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Alpha Analytical

Laboratory Code: 11148

SDG Number: L2417074

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Project Name: RANCO SAND & GRAVEL
Project Number: 12123

Lab Number: L2417074
Report Date: 04/16/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2417074-01	MW-3A	WATER	MANORVILLE, NY	03/28/24 08:50	03/28/24
L2417074-02	MW-6AR	WATER	MANORVILLE, NY	03/28/24 10:35	03/28/24
L2417074-03	MW-7A	WATER	MANORVILLE, NY	03/27/24 13:24	03/28/24
L2417074-04	MW-7B	WATER	MANORVILLE, NY	03/27/24 14:35	03/28/24
L2417074-05	MW-7C	WATER	MANORVILLE, NY	03/27/24 15:05	03/28/24
L2417074-06	DUP	WATER	MANORVILLE, NY	03/28/24 00:00	03/28/24
L2417074-07	EQ BLANK	WATER	MANORVILLE, NY	03/27/24 13:30	03/28/24
L2417074-08	TRIP BLANK	WATER	MANORVILLE, NY	03/27/24 00:00	03/28/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission
April 16, 2024: This final report includes the results of all requested analyses.
April 05, 2024: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

The analysis of Iodide was subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt
L2417074-01 through -06: The analysis of Ammonia was performed at the client's request.
L2417074-02: The sample identified as "MW-6AR" on the chain of custody was identified as "MW-6A" on the container label. At the client's request, the sample is reported as "MW-6AR".
L2417074-03: The sample was received without an appropriate container for the Total Metals analysis. At the client's request, an aliquot was taken from an unpreserved container and preserved appropriately.
L2417074-07: The collection date and time on the chain of custody was 27-MAR-24 15:30; however, the collection date/time on the container label was 27-MAR-24 13:30. At the client's request, the collection date/time is reported as 27-MAR-24 13:30.
L2417074-07: The analysis of Dissolved Metals was requested on the Chain of Custody; however, a sample container was not received. This was verified by the client.
Please note: The client requested MS/MSD was incorrectly assigned to L2417074-01 when it was requested on L2417074-02. We cannot guarantee that the Semivolatile Organics analysis originally reported on L2417074-01 was performed on a sample container or on one of the containers supplied for the MS/MSD; therefore, the Semivolatile Organics analyses were cancelled on L2417074-01.

Semivolatile Organics by SIM

Case Narrative (continued)

L2417074-03: The sample has elevated detection limits due to limited sample volume available for analysis.

Total Metals

The WG1902788-1 Method Blank, associated with L2417074-01 and -03 through -07, has a concentration above the reporting limit for manganese. All samples, with the exception of L2417074-03, were re-digested and the associated Method Blanks were non-detect

The WG1906871-3/-4 MS/MSD recoveries for manganese (148%/165%), performed on L2417074-02, do not apply because the sample concentration is greater than four times the spike amount added.

Dissolved Metals

The WG1906880-4 MSD recovery, performed on L2417074-02, is outside the acceptance criteria for calcium (58%). A post digestion spike was performed and was within acceptance criteria.

Anions by Ion Chromatography

The WG1903534-3 MS recovery, performed on L2417074-01, is outside the acceptance criteria for fluoride (85%); however, the associated LCS recovery is within criteria. No further action was taken.

The WG1903534-4 Laboratory Duplicate RPD for bromide (46%), performed on L2417074-01, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom Report Date: 04/16/24

Title: Technical Director/Representative

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Volatile Organics Instruments

Volatile Organics:

Instrument: Agilent 7890 GC/5975C MSD	Columns (length x ID x df):
Trap: Supelco K Trap (VOACARB 3000)	RTX-VMS 20m x 0.18mm x 1um
Concentrator: EST Encon (or equivalent)	RTX-VMS 30m x 0.25mm x 1.4um
Autosampler: EST Centurion (or equivalent)	RTX-502.2 40m x 0.18mm x 1um
Purge time: 11 min	

Volatile Organics: VPH

Instrument: Agilent 6890 (or equivalent)	Column Type: Restek RTX 502.2
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 105 Meters
Concentrator: EST Encon (or equivalent)	df: 3.00 um
Autosampler: EST Centurion (or equivalent)	ID: 0.53mm

Volatile Organics: PIANO

Instrument: Agilent 7890 GC/5975C MSD	Column Type: DB-VRX
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 60 Meters
Concentrator: Tekmar Velocity / EST Encon	df: 1.40 um
Autosampler: Varian Archon / EST Centurion	ID: 0.25 mm
Purge time: 11 min	Desorb: 1 min

Volatile Organics: Dissolved Gas

Instrument: Agilent 7890 (or equivalent) with FID/TCD	
	Column Type: Haysep S Column
	Column Length: 2 Meters packed (100/200 mesh)
Autosampler: LEAP Headspace	Purge time: 0.6 min

Volatile Organics in Air Instruments

Volatile Organics in Air:

Instruments: Agilent 6890 GC / 5975 MSD Shimadzu QP2010-SE / QP2020

Concentrator: Entech 7100A or 7200	Column Type: Restek RTX-1
Autosampler: Entech 7016CA or 7016D	Column Length: 60 Meters
	df: 1.00 um
	ID: 0.25 mm or 0.32 mm

Trap 1: Glass Bead: manufacturer-Entech: 20 cm packing material
Trap 2: Tenax: manufacturer-Entech: 20 cm packing material

Semivolatile Organics Instruments - Westborough

Semivolatile Organics (Acid/Base/Neutral Extractables):

Instrument: Agilent 5973N MSD	Injection volume: 1 ul;2 uL LVI
Column Type: Restek RXI-5SILMS	df: 0.32 um
Column Length: 30 Meters	ID: 0.25 mm

Polynuclear Aromatic Hydrocarbons by 8270 SIM:

Instrument: Agilent 5973 MSD	Injection volume: 1 ul;2 uL LVI
Column Type: Restek RXI-5SILMS	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Pesticides/PCB/Herbicides:

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column A: Restek RTX-CL/STX-CL	df: 0.32
Column B: Restek RTX/STX-CLPPesticide II	df: 0.25
Column Length: 30 Meters	ID: 0.32 mm

Petroleum/EPH:

Instrument: Agilent 6890 w/FID / HP 5890 w/ FID	Injection Volume: 1uL
Column: Restek RTX 5	df: 0.25
Column Length: 30 Meters	
ID: 0.32 mm	

Semivolatile Organic Instruments - Mansfield

Semivolatile Organics (ALK-PAH Extractables):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 1 ul
Column Type: ZB-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (8270):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 2 ul
Column Type: ZB-Semivolatiles	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Semivolatile Organics (8270 SIM):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 3 ul
Column Type: ZB-5	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Semivolatile Organics (1,4-Dioxane):

Instrument: Agilent 5973N / 5975 / 5977 MSD	Injection volume: 3 ul
Column Type: RTX-5	df: 0.25um, 0.18 um
Column Length: 30 Meters	ID: 0.25um, 0.18 mm

Semivolatile Organics (209 Congener):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 3 ul
Column Type: RTX-5, RTX-PCB	df: 0.25um, 0.18 um
Column Length: 60 Meters	ID: 0.25um, 0.18 mm

Semivolatile Organics (8081):

Instrument: Agilent 6890 / 7890	Injection volume: 1 ul
Column Type: RTX-5 / RTX-CLP II	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (8082):

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column A: Restek RTX-CL/STX-CL	df: 0.32
Column B: Restek RTX/STX-CLPPesticide II	df: 0.25
Column Length: 30 Meters	ID: 0.32 mm

Semivolatile Organics (SHC Extractables):

Instrument: Agilent 6890	Injection volume: 1 ul
Column Type: RTX-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Sample Delivery Group Summary

Alpha Job Number : L2417074

Received : 28-MAR-2024
Reviewer : Maile Kolton

Account Name : Alpha Geoscience
Project Number : 12123
Project Name : RANCO SAND & GRAVEL

Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	2.9	
B	Absent/	Ice	3.3	
C	Absent/	Ice	2.0	

Condition Information

1) All samples on COC received? **YES**

2) Extra samples received? **NO**

3) Are there any sample container discrepancies? **YES**
Following containers were not received for listed analysis: -07 (TAL-6020S)

4) Are there any discrepancies between COC & sample labels? **YES**
L2417074-07: 27-MAR-24 15:30 vs. 27-MAR-24 13:30
L2417074-02: MW-6AR vs. MW-6A

5) Are samples in appropriate containers for requested analysis? **YES**

6) Are samples properly preserved for requested analysis? **NO**

Container	pH	Preservative Added	Final pH
L2417074-03X	7	HNO3	<2

7) Are samples within holding time for requested analysis? **YES**

8) All sampling equipment returned? **NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client? **NO**

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Apr 16 2024, 07:07 pm

Login Number: L2417074
Account: ALPHAGEO Alpha GeoscienceProject: 12123
Received: 28MAR24 Due Date: 16APR24

Sample #	Client ID	Mat	PR	Collected
L2417074-01	MW-3A		1 S0	28MAR24 08:50

MS/MSD moved to L2417074-02 1ZE306540196104836 124.09 USD NYTCL-8270-LVI: REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene;2,3,4,6-Tetrachlorophenol;Atrazine;Benzaldehyde;Caprolactam NYTCL-8260-R2: REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane ASP-B Package Due Date: 04/16/24

ALK-CO3-2320,ALK-HCO3-2320,ARCHIVE,ASP-B,BR-300,CL-300,F-300,NH3-350,NYTCL-8260-R2,SO4-300,SUB-IODIDE,SULFIDE-4500,TAL-6020S,AG-6020S,AL-6020S,AS-6020S,BA-6020S,BE-6020S,CA-6020S,CD-6020S,CO-6020S,CR-6020S,CU-6020S,FE-6020S,HG-S,K-6020S,MG-6020S,MN-6020S,NA-6020S,NI-6020S,PB-6020S,PREPS,SB-6020S,SE-6020S,TL-6020S,V-6020S,ZN-6020S,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TDS-2540,TOTALNITROGEN-353,NO3/NO2-353,TKN-4500,TNITROGEN,TPO4-4500

L2417074-02	MW-6AR		1 S0	28MAR24 10:35

L2417074-02 MS L2417074-02 MSD MS/MSD is assigned to sample -02. NYTCL-8260-R2: REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane NYTCL-8270-LVI: REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene;2,3,4,6-Tetrachlorophenol;Atrazine;Benzaldehyde; Caprolactam Package Due Date: 04/16/24

ALK-CO3-2320,ALK-HCO3-2320,BR-300,CL-300,F-300,MS/MSD,NH3-350,NYTCL-8260-R2,NYTCL-8270/SIM-LVI, NYTCL-8270-LVI,NYTCL-8270-SIM-LVI,SO4-300,SUB-IODIDE,SULFIDE-4500,TAL-6020S,AG-6020S,AL-6020S,AS-6020S,BA-6020S,BE-6020S,CA-6020S,CD-6020S,CO-6020S,CR-6020S,CU-6020S,FE-6020S,HG-S,K-6020S,MG-6020S, MN-6020S,NA-6020S,NI-6020S,PB-6020S,PREPS,SB-6020S,SE-6020S,TL-6020S,V-6020S,ZN-6020S,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TDS-2540,TOTALNITROGEN-353,NO3/NO2-353,TKN-4500,TNITROGEN,TPO4-4500

L2417074-03	MW-7A		1 S0	27MAR24 13:24

HNO3 added 4/1 09:25 NYTCL-8260-R2: REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane NYTCL-8270-LVI: REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene; 2,3,4,6-Tetrachlorophenol;Atrazine;Benzaldehyde;Caprolactam Package Due Date: 04/16/24

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Apr 16 2024, 07:07 pm

Login Number: L2417074
Account: ALPHAGEO Alpha GeoscienceProject: 12123
Received: 28MAR24 Due Date: 16APR24

Sample #	Client ID	Mat	PR	Collected

ALK-CO3-2320,ALK-HCO3-2320,BR-300,CL-300,F-300,NH3-350,NYTCL-8260-R2,NYTCL-8270/SIM-LVI,NYTCL-8270-LVI,NYTCL-8270-SIM-LVI,SO4-300,SUB-IODIDE,SULFIDE-4500,TAL-6020S,AG-6020S,AL-6020S,AS-6020S,BA-6020S,BE-6020S,CA-6020S,CD-6020S,CO-6020S,CR-6020S,CU-6020S,FE-6020S,HG-S,K-6020S,MG-6020S,MN-6020S,NA-6020S,NI-6020S,PB-6020S,PREPS,SB-6020S,SE-6020S,TL-6020S,V-6020S,ZN-6020S,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TDS-2540,TOTALNITROGEN-353,NO3/NO2-353,TKN-4500,TNITROGEN,TPO4-4500

L2417074-04 MW-7B 1 S0 27MAR24 14:35

NYTCL-8260-R2: REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane
NYTCL-8270-LVI: REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene;2,3,4,6-Tetrachlorophenol;Atrazine;Benzaldehyde;Caprolactam' Package Due Date: 04/16/24

ALK-CO3-2320,ALK-HCO3-2320,BR-300,CL-300,F-300,NH3-350,NYTCL-8260-R2,NYTCL-8270/SIM-LVI,NYTCL-8270-LVI,NYTCL-8270-SIM-LVI,SO4-300,SUB-IODIDE,SULFIDE-4500,TAL-6020S,AG-6020S,AL-6020S,AS-6020S,BA-6020S,BE-6020S,CA-6020S,CD-6020S,CO-6020S,CR-6020S,CU-6020S,FE-6020S,HG-S,K-6020S,MG-6020S,MN-6020S,NA-6020S,NI-6020S,PB-6020S,PREPS,SB-6020S,SE-6020S,TL-6020S,V-6020S,ZN-6020S,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TDS-2540,TOTALNITROGEN-353,NO3/NO2-353,TKN-4500,TNITROGEN,TPO4-4500

L2417074-05 MW-7C 1 S0 27MAR24 15:05

NYTCL-8260-R2: REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane
NYTCL-8270-LVI: REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene;2,3,4,6-Tetrachlorophenol;Atrazine;Benzaldehyde;Caprolactam' Package Due Date: 04/16/24

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Apr 16 2024, 07:07 pm

Login Number: L2417074
Account: ALPHAGEO Alpha GeoscienceProject: 12123
Received: 28MAR24 Due Date: 16APR24

Sample #	Client ID	Mat	PR	Collected

ALK-CO3-2320,ALK-HCO3-2320,BR-300,CL-300,F-300,NH3-350,NYTCL-8260-R2,NYTCL-8270/SIM-LVI,NYTCL-8270-LVI,NYTCL-8270-SIM-LVI,SO4-300,SUB-IODIDE,SULFIDE-4500,TAL-6020S,AG-6020S,AL-6020S,AS-6020S,BA-6020S,BE-6020S,CA-6020S,CD-6020S,CO-6020S,CR-6020S,CU-6020S,FE-6020S,HG-S,K-6020S,MG-6020S,MN-6020S,NA-6020S,NI-6020S,PB-6020S,PREPS,SB-6020S,SE-6020S,TL-6020S,V-6020S,ZN-6020S,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TDS-2540,TOTALNITROGEN-353,NO3/NO2-353,TKN-4500,TNITROGEN,TPO4-4500

L2417074-06	DUP		1	S0 28MAR24 00:00

NYTCL-8260-R2: REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane
NYTCL-8270-LVI: REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene;2,3,4,6-Tetrachlorophenol; Atrazine;Benzaldehyde;Caprolactam' Package Due Date: 04/16/24

ALK-CO3-2320,ALK-HCO3-2320,BR-300,CL-300,F-300,NH3-350,NYTCL-8260-R2,NYTCL-8270/SIM-LVI,NYTCL-8270-LVI,NYTCL-8270-SIM-LVI,SO4-300,SUB-IODIDE,SULFIDE-4500,TAL-6020S,AG-6020S,AL-6020S,AS-6020S,BA-6020S,BE-6020S,CA-6020S,CD-6020S,CO-6020S,CR-6020S,CU-6020S,FE-6020S,HG-S,K-6020S,MG-6020S,MN-6020S,NA-6020S,NI-6020S,PB-6020S,PREPS,SB-6020S,SE-6020S,TL-6020S,V-6020S,ZN-6020S,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TDS-2540,TOTALNITROGEN-353,NO3/NO2-353,TKN-4500,TNITROGEN,TPO4-4500

L2417074-07	EQ BLANK		1	S0 27MAR24 13:30

NYTCL-8260-R2: REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane
NYTCL-8270-LVI: REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene;2,3,4,6-Tetrachlorophenol; Atrazine;Benzaldehyde;Caprolactam' Package Due Date: 04/16/24

NYTCL-8260-R2,NYTCL-8270/SIM-LVI,NYTCL-8270-LVI,NYTCL-8270-SIM-LVI,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Apr 16 2024, 07:07 pm

Login Number: L2417074
Account: ALPHAGEO Alpha GeoscienceProject: 12123
Received: 28MAR24 Due Date: 16APR24

Sample #	Client ID	Mat	PR	Collected
L2417074-08	TRIP BLANK	S0	1	27MAR24 00:00

NYTCL-8260-R2; REPORT LIST BUILT; Non-Routine: Freon-113;Cyclohexane;Methyl Acetate;Methyl cyclohexane
NYTCL-8270-LVI; REPORT LIST BUILT; Non-Routine: 1,2,4,5-Tetrachlorobenzene;2,3,4,6-Tetrachlorophenol; Atrazine;Benzaldehyde;Caprolactam Package Due Date: 04/16/24

NYTCL-8260-R2

Logged By: Melissa Deyo

NEW YORK CHAIN OF CUSTODY

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 106

Page 1 of 1

Date Rec'd in Lab: 3/29/24

ALPHA Job #: L2417074

Client Information
Client: Alpha Geoscience
Address: 679 Plank Rd
Clifton Park
Phone: 518-348-6995
Fax:
Email:

Project Information
Project Name: Ranco Sand + Gravel
Project Location: Manorville, NY
Project #: 12123
(Use Project name as Project #): ☒
Project Manager: Scott Huisenapple
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File) NYS DEC
☐ Other

Billing Information
☒ Same as Client Info
PO #

Regulatory Requirement
☒ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
See Bottle Order #455733 for Clarification on Analyte List
Metals Field Filtered

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☒ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs 8260 NYTCL	SVOCs 8270 NYTCL	[redacted]	Total + Dissolved Metals	Sulfide	TDHN NIT. T PO4, TDS	Cl, Br, F, I, SO4 Alk (COS/HCO3)	Nitrate/Nitrite	Total Bottle	Sample Specific Comments
17074-01	MW-3A	3/28/24	08:50	WG	NS	X	X		X	X	X	X	X		
01	MS	3/28/24	10:35	WG	NS	X	X		X						
01	MSD	3/28/24	10:35	WG	NS	X	X		X						
02	MW-6AR	3/28/24	10:35	WG	NS	X	X		X	X	X	X	X		
03	MW-7A	3/27/24	13:04	WG	JB	X	X		X	X	X	X	X		
04	MW-7B	3/27/24	14:35	WG	JB	X	X		X	X	X	X	X		
05	MW-7C	3/27/24	15:05	WG	NS	X	X		X	X	X	X	X		
06	DUP	3/28/24	00:00	WG	NS	X	X		X	X	X	X	X		
07	EQ BLANK	3/27/24	15:30	WQ	JB	X	X		X						
08	TRIP BLANK	~~3/27/24~~	—	~~WQ~~	—	X									

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	V	A	[redacted]	P	P	P	P	P	
Preservative	B	A		C	K/E	A	A	D	

Relinquished By:	Date/Time	Received By:	Date/Time
Jason Bolduc	3/28/24 17:09	[signature]	3/29/24 1709
			3/29/24 0130

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

Organics

GC/MS 8260
Analysis

Volatiles QC Summary

Surrogate Recovery Summary
Form 2
Volatiles

Client: Alpha Geoscience
Project Name: RANCO SAND & GRAVEL

Lab Number: L2417074
Project Number: 12123
Matrix:

CLIENT ID (LAB SAMPLE NO.)	SMC1 DCA	SMC2 TOL	SMC3 BFB	SMC4 DBFM	TOT OUT
MW-3A (L2417074-01)	100	100	104	102	0
MW-6AR (L2417074-02)	100	102	106	102	0
MW-7A (L2417074-03)	101	103	106	102	0
MW-7B (L2417074-04)	101	101	105	101	0
MW-7C (L2417074-05)	101	101	106	101	0
DUP (L2417074-06)	100	102	107	101	0
EQ BLANK (L2417074-07)	102	101	106	102	0
TRIP BLANK (L2417074-08)	102	102	105	100	0
WG1904126-3LCS	102	104	109	100	0
WG1904126-4LCSD	102	103	109	100	0
WG1904126-5BLANK	99	101	107	102	0
MW-6ARMS	101	102	105	101	0
MW-6ARMSD	100	102	105	100	0

QC LIMITS

(70-130) DCA = 1,2-DICHLOROETHANE-D4
(70-130) TOL = TOLUENE-D8
(70-130) BFB = 4-BROMOFLUOROBENZENE
(70-130) DBFM = DIBROMOFLUOROMETHANE

*** Values outside of QC limits**

FORM II NYTCL-8260-R2

Laboratory Control Sample Summary
Form 3
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix (Level)	: WATER (LOW)		
LCS Sample ID	: WG1904126-3	**Analysis Date** : 04/02/24 17:41	**File ID** : V08240402N01
LCSD Sample ID	: WG1904126-4	**Analysis Date** : 04/02/24 18:03	**File ID** : V08240402N02

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Methylene chloride	10	9.2	92	10	9.3	93	1	70-130	20
1,1-Dichloroethane	10	9.2	92	10	9.5	95	3	70-130	20
Chloroform	10	9.5	95	10	9.8	98	3	70-130	20
Carbon tetrachloride	10	9.3	93	10	9.6	96	3	63-132	20
1,2-Dichloropropane	10	9.2	92	10	9.5	95	3	70-130	20
Dibromochloromethane	10	9.7	97	10	9.7	97	0	63-130	20
1,1,2-Trichloroethane	10	10	100	10	10	100	0	70-130	20
Tetrachloroethene	10	9.7	97	10	9.7	97	0	70-130	20
Chlorobenzene	10	10	100	10	9.9	99	1	75-130	20
Trichlorofluoromethane	10	9.0	90	10	9.0	90	0	62-150	20
1,2-Dichloroethane	10	9.3	93	10	9.5	95	2	70-130	20
1,1,1-Trichloroethane	10	9.5	95	10	9.6	96	1	67-130	20
Bromodichloromethane	10	9.4	94	10	9.5	95	1	67-130	20
trans-1,3-Dichloropropene	10	10	100	10	10	100	0	70-130	20
cis-1,3-Dichloropropene	10	9.8	98	10	10	100	2	70-130	20
Bromoform	10	11	110	10	10	100	10	54-136	20
1,1,2,2-Tetrachloroethane	10	11	110	10	10	100	10	67-130	20
Benzene	10	9.6	96	10	9.6	96	0	70-130	20
Toluene	10	10	100	10	10	100	0	70-130	20
Ethylbenzene	10	10	100	10	10	100	0	70-130	20
Chloromethane	10	8.2	82	10	8.4	84	2	64-130	20
Bromomethane	10	6.0	60	10	6.9	69	14	39-139	20
Vinyl chloride	10	8.9	89	10	9.1	91	2	55-140	20
Chloroethane	10	9.3	93	10	9.5	95	2	55-138	20
1,1-Dichloroethene	10	9.7	97	10	9.7	97	0	61-145	20
trans-1,2-Dichloroethene	10	9.6	96	10	9.7	97	1	70-130	20

Laboratory Control Sample Summary
Form 3
Volatiles

Client : Alpha Geoscience **Lab Number** : L2417074
Project Name : RANCO SAND & GRAVEL **Project Number** : 12123
Matrix (Level) : WATER (LOW)
LCS Sample ID : WG1904126-3 **Analysis Date** : 04/02/24 17:41 **File ID** : V08240402N01
LCSD Sample ID : WG1904126-4 **Analysis Date** : 04/02/24 18:03 **File ID** : V08240402N02

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Trichloroethene	10	9.9	99	10	10	100	1	70-130	20
1,2-Dichlorobenzene	10	10	100	10	10	100	0	70-130	20
1,3-Dichlorobenzene	10	10	100	10	10	100	0	70-130	20
1,4-Dichlorobenzene	10	10	100	10	10	100	0	70-130	20
Methyl tert butyl ether	10	10	100	10	10	100	0	63-130	20
p/m-Xylene	20	20	100	20	20	100	0	70-130	20
o-Xylene	20	20	100	20	20	100	0	70-130	20
cis-1,2-Dichloroethene	10	9.6	96	10	9.6	96	0	70-130	20
Styrene	20	20	100	20	20	100	0	70-130	20
Dichlorodifluoromethane	10	10	100	10	10	100	0	36-147	20
Acetone	10	14	140	10	13	130	7	58-148	20
Carbon disulfide	10	9.5	95	10	9.7	97	2	51-130	20
2-Butanone	10	9.1	91	10	9.4	94	3	63-138	20
4-Methyl-2-pentanone	10	9.9	99	10	9.8	98	1	59-130	20
2-Hexanone	10	9.6	96	10	9.4	94	2	57-130	20
Bromochloromethane	10	9.8	98	10	9.9	99	1	70-130	20
1,2-Dibromoethane	10	10	100	10	10	100	0	70-130	20
1,2-Dibromo-3-chloropropane	10	10	100	10	11	110	10	41-144	20
Isopropylbenzene	10	11	110	10	11	110	0	70-130	20
1,2,3-Trichlorobenzene	10	9.2	92	10	9.8	98	6	70-130	20
1,2,4-Trichlorobenzene	10	10	100	10	10	100	0	70-130	20
Methyl Acetate	10	8.4	84	10	8.8	88	5	70-130	20
Cyclohexane	10	8.9	89	10	9.1	91	2	70-130	20
1,4-Dioxane	500	520	104	500	470	94	10	56-162	20
Freon-113	10	9.5	95	10	9.5	95	0	70-130	20
Methyl cyclohexane	10	9.4	94	10	9.5	95	1	70-130	20

Matrix Spike Sample Summary
Form 3
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix (Level)**	: WATER (LOW)
Lab Sample ID	: L2417074-02	**Analysis Date**	: 04/03/24 00:24
Matrix Spike	: WG1904126-6	**MS Analysis Date**	: 04/03/24 03:00
Matrix Spike Dup	: WG1904126-7	**MSD Analysis Date**	: 04/03/24 03:22

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (ug/l)	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Methylene chloride	ND	10	11	110	10	10	100	10	70-130	20
1,1-Dichloroethane	ND	10	11	110	10	10	100	10	70-130	20
Chloroform	ND	10	11	110	10	11	110	0	70-130	20
Carbon tetrachloride	ND	10	11	110	10	11	110	0	63-132	20
1,2-Dichloropropane	ND	10	11	110	10	10	100	10	70-130	20
Dibromochloromethane	ND	10	10	100	10	10	100	0	63-130	20
1,1,2-Trichloroethane	ND	10	11	110	10	11	110	0	70-130	20
Tetrachloroethene	ND	10	11	110	10	11	110	0	70-130	20
Chlorobenzene	ND	10	11	110	10	10	100	10	75-130	20
Trichlorofluoromethane	ND	10	11	110	10	11	110	0	62-150	20
1,2-Dichloroethane	ND	10	11	110	10	10	100	10	70-130	20
1,1,1-Trichloroethane	ND	10	12	120	10	11	110	9	67-130	20
Bromodichloromethane	ND	10	11	110	10	10	100	10	67-130	20
trans-1,3-Dichloropropene	ND	10	11	110	10	11	110	0	70-130	20
cis-1,3-Dichloropropene	ND	10	11	110	10	11	110	0	70-130	20
Bromoform	ND	10	10	100	10	10	100	0	54-136	20
1,1,2,2-Tetrachloroethane	ND	10	11	110	10	11	110	0	67-130	20
Benzene	ND	10	11	110	10	11	110	0	70-130	20
Toluene	ND	10	11	110	10	11	110	0	70-130	20
Ethylbenzene	ND	10	11	110	10	11	110	0	70-130	20
Chloromethane	ND	10	11	110	10	10	100	10	64-130	20
Bromomethane	ND	10	8.3	83	10	8.6	86	4	39-139	20

Matrix Spike Sample Summary
Form 3
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix (Level)**	: WATER (LOW)
Lab Sample ID	: L2417074-02	**Analysis Date**	: 04/03/24 00:24
Matrix Spike	: WG1904126-6	**MS Analysis Date**	: 04/03/24 03:00
Matrix Spike Dup	: WG1904126-7	**MSD Analysis Date**	: 04/03/24 03:22

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (ug/l)	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Vinyl chloride	ND	10	12	120	10	11	110	9	55-140	20
Chloroethane	ND	10	12	120	10	11	110	9	55-138	20
1,1-Dichloroethene	ND	10	12	120	10	11	110	9	61-145	20
trans-1,2-Dichloroethene	ND	10	12	120	10	11	110	9	70-130	20
Trichloroethene	ND	10	11	110	10	10	100	10	70-130	20
1,2-Dichlorobenzene	ND	10	11	110	10	10	100	10	70-130	20
1,3-Dichlorobenzene	ND	10	11	110	10	10	100	10	70-130	20
1,4-Dichlorobenzene	ND	10	10	100	10	10	100	0	70-130	20
Methyl tert butyl ether	ND	10	11	110	10	10	100	10	63-130	20
p/m-Xylene	ND	20	22	110	20	22	110	0	70-130	20
o-Xylene	ND	20	23	115	20	22	110	4	70-130	20
cis-1,2-Dichloroethene	ND	10	11	110	10	11	110	0	70-130	20
Styrene	ND	20	22	110	20	22	110	0	70-130	20
Dichlorodifluoromethane	ND	10	13	130	10	12	120	8	36-147	20
Acetone	ND	10	13	130	10	12	120	8	58-148	20
Carbon disulfide	ND	10	12	120	10	11	110	9	51-130	20
2-Butanone	ND	10	10	100	10	9.6	96	4	63-138	20
4-Methyl-2-pentanone	ND	10	10	100	10	10	100	0	59-130	20
2-Hexanone	ND	10	10	100	10	10	100	0	57-130	20
Bromochloromethane	ND	10	11	110	10	10	100	10	70-130	20
1,2-Dibromoethane	ND	10	11	110	10	10	100	10	70-130	20
1,2-Dibromo-3-chloropropane	ND	10	11	110	10	10	100	10	41-144	20

Matrix Spike Sample Summary
Form 3
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix (Level)**	: WATER (LOW)
Lab Sample ID	: L2417074-02	**Analysis Date**	: 04/03/24 00:24
Matrix Spike	: WG1904126-6	**MS Analysis Date**	: 04/03/24 03:00
Matrix Spike Dup	: WG1904126-7	**MSD Analysis Date**	: 04/03/24 03:22

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (ug/l)	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Isopropylbenzene	ND	10	12	120	10	11	110	9	70-130	20
1,2,3-Trichlorobenzene	ND	10	9.7	97	10	9.9	99	2	70-130	20
1,2,4-Trichlorobenzene	ND	10	10	100	10	10	100	0	70-130	20
Methyl Acetate	ND	10	9.7	97	10	9.2	92	5	70-130	20
Cyclohexane	ND	10	12	120	10	11	110	9	70-130	20
1,4-Dioxane	ND	500	520	104	500	510	102	2	56-162	20
Freon-113	ND	10	12	120	10	11	110	9	70-130	20
Methyl cyclohexane	ND	10	11	110	10	11	110	0	70-130	20

Method Blank Summary
Form 4
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: WG1904126-5	**Lab File ID**	: V08240402N05
Instrument ID	: VOA108		
Matrix	: WATER	**Analysis Date**	: 04/02/24 19:09

Client Sample No.	Lab Sample ID	Analysis Date
WG1904126-3LCS	WG1904126-3	04/02/24 17:41
WG1904126-4LCSD	WG1904126-4	04/02/24 18:03
MW-3A	L2417074-01	04/03/24 00:02
MW-6AR	L2417074-02	04/03/24 00:24
MW-7A	L2417074-03	04/03/24 00:46
MW-7B	L2417074-04	04/03/24 01:09
MW-7C	L2417074-05	04/03/24 01:31
DUP	L2417074-06	04/03/24 01:53
EQ BLANK	L2417074-07	04/03/24 02:15
TRIP BLANK	L2417074-08	04/03/24 02:38
MW-6ARMS	WG1904126-6	04/03/24 03:00
MW-6ARMSD	WG1904126-7	04/03/24 03:22

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: VOA108	**Analysis Date**	: 03/22/24 18:00
Tune Standard	: WG1900595-1	**Tune File ID**	: V08240322NBF1_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	24.3
75	30.0 - 80.0% of mass 95	50.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.8 (1.1)1
174	Greater than 50.0% of mass 95	74.6
175	5.0 - 9.0% of mass 174	5.5 (7.4)1
176	Greater than 95.0% but less than 101% of mass	71.9 (96.3)1
177	5.0 - 9.0% of mass 176	4.5 (6.2)2

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

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
STD0.19PPB	R1809376-2	V08240322N03	03/22/24 19:07
STD0.5PPB	R1809376-1	V08240322N05	03/22/24 19:52
STD2PPB	R1809376-4	V08240322N07	03/22/24 20:36
STD10PPB	R1809376-3	V08240322N08	03/22/24 20:58
STD30PPB	R1809376-5	V08240322N09	03/22/24 21:21
STD80PPB	R1809376-6	V08240322N10	03/22/24 21:43
STD120PPB	R1809376-7	V08240322N11	03/22/24 22:05
STD200PPB	R1809376-8	V08240322N12	03/22/24 22:27
ICV Quant Report	R1809376-9	V08240322N17	03/23/24 00:18

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: VOA108	**Analysis Date**	: 04/02/24 17:11
Tune Standard	: WG1904126-1	**Tune File ID**	: V08240402NBF1_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	23.4
75	30.0 - 80.0% of mass 95	49.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7 (1)1
174	Greater than 50.0% of mass 95	74.5
175	5.0 - 9.0% of mass 174	5.3 (7.1)1
176	Greater than 95.0% but less than 101% of mass	74.1 (99.5)1
177	5.0 - 9.0% of mass 176	4.8 (6.5)2

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

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1904126-2CCAL	WG1904126-2	V08240402N01	04/02/24 17:41
WG1904126-3LCS	WG1904126-3	V08240402N01	04/02/24 17:41
WG1904126-4LCSD	WG1904126-4	V08240402N02	04/02/24 18:03
WG1904126-5BLANK	WG1904126-5	V08240402N05	04/02/24 19:09
MW-3A	L2417074-01	V08240402N18	04/03/24 00:02
MW-6AR	L2417074-02	V08240402N19	04/03/24 00:24
MW-7A	L2417074-03	V08240402N20	04/03/24 00:46
MW-7B	L2417074-04	V08240402N21	04/03/24 01:09
MW-7C	L2417074-05	V08240402N22	04/03/24 01:31
DUP	L2417074-06	V08240402N23	04/03/24 01:53
EQ BLANK	L2417074-07	V08240402N24	04/03/24 02:15
TRIP BLANK	L2417074-08	V08240402N25	04/03/24 02:38
WG1904126-6MS	WG1904126-6	V08240402N26	04/03/24 03:00
WG1904126-7MSD	WG1904126-7	V08240402N27	04/03/24 03:22

Internal Standard Area and RT Summary
Form 8a
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: VOA108	**Analysis Date**	: 04/02/24 17:41:00
Sample No	: WG1904126-2	**Lab File ID**	: V08240402N01

	Fluorobenzene (IS)		Chlorobenzene-d5		1,4-Dichlorobenzene-D4	
	Area	RT	Area	RT	Area	RT
WG1904126-2	496523	6.09	357338	9.62	158777	12.30
Upper Limit	993046	6.59	714676	10.12	317554	12.80
Lower Limit	248262	5.59	178669	9.12	79389	11.80
Sample ID						
WG1904126-3 LCS	496523	6.09	357338	9.62	158777	12.30
WG1904126-4 LCSD	488515	6.08	355102	9.61	160027	12.30
WG1904126-5 BLANK	437200	6.09	328558	9.62	150589	12.30
MW-3A	405677	6.09	311993	9.62	149183	12.30
MW-6AR	435364	6.09	325404	9.62	152240	12.30
MW-7A	445953	6.09	325662	9.62	151545	12.30
MW-7B	428009	6.09	322846	9.62	154009	12.30
MW-7C	446473	6.09	331137	9.62	155071	12.30
DUP	451712	6.09	334225	9.62	153058	12.30
EQ BLANK	460147	6.09	347517	9.62	163897	12.30
TRIP BLANK	469359	6.09	345655	9.62	161320	12.30
MW-6AR MS	444612	6.09	330845	9.62	158644	12.30
MW-6AR MSD	466426	6.09	344976	9.62	162899	12.30

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

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Date Created: 03/15/23
Created By: Jason Hebert
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Volatile Organics - EPA 8260D (WATER)

Holding Time: 14 days
Container/Sample Preservation: 3 - Vial HCl preserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Methylene chloride	75-09-2	3	0.678	ug/l	70-130	20	70-130	20	20			
1,1-Dichloroethane	75-34-3	0.75	0.21	ug/l	70-130	20	70-130	20	20			
Chloroform	67-66-3	0.75	0.222	ug/l	70-130	20	70-130	20	20			
Carbon tetrachloride	56-23-5	0.5	0.134	ug/l	63-132	20	63-132	20	20			
1,2-Dichloropropane	78-87-5	1.75	0.137	ug/l	70-130	20	70-130	20	20			
Dibromochloromethane	124-48-1	0.5	0.149	ug/l	63-130	20	63-130	20	20			
1,1,2-Trichloroethane	79-00-5	0.75	0.144	ug/l	70-130	20	70-130	20	20			
Tetrachloroethene	127-18-4	0.5	0.181	ug/l	70-130	20	70-130	20	20			
Chlorobenzene	108-90-7	0.5	0.178	ug/l	75-130	25	75-130	25	25			
Trichlorofluoromethane	75-69-4	2.5	0.161	ug/l	62-150	20	62-150	20	20			
1,2-Dichloroethane	107-06-2	0.5	0.132	ug/l	70-130	20	70-130	20	20			
1,1,1-Trichloroethane	71-55-6	0.5	0.158	ug/l	67-130	20	67-130	20	20			
Bromodichloromethane	75-27-4	0.5	0.192	ug/l	67-130	20	67-130	20	20			
trans-1,3-Dichloropropene	10061-02-6	0.5	0.164	ug/l	70-130	20	70-130	20	20			
cis-1,3-Dichloropropene	10061-01-5	0.5	0.144	ug/l	70-130	20	70-130	20	20			
1,3-Dichloropropene, Total	542-75-6	0.5	0.144	ug/l				20	20			
1,1-Dichloropropene	563-58-6	2.5	0.24	ug/l	70-130	20	70-130	20	20			
Bromoform	75-25-2	2	0.248	ug/l	54-136	20	54-136	20	20			
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.167	ug/l	67-130	20	67-130	20	20			
Benzene	71-43-2	0.5	0.159	ug/l	70-130	25	70-130	25	25			
Toluene	108-88-3	0.75	0.203	ug/l	70-130	25	70-130	25	25			
Ethylbenzene	100-41-4	0.5	0.167	ug/l	70-130	20	70-130	20	20			
Chloromethane	74-87-3	2.5	0.2	ug/l	64-130	20	64-130	20	20			
Bromomethane	74-83-9	1	0.256	ug/l	39-139	20	39-139	20	20			
Vinyl chloride	75-01-4	1	0.0714	ug/l	55-140	20	55-140	20	20			
Chloroethane	75-00-3	1	0.134	ug/l	55-138	20	55-138	20	20			
1,1-Dichloroethene	75-35-4	0.5	0.169	ug/l	61-145	25	61-145	25	25			
trans-1,2-Dichloroethene	156-60-5	0.75	0.163	ug/l	70-130	20	70-130	20	20			
1,2-Dichloroethene (total)	540-59-0	0.5	0.163	ug/l				20	20			
Trichloroethene	79-01-6	0.5	0.175	ug/l	70-130	25	70-130	25	25			
1,2-Dichlorobenzene	95-50-1	2.5	0.184	ug/l	70-130	20	70-130	20	20			
1,3-Dichlorobenzene	541-73-1	2.5	0.186	ug/l	70-130	20	70-130	20	20			
1,4-Dichlorobenzene	106-46-7	2.5	0.187	ug/l	70-130	20	70-130	20	20			
Methyl tert butyl ether	1634-04-4	1	0.166	ug/l	63-130	20	63-130	20	20			
p/m-Xylene	179601-23-1	1	0.332	ug/l	70-130	20	70-130	20	20			
o-Xylene	95-47-6	1	0.392	ug/l	70-130	20	70-130	20	20			
Xylene (Total)	1330-20-7	1	0.33	ug/l				20	20			
cis-1,2-Dichloroethene	156-59-2	0.5	0.187	ug/l	70-130	20	70-130	20	20			
Dibromomethane	74-95-3	5	0.363	ug/l	70-130	20	70-130	20	20			
1,4-Dichlorobutane	110-56-5	5	0.464	ug/l	70-130	20	70-130	20	20			
1,2,3-Trichloropropane	96-18-4	5	0.176	ug/l	64-130	20	64-130	20	20			
Styrene	100-42-5	1	0.359	ug/l	70-130	20	70-130	20	20			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Volatile Organics - EPA 8260D (WATER)

Holding Time: 14 days
Container/Sample Preservation: 3 - Vial HCl preserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dichlorodifluoromethane	75-71-8	5	0.244	ug/l	36-147	20	36-147	20	20			
Acetone	67-64-1	5	1.46	ug/l	58-148	20	58-148	20	20			
Carbon disulfide	75-15-0	5	0.299	ug/l	51-130	20	51-130	20	20			
2-Butanone	78-93-3	5	1.94	ug/l	63-138	20	63-138	20	20			
Vinyl acetate	108-05-4	5	0.311	ug/l	70-130	20	70-130	20	20			
4-Methyl-2-pentanone	108-10-1	5	0.416	ug/l	59-130	20	59-130	20	20			
2-Hexanone	591-78-6	5	0.515	ug/l	57-130	20	57-130	20	20			
Ethyl methacrylate	97-63-2	5	0.606	ug/l	70-130	20	70-130	20	20			
Acrylonitrile	107-13-1	5	0.43	ug/l	70-130	20	70-130	20	20			
Bromochloromethane	74-97-5	2.5	0.152	ug/l	70-130	20	70-130	20	20			
Tetrahydrofuran	109-99-9	5	0.525	ug/l	58-130	20	58-130	20	20			
2,2-Dichloropropane	594-20-7	2.5	0.204	ug/l	63-133	20	63-133	20	20			
1,2-Dibromoethane	106-93-4	2	0.193	ug/l	70-130	20	70-130	20	20			
1,3-Dichloropropane	142-28-9	2.5	0.212	ug/l	70-130	20	70-130	20	20			
1,1,1,2-Tetrachloroethane	630-20-6	0.5	0.164	ug/l	64-130	20	64-130	20	20			
Bromobenzene	108-86-1	2.5	0.152	ug/l	70-130	20	70-130	20	20			
n-Butylbenzene	104-51-8	0.5	0.192	ug/l	53-136	20	53-136	20	20			
sec-Butylbenzene	135-98-8	0.5	0.181	ug/l	70-130	20	70-130	20	20			
tert-Butylbenzene	98-06-6	2.5	0.196	ug/l	70-130	20	70-130	20	20			
o-Chlorotoluene	95-49-8	2.5	0.215	ug/l	70-130	20	70-130	20	20			
p-Chlorotoluene	106-43-4	2.5	0.185	ug/l	70-130	20	70-130	20	20			
1,2-Dibromo-3-chloropropane	96-12-8	2.5	0.353	ug/l	41-144	20	41-144	20	20			
Hexachlorobutadiene	87-68-3	0.5	0.217	ug/l	63-130	20	63-130	20	20			
Isopropylbenzene	98-82-8	0.5	0.187	ug/l	70-130	20	70-130	20	20			
p-Isopropyltoluene	99-87-6	0.5	0.188	ug/l	70-130	20	70-130	20	20			
Naphthalene	91-20-3	2.5	0.216	ug/l	70-130	20	70-130	20	20			
n-Propylbenzene	103-65-1	0.5	0.173	ug/l	69-130	20	69-130	20	20			
1,2,3-Trichlorobenzene	87-61-6	2.5	0.234	ug/l	70-130	20	70-130	20	20			
1,2,4-Trichlorobenzene	120-82-1	2.5	0.22	ug/l	70-130	20	70-130	20	20			
1,3,5-Trimethylbenzene	108-67-8	2.5	0.217	ug/l	64-130	20	64-130	20	20			
1,2,4-Trimethylbenzene	95-63-6	2.5	0.191	ug/l	70-130	20	70-130	20	20			
trans-1,4-Dichloro-2-butene	110-57-6	2.5	0.213	ug/l	70-130	20	70-130	20	20			
Ethyl ether	60-29-7	2.5	0.163	ug/l	59-134	20	59-134	20	20			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
Toluene-d8	*2037-26-5*									*70-130*		
4-Bromofluorobenzene	*460-00-4*									*70-130*		
Dibromofluoromethane	*1868-53-7*									*70-130*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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VOCs - EPA 8260D/5035 High & Low (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - 1 Vial MeOH/2 Vial Water

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Methylene chloride	75-09-2	5	2.29	ug/kg	70-130	30	70-130	30	30			
1,1-Dichloroethane	75-34-3	1	0.145	ug/kg	70-130	30	70-130	30	30			
Chloroform	67-66-3	1.5	0.14	ug/kg	70-130	30	70-130	30	30			
Carbon tetrachloride	56-23-5	1	0.23	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloropropane	78-87-5	1	0.125	ug/kg	70-130	30	70-130	30	30			
Dibromochloromethane	124-48-1	1	0.14	ug/kg	70-130	30	70-130	30	30			
1,1,2-Trichloroethane	79-00-5	1	0.267	ug/kg	70-130	30	70-130	30	30			
Tetrachloroethene	127-18-4	0.5	0.196	ug/kg	70-130	30	70-130	30	30			
Chlorobenzene	108-90-7	0.5	0.127	ug/kg	70-130	30	70-130	30	30			
Trichlorofluoromethane	75-69-4	4	0.695	ug/kg	70-139	30	70-139	30	30			
1,2-Dichloroethane	107-06-2	1	0.257	ug/kg	70-130	30	70-130	30	30			
1,1,1-Trichloroethane	71-55-6	0.5	0.167	ug/kg	70-130	30	70-130	30	30			
Bromodichloromethane	75-27-4	0.5	0.109	ug/kg	70-130	30	70-130	30	30			
trans-1,3-Dichloropropene	10061-02-6	1	0.273	ug/kg	70-130	30	70-130	30	30			
cis-1,3-Dichloropropene	10061-01-5	0.5	0.158	ug/kg	70-130	30	70-130	30	30			
1,3-Dichloropropene, Total	542-75-6	0.5	0.158	ug/kg				30	30			
1,1-Dichloropropene	563-58-6	0.5	0.159	ug/kg	70-130	30	70-130	30	30			
Bromoform	75-25-2	4	0.246	ug/kg	70-130	30	70-130	30	30			
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.166	ug/kg	70-130	30	70-130	30	30			
Benzene	71-43-2	0.5	0.166	ug/kg	70-130	30	70-130	30	30			
Toluene	108-88-3	1	0.543	ug/kg	70-130	30	70-130	30	30			
Ethylbenzene	100-41-4	1	0.141	ug/kg	70-130	30	70-130	30	30			
Chloromethane	74-87-3	4	0.932	ug/kg	52-130	30	52-130	30	30			
Bromomethane	74-83-9	2	0.581	ug/kg	57-147	30	57-147	30	30			
Vinyl chloride	75-01-4	1	0.335	ug/kg	67-130	30	67-130	30	30			
Chloroethane	75-00-3	2	0.452	ug/kg	50-151	30	50-151	30	30			
1,1-Dichloroethene	75-35-4	1	0.238	ug/kg	65-135	30	65-135	30	30			
trans-1,2-Dichloroethene	156-60-5	1.5	0.137	ug/kg	70-130	30	70-130	30	30			
Trichloroethene	79-01-6	0.5	0.137	ug/kg	70-130	30	70-130	30	30			
1,2-Dichlorobenzene	95-50-1	2	0.144	ug/kg	70-130	30	70-130	30	30			
1,3-Dichlorobenzene	541-73-1	2	0.148	ug/kg	70-130	30	70-130	30	30			
1,4-Dichlorobenzene	106-46-7	2	0.171	ug/kg	70-130	30	70-130	30	30			
Methyl tert butyl ether	1634-04-4	2	0.201	ug/kg	66-130	30	66-130	30	30			
p/m-Xylene	179601-23-1	2	0.56	ug/kg	70-130	30	70-130	30	30			
o-Xylene	95-47-6	1	0.291	ug/kg	70-130	30	70-130	30	30			
Xylene (Total)	1330-20-7	1	0.291	ug/kg				30	30			
cis-1,2-Dichloroethene	156-59-2	1	0.175	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloroethene (total)	540-59-0	1	0.137	ug/kg				30	30			
Dibromomethane	74-95-3	2	0.238	ug/kg	70-130	30	70-130	30	30			
1,4-Dichlorobutane	110-56-5	10	0.226	ug/kg	70-130	30	70-130	30	30			
1,2,3-Trichloropropane	96-18-4	2	0.127	ug/kg	68-130	30	68-130	30	30			
Styrene	100-42-5	1	0.196	ug/kg	70-130	30	70-130	30	30			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

VOCs - EPA 8260D/5035 High & Low (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - 1 Vial MeOH/2 Vial Water

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dichlorodifluoromethane	75-71-8	10	0.915	ug/kg	30-146	30	30-146	30	30			
Acetone	67-64-1	25	10	ug/kg	54-140	30	54-140	30	30			
Carbon disulfide	75-15-0	10	4.55	ug/kg	59-130	30	59-130	30	30			
2-Butanone	78-93-3	10	2.22	ug/kg	70-130	30	70-130	30	30			
Vinyl acetate	108-05-4	10	2.15	ug/kg	70-130	30	70-130	30	30			
4-Methyl-2-pentanone	108-10-1	10	1.28	ug/kg	70-130	30	70-130	30	30			
2-Hexanone	591-78-6	10	1.18	ug/kg	70-130	30	70-130	30	30			
Ethyl methacrylate	97-63-2	10	1.58	ug/kg	70-130	30	70-130	30	30			
Acrylonitrile	107-13-1	4	1.15	ug/kg	70-130	30	70-130	30	30			
Bromochloromethane	74-97-5	2	0.205	ug/kg	70-130	30	70-130	30	30			
Tetrahydrofuran	109-99-9	4	1.59	ug/kg	66-130	30	66-130	30	30			
2,2-Dichloropropane	594-20-7	2	0.202	ug/kg	70-130	30	70-130	30	30			
1,2-Dibromoethane	106-93-4	1	0.279	ug/kg	70-130	30	70-130	30	30			
1,3-Dichloropropane	142-28-9	2	0.167	ug/kg	69-130	30	69-130	30	30			
1,1,1,2-Tetrachloroethane	630-20-6	0.5	0.132	ug/kg	70-130	30	70-130	30	30			
Bromobenzene	108-86-1	2	0.145	ug/kg	70-130	30	70-130	30	30			
n-Butylbenzene	104-51-8	1	0.167	ug/kg	70-130	30	70-130	30	30			
sec-Butylbenzene	135-98-8	1	0.146	ug/kg	70-130	30	70-130	30	30			
tert-Butylbenzene	98-06-6	2	0.118	ug/kg	70-130	30	70-130	30	30			
o-Chlorotoluene	95-49-8	2	0.191	ug/kg	70-130	30	70-130	30	30			
p-Chlorotoluene	106-43-4	2	0.108	ug/kg	70-130	30	70-130	30	30			
1,2-Dibromo-3-chloropropane	96-12-8	3	0.998	ug/kg	68-130	30	68-130	30	30			
Hexachlorobutadiene	87-68-3	4	0.169	ug/kg	67-130	30	67-130	30	30			
Isopropylbenzene	98-82-8	1	0.109	ug/kg	70-130	30	70-130	30	30			
p-Isopropyltoluene	99-87-6	1	0.109	ug/kg	70-130	30	70-130	30	30			
Naphthalene	91-20-3	4	0.65	ug/kg	70-130	30	70-130	30	30			
n-Propylbenzene	103-65-1	1	0.171	ug/kg	70-130	30	70-130	30	30			
1,2,3-Trichlorobenzene	87-61-6	2	0.322	ug/kg	70-130	30	70-130	30	30			
1,2,4-Trichlorobenzene	120-82-1	2	0.272	ug/kg	70-130	30	70-130	30	30			
1,3,5-Trimethylbenzene	108-67-8	2	0.193	ug/kg	70-130	30	70-130	30	30			
1,2,4-Trimethylbenzene	95-63-6	2	0.334	ug/kg	70-130	30	70-130	30	30			
trans-1,4-Dichloro-2-butene	110-57-6	5	1.42	ug/kg	70-130	30	70-130	30	30			
Ethyl ether	60-29-7	2	0.341	ug/kg	67-130	30	67-130	30	30			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
Toluene-d8	*2037-26-5*									*70-130*		
4-Bromofluorobenzene	*460-00-4*									*70-130*		
Dibromofluoromethane	*1868-53-7*									*70-130*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Volatiles Sample Data

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N18	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N18	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	3.3	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N18	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:24
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N19	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:24
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N19	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:24
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N19	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:46
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N20	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:46
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N20	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	3.4	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 00:46
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N20	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:09
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N21	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:09
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N21	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	0.60	2.0	0.23	J
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:09
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N21	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:31
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N22	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:31
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N22	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:31
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N22	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:53
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N23	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:53
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N23	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 01:53
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N23	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 02:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N24	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 02:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N24	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	2.6	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 02:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N24	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-08	**Date Collected**	: 03/27/24 00:00
Client ID	: TRIP BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 02:38
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N25	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-08	**Date Collected**	: 03/27/24 00:00
Client ID	: TRIP BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 02:38
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N25	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-08	**Date Collected**	: 03/27/24 00:00
Client ID	: TRIP BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 02:38
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08240402N25	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904126-5	**Date Collected**	: NA
Client ID	: WG1904126-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/02/24 19:09
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: TMS
Lab File ID	: V08240402N05	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904126-5	**Date Collected**	: NA
Client ID	: WG1904126-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/02/24 19:09
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: TMS
Lab File ID	: V08240402N05	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	2.4	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904126-5	**Date Collected**	: NA
Client ID	: WG1904126-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/02/24 19:09
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: TMS
Lab File ID	: V08240402N05	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N18.d
Acq On : 3 Apr 2024 12:02 am
Operator : VOA108:MJV
Sample : L2417074-01,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 03 05:57:57 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	405677	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 81.70%			
59) Chlorobenzene-d5	9.617	117	311993	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 87.31%			
79) 1,4-Dichlorobenzene-d4	12.301	152	149183	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 93.96%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.276	113	108194	10.186	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.86%			
43) 1,2-Dichloroethane-d4	5.805	65	130137	9.980	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.80%			
60) Toluene-d8	7.777	98	401041	9.989	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.89%			
83) 4-Bromofluorobenzene	11.095	95	143630	10.440	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 104.40%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	2.402	64	158	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.068	76	591	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.598	84	50	N.D.		
17) Acetone	3.629	43	9336	3.314	ug/L #	45
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	0.000		0	N.D. d		
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N18.d
Acq On : 3 Apr 2024 12:02 am
Operator : VOA108:MJV
Sample : L2417074-01,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 03 05:57:57 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0		N.D.	
39) 2-Butanone	5.543	43	47		N.D.	
41) Benzene	0.000		0		N.D.	
44) 1,2-Dichloroethane	0.000		0		N.D.	
47) Methyl cyclohexane	0.000		0		N.D.	
48) Trichloroethene	0.000		0		N.D.	
51) 1,2-Dichloropropane	0.000		0		N.D.	
54) Bromodichloromethane	0.000		0		N.D.	
57) 1,4-Dioxane	0.000		0		N.D.	
58) cis-1,3-Dichloropropene	0.000		0		N.D.	
61) Toluene	0.000		0		N.D.	
62) 4-Methyl-2-pentanone	0.000		0		N.D.	
63) Tetrachloroethene	8.285	166	226		N.D.	
65) trans-1,3-Dichloropropene	0.000		0		N.D.	
68) 1,1,2-Trichloroethane	0.000		0		N.D.	
69) Chlorodibromomethane	0.000		0		N.D.	
71) 1,2-Dibromoethane	0.000		0		N.D.	
72) 2-Hexanone	0.000		0		N.D.	d
73) Chlorobenzene	0.000		0		N.D.	
74) Ethylbenzene	9.674	91	175		N.D.	
76) p/m Xylene	9.868	106	115		N.D.	
77) o Xylene	0.000		0		N.D.	
78) Styrene	0.000		0		N.D.	
80) Bromoform	0.000		0		N.D.	
82) Isopropylbenzene	0.000		0		N.D.	
87) 1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100) 1,3-Dichlorobenzene	0.000		0		N.D.	
101) 1,4-Dichlorobenzene	0.000		0		N.D.	
104) 1,2-Dichlorobenzene	0.000		0		N.D.	
106) 1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109) 1,2,4-Trichlorobenzene	0.000		0		N.D.	
111) 1,2,3-Trichlorobenzene	0.000		0		N.D.	

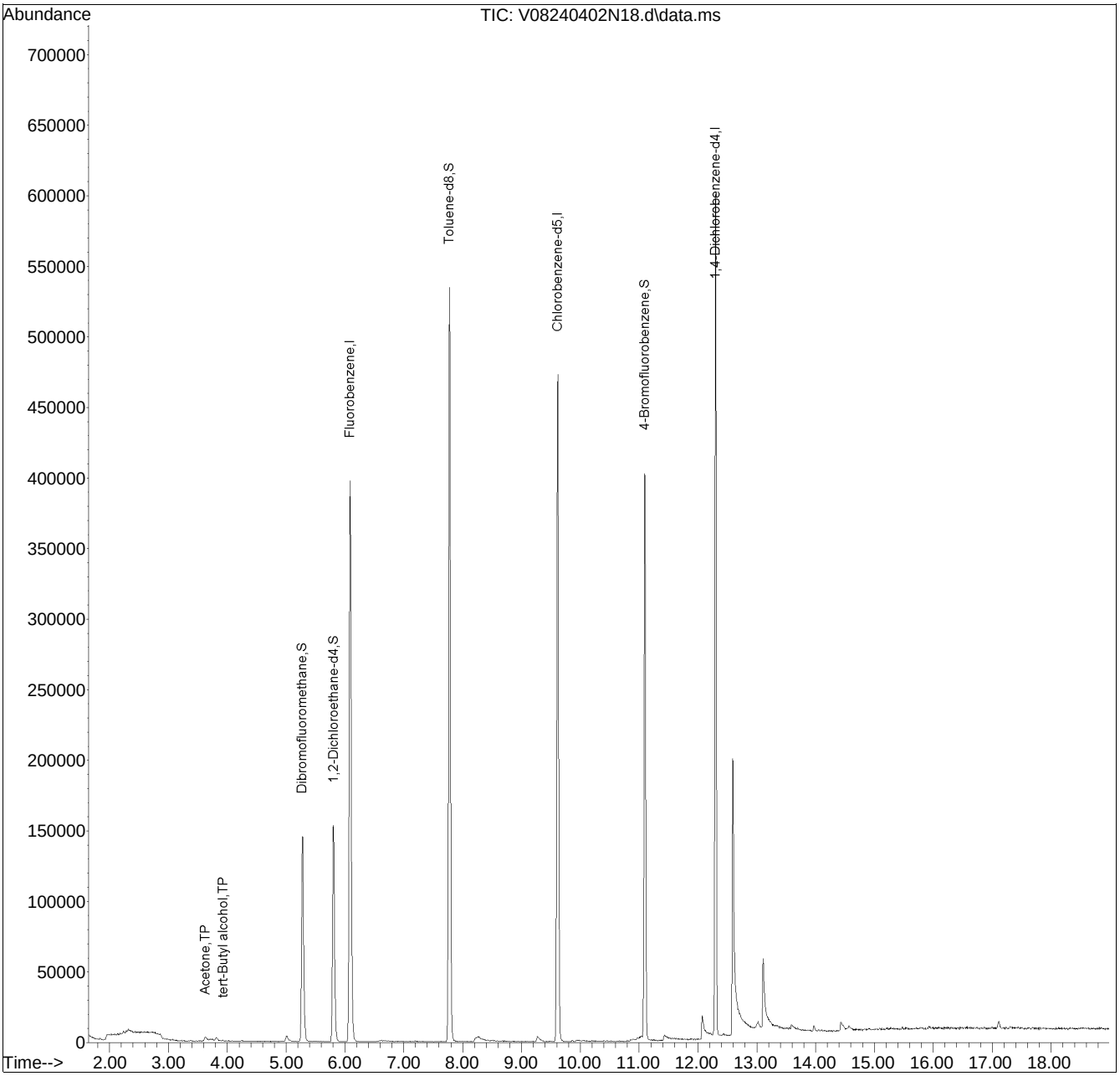
(#) = qualifier out of range (m) = manual integration (+) = signals summed

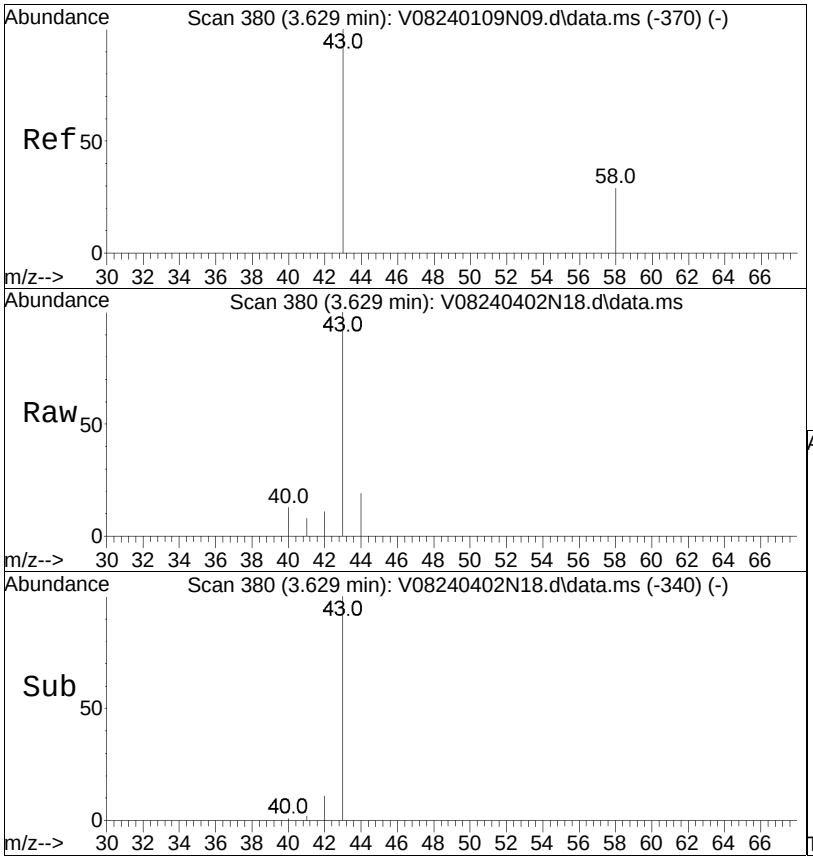
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N18.d
Acq On : 3 Apr 2024 12:02 am
Operator : VOA108:MJV
Sample : L2417074-01,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 03 05:57:57 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•

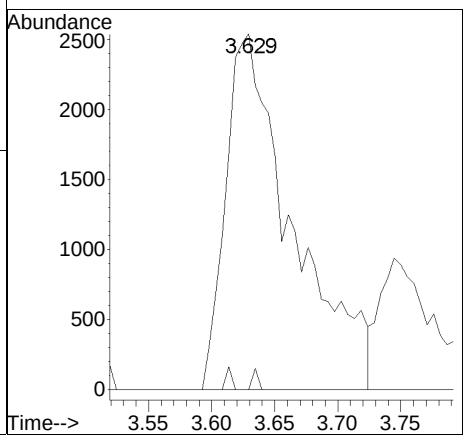




#17
Acetone
Concen: 3.31 ug/L
RT: 3.629 min Scan# 380
Delta R.T. 0.010 min
Lab File: V08240402N18.d
Acq: 3 Apr 2024 12:02 am

Tgt Ion: 43 Resp: 9336

Ion	Ratio	Lower	Upper
43	100		
58	0.5	24.2	36.4#



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N18.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 12:02 am	Instrument	: VOA 108
Sample	: L2417074-01,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N19.d
Acq On : 3 Apr 2024 12:24 am
Operator : VOA108:MJV
Sample : L2417074-02,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 03 05:58:11 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	435364	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 87.68%			
59) Chlorobenzene-d5	9.617	117	325404	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 91.06%			
79) 1,4-Dichlorobenzene-d4	12.301	152	152240	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 95.88%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	116489	10.219	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.19%			
43) 1,2-Dichloroethane-d4	5.800	65	139376	9.960	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.60%			
60) Toluene-d8	7.776	98	428392	10.230	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.30%			
83) 4-Bromofluorobenzene	11.095	95	148547	10.581	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.81%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	2.407	64	116	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.063	76	617	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.587	84	128	N.D.		
17) Acetone	0.000		0	N.D.	d	
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	0.000		0	N.D.	d	
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N19.d
Acq On : 3 Apr 2024 12:24 am
Operator : VOA108:MJV
Sample : L2417074-02,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 03 05:58:11 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0		N.D.	
39) 2-Butanone	5.385	43	51		N.D.	
41) Benzene	0.000		0		N.D.	
44) 1,2-Dichloroethane	0.000		0		N.D.	
47) Methyl cyclohexane	0.000		0		N.D.	
48) Trichloroethene	0.000		0		N.D.	
51) 1,2-Dichloropropane	0.000		0		N.D.	
54) Bromodichloromethane	0.000		0		N.D.	
57) 1,4-Dioxane	0.000		0		N.D.	
58) cis-1,3-Dichloropropene	0.000		0		N.D.	
61) Toluene	7.839	92	101		N.D.	
62) 4-Methyl-2-pentanone	0.000		0		N.D.	
63) Tetrachloroethene	0.000		0		N.D.	
65) trans-1,3-Dichloropropene	0.000		0		N.D.	
68) 1,1,2-Trichloroethane	0.000		0		N.D.	
69) Chlorodibromomethane	0.000		0		N.D.	
71) 1,2-Dibromoethane	0.000		0		N.D.	
72) 2-Hexanone	0.000		0		N.D.	d
73) Chlorobenzene	0.000		0		N.D.	
74) Ethylbenzene	9.680	91	157		N.D.	
76) p/m Xylene	9.874	106	109		N.D.	
77) o Xylene	0.000		0		N.D.	
78) Styrene	0.000		0		N.D.	
80) Bromoform	0.000		0		N.D.	
82) Isopropylbenzene	0.000		0		N.D.	
87) 1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100) 1,3-Dichlorobenzene	0.000		0		N.D.	
101) 1,4-Dichlorobenzene	0.000		0		N.D.	
104) 1,2-Dichlorobenzene	0.000		0		N.D.	
106) 1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109) 1,2,4-Trichlorobenzene	0.000		0		N.D.	
111) 1,2,3-Trichlorobenzene	0.000		0		N.D.	

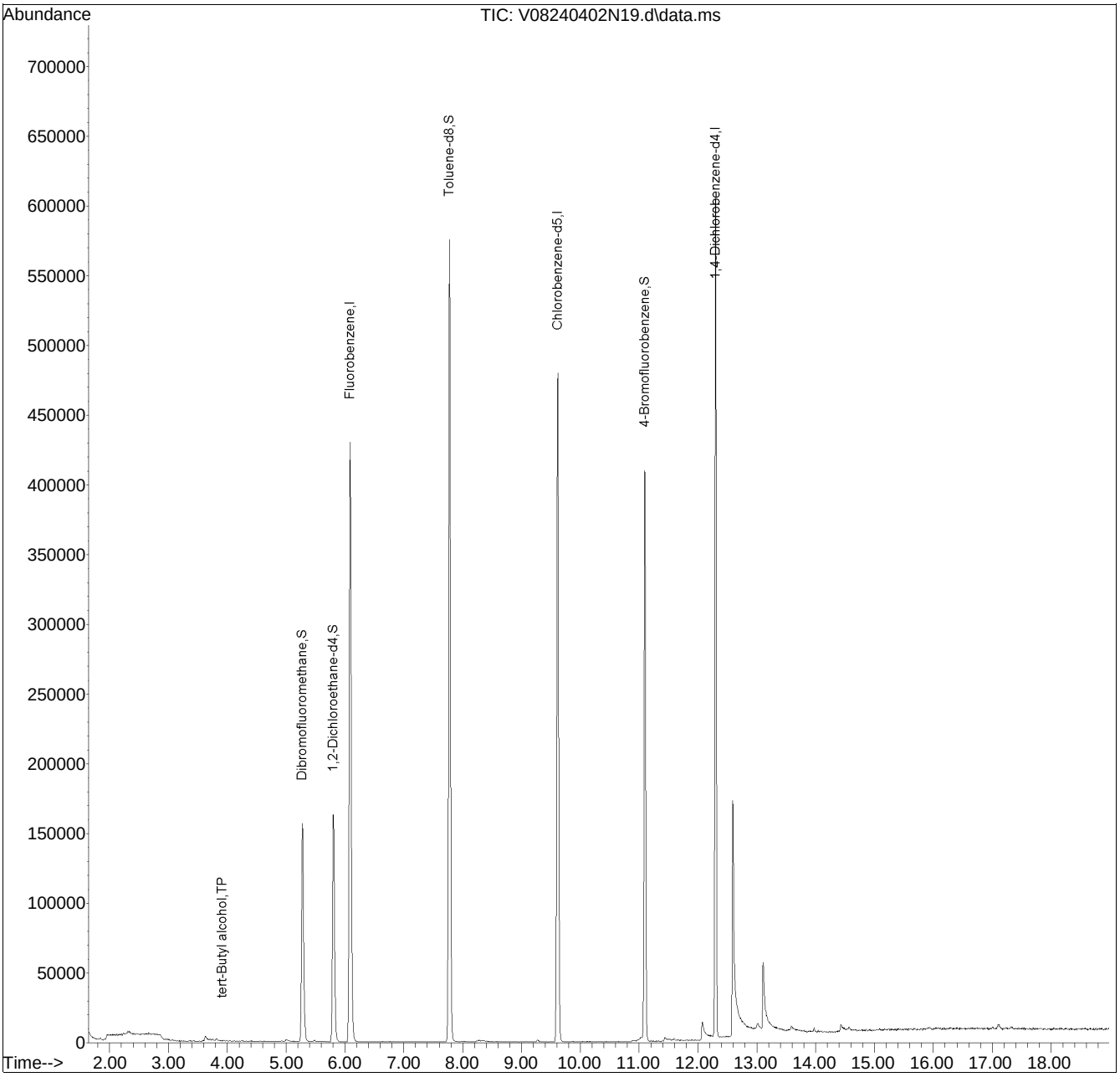
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N19.d
Acq On : 3 Apr 2024 12:24 am
Operator : VOA108:MJV
Sample : L2417074-02,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 03 05:58:11 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N19.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 12:24 am	Instrument	: VOA 108
Sample	: L2417074-02,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N20.d
Acq On : 3 Apr 2024 12:46 am
Operator : VOA108:MJV
Sample : L2417074-03,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 03 05:58:24 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	445953	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 89.82%			
59) Chlorobenzene-d5	9.617	117	325662	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 91.14%			
79) 1,4-Dichlorobenzene-d4	12.301	152	151545	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 95.45%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.281	113	118541	10.152	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.52%			
43) 1,2-Dichloroethane-d4	5.805	65	145215	10.131	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.31%			
60) Toluene-d8	7.776	98	430814	10.280	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.80%			
83) 4-Bromofluorobenzene	11.095	95	148172	10.603	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 106.03%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	2.528	64	47	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.063	76	201	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.587	84	125	N.D.		
17) Acetone	3.634	43	10488	3.430	ug/L #	46
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	0.000		0	N.D. d		
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N20.d
Acq On : 3 Apr 2024 12:46 am
Operator : VOA108:MJV
Sample : L2417074-03,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 03 05:58:24 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0		N.D.	
39) 2-Butanone	5.354	43	52		N.D.	
41) Benzene	0.000		0		N.D.	
44) 1,2-Dichloroethane	0.000		0		N.D.	
47) Methyl cyclohexane	0.000		0		N.D.	
48) Trichloroethene	0.000		0		N.D.	
51) 1,2-Dichloropropane	0.000		0		N.D.	
54) Bromodichloromethane	0.000		0		N.D.	
57) 1,4-Dioxane	0.000		0		N.D.	
58) cis-1,3-Dichloropropene	0.000		0		N.D.	
61) Toluene	0.000		0		N.D.	
62) 4-Methyl-2-pentanone	0.000		0		N.D.	
63) Tetrachloroethene	0.000		0		N.D.	
65) trans-1,3-Dichloropropene	0.000		0		N.D.	
68) 1,1,2-Trichloroethane	0.000		0		N.D.	
69) Chlorodibromomethane	0.000		0		N.D.	
71) 1,2-Dibromoethane	0.000		0		N.D.	
72) 2-Hexanone	9.260	43	113		N.D.	
73) Chlorobenzene	0.000		0		N.D.	
74) Ethylbenzene	9.674	91	119		N.D.	
76) p/m Xylene	9.858	106	52		N.D.	
77) o Xylene	0.000		0		N.D.	
78) Styrene	0.000		0		N.D.	
80) Bromoform	0.000		0		N.D.	
82) Isopropylbenzene	0.000		0		N.D.	
87) 1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100) 1,3-Dichlorobenzene	0.000		0		N.D.	
101) 1,4-Dichlorobenzene	0.000		0		N.D.	
104) 1,2-Dichlorobenzene	0.000		0		N.D.	
106) 1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109) 1,2,4-Trichlorobenzene	0.000		0		N.D.	
111) 1,2,3-Trichlorobenzene	0.000		0		N.D.	

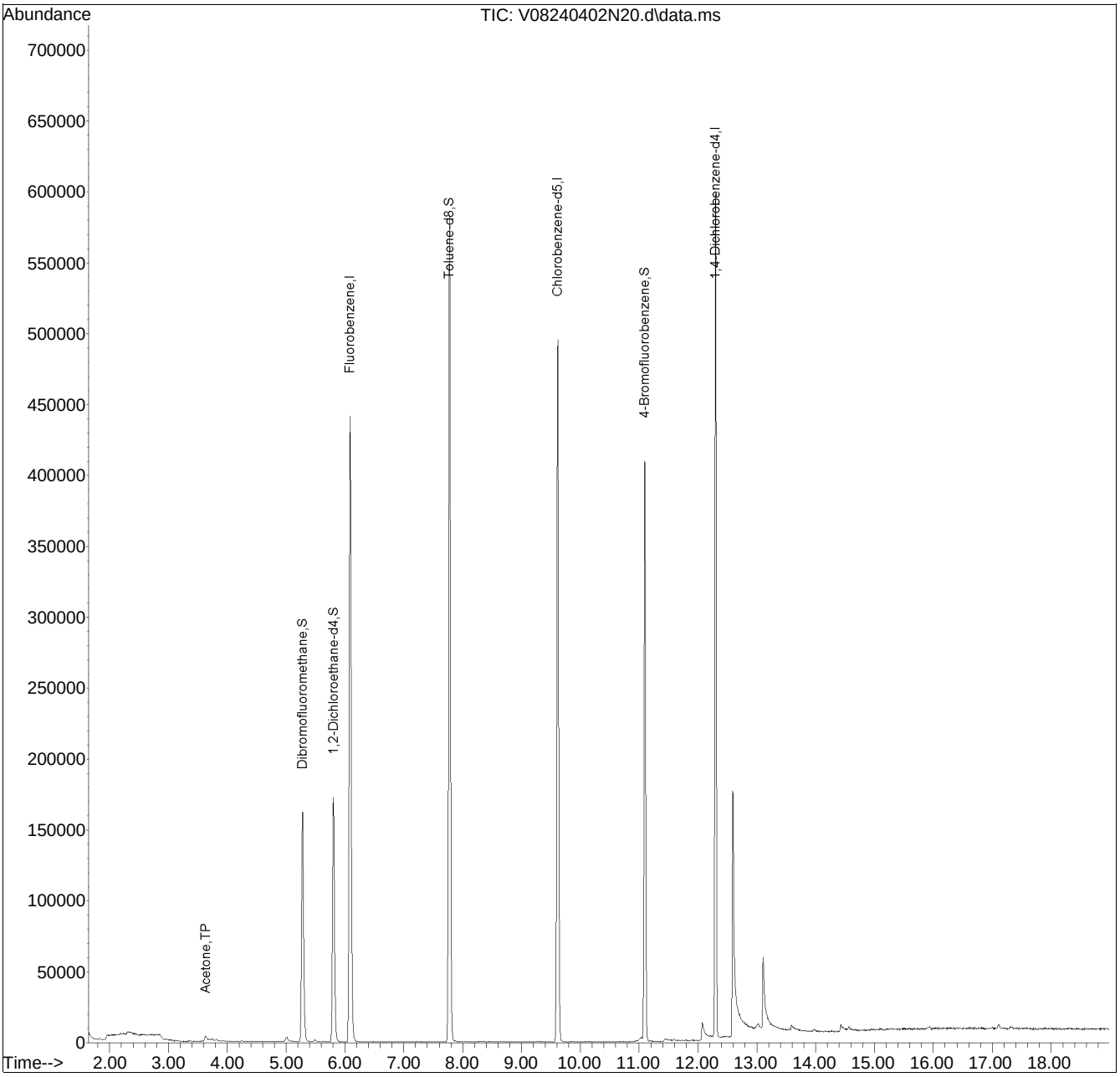
(#) = qualifier out of range (m) = manual integration (+) = signals summed

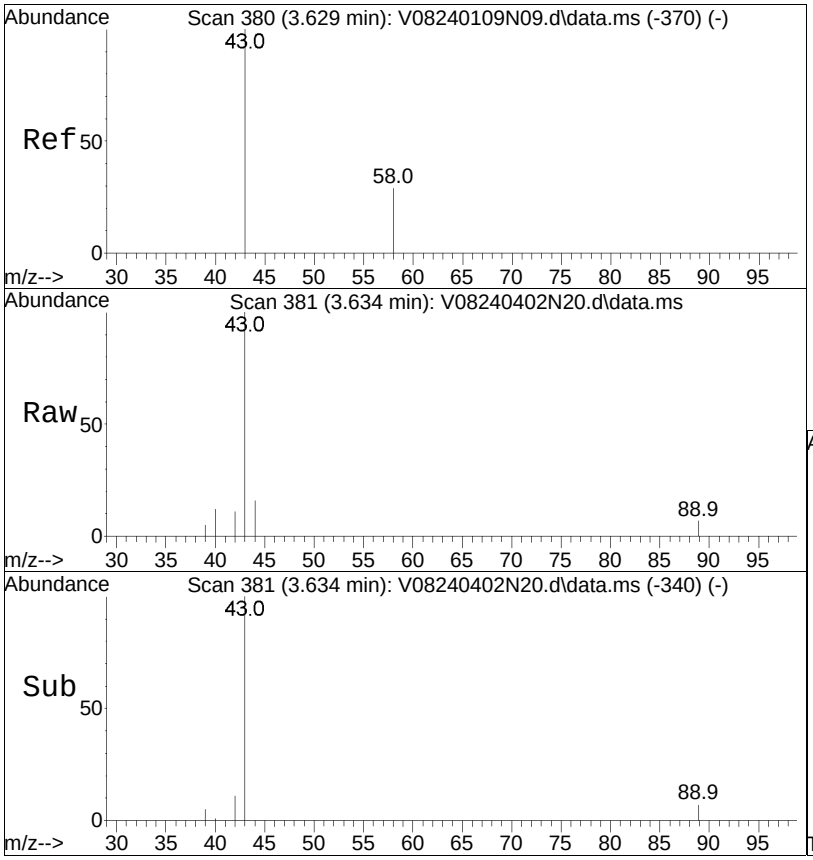
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N20.d
Acq On : 3 Apr 2024 12:46 am
Operator : VOA108:MJV
Sample : L2417074-03,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 03 05:58:24 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•

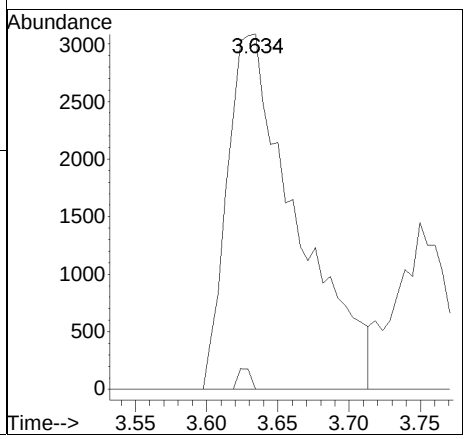




#17
Acetone
Concen: 3.43 ug/L
RT: 3.634 min Scan# 381
Delta R.T. 0.015 min
Lab File: V08240402N20.d
Acq: 3 Apr 2024 12:46 am

Tgt Ion: 43 Resp: 10488

Ion	Ratio	Lower	Upper
43	100		
58	1.1	24.2	36.4#



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N20.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 12:46 am	Instrument	: VOA 108
Sample	: L2417074-03,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N21.d
Acq On : 3 Apr 2024 1:09 am
Operator : VOA108:MJV
Sample : L2417074-04,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 03 05:58:38 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	428009	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 86.20%			
59) Chlorobenzene-d5	9.617	117	322846	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 90.35%			
79) 1,4-Dichlorobenzene-d4	12.301	152	154009	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 97.00%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.276	113	113511	10.129	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.29%			
43) 1,2-Dichloroethane-d4	5.805	65	139261	10.123	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.23%			
60) Toluene-d8	7.776	98	421020	10.134	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.34%			
83) 4-Bromofluorobenzene	11.095	95	149012	10.492	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 104.92%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.058	76	367	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.603	84	153	N.D.		
17) Acetone	0.000		0	N.D.	d	
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	3.755	43	3082	0.602	ug/L #	86
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N21.d
Acq On : 3 Apr 2024 1:09 am
Operator : VOA108:MJV
Sample : L2417074-04,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 03 05:58:38 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0		N.D.	
39) 2-Butanone	5.296	43	52		N.D.	
41) Benzene	0.000		0		N.D.	
44) 1,2-Dichloroethane	0.000		0		N.D.	
47) Methyl cyclohexane	0.000		0		N.D.	
48) Trichloroethene	0.000		0		N.D.	
51) 1,2-Dichloropropane	0.000		0		N.D.	
54) Bromodichloromethane	0.000		0		N.D.	
57) 1,4-Dioxane	0.000		0		N.D.	
58) cis-1,3-Dichloropropene	0.000		0		N.D.	
61) Toluene	0.000		0		N.D.	
62) 4-Methyl-2-pentanone	0.000		0		N.D.	
63) Tetrachloroethene	0.000		0		N.D.	
65) trans-1,3-Dichloropropene	0.000		0		N.D.	
68) 1,1,2-Trichloroethane	0.000		0		N.D.	
69) Chlorodibromomethane	0.000		0		N.D.	
71) 1,2-Dibromoethane	0.000		0		N.D.	
72) 2-Hexanone	0.000		0		N.D.	d
73) Chlorobenzene	0.000		0		N.D.	
74) Ethylbenzene	9.674	91	175		N.D.	
76) p/m Xylene	9.868	106	58		N.D.	
77) o Xylene	0.000		0		N.D.	
78) Styrene	0.000		0		N.D.	
80) Bromoform	0.000		0		N.D.	
82) Isopropylbenzene	0.000		0		N.D.	
87) 1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100) 1,3-Dichlorobenzene	0.000		0		N.D.	
101) 1,4-Dichlorobenzene	0.000		0		N.D.	
104) 1,2-Dichlorobenzene	0.000		0		N.D.	
106) 1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109) 1,2,4-Trichlorobenzene	0.000		0		N.D.	
111) 1,2,3-Trichlorobenzene	0.000		0		N.D.	

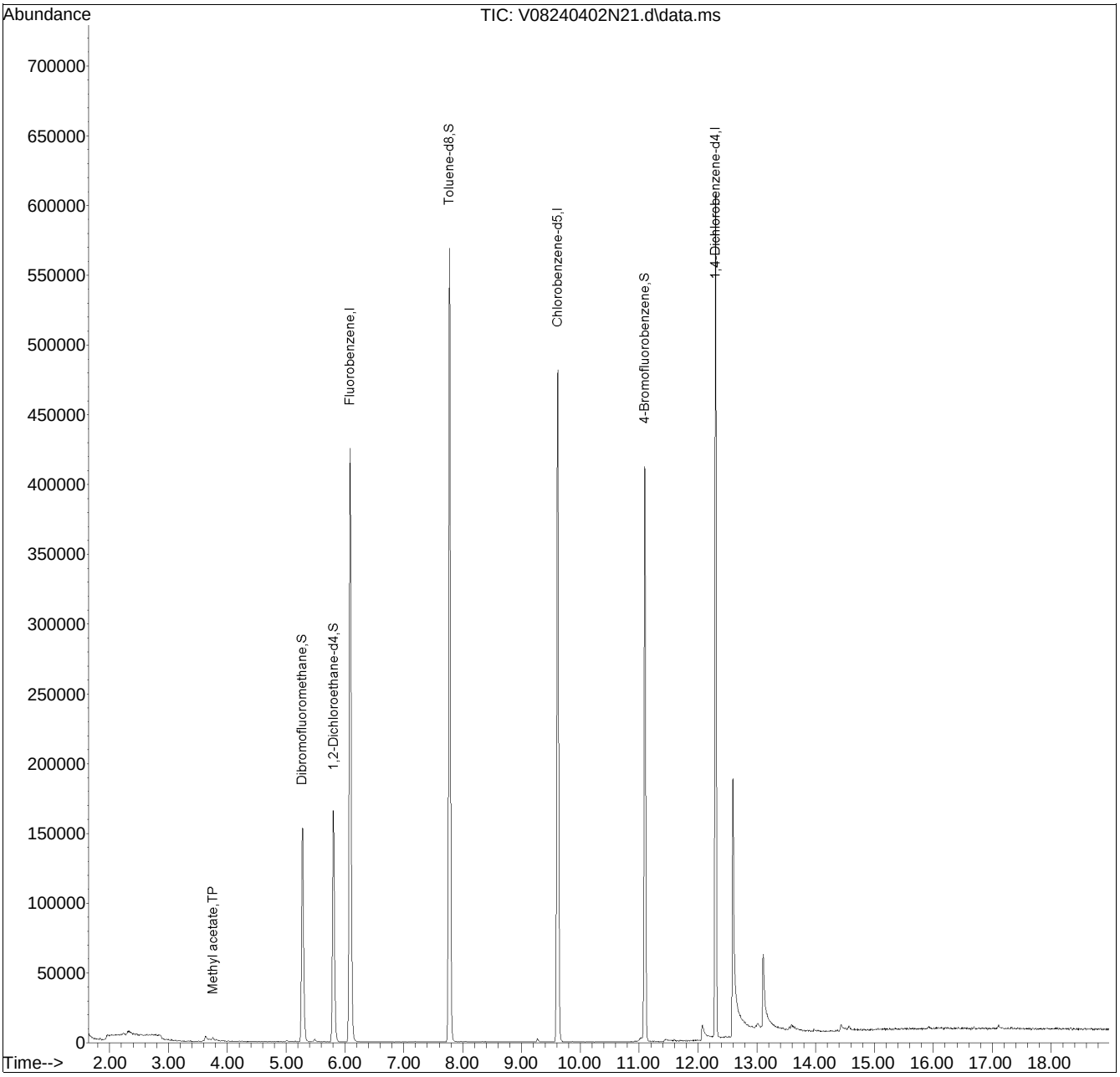
(#) = qualifier out of range (m) = manual integration (+) = signals summed

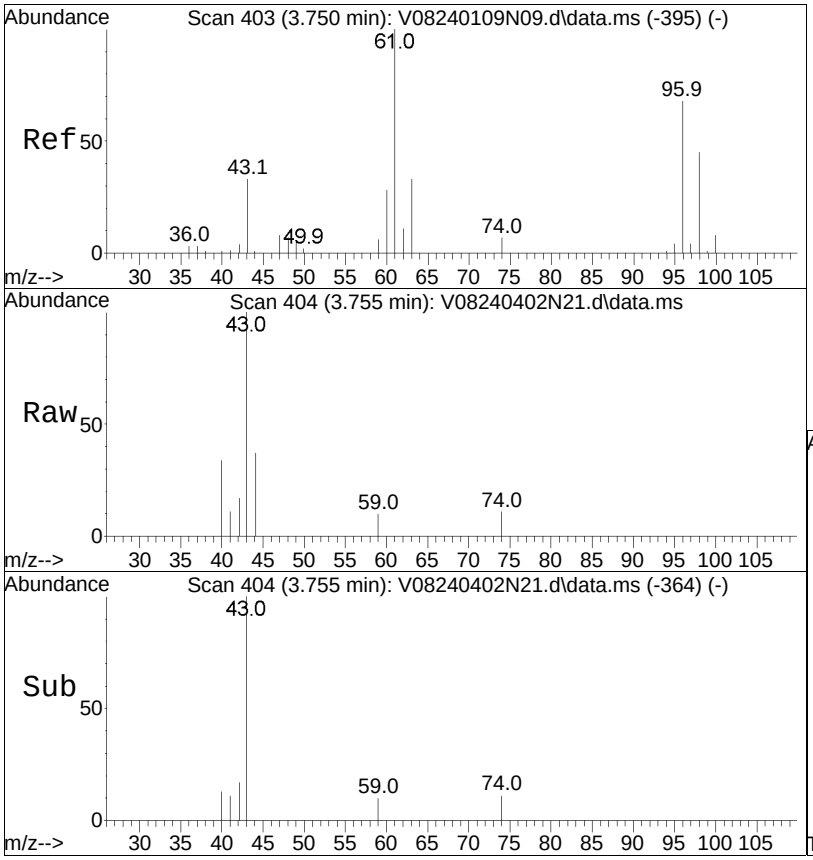
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N21.d
Acq On : 3 Apr 2024 1:09 am
Operator : VOA108:MJV
Sample : L2417074-04,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 03 05:58:38 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•

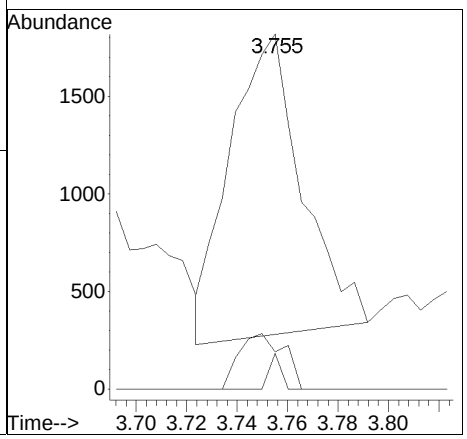




#19
Methyl acetate
Concen: 0.60 ug/L
RT: 3.755 min Scan# 404
Delta R.T. 0.011 min
Lab File: V08240402N21.d
Acq: 3 Apr 2024 1:09 am

Tgt Ion: 43 Resp: 3082

Ion	Ratio	Lower	Upper
43	100		
74	11.5	14.2	21.4#
59	1.9	5.0	7.6#



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N21.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 1:09 am	Instrument	: VOA 108
Sample	: L2417074-04,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N22.d
Acq On : 3 Apr 2024 1:31 am
Operator : VOA108:MJV
Sample : L2417074-05,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 03 05:58:48 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	446473	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 89.92%			
59) Chlorobenzene-d5	9.617	117	331137	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 92.67%			
79) 1,4-Dichlorobenzene-d4	12.301	152	155071	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 97.67%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.281	113	118493	10.136	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.36%			
43) 1,2-Dichloroethane-d4	5.805	65	145462	10.136	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.36%			
60) Toluene-d8	7.776	98	431343	10.122	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.22%			
83) 4-Bromofluorobenzene	11.095	95	152235	10.646	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 106.46%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.063	76	123	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.587	84	167	N.D.		
17) Acetone	0.000		0	N.D.	d	
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	0.000		0	N.D.	d	
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N22.d
Acq On : 3 Apr 2024 1:31 am
Operator : VOA108:MJV
Sample : L2417074-05,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 03 05:58:48 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0		N.D.	
39) 2-Butanone	5.417	43	59		N.D.	
41) Benzene	0.000		0		N.D.	
44) 1,2-Dichloroethane	0.000		0		N.D.	
47) Methyl cyclohexane	0.000		0		N.D.	
48) Trichloroethene	0.000		0		N.D.	
51) 1,2-Dichloropropane	0.000		0		N.D.	
54) Bromodichloromethane	0.000		0		N.D.	
57) 1,4-Dioxane	0.000		0		N.D.	
58) cis-1,3-Dichloropropene	0.000		0		N.D.	
61) Toluene	0.000		0		N.D.	
62) 4-Methyl-2-pentanone	0.000		0		N.D.	
63) Tetrachloroethene	0.000		0		N.D.	
65) trans-1,3-Dichloropropene	0.000		0		N.D.	
68) 1,1,2-Trichloroethane	0.000		0		N.D.	
69) Chlorodibromomethane	0.000		0		N.D.	
71) 1,2-Dibromoethane	0.000		0		N.D.	
72) 2-Hexanone	9.276	43	60		N.D.	
73) Chlorobenzene	0.000		0		N.D.	
74) Ethylbenzene	9.617	91	525		N.D.	
76) p/m Xylene	9.873	106	50		N.D.	
77) o Xylene	0.000		0		N.D.	
78) Styrene	0.000		0		N.D.	
80) Bromoform	0.000		0		N.D.	
82) Isopropylbenzene	0.000		0		N.D.	
87) 1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100) 1,3-Dichlorobenzene	0.000		0		N.D.	
101) 1,4-Dichlorobenzene	0.000		0		N.D.	
104) 1,2-Dichlorobenzene	0.000		0		N.D.	
106) 1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109) 1,2,4-Trichlorobenzene	0.000		0		N.D.	
111) 1,2,3-Trichlorobenzene	0.000		0		N.D.	

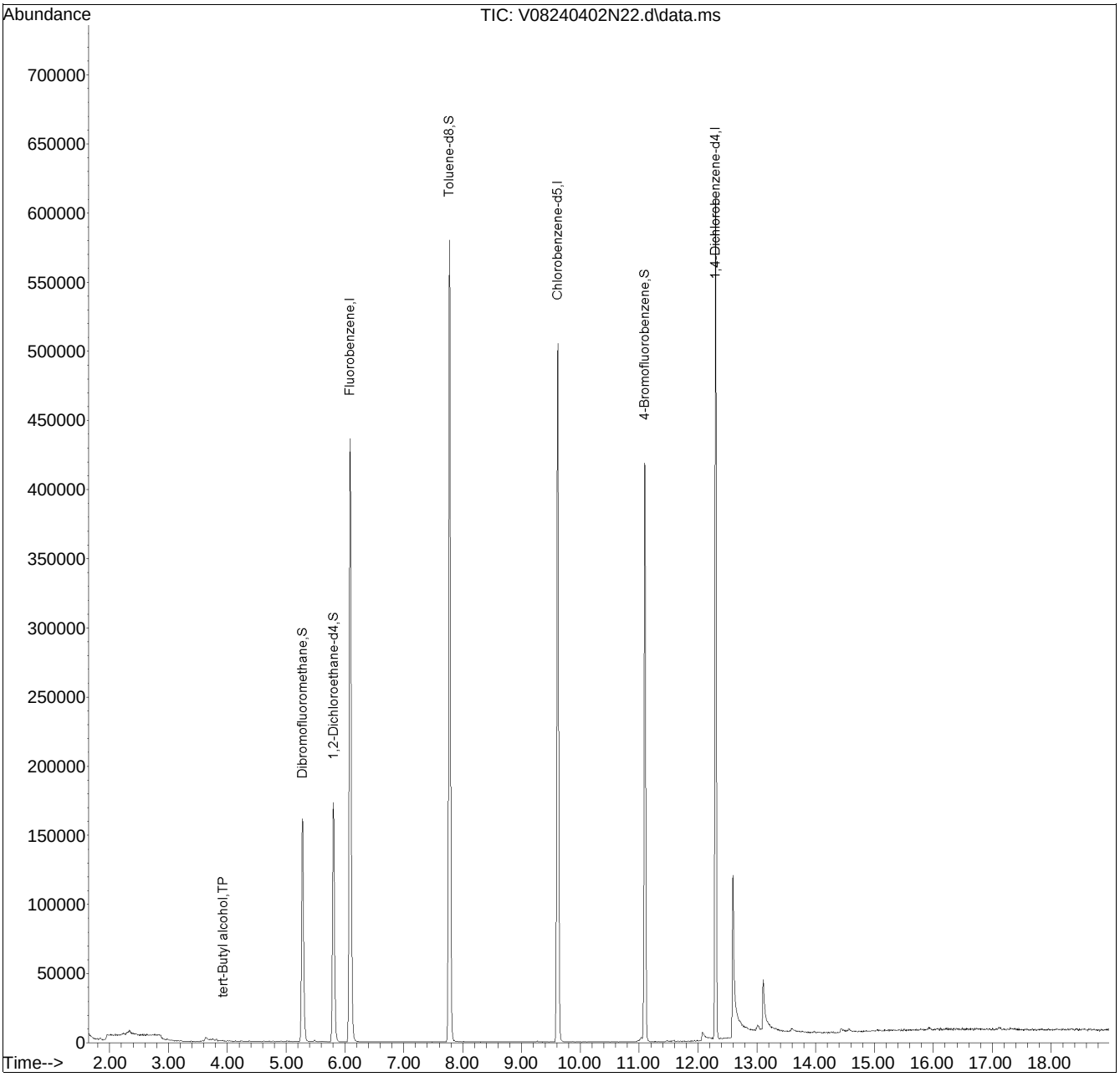
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N22.d
Acq On : 3 Apr 2024 1:31 am
Operator : VOA108:MJV
Sample : L2417074-05,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 03 05:58:48 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N22.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 1:31 am	Instrument	: VOA 108
Sample	: L2417074-05,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N23.d
Acq On : 3 Apr 2024 1:53 am
Operator : VOA108:MJV
Sample : L2417074-06,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 03 05:59:03 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.088	96	451712	10.000 ug/L	0.00
Standard Area 1 = 496523			Recovery = 90.98%		
59) Chlorobenzene-d5	9.617	117	334225	10.000 ug/L	0.00
Standard Area 1 = 357338			Recovery = 93.53%		
79) 1,4-Dichlorobenzene-d4	12.301	152	153058	10.000 ug/L	0.00
Standard Area 1 = 158777			Recovery = 96.40%		
System Monitoring Compounds					
36) Dibromofluoromethane	5.276	113	119687	10.120 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.20%		
43) 1,2-Dichloroethane-d4	5.800	65	145685	10.034 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.34%		
60) Toluene-d8	7.777	98	440466	10.241 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.41%		
83) 4-Bromofluorobenzene	11.095	95	151480	10.732 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 107.32%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	0.000		0	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
10) 1,1-Dichloroethene	0.000		0	N.D.	
11) Carbon disulfide	3.047	76	57	N.D.	
12) Freon-113	0.000		0	N.D.	
15) Methylene chloride	3.593	84	55	N.D.	
17) Acetone	0.000		0	N.D.	d
18) trans-1,2-Dichloroethene	0.000		0	N.D.	
19) Methyl acetate	0.000		0	N.D.	d
20) Methyl tert-butyl ether	0.000		0	N.D.	
23) 1,1-Dichloroethane	0.000		0	N.D.	
28) cis-1,2-Dichloroethene	0.000		0	N.D.	
30) Bromochloromethane	0.000		0	N.D.	
31) Cyclohexane	0.000		0	N.D.	
32) Chloroform	0.000		0	N.D.	
34) Carbon tetrachloride	0.000		0	N.D.	

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N23.d
Acq On : 3 Apr 2024 1:53 am
Operator : VOA108:MJV
Sample : L2417074-06,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 03 05:59:03 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0		N.D.	
39) 2-Butanone	5.370	43	48		N.D.	
41) Benzene	0.000		0		N.D.	
44) 1,2-Dichloroethane	0.000		0		N.D.	
47) Methyl cyclohexane	0.000		0		N.D.	
48) Trichloroethene	0.000		0		N.D.	
51) 1,2-Dichloropropane	0.000		0		N.D.	
54) Bromodichloromethane	0.000		0		N.D.	
57) 1,4-Dioxane	0.000		0		N.D.	
58) cis-1,3-Dichloropropene	0.000		0		N.D.	
61) Toluene	0.000		0		N.D.	
62) 4-Methyl-2-pentanone	0.000		0		N.D.	
63) Tetrachloroethene	0.000		0		N.D.	
65) trans-1,3-Dichloropropene	0.000		0		N.D.	
68) 1,1,2-Trichloroethane	0.000		0		N.D.	
69) Chlorodibromomethane	0.000		0		N.D.	
71) 1,2-Dibromoethane	0.000		0		N.D.	
72) 2-Hexanone	9.271	43	165		N.D.	
73) Chlorobenzene	0.000		0		N.D.	
74) Ethylbenzene	9.617	91	626		N.D.	
76) p/m Xylene	0.000		0		N.D.	
77) o Xylene	0.000		0		N.D.	
78) Styrene	0.000		0		N.D.	
80) Bromoform	0.000		0		N.D.	
82) Isopropylbenzene	0.000		0		N.D.	
87) 1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100) 1,3-Dichlorobenzene	0.000		0		N.D.	
101) 1,4-Dichlorobenzene	0.000		0		N.D.	
104) 1,2-Dichlorobenzene	0.000		0		N.D.	
106) 1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109) 1,2,4-Trichlorobenzene	0.000		0		N.D.	
111) 1,2,3-Trichlorobenzene	0.000		0		N.D.	

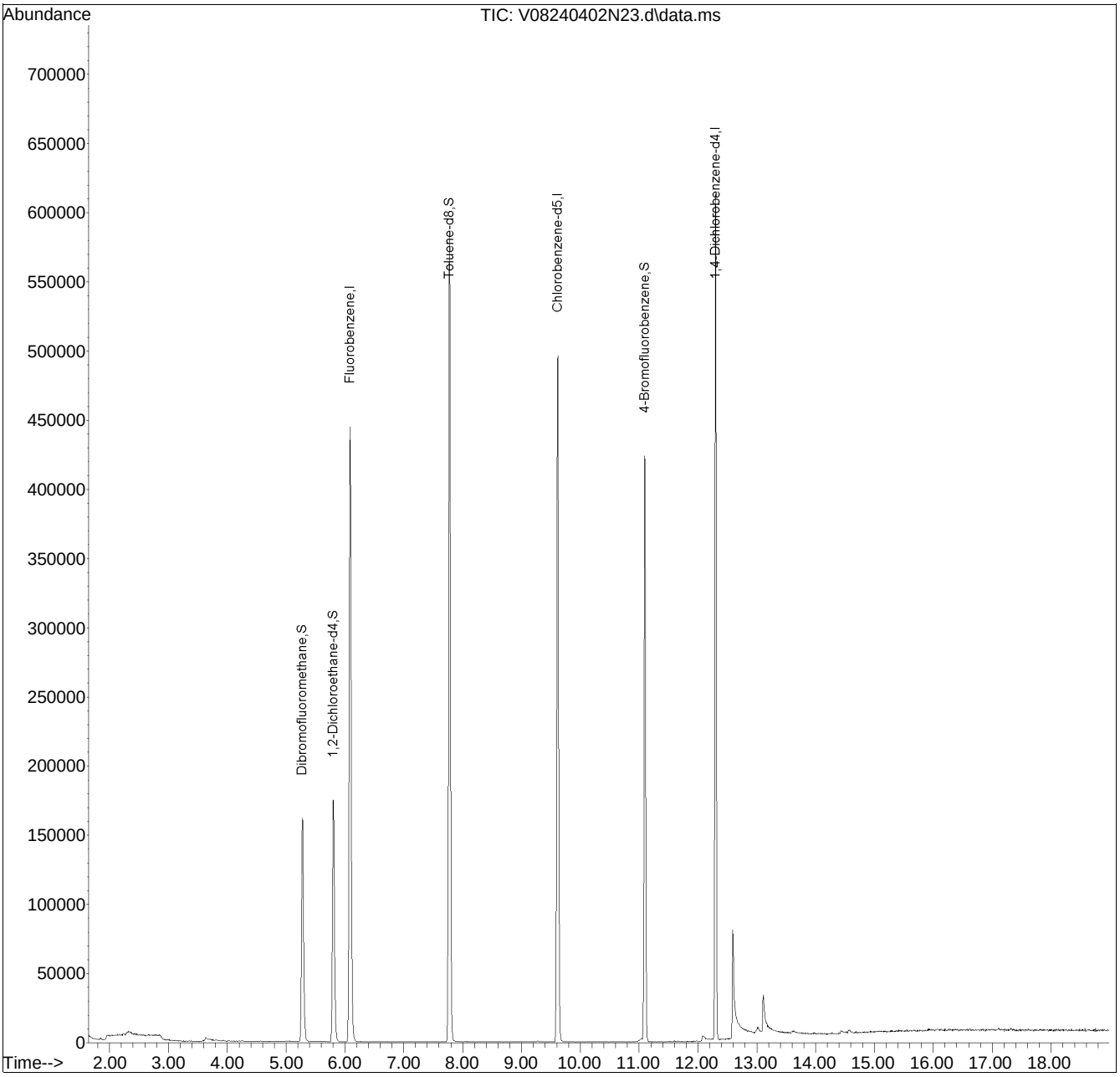
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N23.d
Acq On : 3 Apr 2024 1:53 am
Operator : VOA108:MJV
Sample : L2417074-06,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 03 05:59:03 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N23.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 1:53 am	Instrument	: VOA 108
Sample	: L2417074-06,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N24.d
Acq On : 3 Apr 2024 2:15 am
Operator : VOA108:MJV
Sample : L2417074-07,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 03 05:59:18 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	460147	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 92.67%			
59) Chlorobenzene-d5	9.617	117	347517	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 97.25%			
79) 1,4-Dichlorobenzene-d4	12.301	152	163897	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 103.22%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.276	113	123130	10.220	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.20%			
43) 1,2-Dichloroethane-d4	5.800	65	150711	10.190	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.90%			
60) Toluene-d8	7.776	98	450831	10.081	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.81%			
83) 4-Bromofluorobenzene	11.095	95	159549	10.556	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.56%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	1.904	50	47	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	2.276	94	48	N.D.		
6) Chloroethane	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.063	76	665	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.592	84	60	N.D.		
17) Acetone	3.645	43	9094	2.566	ug/L #	49
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	0.000		0	N.D. d		
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N24.d
Acq On : 3 Apr 2024 2:15 am
Operator : VOA108:MJV
Sample : L2417074-07,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 03 05:59:18 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37)	1,1,1-Trichloroethane	0.000		0		N.D.	
39)	2-Butanone	5.386	43	62		N.D.	
41)	Benzene	0.000		0		N.D.	
44)	1,2-Dichloroethane	0.000		0		N.D.	
47)	Methyl cyclohexane	0.000		0		N.D.	
48)	Trichloroethene	0.000		0		N.D.	
51)	1,2-Dichloropropane	0.000		0		N.D.	
54)	Bromodichloromethane	0.000		0		N.D.	
57)	1,4-Dioxane	0.000		0		N.D.	
58)	cis-1,3-Dichloropropene	0.000		0		N.D.	
61)	Toluene	7.834	92	49		N.D.	
62)	4-Methyl-2-pentanone	0.000		0		N.D.	
63)	Tetrachloroethene	0.000		0		N.D.	
65)	trans-1,3-Dichloropropene	0.000		0		N.D.	
68)	1,1,2-Trichloroethane	0.000		0		N.D.	
69)	Chlorodibromomethane	0.000		0		N.D.	
71)	1,2-Dibromoethane	0.000		0		N.D.	
72)	2-Hexanone	0.000		0		N.D.	d
73)	Chlorobenzene	0.000		0		N.D.	
74)	Ethylbenzene	9.685	91	151		N.D.	
76)	p/m Xylene	0.000		0		N.D.	
77)	o Xylene	0.000		0		N.D.	
78)	Styrene	0.000		0		N.D.	
80)	Bromoform	0.000		0		N.D.	
82)	Isopropylbenzene	0.000		0		N.D.	
87)	1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100)	1,3-Dichlorobenzene	0.000		0		N.D.	
101)	1,4-Dichlorobenzene	0.000		0		N.D.	
104)	1,2-Dichlorobenzene	0.000		0		N.D.	
106)	1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109)	1,2,4-Trichlorobenzene	0.000		0		N.D.	
111)	1,2,3-Trichlorobenzene	0.000		0		N.D.	

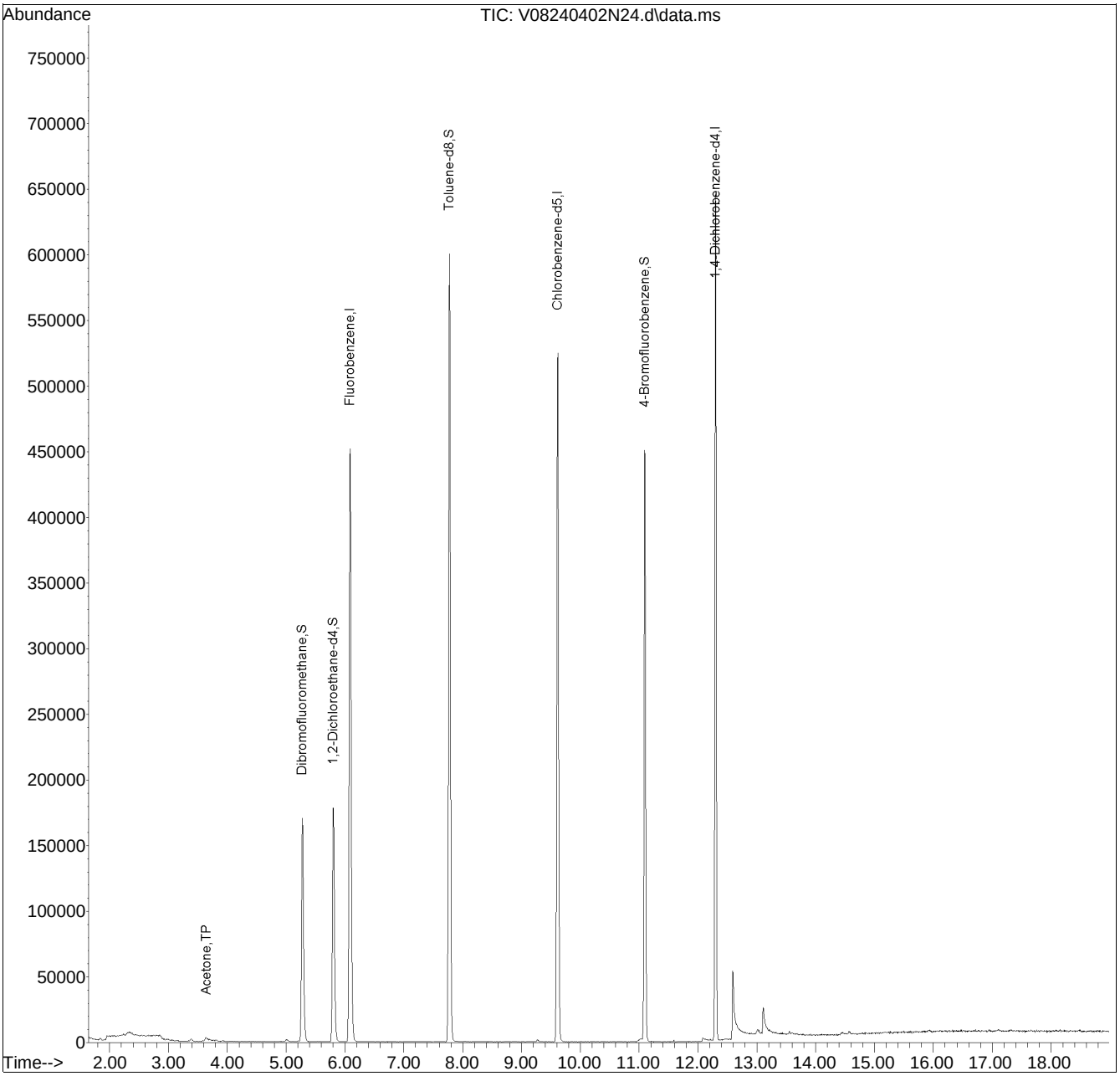
(#) = qualifier out of range (m) = manual integration (+) = signals summed

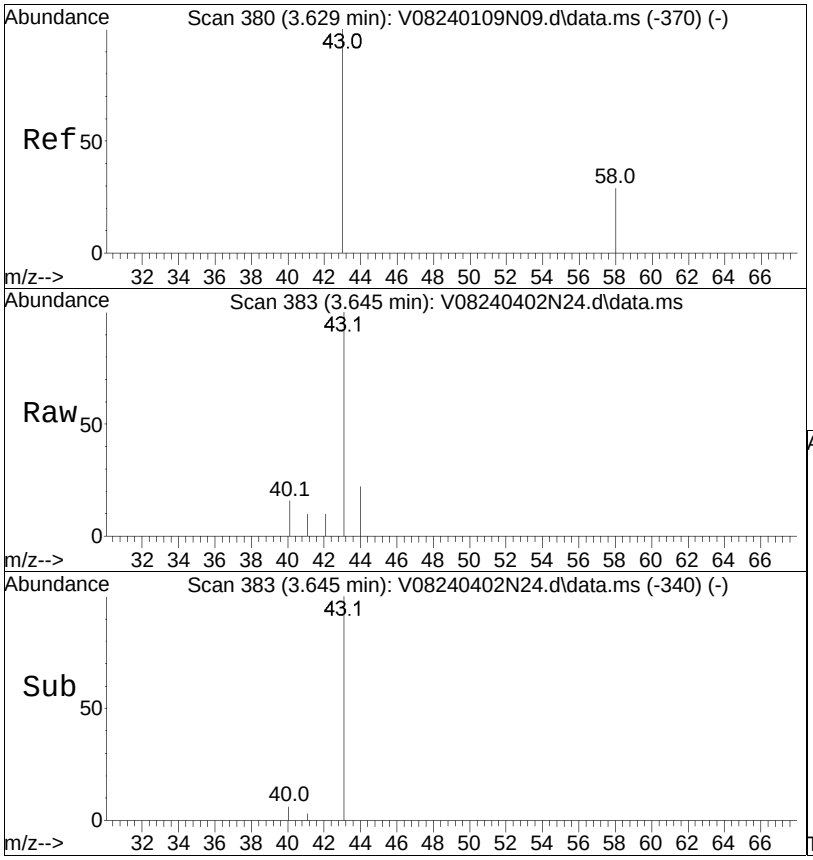
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N24.d
Acq On : 3 Apr 2024 2:15 am
Operator : VOA108:MJV
Sample : L2417074-07,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 03 05:59:18 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•

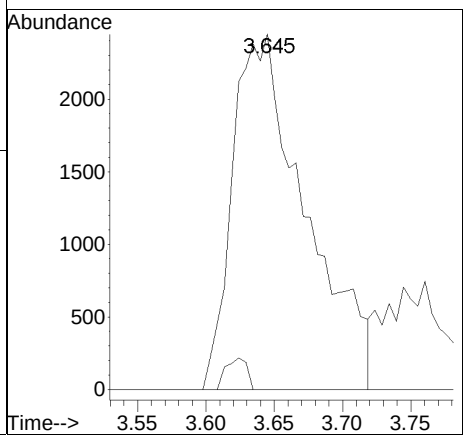




#17
Acetone
Concen: 2.57 ug/L
RT: 3.645 min Scan# 383
Delta R.T. 0.026 min
Lab File: V08240402N24.d
Acq: 3 Apr 2024 2:15 am

Tgt Ion: 43 Resp: 9094

Ion	Ratio	Lower	Upper
43	100		
58	2.6	24.2	36.4#



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N24.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 2:15 am	Instrument	: VOA 108
Sample	: L2417074-07,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N25.d
Acq On : 3 Apr 2024 2:38 am
Operator : VOA108:MJV
Sample : L2417074-08,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 03 05:59:29 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	469359	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 94.53%			
59) Chlorobenzene-d5	9.617	117	345655	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 96.73%			
79) 1,4-Dichlorobenzene-d4	12.301	152	161320	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 101.60%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	123479	10.048	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.48%			
43) 1,2-Dichloroethane-d4	5.805	65	153128	10.150	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.50%			
60) Toluene-d8	7.776	98	455172	10.233	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.33%			
83) 4-Bromofluorobenzene	11.095	95	156387	10.512	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.12%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.063	76	227	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.582	84	56	N.D.		
17) Acetone	0.000		0	N.D.	d	
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	0.000		0	N.D.	d	
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N25.d
Acq On : 3 Apr 2024 2:38 am
Operator : VOA108:MJV
Sample : L2417074-08,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 03 05:59:29 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0		N.D.	
39) 2-Butanone	0.000		0		N.D.	
41) Benzene	0.000		0		N.D.	
44) 1,2-Dichloroethane	0.000		0		N.D.	
47) Methyl cyclohexane	0.000		0		N.D.	
48) Trichloroethene	0.000		0		N.D.	
51) 1,2-Dichloropropane	0.000		0		N.D.	
54) Bromodichloromethane	0.000		0		N.D.	
57) 1,4-Dioxane	0.000		0		N.D.	
58) cis-1,3-Dichloropropene	0.000		0		N.D.	
61) Toluene	7.839	92	52		N.D.	
62) 4-Methyl-2-pentanone	0.000		0		N.D.	
63) Tetrachloroethene	0.000		0		N.D.	
65) trans-1,3-Dichloropropene	0.000		0		N.D.	
68) 1,1,2-Trichloroethane	0.000		0		N.D.	
69) Chlorodibromomethane	0.000		0		N.D.	
71) 1,2-Dibromoethane	0.000		0		N.D.	
72) 2-Hexanone	9.265	43	99		N.D.	
73) Chlorobenzene	0.000		0		N.D.	
74) Ethylbenzene	9.617	91	538		N.D.	
76) p/m Xylene	0.000		0		N.D.	
77) o Xylene	0.000		0		N.D.	
78) Styrene	0.000		0		N.D.	
80) Bromoform	0.000		0		N.D.	
82) Isopropylbenzene	0.000		0		N.D.	
87) 1,1,2,2-Tetrachloroethane	0.000		0		N.D.	
100) 1,3-Dichlorobenzene	12.306	146	51		N.D.	
101) 1,4-Dichlorobenzene	12.306	146	51		N.D.	
104) 1,2-Dichlorobenzene	0.000		0		N.D.	
106) 1,2-Dibromo-3-chloropr...	0.000		0		N.D.	
109) 1,2,4-Trichlorobenzene	0.000		0		N.D.	
111) 1,2,3-Trichlorobenzene	0.000		0		N.D.	

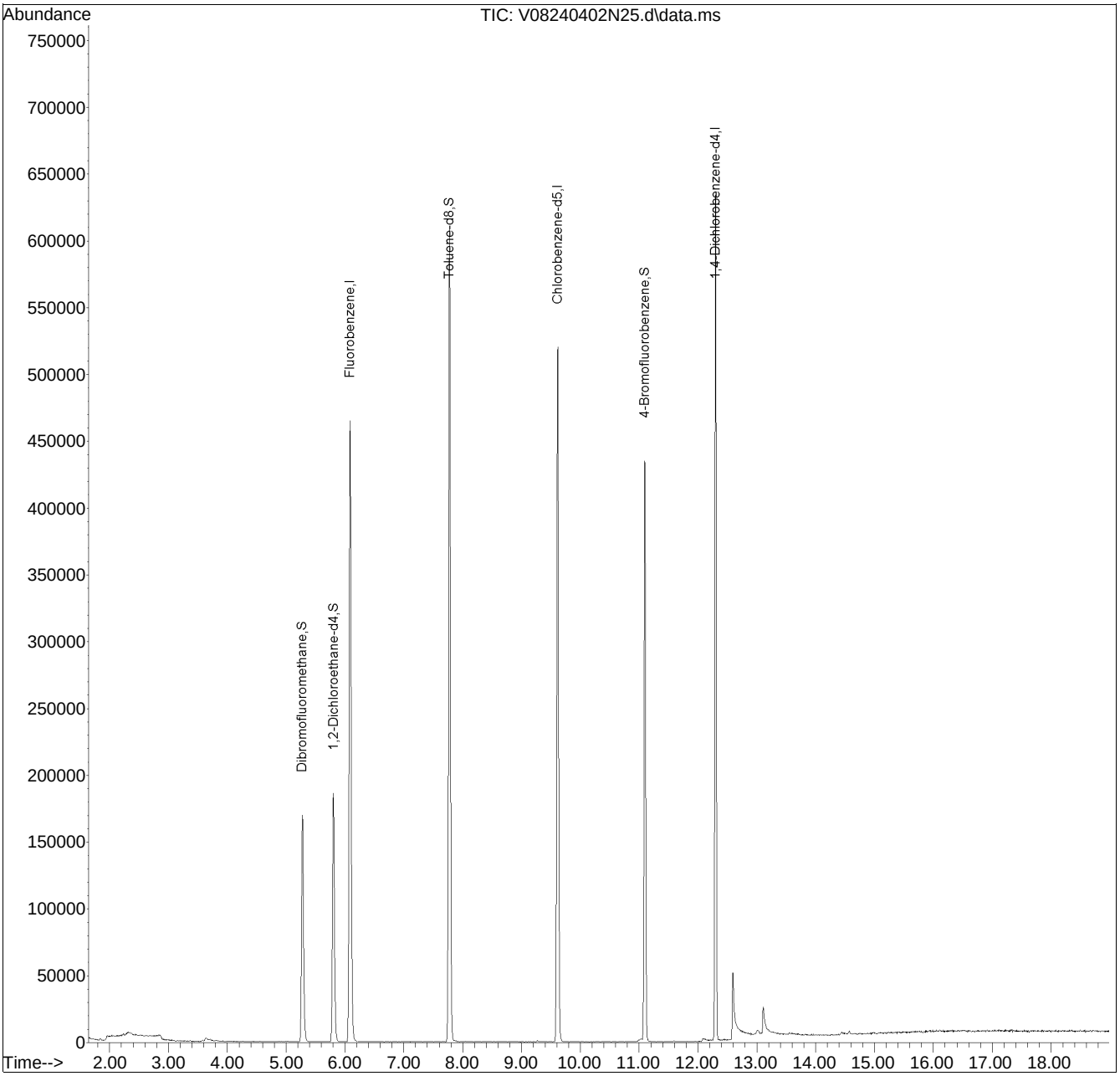
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N25.d
Acq On : 3 Apr 2024 2:38 am
Operator : VOA108:MJV
Sample : L2417074-08,31,10,10,,A
Misc : WG1904126,ICAL20974
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 03 05:59:29 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N25.d	Operator	: VOA108:MJV
Date Inj'd	: 4/3/2024 2:38 am	Instrument	: VOA 108
Sample	: L2417074-08,31,10,10,,A	Quant Date	: 4/3/2024 5:33 am

There are no manual integrations or false positives in this file.

Volatiles Standards Data

Initial Calibration

Initial Calibration Summary
Form 6
Volatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: VOA108**	**Ical Ref**	**: ICAL20974**
Calibration dates	**: 03/22/24 19:07 03/22/24 22:27**		

Calibration Files
L11 =V08240322N03.d L1 =V08240322N05.d L2 =V08240322N07.d L3 =V08240322N08.d L4 =V08240322N09.d
L6 =V08240322N10.d L8 =V08240322N11.d L10 =V08240322N12.d

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------									
2)	TP	Dichlorodifluo		0.193	0.215	0.236	0.233	0.212	0.209	0.195	0.213	7.82
3)	TP	Chloromethane		0.366	0.400	0.417	0.402	0.371	0.349	0.322	0.375	8.93
4)	TC	Vinyl chloride	0.297	0.274	0.315	0.337	0.327	0.305	0.298	0.277	0.304	7.34
5)	TP	Bromomethane		0.093	0.104	0.107	0.113	0.117	0.113	0.112	0.108	7.21
6)	TP	Chloroethane		0.136	0.155	0.164	0.158	0.148	0.141	0.125	0.147	9.14
7)	TP	Trichlorofluor		0.219	0.258	0.280	0.273	0.250	0.247	0.231	0.251	8.68
8)	TP	Ethyl ether		0.074	0.077	0.082	0.083	0.081	0.078	0.073	0.078	5.06
10)	TC	1,1-Dichloroet		0.155	0.178	0.185	0.181	0.171	0.171	0.161	0.172	6.35
11)	TP	Carbon disulfide		0.562	0.594	0.625	0.620	0.585	0.584	0.553	0.589	4.57
12)	TP	Freon-113		0.151	0.167	0.186	0.182	0.166	0.169	0.158	0.168	7.28
13)	TP	Iodomethane			0.151	0.219	0.252	0.259	0.254	0.225	0.227	17.96
14)	TP	Acrolein		0.022	0.022	0.029	0.029	0.028	0.027	0.026	0.026	11.85
15)	TP	Methylene chlo		0.254	0.214	0.211	0.204	0.195	0.189	0.177	0.206	11.92
17)	TP	Acetone			0.074	0.057	0.052	0.048	0.045	0.041	*L	0.9947
18)	TP	trans-1,2-Dich		0.195	0.198	0.210	0.206	0.198	0.193	0.181	0.197	4.66
19)	TP	Methyl acetate		0.126	0.122	0.125	0.127	0.120	0.113	0.104	0.120	6.96
20)	TP	Methyl tert butyl ether		0.436	0.425	0.484	0.493	0.487	0.468	0.442	0.462	5.99
21)	TP	tert-Butyl alc		0.014	0.014	0.016	0.017	0.016	0.015	0.015	0.015	6.70
22)	TP	Diisopropyl ether		0.840	0.846	0.980	1.002	0.965	0.894	0.811	0.905	8.45
23)	TP	1,1-Dichloroet		0.458	0.488	0.517	0.503	0.482	0.458	0.425	0.476	6.53
24)	TP	Halothane		0.140	0.149	0.162	0.161	0.153	0.152	0.143	0.151	5.67
25)	TP	Acrylonitrile		0.066	0.060	0.066	0.066	0.063	0.059	0.055	0.062	7.12
26)	TP	Ethyl tert-but		0.677	0.704	0.829	0.861	0.844	0.799	0.741	0.779	9.28
27)	TP	Vinyl acetate		0.422	0.382	0.430	0.477	0.415	0.382	0.390	0.414	8.18
28)	TP	cis-1,2-Dichlo		0.236	0.214	0.234	0.230	0.221	0.214	0.201	0.221	5.69
29)	TP	2,2-Dichloropr		0.267	0.287	0.315	0.311	0.288	0.282	0.259	0.287	7.15
30)	TP	Bromochloromet		0.099	0.099	0.108	0.105	0.101	0.098	0.086	0.099#	7.00
31)	TP	Cyclohexane		0.373	0.455	0.514	0.519	0.473	0.464	0.425	0.460	10.97
32)	TC	Chloroform		0.357	0.362	0.382	0.371	0.354	0.339	0.315	0.354	6.20
33)	TP	Ethyl acetate		0.166	0.166	0.187	0.190	0.182	0.169	0.156	0.174	7.37
34)	TP	Carbon tetrachloride	0.271	0.255	0.275	0.313	0.304	0.287	0.284	0.266	0.282	6.85
35)	TP	Tetrahydrofuran			0.048	0.056	0.055	0.052	0.046	0.042	0.050	10.72
36)	S	Dibromofluoromethane	0.269	0.267	0.269	0.261	0.259	0.256	0.257	0.256	0.262	2.22
37)	TP	1,1,1-Trichlor		0.280	0.305	0.330	0.328	0.310	0.304	0.284	0.306	6.29
39)	TP	2-Butanone			0.070	0.082	0.080	0.078	0.073	0.067	0.075	7.64

Initial Calibration Summary
Form 6
Volatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: VOA108**	**Ical Ref**	**: ICAL20974**
Calibration dates	**: 03/22/24 19:07 03/22/24 22:27**		

Calibration Files
L11 =V08240322N03.d L1 =V08240322N05.d L2 =V08240322N07.d L3 =V08240322N08.d L4 =V08240322N09.d
L6 =V08240322N10.d L8 =V08240322N11.d L10 =V08240322N12.d

	Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
40) TP	1,1-Dichloropr		0.221	0.259	0.288	0.290	0.274	0.272	0.254	0.265	8.98
41) TP	Benzene	0.793	0.769	0.771	0.830	0.822	0.793	0.768	0.716	0.783	4.61
42) TP	Tertiary-Amyl Methyl Ether		0.452	0.417	0.501	0.525	0.529	0.510	0.482	0.488	8.41
43) S	1,2-Dichloroethane-d4	0.325	0.325	0.334	0.322	0.322	0.317	0.311	0.314	0.321	2.19
44) TP	1,2-Dichloroet		0.309	0.316	0.328	0.320	0.308	0.289	0.268	0.305	6.65
47) TP	Methyl cyclohe		0.235	0.286	0.327	0.337	0.318	0.320	0.300	0.303	11.44
48) TP	Trichloroethene	0.205	0.196	0.209	0.228	0.225	0.219	0.213	0.195	0.211	5.88
50) TP	Dibromomethane		0.126	0.106	0.113	0.112	0.111	0.107	0.101	0.111	7.10
51) TC	1,2-Dichloropr		0.253	0.261	0.285	0.284	0.278	0.265	0.247	0.268	5.64
53) TP	2-Chloroethyl		0.083	0.095	0.115	0.124	0.128	0.123	0.119	0.112	14.74
54) TP	Bromodichlorom		0.256	0.258	0.281	0.284	0.280	0.269	0.253	0.268#	4.91
57) TP	1,4-Dioxane		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001#	4.15
58) TP	cis-1,3-Dichloropropene	0.261	0.267	0.271	0.323	0.337	0.337	0.324	0.305	0.303	10.60
59) I	Chlorobenzene-d5	----------ISTD----------									
60) S	Toluene-d8	1.273	1.287	1.288	1.292	1.288	1.293	1.278	1.296	1.287	0.59
61) TC	Toluene		0.628	0.637	0.691	0.680	0.671	0.646	0.609	0.652	4.58
62) TP	4-Methyl-2-pen		0.064	0.067	0.080	0.088	0.092	0.088	0.083	0.080	13.47
63) TP	Tetrachloroethene		0.243	0.267	0.289	0.288	0.279	0.273	0.256	0.271	6.26
65) TP	trans-1,3-Dichloropropene	0.290	0.292	0.296	0.353	0.371	0.378	0.360	0.339	0.335	10.96
67) TP	Ethyl methacry		0.170	0.175	0.216	0.237	0.246	0.235	0.227	0.215	14.27
68) TP	1,1,2-Trichlor		0.158	0.160	0.177	0.174	0.171	0.163	0.152	0.165#	5.55
69) TP	Chlorodibromom		0.227	0.226	0.262	0.265	0.270	0.259	0.247	0.251	7.22
70) TP	1,3-Dichloropr		0.315	0.327	0.370	0.370	0.363	0.344	0.324	0.345	6.66
71) TP	1,2-Dibromoethane		0.176	0.175	0.198	0.203	0.202	0.194	0.184	0.190#	6.17
72) TP	2-Hexanone		0.114	0.105	0.127	0.142	0.147	0.139	0.130	0.129	11.75
73) TP	Chlorobenzene		0.710	0.714	0.775	0.761	0.748	0.716	0.674	0.728	4.81
74) TC	Ethylbenzene		1.091	1.167	1.311	1.299	1.270	1.213	1.138	1.213	6.97
75) TP	1,1,1,2-Tetrac		0.241	0.253	0.286	0.291	0.291	0.276	0.259	0.271	7.39
76) TP	p/m Xylene		0.459	0.466	0.517	0.510	0.497	0.472	0.434	0.479	6.22
77) TP	o Xylene		0.417	0.446	0.502	0.499	0.489	0.460	0.423	0.463	7.66
78) TP	Styrene		0.624	0.687	0.812	0.818	0.808	0.756	0.683	0.741	10.41
79) I	1,4-Dichlorobenzene-d4	----------ISTD----------									
80) TP	Bromoform		0.243	0.244	0.289	0.287	0.291	0.279	0.278	0.273	7.61
82) TP	Isopropylbenzene		1.990	2.392	2.676	2.608	2.570	2.475	2.418	2.447	9.24
83) S	4-Bromofluorobenzene	0.921	0.918	0.921	0.922	0.910	0.912	0.918	0.956	0.922	1.53
84) TP	Bromobenzene		0.594	0.608	0.646	0.618	0.615	0.585	0.579	0.606	3.78

Initial Calibration Summary
Form 6
Volatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: VOA108**	**Ical Ref**	**: ICAL20974**
Calibration dates	**: 03/22/24 19:07 03/22/24 22:27**		

Calibration Files
L11 =V08240322N03.d L1 =V08240322N05.d L2 =V08240322N07.d L3 =V08240322N08.d L4 =V08240322N09.d
L6 =V08240322N10.d L8 =V08240322N11.d L10 =V08240322N12.d

	Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
85) TP	n-Propylbenzene		2.444	2.866	3.166	3.065	3.017	2.885	2.750	2.885	8.27
86) TP	1,4-Dichlorobu		0.873	0.868	0.974	0.929	0.909	0.848	0.815	0.888	6.00
87) TP	1,1,2,2-Tetrac		0.463	0.450	0.482	0.468	0.453	0.428	0.435	0.454	4.09
88) TP	4-Ethyltoluene		2.030	2.391	2.714	2.639	2.616	2.486	2.394	2.467	9.28
89) TP	2-Chlorotoluene		1.692	1.776	1.987	1.867	1.783	1.702	1.666	1.782	6.36
90) TP	1,3,5-Trimethy		1.764	2.114	2.363	2.293	2.251	2.137	2.035	2.137	9.32
91) TP	1,2,3-Trichlor		0.376	0.367	0.391	0.377	0.370	0.349	0.344	0.368	4.44
92) TP	trans-1,4-Dich		0.146	0.153	0.174	0.169	0.167	0.156	0.155	0.160	6.40
93) TP	4-Chlorotoluene		1.642	1.837	1.990	1.898	1.880	1.789	1.735	1.824	6.28
94) TP	tert-Butylbenzene		1.508	1.802	2.011	1.956	1.930	1.846	1.773	1.833	9.08
97) TP	1,2,4-Trimethy		1.640	1.996	2.319	2.259	2.240	2.129	2.025	2.087	11.08
98) TP	sec-Butylbenzene		2.074	2.600	2.946	2.830	2.783	2.651	2.521	2.629	10.81
99) TP	p-Isopropyltol		1.694	2.171	2.567	2.534	2.516	2.375	2.251	2.301	13.33
100) TP	1,3-Dichlorobe		1.180	1.247	1.332	1.274	1.252	1.177	1.132	1.228	5.57
101) TP	1,4-Dichlorobe		1.240	1.278	1.325	1.263	1.256	1.174	1.131	1.238	5.30
102) TP	p-Diethylbenzene		1.073	1.295	1.543	1.542	1.546	1.460	1.394	1.407	12.41
103) TP	n-Butylbenzene		1.544	1.893	2.189	2.137	2.105	1.985	1.883	1.962	11.18
104) TP	1,2-Dichlorobe		1.109	1.161	1.224	1.174	1.165	1.091	1.047	1.139	5.23
105) TP	1,2,4,5-Tetram		1.631	1.912	2.425	2.494	2.501	2.366	2.236	2.224	14.91
106) TP	1,2-Dibromo-3-		0.041	0.059	0.069	0.070	0.072	0.069	0.069	0.064	16.93
107) TP	1,3,5-Trichlor		0.822	0.885	0.962	0.939	0.930	0.875	0.827	0.891	6.15
108) TP	Hexachlorobuta		0.316	0.351	0.383	0.381	0.365	0.351	0.332	0.354	6.97
109) TP	1,2,4-Trichlor		0.630	0.677	0.775	0.799	0.804	0.755	0.719	0.737	8.85
110) TP	Naphthalene		1.166	1.145	1.443	1.533	1.568	1.490	1.452	1.399	12.31
111) TP	1,2,3-Trichlor		0.545	0.599	0.691	0.692	0.694	0.654	0.630	0.644	8.75

Response Factor Report VOA 108

Method Path : K:\VOA108\2024\240322NICAL\
Method File : V108_240322N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Mon Mar 25 16:26:25 2024
Response Via : Initial Calibration

Calibration Files
L11 =V08240322N03.d L1 =V08240322N05.d L2 =V08240322N07.d L3 =V08240322N08.d L4 =V08240322N09.d
L6 =V08240322N10.d L8 =V08240322N11.d L10 =V08240322N12.d

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
1)	I	Fluorobenzene	ISTD									
2)	TP	Dichlorodifluo...		0.193	0.215	0.236	0.233	0.212	0.209	0.195	0.213	7.82
3)	TP	Chloromethane		0.366	0.400	0.417	0.402	0.371	0.349	0.322	0.375	8.93
4)	TC	Vinyl chloride	0.297	0.274	0.315	0.337	0.327	0.305	0.298	0.277	0.304	7.34
5)	TP	Bromomethane		0.093	0.104	0.107	0.113	0.117	0.113	0.112	0.108	7.21
6)	TP	Chloroethane		0.136	0.155	0.164	0.158	0.148	0.141	0.125	0.147	9.14
7)	TP	Trichlorofluor...		0.219	0.258	0.280	0.273	0.250	0.247	0.231	0.251	8.68
8)	TP	Ethyl ether		0.074	0.077	0.082	0.083	0.081	0.078	0.073	0.078	5.06
10)	TC	1,1-Dichloroet...		0.155	0.178	0.185	0.181	0.171	0.171	0.161	0.172	6.35
11)	TP	Carbon disulfide		0.562	0.594	0.625	0.620	0.585	0.584	0.553	0.589	4.57
12)	TP	Freon-113		0.151	0.167	0.186	0.182	0.166	0.169	0.158	0.168	7.28
13)	TP	Iodomethane			0.151	0.219	0.252	0.259	0.254	0.225	0.227	17.96
14)	TP	Acrolein		0.022	0.022	0.029	0.029	0.028	0.027	0.026	0.026	11.85
15)	TP	Methylene chlo...		0.254	0.214	0.211	0.204	0.195	0.189	0.177	0.206	11.92
17)	TP	Acetone			0.074	0.057	0.052	0.048	0.045	0.041	*L	0.9947
18)	TP	trans-1,2-Dich...		0.195	0.198	0.210	0.206	0.198	0.193	0.181	0.197	4.66
19)	TP	Methyl acetate		0.126	0.122	0.125	0.127	0.120	0.113	0.104	0.120	6.96
20)	TP	Methyl tert-bu...		0.436	0.425	0.484	0.493	0.487	0.468	0.442	0.462	5.99
21)	TP	tert-Butyl alc...		0.014	0.014	0.016	0.017	0.016	0.015	0.015	0.015	6.70
22)	TP	Diisopropyl ether		0.840	0.846	0.980	1.002	0.965	0.894	0.811	0.905	8.45
23)	TP	1,1-Dichloroet...		0.458	0.488	0.517	0.503	0.482	0.458	0.425	0.476	6.53
24)	TP	Halothane		0.140	0.149	0.162	0.161	0.153	0.152	0.143	0.151	5.67
25)	TP	Acrylonitrile		0.066	0.060	0.066	0.066	0.063	0.059	0.055	0.062	7.12
26)	TP	Ethyl tert-but...		0.677	0.704	0.829	0.861	0.844	0.799	0.741	0.779	9.28
27)	TP	Vinyl acetate		0.422	0.382	0.430	0.477	0.415	0.382	0.390	0.414	8.18
28)	TP	cis-1,2-Dichlo...		0.236	0.214	0.234	0.230	0.221	0.214	0.201	0.221	5.69
29)	TP	2,2-Dichloropr...		0.267	0.287	0.315	0.311	0.288	0.282	0.259	0.287	7.15
30)	TP	Bromochloromet...		0.099	0.099	0.108	0.105	0.101	0.098	0.086	0.099#	7.00
31)	TP	Cyclohexane		0.373	0.455	0.514	0.519	0.473	0.464	0.425	0.460	10.97
32)	TC	Chloroform		0.357	0.362	0.382	0.371	0.354	0.339	0.315	0.354	6.20
33)	TP	Ethyl acetate		0.166	0.166	0.187	0.190	0.182	0.169	0.156	0.174	7.37

Response Factor Report VOA 108

Method Path : K:\VOA108\2024\240322NICAL\
Method File : V108_240322N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Mon Mar 25 16:26:25 2024
Response Via : Initial Calibration

Calibration Files
L11 =V08240322N03.d L1 =V08240322N05.d L2 =V08240322N07.d L3 =V08240322N08.d L4 =V08240322N09.d
L6 =V08240322N10.d L8 =V08240322N11.d L10 =V08240322N12.d

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
34)	TP	Carbon tetrach...	0.271	0.255	0.275	0.313	0.304	0.287	0.284	0.266	0.282	6.85
35)	TP	Tetrahydrofuran		0.048	0.056	0.055	0.052	0.046	0.042	0.050		10.72
36)	S	Dibromofluorom...	0.269	0.267	0.269	0.261	0.259	0.256	0.257	0.256	0.262	2.22
37)	TP	1,1,1-Trichlor...		0.280	0.305	0.330	0.328	0.310	0.304	0.284	0.306	6.29
39)	TP	2-Butanone			0.070	0.082	0.080	0.078	0.073	0.067	0.075	7.64
40)	TP	1,1-Dichloropr...		0.221	0.259	0.288	0.290	0.274	0.272	0.254	0.265	8.98
41)	TP	Benzene	0.793	0.769	0.771	0.830	0.822	0.793	0.768	0.716	0.783	4.61
42)	TP	tert-Amyl meth...		0.452	0.417	0.501	0.525	0.529	0.510	0.482	0.488	8.41
43)	S	1,2-Dichloroet...	0.325	0.325	0.334	0.322	0.322	0.317	0.311	0.314	0.321	2.19
44)	TP	1,2-Dichloroet...		0.309	0.316	0.328	0.320	0.308	0.289	0.268	0.305	6.65
47)	TP	Methyl cyclohe...		0.235	0.286	0.327	0.337	0.318	0.320	0.300	0.303	11.44
48)	TP	Trichloroethene	0.205	0.196	0.209	0.228	0.225	0.219	0.213	0.195	0.211	5.88
50)	TP	Dibromomethane		0.126	0.106	0.113	0.112	0.111	0.107	0.101	0.111	7.10
51)	TC	1,2-Dichloropr...		0.253	0.261	0.285	0.284	0.278	0.265	0.247	0.268	5.64
53)	TP	2-Chloroethyl ...		0.083	0.095	0.115	0.124	0.128	0.123	0.119	0.112	14.74
54)	TP	Bromodichlorom...		0.256	0.258	0.281	0.284	0.280	0.269	0.253	0.268#	4.91
57)	TP	1,4-Dioxane		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001#	4.15
58)	TP	cis-1,3-Dichlo...	0.261	0.267	0.271	0.323	0.337	0.337	0.324	0.305	0.303	10.60
59)	I	Chlorobenzene-d5	----------ISTD----------									
60)	S	Toluene-d8	1.273	1.287	1.288	1.292	1.288	1.293	1.278	1.296	1.287	0.59
61)	TC	Toluene		0.628	0.637	0.691	0.680	0.671	0.646	0.609	0.652	4.58
62)	TP	4-Methyl-2-pen...		0.064	0.067	0.080	0.088	0.092	0.088	0.083	0.080	13.47
63)	TP	Tetrachloroethene		0.243	0.267	0.289	0.288	0.279	0.273	0.256	0.271	6.26
65)	TP	trans-1,3-Dich...	0.290	0.292	0.296	0.353	0.371	0.378	0.360	0.339	0.335	10.96
67)	TP	Ethyl methacry...		0.170	0.175	0.216	0.237	0.246	0.235	0.227	0.215	14.27
68)	TP	1,1,2-Trichlor...		0.158	0.160	0.177	0.174	0.171	0.163	0.152	0.165#	5.55
69)	TP	Chlorodibromom...		0.227	0.226	0.262	0.265	0.270	0.259	0.247	0.251	7.22
70)	TP	1,3-Dichloropr...		0.315	0.327	0.370	0.370	0.363	0.344	0.324	0.345	6.66
71)	TP	1,2-Dibromoethane		0.176	0.175	0.198	0.203	0.202	0.194	0.184	0.190#	6.17
72)	TP	2-Hexanone		0.114	0.105	0.127	0.142	0.147	0.139	0.130	0.129	11.75
73)	TP	Chlorobenzene		0.710	0.714	0.775	0.761	0.748	0.716	0.674	0.728	4.81

Method Path : K:\VOA108\2024\240322NICAL\
Method File : V108_240322N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Mon Mar 25 16:26:25 2024
Response Via : Initial Calibration

Calibration Files
L11 =V08240322N03.d L1 =V08240322N05.d L2 =V08240322N07.d L3 =V08240322N08.d L4 =V08240322N09.d
L6 =V08240322N10.d L8 =V08240322N11.d L10 =V08240322N12.d

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
74)	TC	Ethylbenzene		1.091	1.167	1.311	1.299	1.270	1.213	1.138	1.213	6.97
75)	TP	1,1,1,2-Tetrac...		0.241	0.253	0.286	0.291	0.291	0.276	0.259	0.271	7.39
76)	TP	p/m Xylene		0.459	0.466	0.517	0.510	0.497	0.472	0.434	0.479	6.22
77)	TP	o Xylene		0.417	0.446	0.502	0.499	0.489	0.460	0.423	0.463	7.66
78)	TP	Styrene		0.624	0.687	0.812	0.818	0.808	0.756	0.683	0.741	10.41
79)	I	1,4-Dichlorobenzene-d4	----------ISTD----------									
80)	TP	Bromoform		0.243	0.244	0.289	0.287	0.291	0.279	0.278	0.273	7.61
82)	TP	Isopropylbenzene		1.990	2.392	2.676	2.608	2.570	2.475	2.418	2.447	9.24
83)	S	4-Bromofluorob...	0.921	0.918	0.921	0.922	0.910	0.912	0.918	0.956	0.922	1.53
84)	TP	Bromobenzene		0.594	0.608	0.646	0.618	0.615	0.585	0.579	0.606	3.78
85)	TP	n-Propylbenzene		2.444	2.866	3.166	3.065	3.017	2.885	2.750	2.885	8.27
86)	TP	1,4-Dichlorobu...		0.873	0.868	0.974	0.929	0.909	0.848	0.815	0.888	6.00
87)	TP	1,1,2,2-Tetrac...		0.463	0.450	0.482	0.468	0.453	0.428	0.435	0.454	4.09
88)	TP	4-Ethyltoluene		2.030	2.391	2.714	2.639	2.616	2.486	2.394	2.467	9.28
89)	TP	2-Chlorotoluene		1.692	1.776	1.987	1.867	1.783	1.702	1.666	1.782	6.36
90)	TP	1,3,5-Trimethy...		1.764	2.114	2.363	2.293	2.251	2.137	2.035	2.137	9.32
91)	TP	1,2,3-Trichlor...		0.376	0.367	0.391	0.377	0.370	0.349	0.344	0.368	4.44
92)	TP	trans-1,4-Dich...		0.146	0.153	0.174	0.169	0.167	0.156	0.155	0.160	6.40
93)	TP	4-Chlorotoluene		1.642	1.837	1.990	1.898	1.880	1.789	1.735	1.824	6.28
94)	TP	tert-Butylbenzene		1.508	1.802	2.011	1.956	1.930	1.846	1.773	1.833	9.08
97)	TP	1,2,4-Trimethy...		1.640	1.996	2.319	2.259	2.240	2.129	2.025	2.087	11.08
98)	TP	sec-Butylbenzene		2.074	2.600	2.946	2.830	2.783	2.651	2.521	2.629	10.81
99)	TP	p-Isopropyltol...		1.694	2.171	2.567	2.534	2.516	2.375	2.251	2.301	13.33
100)	TP	1,3-Dichlorobe...		1.180	1.247	1.332	1.274	1.252	1.177	1.132	1.228	5.57
101)	TP	1,4-Dichlorobe...		1.240	1.278	1.325	1.263	1.256	1.174	1.131	1.238	5.30
102)	TP	p-Diethylbenzene		1.073	1.295	1.543	1.542	1.546	1.460	1.394	1.407	12.41
103)	TP	n-Butylbenzene		1.544	1.893	2.189	2.137	2.105	1.985	1.883	1.962	11.18
104)	TP	1,2-Dichlorobe...		1.109	1.161	1.224	1.174	1.165	1.091	1.047	1.139	5.23
105)	TP	1,2,4,5-Tetram...		1.631	1.912	2.425	2.494	2.501	2.366	2.236	2.224	14.91
106)	TP	1,2-Dibromo-3-...		0.041	0.059	0.069	0.070	0.072	0.069	0.069	0.064	16.93
107)	TP	1,3,5-Trichlor...		0.822	0.885	0.962	0.939	0.930	0.875	0.827	0.891	6.15

Method Path : K:\VOA108\2024\240322NICAL\
Method File : V108_240322N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Mon Mar 25 16:26:25 2024
Response Via : Initial Calibration

Calibration Files
L11 =V08240322N03.d L1 =V08240322N05.d L2 =V08240322N07.d L3 =V08240322N08.d L4 =V08240322N09.d
L6 =V08240322N10.d L8 =V08240322N11.d L10 =V08240322N12.d

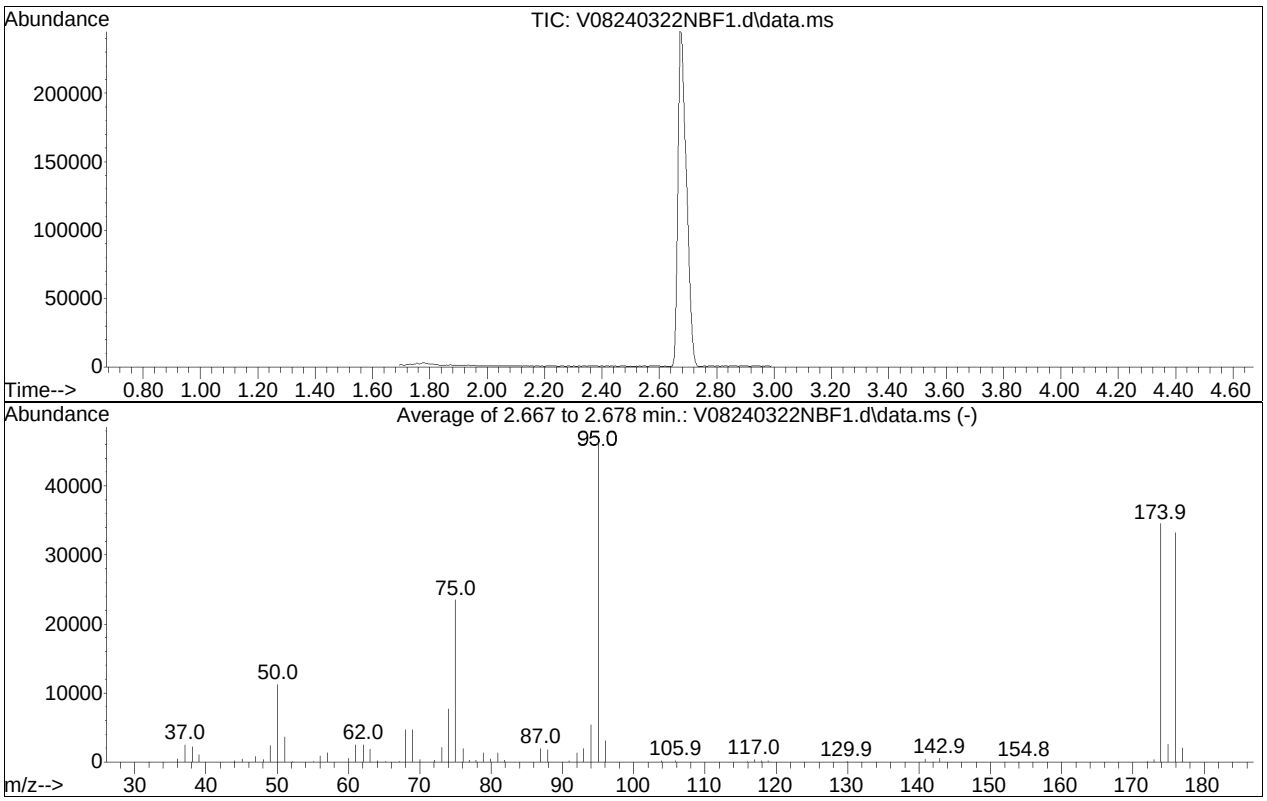
	Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
108) TP	Hexachlorobuta...	0.316	0.351	0.383	0.381	0.365	0.351	0.332	0.354	6.97	
109) TP	1,2,4-Trichlor...	0.630	0.677	0.775	0.799	0.804	0.755	0.719	0.737	8.85	
110) TP	Naphthalene	1.166	1.145	1.443	1.533	1.568	1.490	1.452	1.399	12.31	
111) TP	1,2,3-Trichlor...	0.545	0.599	0.691	0.692	0.694	0.654	0.630	0.644	8.75	

(#) = Out of Range

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322NBF1.d
Acq On : 22 Mar 2024 6:00 pm
Operator : VOA108:RAW
Sample : WG1900595-1
Misc : WG1900595
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Mon Mar 25 16:26:25 2024



AutoFind: Scans 187, 188, 189; Background Corrected with Scan 180

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.3	11244	PASS
75	95	30	60	50.9	23563	PASS
95	95	100	100	100.0	46269	PASS
96	95	5	9	6.8	3141	PASS
173	174	0.00	2	1.1	376	PASS
174	95	50	100	74.6	34523	PASS
175	174	5	9	7.4	2559	PASS
176	174	95	101	96.3	33251	PASS
177	176	5	9	6.2	2071	PASS

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N03.d
Acq On : 22 Mar 2024 7:07 pm
Operator : VOA108:KJD
Sample : I8260STD0.19PPB
Misc : WG1900595
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 25 16:02:14 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-L11_MCP - L11 MCP

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	6.083	96	358109	10.000 ug/L	0.00
Standard Area 1 = 369742			Recovery = 96.85%		
59) Chlorobenzene-d5	9.617	117	274269	10.000 ug/L	0.00
Standard Area 1 = 278027			Recovery = 98.65%		
79) 1,4-Dichlorobenzene-d4	12.301	152	132406	10.000 ug/L	0.00
Standard Area 1 = 134086			Recovery = 98.75%		
System Monitoring Compounds					
36) Dibromofluoromethane	5.275	113	96411	10.298 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.98%		
43) 1,2-Dichloroethane-d4	5.805	65	116371	10.081 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.81%		
60) Toluene-d8	7.776	98	349200	9.856 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.56%		
83) 4-Bromofluorobenzene	11.095	95	121880	9.987 ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.87%		
Target Compounds					Qvalue
4) Vinyl chloride	1.962	62	2024	0.168 ug/L	82
34) Carbon tetrachloride	5.244	117	1846	0.165 ug/L #	88
41) Benzene	5.674	78	5393	0.181 ug/L #	80
48) Trichloroethene	6.261	95	1398	0.171 ug/L	96
58) cis-1,3-Dichloropropene	7.567	75	1774	0.153 ug/L	97
65) trans-1,3-Dichloropropene	8.316	75	1513	0.156 ug/L	97

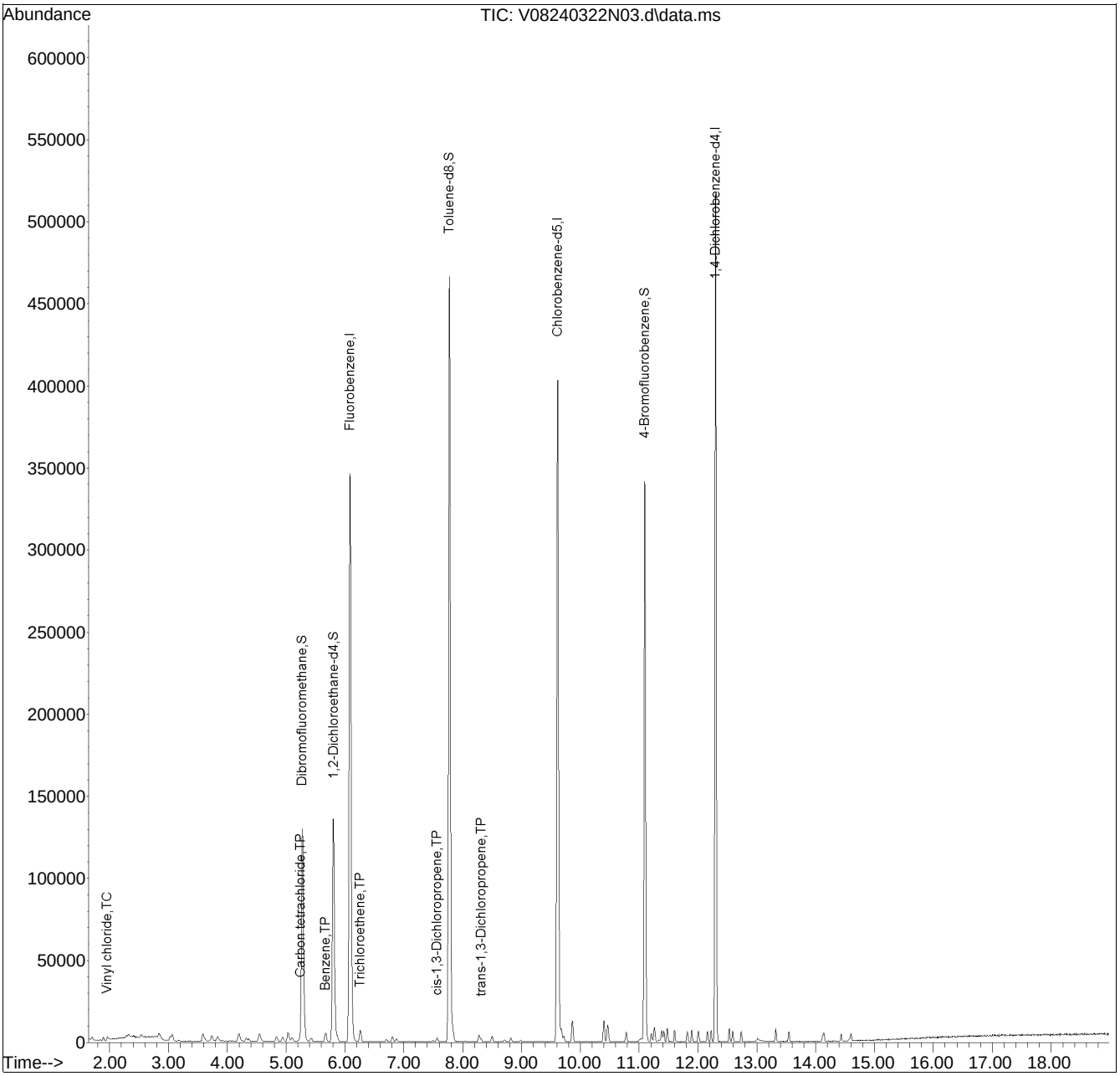
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N03.d
Acq On : 22 Mar 2024 7:07 pm
Operator : VOA108:KJD
Sample : I8260STD0.19PPB
Misc : WG1900595
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 25 16:02:14 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

Sub List : 8260-L11_MCP - L11 MCP322NICAL\V08240322N08.d•



Manual Integration Report

Data Path	: K:\VOA108\2024\240322NICALQ	Method	: V108_240322N_8260.m
Data File	: V08240322N03.d	Operator	: VOA108:KJD
Date Inj'd	: 3/22/2024 7:07 pm	Instrument	: VOA 108
Sample	: I8260STD0.19PPB	Quant Date	: 3/25/2024 3:52 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N05.d
Acq On : 22 Mar 2024 7:52 pm
Operator : VOA108:KJD
Sample : I8260STD0.5PPB
Misc : WG1900595
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 25 16:02:44 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	352356	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 95.30%			
59) Chlorobenzene-d5	9.617	117	265515	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 95.50%			
79) 1,4-Dichlorobenzene-d4	12.301	152	129136	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 96.31%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	94239	10.230	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.30%			
43) 1,2-Dichloroethane-d4	5.800	65	114517	10.082	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.82%			
60) Toluene-d8	7.776	98	341609	9.960	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.60%			
83) 4-Bromofluorobenzene	11.095	95	118561	9.961	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.61%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	3404	0.410	ug/L	93
3) Chloromethane	1.894	50	6447	0.438	ug/L	97
4) Vinyl chloride	1.967	62	4822	0.406	ug/L	98
5) Bromomethane	2.282	94	1647	0.436	ug/L	98
6) Chloroethane	2.402	64	2399	0.416	ug/L	95
7) Trichlorofluoromethane	2.539	101	3863	0.391	ug/L	98
8) Ethyl ether	2.832	74	1300	0.451	ug/L #	33
10) 1,1-Dichloroethene	3.026	96	2725	0.418	ug/L	90
11) Carbon disulfide	3.058	76	9905	0.450	ug/L	98
12) Freon-113	3.079	101	2668	0.407	ug/L	94
13) Iodomethane	3.168	142	2078	0.269	ug/L #	74
14) Acrolein	3.346	56	381	0.373	ug/L #	65
15) Methylene chloride	3.587	84	4478	0.603	ug/L	85
17) Acetone	3.624	43	2715	1.342	ug/L	91
18) trans-1,2-Dichloroethene	3.739	96	3429	0.464	ug/L	91
19) Methyl acetate	3.739	43	2219	0.504	ug/L #	81
20) Methyl tert-butyl ether	3.839	73	7674	0.450	ug/L #	77
21) tert-Butyl alcohol	3.918	59	1270	2.269	ug/L #	69
22) Diisopropyl ether	4.190	45	14799	0.429	ug/L	95
23) 1,1-Dichloroethane	4.326	63	8062	0.442	ug/L	96
24) Halothane	4.374	117	2460	0.430	ug/L	94

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N05.d
Acq On : 22 Mar 2024 7:52 pm
Operator : VOA108:KJD
Sample : I8260STD0.5PPB
Misc : WG1900595
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 25 16:02:44 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.358	53	1170	0.502	ug/L	#	88
26) Ethyl tert-butyl ether	4.547	59	11935	0.409	ug/L		95
27) Vinyl acetate	4.562	43	7429	0.490	ug/L	#	91
28) cis-1,2-Dichloroethene	4.840	96	4152	0.504	ug/L		89
29) 2,2-Dichloropropane	4.940	77	4696	0.423	ug/L		82
30) Bromochloromethane	5.029	128	1739	0.456	ug/L		98
31) Cyclohexane	5.040	56	6574	0.363	ug/L		97
32) Chloroform	5.097	83	6291	0.467	ug/L		96
33) Ethyl acetate	5.218	43	2920	0.444	ug/L	#	83
34) Carbon tetrachloride	5.234	117	4491	0.407	ug/L	#	94
35) Tetrahydrofuran	0.000		0	N.D.	d		
37) 1,1,1-Trichloroethane	5.302	97	4936	0.424	ug/L	#	96
39) 2-Butanone	0.000		0	N.D.	d		
40) 1,1-Dichloropropene	5.428	75	3893	0.383	ug/L		96
41) Benzene	5.669	78	13542	0.463	ug/L		97
42) tert-Amyl methyl ether	5.784	73	7968	0.451	ug/L	#	85
44) 1,2-Dichloroethane	5.868	62	5442	0.471	ug/L		93
47) Methyl cyclohexane	6.256	83	4135	0.358	ug/L		87
48) Trichloroethene	6.272	95	3449	0.430	ug/L		95
50) Dibromomethane	6.707	93	2217	0.556	ug/L		91
51) 1,2-Dichloropropane	6.812	63	4463	0.444	ug/L	#	85
53) 2-Chloroethyl vinyl ether	7.504	63	1471	0.362	ug/L	#	85
54) Bromodichloromethane	6.880	83	4511	0.456	ug/L	#	98
57) 1,4-Dioxane	7.084	88	4114	94.105	ug/L		88
58) cis-1,3-Dichloropropene	7.567	75	4700	0.413	ug/L		97
61) Toluene	7.834	92	8338	0.454	ug/L		94
62) 4-Methyl-2-pentanone	8.269	58	850	0.400	ug/L	#	58
63) Tetrachloroethene	8.280	166	3220	0.420	ug/L		87
65) trans-1,3-Dichloropropene	8.311	75	3875	0.413	ug/L		96
67) Ethyl methacrylate	8.505	69	2253	0.394	ug/L	#	7
68) 1,1,2-Trichloroethane	8.495	83	2096	0.445	ug/L		90
69) Chlorodibromomethane	8.710	129	3013	0.433	ug/L		93
70) 1,3-Dichloropropane	8.820	76	4188	0.426	ug/L		95
71) 1,2-Dibromoethane	8.982	107	2339	0.446	ug/L		99
72) 2-Hexanone	9.276	43	1516	0.450	ug/L	#	89
73) Chlorobenzene	9.632	112	9422	0.458	ug/L	#	84
74) Ethylbenzene	9.680	91	14483	0.416	ug/L		98
75) 1,1,1,2-Tetrachloroethane	9.722	131	3205	0.422	ug/L	#	69
76) p/m Xylene	9.863	106	12197	0.889	ug/L		94
77) o Xylene	10.398	106	11073	0.830	ug/L		91

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N05.d
Acq On : 22 Mar 2024 7:52 pm
Operator : VOA108:KJD
Sample : I8260STD0.5PPB
Misc : WG1900595
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 25 16:02:44 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
78) Styrene	10.466	104	16560	0.768	ug/L		89
80) Bromoform	10.492	173	1570	0.420	ug/L		95
82) Isopropylbenzene	10.781	105	12850	0.372	ug/L		97
84) Bromobenzene	11.211	156	3833	0.460	ug/L		96
85) n-Propylbenzene	11.253	91	15783	0.386	ug/L		97
86) 1,4-Dichlorobutane	11.268	55	5638	0.448	ug/L	#	89
87) 1,1,2,2-Tetrachloroethane	11.336	83	2987	0.480	ug/L		98
88) 4-Ethyltoluene	11.378	105	13109	0.374	ug/L		99
89) 2-Chlorotoluene	11.420	91	10928	0.426	ug/L	#	89
90) 1,3,5-Trimethylbenzene	11.478	105	11393	0.373	ug/L		88
91) 1,2,3-Trichloropropane	11.478	75	2428	0.481	ug/L		91
92) trans-1,4-Dichloro-2-b...	11.530	53	943	0.419	ug/L	#	88
93) 4-Chlorotoluene	11.604	91	10601	0.412	ug/L		95
94) tert-Butylbenzene	11.819	119	9740	0.375	ug/L		99
97) 1,2,4-Trimethylbenzene	11.897	105	10590	0.354	ug/L		92
98) sec-Butylbenzene	12.008	105	13394	0.352	ug/L		98
99) p-Isopropyltoluene	12.160	119	10940	0.330	ug/L		96
100) 1,3-Dichlorobenzene	12.223	146	7620	0.443	ug/L		97
101) 1,4-Dichlorobenzene	12.317	146	8008	0.468	ug/L	#	85
102) p-Diethylbenzene	12.532	119	6928	0.348	ug/L		94
103) n-Butylbenzene	12.590	91	9972	0.353	ug/L		99
104) 1,2-Dichlorobenzene	12.736	146	7159	0.453	ug/L		98
105) 1,2,4,5-Tetramethylben...	13.324	119	10533	0.336	ug/L		96
106) 1,2-Dibromo-3-chloropr...	13.512	155	267	0.302	ug/L		94
107) 1,3,5-Trichlorobenzene	13.544	180	5309	0.427	ug/L		91
108) Hexachlorobutadiene	14.120	225	2038	0.412	ug/L		89
109) 1,2,4-Trichlorobenzene	14.141	180	4067	0.407	ug/L		97
110) Naphthalene	14.435	128	7526	0.404	ug/L		100
111) 1,2,3-Trichlorobenzene	14.598	180	3521	0.395	ug/L		97

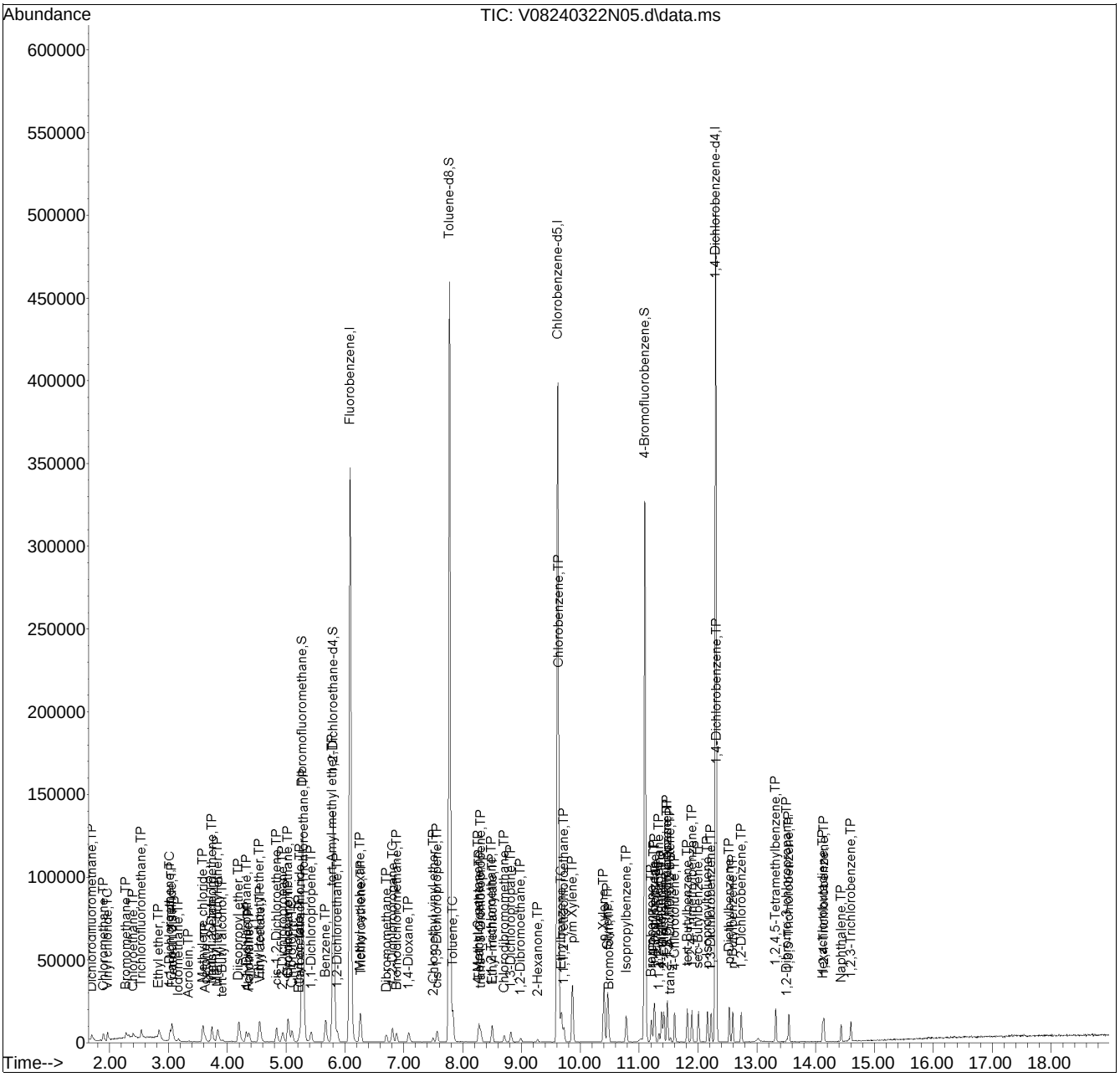
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N05.d
Acq On : 22 Mar 2024 7:52 pm
Operator : VOA108:KJD
Sample : I8260STD0.5PPB
Misc : WG1900595
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 25 16:02:44 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•



Manual Integration Report

Data Path	: K:\VOA108\2024\240322NICALQ	Method	: V108_240322N_8260.m
Data File	: V08240322N05.d	Operator	: VOA108:KJD
Date Inj'd	: 3/22/2024 7:52 pm	Instrument	: VOA 108
Sample	: I8260STD0.5PPB	Quant Date	: 3/25/2024 3:52 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N07.d
Acq On : 22 Mar 2024 8:36 pm
Operator : VOA108:KJD
Sample : I8260STD2PPB
Misc : WG1900595
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 25 16:12:41 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	381960	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 103.30%			
59) Chlorobenzene-d5	9.617	117	288482	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 103.76%			
79) 1,4-Dichlorobenzene-d4	12.301	152	139610	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 104.12%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	102634	10.278	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.78%			
43) 1,2-Dichloroethane-d4	5.805	65	127437	10.350	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.50%			
60) Toluene-d8	7.776	98	371638	9.973	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.73%			
83) 4-Bromofluorobenzene	11.095	95	128591	9.993	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.93%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	16400	1.821	ug/L	98
3) Chloromethane	1.894	50	30552	1.917	ug/L	99
4) Vinyl chloride	1.962	62	24052	1.868	ug/L	100
5) Bromomethane	2.282	94	7923	1.935	ug/L	96
6) Chloroethane	2.402	64	11861	1.899	ug/L	99
7) Trichlorofluoromethane	2.539	101	19700	1.839	ug/L	97
8) Ethyl ether	2.843	74	5907	1.889	ug/L #	69
10) 1,1-Dichloroethene	3.031	96	13591	1.923	ug/L	90
11) Carbon disulfide	3.058	76	45340	1.898	ug/L	98
12) Freon-113	3.068	101	12787	1.800	ug/L	98
13) Iodomethane	3.168	142	11501	1.374	ug/L	88
14) Acrolein	3.351	56	1699	1.535	ug/L	96
15) Methylene chloride	3.587	84	16327	2.029	ug/L	91
17) Acetone	3.624	43	5678	2.588	ug/L	92
18) trans-1,2-Dichloroethene	3.739	96	15139	1.889	ug/L	97
19) Methyl acetate	3.739	43	9349	1.959	ug/L #	87
20) Methyl tert-butyl ether	3.839	73	32483	1.758	ug/L #	83
21) tert-Butyl alcohol	3.928	59	5204	8.578	ug/L #	54
22) Diisopropyl ether	4.201	45	64661	1.728	ug/L	97
23) 1,1-Dichloroethane	4.321	63	37248	1.886	ug/L	96
24) Halothane	4.374	117	11374	1.835	ug/L	99

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N07.d
Acq On : 22 Mar 2024 8:36 pm
Operator : VOA108:KJD
Sample : I8260STD2PPB
Misc : WG1900595
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 25 16:12:41 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.363	53	4559	1.806	ug/L	#	85
26) Ethyl tert-butyl ether	4.547	59	53753	1.697	ug/L		95
27) Vinyl acetate	4.552	43	29189	1.776	ug/L	#	96
28) cis-1,2-Dichloroethene	4.835	96	16321	1.829	ug/L		98
29) 2,2-Dichloropropane	4.940	77	21957	1.827	ug/L		86
30) Bromochloromethane	5.029	128	7542	1.826	ug/L		92
31) Cyclohexane	5.034	56	34749	1.771	ug/L		97
32) Chloroform	5.102	83	27628	1.893	ug/L		94
33) Ethyl acetate	5.213	43	12699	1.781	ug/L	#	95
34) Carbon tetrachloride	5.239	117	20975M6	1.755	ug/L		
35) Tetrahydrofuran	5.249	42	3681M6	1.720	ug/L		
37) 1,1,1-Trichloroethane	5.302	97	23309	1.849	ug/L	#	95
39) 2-Butanone	5.391	43	5368	1.720	ug/L	#	80
40) 1,1-Dichloropropene	5.428	75	19774	1.795	ug/L		96
41) Benzene	5.669	78	58874	1.857	ug/L		98
42) tert-Amyl methyl ether	5.779	73	31845	1.663	ug/L		86
44) 1,2-Dichloroethane	5.868	62	24110	1.927	ug/L		100
47) Methyl cyclohexane	6.261	83	21849	1.747	ug/L		90
48) Trichloroethene	6.266	95	15949	1.833	ug/L		95
50) Dibromomethane	6.707	93	8119	1.880	ug/L		97
51) 1,2-Dichloropropane	6.806	63	19938	1.832	ug/L	#	91
53) 2-Chloroethyl vinyl ether	7.498	63	7281	1.651	ug/L		99
54) Bromodichloromethane	6.880	83	19675	1.835	ug/L		99
57) 1,4-Dioxane	7.084	88	16768	353.831	ug/L		90
58) cis-1,3-Dichloropropene	7.567	75	20735	1.681	ug/L		98
61) Toluene	7.834	92	36735	1.842	ug/L		96
62) 4-Methyl-2-pentanone	8.259	58	3844	1.664	ug/L		92
63) Tetrachloroethene	8.280	166	15399	1.850	ug/L		89
65) trans-1,3-Dichloropropene	8.306	75	17095	1.679	ug/L		95
67) Ethyl methacrylate	8.505	69	10082	1.621	ug/L	#	23
68) 1,1,2-Trichloroethane	8.500	83	9253	1.809	ug/L		96
69) Chlorodibromomethane	8.704	129	13021	1.724	ug/L		96
70) 1,3-Dichloropropane	8.820	76	18891	1.770	ug/L		99
71) 1,2-Dibromoethane	8.988	107	10081	1.769	ug/L		100
72) 2-Hexanone	9.271	43	6044	1.650	ug/L	#	93
73) Chlorobenzene	9.638	112	41215	1.843	ug/L		91
74) Ethylbenzene	9.680	91	67329	1.780	ug/L		97
75) 1,1,1,2-Tetrachloroethane	9.722	131	14593	1.769	ug/L		94
76) p/m Xylene	9.868	106	53734	3.603	ug/L		94
77) o Xylene	10.398	106	51498	3.555	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N07.d
Acq On : 22 Mar 2024 8:36 pm
Operator : VOA108:KJD
Sample : I8260STD2PPB
Misc : WG1900595
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 25 16:12:41 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
78) Styrene	10.466	104	79241	3.384	ug/L		88
80) Bromoform	10.492	173	6814	1.687	ug/L		98
82) Isopropylbenzene	10.781	105	66793	1.788	ug/L		97
84) Bromobenzene	11.211	156	16985	1.884	ug/L		98
85) n-Propylbenzene	11.258	91	80030	1.811	ug/L		96
86) 1,4-Dichlorobutane	11.268	55	24241	1.783	ug/L		91
87) 1,1,2,2-Tetrachloroethane	11.336	83	12554	1.867	ug/L		98
88) 4-Ethyltoluene	11.384	105	66775	1.763	ug/L		95
89) 2-Chlorotoluene	11.420	91	49593M6	1.788	ug/L		
90) 1,3,5-Trimethylbenzene	11.483	105	59026	1.789	ug/L		90
91) 1,2,3-Trichloropropane	11.478	75	10235	1.877	ug/L		96
92) trans-1,4-Dichloro-2-b...	11.525	53	4280	1.758	ug/L	#	89
93) 4-Chlorotoluene	11.604	91	51286	1.846	ug/L		91
94) tert-Butylbenzene	11.819	119	50320	1.792	ug/L		99
97) 1,2,4-Trimethylbenzene	11.897	105	55720	1.721	ug/L		92
98) sec-Butylbenzene	12.008	105	72585	1.765	ug/L		96
99) p-Isopropyltoluene	12.165	119	60619	1.691	ug/L		95
100) 1,3-Dichlorobenzene	12.222	146	34821	1.872	ug/L		99
101) 1,4-Dichlorobenzene	12.312	146	35692	1.929	ug/L		97
102) p-Diethylbenzene	12.532	119	36156	1.678	ug/L		94
103) n-Butylbenzene	12.589	91	52845	1.729	ug/L		97
104) 1,2-Dichlorobenzene	12.736	146	32405	1.897	ug/L		96
105) 1,2,4,5-Tetramethylben...	13.324	119	53385	1.577	ug/L		97
106) 1,2-Dibromo-3-chloropr...	13.507	155	1647	1.721	ug/L		83
107) 1,3,5-Trichlorobenzene	13.544	180	24699	1.839	ug/L		96
108) Hexachlorobutadiene	14.120	225	9788	1.828	ug/L		96
109) 1,2,4-Trichlorobenzene	14.141	180	18903	1.748	ug/L		98
110) Naphthalene	14.430	128	31980	1.587	ug/L		100
111) 1,2,3-Trichlorobenzene	14.598	180	16727	1.735	ug/L		98

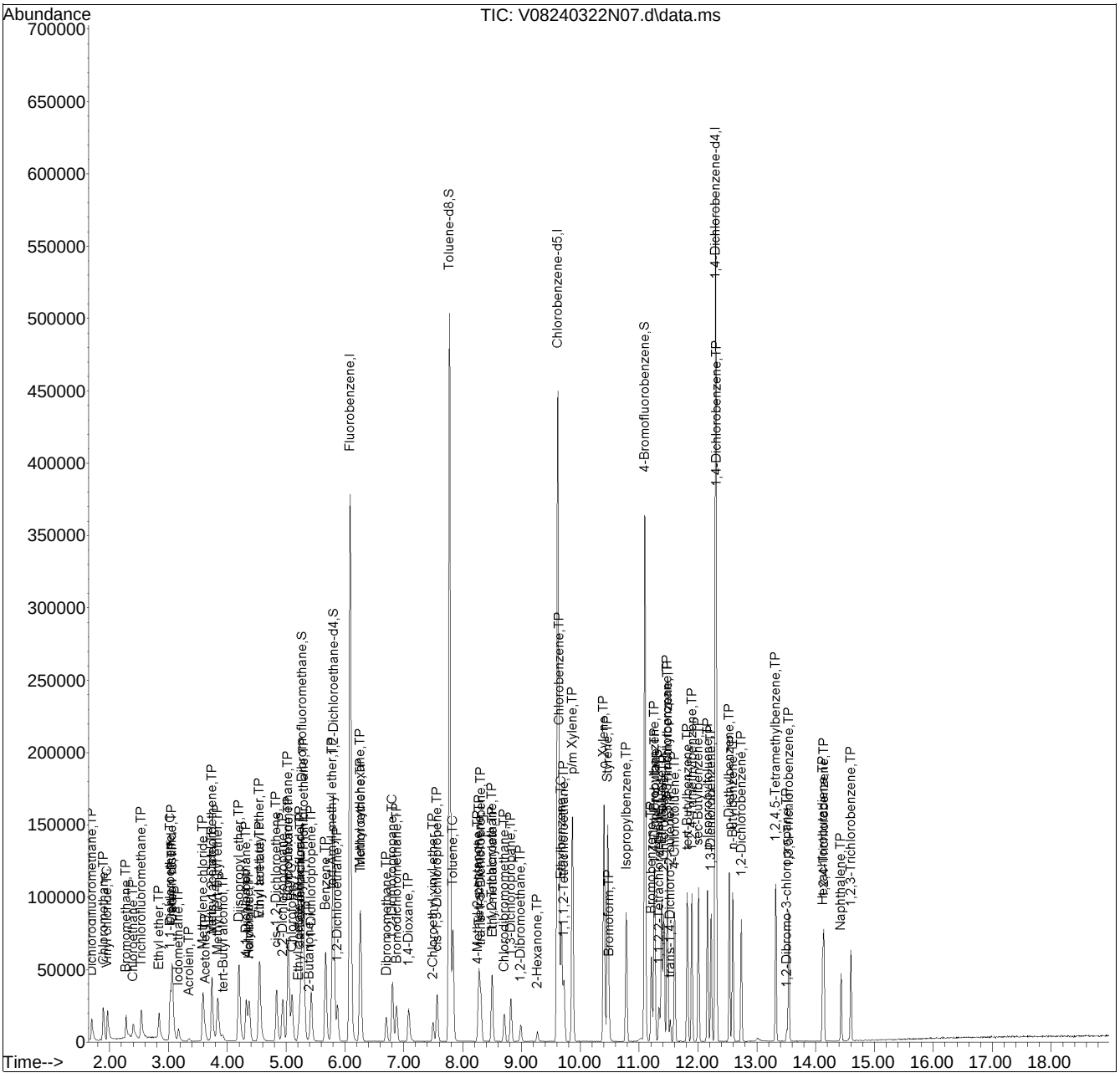
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N07.d
Acq On : 22 Mar 2024 8:36 pm
Operator : VOA108:KJD
Sample : I8260STD2PPB
Misc : WG1900595
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 25 16:12:41 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•

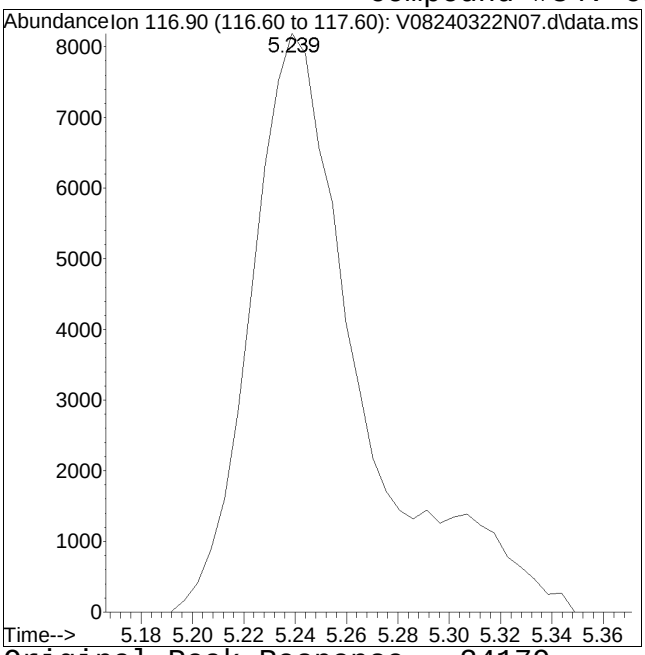


Manual Integration Report

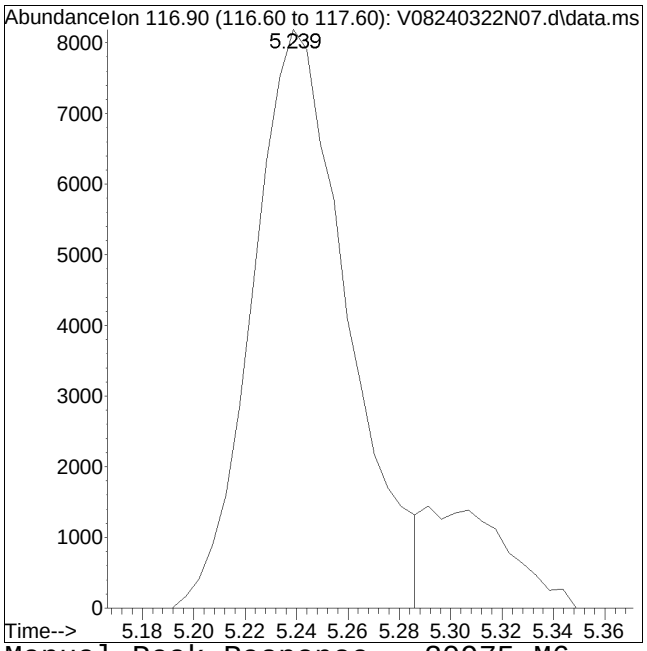
Data Path : K:\VOA108\2024\240322NICALQ
Data File : V08240322N07.d
Date Inj'd : 3/22/2024 8:36 pm
Sample : I8260STD2PPB

Method : V108_240322N_8260.m
Operator : VOA108:KJD
Instrument : VOA 108
Quant Date : 3/25/2024 3:52 pm

Compound #34: Carbon tetrachloride



Original Peak Response = 24179



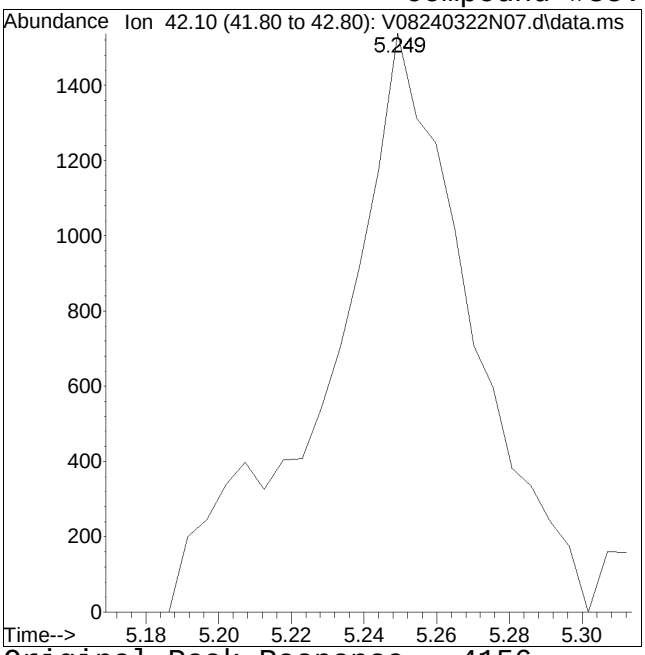
Manual Peak Response = 20975 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

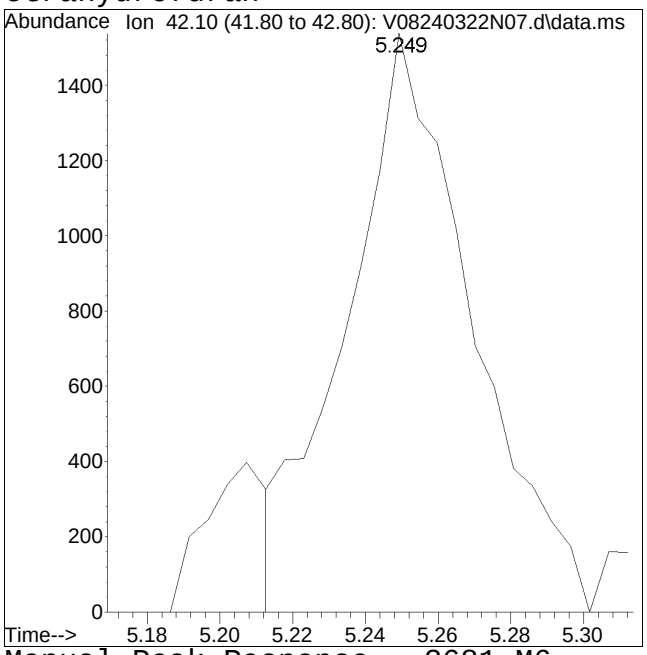
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N07.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 8:36 pm Instrument : VOA 108
Sample : I8260STD2PPB Quant Date : 3/25/2024 3:52 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 4156



Manual Peak Response = 3681 M6

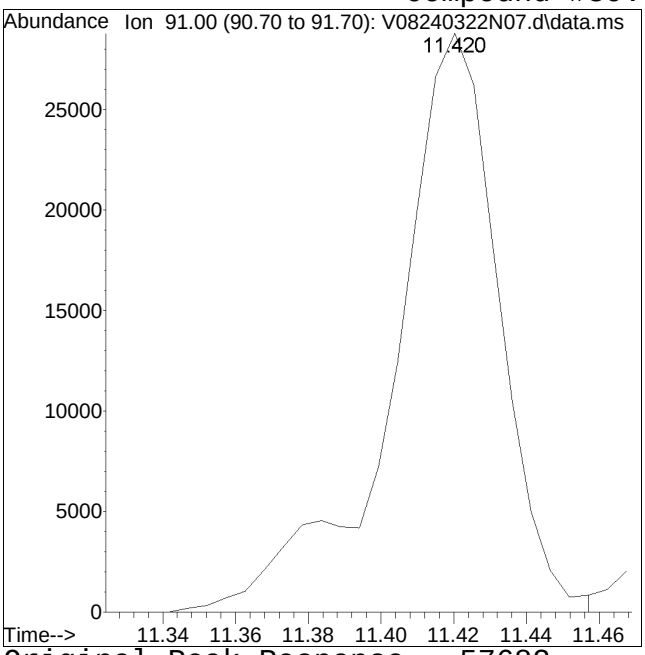
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

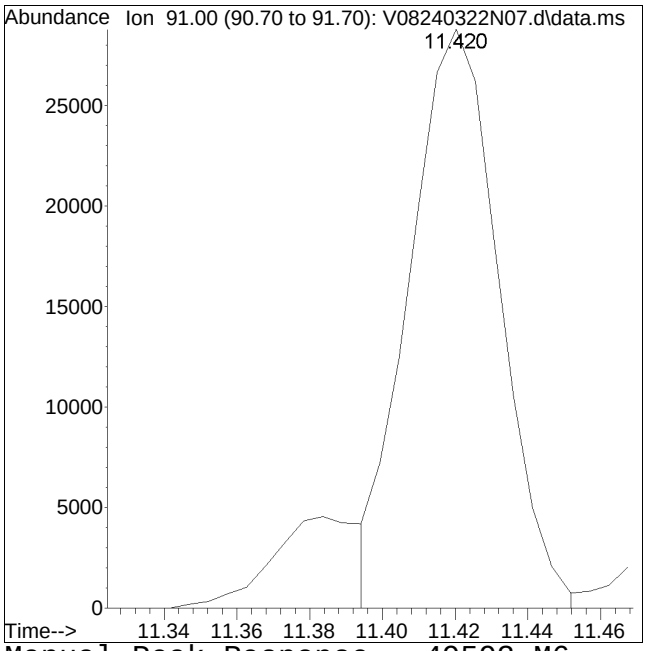
Data Path : K:\VOA108\2024\240322NICALQ
Data File : V08240322N07.d
Date Inj'd : 3/22/2024 8:36 pm
Sample : I8260STD2PPB

Method : V108_240322N_8260.m
Operator : VOA108:KJD
Instrument : VOA 108
Quant Date : 3/25/2024 3:52 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 57682



Manual Peak Response = 49593 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N08.d
Acq On : 22 Mar 2024 8:58 pm
Operator : VOA108:KJD
Sample : I8260STD10PPB
Misc : WG1900595
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 25 15:51:02 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:49 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	369742	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 100.00%			
59) Chlorobenzene-d5	9.617	117	278027	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 100.00%			
79) 1,4-Dichlorobenzene-d4	12.301	152	134086	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 100.00%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	96666	10.000	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.00%			
43) 1,2-Dichloroethane-d4	5.800	65	119189	10.000	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.00%			
60) Toluene-d8	7.776	98	359155	10.000	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.00%			
83) 4-Bromofluorobenzene	11.095	95	123591	10.000	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.00%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	87163	10.000	ug/L	98
3) Chloromethane	1.888	50	154300	10.000	ug/L	99
4) Vinyl chloride	1.962	62	124669	10.000	ug/L	100
5) Bromomethane	2.282	94	39645	10.000	ug/L	99
6) Chloroethane	2.402	64	60464	10.000	ug/L	99
7) Trichlorofluoromethane	2.539	101	103698	10.000	ug/L	96
8) Ethyl ether	2.837	74	30271	10.000	ug/L	77
10) 1,1-Dichloroethene	3.031	96	68415	10.000	ug/L	96
11) Carbon disulfide	3.058	76	231205	10.000	ug/L	97
12) Freon-113	3.068	101	68751	10.000	ug/L	99
13) Iodomethane	3.173	142	81045	10.000	ug/L	86
14) Acrolein	3.351	56	10712	10.000	ug/L	93
15) Methylene chloride	3.587	84	77877	10.000	ug/L	89
17) Acetone	3.619	43	21235	10.000	ug/L	97
18) trans-1,2-Dichloroethene	3.739	96	77567	10.000	ug/L	98
19) Methyl acetate	3.744	43	46192	10.000	ug/L #	88
20) Methyl tert-butyl ether	3.839	73	178881	10.000	ug/L	90
21) tert-Butyl alcohol	3.917	59	29362	50.000	ug/L #	61
22) Diisopropyl ether	4.201	45	362206	10.000	ug/L	98
23) 1,1-Dichloroethane	4.321	63	191196	10.000	ug/L	96
24) Halothane	4.368	117	60000	10.000	ug/L	98

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N08.d
Acq On : 22 Mar 2024 8:58 pm
Operator : VOA108:KJD
Sample : I8260STD10PPB
Misc : WG1900595
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 25 15:51:02 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:49 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.363	53	24433	10.000	ug/L	#	87
26) Ethyl tert-butyl ether	4.547	59	306563	10.000	ug/L		93
27) Vinyl acetate	4.552	43	159120	10.000	ug/L		98
28) cis-1,2-Dichloroethene	4.840	96	86394	10.000	ug/L		94
29) 2,2-Dichloropropane	4.940	77	116359	10.000	ug/L		87
30) Bromochloromethane	5.029	128	39983	10.000	ug/L		87
31) Cyclohexane	5.039	56	189945	10.000	ug/L		98
32) Chloroform	5.102	83	141301	10.000	ug/L		95
33) Ethyl acetate	5.207	43	69021	10.000	ug/L	#	96
34) Carbon tetrachloride	5.244	117	115702	10.000	ug/L		99
35) Tetrahydrofuran	5.249	42	20722M6	10.000	ug/L		
37) 1,1,1-Trichloroethane	5.307	97	122051	10.000	ug/L	#	95
39) 2-Butanone	5.385	43	30209	10.000	ug/L		97
40) 1,1-Dichloropropene	5.427	75	106610	10.000	ug/L		96
41) Benzene	5.674	78	306967	10.000	ug/L		97
42) tert-Amyl methyl ether	5.784	73	185365	10.000	ug/L		92
44) 1,2-Dichloroethane	5.873	62	121127	10.000	ug/L		99
47) Methyl cyclohexane	6.261	83	121059	10.000	ug/L		89
48) Trichloroethene	6.266	95	84225	10.000	ug/L		92
50) Dibromomethane	6.701	93	41810	10.000	ug/L		98
51) 1,2-Dichloropropane	6.806	63	105371	10.000	ug/L	#	91
53) 2-Chloroethyl vinyl ether	7.498	63	42679	10.000	ug/L		96
54) Bromodichloromethane	6.875	83	103816	10.000	ug/L		98
57) 1,4-Dioxane	7.079	88	22937	500.000	ug/L		94
58) cis-1,3-Dichloropropene	7.567	75	119437	10.000	ug/L		99
61) Toluene	7.834	92	192231	10.000	ug/L		96
62) 4-Methyl-2-pentanone	8.269	58	22261	10.000	ug/L		96
63) Tetrachloroethene	8.280	166	80237	10.000	ug/L		90
65) trans-1,3-Dichloropropene	8.311	75	98136	10.000	ug/L		96
67) Ethyl methacrylate	8.500	69	59942	10.000	ug/L	#	30
68) 1,1,2-Trichloroethane	8.500	83	49283	10.000	ug/L		94
69) Chlorodibromomethane	8.704	129	72806	10.000	ug/L		96
70) 1,3-Dichloropropane	8.820	76	102837	10.000	ug/L		100
71) 1,2-Dibromoethane	8.987	107	54934	10.000	ug/L		98
72) 2-Hexanone	9.265	43	35303	10.000	ug/L		94
73) Chlorobenzene	9.638	112	215545	10.000	ug/L		97
74) Ethylbenzene	9.680	91	364515	10.000	ug/L		99
75) 1,1,1,2-Tetrachloroethane	9.721	131	79515	10.000	ug/L		94
76) p/m Xylene	9.863	106	287486	20.000	ug/L		95
77) o Xylene	10.403	106	279257	20.000	ug/L		90

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N08.d
Acq On : 22 Mar 2024 8:58 pm
Operator : VOA108:KJD
Sample : I8260STD10PPB
Misc : WG1900595
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 25 15:51:02 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:49 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
78)	Styrene	10.466	104	451353	20.000	ug/L		89
80)	Bromoform	10.487	173	38785	10.000	ug/L		94
82)	Isopropylbenzene	10.781	105	358794	10.000	ug/L		96
84)	Bromobenzene	11.211	156	86598	10.000	ug/L		99
85)	n-Propylbenzene	11.258	91	424502	10.000	ug/L		95
86)	1,4-Dichlorobutane	11.268	55	130546	10.000	ug/L	#	90
87)	1,1,2,2-Tetrachloroethane	11.336	83	64569	10.000	ug/L		99
88)	4-Ethyltoluene	11.384	105	363843	10.000	ug/L		96
89)	2-Chlorotoluene	11.420	91	266376M6	10.000	ug/L		
90)	1,3,5-Trimethylbenzene	11.478	105	316877	10.000	ug/L		89
91)	1,2,3-Trichloropropane	11.473	75	52375	10.000	ug/L		98
92)	trans-1,4-Dichloro-2-b...	11.525	53	23385	10.000	ug/L	#	93
93)	4-Chlorotoluene	11.604	91	266871	10.000	ug/L		92
94)	tert-Butylbenzene	11.819	119	269629	10.000	ug/L		99
97)	1,2,4-Trimethylbenzene	11.892	105	310970	10.000	ug/L		92
98)	sec-Butylbenzene	12.007	105	394990	10.000	ug/L		97
99)	p-Isopropyltoluene	12.165	119	344211	10.000	ug/L		94
100)	1,3-Dichlorobenzene	12.222	146	178634	10.000	ug/L		97
101)	1,4-Dichlorobenzene	12.317	146	177717	10.000	ug/L		98
102)	p-Diethylbenzene	12.532	119	206903	10.000	ug/L		93
103)	n-Butylbenzene	12.589	91	293522	10.000	ug/L		98
104)	1,2-Dichlorobenzene	12.736	146	164091	10.000	ug/L		98
105)	1,2,4,5-Tetramethylben...	13.323	119	325185	10.000	ug/L		97
106)	1,2-Dibromo-3-chloropr...	13.507	155	9192	10.000	ug/L		94
107)	1,3,5-Trichlorobenzene	13.544	180	128992	10.000	ug/L		95
108)	Hexachlorobutadiene	14.120	225	51419	10.000	ug/L		95
109)	1,2,4-Trichlorobenzene	14.141	180	103850	10.000	ug/L		98
110)	Naphthalene	14.435	128	193521	10.000	ug/L		100
111)	1,2,3-Trichlorobenzene	14.598	180	92600	10.000	ug/L		99

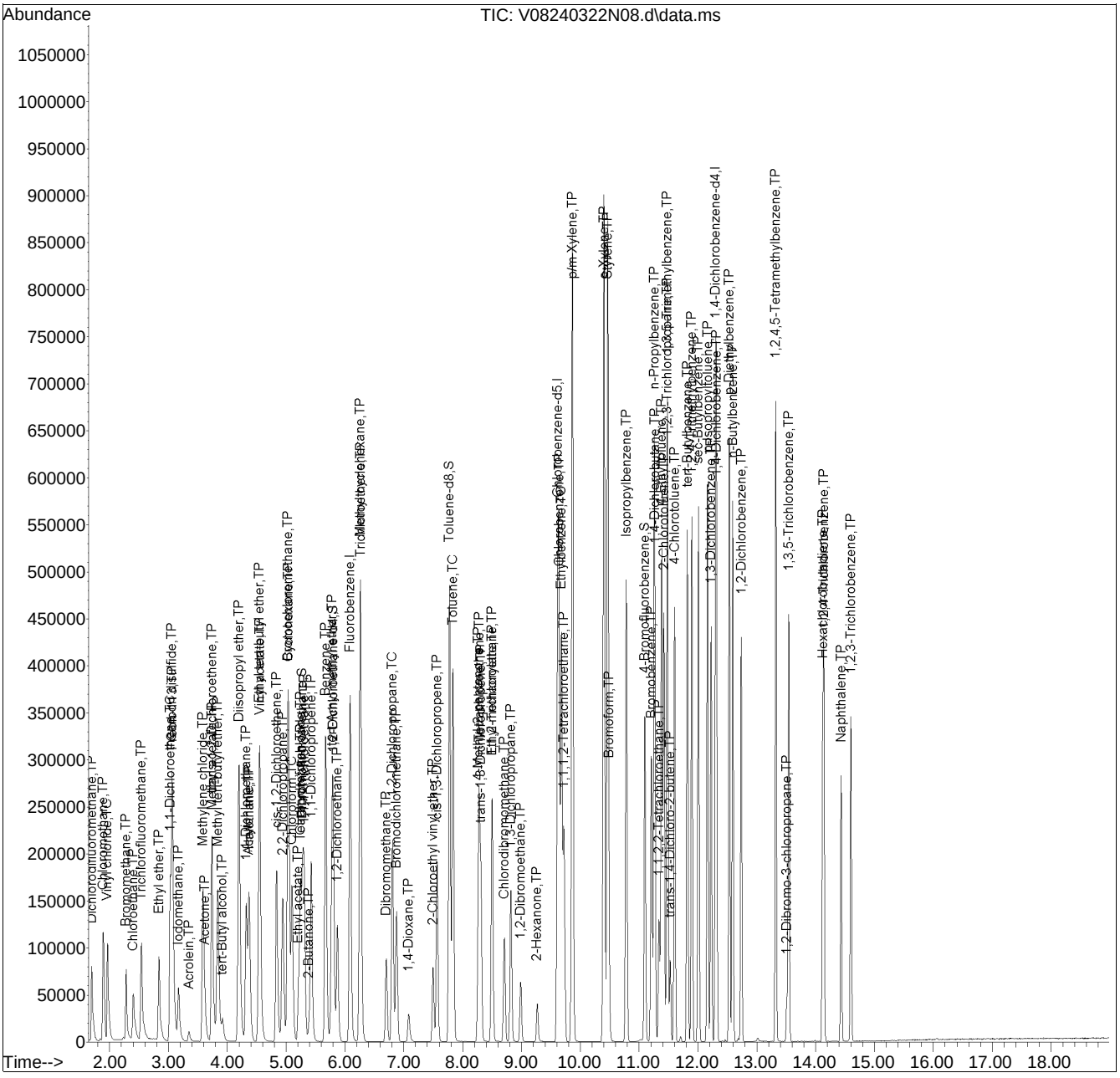
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N08.d
Acq On : 22 Mar 2024 8:58 pm
Operator : VOA108:KJD
Sample : I8260STD10PPB
Misc : WG1900595
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 25 15:51:02 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:49 2024
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•

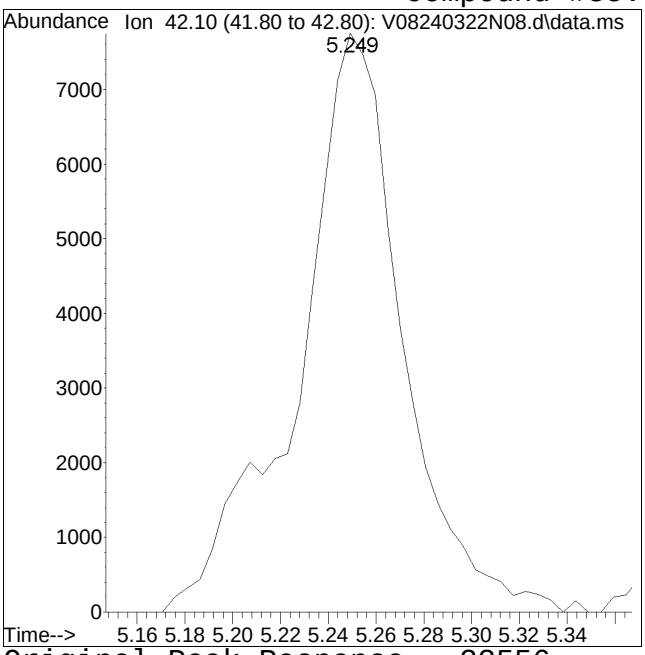


Manual Integration Report

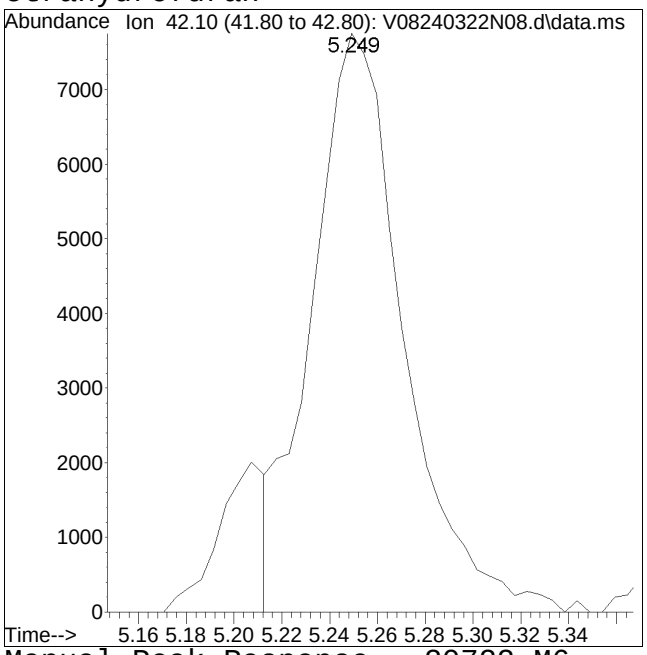
Data Path : K:\VOA108\2024\240322NICALQ
Data File : V08240322N08.d
Date Inj'd : 3/22/2024 8:58 pm
Sample : I8260STD10PPB

Method : V108_240322N_8260.m
Operator : VOA108:KJD
Instrument : VOA 108
Quant Date : 3/25/2024 3:50 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 23556



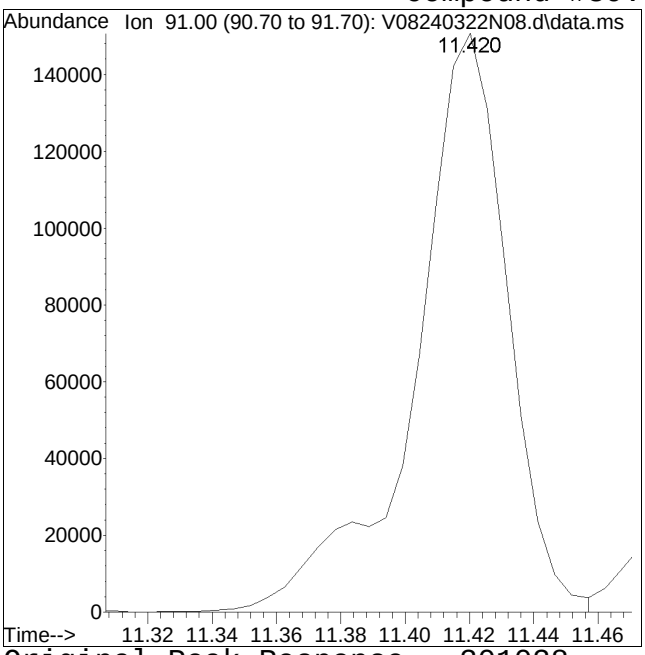
Manual Peak Response = 20722 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

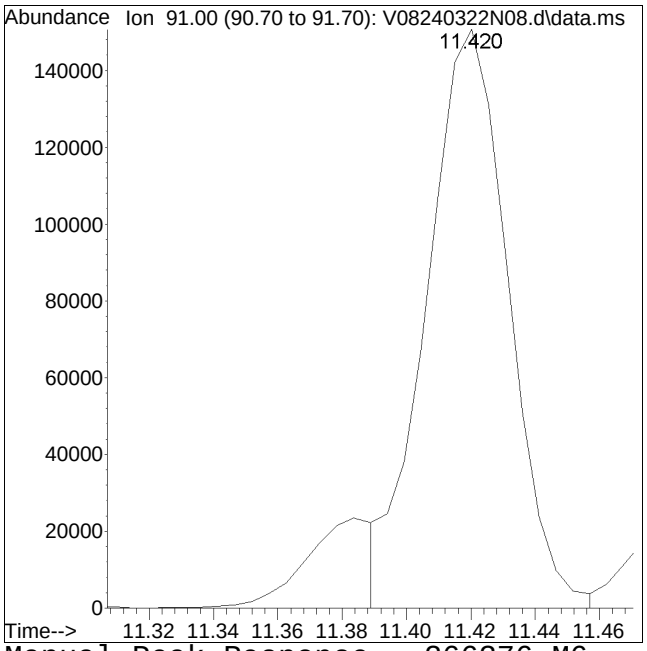
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N08.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 8:58 pm Instrument : VOA 108
Sample : I8260STD10PPB Quant Date : 3/25/2024 3:50 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 301038



Manual Peak Response = 266376 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N09.d
Acq On : 22 Mar 2024 9:21 pm
Operator : VOA108:KJD
Sample : I8260STD30PPB
Misc : WG1900595
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 25 16:16:48 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	378450	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 102.36%			
59) Chlorobenzene-d5	9.617	117	287820	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 103.52%			
79) 1,4-Dichlorobenzene-d4	12.301	152	142628	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 106.37%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	98079	9.913	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.13%			
43) 1,2-Dichloroethane-d4	5.805	65	122021	10.002	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.02%			
60) Toluene-d8	7.776	98	370699	9.970	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.70%			
83) 4-Bromofluorobenzene	11.095	95	129846	9.877	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.77%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	264242	29.618	ug/L	98
3) Chloromethane	1.894	50	456560	28.908	ug/L	99
4) Vinyl chloride	1.962	62	371818	29.138	ug/L	100
5) Bromomethane	2.282	94	127777	31.489	ug/L	99
6) Chloroethane	2.402	64	179356	28.981	ug/L	99
7) Trichlorofluoromethane	2.539	101	310379	29.242	ug/L	97
8) Ethyl ether	2.837	74	94735	30.576	ug/L	84
10) 1,1-Dichloroethene	3.031	96	205631	29.365	ug/L	97
11) Carbon disulfide	3.063	76	703464	29.726	ug/L	97
12) Freon-113	3.068	101	206683	29.371	ug/L	100
13) Iodomethane	3.173	142	286560	34.545	ug/L	88
14) Acrolein	3.346	56	33054	30.147	ug/L	95
15) Methylene chloride	3.587	84	231930	29.096	ug/L	91
17) Acetone	3.624	43	58949	27.122	ug/L	98
18) trans-1,2-Dichloroethene	3.739	96	233432	29.402	ug/L	97
19) Methyl acetate	3.744	43	144533	30.570	ug/L #	87
20) Methyl tert-butyl ether	3.839	73	560206	30.597	ug/L	90
21) tert-Butyl alcohol	3.923	59	94035	156.446	ug/L #	69
22) Diisopropyl ether	4.201	45	1137711	30.688	ug/L	100
23) 1,1-Dichloroethane	4.321	63	570654	29.160	ug/L	96
24) Halothane	4.368	117	183276	29.843	ug/L	99

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N09.d
Acq On : 22 Mar 2024 9:21 pm
Operator : VOA108:KJD
Sample : I8260STD30PPB
Misc : WG1900595
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 25 16:16:48 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.358	53	75483	30.183	ug/L	#	88
26) Ethyl tert-butyl ether	4.547	59	977879	31.164	ug/L		95
27) Vinyl acetate	4.552	43	541338	33.238	ug/L		98
28) cis-1,2-Dichloroethene	4.835	96	260577	29.467	ug/L		94
29) 2,2-Dichloropropane	4.940	77	352533	29.600	ug/L		90
30) Bromochloromethane	5.029	128	119280	29.146	ug/L		86
31) Cyclohexane	5.040	56	588931	30.292	ug/L		98
32) Chloroform	5.102	83	421730	29.159	ug/L		96
33) Ethyl acetate	5.207	43	216199	30.603	ug/L	#	96
34) Carbon tetrachloride	5.239	117	345018	29.133	ug/L		98
35) Tetrahydrofuran	5.249	42	62469M6	29.453	ug/L		
37) 1,1,1-Trichloroethane	5.307	97	372378	29.808	ug/L	#	96
39) 2-Butanone	5.391	43	90440	29.249	ug/L		95
40) 1,1-Dichloropropene	5.428	75	329324	30.180	ug/L		96
41) Benzene	5.669	78	933736	29.718	ug/L		98
42) tert-Amyl methyl ether	5.784	73	596509	31.440	ug/L		95
44) 1,2-Dichloroethane	5.873	62	363401	29.311	ug/L		99
47) Methyl cyclohexane	6.261	83	382323	30.855	ug/L		90
48) Trichloroethene	6.266	95	255973	29.692	ug/L		93
50) Dibromomethane	6.702	93	127725	29.846	ug/L		98
51) 1,2-Dichloropropane	6.806	63	322374	29.890	ug/L	#	91
53) 2-Chloroethyl vinyl ether	7.499	63	140369	32.133	ug/L		99
54) Bromodichloromethane	6.875	83	322308	30.332	ug/L		99
57) 1,4-Dioxane	7.084	88	27987	596.046	ug/L		92
58) cis-1,3-Dichloropropene	7.567	75	382821	31.315	ug/L		100
61) Toluene	7.834	92	586896	29.492	ug/L		96
62) 4-Methyl-2-pentanone	8.264	58	75751	32.871	ug/L		99
63) Tetrachloroethene	8.280	166	248768	29.949	ug/L		89
65) trans-1,3-Dichloropropene	8.311	75	319958	31.494	ug/L		96
67) Ethyl methacrylate	8.500	69	204341	32.930	ug/L	#	37
68) 1,1,2-Trichloroethane	8.500	83	150120	29.424	ug/L		92
69) Chlorodibromomethane	8.710	129	228669	30.339	ug/L		97
70) 1,3-Dichloropropane	8.820	76	319257	29.989	ug/L		100
71) 1,2-Dibromoethane	8.988	107	174958	30.765	ug/L		98
72) 2-Hexanone	9.271	43	122223	33.443	ug/L		95
73) Chlorobenzene	9.638	112	657162	29.451	ug/L		97
74) Ethylbenzene	9.680	91	1121996	29.733	ug/L		98
75) 1,1,1,2-Tetrachloroethane	9.722	131	251518	30.555	ug/L		95
76) p/m Xylene	9.863	106	880377	59.163	ug/L		94
77) o Xylene	10.403	106	862386	59.661	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N09.d
Acq On : 22 Mar 2024 9:21 pm
Operator : VOA108:KJD
Sample : I8260STD30PPB
Misc : WG1900595
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 25 16:16:48 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
78) Styrene	10.466	104	1412148	60.445	ug/L		88
80) Bromoform	10.487	173	122858	29.780	ug/L		96
82) Isopropylbenzene	10.781	105	1115723	29.234	ug/L		95
84) Bromobenzene	11.211	156	264464	28.710	ug/L		98
85) n-Propylbenzene	11.258	91	1311534	29.045	ug/L		95
86) 1,4-Dichlorobutane	11.268	55	397328	28.613	ug/L		91
87) 1,1,2,2-Tetrachloroethane	11.336	83	200235	29.154	ug/L		98
88) 4-Ethyltoluene	11.384	105	1129308	29.179	ug/L		96
89) 2-Chlorotoluene	11.420	91	798822M6	28.192	ug/L		
90) 1,3,5-Trimethylbenzene	11.478	105	981039	29.105	ug/L		89
91) 1,2,3-Trichloropropane	11.473	75	161419	28.974	ug/L		98
92) trans-1,4-Dichloro-2-b...	11.525	53	72414	29.111	ug/L	#	92
93) 4-Chlorotoluene	11.604	91	812228	28.612	ug/L		92
94) tert-Butylbenzene	11.819	119	837110	29.187	ug/L		99
97) 1,2,4-Trimethylbenzene	11.897	105	966724	29.226	ug/L		92
98) sec-Butylbenzene	12.008	105	1210967	28.822	ug/L		97
99) p-Isopropyltoluene	12.160	119	1084461	29.619	ug/L		95
100) 1,3-Dichlorobenzene	12.222	146	545026	28.683	ug/L		98
101) 1,4-Dichlorobenzene	12.317	146	540208	28.577	ug/L		98
102) p-Diethylbenzene	12.532	119	659751	29.977	ug/L		93
103) n-Butylbenzene	12.589	91	914490	29.290	ug/L		97
104) 1,2-Dichlorobenzene	12.736	146	502287	28.777	ug/L		98
105) 1,2,4,5-Tetramethylben...	13.324	119	1067328	30.856	ug/L		98
106) 1,2-Dibromo-3-chloropr...	13.512	155	29775	30.452	ug/L		92
107) 1,3,5-Trichlorobenzene	13.544	180	401650	29.273	ug/L		95
108) Hexachlorobutadiene	14.120	225	162881	29.780	ug/L		95
109) 1,2,4-Trichlorobenzene	14.141	180	341901	30.951	ug/L		99
110) Naphthalene	14.430	128	655789	31.858	ug/L		100
111) 1,2,3-Trichlorobenzene	14.598	180	296090	30.060	ug/L		99

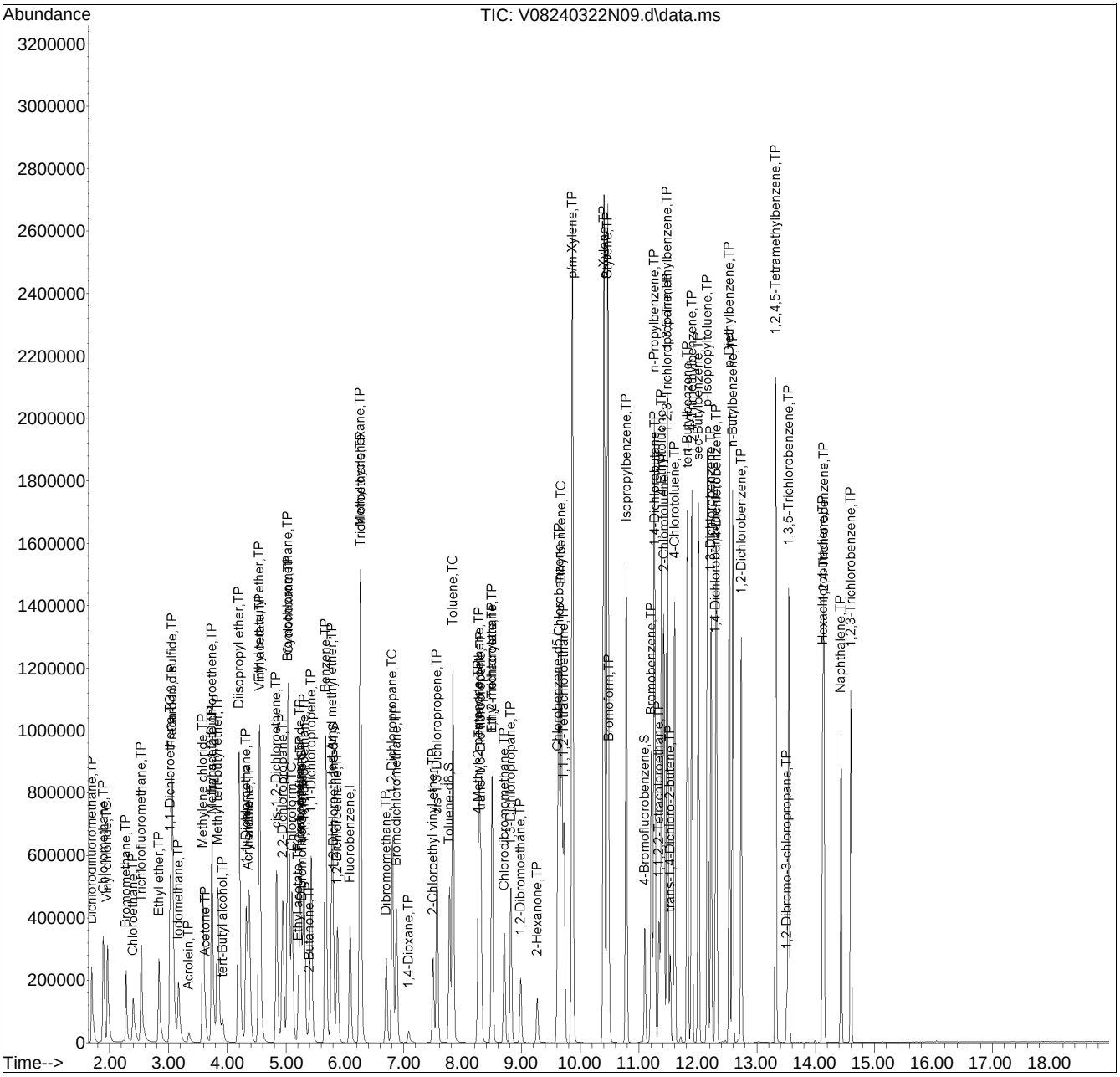
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N09.d
Acq On : 22 Mar 2024 9:21 pm
Operator : VOA108:KJD
Sample : I8260STD30PPB
Misc : WG1900595
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 25 16:16:48 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

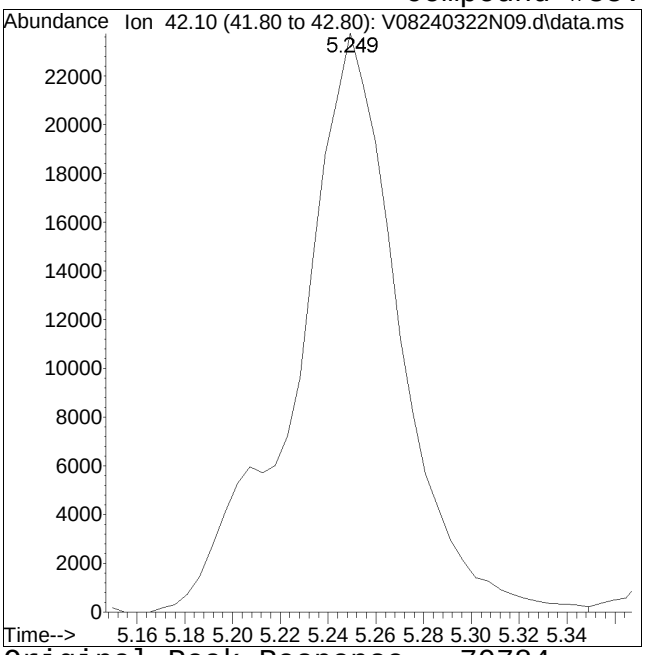
Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•



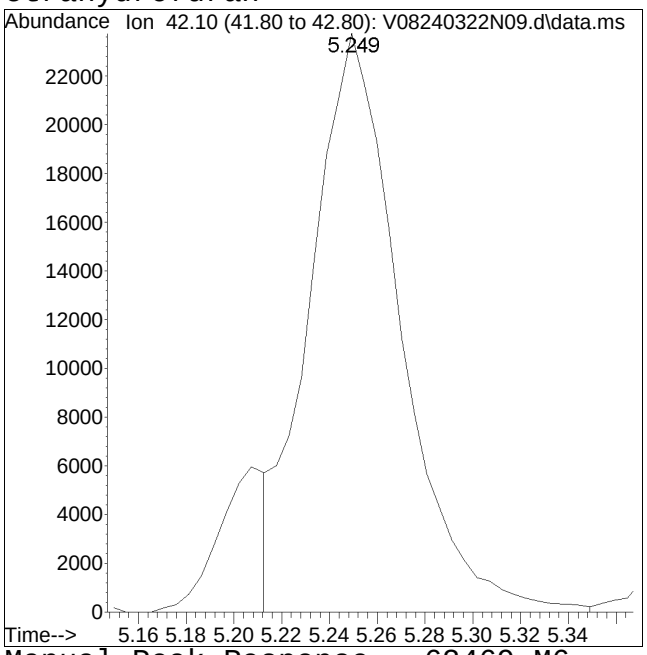
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N09.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 9:21 pm Instrument : VOA 108
Sample : I8260STD30PPB Quant Date : 3/25/2024 4:11 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 70784



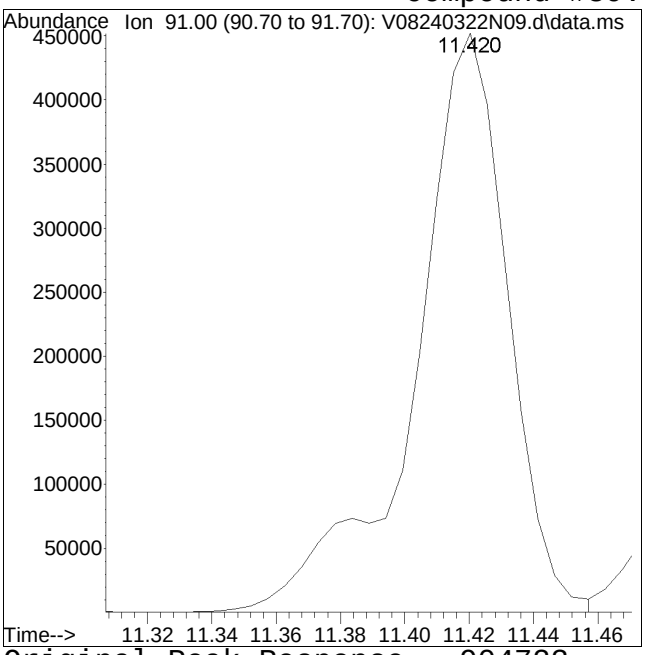
Manual Peak Response = 62469 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

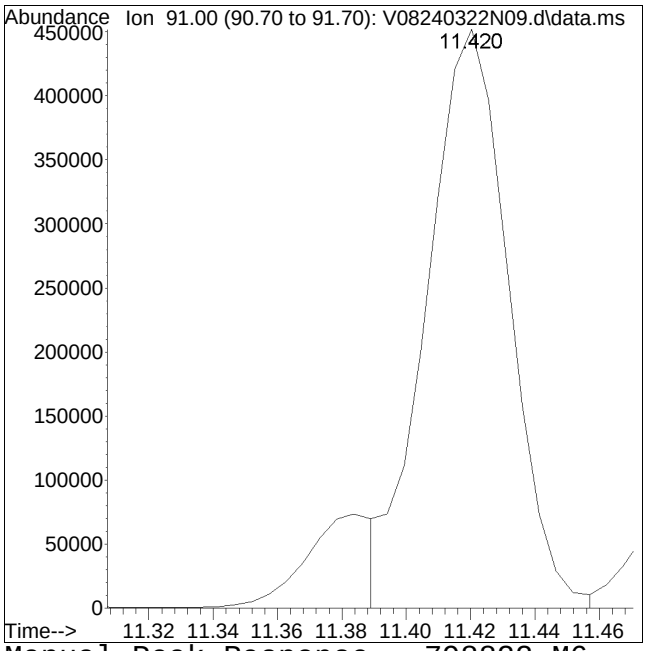
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N09.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 9:21 pm Instrument : VOA 108
Sample : I8260STD30PPB Quant Date : 3/25/2024 4:11 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 904723



Manual Peak Response = 798822 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N10.d
Acq On : 22 Mar 2024 9:43 pm
Operator : VOA108:KJD
Sample : I8260STD80PPB
Misc : WG1900595
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 25 16:16:36 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	395772	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 107.04%			
59) Chlorobenzene-d5	9.617	117	299419	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 107.69%			
79) 1,4-Dichlorobenzene-d4	12.301	152	147495	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 110.00%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.276	113	101323	9.792	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 97.92%			
43) 1,2-Dichloroethane-d4	5.800	65	125635	9.848	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.48%			
60) Toluene-d8	7.777	98	387033	10.006	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.06%			
83) 4-Bromofluorobenzene	11.095	95	134530	9.896	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.96%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.695	85	670252	71.839	ug/L	99
3) Chloromethane	1.889	50	1174865	71.134	ug/L	99
4) Vinyl chloride	1.962	62	965672	72.364	ug/L	99
5) Bromomethane	2.282	94	368944	86.941	ug/L	97
6) Chloroethane	2.397	64	468171	72.337	ug/L	100
7) Trichlorofluoromethane	2.539	101	790683	71.234	ug/L	97
8) Ethyl ether	2.838	74	256154	79.055	ug/L	86
10) 1,1-Dichloroethene	3.032	96	540102	73.753	ug/L	96
11) Carbon disulfide	3.063	76	1852898	74.870	ug/L	97
12) Freon-113	3.068	101	526214	71.505	ug/L	99
13) Iodomethane	3.173	142	818787	94.384	ug/L	87
14) Acrolein	3.346	56	89397	77.966	ug/L	93
15) Methylene chloride	3.587	84	618126	74.152	ug/L	93
17) Acetone	3.619	43	151523	66.662	ug/L	95
18) trans-1,2-Dichloroethene	3.739	96	625382	75.322	ug/L	98
19) Methyl acetate	3.739	43	379319	76.717	ug/L #	88
20) Methyl tert-butyl ether	3.839	73	1542368	80.552	ug/L	91
21) tert-Butyl alcohol	3.923	59	252078	401.026	ug/L #	70
22) Diisopropyl ether	4.196	45	3054110	78.774	ug/L	100
23) 1,1-Dichloroethane	4.321	63	1525169	74.523	ug/L	96
24) Halothane	4.374	117	485247	75.555	ug/L	99

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N10.d
Acq On : 22 Mar 2024 9:43 pm
Operator : VOA108:KJD
Sample : I8260STD80PPB
Misc : WG1900595
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 25 16:16:36 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.363	53	200498	76.663	ug/L	#	88
26) Ethyl tert-butyl ether	4.547	59	2672312	81.437	ug/L		92
27) Vinyl acetate	4.552	43	1314579	77.182	ug/L		99
28) cis-1,2-Dichloroethene	4.835	96	698903	75.577	ug/L		94
29) 2,2-Dichloropropane	4.940	77	913265	73.325	ug/L		91
30) Bromochloromethane	5.029	128	321031	75.011	ug/L		83
31) Cyclohexane	5.040	56	1498486	73.702	ug/L		99
32) Chloroform	5.097	83	1119545	74.020	ug/L		96
33) Ethyl acetate	5.207	43	575862	77.945	ug/L	#	95
34) Carbon tetrachloride	5.239	117	908456	73.353	ug/L		98
35) Tetrahydrofuran	5.249	42	165609M6	74.663	ug/L		
37) 1,1,1-Trichloroethane	5.307	97	980032	75.016	ug/L	#	97
39) 2-Butanone	5.386	43	246402M3	76.201	ug/L		
40) 1,1-Dichloropropene	5.428	75	868801	76.134	ug/L		96
41) Benzene	5.669	78	2510937	76.418	ug/L		99
42) tert-Amyl methyl ether	5.779	73	1675403	84.439	ug/L		97
44) 1,2-Dichloroethane	5.873	62	974089	75.130	ug/L		99
47) Methyl cyclohexane	6.261	83	1007314	77.736	ug/L		91
48) Trichloroethene	6.266	95	694794	77.067	ug/L		93
50) Dibromomethane	6.702	93	352449	78.753	ug/L		98
51) 1,2-Dichloropropane	6.807	63	881730	78.175	ug/L	#	91
53) 2-Chloroethyl vinyl ether	7.499	63	404012	88.437	ug/L		97
54) Bromodichloromethane	6.875	83	886165	79.745	ug/L		99
57) 1,4-Dioxane	7.084	88	38266	779.292	ug/L		93
58) cis-1,3-Dichloropropene	7.567	75	1065580	83.349	ug/L		98
61) Toluene	7.834	92	1607171	77.633	ug/L		95
62) 4-Methyl-2-pentanone	8.264	58	219644	91.618	ug/L		97
63) Tetrachloroethene	8.280	166	668183	77.327	ug/L		89
65) trans-1,3-Dichloropropene	8.311	75	906107	85.735	ug/L		99
67) Ethyl methacrylate	8.500	69	589114	91.259	ug/L	#	40
68) 1,1,2-Trichloroethane	8.495	83	409201	77.099	ug/L		92
69) Chlorodibromomethane	8.710	129	646796	82.491	ug/L		97
70) 1,3-Dichloropropane	8.820	76	869321	78.494	ug/L		100
71) 1,2-Dibromoethane	8.988	107	482895	81.624	ug/L		99
72) 2-Hexanone	9.266	43	351716	92.510	ug/L		92
73) Chlorobenzene	9.638	112	1791395	77.172	ug/L		98
74) Ethylbenzene	9.680	91	3041923	77.489	ug/L		98
75) 1,1,1,2-Tetrachloroethane	9.722	131	696746	81.364	ug/L		94
76) p/m Xylene	9.868	106	2378831	153.668	ug/L		94
77) o Xylene	10.403	106	2344731	155.929	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N10.d
Acq On : 22 Mar 2024 9:43 pm
Operator : VOA108:KJD
Sample : I8260STD80PPB
Misc : WG1900595
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 25 16:16:36 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Styrene	10.466	104	3872191	159.323	ug/L	89
80) Bromoform	10.487	173	343864	80.599	ug/L	96
82) Isopropylbenzene	10.781	105	3033008	76.848	ug/L	96
84) Bromobenzene	11.211	156	725955	76.209	ug/L	97
85) n-Propylbenzene	11.258	91	3560307	76.245	ug/L	95
86) 1,4-Dichlorobutane	11.268	55	1072122	74.660	ug/L	90
87) 1,1,2,2-Tetrachloroethane	11.337	83	533933	75.174	ug/L	98
88) 4-Ethyltoluene	11.384	105	3086649	77.122	ug/L	96
89) 2-Chlorotoluene	11.420	91	2104220M6	71.813	ug/L	
90) 1,3,5-Trimethylbenzene	11.483	105	2656165	76.203	ug/L	89
91) 1,2,3-Trichloropropane	11.478	75	436958	75.844	ug/L	98
92) trans-1,4-Dichloro-2-b...	11.531	53	197472	76.767	ug/L	88
93) 4-Chlorotoluene	11.604	91	2217876	75.551	ug/L	92
94) tert-Butylbenzene	11.819	119	2277572	76.791	ug/L	99
97) 1,2,4-Trimethylbenzene	11.898	105	2643668	77.285	ug/L	91
98) sec-Butylbenzene	12.008	105	3283257	75.566	ug/L	97
99) p-Isopropyltoluene	12.165	119	2968839	78.409	ug/L	95
100) 1,3-Dichlorobenzene	12.223	146	1477572	75.195	ug/L	98
101) 1,4-Dichlorobenzene	12.317	146	1482244	75.822	ug/L	98
102) p-Diethylbenzene	12.532	119	1823722	80.131	ug/L	93
103) n-Butylbenzene	12.590	91	2483371	76.914	ug/L	97
104) 1,2-Dichlorobenzene	12.736	146	1374750	76.163	ug/L	97
105) 1,2,4,5-Tetramethylben...	13.324	119	2951129	82.502	ug/L	97
106) 1,2-Dibromo-3-chloropr...	13.512	155	85145	84.208	ug/L	92
107) 1,3,5-Trichlorobenzene	13.544	180	1097778	77.367	ug/L	95
108) Hexachlorobutadiene	14.121	225	430473	76.108	ug/L	96
109) 1,2,4-Trichlorobenzene	14.142	180	949025	83.076	ug/L	98
110) Naphthalene	14.430	128	1849700	86.892	ug/L	100
111) 1,2,3-Trichlorobenzene	14.598	180	819021	80.406	ug/L	99

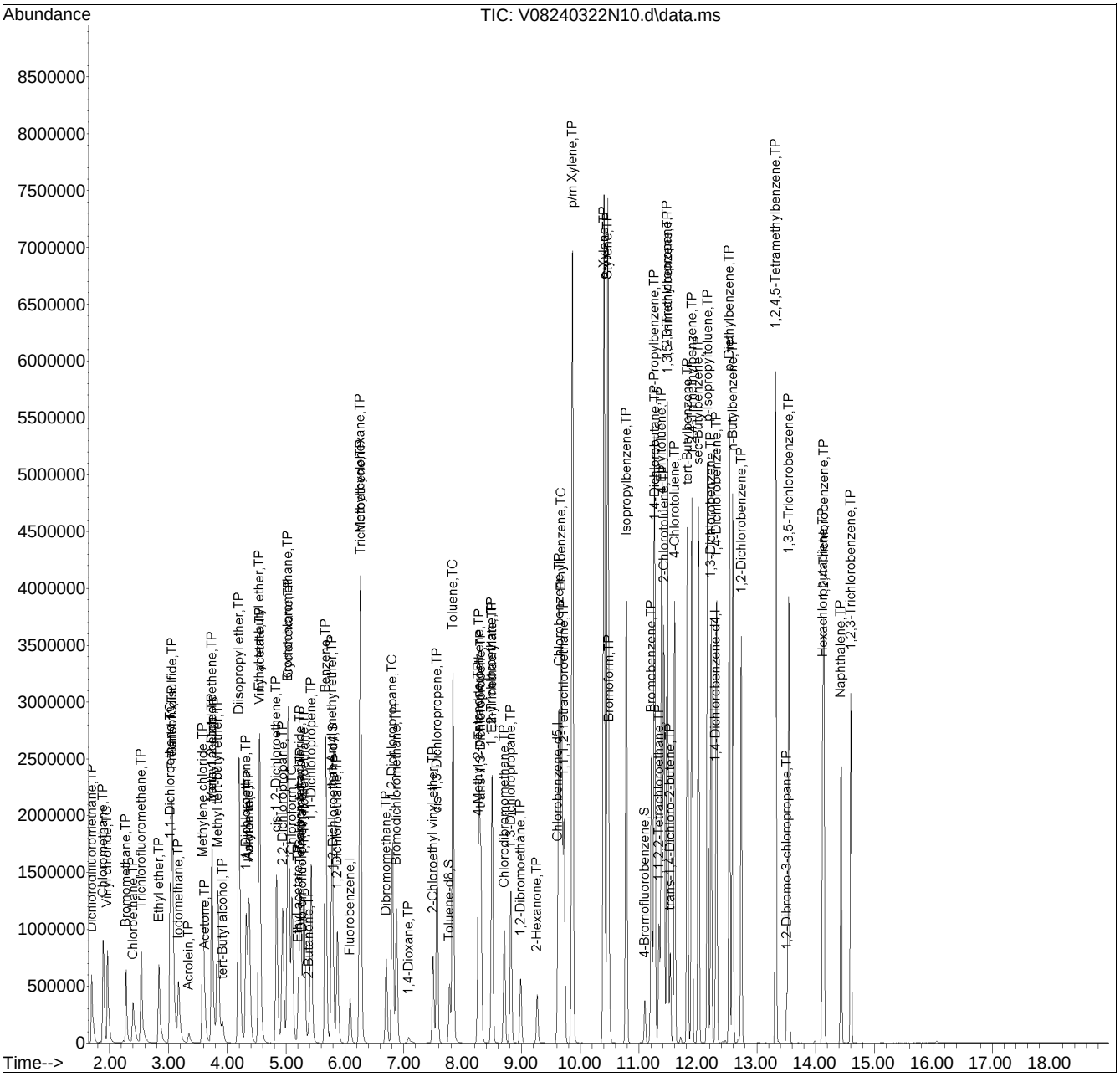
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N10.d
Acq On : 22 Mar 2024 9:43 pm
Operator : VOA108:KJD
Sample : I8260STD80PPB
Misc : WG1900595
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 25 16:16:36 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

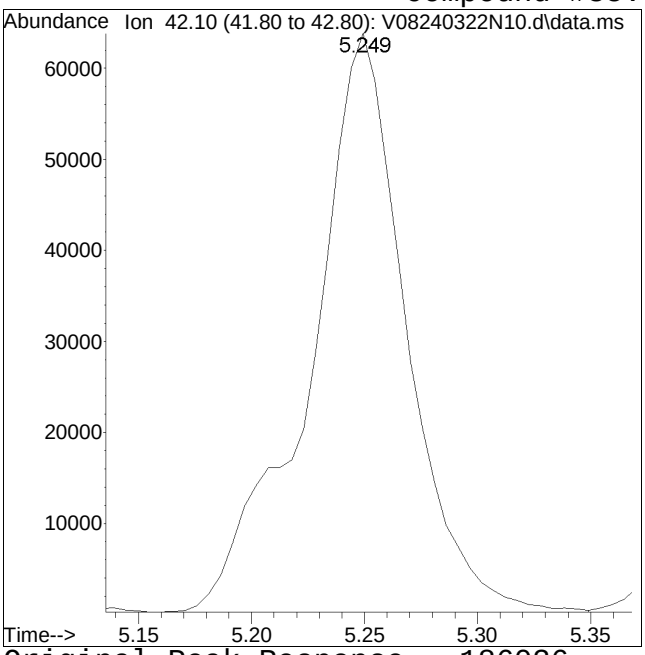
Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•



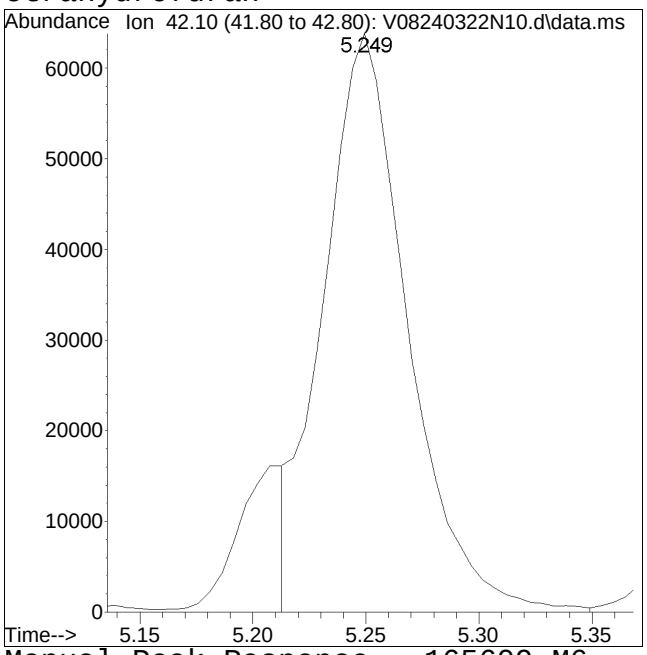
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N10.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 9:43 pm Instrument : VOA 108
Sample : I8260STD80PPB Quant Date : 3/25/2024 4:11 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 186036



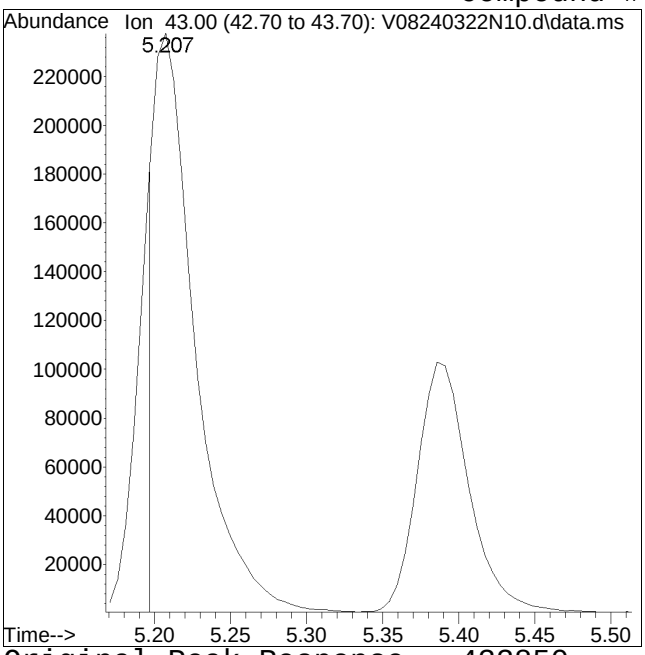
Manual Peak Response = 165609 M6

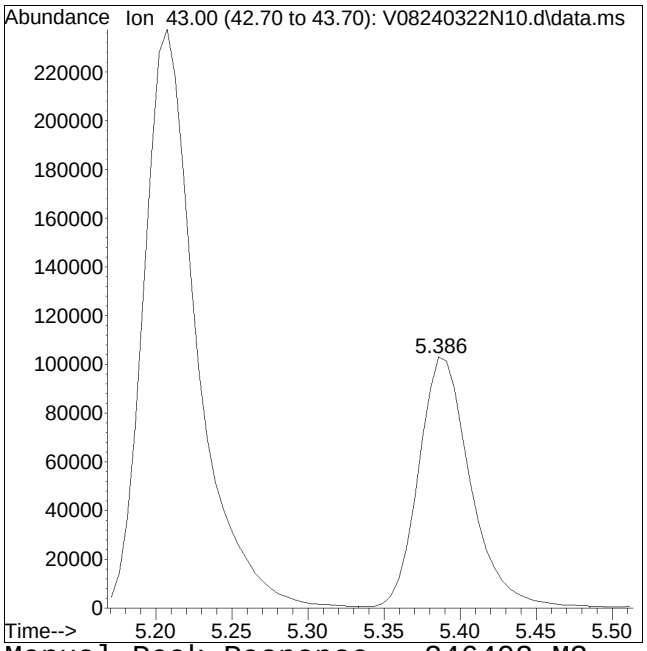
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N10.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 9:43 pm Instrument : VOA 108
Sample : I8260STD80PPB Quant Date : 3/25/2024 4:11 pm

Compound #39: 2-Butanone





Original Peak Response = 433850 Manual Peak Response = 246402 M3

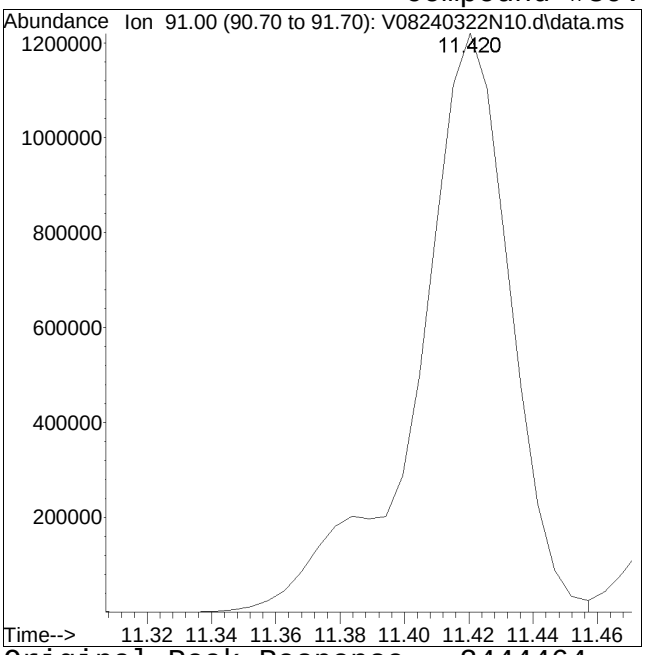
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

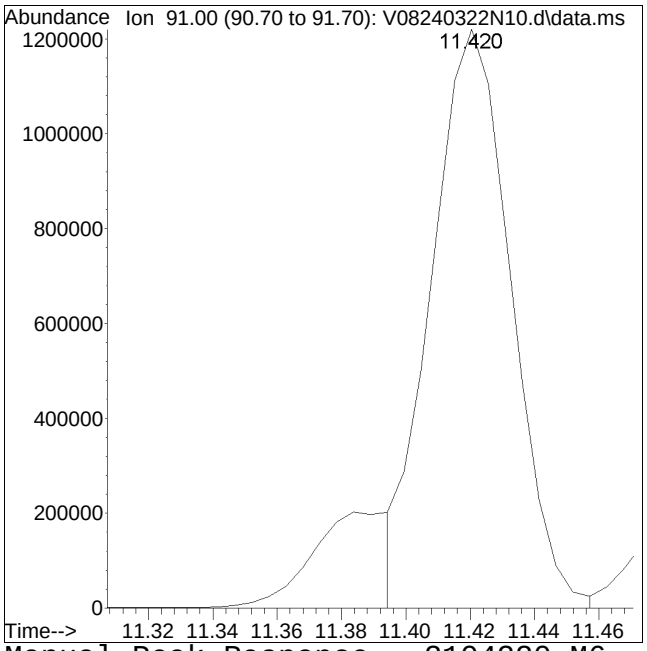
Data Path : K:\VOA108\2024\240322NICALQ
Data File : V08240322N10.d
Date Inj'd : 3/22/2024 9:43 pm
Sample : I8260STD80PPB

Method : V108_240322N_8260.m
Operator : VOA108:KJD
Instrument : VOA 108
Quant Date : 3/25/2024 4:11 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 2444464



Manual Peak Response = 2104220 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N11.d
Acq On : 22 Mar 2024 10:05 pm
Operator : VOA108:KJD
Sample : I8260STD120PPB
Misc : WG1900595
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 25 16:18:11 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	425643	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 115.12%			
59) Chlorobenzene-d5	9.617	117	324574	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 116.74%			
79) 1,4-Dichlorobenzene-d4	12.301	152	157691	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 117.60%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	109432	9.834	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.34%			
43) 1,2-Dichloroethane-d4	5.805	65	132498	9.657	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 96.57%			
60) Toluene-d8	7.776	98	414955	9.897	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.97%			
83) 4-Bromofluorobenzene	11.095	95	144749	9.959	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.59%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	1065767	106.214	ug/L	99
3) Chloromethane	1.888	50	1784582	100.467	ug/L	99
4) Vinyl chloride	1.962	62	1521167	105.992	ug/L	99
5) Bromomethane	2.282	94	578351	126.723	ug/L	98
6) Chloroethane	2.397	64	719677	103.394	ug/L	100
7) Trichlorofluoromethane	2.539	101	1262811	105.784	ug/L	97
8) Ethyl ether	2.837	74	396010	113.640	ug/L	90
10) 1,1-Dichloroethene	3.031	96	872251	110.750	ug/L	94
11) Carbon disulfide	3.063	76	2984750	112.141	ug/L	97
12) Freon-113	3.068	101	861655	108.870	ug/L	100
13) Iodomethane	3.173	142	1297886	139.112	ug/L	87
14) Acrolein	3.346	56	136212	110.458	ug/L	94
15) Methylene chloride	3.587	84	966815	107.842	ug/L	98
17) Acetone	3.624	43	228537	93.488	ug/L	94
18) trans-1,2-Dichloroethene	3.739	96	985205	110.332	ug/L	99
19) Methyl acetate	3.739	43	575159	108.162	ug/L #	89
20) Methyl tert-butyl ether	3.839	73	2392642	116.189	ug/L	92
21) tert-Butyl alcohol	3.923	59	390760	578.027	ug/L #	71
22) Diisopropyl ether	4.195	45	4567667	109.545	ug/L	99
23) 1,1-Dichloroethane	4.321	63	2341593	106.386	ug/L	97
24) Halothane	4.374	117	775189	112.230	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N11.d
Acq On : 22 Mar 2024 10:05 pm
Operator : VOA108:KJD
Sample : I8260STD120PPB
Misc : WG1900595
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 25 16:18:11 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.363	53	303848	108.027	ug/L	#	88
26) Ethyl tert-butyl ether	4.547	59	4079202	115.587	ug/L		91
27) Vinyl acetate	4.552	43	1952533	106.593	ug/L		100
28) cis-1,2-Dichloroethene	4.835	96	1093541	109.952	ug/L		92
29) 2,2-Dichloropropane	4.940	77	1439539	107.467	ug/L		93
30) Bromochloromethane	5.029	128	499545	108.531	ug/L		80
31) Cyclohexane	5.039	56	2369824	108.378	ug/L		100
32) Chloroform	5.097	83	1730742	106.400	ug/L		96
33) Ethyl acetate	5.207	43	862805	108.589	ug/L	#	95
34) Carbon tetrachloride	5.239	117	1452883	109.079	ug/L		98
35) Tetrahydrofuran	5.249	42	236599M6	99.182	ug/L		
37) 1,1,1-Trichloroethane	5.307	97	1555133	110.683	ug/L	#	97
39) 2-Butanone	5.385	43	371056M3	106.698	ug/L		
40) 1,1-Dichloropropene	5.427	75	1389016	113.178	ug/L		96
41) Benzene	5.669	78	3921845	110.982	ug/L		99
42) tert-Amyl methyl ether	5.779	73	2605053	122.079	ug/L		98
44) 1,2-Dichloroethane	5.873	62	1476819	105.911	ug/L		99
47) Methyl cyclohexane	6.261	83	1635412	117.350	ug/L		94
48) Trichloroethene	6.261	95	1088802	112.295	ug/L		93
50) Dibromomethane	6.701	93	544003	113.025	ug/L		97
51) 1,2-Dichloropropane	6.806	63	1354544	111.667	ug/L	#	92
53) 2-Chloroethyl vinyl ether	7.498	63	629337	128.092	ug/L		96
54) Bromodichloromethane	6.875	83	1371551	114.763	ug/L		99
57) 1,4-Dioxane	7.084	88	61823	1170.676	ug/L		95
58) cis-1,3-Dichloropropene	7.567	75	1653263	120.242	ug/L		96
61) Toluene	7.834	92	2515974	112.113	ug/L		95
62) 4-Methyl-2-pentanone	8.264	58	341573	131.435	ug/L		94
63) Tetrachloroethene	8.280	166	1062185	113.396	ug/L		89
65) trans-1,3-Dichloropropene	8.311	75	1400620	122.255	ug/L		99
67) Ethyl methacrylate	8.500	69	914760	130.722	ug/L	#	40
68) 1,1,2-Trichloroethane	8.495	83	633005	110.023	ug/L		93
69) Chlorodibromomethane	8.710	129	1008383	118.640	ug/L		96
70) 1,3-Dichloropropane	8.820	76	1340381	111.648	ug/L		100
71) 1,2-Dibromoethane	8.987	107	755533	117.811	ug/L		99
72) 2-Hexanone	9.265	43	539687	130.949	ug/L		92
73) Chlorobenzene	9.638	112	2787194	110.765	ug/L		98
74) Ethylbenzene	9.680	91	4725233	111.040	ug/L		98
75) 1,1,1,2-Tetrachloroethane	9.721	131	1074046	115.704	ug/L		94
76) p/m Xylene	9.868	106	3676754	219.104	ug/L		93
77) o Xylene	10.403	106	3582690	219.790	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N11.d
Acq On : 22 Mar 2024 10:05 pm
Operator : VOA108:KJD
Sample : I8260STD120PPB
Misc : WG1900595
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 25 16:18:11 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
78) Styrene	10.466	104	5885276	223.385	ug/L		89
80) Bromoform	10.492	173	527774	115.707	ug/L		96
82) Isopropylbenzene	10.781	105	4682594	110.973	ug/L		95
84) Bromobenzene	11.211	156	1107101	108.707	ug/L		97
85) n-Propylbenzene	11.258	91	5459667	109.361	ug/L		95
86) 1,4-Dichlorobutane	11.268	55	1603875	104.468	ug/L	#	90
87) 1,1,2,2-Tetrachloroethane	11.336	83	810829	106.778	ug/L		98
88) 4-Ethyltoluene	11.384	105	4703980	109.933	ug/L		95
89) 2-Chlorotoluene	11.420	91	3220261M6	102.795	ug/L		
90) 1,3,5-Trimethylbenzene	11.483	105	4043831	108.512	ug/L		89
91) 1,2,3-Trichloropropane	11.478	75	660970	107.309	ug/L		98
92) trans-1,4-Dichloro-2-b...	11.530	53	295481	107.441	ug/L		86
93) 4-Chlorotoluene	11.604	91	3384953	107.852	ug/L		93
94) tert-Butylbenzene	11.819	119	3493960	110.186	ug/L		99
97) 1,2,4-Trimethylbenzene	11.897	105	4029131	110.172	ug/L		92
98) sec-Butylbenzene	12.007	105	5017026	108.003	ug/L		97
99) p-Isopropyltoluene	12.165	119	4495126	111.044	ug/L		95
100) 1,3-Dichlorobenzene	12.222	146	2227965	106.052	ug/L		98
101) 1,4-Dichlorobenzene	12.317	146	2221749	106.302	ug/L		98
102) p-Diethylbenzene	12.537	119	2762262	113.521	ug/L		93
103) n-Butylbenzene	12.589	91	3755526	108.794	ug/L		97
104) 1,2-Dichlorobenzene	12.736	146	2063627	106.936	ug/L		98
105) 1,2,4,5-Tetramethylben...	13.323	119	4476355	117.050	ug/L		98
106) 1,2-Dibromo-3-chloropr...	13.512	155	130718	120.921	ug/L		91
107) 1,3,5-Trichlorobenzene	13.544	180	1656508	109.196	ug/L		95
108) Hexachlorobutadiene	14.120	225	664105	109.822	ug/L		96
109) 1,2,4-Trichlorobenzene	14.141	180	1428908	116.997	ug/L		98
110) Naphthalene	14.430	128	2819767	123.897	ug/L		100
111) 1,2,3-Trichlorobenzene	14.598	180	1236621	113.554	ug/L		99

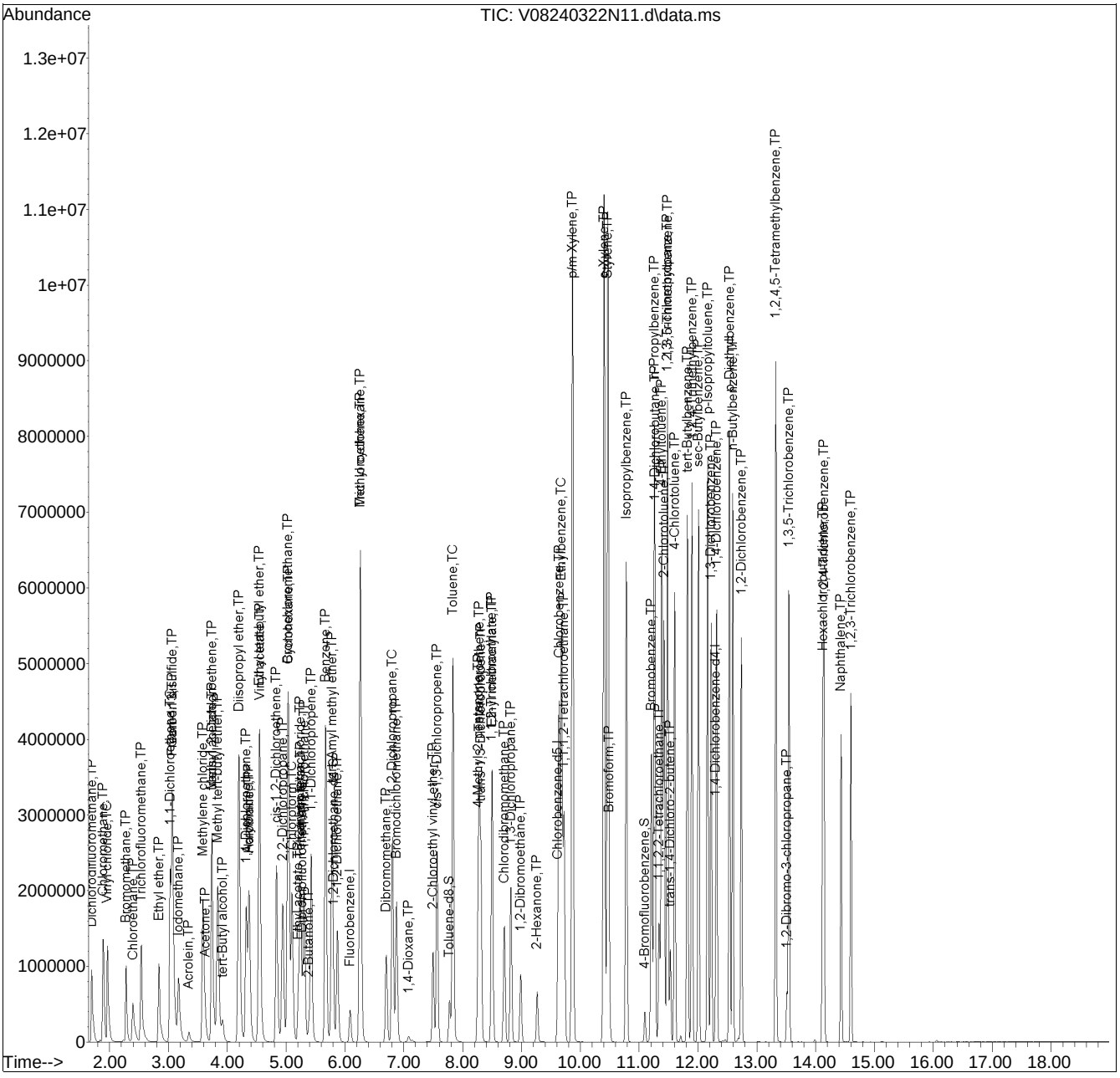
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N11.d
Acq On : 22 Mar 2024 10:05 pm
Operator : VOA108:KJD
Sample : I8260STD120PPB
Misc : WG1900595
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 25 16:18:11 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

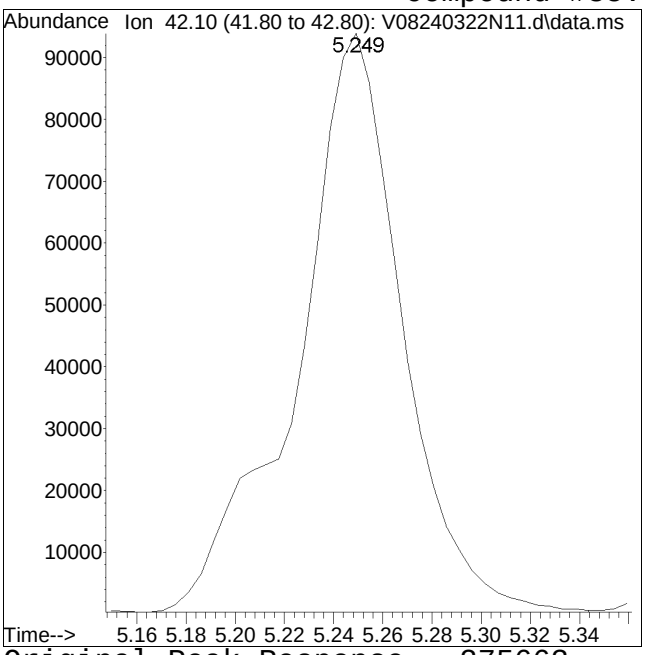
Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•



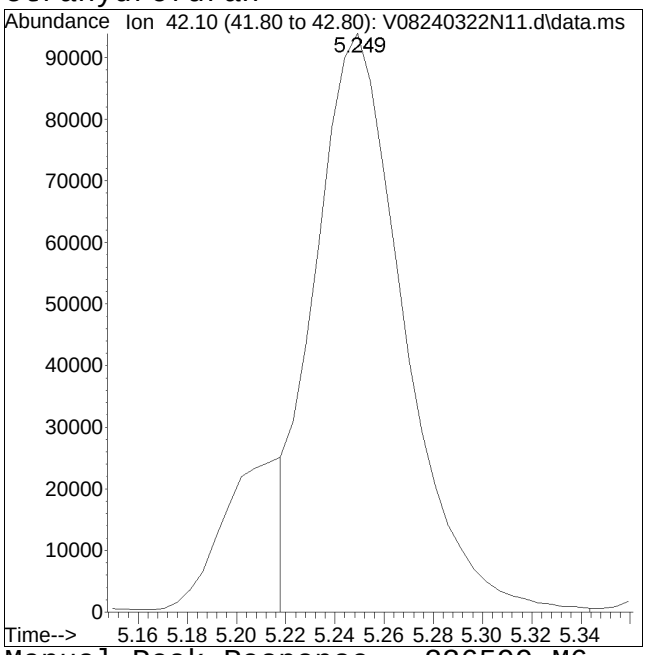
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N11.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 10:05 pm Instrument : VOA 108
Sample : I8260STD120PPB Quant Date : 3/25/2024 4:11 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 275663



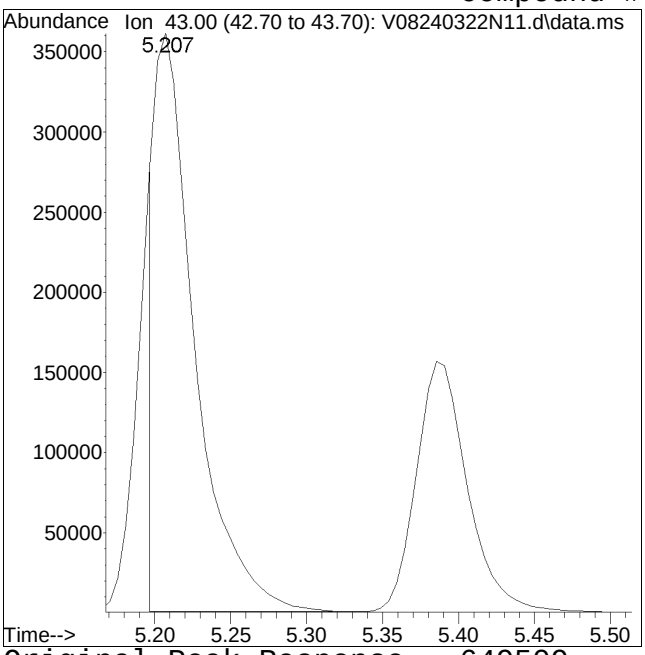
Manual Peak Response = 236599 M6

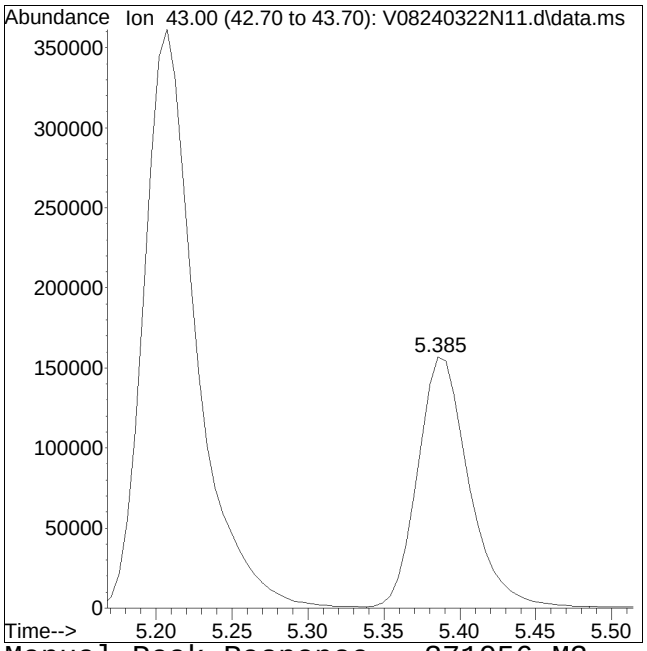
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N11.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 10:05 pm Instrument : VOA 108
Sample : I8260STD120PPB Quant Date : 3/25/2024 4:11 pm

Compound #39: 2-Butanone





Original Peak Response = 649509 Manual Peak Response = 371056 M3

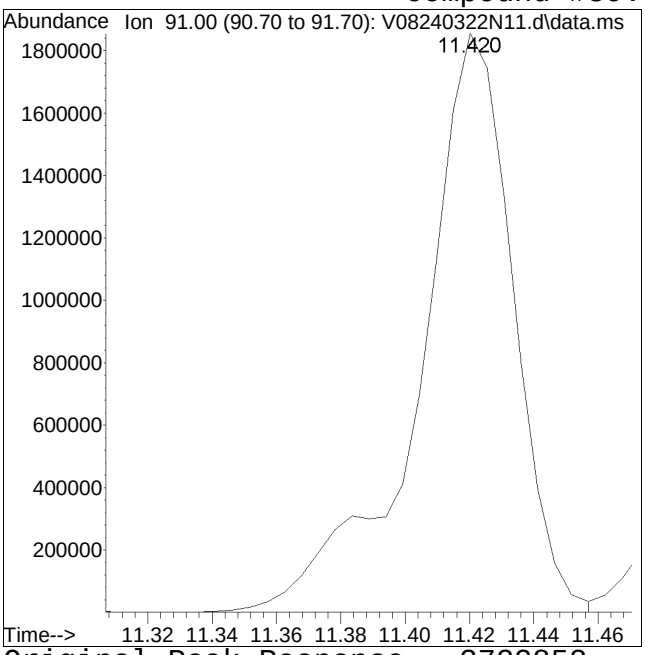
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

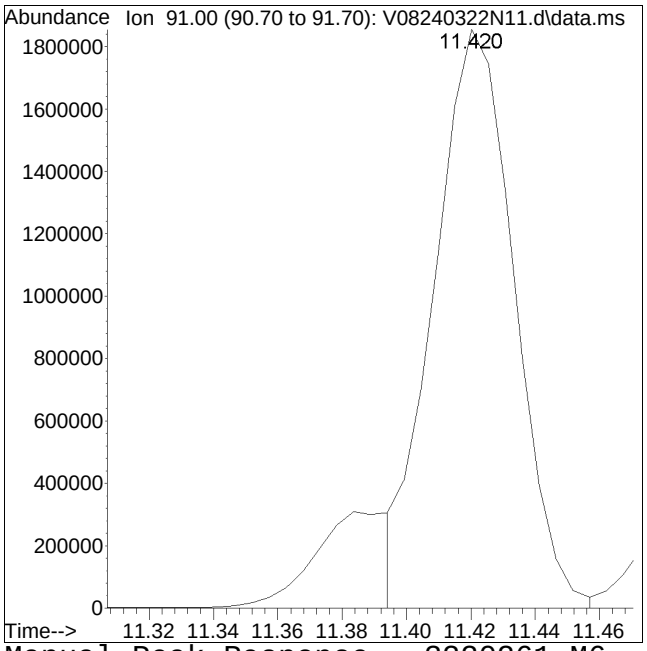
Data Path : K:\VOA108\2024\240322NICALQ
Data File : V08240322N11.d
Date Inj'd : 3/22/2024 10:05 pm
Sample : I8260STD120PPB

Method : V108_240322N_8260.m
Operator : VOA108:KJD
Instrument : VOA 108
Quant Date : 3/25/2024 4:11 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 3722852



Manual Peak Response = 3220261 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N12.d
Acq On : 22 Mar 2024 10:27 pm
Operator : VOA108:KJD
Sample : I8260STD200PPB
Misc : WG1900595
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 25 16:20:04 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	466104	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 126.06%			
59) Chlorobenzene-d5	9.617	117	354475	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 127.50%			
79) 1,4-Dichlorobenzene-d4	12.301	152	163936	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 122.26%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	119109	9.774	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 97.74%			
43) 1,2-Dichloroethane-d4	5.805	65	146478	9.749	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 97.49%			
60) Toluene-d8	7.776	98	459443	10.033	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.33%			
83) 4-Bromofluorobenzene	11.095	95	156645	10.367	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.67%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	1813344	165.030	ug/L	99
3) Chloromethane	1.888	50	2999505	154.205	ug/L	99
4) Vinyl chloride	1.962	62	2585670	164.524	ug/L	99
5) Bromomethane	2.276	94	1046076	209.310	ug/L	96
6) Chloroethane	2.386	64	1169627	153.450	ug/L	100
7) Trichlorofluoromethane	2.533	101	2150059	164.474	ug/L	97
8) Ethyl ether	2.837	74	682069	178.738	ug/L	94
10) 1,1-Dichloroethene	3.026	96	1500980	174.036	ug/L	92
11) Carbon disulfide	3.063	76	5151601	176.751	ug/L	97
12) Freon-113	3.068	101	1470269	169.642	ug/L	99
13) Iodomethane	3.173	142	2098229	205.373	ug/L	86
14) Acrolein	3.346	56	239415	177.295	ug/L	93
15) Methylene chloride	3.587	84	1651244	168.197	ug/L	97
17) Acetone	3.624	43	384304	143.562	ug/L	92
18) trans-1,2-Dichloroethene	3.739	96	1690520	172.886	ug/L	100
19) Methyl acetate	3.739	43	973217	167.132	ug/L #	90
20) Methyl tert-butyl ether	3.839	73	4118337	182.631	ug/L	93
21) tert-Butyl alcohol	3.923	59	684767	925.003	ug/L #	73
22) Diisopropyl ether	4.201	45	7562649	165.628	ug/L	99
23) 1,1-Dichloroethane	4.321	63	3964545	164.487	ug/L	97
24) Halothane	4.368	117	1330242	175.871	ug/L	99

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N12.d
Acq On : 22 Mar 2024 10:27 pm
Operator : VOA108:KJD
Sample : I8260STD200PPB
Misc : WG1900595
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 25 16:20:04 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.363	53	512448	166.375	ug/L	#	89
26) Ethyl tert-butyl ether	4.547	59	6903517	178.635	ug/L		94
27) Vinyl acetate	4.552	43	3634359	181.184	ug/L		99
28) cis-1,2-Dichloroethene	4.835	96	1873584	172.031	ug/L		91
29) 2,2-Dichloropropane	4.940	77	2418118	164.852	ug/L		95
30) Bromochloromethane	5.029	128	803400	159.394	ug/L	#	76
31) Cyclohexane	5.039	56	3962991	165.505	ug/L		98
32) Chloroform	5.097	83	2939293	165.011	ug/L		97
33) Ethyl acetate	5.207	43	1451218	166.789	ug/L	#	95
34) Carbon tetrachloride	5.239	117	2482911	170.230	ug/L		98
35) Tetrahydrofuran	5.249	42	393968M6	150.815	ug/L		
37) 1,1,1-Trichloroethane	5.307	97	2649663	172.213	ug/L	#	97
39) 2-Butanone	5.385	43	626108M3	164.410	ug/L		
40) 1,1-Dichloropropene	5.427	75	2365590	176.018	ug/L		96
41) Benzene	5.674	78	6671247	172.398	ug/L		99
42) tert-Amyl methyl ether	5.784	73	4496522	192.427	ug/L		97
44) 1,2-Dichloroethane	5.873	62	2500828	163.779	ug/L		99
47) Methyl cyclohexane	6.261	83	2797805	183.331	ug/L		97
48) Trichloroethene	6.266	95	1820092	171.423	ug/L		93
50) Dibromomethane	6.701	93	940123	178.369	ug/L		97
51) 1,2-Dichloropropane	6.806	63	2302074	173.306	ug/L	#	92
53) 2-Chloroethyl vinyl ether	7.498	63	1105943	205.558	ug/L		94
54) Bromodichloromethane	6.874	83	2355053	179.950	ug/L		99
57) 1,4-Dioxane	7.084	88	109053	1885.762	ug/L		95
58) cis-1,3-Dichloropropene	7.567	75	2841245	188.706	ug/L		95
61) Toluene	7.834	92	4320380	176.279	ug/L		94
62) 4-Methyl-2-pentanone	8.264	58	588836	207.468	ug/L		92
63) Tetrachloroethene	8.280	166	1814902	177.411	ug/L		89
65) trans-1,3-Dichloropropene	8.311	75	2400599	191.864	ug/L		92
67) Ethyl methacrylate	8.505	69	1612387	210.979	ug/L	#	42
68) 1,1,2-Trichloroethane	8.500	83	1079531	171.806	ug/L		93
69) Chlorodibromomethane	8.710	129	1753068	188.857	ug/L		96
70) 1,3-Dichloropropane	8.820	76	2298679	175.320	ug/L		99
71) 1,2-Dibromoethane	8.987	107	1305958	186.462	ug/L		99
72) 2-Hexanone	9.265	43	924857	205.478	ug/L		91
73) Chlorobenzene	9.638	112	4775964	173.790	ug/L		97
74) Ethylbenzene	9.685	91	8070052	173.645	ug/L		97
75) 1,1,1,2-Tetrachloroethane	9.721	131	1834951	180.999	ug/L		94
76) p/m Xylene	9.868	106	6155495	335.875	ug/L		93
77) o Xylene	10.408	106	6002306	337.167	ug/L		88

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N12.d
Acq On : 22 Mar 2024 10:27 pm
Operator : VOA108:KJD
Sample : I8260STD200PPB
Misc : WG1900595
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 25 16:20:04 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Styrene	10.471	104	9681697	336.486	ug/L	91
80) Bromoform	10.492	173	910293	191.967	ug/L	96
82) Isopropylbenzene	10.786	105	7929181	180.756	ug/L	95
84) Bromobenzene	11.210	156	1897628	179.231	ug/L	98
85) n-Propylbenzene	11.258	91	9017648	173.749	ug/L	94
86) 1,4-Dichlorobutane	11.268	55	2671222	167.361	ug/L	91
87) 1,1,2,2-Tetrachloroethane	11.342	83	1425414	180.562	ug/L	98
88) 4-Ethyltoluene	11.389	105	7848046	176.424	ug/L	95
89) 2-Chlorotoluene	11.425	91	5461793M6	167.706	ug/L	
90) 1,3,5-Trimethylbenzene	11.483	105	6672479	172.229	ug/L	89
91) 1,2,3-Trichloropropane	11.478	75	1127720	176.111	ug/L	98
92) trans-1,4-Dichloro-2-b...	11.530	53	506825	177.268	ug/L	87
93) 4-Chlorotoluene	11.609	91	5688010	174.328	ug/L	92
94) tert-Butylbenzene	11.824	119	5814768	176.390	ug/L	98
97) 1,2,4-Trimethylbenzene	11.897	105	6639657	174.637	ug/L	91
98) sec-Butylbenzene	12.013	105	8265944	171.165	ug/L	97
99) p-Isopropyltoluene	12.165	119	7381958	175.411	ug/L	95
100) 1,3-Dichlorobenzene	12.228	146	3710726	169.904	ug/L	98
101) 1,4-Dichlorobenzene	12.317	146	3706921	170.606	ug/L	98
102) p-Diethylbenzene	12.537	119	4569358	180.633	ug/L	94
103) n-Butylbenzene	12.595	91	6174230	172.049	ug/L	96
104) 1,2-Dichlorobenzene	12.736	146	3432651	171.102	ug/L	98
105) 1,2,4,5-Tetramethylben...	13.323	119	7330636	184.383	ug/L	97
106) 1,2-Dibromo-3-chloropr...	13.512	155	225914	201.021	ug/L	92
107) 1,3,5-Trichlorobenzene	13.549	180	2710030	171.838	ug/L	95
108) Hexachlorobutadiene	14.120	225	1090111	173.403	ug/L	96
109) 1,2,4-Trichlorobenzene	14.141	180	2355793	185.541	ug/L	97
110) Naphthalene	14.435	128	4759114	201.144	ug/L	100
111) 1,2,3-Trichlorobenzene	14.603	180	2065387	182.431	ug/L	99

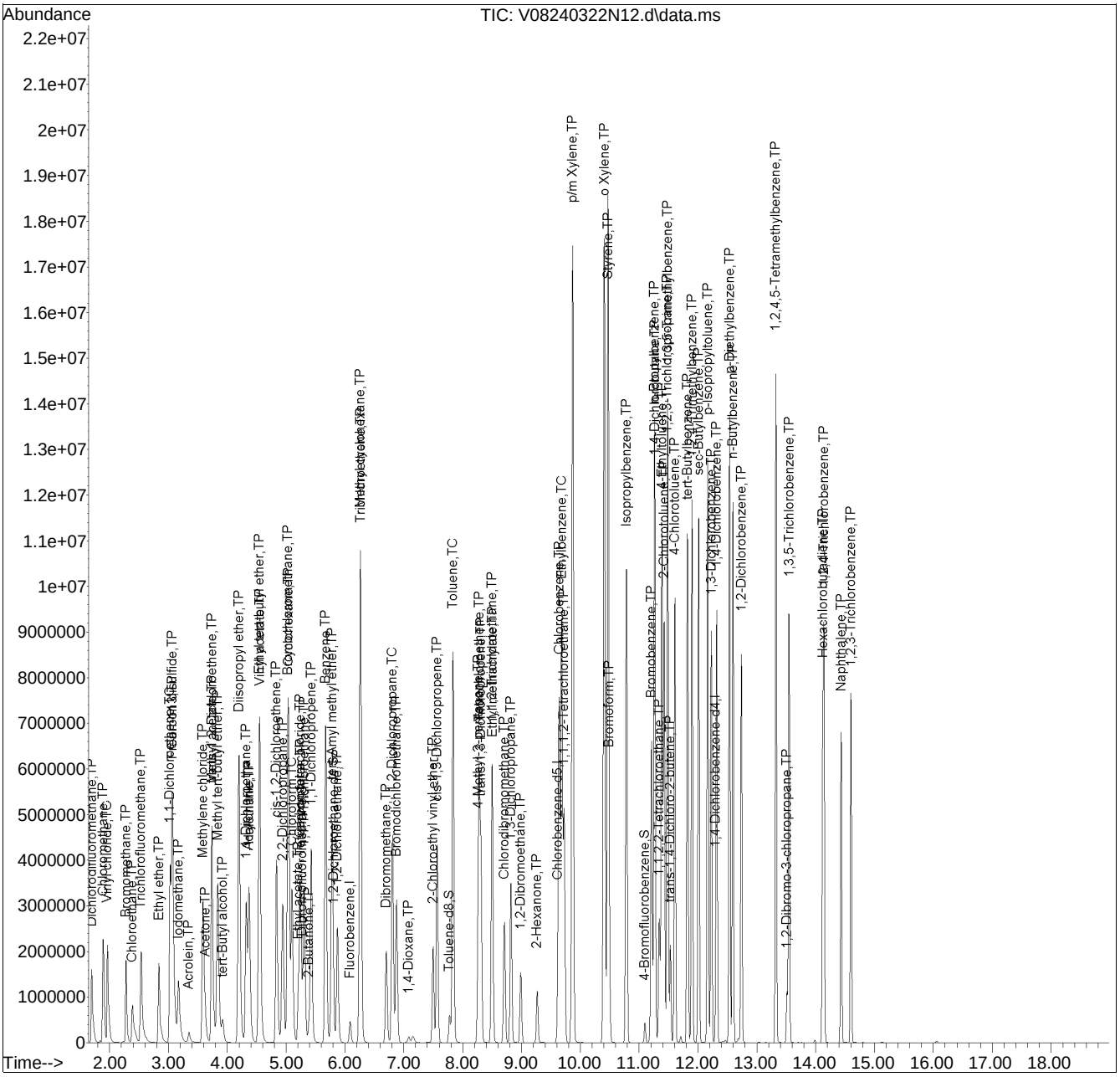
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N12.d
Acq On : 22 Mar 2024 10:27 pm
Operator : VOA108:KJD
Sample : I8260STD200PPB
Misc : WG1900595
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 25 16:20:04 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 15:50:46 2024
Response via : Initial Calibration

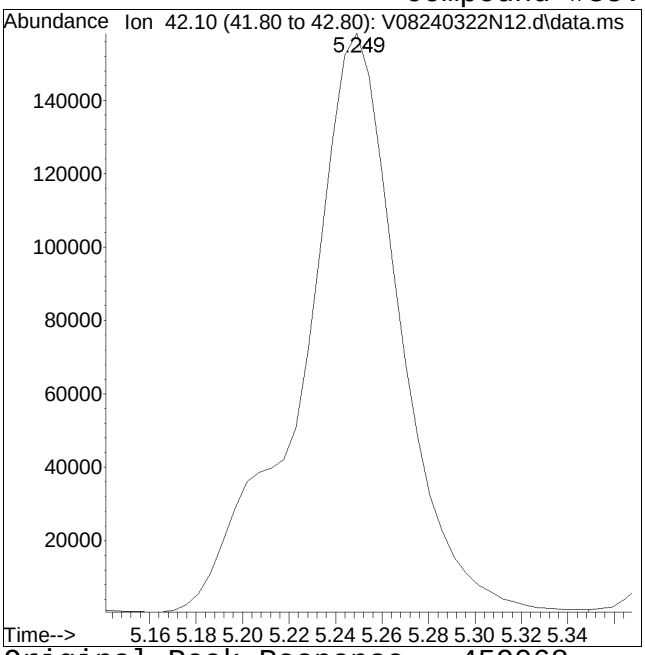
Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•



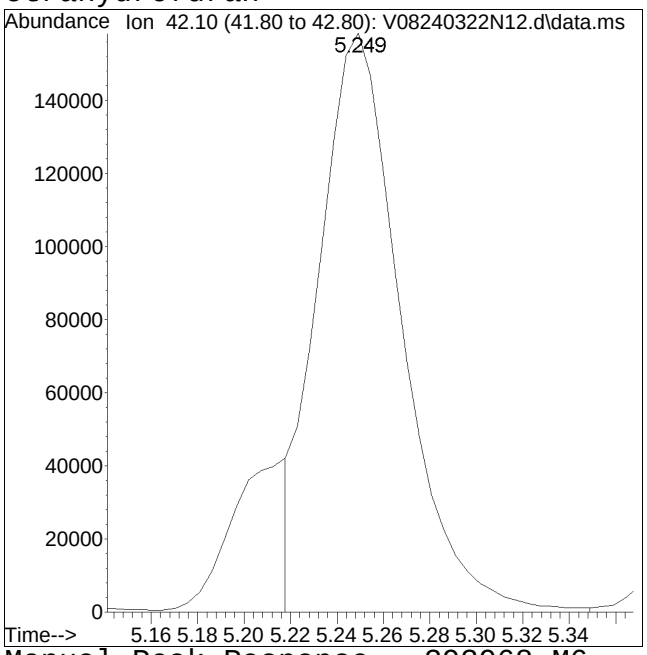
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N12.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 10:27 pm Instrument : VOA 108
Sample : I8260STD200PPB Quant Date : 3/25/2024 4:11 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 459068



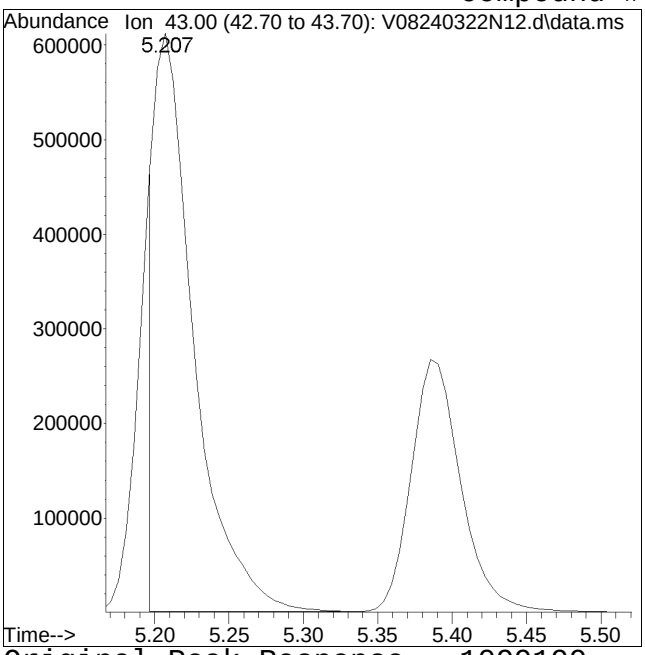
Manual Peak Response = 393968 M6

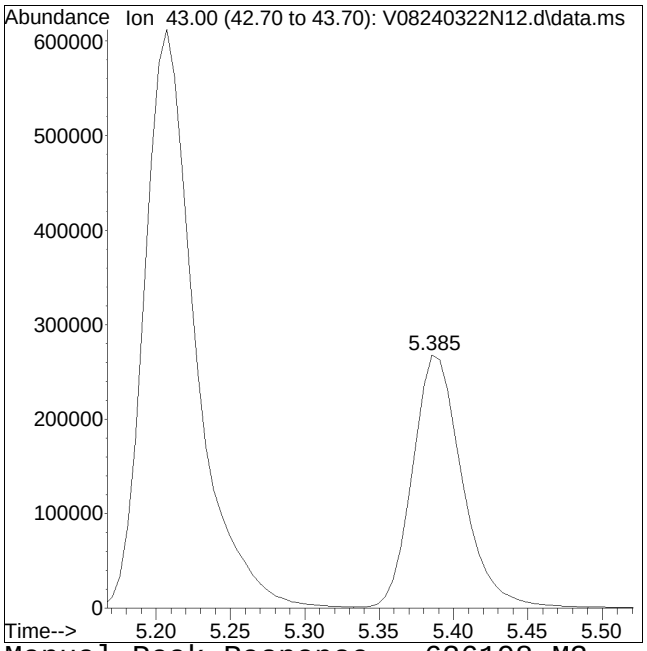
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N12.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 10:27 pm Instrument : VOA 108
Sample : I8260STD200PPB Quant Date : 3/25/2024 4:11 pm

Compound #39: 2-Butanone





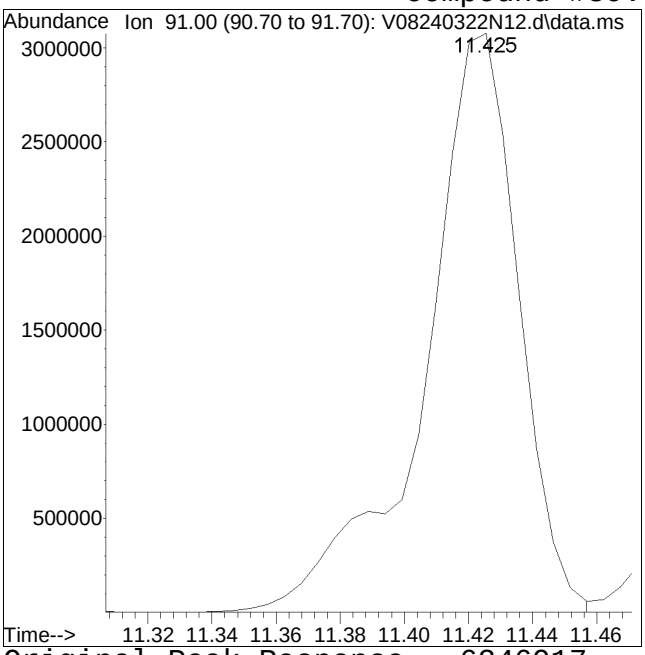
Original Peak Response = 1099199 Manual Peak Response = 626108 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

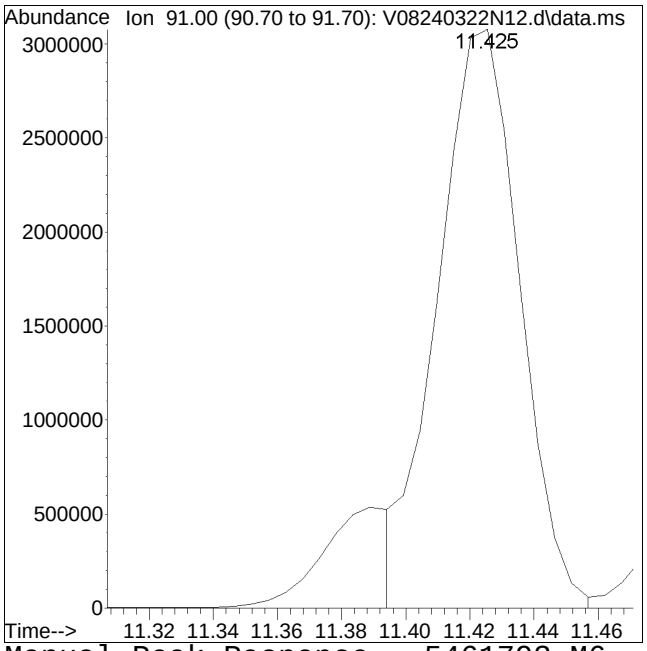
Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N12.d Operator : VOA108:KJD
Date Inj'd : 3/22/2024 10:27 pm Instrument : VOA 108
Sample : I8260STD200PPB Quant Date : 3/25/2024 4:11 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 6246917



Manual Peak Response = 5461793 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Evaluate Continuing Calibration Report

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N17.d
Acq On : 23 Mar 2024 12:18 am
Operator : VOA108:KJD
Sample : C8260STC10PPB
Misc : WG1900595
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 25 16:29:25 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	110	0.00
2	TP	Dichlorodifluoromethane	0.213	0.233	-9.4	109	0.00
3	TP	Chloromethane	0.375	0.428	-14.1	113	0.00
4	TC	Vinyl chloride	0.304	0.320	-5.3	104	0.00
5	TP	Bromomethane	0.108	0.098	9.3	101	0.00
6	TP	Chloroethane	0.147	0.160	-8.8	108	0.00
7	TP	Trichlorofluoromethane	0.251	0.287	-14.3	113	0.00
8	TP	Ethyl ether	0.078	0.097	-24.4#	130	0.00
10	TC	1,1-Dichloroethene	0.172	0.176	-2.3	104	0.00
11	TP	Carbon disulfide	0.589	0.410	30.4#	72	0.00
12	TP	Freon-113	0.168	0.179	-6.5	106	0.00
13	TP	Iodomethane	0.227	0.188	17.2	94	0.00
14	TP	Acrolein	0.026	0.033	-26.9#	125	0.00
15	TP	Methylene chloride	0.206	0.216	-4.9	112	0.00
17	TP	Acetone	* 10.000	9.105	8.9	92	0.00
18	TP	trans-1,2-Dichloroethene	0.197	0.205	-4.1	108	0.00
19	TP	Methyl acetate	0.120	0.113	5.8	99	0.00
20	TP	Methyl tert-butyl ether	0.462	0.458	0.9	104	0.00
21	TP	tert-Butyl alcohol	0.015	0.015	0.0	100	0.00
22	TP	Diisopropyl ether	0.905	0.865	4.4	97	0.00
23	TP	1,1-Dichloroethane	0.476	0.494	-3.8	105	0.00
24	TP	Halothane	0.151	0.155	-2.6	105	0.00
25	TP	Acrylonitrile	0.062	0.075	-21.0#	125	0.00
26	TP	Ethyl tert-butyl ether	0.779	0.754	3.2	100	0.00
27	TP	Vinyl acetate	0.414	0.399	3.6	102	0.00
28	TP	cis-1,2-Dichloroethene	0.221	0.225	-1.8	106	0.00
29	TP	2,2-Dichloropropane	0.287	0.277	3.5	97	0.00
30	TP	Bromochloromethane	0.099	0.105	-6.1	107	0.00
31	TP	Cyclohexane	0.460	0.450	2.2	96	0.00
32	TC	Chloroform	0.354	0.372	-5.1	107	0.00
33	TP	Ethyl acetate	0.174	0.171	1.7	101	0.00
34	TP	Carbon tetrachloride	0.282	0.295	-4.6	104	0.00
35	TP	Tetrahydrofuran	0.050	0.052	-4.0	101	0.00
36	S	Dibromofluoromethane	0.262	0.257	1.9	108	0.00
37	TP	1,1,1-Trichloroethane	0.306	0.319	-4.2	106	0.00
39	TP	2-Butanone	0.075	0.076	-1.3	102	0.00
40	TP	1,1-Dichloropropene	0.265	0.281	-6.0	107	0.00
41	TP	Benzene	0.783	0.824	-5.2	109	0.00
42	TP	tert-Amyl methyl ether	0.488	0.469	3.9	103	0.00

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N17.d
Acq On : 23 Mar 2024 12:18 am
Operator : VOA108:KJD
Sample : C8260STC10PPB
Misc : WG1900595
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 25 16:29:25 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
43	S	1,2-Dichloroethane-d4	0.321	0.317	1.2	108	0.00
44	TP	1,2-Dichloroethane	0.305	0.307	-0.7	103	0.00
47	TP	Methyl cyclohexane	0.303	0.298	1.7	100	0.00
48	TP	Trichloroethene	0.211	0.225	-6.6	108	0.00
50	TP	Dibromomethane	0.111	0.112	-0.9	109	0.00
51	TC	1,2-Dichloropropane	0.268	0.276	-3.0	106	0.00
53	TP	2-Chloroethyl vinyl ether	0.112	0.127	-13.4	121	0.00
54	TP	Bromodichloromethane	0.268	0.271#	-1.1	106	0.00
57	TP	1,4-Dioxane	0.00119	0.00120#	-0.8	106	0.00
58	TP	cis-1,3-Dichloropropene	0.303	0.326	-7.6	111	0.00
59	I	Chlorobenzene-d5	1.000	1.000	0.0	110	0.00
60	S	Toluene-d8	1.287	1.289	-0.2	109	0.00
61	TC	Toluene	0.652	0.680	-4.3	108	0.00
62	TP	4-Methyl-2-pentanone	0.080	0.079	1.3	108	0.00
63	TP	Tetrachloroethene	0.271	0.280	-3.3	106	0.00
65	TP	trans-1,3-Dichloropropene	0.335	0.357	-6.6	111	0.00
67	TP	Ethyl methacrylate	0.215	0.237	-10.2	120	0.00
68	TP	1,1,2-Trichloroethane	0.165	0.171#	-3.6	106	0.00
69	TP	Chlorodibromomethane	0.251	0.259	-3.2	108	0.00
70	TP	1,3-Dichloropropane	0.345	0.362	-4.9	107	0.00
71	TP	1,2-Dibromoethane	0.190	0.197#	-3.7	109	0.00
72	TP	2-Hexanone	0.129	0.121	6.2	105	0.00
73	TP	Chlorobenzene	0.728	0.767	-5.4	108	0.00
74	TC	Ethylbenzene	1.213	1.280	-5.5	107	0.00
75	TP	1,1,1,2-Tetrachloroethane	0.271	0.273	-0.7	105	0.00
76	TP	p/m Xylene	0.479	0.509	-6.3	108	0.00
77	TP	o Xylene	0.463	0.490	-5.8	107	0.00
78	TP	Styrene	0.741	0.792	-6.9	107	0.00
79	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	109	0.00
80	TP	Bromoform	0.273	0.286	-4.8	108	0.00
82	TP	Isopropylbenzene	2.447	2.631	-7.5	107	0.00
83	S	4-Bromofluorobenzene	0.922	0.937	-1.6	111	0.00
84	TP	Bromobenzene	0.606	0.640	-5.6	108	0.00
85	TP	n-Propylbenzene	2.885	3.073	-6.5	106	0.00
86	TP	1,4-Dichlorobutane	0.888	0.974	-9.7	109	0.00
87	TP	1,1,2,2-Tetrachloroethane	0.454	0.445	2.0	101	0.00
88	TP	4-Ethyltoluene	2.467	2.578	-4.5	104	0.00

Evaluate Continuing Calibration Report

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N17.d
Acq On : 23 Mar 2024 12:18 am
Operator : VOA108:KJD
Sample : C8260STC10PPB
Misc : WG1900595
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 25 16:29:25 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
89 TP	2-Chlorotoluene	1.782	1.931	-8.4	106	0.00
90 TP	1,3,5-Trimethylbenzene	2.137	2.251	-5.3	104	0.00
91 TP	1,2,3-Trichloropropane	0.368	0.383	-4.1	107	0.00
92 TP	trans-1,4-Dichloro-2-butene	0.160	0.161	-0.6	101	0.00
93 TP	4-Chlorotoluene	1.824	1.938	-6.2	106	0.00
94 TP	tert-Butylbenzene	1.833	1.964	-7.1	106	0.00
97 TP	1,2,4-Trimethylbenzene	2.087	2.305	-10.4	108	0.00
98 TP	sec-Butylbenzene	2.629	2.803	-6.6	104	0.00
99 TP	p-Isopropyltoluene	2.301	2.475	-7.6	105	0.00
100 TP	1,3-Dichlorobenzene	1.228	1.334	-8.6	109	0.00
101 TP	1,4-Dichlorobenzene	1.238	1.317	-6.4	108	0.00
102 TP	p-Diethylbenzene	1.407	1.360	3.3	96	0.00
103 TP	n-Butylbenzene	1.962	2.169	-10.6	108	0.00
104 TP	1,2-Dichlorobenzene	1.139	1.213	-6.5	108	0.00
105 TP	1,2,4,5-Tetramethylbenzene	2.224	2.234	-0.4	100	0.00
106 TP	1,2-Dibromo-3-chloropropane	0.064	0.069	-7.8	109	0.00
107 TP	1,3,5-Trichlorobenzene	0.891	0.894	-0.3	101	0.00
108 TP	Hexachlorobutadiene	0.354	0.365	-3.1	104	0.00
109 TP	1,2,4-Trichlorobenzene	0.737	0.783	-6.2	110	0.00
110 TP	Naphthalene	1.399	1.442	-3.1	109	0.00
111 TP	1,2,3-Trichlorobenzene	0.644	0.688	-6.8	109	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 4 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N17.d
Acq On : 23 Mar 2024 12:18 am
Operator : VOA108:KJD
Sample : C8260STC10PPB
Misc : WG1900595
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 25 16:29:25 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	406328	10.000	ug/L	0.00
Standard Area 1 = 369742			Recovery = 109.90%			
59) Chlorobenzene-d5	9.617	117	304703	10.000	ug/L	0.00
Standard Area 1 = 278027			Recovery = 109.59%			
79) 1,4-Dichlorobenzene-d4	12.301	152	146124	10.000	ug/L	0.00
Standard Area 1 = 134086			Recovery = 108.98%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	104340	9.807	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.07%			
43) 1,2-Dichloroethane-d4	5.805	65	128799	9.862	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 98.62%			
60) Toluene-d8	7.776	98	392766	10.017	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.17%			
83) 4-Bromofluorobenzene	11.095	95	136919	10.161	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.61%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	94738	10.944	ug/L	99
3) Chloromethane	1.888	50	173965	11.406	ug/L	99
4) Vinyl chloride	1.962	62	130217	10.547	ug/L	100
5) Bromomethane	2.282	94	39986	9.077	ug/L	100
6) Chloroethane	2.402	64	65180	10.932	ug/L	100
7) Trichlorofluoromethane	2.539	101	116810	11.443	ug/L	97
8) Ethyl ether	2.837	74	39241	12.336	ug/L	91
10) 1,1-Dichloroethene	3.031	96	71492	10.254	ug/L	90
11) Carbon disulfide	3.058	76	166646	6.963	ug/L	97
12) Freon-113	3.073	101	72734	10.624	ug/L	99
13) Iodomethane	3.173	142	76355	8.291	ug/L	84
14) Acrolein	3.346	56	13417	12.663	ug/L	95
15) Methylene chloride	3.587	84	87594	10.447	ug/L	97
17) Acetone	3.624	43	19577	9.105	ug/L	95
18) trans-1,2-Dichloroethene	3.739	96	83461	10.419	ug/L	99
19) Methyl acetate	3.744	43	45902	9.443	ug/L #	89
20) Methyl tert-butyl ether	3.839	73	186093	9.909	ug/L	90
21) tert-Butyl alcohol	3.923	59	29483	47.735	ug/L #	70
22) Diisopropyl ether	4.201	45	351598	9.556	ug/L	99
23) 1,1-Dichloroethane	4.321	63	200602	10.377	ug/L	97
24) Halothane	4.368	117	62931	10.228	ug/L	99

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N17.d
Acq On : 23 Mar 2024 12:18 am
Operator : VOA108:KJD
Sample : C8260STC10PPB
Misc : WG1900595
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 25 16:29:25 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.363	53	30533	12.052	ug/L	#	90
26) Ethyl tert-butyl ether	4.547	59	306239	9.672	ug/L		94
27) Vinyl acetate	4.552	43	162203	9.641	ug/L		100
28) cis-1,2-Dichloroethene	4.835	96	91562	10.188	ug/L		91
29) 2,2-Dichloropropane	4.945	77	112501	9.648	ug/L		92
30) Bromochloromethane	5.029	128	42798	10.593	ug/L		78
31) Cyclohexane	5.034	56	182788	9.771	ug/L		98
32) Chloroform	5.102	83	151256	10.507	ug/L		96
33) Ethyl acetate	5.207	43	69508	9.851	ug/L	#	95
34) Carbon tetrachloride	5.239	117	119875	10.465	ug/L		99
35) Tetrahydrofuran	5.249	42	21025M6	10.344	ug/L		
37) 1,1,1-Trichloroethane	5.302	97	129498	10.417	ug/L	#	97
39) 2-Butanone	5.385	43	30936M3	10.168	ug/L		
40) 1,1-Dichloropropene	5.427	75	114293	10.595	ug/L		96
41) Benzene	5.669	78	334688	10.525	ug/L		99
42) tert-Amyl methyl ether	5.779	73	190488	9.603	ug/L		95
44) 1,2-Dichloroethane	5.873	62	124832	10.062	ug/L		98
47) Methyl cyclohexane	6.261	83	121089	9.824	ug/L		96
48) Trichloroethene	6.266	95	91342	10.634	ug/L		93
50) Dibromomethane	6.702	93	45450	10.085	ug/L		97
51) 1,2-Dichloropropane	6.806	63	111969	10.294	ug/L	#	92
53) 2-Chloroethyl vinyl ether	7.493	63	51524	11.274	ug/L		93
54) Bromodichloromethane	6.875	83	109992	10.083	ug/L		99
57) 1,4-Dioxane	7.079	88	24348	503.722	ug/L	#	93
58) cis-1,3-Dichloropropene	7.567	75	132390	10.752	ug/L		97
61) Toluene	7.834	92	207150	10.431	ug/L		95
62) 4-Methyl-2-pentanone	8.264	58	24153	9.893	ug/L		97
63) Tetrachloroethene	8.280	166	85434	10.364	ug/L		88
65) trans-1,3-Dichloropropene	8.311	75	108797	10.664	ug/L		99
67) Ethyl methacrylate	8.500	69	72151	11.014	ug/L	#	37
68) 1,1,2-Trichloroethane	8.495	83	52251	10.393	ug/L		94
69) Chlorodibromomethane	8.710	129	78925	10.328	ug/L		95
70) 1,3-Dichloropropane	8.820	76	110394	10.507	ug/L		99
71) 1,2-Dibromoethane	8.987	107	60102	10.374	ug/L		99
72) 2-Hexanone	9.265	43	37005	9.411	ug/L		92
73) Chlorobenzene	9.638	112	233749	10.534	ug/L		97
74) Ethylbenzene	9.680	91	389951	10.552	ug/L		98
75) 1,1,1,2-Tetrachloroethane	9.716	131	83242	10.080	ug/L		95
76) p/m Xylene	9.863	106	310228	21.246	ug/L		93
77) o Xylene	10.403	106	298699	21.195	ug/L		87

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N17.d
Acq On : 23 Mar 2024 12:18 am
Operator : VOA108:KJD
Sample : C8260STC10PPB
Misc : WG1900595
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 25 16:29:25 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240322NICAL\V08240322N08.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
78) Styrene	10.466	104	482927	21.391	ug/L		88
80) Bromoform	10.487	173	41746	10.462	ug/L		96
82) Isopropylbenzene	10.781	105	384502	10.753	ug/L		95
84) Bromobenzene	11.211	156	93532	10.555	ug/L		97
85) n-Propylbenzene	11.258	91	449030	10.652	ug/L		95
86) 1,4-Dichlorobutane	11.268	55	142350	10.973	ug/L	#	90
87) 1,1,2,2-Tetrachloroethane	11.336	83	65023	9.803	ug/L		98
88) 4-Ethyltoluene	11.384	105	376651	10.448	ug/L		96
89) 2-Chlorotoluene	11.420	91	282093M6	10.834	ug/L		
90) 1,3,5-Trimethylbenzene	11.478	105	328950	10.535	ug/L		90
91) 1,2,3-Trichloropropane	11.473	75	55921	10.407	ug/L		97
92) trans-1,4-Dichloro-2-b...	11.525	53	23579	10.076	ug/L	#	90
93) 4-Chlorotoluene	11.604	91	283259	10.626	ug/L		92
94) tert-Butylbenzene	11.819	119	286996	10.717	ug/L		99
97) 1,2,4-Trimethylbenzene	11.897	105	336887	11.047	ug/L		91
98) sec-Butylbenzene	12.007	105	409602	10.661	ug/L		97
99) p-Isopropyltoluene	12.160	119	361718	10.756	ug/L		94
100) 1,3-Dichlorobenzene	12.222	146	194917	10.864	ug/L		97
101) 1,4-Dichlorobenzene	12.317	146	192432	10.636	ug/L		97
102) p-Diethylbenzene	12.532	119	198801	9.667	ug/L		93
103) n-Butylbenzene	12.589	91	316985	11.055	ug/L		97
104) 1,2-Dichlorobenzene	12.736	146	177318	10.658	ug/L		98
105) 1,2,4,5-Tetramethylben...	13.323	119	326395	10.045	ug/L		97
106) 1,2-Dibromo-3-chloropr...	13.507	155	10019	10.699	ug/L		94
107) 1,3,5-Trichlorobenzene	13.544	180	130585	10.025	ug/L		94
108) Hexachlorobutadiene	14.120	225	53280	10.298	ug/L		95
109) 1,2,4-Trichlorobenzene	14.141	180	114447	10.628	ug/L		98
110) Naphthalene	14.430	128	210779	10.307	ug/L		100
111) 1,2,3-Trichlorobenzene	14.598	180	100539	10.692	ug/L		99

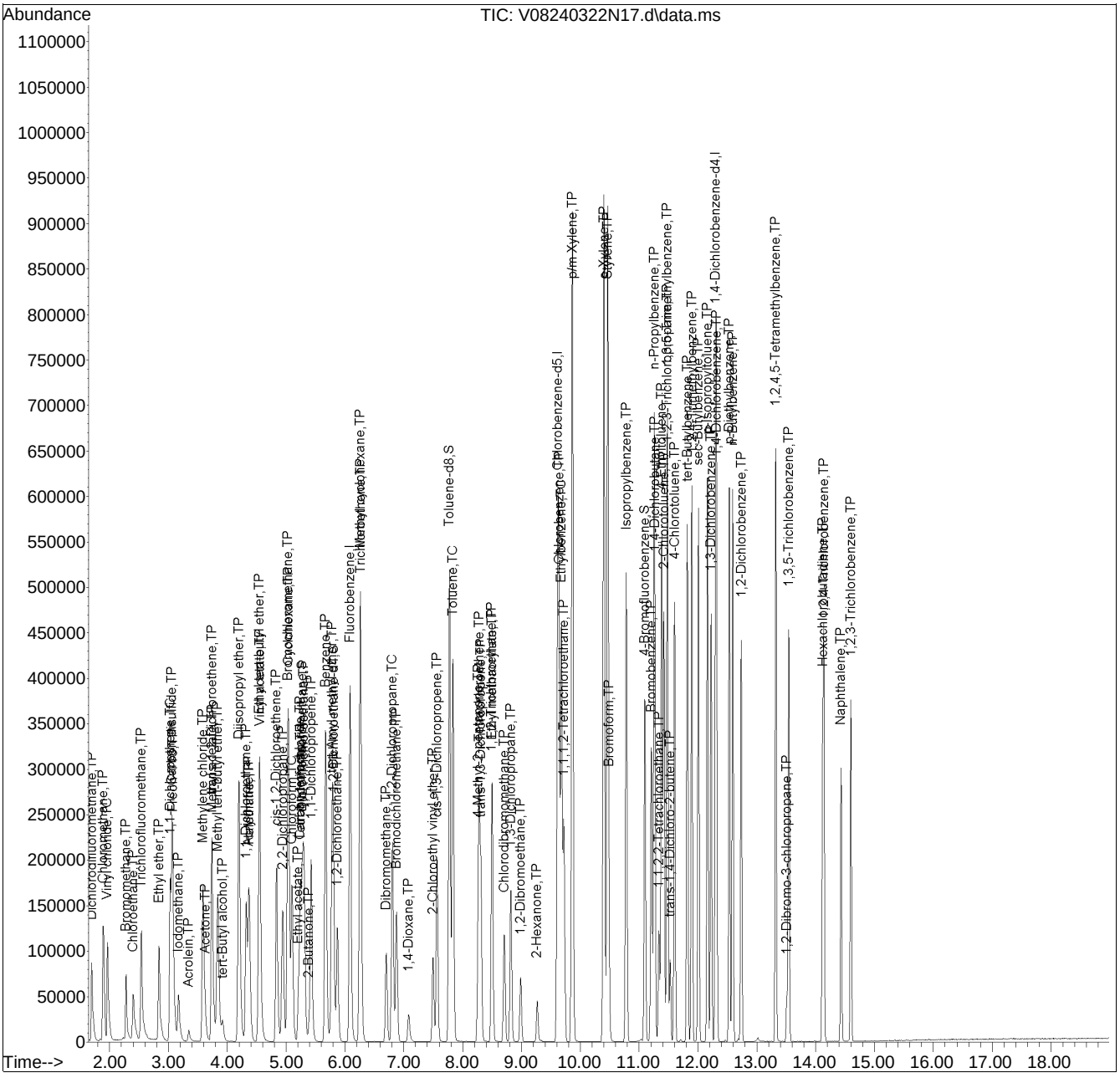
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240322NICAL\
Data File : V08240322N17.d
Acq On : 23 Mar 2024 12:18 am
Operator : VOA108:KJD
Sample : C8260STC10PPB
Misc : WG1900595
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Mar 25 16:29:25 2024
Quant Method : K:\VOA108\2024\240322NICAL\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox\V08240322N08.d•

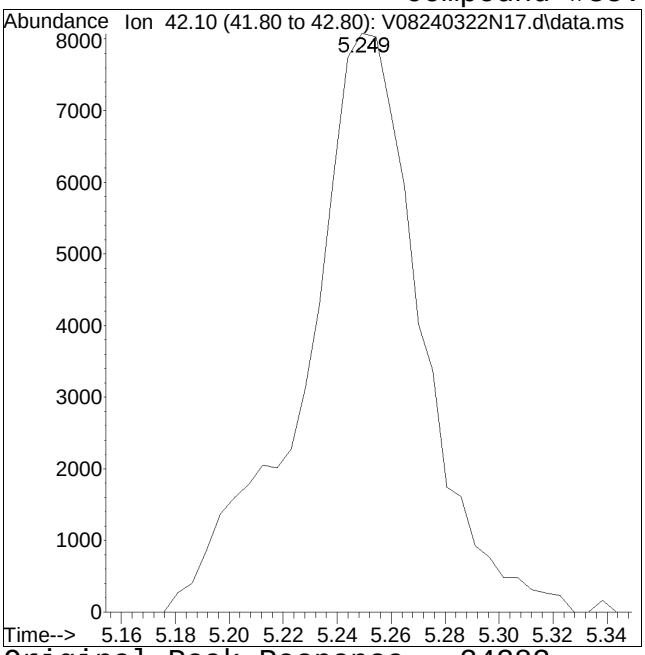


Manual Integration Report

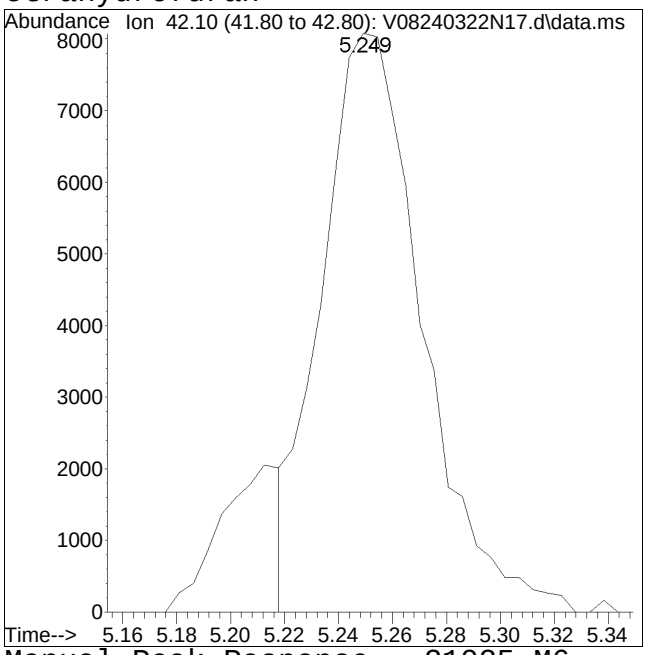
Data Path : K:\VOA108\2024\240322NICALQ
Data File : V08240322N17.d
Date Inj'd : 3/23/2024 12:18 am
Sample : C8260STC10PPB

Method : V108_240322N_8260.m
Operator : VOA108:KJD
Instrument : VOA 108
Quant Date : 3/25/2024 4:28 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 24283



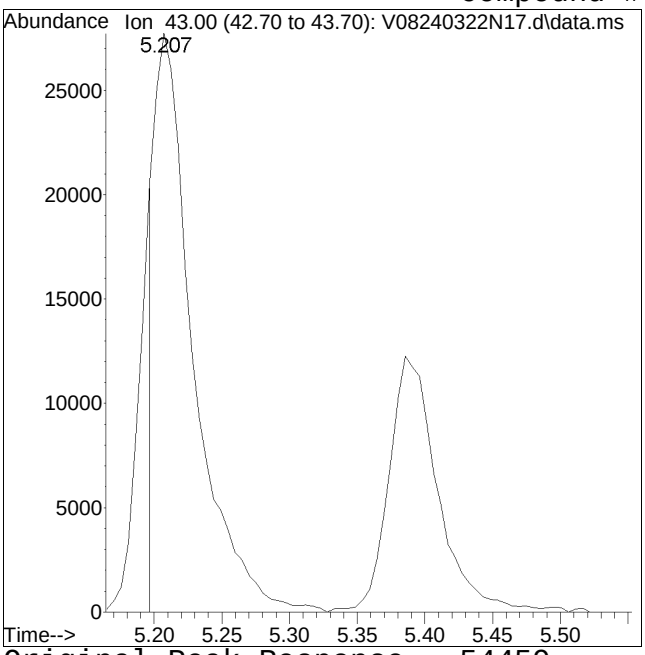
Manual Peak Response = 21025 M6

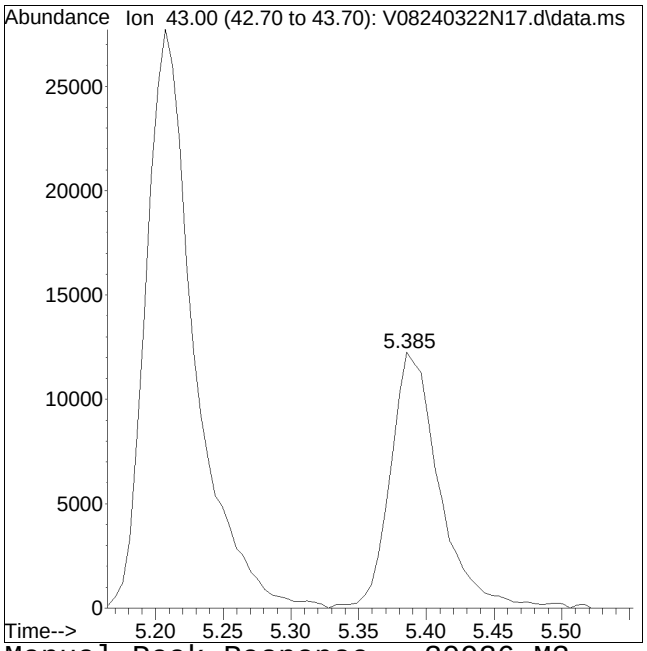
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

Data Path : K:\VOA108\2024\240322NICALQMethod : V108_240322N_8260.m
Data File : V08240322N17.d Operator : VOA108:KJD
Date Inj'd : 3/23/2024 12:18 am Instrument : VOA 108
Sample : C8260STC10PPB Quant Date : 3/25/2024 4:28 pm

Compound #39: 2-Butanone





Original Peak Response = 54459 Manual Peak Response = 30936 M3

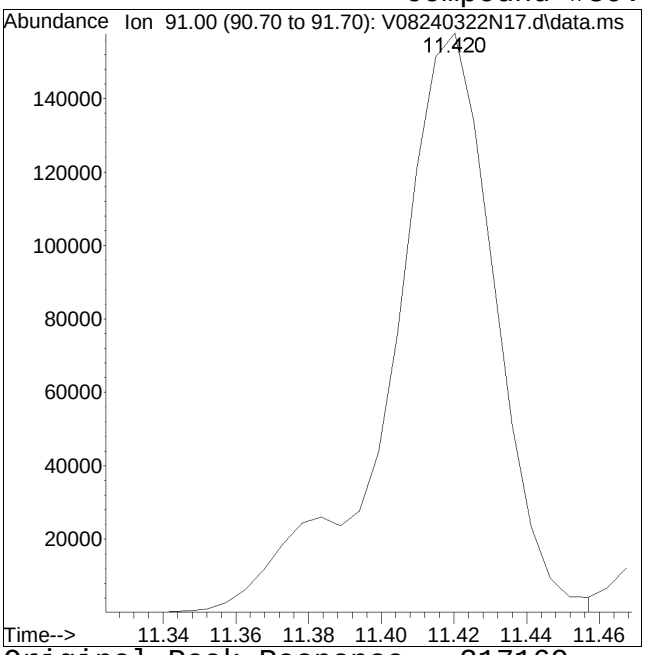
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

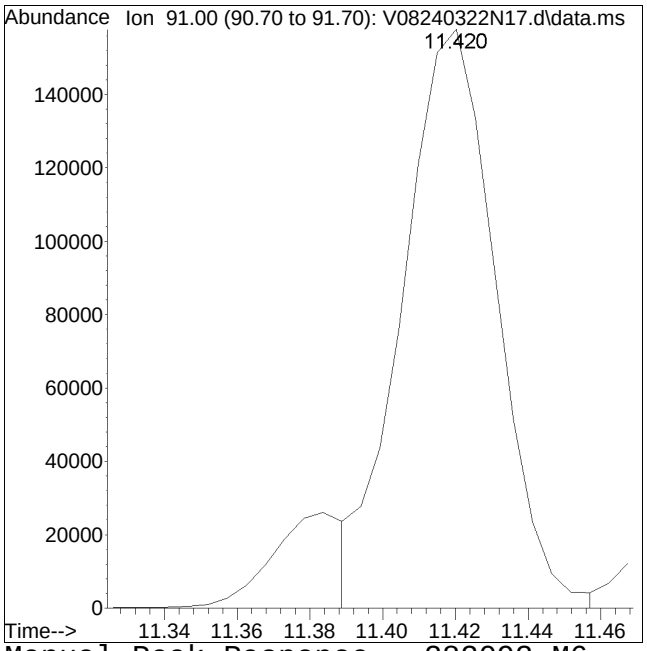
Data Path : K:\VOA108\2024\240322NICALQ
Data File : V08240322N17.d
Date Inj'd : 3/23/2024 12:18 am
Sample : C8260STC10PPB

Method : V108_240322N_8260.m
Operator : VOA108:KJD
Instrument : VOA 108
Quant Date : 3/25/2024 4:28 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 317169



Manual Peak Response = 282093 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Evaluate Relative Error Report VOA 108

Method Path : K:\VOA108\2024\240322NICAL\
Method File : V108_240322N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Mon Mar 25 16:26:25 2024

	COMPOUND	CalFit	Units	TrueMid	MidConc	%RE	TrueLow	LowConc	%RE
17	TP Acetone	L	ug/L	10.0	11.234	12.3	2.00	1.439	-28.0

Calibration Correlation Report

	COMPOUND	CalFit	CoefOfDet	QuadTerm	LinTerm	Constant
17	TP Acetone	Linear	0.994746	0.000000	0.0434537	0.00861447

Continuing Calibration

Calibration Verification Summary
Form 7
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: VOA108	**Calibration Date**	: 04/02/24 17:41		
Lab File ID	: V08240402N01	**Init. Calib. Date(s)**	: 03/22/24	03/22/24	
Sample No	: WG1904126-2	**Init. Calib. Times**	: 19:07	22:27	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	134	0
Dichlorodifluoromethane	0.213	0.216	-	-1.4	20	123	0
Chloromethane	0.375	0.308	-	17.9	20	99	0
Vinyl chloride	0.304	0.271	-	10.9	20	108	0
Bromomethane	0.108	0.065	-	39.8*	20	81	0
Chloroethane	0.147	0.136	-	7.5	20	112	0
Trichlorofluoromethane	0.251	0.225	-	10.4	20	108	0
Ethyl ether	0.078	0.077	-	1.3	20	126	0
1,1-Dichloroethene	0.172	0.167	-	2.9	20	121	0
Carbon disulfide	0.589	0.562	-	4.6	20	121	0
Freon-113	0.168	0.16	-	4.8	20	116	0
Iodomethane	0.227	0.134	-	41*	20	82	0
Acrolein	0.026	0.023	-	11.5	20	107	0
Methylene chloride	0.206	0.191	-	7.3	20	122	0
Acetone	10	13.696	-	-37*	20	159	0
trans-1,2-Dichloroethene	0.197	0.19	-	3.6	20	122	0
Methyl acetate	0.12	0.101	-	15.8	20	109	0
Methyl tert-butyl ether	0.462	0.462	-	0	20	128	0
tert-Butyl alcohol	0.015	0.015	-	0	20	129	0
Diisopropyl ether	0.905	0.796	-	12	20	109	0
1,1-Dichloroethane	0.476	0.44	-	7.6	20	114	0
Halothane	0.151	0.143	-	5.3	20	118	0
Acrylonitrile	0.062	0.057	-	8.1	20	116	0
Ethyl tert-butyl ether	0.779	0.739	-	5.1	20	120	0
Vinyl acetate	0.414	0.329	-	20.5*	20	103	0
cis-1,2-Dichloroethene	0.221	0.213	-	3.6	20	122	0
2,2-Dichloropropane	0.287	0.277	-	3.5	20	118	0
Bromochloromethane	0.099	0.097*	-	2	20	121	0
Cyclohexane	0.46	0.409	-	11.1	20	107	0
Chloroform	0.354	0.337	-	4.8	20	118	0
Ethyl acetate	0.174	0.158	-	9.2	20	114	0
Carbon tetrachloride	0.282	0.262	-	7.1	20	112	0
Tetrahydrofuran	0.05	0.045	-	10	20	108	0
Dibromofluoromethane	0.262	0.261	-	0.4	20	134	0
1,1,1-Trichloroethane	0.306	0.292	-	4.6	20	119	0
2-Butanone	0.075	0.068	-	9.3	20	113	0
1,1-Dichloropropene	0.265	0.256	-	3.4	20	119	0
Benzene	0.783	0.749	-	4.3	20	121	0
tert-Amyl methyl ether	0.488	0.487	-	0.2	20	130	0
1,2-Dichloroethane-d4	0.321	0.326	-	-1.6	20	136	0
1,2-Dichloroethane	0.305	0.284	-	6.9	20	116	0
Methyl cyclohexane	0.303	0.285	-	5.9	20	117	0
Trichloroethene	0.211	0.209	-	0.9	20	123	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: VOA108	**Calibration Date**	: 04/02/24 17:41		
Lab File ID	: V08240402N01	**Init. Calib. Date(s)**	: 03/22/24	03/22/24	
Sample No	: WG1904126-2	**Init. Calib. Times**	: 19:07	22:27	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	0.111	0.103	-	7.2	20	122	0
1,2-Dichloropropane	0.268	0.246	-	8.2	20	116	0
2-Chloroethyl vinyl ether	0.112	0.109	-	2.7	20	127	0
Bromodichloromethane	0.268	0.252*	-	6	20	120	0
1,4-Dioxane	0.00119	0.00123*	-	-3.4	20	133	0
cis-1,3-Dichloropropene	0.303	0.297*	-	2	20	124	0
Chlorobenzene-d5	1	1	-	0	20	129	0
Toluene-d8	1.287	1.343	-	-4.4	20	134	0
Toluene	0.652	0.649	-	0.5	20	121	0
4-Methyl-2-pentanone	0.08	0.079	-	1.3	20	127	0
Tetrachloroethene	0.271	0.263	-	3	20	117	0
trans-1,3-Dichloropropene	0.335	0.347	-	-3.6	20	126	0
Ethyl methacrylate	0.215	0.222	-	-3.3	20	132	0
1,1,2-Trichloroethane	0.165	0.171*	-	-3.6	20	124	0
Chlorodibromomethane	0.251	0.244	-	2.8	20	120	0
1,3-Dichloropropane	0.345	0.355	-	-2.9	20	123	0
1,2-Dibromoethane	0.19	0.195*	-	-2.6	20	127	0
2-Hexanone	0.129	0.124	-	3.9	20	125	0
Chlorobenzene	0.728	0.727	-	0.1	20	121	0
Ethylbenzene	1.213	1.226	-	-1.1	20	120	0
1,1,1,2-Tetrachloroethane	0.271	0.265	-	2.2	20	119	0
p/m Xylene	0.479	0.483	-	-0.8	20	120	0
o Xylene	0.463	0.469	-	-1.3	20	120	0
Styrene	0.741	0.748	-	-0.9	20	118	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	118	0
Bromoform	0.273	0.292	-	-7	20	120	0
Isopropylbenzene	2.447	2.696	-	-10.2	20	119	0
4-Bromofluorobenzene	0.922	1.006	-	-9.1	20	129	0
Bromobenzene	0.606	0.647	-	-6.8	20	119	0
n-Propylbenzene	2.885	3.159	-	-9.5	20	118	0
1,4-Dichlorobutane	0.888	0.928	-	-4.5	20	113	0
1,1,2,2-Tetrachloroethane	0.454	0.483	-	-6.4	20	119	0
4-Ethyltoluene	2.467	2.673	-	-8.4	20	117	0
2-Chlorotoluene	1.782	1.937	-	-8.7	20	115	0
1,3,5-Trimethylbenzene	2.137	2.342	-	-9.6	20	117	0
1,2,3-Trichloropropane	0.368	0.406	-	-10.3	20	123	0
trans-1,4-Dichloro-2-buten	0.16	0.155	-	3.1	20	105	0
4-Chlorotoluene	1.824	1.988	-	-9	20	118	0
tert-Butylbenzene	1.833	1.992	-	-8.7	20	117	0
1,2,4-Trimethylbenzene	2.087	2.303	-	-10.3	20	118	0
sec-Butylbenzene	2.629	2.861	-	-8.8	20	115	0
p-Isopropyltoluene	2.301	2.518	-	-9.4	20	116	0
1,3-Dichlorobenzene	1.228	1.287	-	-4.8	20	114	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: Alpha Geoscience		**Lab Number**	: L2417074	
Project Name	: RANCO SAND & GRAVEL		**Project Number**	: 12123	
Instrument ID	: VOA108		**Calibration Date**	: 04/02/24 17:41	
Lab File ID	: V08240402N01		**Init. Calib. Date(s)**	: 03/22/24	03/22/24
Sample No	: WG1904126-2		**Init. Calib. Times**	: 19:07	22:27
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	1.238	1.296	-	-4.7	20	116	0
p-Diethylbenzene	1.407	1.497	-	-6.4	20	115	0
n-Butylbenzene	1.962	2.101	-	-7.1	20	114	0
1,2-Dichlorobenzene	1.139	1.196	-	-5	20	116	0
1,2,4,5-Tetramethylbenzene	2.224	2.424	-	-9	20	118	0
1,2-Dibromo-3-chloropropan	0.064	0.068	-	-6.3	20	117	0
1,3,5-Trichlorobenzene	0.891	0.914	-	-2.6	20	113	0
Hexachlorobutadiene	0.354	0.346	-	2.3	20	107	0
1,2,4-Trichlorobenzene	0.737	0.75	-	-1.8	20	115	0
Naphthalene	1.399	1.406	-	-0.5	20	115	0
1,2,3-Trichlorobenzene	0.644	0.595	-	7.6	20	102	0

*** Value outside of QC limits.**

Evaluate Continuing Calibration Report

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-2
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	134	0.00
2	TP	Dichlorodifluoromethane	0.213	0.216	-1.4	123	0.00
3	TP	Chloromethane	0.375	0.308	17.9	99	0.00
4	TC	Vinyl chloride	0.304	0.271	10.9	108	0.00
5	TP	Bromomethane	0.108	0.065	39.8#	81	0.00
6	TP	Chloroethane	0.147	0.136	7.5	112	0.00
7	TP	Trichlorofluoromethane	0.251	0.225	10.4	108	0.00
8	TP	Ethyl ether	0.078	0.077	1.3	126	0.00
10	TC	1,1-Dichloroethene	0.172	0.167	2.9	121	0.00
11	TP	Carbon disulfide	0.589	0.562	4.6	121	0.00
12	TP	Freon-113	0.168	0.160	4.8	116	0.00
13	TP	Iodomethane	0.227	0.134	41.0#	82	0.00
14	TP	Acrolein	0.026	0.023	11.5	107	0.00
15	TP	Methylene chloride	0.206	0.191	7.3	122	0.00
17	TP	Acetone	* 10.000	13.696	-37.0#	159	0.00
18	TP	trans-1,2-Dichloroethene	0.197	0.190	3.6	122	0.00
19	TP	Methyl acetate	0.120	0.101	15.8	109	0.00
20	TP	Methyl tert-butyl ether	0.462	0.462	0.0	128	0.00
21	TP	tert-Butyl alcohol	0.015	0.015	0.0	129	0.00
22	TP	Diisopropyl ether	0.905	0.796	12.0	109	0.00
23	TP	1,1-Dichloroethane	0.476	0.440	7.6	114	0.00
24	TP	Halothane	0.151	0.143	5.3	118	0.00
25	TP	Acrylonitrile	0.062	0.057	8.1	116	0.00
26	TP	Ethyl tert-butyl ether	0.779	0.739	5.1	120	0.00
27	TP	Vinyl acetate	0.414	0.329	20.5#	103	0.00
28	TP	cis-1,2-Dichloroethene	0.221	0.213	3.6	122	0.00
29	TP	2,2-Dichloropropane	0.287	0.277	3.5	118	0.00
30	TP	Bromochloromethane	0.099	0.097#	2.0	121	0.00
31	TP	Cyclohexane	0.460	0.409	11.1	107	0.00
32	TC	Chloroform	0.354	0.337	4.8	118	0.00
33	TP	Ethyl acetate	0.174	0.158	9.2	114	0.00
34	TP	Carbon tetrachloride	0.282	0.262	7.1	112	0.00
35	TP	Tetrahydrofuran	0.050	0.045	10.0	108	0.00
36	S	Dibromofluoromethane	0.262	0.261	0.4	134	0.00
37	TP	1,1,1-Trichloroethane	0.306	0.292	4.6	119	0.00
39	TP	2-Butanone	0.075	0.068	9.3	113	0.00
40	TP	1,1-Dichloropropene	0.265	0.256	3.4	119	0.00
41	TP	Benzene	0.783	0.749	4.3	121	0.00
42	TP	tert-Amyl methyl ether	0.488	0.487	0.2	130	0.00

Evaluate Continuing Calibration Report

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-2
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
43	S	1,2-Dichloroethane-d4	0.321	0.326	-1.6	136	0.00
44	TP	1,2-Dichloroethane	0.305	0.284	6.9	116	0.00
47	TP	Methyl cyclohexane	0.303	0.285	5.9	117	0.00
48	TP	Trichloroethene	0.211	0.209	0.9	123	0.00
50	TP	Dibromomethane	0.111	0.103	7.2	122	0.00
51	TC	1,2-Dichloropropane	0.268	0.246	8.2	116	0.00
53	TP	2-Chloroethyl vinyl ether	0.112	0.109	2.7	127	0.00
54	TP	Bromodichloromethane	0.268	0.252#	6.0	120	0.00
57	TP	1,4-Dioxane	0.00119	0.00123#	-3.4	133	0.00
58	TP	cis-1,3-Dichloropropene	0.303	0.297#	2.0	124	0.00
59	I	Chlorobenzene-d5	1.000	1.000	0.0	129	0.00
60	S	Toluene-d8	1.287	1.343	-4.4	134	0.00
61	TC	Toluene	0.652	0.649	0.5	121	0.00
62	TP	4-Methyl-2-pentanone	0.080	0.079	1.3	127	0.00
63	TP	Tetrachloroethene	0.271	0.263	3.0	117	0.00
65	TP	trans-1,3-Dichloropropene	0.335	0.347	-3.6	126	0.00
67	TP	Ethyl methacrylate	0.215	0.222	-3.3	132	0.00
68	TP	1,1,2-Trichloroethane	0.165	0.171#	-3.6	124	0.00
69	TP	Chlorodibromomethane	0.251	0.244	2.8	120	0.00
70	TP	1,3-Dichloropropane	0.345	0.355	-2.9	123	0.00
71	TP	1,2-Dibromoethane	0.190	0.195#	-2.6	127	0.00
72	TP	2-Hexanone	0.129	0.124	3.9	125	0.00
73	TP	Chlorobenzene	0.728	0.727	0.1	121	0.00
74	TC	Ethylbenzene	1.213	1.226	-1.1	120	0.00
75	TP	1,1,1,2-Tetrachloroethane	0.271	0.265	2.2	119	0.00
76	TP	p/m Xylene	0.479	0.483	-0.8	120	0.00
77	TP	o Xylene	0.463	0.469	-1.3	120	0.00
78	TP	Styrene	0.741	0.748	-0.9	118	0.00
79	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	118	0.00
80	TP	Bromoform	0.273	0.292	-7.0	120	0.00
82	TP	Isopropylbenzene	2.447	2.696	-10.2	119	0.00
83	S	4-Bromofluorobenzene	0.922	1.006	-9.1	129	0.00
84	TP	Bromobenzene	0.606	0.647	-6.8	119	0.00
85	TP	n-Propylbenzene	2.885	3.159	-9.5	118	0.00
86	TP	1,4-Dichlorobutane	0.888	0.928	-4.5	113	0.00
87	TP	1,1,2,2-Tetrachloroethane	0.454	0.483	-6.4	119	0.00
88	TP	4-Ethyltoluene	2.467	2.673	-8.4	117	0.00

Evaluate Continuing Calibration Report

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-2
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
89 TP	2-Chlorotoluene	1.782	1.937	-8.7	115	0.00
90 TP	1,3,5-Trimethylbenzene	2.137	2.342	-9.6	117	0.00
91 TP	1,2,3-Trichloropropane	0.368	0.406	-10.3	123	0.00
92 TP	trans-1,4-Dichloro-2-butene	0.160	0.155	3.1	105	0.00
93 TP	4-Chlorotoluene	1.824	1.988	-9.0	118	0.00
94 TP	tert-Butylbenzene	1.833	1.992	-8.7	117	0.00
97 TP	1,2,4-Trimethylbenzene	2.087	2.303	-10.3	118	0.00
98 TP	sec-Butylbenzene	2.629	2.861	-8.8	115	0.00
99 TP	p-Isopropyltoluene	2.301	2.518	-9.4	116	0.00
100 TP	1,3-Dichlorobenzene	1.228	1.287	-4.8	114	0.00
101 TP	1,4-Dichlorobenzene	1.238	1.296	-4.7	116	0.00
102 TP	p-Diethylbenzene	1.407	1.497	-6.4	115	0.00
103 TP	n-Butylbenzene	1.962	2.101	-7.1	114	0.00
104 TP	1,2-Dichlorobenzene	1.139	1.196	-5.0	116	0.00
105 TP	1,2,4,5-Tetramethylbenzene	2.224	2.424	-9.0	118	0.00
106 TP	1,2-Dibromo-3-chloropropane	0.064	0.068	-6.3	117	0.00
107 TP	1,3,5-Trichlorobenzene	0.891	0.914	-2.6	113	0.00
108 TP	Hexachlorobutadiene	0.354	0.346	2.3	107	0.00
109 TP	1,2,4-Trichlorobenzene	0.737	0.750	-1.8	115	0.00
110 TP	Naphthalene	1.399	1.406	-0.5	115	0.00
111 TP	1,2,3-Trichlorobenzene	0.644	0.595	7.6	102	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 6 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-2
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	496523	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 100.00%			
59) Chlorobenzene-d5	9.617	117	357338	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 100.00%			
79) 1,4-Dichlorobenzene-d4	12.296	152	158777	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 100.00%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	129711	9.977	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.77%			
43) 1,2-Dichloroethane-d4	5.800	65	162057	10.154	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.54%			
60) Toluene-d8	7.776	98	479891	10.436	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 104.36%			
83) 4-Bromofluorobenzene	11.095	95	159781	10.913	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 109.13%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	107426	10.156	ug/L	98
3) Chloromethane	1.894	50	152978	8.208	ug/L	99
4) Vinyl chloride	1.962	62	134487	8.914	ug/L	99
5) Bromomethane	2.276	94	32114	5.965	ug/L	100
6) Chloroethane	2.402	64	67701	9.292	ug/L	99
7) Trichlorofluoromethane	2.539	101	111960	8.975	ug/L	96
8) Ethyl ether	2.837	74	38268	9.844	ug/L	97
10) 1,1-Dichloroethene	3.026	96	82927	9.734	ug/L	87
11) Carbon disulfide	3.058	76	278847	9.535	ug/L	97
12) Freon-113	3.068	101	79477	9.500	ug/L	99
13) Iodomethane	3.168	142	66491	5.908	ug/L	85
14) Acrolein	3.346	56	11476	8.863	ug/L	98
15) Methylene chloride	3.587	84	94718	9.245	ug/L	93
17) Acetone	3.624	43	33828	13.696	ug/L #	88
18) trans-1,2-Dichloroethene	3.739	96	94543	9.659	ug/L	96
19) Methyl acetate	3.739	43	50154	8.444	ug/L #	89
20) Methyl tert-butyl ether	3.839	73	229237	9.989	ug/L	94
21) tert-Butyl alcohol	3.918	59	37814	50.102	ug/L #	71
22) Diisopropyl ether	4.195	45	395123	8.789	ug/L	97
23) 1,1-Dichloroethane	4.321	63	218263	9.239	ug/L	98
24) Halothane	4.374	117	70958	9.438	ug/L	98

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-2
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
25) Acrylonitrile	4.358	53	28319	9.148	ug/L	#	87
26) Ethyl tert-butyl ether	4.541	59	367165	9.490	ug/L		90
27) Vinyl acetate	4.552	43	163558	7.956	ug/L		100
28) cis-1,2-Dichloroethene	4.835	96	105548	9.611	ug/L		88
29) 2,2-Dichloropropane	4.940	77	137344	9.639	ug/L		92
30) Bromochloromethane	5.029	128	48264	9.776	ug/L	#	75
31) Cyclohexane	5.034	56	203207	8.889	ug/L		93
32) Chloroform	5.097	83	167402	9.516	ug/L		96
33) Ethyl acetate	5.207	43	78534	9.108	ug/L	#	94
34) Carbon tetrachloride	5.244	117	130103	9.295	ug/L		99
35) Tetrahydrofuran	5.249	42	22479M6	9.050	ug/L		
37) 1,1,1-Trichloroethane	5.302	97	144836	9.534	ug/L	#	98
39) 2-Butanone	5.391	43	33994M3	9.144	ug/L		
40) 1,1-Dichloropropene	5.422	75	126980	9.633	ug/L		96
41) Benzene	5.669	78	371963	9.572	ug/L		98
42) tert-Amyl methyl ether	5.779	73	241655	9.969	ug/L		98
44) 1,2-Dichloroethane	5.868	62	141080	9.306	ug/L		98
47) Methyl cyclohexane	6.256	83	141523	9.397	ug/L		99
48) Trichloroethene	6.261	95	103786	9.888	ug/L		94
50) Dibromomethane	6.702	93	51020	9.265	ug/L		98
51) 1,2-Dichloropropane	6.806	63	122290	9.200	ug/L	#	92
53) 2-Chloroethyl vinyl ether	7.493	63	54347	9.732	ug/L		95
54) Bromodichloromethane	6.875	83	124935	9.372	ug/L		98
57) 1,4-Dioxane	7.079	88	30590	517.898	ug/L	#	94
58) cis-1,3-Dichloropropene	7.561	75	147533	9.806	ug/L		97
61) Toluene	7.834	92	231845	9.955	ug/L		96
62) 4-Methyl-2-pentanone	8.264	58	28365	9.906	ug/L		95
63) Tetrachloroethene	8.280	166	94049	9.728	ug/L		90
65) trans-1,3-Dichloropropene	8.311	75	123985	10.363	ug/L		99
67) Ethyl methacrylate	8.500	69	79387	10.334	ug/L	#	35
68) 1,1,2-Trichloroethane	8.495	83	61206	10.381	ug/L		95
69) Chlorodibromomethane	8.704	129	87338	9.746	ug/L		96
70) 1,3-Dichloropropane	8.815	76	126998	10.307	ug/L		100
71) 1,2-Dibromoethane	8.982	107	69720	10.262	ug/L		98
72) 2-Hexanone	9.265	43	44228	9.591	ug/L		95
73) Chlorobenzene	9.632	112	259903	9.988	ug/L		97
74) Ethylbenzene	9.674	91	438188	10.111	ug/L		99
75) 1,1,1,2-Tetrachloroethane	9.722	131	94543	9.762	ug/L		95
76) p/m Xylene	9.863	106	344849	20.138	ug/L		95
77) o Xylene	10.398	106	335093	20.275	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-2
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78)	Styrene	10.466	104	534547	20.190	ug/L	89
80)	Bromoform	10.487	173	46441	10.711	ug/L	94
82)	Isopropylbenzene	10.781	105	428034	11.017	ug/L	96
84)	Bromobenzene	11.205	156	102672	10.663	ug/L	98
85)	n-Propylbenzene	11.253	91	501534	10.949	ug/L	95
86)	1,4-Dichlorobutane	11.268	55	147403	10.457	ug/L	92
87)	1,1,2,2-Tetrachloroethane	11.336	83	76631	10.632	ug/L	99
88)	4-Ethyltoluene	11.378	105	424377	10.834	ug/L	95
89)	2-Chlorotoluene	11.420	91	307612M6	10.873	ug/L	
90)	1,3,5-Trimethylbenzene	11.478	105	371889	10.961	ug/L	89
91)	1,2,3-Trichloropropane	11.473	75	64491	11.046	ug/L	97
92)	trans-1,4-Dichloro-2-b...	11.525	53	24595	9.672	ug/L	89
93)	4-Chlorotoluene	11.599	91	315582	10.895	ug/L	93
94)	tert-Butylbenzene	11.819	119	316238	10.868	ug/L	99
97)	1,2,4-Trimethylbenzene	11.892	105	365723	11.037	ug/L	92
98)	sec-Butylbenzene	12.008	105	454272	10.882	ug/L	97
99)	p-Isopropyltoluene	12.160	119	399869	10.943	ug/L	95
100)	1,3-Dichlorobenzene	12.223	146	204313	10.480	ug/L	99
101)	1,4-Dichlorobenzene	12.312	146	205729	10.465	ug/L	99
102)	p-Diethylbenzene	12.532	119	237659	10.635	ug/L	94
103)	n-Butylbenzene	12.590	91	333524	10.705	ug/L	97
104)	1,2-Dichlorobenzene	12.736	146	189870	10.503	ug/L	97
105)	1,2,4,5-Tetramethylben...	13.318	119	384847	10.900	ug/L	97
106)	1,2-Dibromo-3-chloropr...	13.507	155	10733	10.548	ug/L	85
107)	1,3,5-Trichlorobenzene	13.544	180	145168	10.257	ug/L	96
108)	Hexachlorobutadiene	14.115	225	54881	9.762	ug/L	96
109)	1,2,4-Trichlorobenzene	14.136	180	119121	10.181	ug/L	98
110)	Naphthalene	14.430	128	223313	10.050	ug/L	100
111)	1,2,3-Trichlorobenzene	14.598	180	94439	9.243	ug/L	99

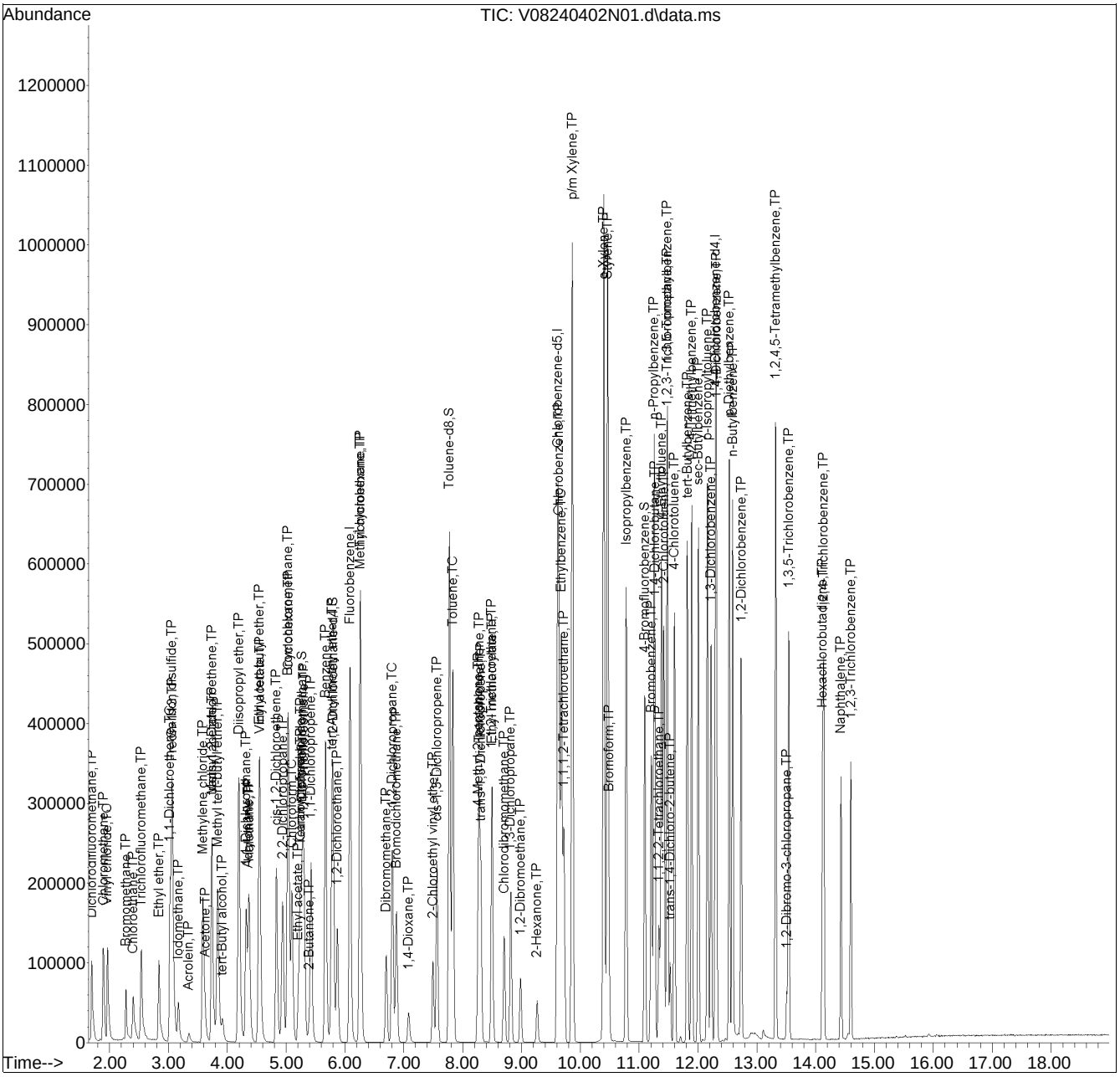
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-2
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

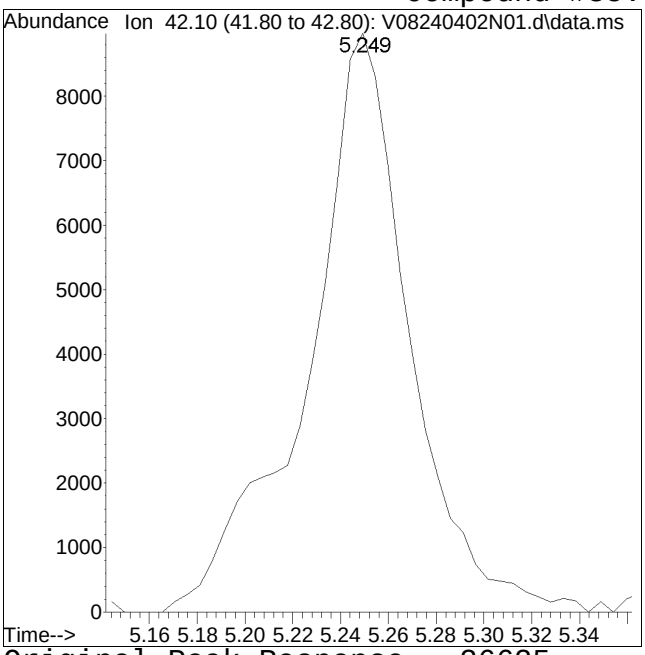
Sub List : 8260-Curve - Megamix plus Diox240402N01.d•



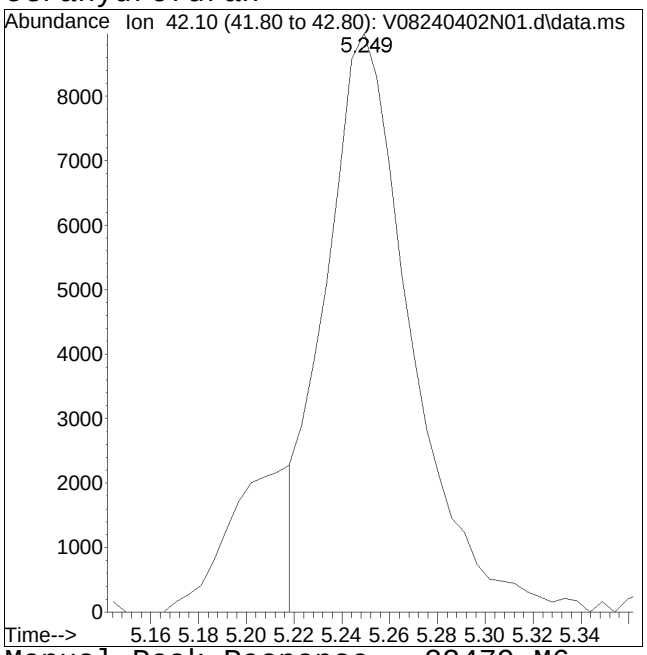
Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N01.d	Operator	: VOA108:TMS
Date Inj'd	: 4/2/2024 5:41 pm	Instrument	: VOA 108
Sample	: WG1904126-2	Quant Date	: 4/2/2024 6:14 pm

Compound #35: Tetrahydrofuran



Original Peak Response = 26625



Manual Peak Response = 22479 M6

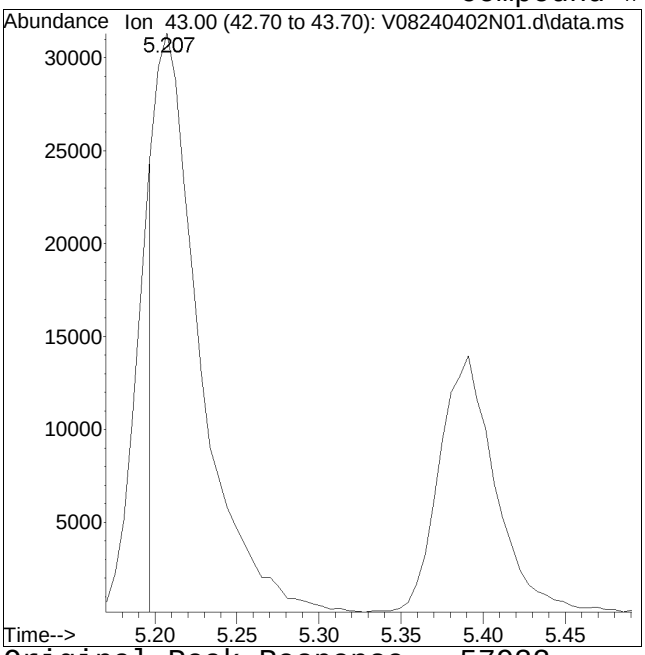
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

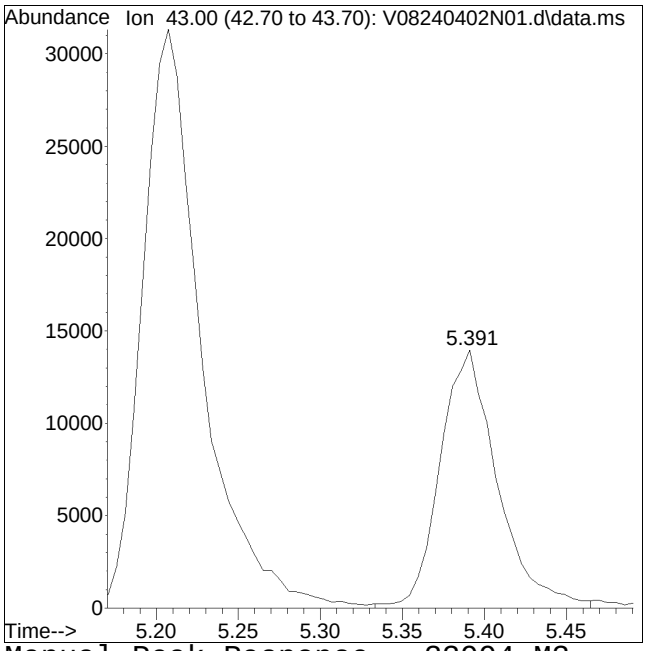
Manual Integration Report

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Date Inj'd : 4/2/2024 5:41 pm
Sample : WG1904126-2

QMethod : V108_240322N_8260.m
Operator : VOA108:TMS
Instrument : VOA 108
Quant Date : 4/2/2024 6:14 pm

Compound #39: 2-Butanone





Original Peak Response = 57932 Manual Peak Response = 33994 M3

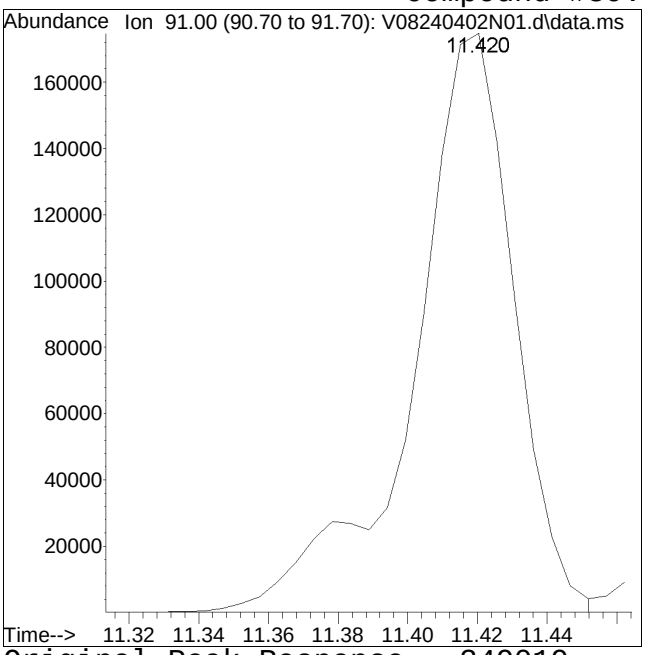
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

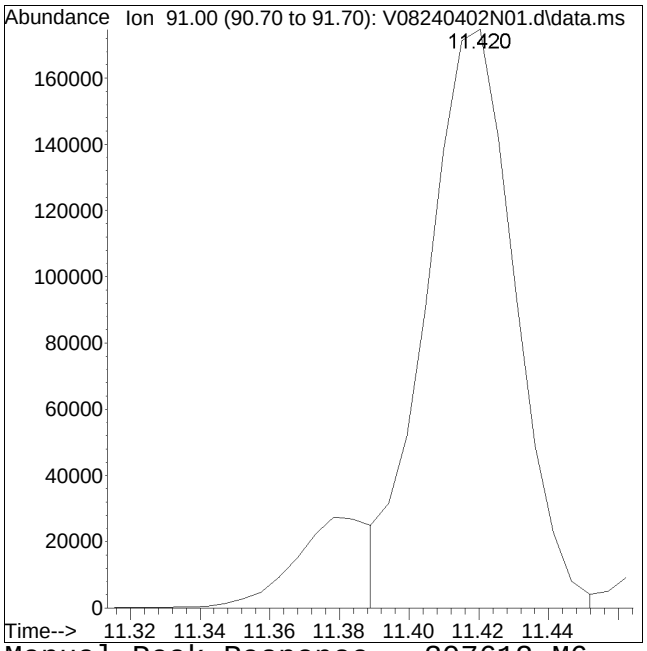
Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Date Inj'd : 4/2/2024 5:41 pm
Sample : WG1904126-2

QMethod : V108_240322N_8260.m
Operator : VOA108:TMS
Instrument : VOA 108
Quant Date : 4/2/2024 6:14 pm

Compound #89: 2-Chlorotoluene



Original Peak Response = 349019



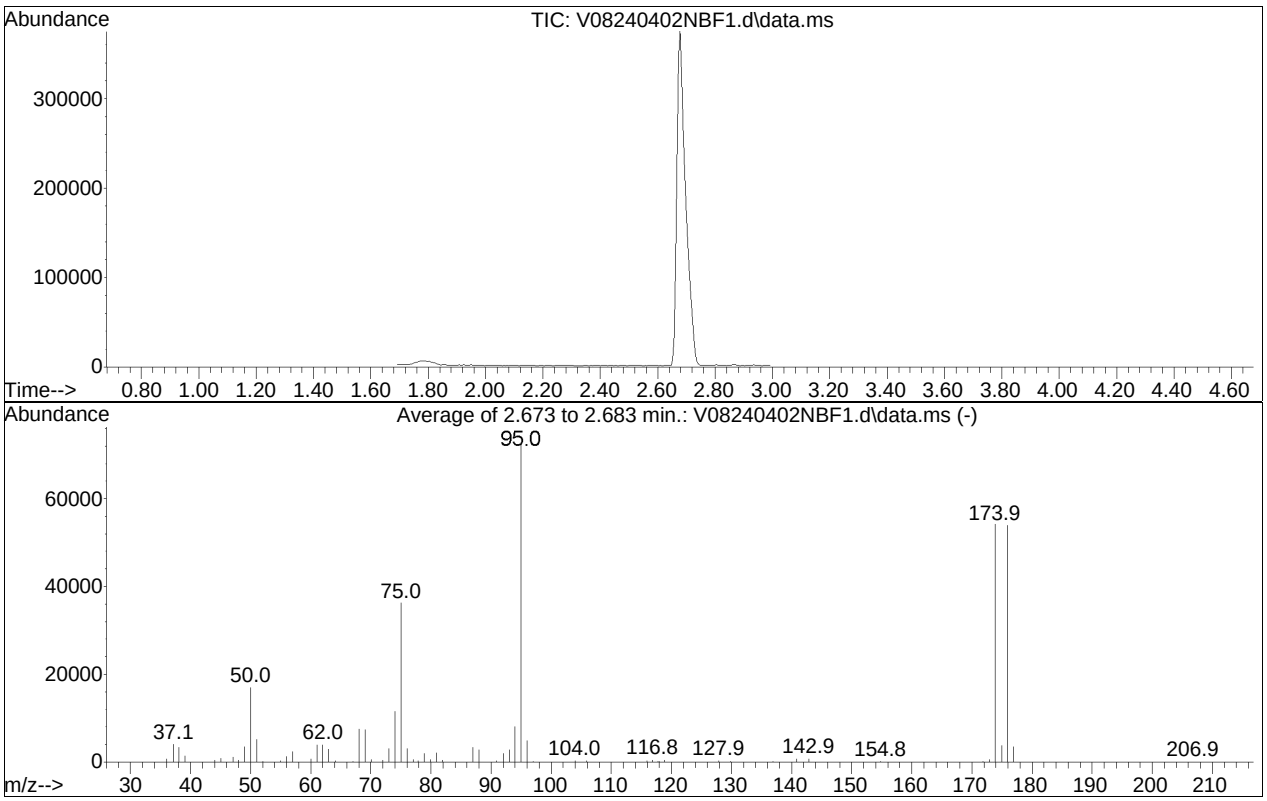
Manual Peak Response = 307612 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402NBF1.d
Acq On : 2 Apr 2024 5:11 pm
Operator : VOA108:TMS
Sample : WG1904126-1
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Mon Mar 25 16:26:25 2024



Spectrum Information: Average of 2.673 to 2.683 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.4	17014	PASS
75	95	30	60	49.9	36349	PASS
95	95	100	100	100.0	72779	PASS
96	95	5	9	6.7	4899	PASS
173	174	0.00	2	1.0	532	PASS
174	95	50	100	74.5	54184	PASS
175	174	5	9	7.1	3851	PASS
176	174	95	101	99.5	53912	PASS
177	176	5	9	6.5	3508	PASS

Volatiles Raw QC Data

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N05.d
Acq On : 2 Apr 2024 7:09 pm
Operator : VOA108:TMS
Sample : WG1904126-5,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 03 05:50:36 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	437200	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 88.05%			
59) Chlorobenzene-d5	9.617	117	328558	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 91.95%			
79) 1,4-Dichlorobenzene-d4	12.301	152	150589	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 94.84%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.281	113	116360	10.165	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.65%			
43) 1,2-Dichloroethane-d4	5.800	65	139660	9.938	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.38%			
60) Toluene-d8	7.776	98	429124	10.149	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.49%			
83) 4-Bromofluorobenzene	11.095	95	148091	10.664	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 106.64%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	1.888	50	517	N.D.		
4) Vinyl chloride	0.000		0	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
10) 1,1-Dichloroethene	0.000		0	N.D.		
11) Carbon disulfide	3.058	76	1199	N.D.		
12) Freon-113	0.000		0	N.D.		
15) Methylene chloride	3.582	84	691	0.077	ug/L	88
17) Acetone	3.629	43	8230	2.350	ug/L #	46
18) trans-1,2-Dichloroethene	0.000		0	N.D.		
19) Methyl acetate	0.000		0	N.D. d		
20) Methyl tert-butyl ether	0.000		0	N.D.		
23) 1,1-Dichloroethane	0.000		0	N.D.		
28) cis-1,2-Dichloroethene	0.000		0	N.D.		
30) Bromochloromethane	0.000		0	N.D.		
31) Cyclohexane	0.000		0	N.D.		
32) Chloroform	0.000		0	N.D.		
34) Carbon tetrachloride	0.000		0	N.D.		

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N05.d
Acq On : 2 Apr 2024 7:09 pm
Operator : VOA108:TMS
Sample : WG1904126-5,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 03 05:50:36 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 1,1,1-Trichloroethane	0.000		0	N.D.		
39) 2-Butanone	0.000		0	N.D.		
41) Benzene	0.000		0	N.D.		
44) 1,2-Dichloroethane	0.000		0	N.D.		
47) Methyl cyclohexane	0.000		0	N.D.		
48) Trichloroethene	0.000		0	N.D.		
51) 1,2-Dichloropropane	0.000		0	N.D.		
54) Bromodichloromethane	0.000		0	N.D.		
57) 1,4-Dioxane	0.000		0	N.D.		
58) cis-1,3-Dichloropropene	0.000		0	N.D.		
61) Toluene	7.829	92	288	N.D.		
62) 4-Methyl-2-pentanone	0.000		0	N.D.		
63) Tetrachloroethene	0.000		0	N.D.		
65) trans-1,3-Dichloropropene	8.322	75	55	N.D.		
68) 1,1,2-Trichloroethane	0.000		0	N.D.		
69) Chlorodibromomethane	0.000		0	N.D.		
71) 1,2-Dibromoethane	0.000		0	N.D.		
72) 2-Hexanone	0.000		0	N.D.		
73) Chlorobenzene	9.632	112	118	N.D.		
74) Ethylbenzene	9.674	91	893	N.D.		
76) p/m Xylene	9.858	106	773	N.D.		
77) o Xylene	10.408	106	105	N.D.		
78) Styrene	10.466	104	296	N.D.		
80) Bromoform	0.000		0	N.D.		
82) Isopropylbenzene	10.775	105	272	N.D.		
87) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.		
100) 1,3-Dichlorobenzene	12.228	146	515	N.D.		
101) 1,4-Dichlorobenzene	12.322	146	627	N.D.		
104) 1,2-Dichlorobenzene	12.736	146	420	N.D.		
106) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
109) 1,2,4-Trichlorobenzene	14.136	180	997	0.090	ug/L	97
111) 1,2,3-Trichlorobenzene	14.598	180	1283	0.132	ug/L	99

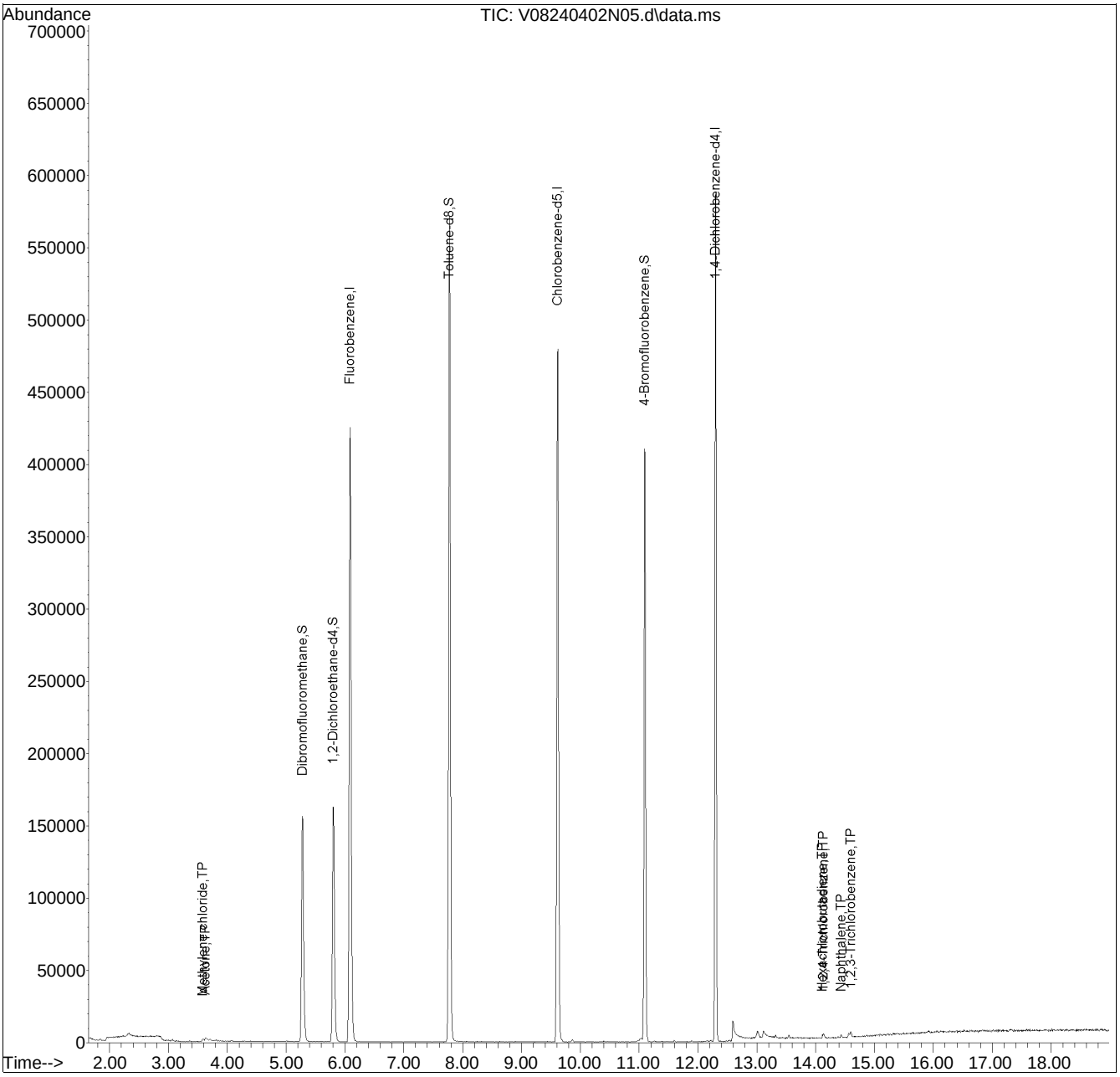
(#) = qualifier out of range (m) = manual integration (+) = signals summed

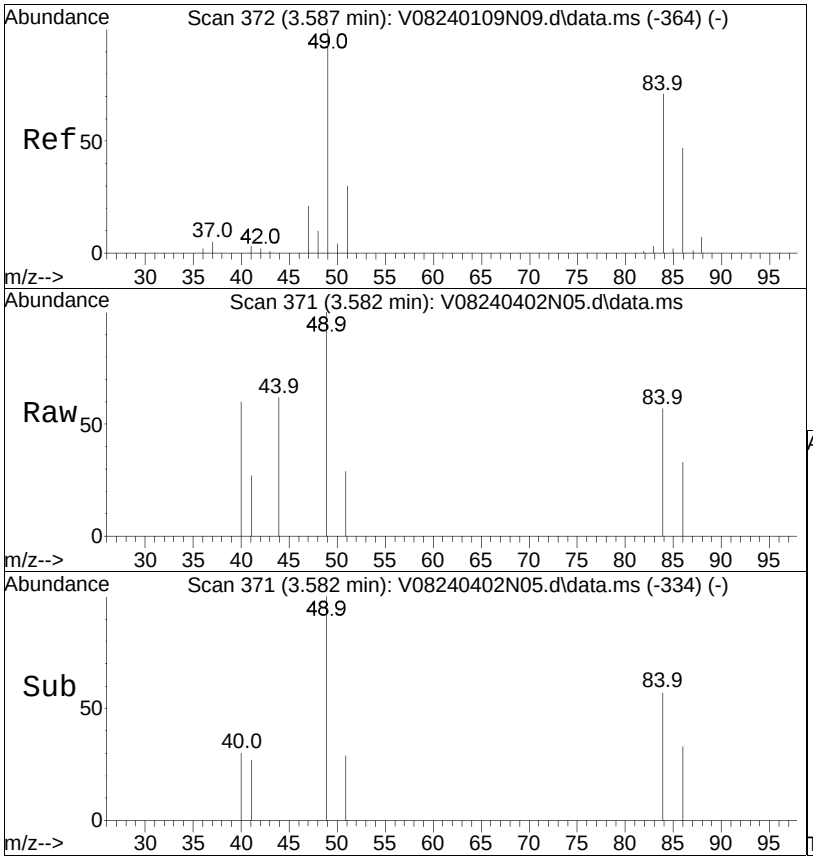
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N05.d
Acq On : 2 Apr 2024 7:09 pm
Operator : VOA108:TMS
Sample : WG1904126-5,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 03 05:50:36 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox240402N01.d•

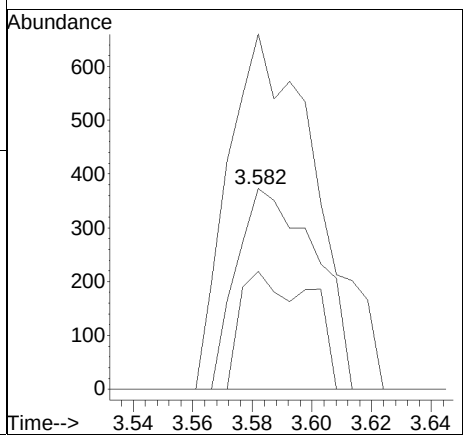


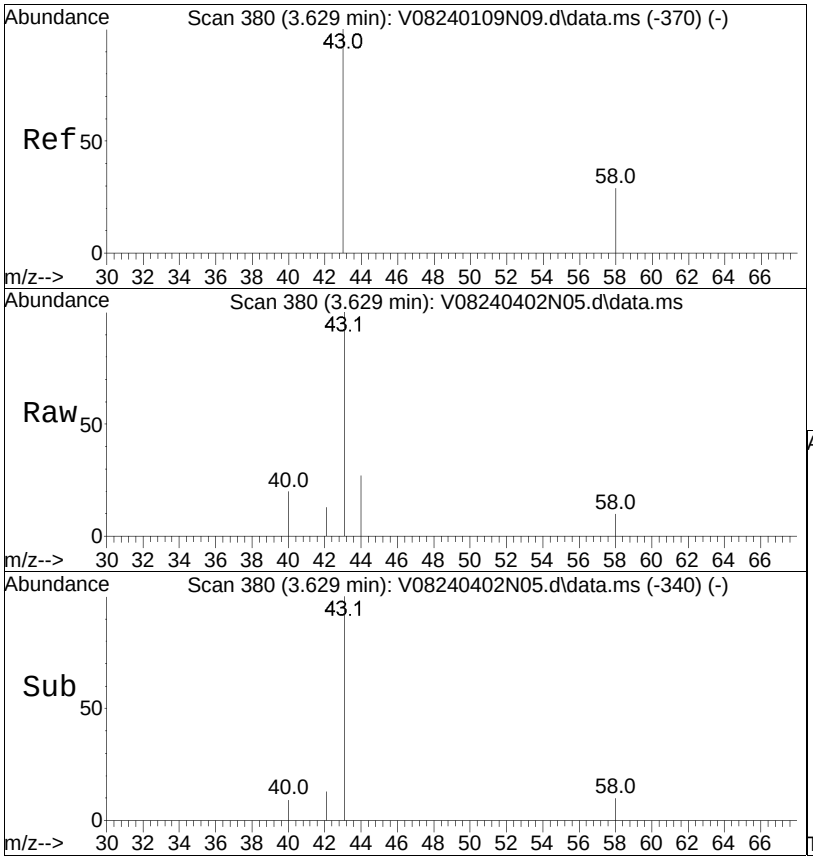


#15
Methylene chloride
Concen: 0.08 ug/L
RT: 3.582 min Scan# 371
Delta R.T. -0.005 min
Lab File: V08240402N05.d
Acq: 2 Apr 2024 7:09 pm

Tgt Ion: 84 Resp: 691

Ion	Ratio	Lower	Upper
84	100		
86	51.2	40.4	83.8
49	200.3	120.0	249.2

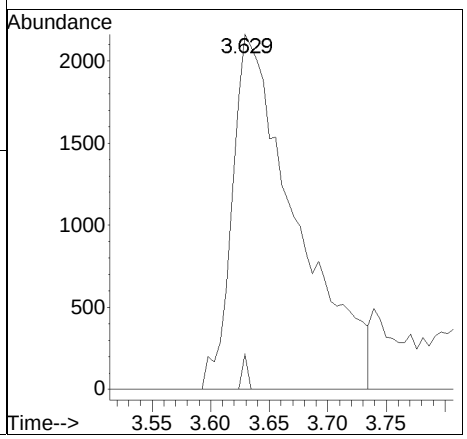


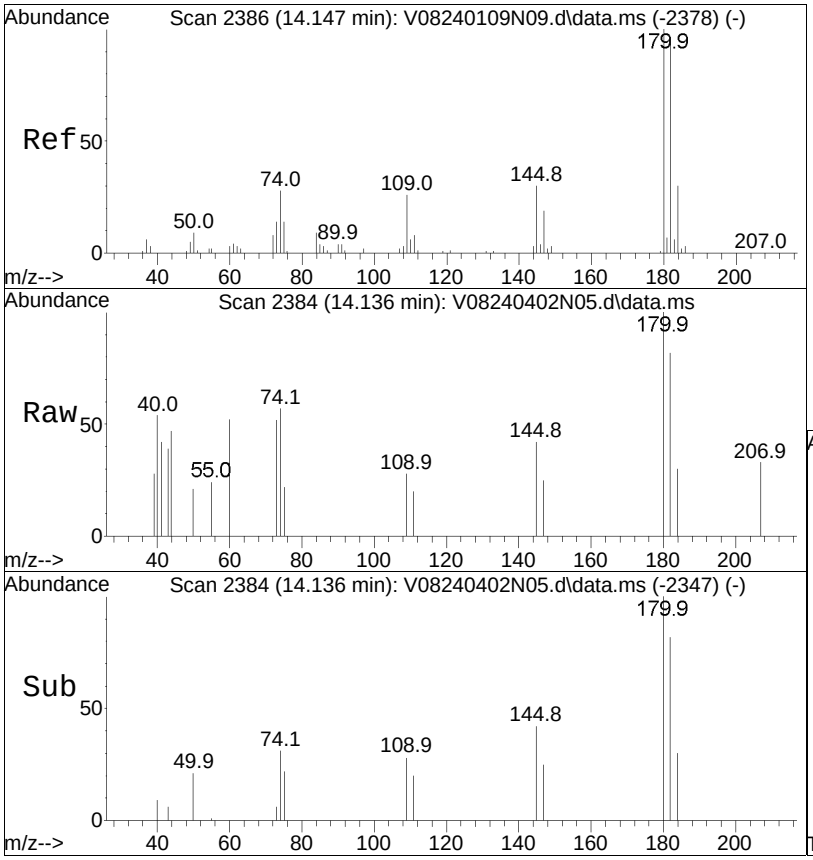


#17
Acetone
Concen: 2.35 ug/L
RT: 3.629 min Scan# 380
Delta R.T. 0.010 min
Lab File: V08240402N05.d
Acq: 2 Apr 2024 7:09 pm

Tgt Ion: 43 Resp: 8230

Ion	Ratio	Lower	Upper
43	100		
58	0.8	24.2	36.4#

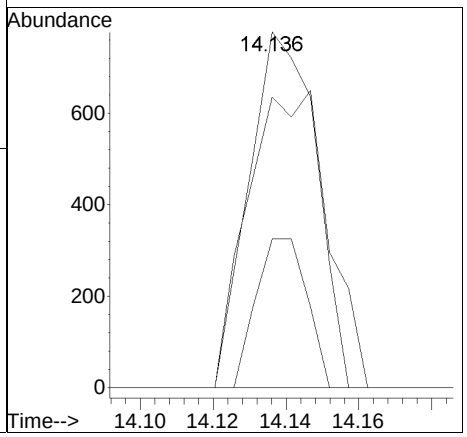


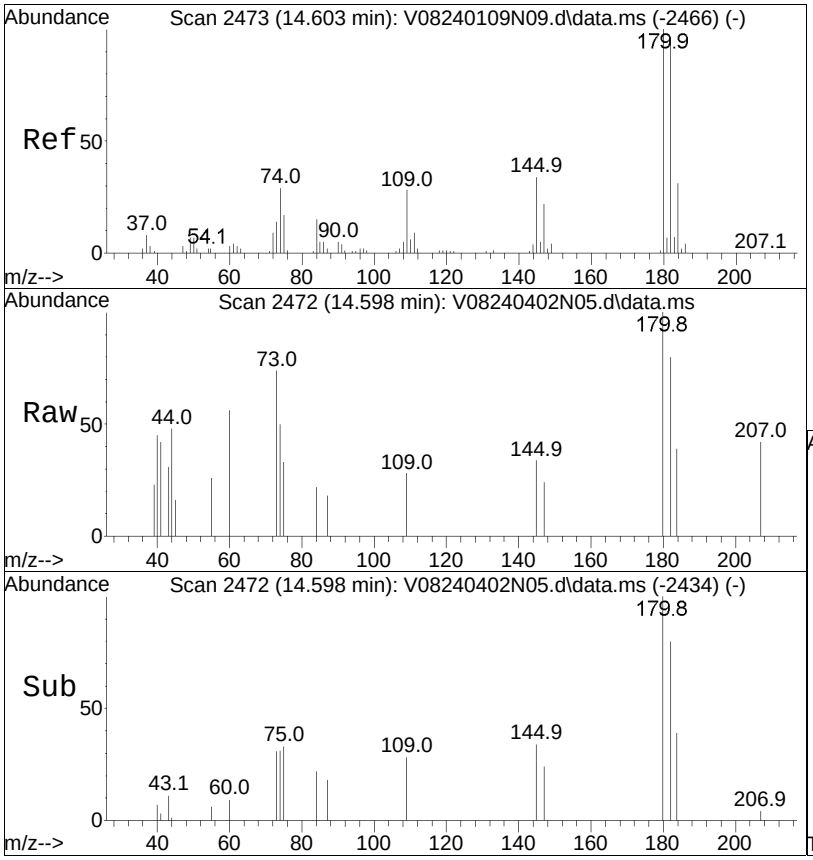


#109
1,2,4-Trichlorobenzene
Concen: 0.09 ug/L
RT: 14.136 min Scan# 2384
Delta R.T. -0.005 min
Lab File: V08240402N05.d
Acq: 2 Apr 2024 7:09 pm

Tgt Ion:180 Resp: 997

Ion	Ratio	Lower	Upper
180	100		
182	99.1	77.3	115.9
145	31.7	28.1	42.1

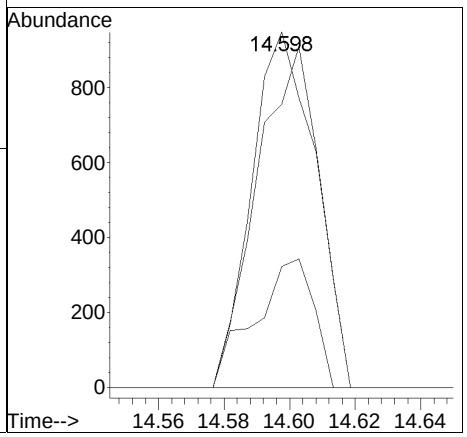




#111
1,2,3-Trichlorobenzene
Concen: 0.13 ug/L
RT: 14.598 min Scan# 2472
Delta R.T. 0.000 min
Lab File: V08240402N05.d
Acq: 2 Apr 2024 7:09 pm

Tgt Ion:180 Resp: 1283

Ion	Ratio	Lower	Upper
180	100		
182	94.8	76.4	114.6
145	33.4	26.4	39.6



Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N05.d	Operator	: VOA108:TMS
Date Inj'd	: 4/2/2024 7:09 pm	Instrument	: VOA 108
Sample	: WG1904126-5,31,10,10	Quant Date	: 4/3/2024 5:50 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-3,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	496523	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 100.00%			
59) Chlorobenzene-d5	9.617	117	357338	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 100.00%			
79) 1,4-Dichlorobenzene-d4	12.296	152	158777	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 100.00%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	129711	9.977	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.77%			
43) 1,2-Dichloroethane-d4	5.800	65	162057	10.154	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.54%			
60) Toluene-d8	7.776	98	479891	10.436	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 104.36%			
83) 4-Bromofluorobenzene	11.095	95	159781	10.913	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 109.13%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	107426	10.156	ug/L	98
3) Chloromethane	1.894	50	152978	8.208	ug/L	99
4) Vinyl chloride	1.962	62	134487	8.914	ug/L	99
5) Bromomethane	2.276	94	32114	5.965	ug/L	100
6) Chloroethane	2.402	64	67701	9.292	ug/L	99
7) Trichlorofluoromethane	2.539	101	111960	8.975	ug/L	96
10) 1,1-Dichloroethene	3.026	96	82927	9.734	ug/L	87
11) Carbon disulfide	3.058	76	278847	9.535	ug/L	97
12) Freon-113	3.068	101	79477	9.500	ug/L	99
15) Methylene chloride	3.587	84	94718	9.245	ug/L	93
17) Acetone	3.624	43	33828	13.696	ug/L #	88
18) trans-1,2-Dichloroethene	3.739	96	94543	9.659	ug/L	96
19) Methyl acetate	3.739	43	50154	8.444	ug/L #	89
20) Methyl tert-butyl ether	3.839	73	229237	9.989	ug/L	94
23) 1,1-Dichloroethane	4.321	63	218263	9.239	ug/L	98
28) cis-1,2-Dichloroethene	4.835	96	105548	9.611	ug/L	88
30) Bromochloromethane	5.029	128	48264	9.776	ug/L #	75
31) Cyclohexane	5.034	56	203207	8.889	ug/L	93
32) Chloroform	5.097	83	167402	9.516	ug/L	96
34) Carbon tetrachloride	5.244	117	130103	9.295	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-3,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 1,1,1-Trichloroethane	5.302	97	144836	9.534	ug/L	#	98
39) 2-Butanone	5.391	43	33994M3	9.144	ug/L		
41) Benzene	5.669	78	371963	9.572	ug/L		98
44) 1,2-Dichloroethane	5.868	62	141080	9.306	ug/L		98
47) Methyl cyclohexane	6.256	83	141523	9.397	ug/L		99
48) Trichloroethene	6.261	95	103786	9.888	ug/L		94
51) 1,2-Dichloropropane	6.806	63	122290	9.200	ug/L	#	92
54) Bromodichloromethane	6.875	83	124935	9.372	ug/L		98
57) 1,4-Dioxane	7.079	88	30590	517.898	ug/L	#	94
58) cis-1,3-Dichloropropene	7.561	75	147533	9.806	ug/L		97
61) Toluene	7.834	92	231845	9.955	ug/L		96
62) 4-Methyl-2-pentanone	8.264	58	28365	9.906	ug/L		95
63) Tetrachloroethene	8.280	166	94049	9.728	ug/L		90
65) trans-1,3-Dichloropropene	8.311	75	123985	10.363	ug/L		99
68) 1,1,2-Trichloroethane	8.495	83	61206	10.381	ug/L		95
69) Chlorodibromomethane	8.704	129	87338	9.746	ug/L		96
71) 1,2-Dibromoethane	8.982	107	69720	10.262	ug/L		98
72) 2-Hexanone	9.265	43	44228	9.591	ug/L		95
73) Chlorobenzene	9.632	112	259903	9.988	ug/L		97
74) Ethylbenzene	9.674	91	438188	10.111	ug/L		99
76) p/m Xylene	9.863	106	344849	20.138	ug/L		95
77) o Xylene	10.398	106	335093	20.275	ug/L		90
78) Styrene	10.466	104	534547	20.190	ug/L		89
80) Bromoform	10.487	173	46441	10.711	ug/L		94
82) Isopropylbenzene	10.781	105	428034	11.017	ug/L		96
87) 1,1,2,2-Tetrachloroethane	11.336	83	76631	10.632	ug/L		99
100) 1,3-Dichlorobenzene	12.223	146	204313	10.480	ug/L		99
101) 1,4-Dichlorobenzene	12.312	146	205729	10.465	ug/L		99
104) 1,2-Dichlorobenzene	12.736	146	189870	10.503	ug/L		97
106) 1,2-Dibromo-3-chloropr...	13.507	155	10733	10.548	ug/L		85
109) 1,2,4-Trichlorobenzene	14.136	180	119121	10.181	ug/L		98
111) 1,2,3-Trichlorobenzene	14.598	180	94439	9.243	ug/L		99

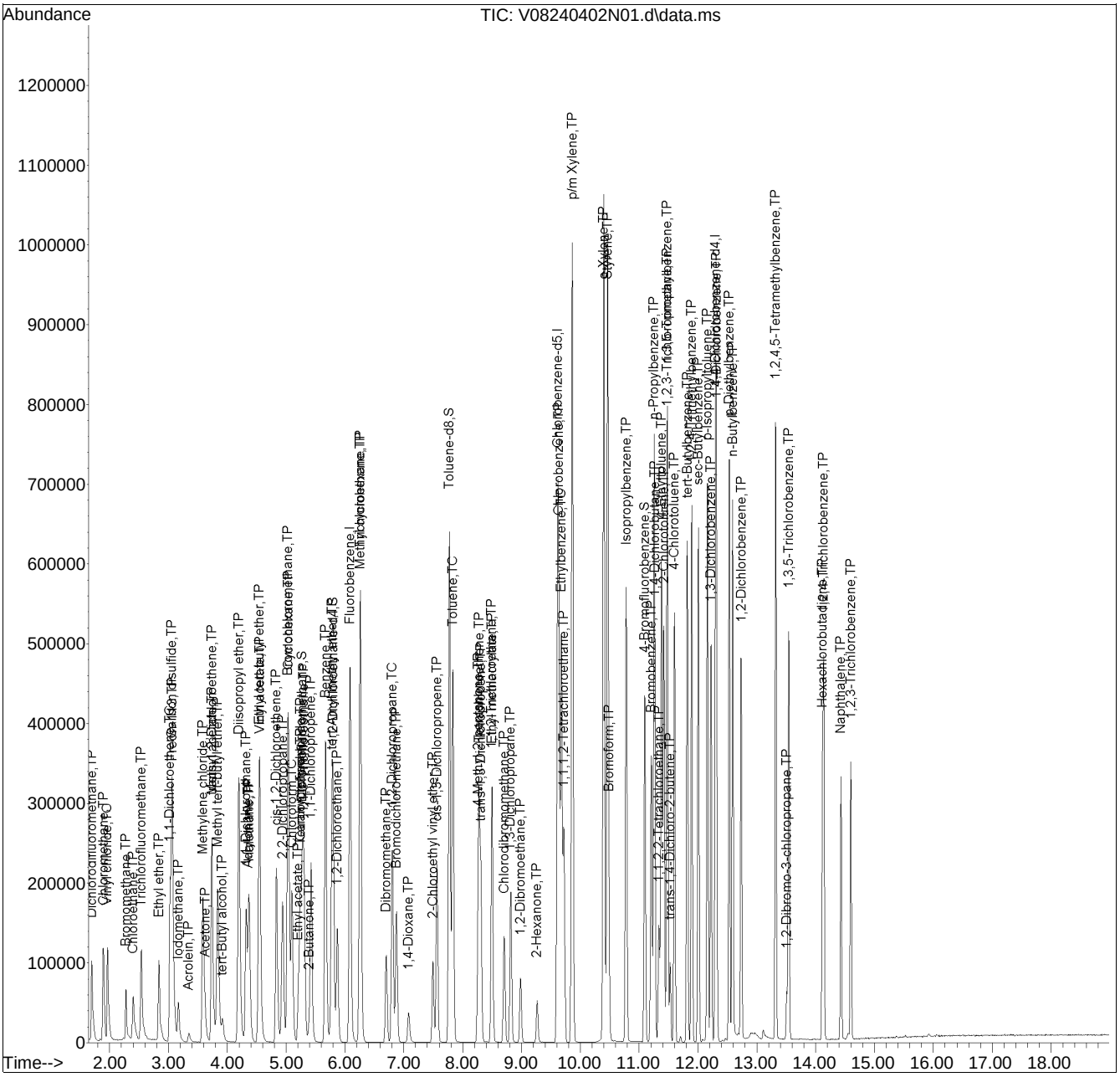
(#) = qualifier out of range (m) = manual integration (+) = signals summed

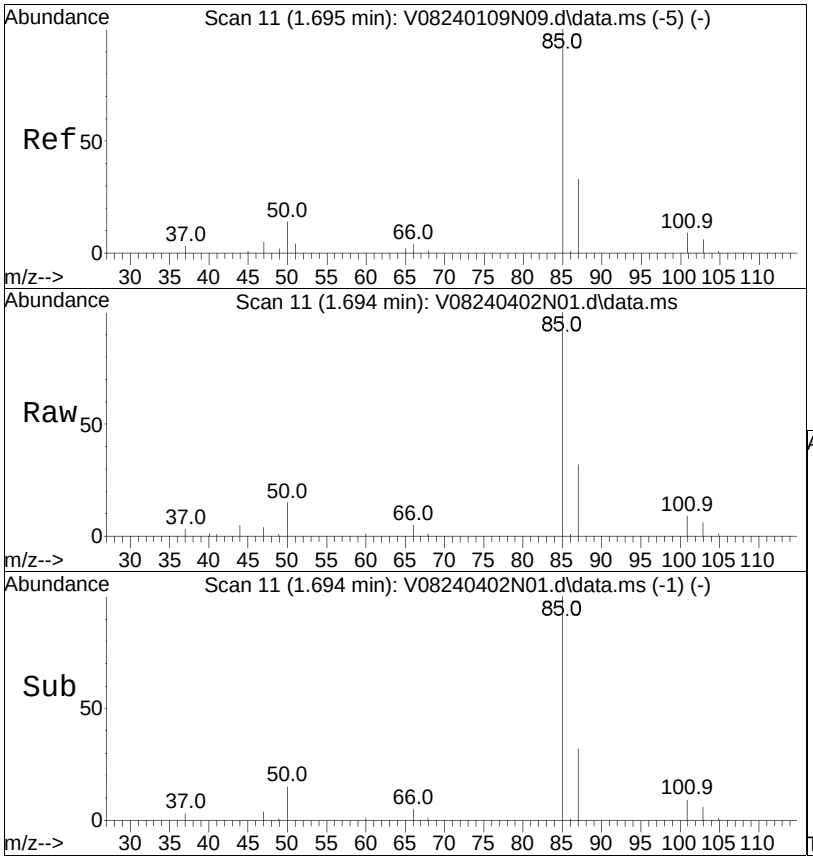
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Acq On : 2 Apr 2024 5:41 pm
Operator : VOA108:TMS
Sample : WG1904126-3,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 18:34:09 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox240402N01.d•

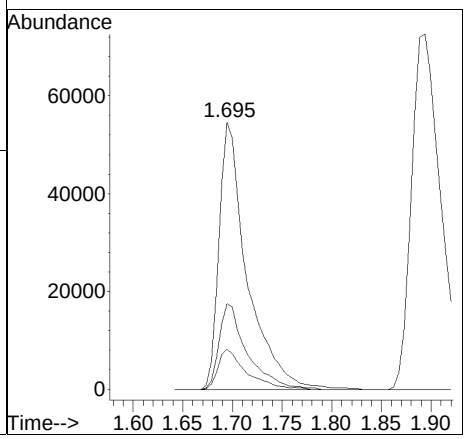


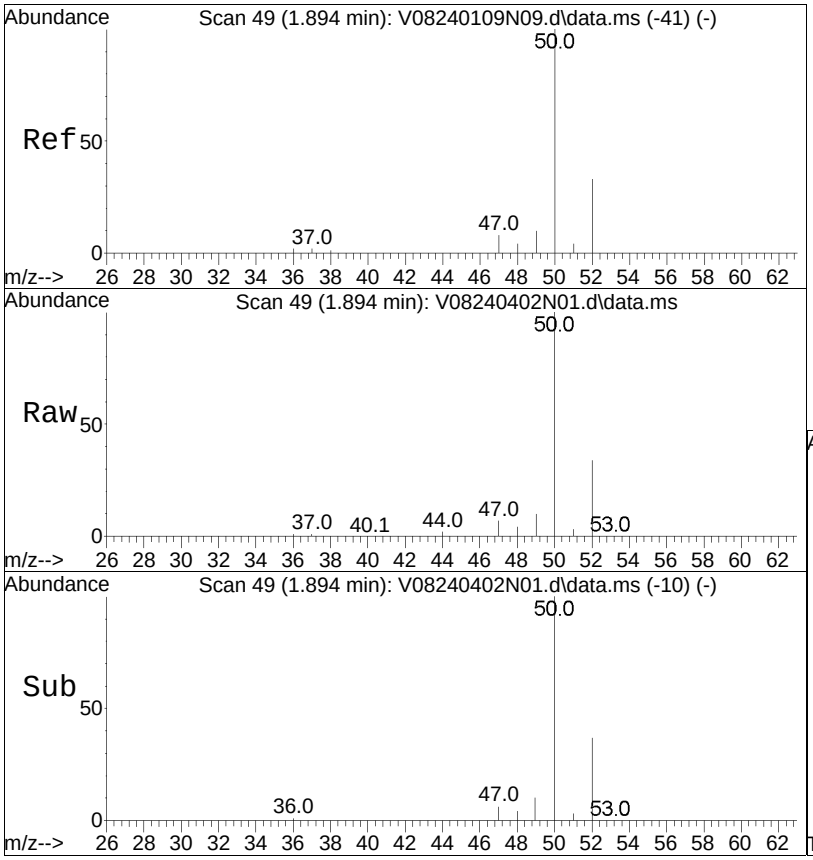


#2
Dichlorodifluoromethane
Concen: 10.16 ug/L
RT: 1.694 min Scan# 11
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 85 Resp: 107426

Ion	Ratio	Lower	Upper
85	100		
87	31.9	21.0	43.6
50	15.2	8.9	18.5

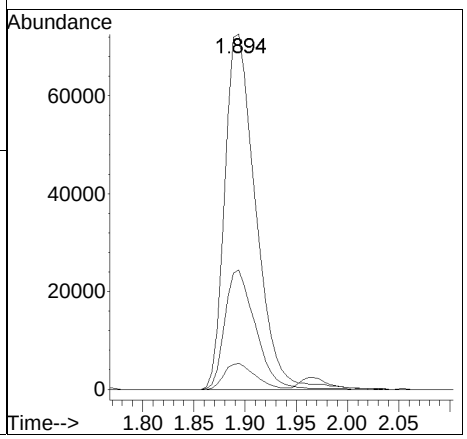


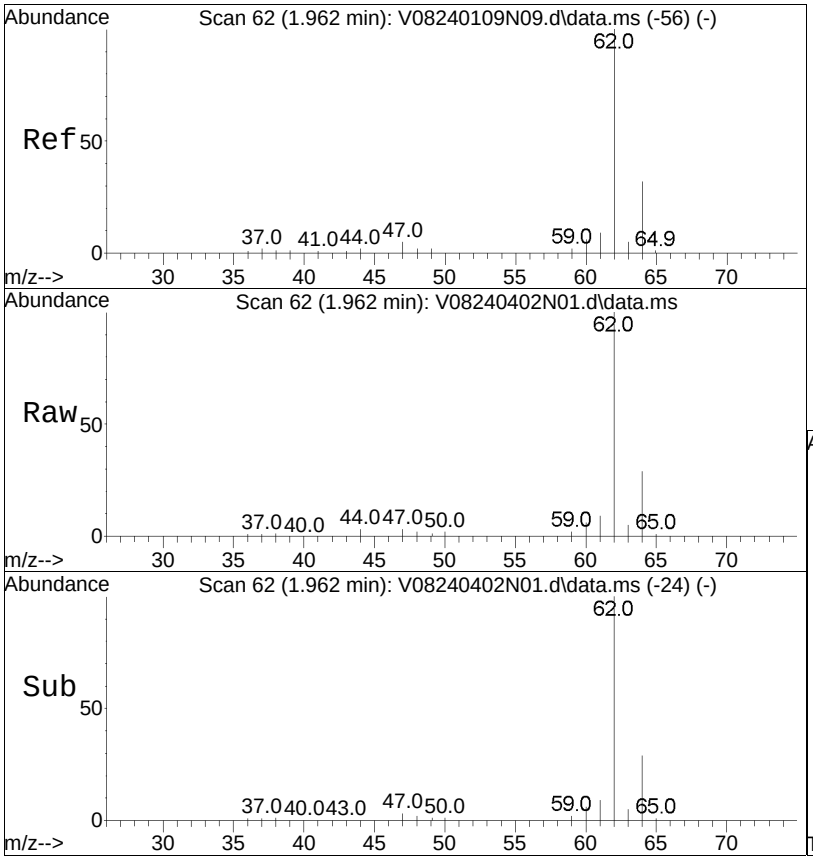


#3
Chloromethane
Concen: 8.21 ug/L
RT: 1.894 min Scan# 49
Delta R.T. 0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 50 Resp: 152978

Ion	Ratio	Lower	Upper
50	100		
52	33.1	12.9	52.9
47	7.4	0.0	28.3

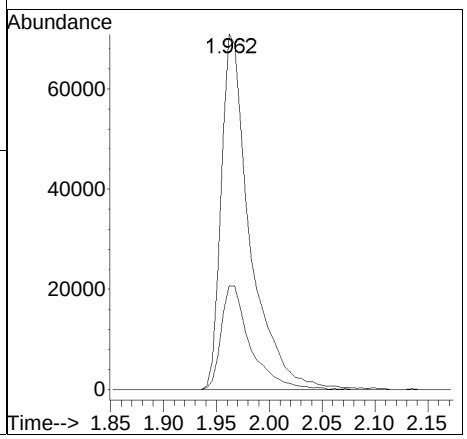


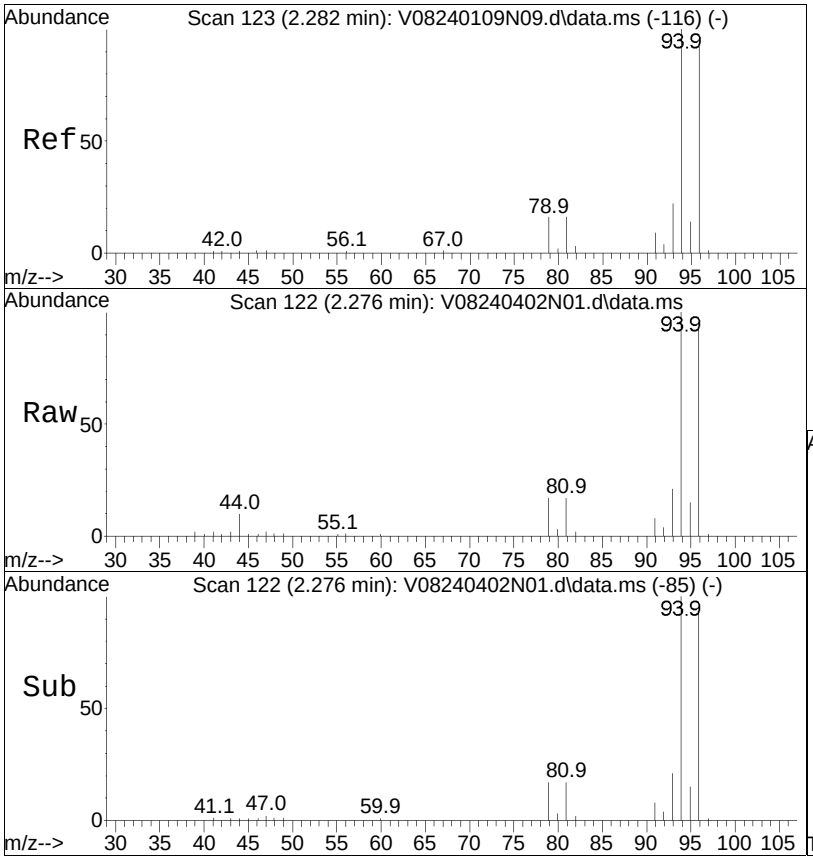


#4
Vinyl chloride
Concen: 8.91 ug/L
RT: 1.962 min Scan# 62
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 62 Resp: 134487

Ion	Ratio	Lower	Upper
62	100		
64	29.6	9.1	49.1

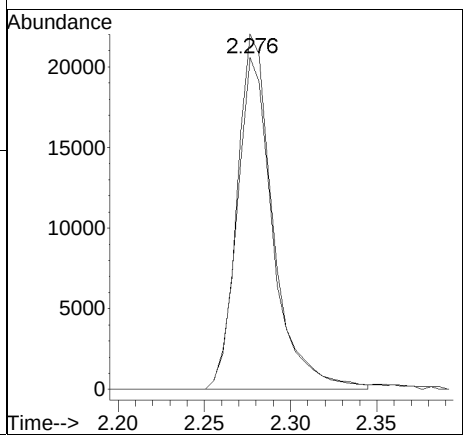


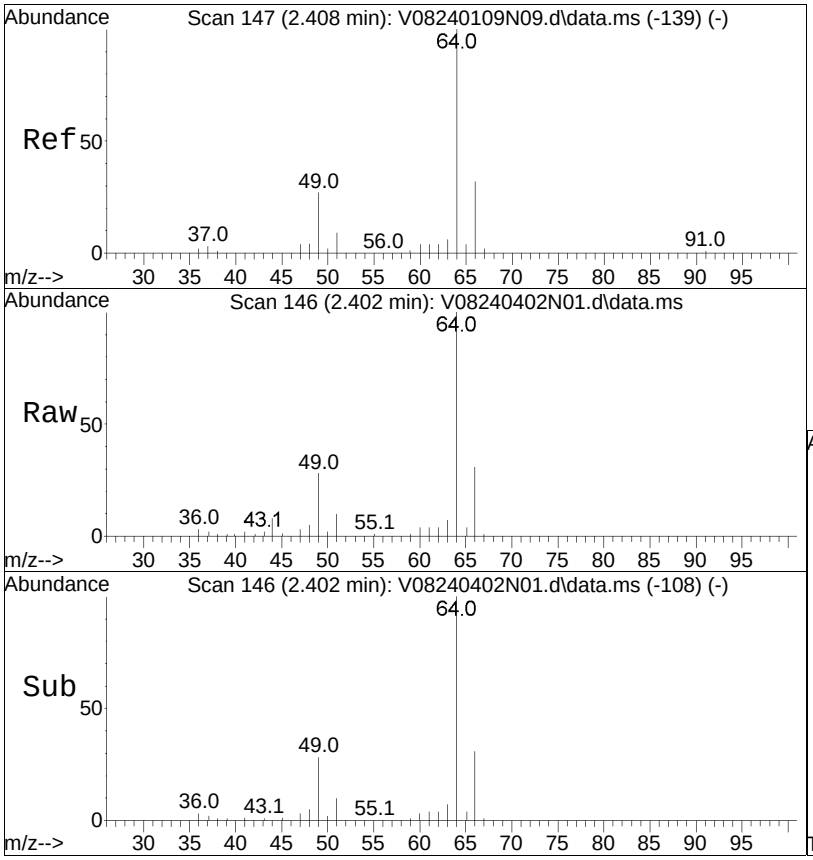


#5
Bromomethane
Concen: 5.97 ug/L
RT: 2.276 min Scan# 122
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 94 Resp: 32114

Ion	Ratio	Lower	Upper
94	100		
96	95.4	75.6	115.6

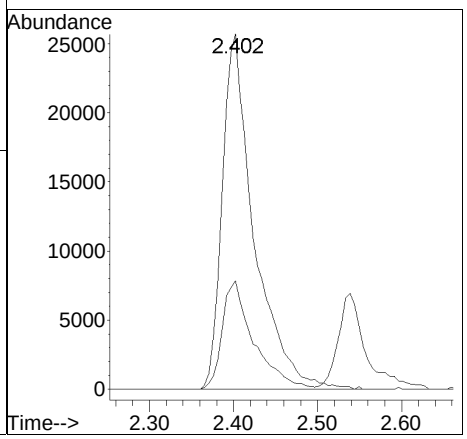


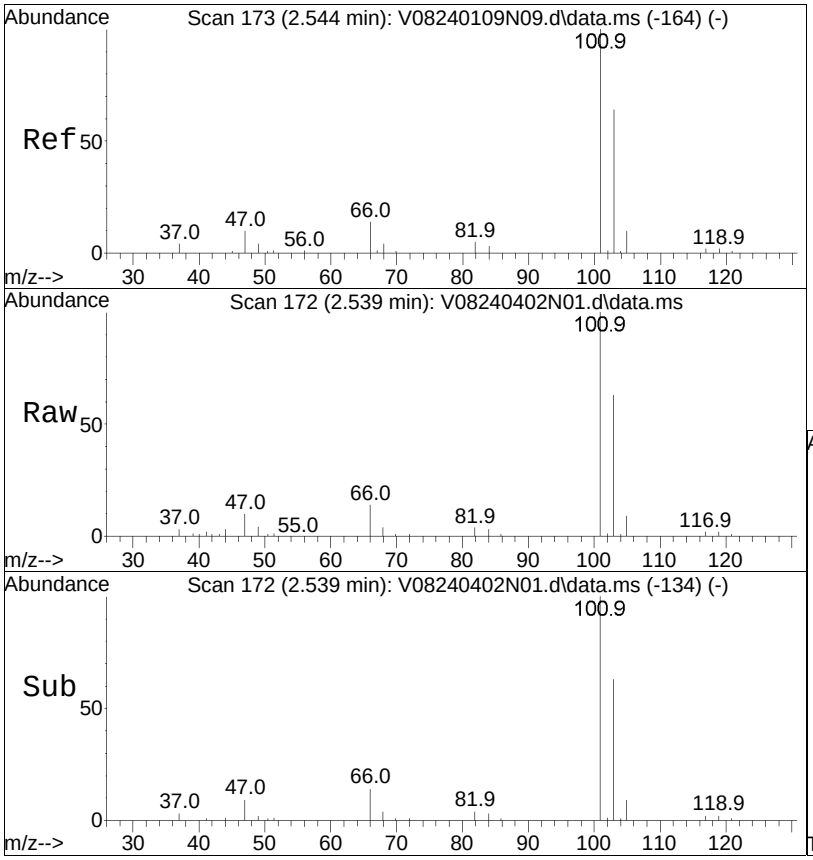


#6
Chloroethane
Concen: 9.29 ug/L
RT: 2.402 min Scan# 146
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 64 Resp: 67701

Ion	Ratio	Lower	Upper
64	100		
66	30.3	9.8	49.8

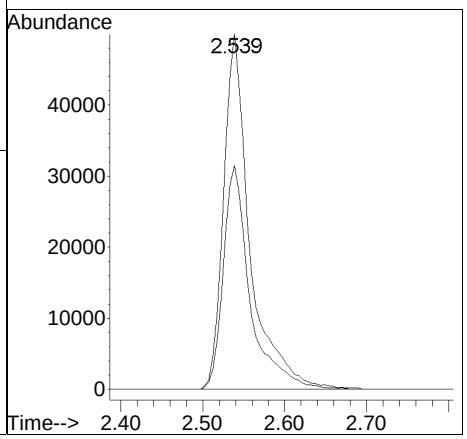


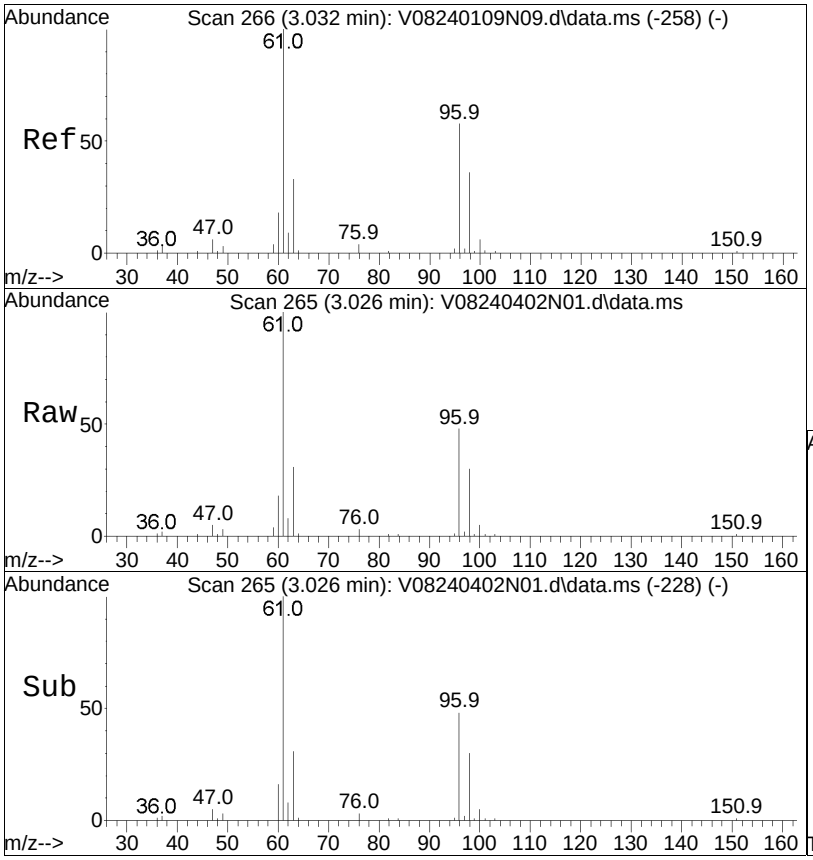


#7
Trichlorofluoromethane
Concen: 8.98 ug/L
RT: 2.539 min Scan# 172
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:101 Resp: 111960

Ion	Ratio	Lower	Upper
101	100		
103	64.1	53.8	80.6

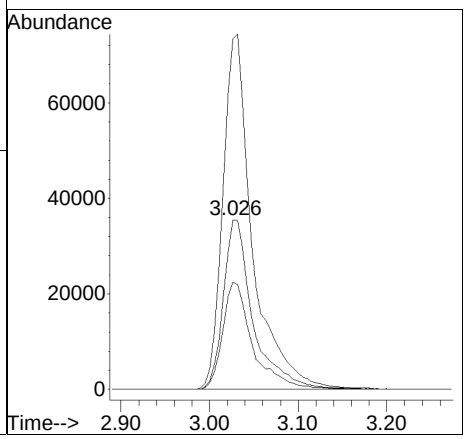


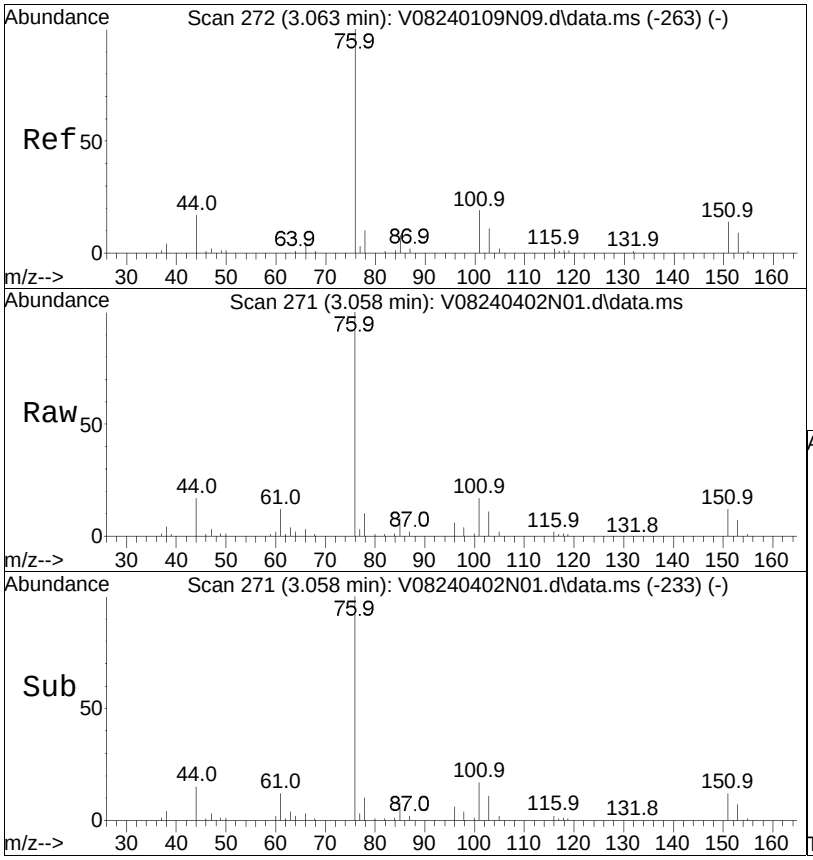


#10
1,1-Dichloroethene
Concen: 9.73 ug/L
RT: 3.026 min Scan# 265
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 96 Resp: 82927

Ion	Ratio	Lower	Upper
96	100		
61	209.1	186.1	279.1
63	63.9	57.6	86.4

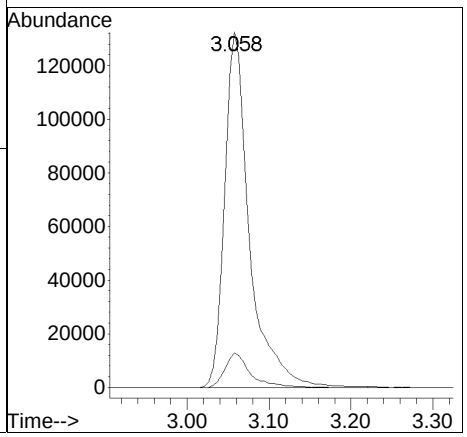


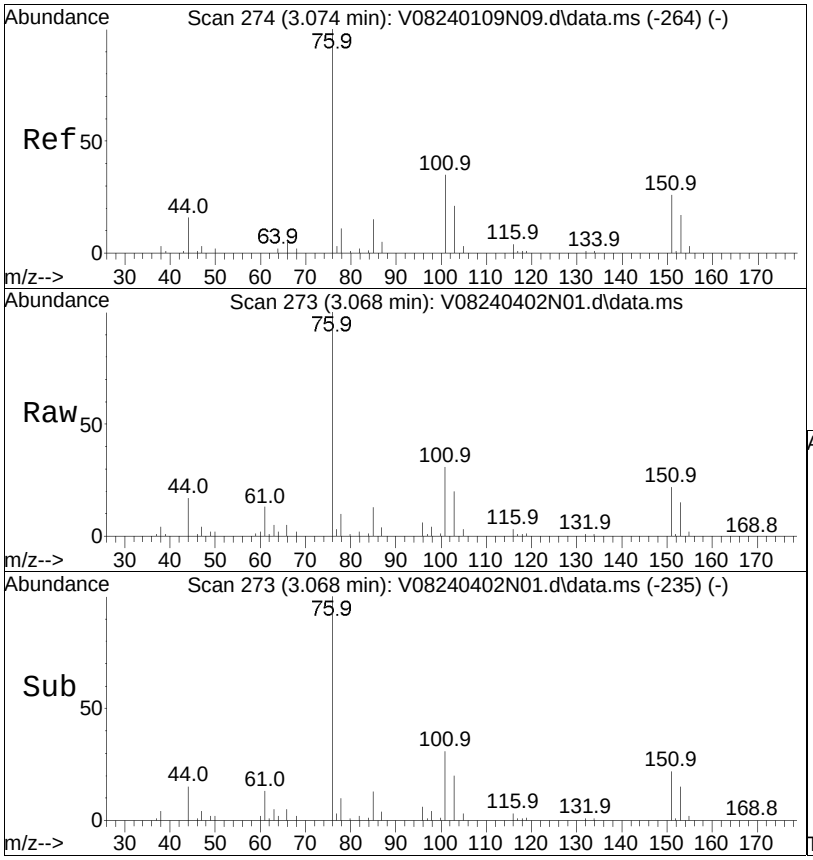


#11
Carbon disulfide
Concen: 9.54 ug/L
RT: 3.058 min Scan# 271
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 76 Resp: 278847

Ion	Ratio	Lower	Upper
76	100		
78	9.8	5.7	11.7

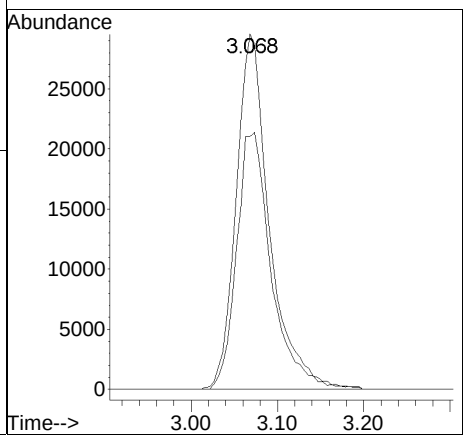


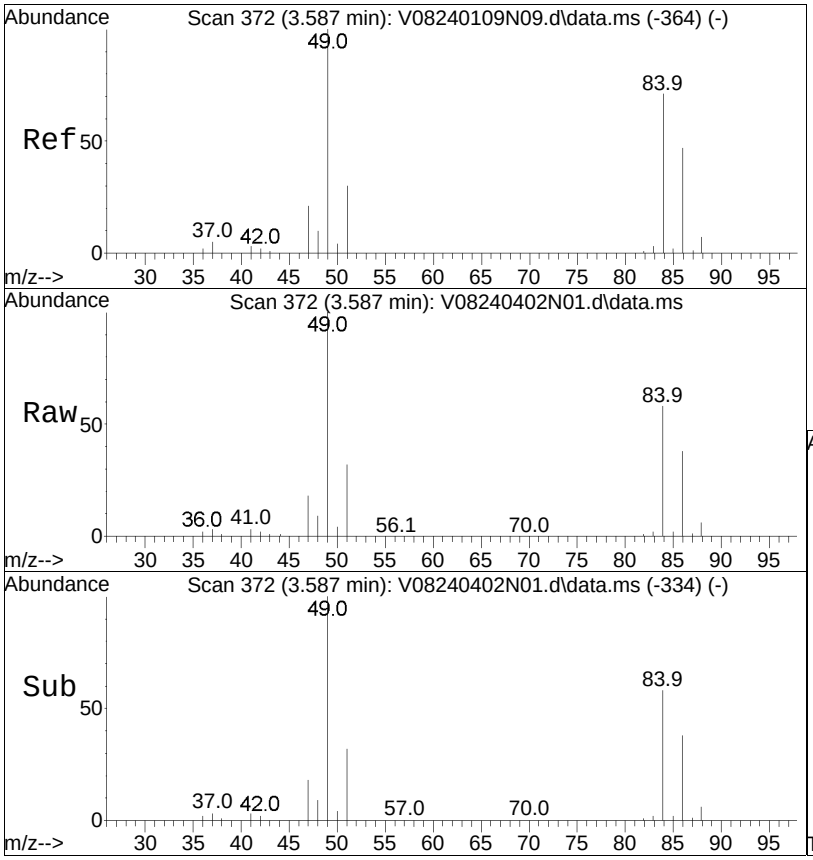


#12
Freon-113
Concen: 9.50 ug/L
RT: 3.068 min Scan# 273
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:101 Resp: 79477

Ion	Ratio	Lower	Upper
101	100		
151	75.3	59.8	89.8

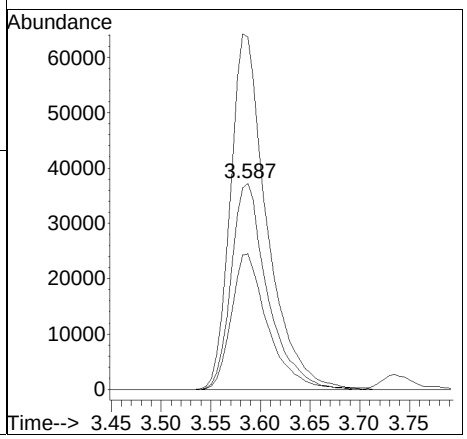


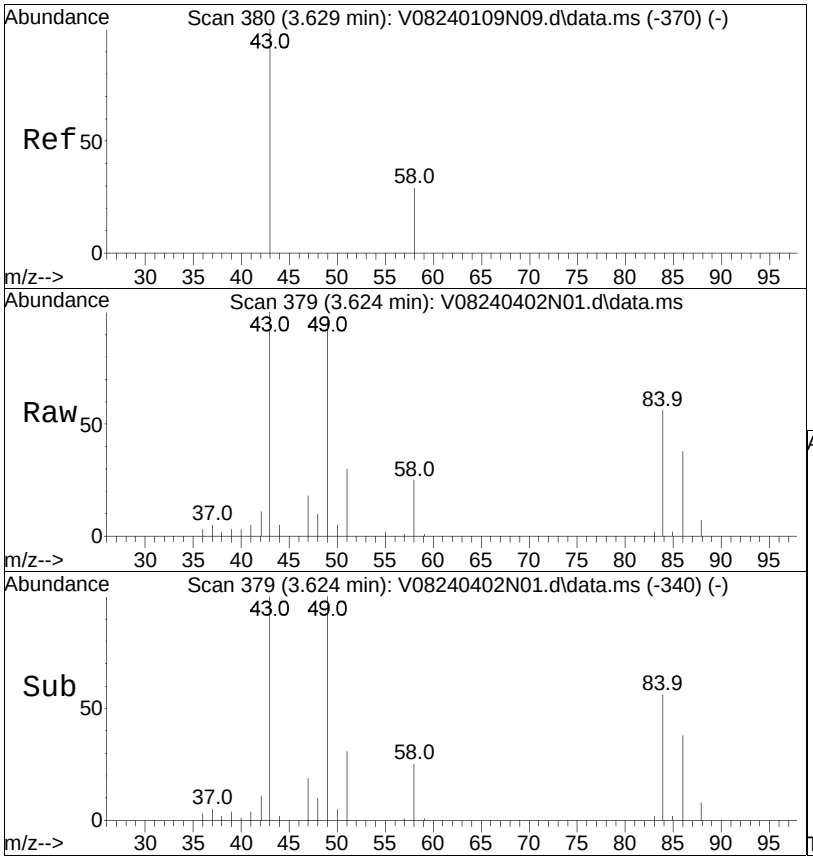


#15
Methylene chloride
Concen: 9.24 ug/L
RT: 3.587 min Scan# 372
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 84 Resp: 94718

Ion	Ratio	Lower	Upper
84	100		
86	66.0	40.4	83.8
49	172.9	120.0	249.2

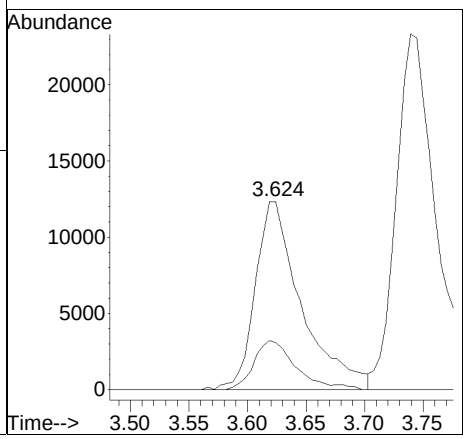


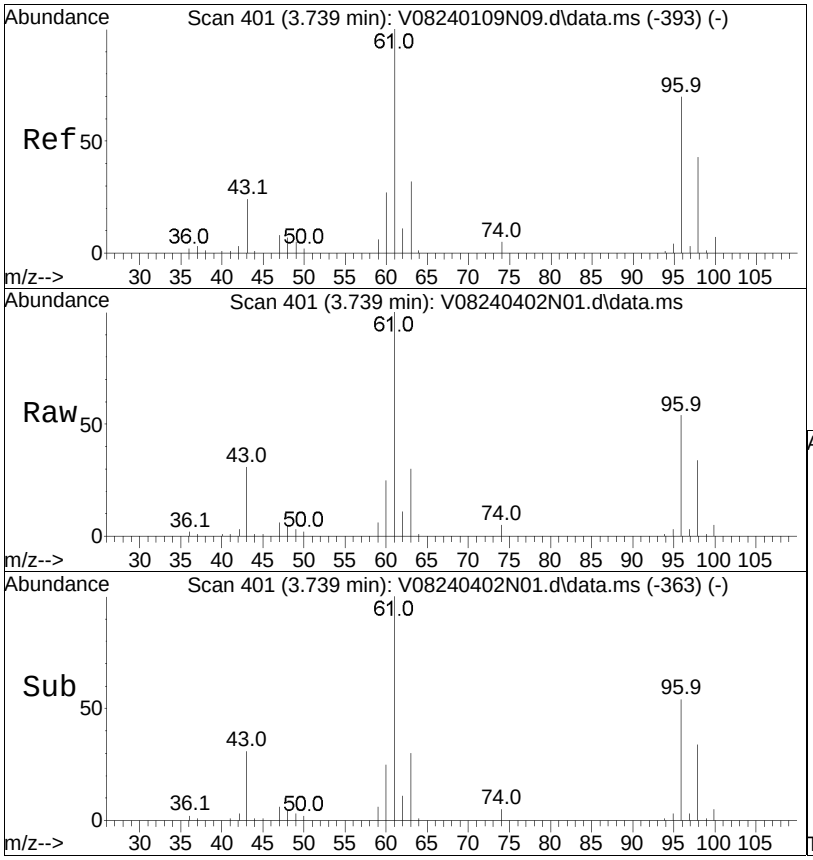


#17
Acetone
Concen: 13.70 ug/L
RT: 3.624 min Scan# 379
Delta R.T. 0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 43 Resp: 33828

Ion	Ratio	Lower	Upper
43	100		
58	23.6	24.2	36.4#

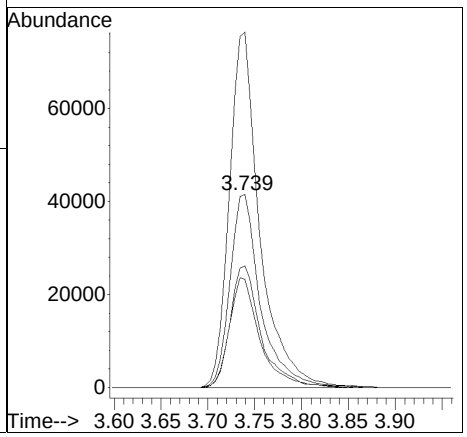


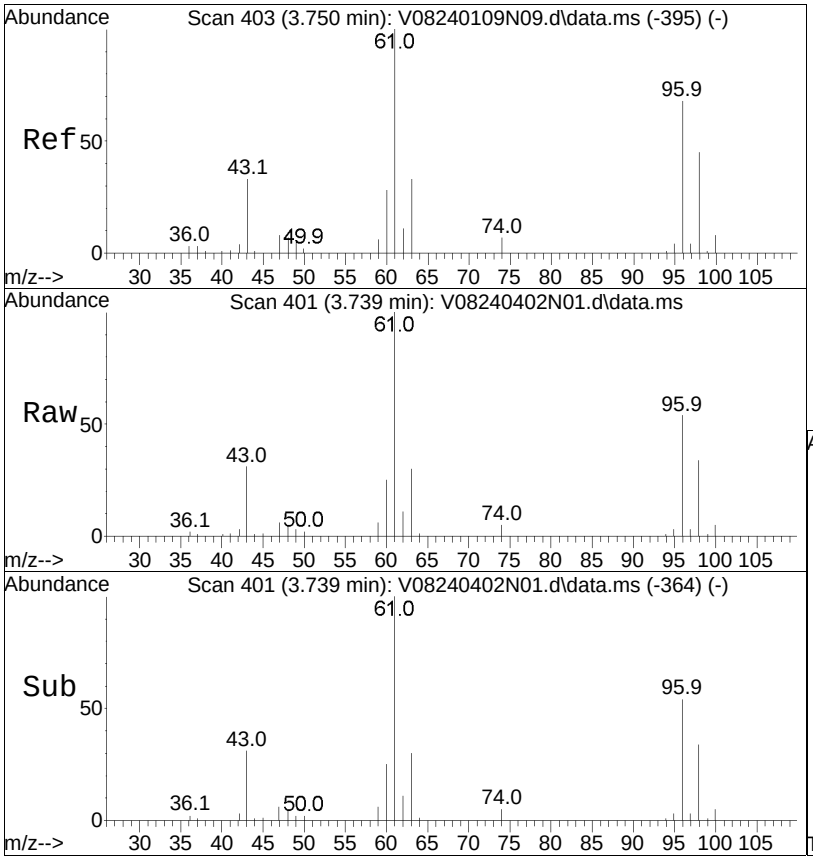


#18
trans-1,2-Dichloroethene
Concen: 9.66 ug/L
RT: 3.739 min Scan# 401
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 96 Resp: 94543

Ion	Ratio	Lower	Upper
96	100		
61	183.0	124.0	257.6
98	63.2	41.2	85.6
63	56.4	38.4	79.7

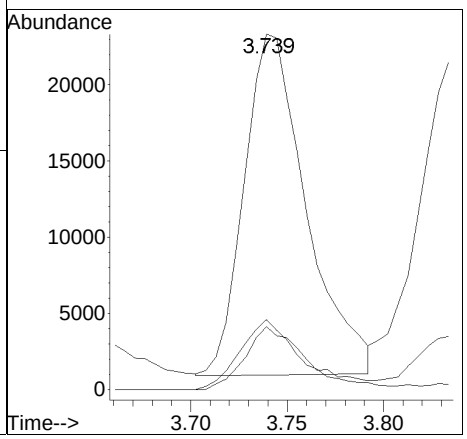


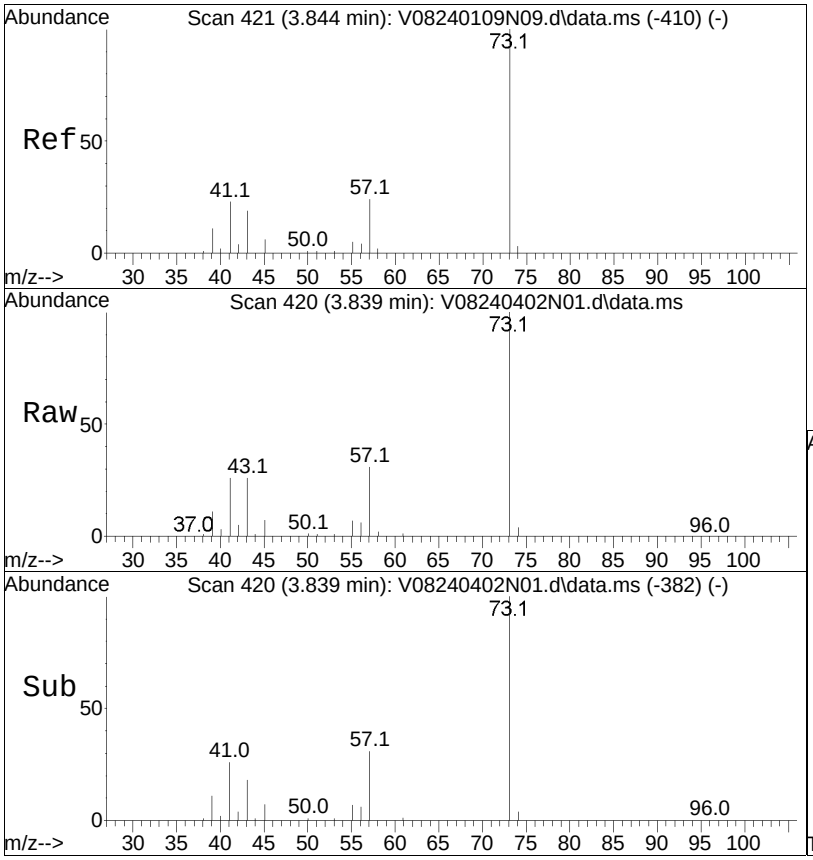


#19
Methyl acetate
Concen: 8.44 ug/L
RT: 3.739 min Scan# 401
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 43 Resp: 50154

Ion	Ratio	Lower	Upper
43	100		
74	18.4	14.2	21.4
59	19.9	5.0	7.6#

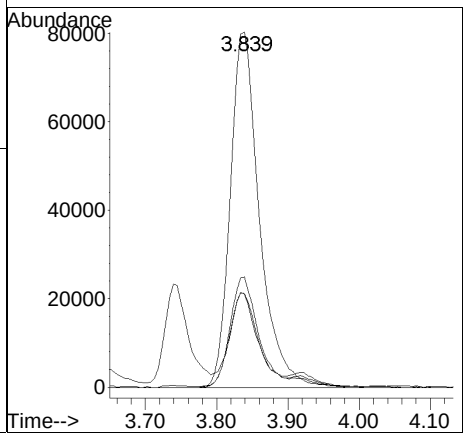


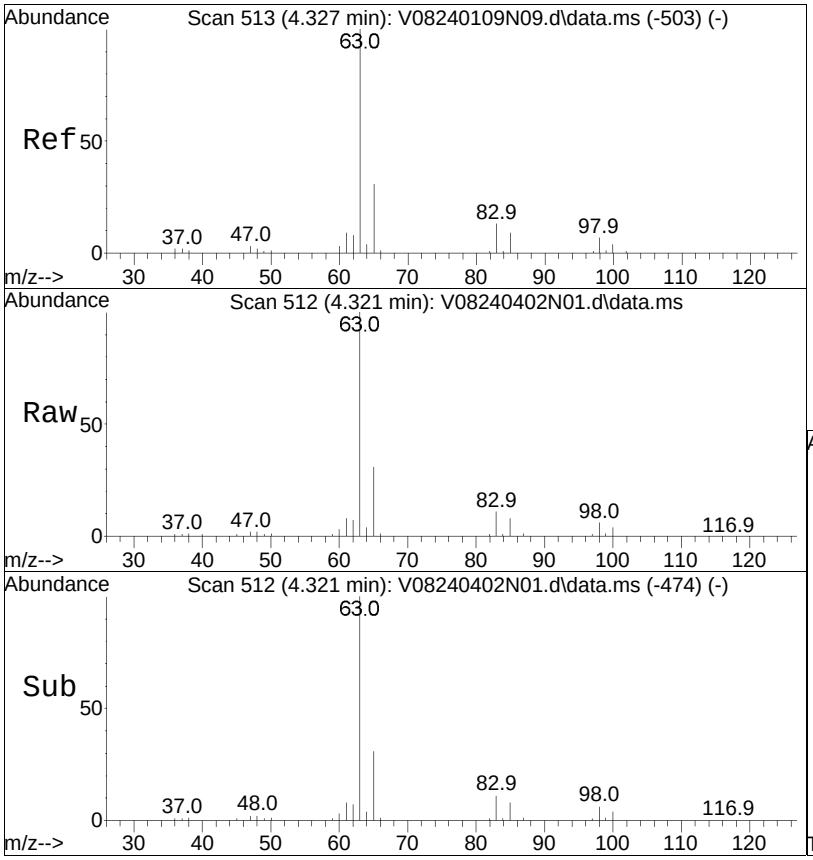


#20
Methyl tert-butyl ether
Concen: 9.99 ug/L
RT: 3.839 min Scan# 420
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 73 Resp: 229237

Ion	Ratio	Lower	Upper
73	100		
57	30.2	17.5	36.3
43	21.5	15.3	31.9
41	26.5	15.3	31.7

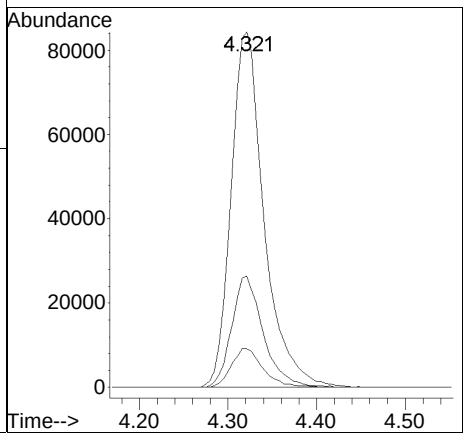


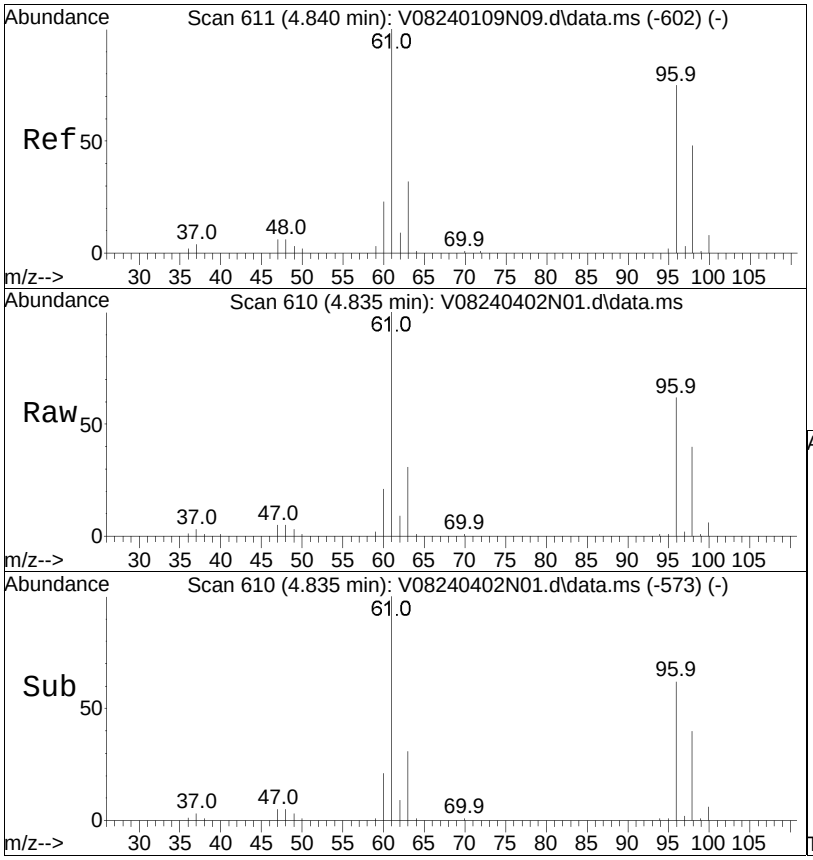


#23
1,1-Dichloroethane
Concen: 9.24 ug/L
RT: 4.321 min Scan# 512
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 63 Resp: 218263

Ion	Ratio	Lower	Upper
63	100		
65	30.1	11.0	51.0
83	10.6	0.0	31.8

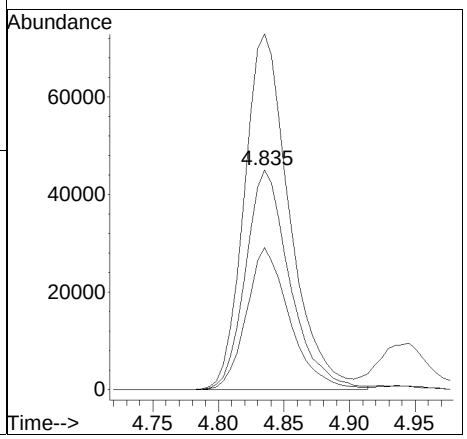


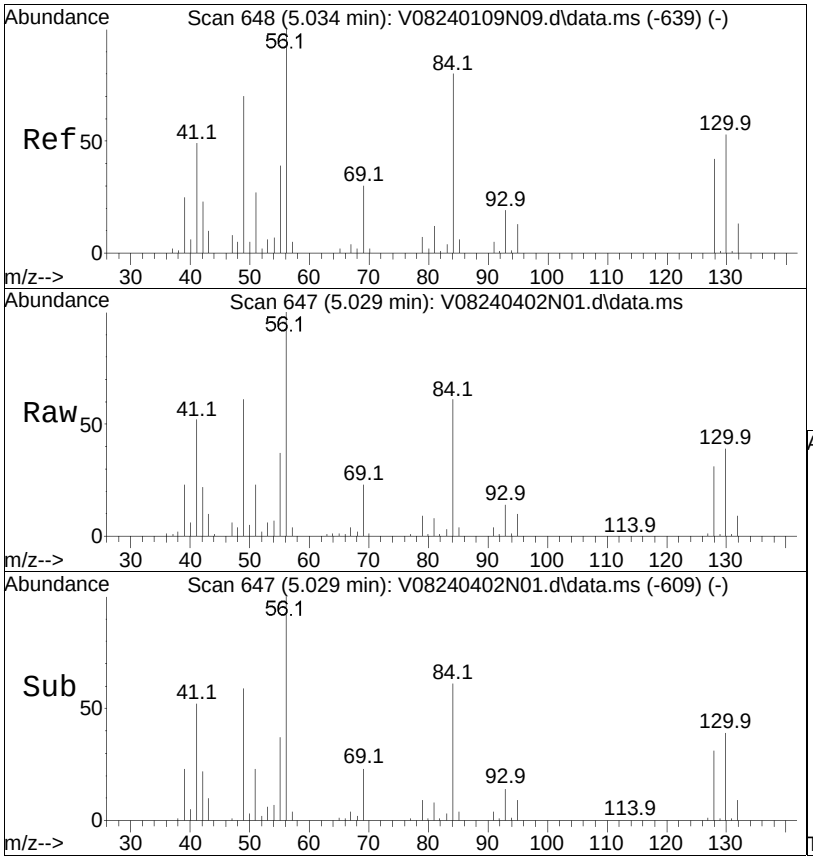


#28
cis-1,2-Dichloroethene
Concen: 9.61 ug/L
RT: 4.835 min Scan# 610
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 96 Resp: 105548

Ion	Ratio	Lower	Upper
96	100		
61	165.0	149.4	224.2
98	63.0	53.4	80.2

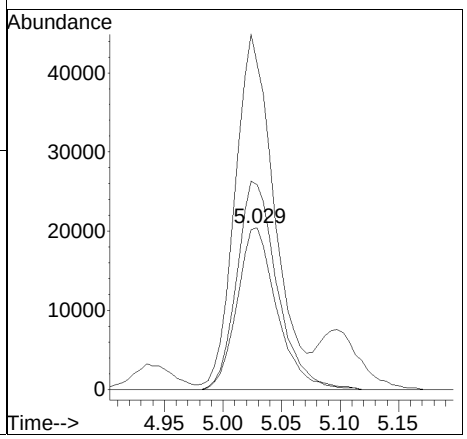


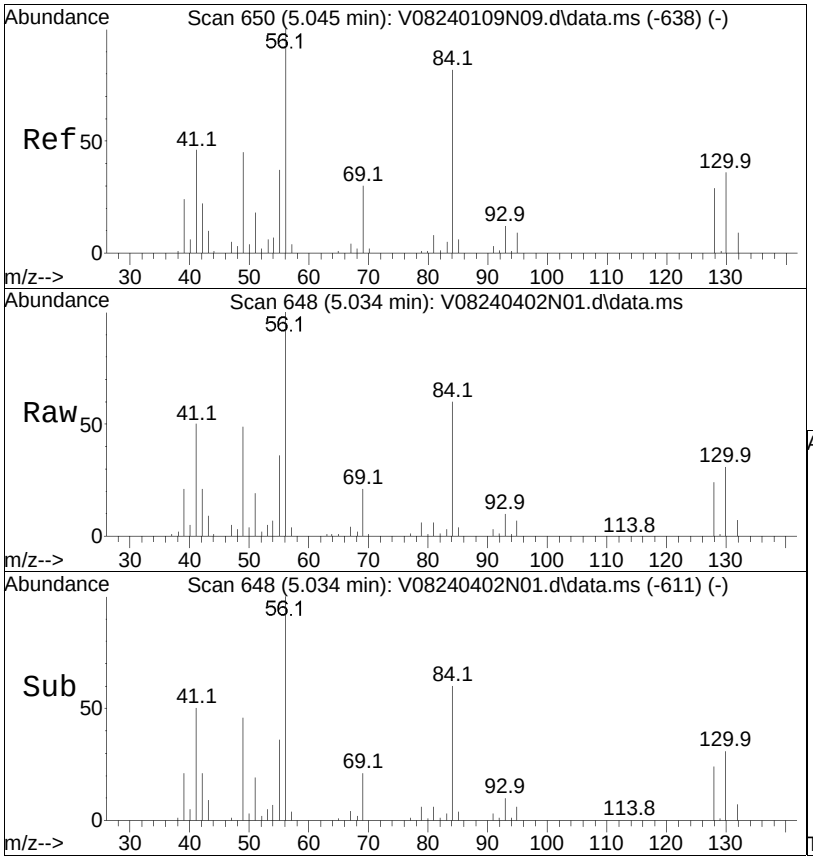


#30
Bromochloromethane
Concen: 9.78 ug/L
RT: 5.029 min Scan# 647
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:128 Resp: 48264

Ion	Ratio	Lower	Upper
128	100		
49	215.8	223.0	334.4#
130	130.3	111.4	167.0

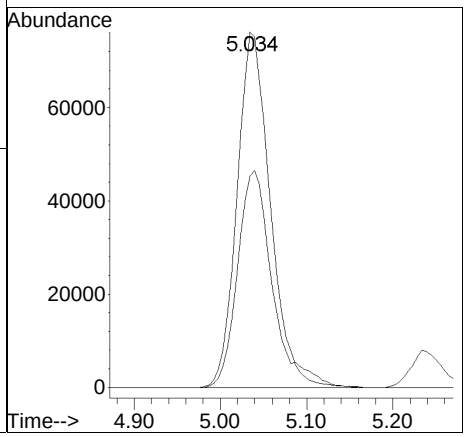


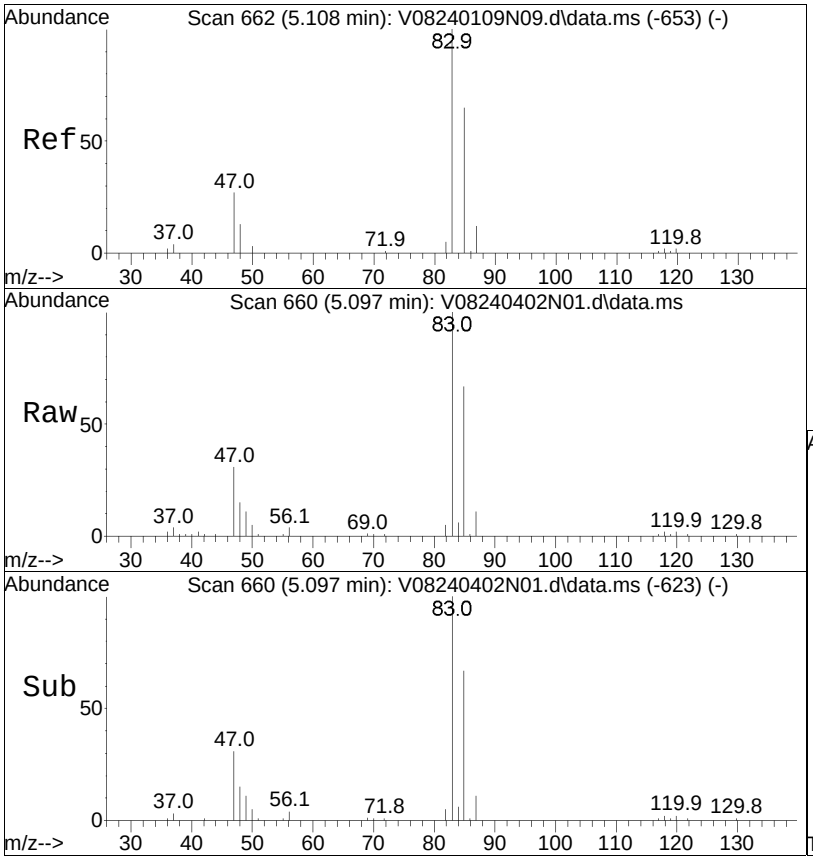


#31
Cyclohexane
Concen: 8.89 ug/L
RT: 5.034 min Scan# 648
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 56 Resp: 203207

Ion	Ratio	Lower	Upper
56	100		
84	64.5	38.4	79.8

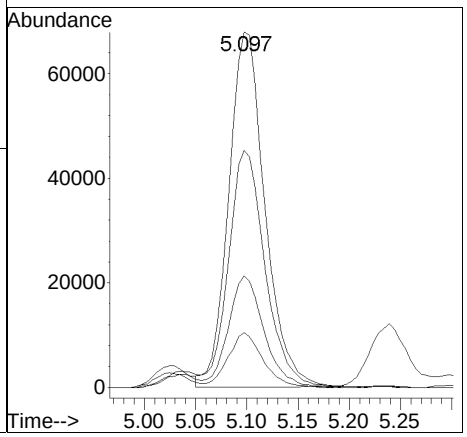


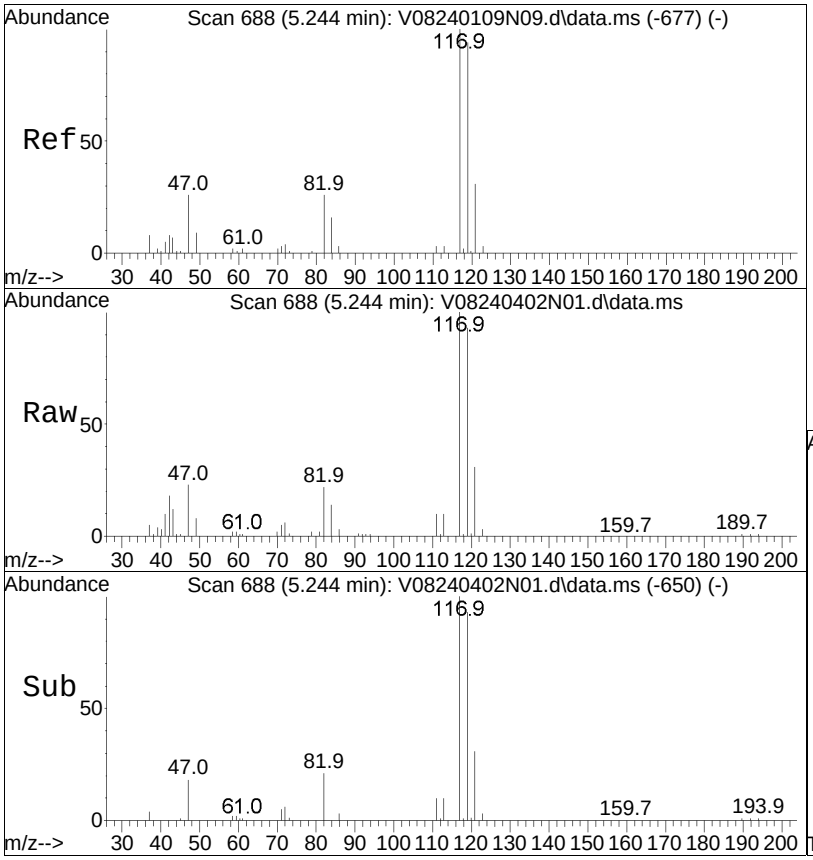


#32
Chloroform
Concen: 9.52 ug/L
RT: 5.097 min Scan# 660
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 83 Resp: 167402

Ion	Ratio	Lower	Upper
83	100		
85	67.2	41.5	86.1
47	31.0	19.0	39.4
48	14.9	9.9	20.5

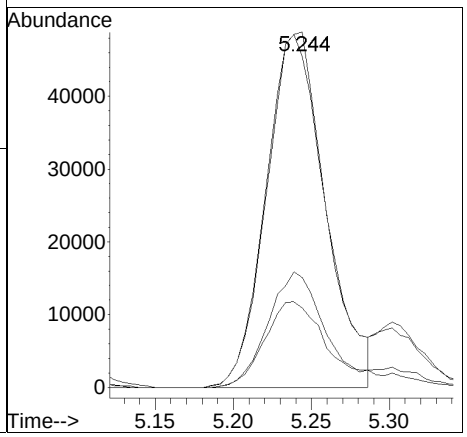


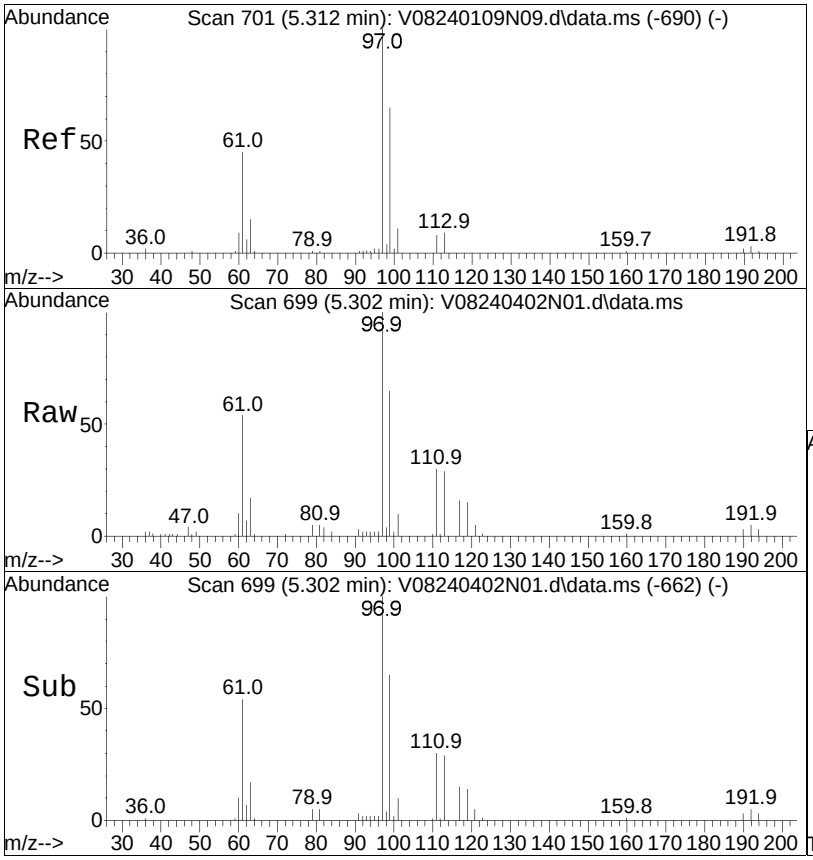


#34
Carbon tetrachloride
Concen: 9.29 ug/L
RT: 5.244 min Scan# 688
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:117 Resp: 130103

Ion	Ratio	Lower	Upper
117	100		
119	97.4	62.4	129.6
121	31.0	19.5	40.5
82	25.8	17.0	35.4

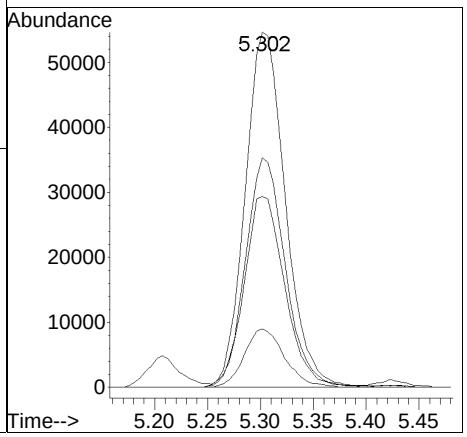


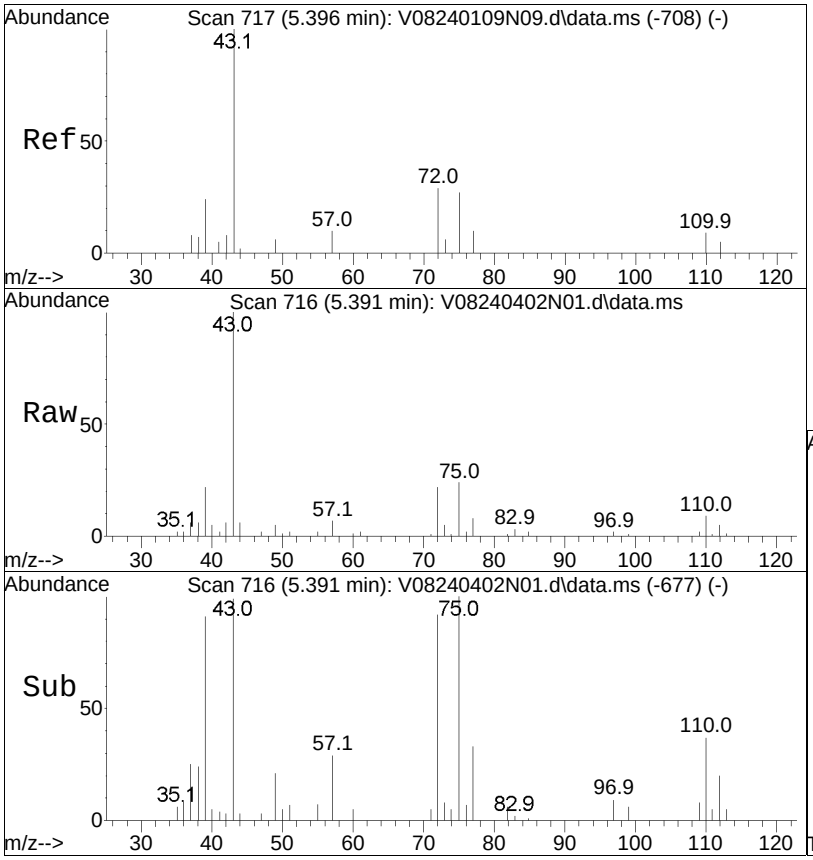


#37
1,1,1-Trichloroethane
Concen: 9.53 ug/L
RT: 5.302 min Scan# 699
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 97 Resp: 144836

Ion	Ratio	Lower	Upper
97	100		
99	64.0	40.7	84.5
61	54.4	35.4	73.4
63	16.5	5.0	10.4#

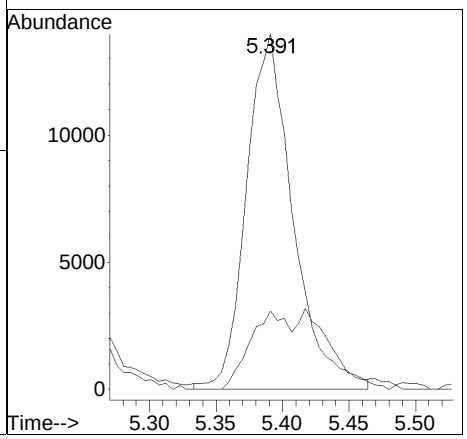


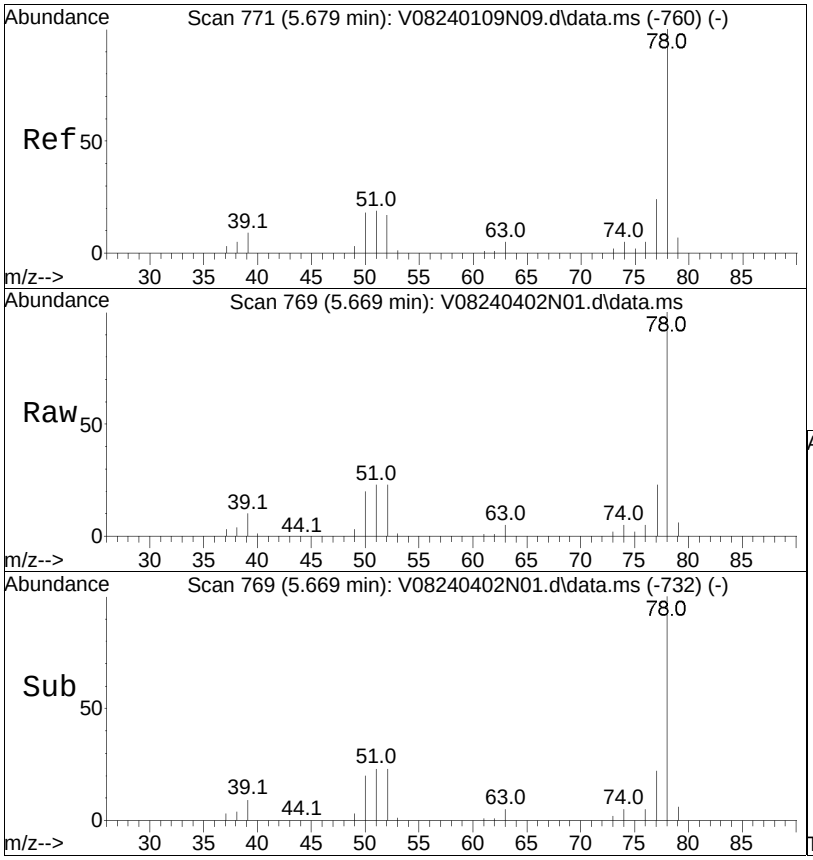


#39
2-Butanone
Concen: 9.14 ug/L M3
RT: 5.391 min Scan# 716
Delta R.T. 0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 43 Resp: 33994

Ion	Ratio	Lower	Upper
43	100		
72	35.2	10.9	16.3#

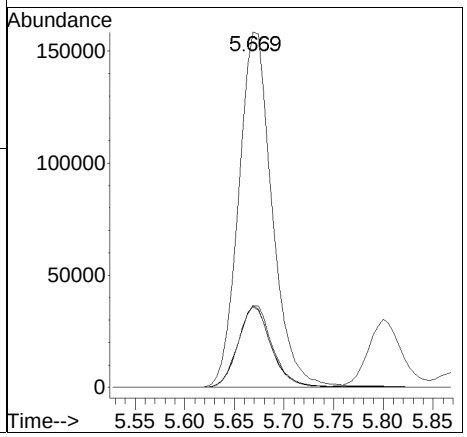


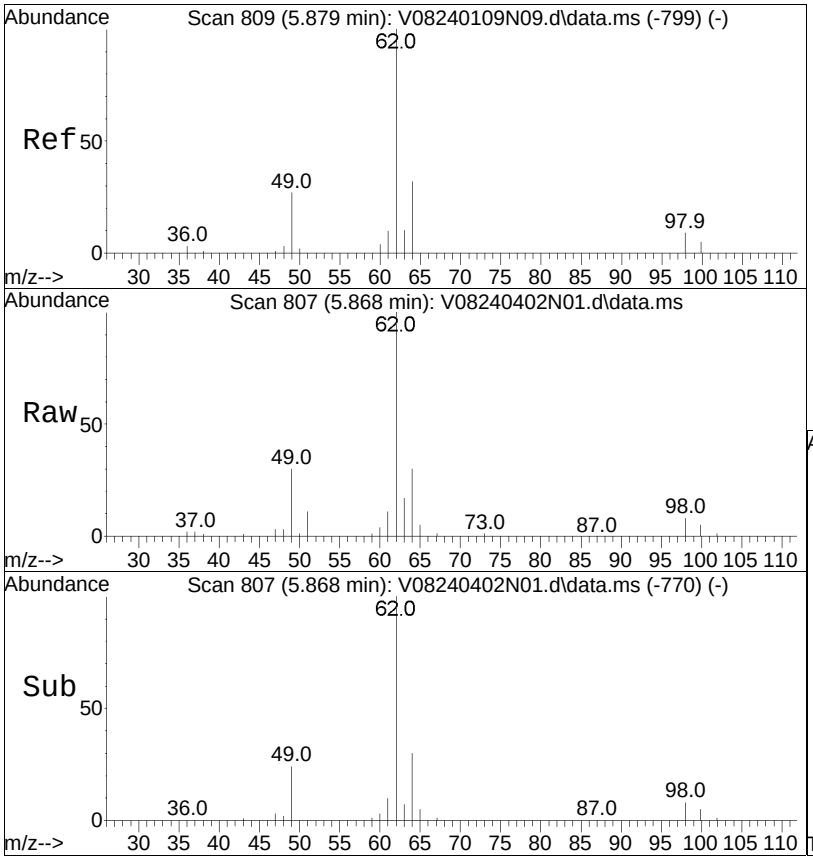


#41
Benzene
Concen: 9.57 ug/L
RT: 5.669 min Scan# 769
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 78 Resp: 371963

Ion	Ratio	Lower	Upper
78	100		
77	23.6	15.7	32.7
51	22.4	16.0	33.2
52	22.8	15.3	31.9

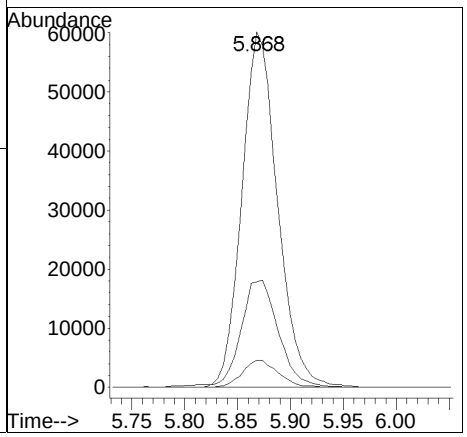


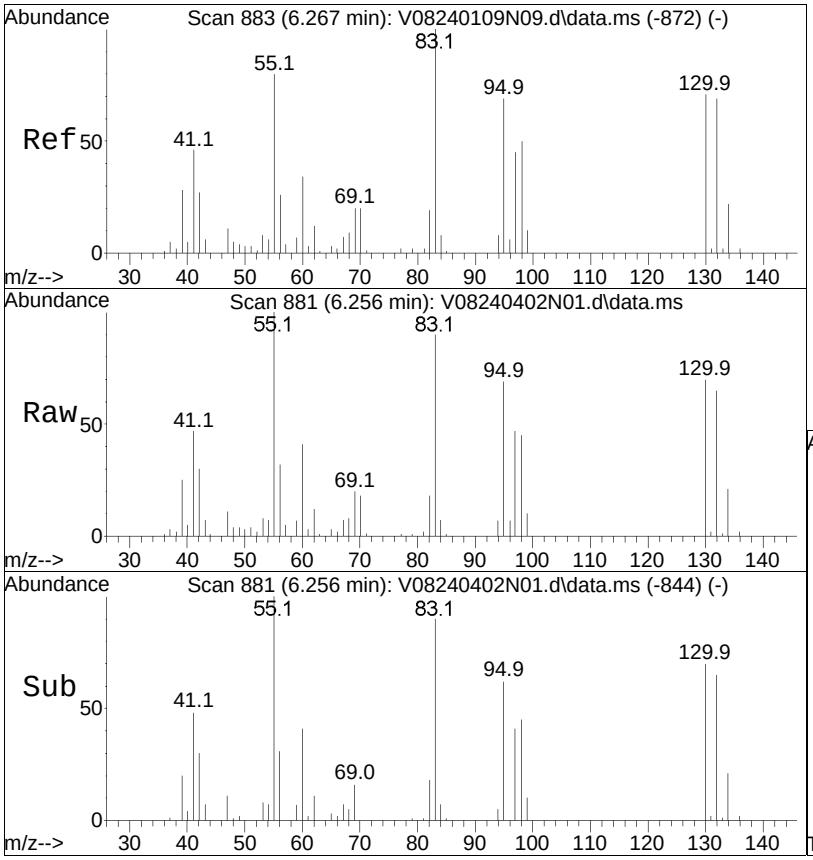


#44
1,2-Dichloroethane
Concen: 9.31 ug/L
RT: 5.868 min Scan# 807
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 62 Resp: 141080

Ion	Ratio	Lower	Upper
62	100		
64	32.1	11.2	51.2
98	7.8	0.0	26.1

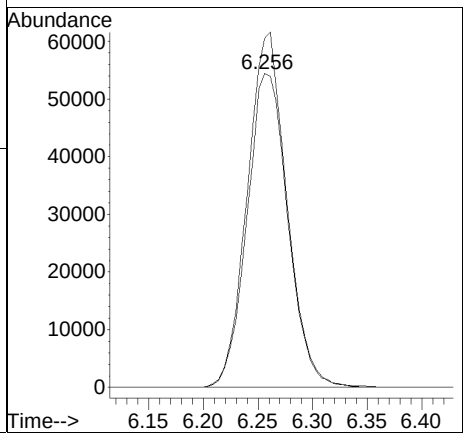


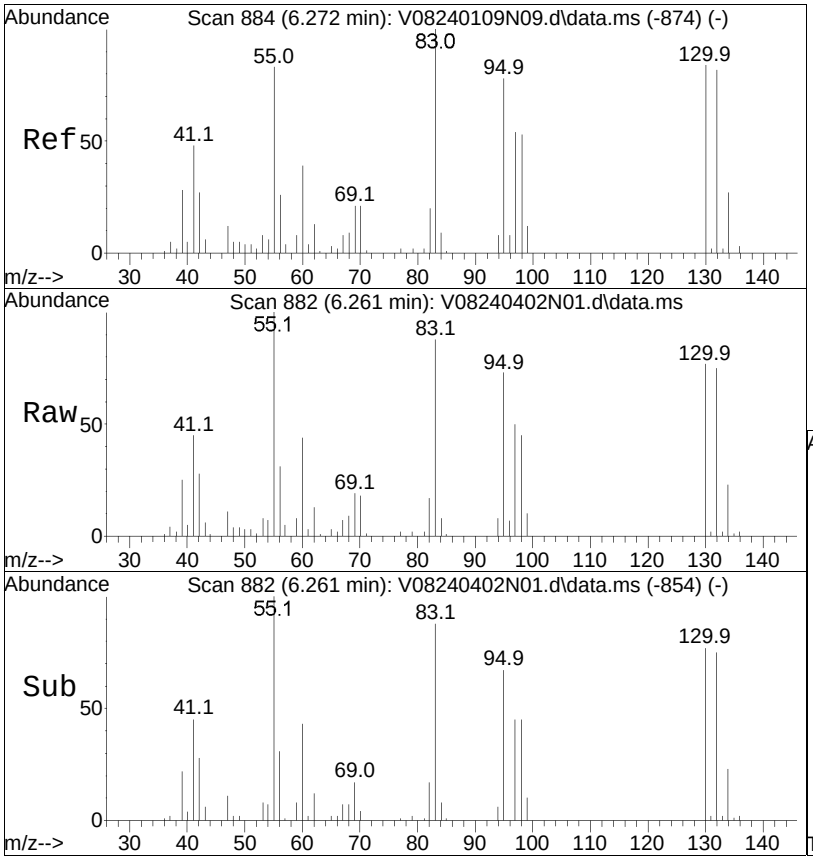


#47
Methyl cyclohexane
Concen: 9.40 ug/L
RT: 6.256 min Scan# 881
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 83 Resp: 141523

Ion	Ratio	Lower	Upper
83	100		
55	109.5	88.3	132.5

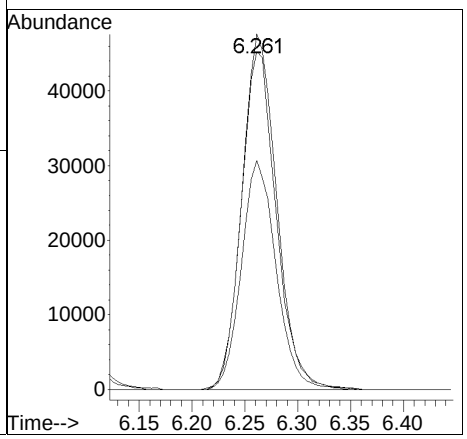


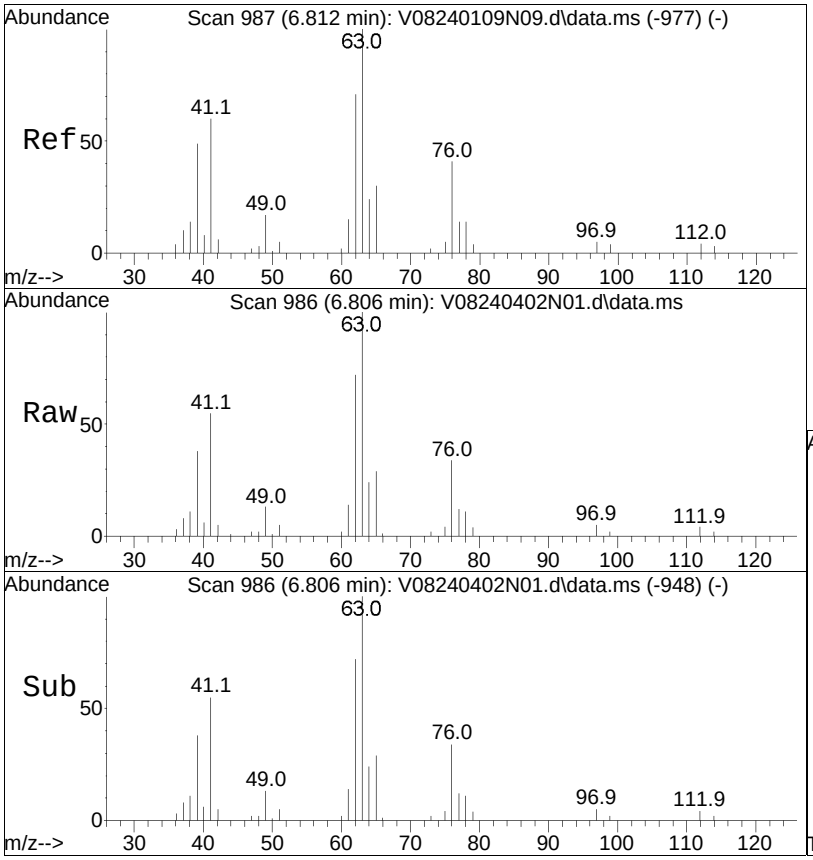


#48
Trichloroethene
Concen: 9.89 ug/L
RT: 6.261 min Scan# 882
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 95 Resp: 103786

Ion	Ratio	Lower	Upper
95	100		
97	67.5	55.5	83.3
130	105.0	76.6	115.0

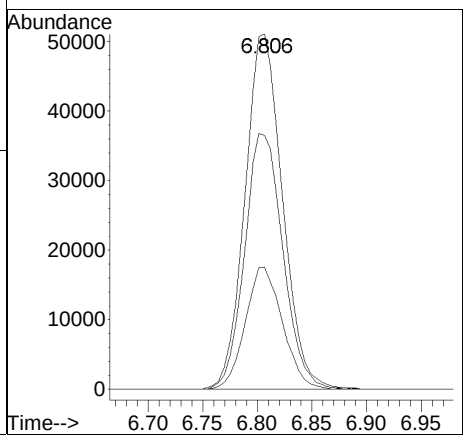


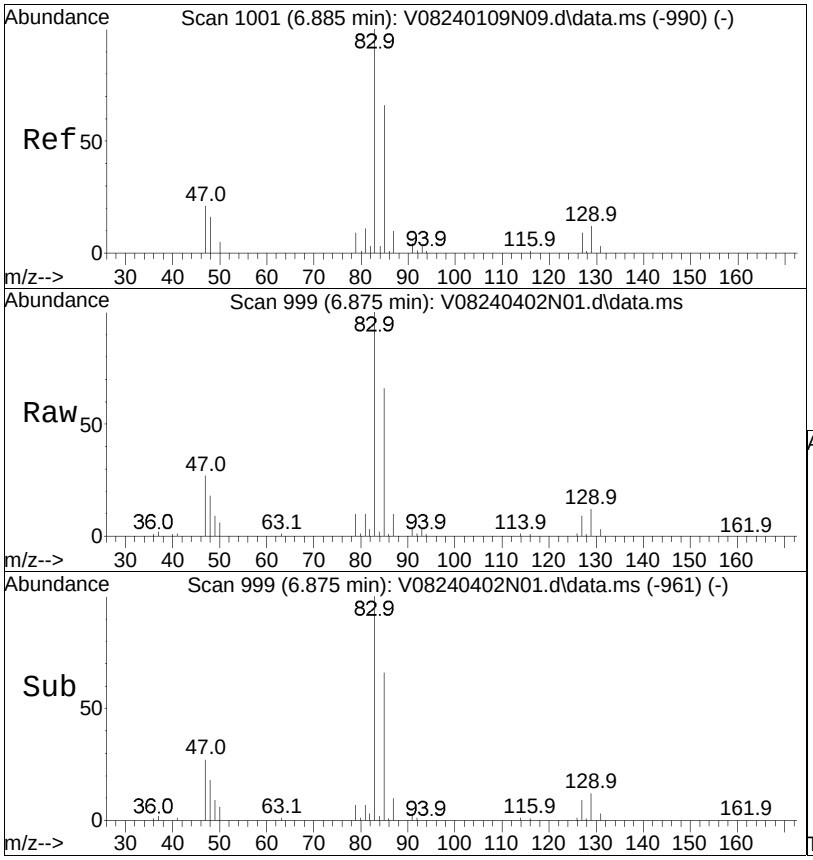


#51
1,2-Dichloropropane
Concen: 9.20 ug/L
RT: 6.806 min Scan# 986
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 63 Resp: 122290

Ion	Ratio	Lower	Upper
63	100		
62	73.3	58.6	87.8
76	34.1	38.0	57.0#

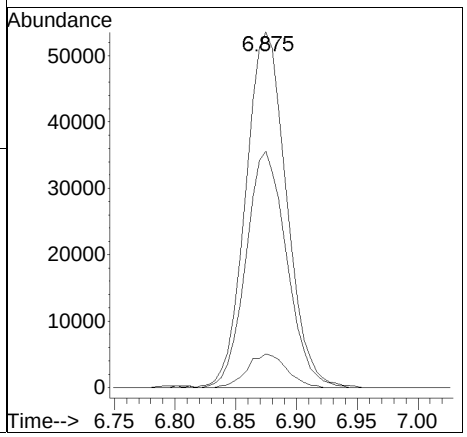


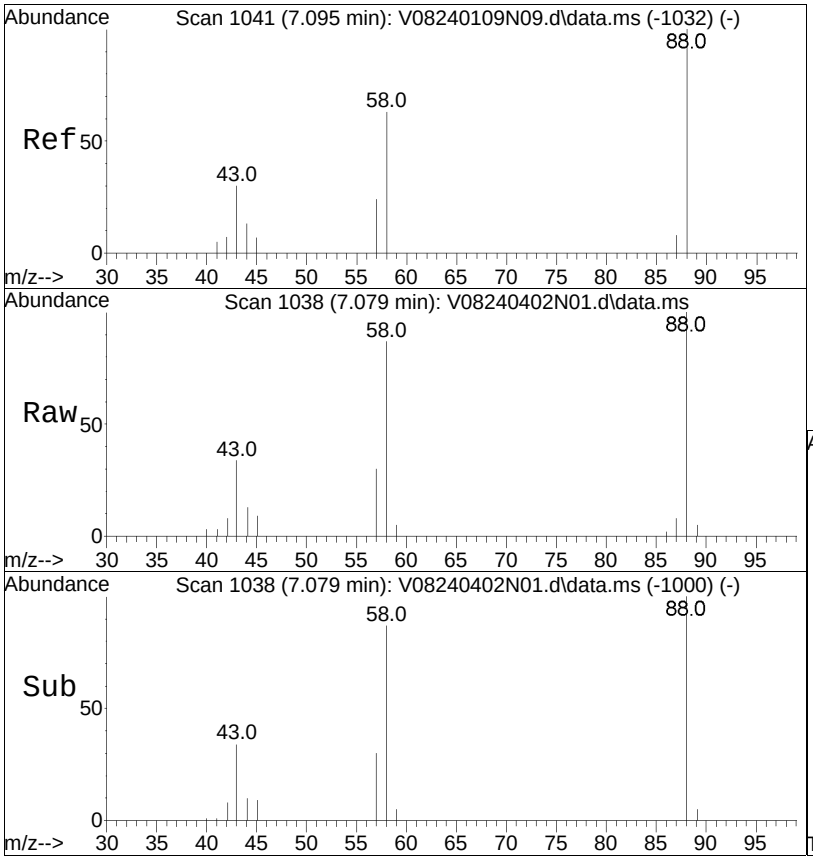


#54
Bromodichloromethane
Concen: 9.37 ug/L
RT: 6.875 min Scan# 999
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 83 Resp: 124935

Ion	Ratio	Lower	Upper
83	100		
85	66.5	52.3	78.5
127	9.1	6.2	9.4

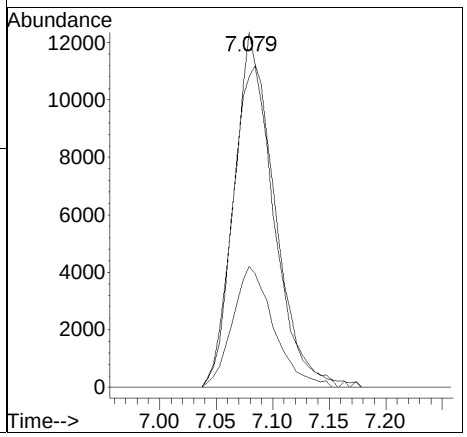


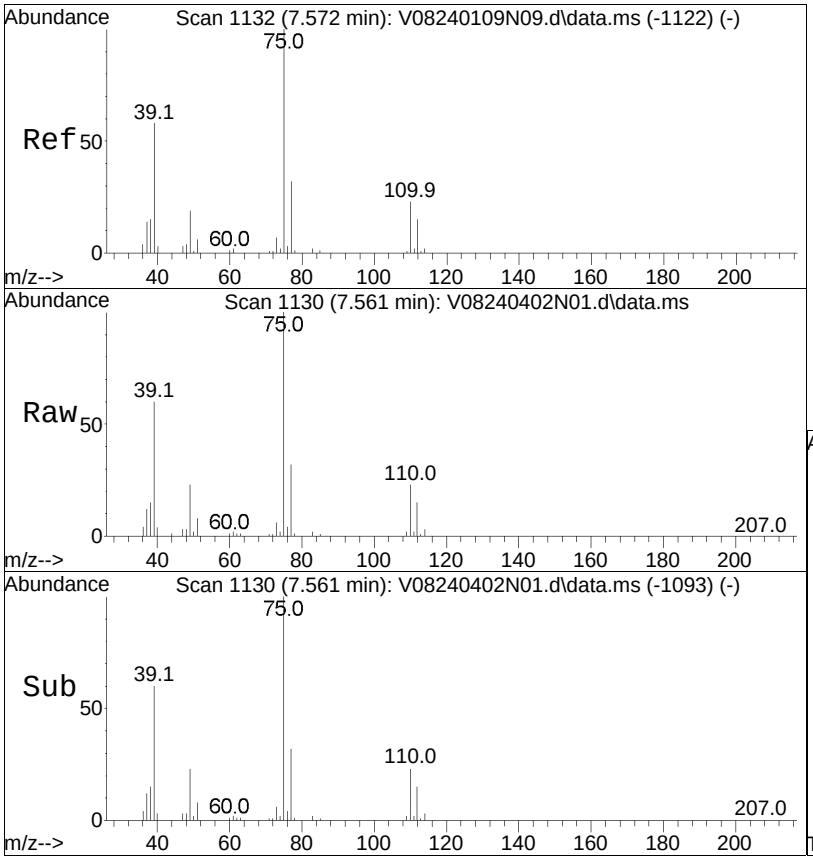


#57
1,4-Dioxane
Concen: 517.90 ug/L
RT: 7.079 min Scan# 1038
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 88 Resp: 30590

Ion	Ratio	Lower	Upper
88	100		
58	94.5	76.7	115.1
43	35.0	36.2	54.2#

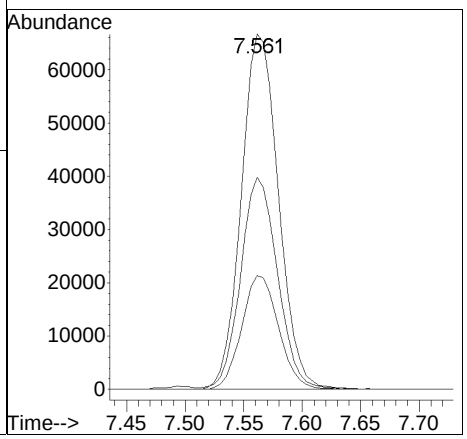


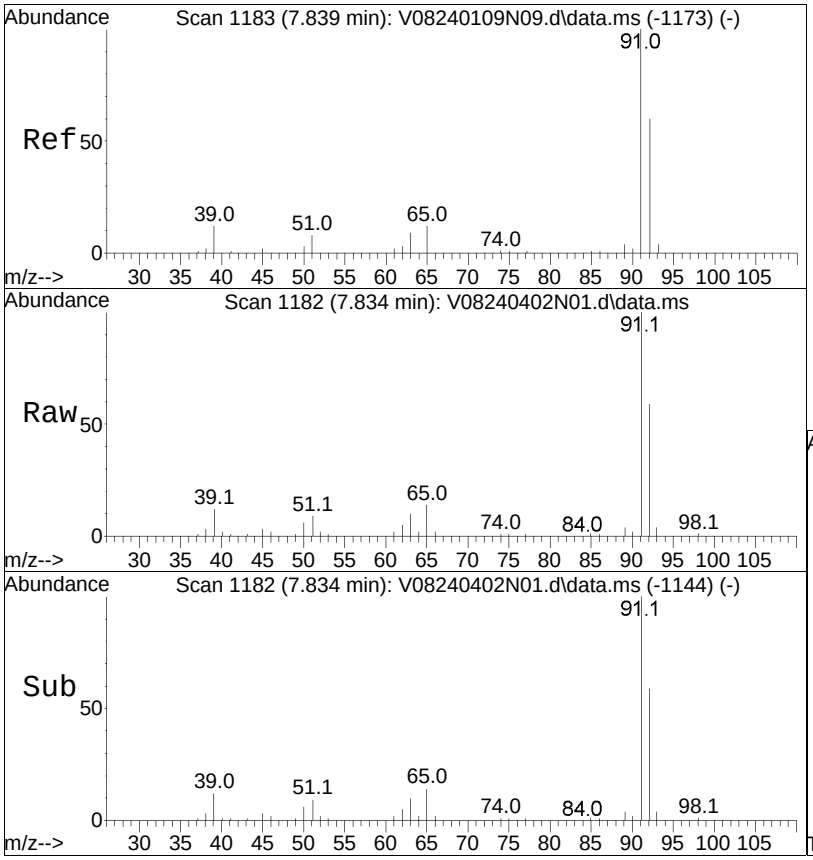


#58
cis-1,3-Dichloropropene
Concen: 9.81 ug/L
RT: 7.561 min Scan# 1130
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 75 Resp: 147533

Ion	Ratio	Lower	Upper
75	100		
77	31.8	25.0	37.4
39	59.3	50.1	75.1

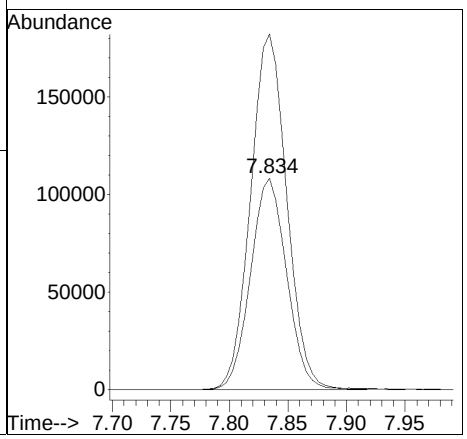


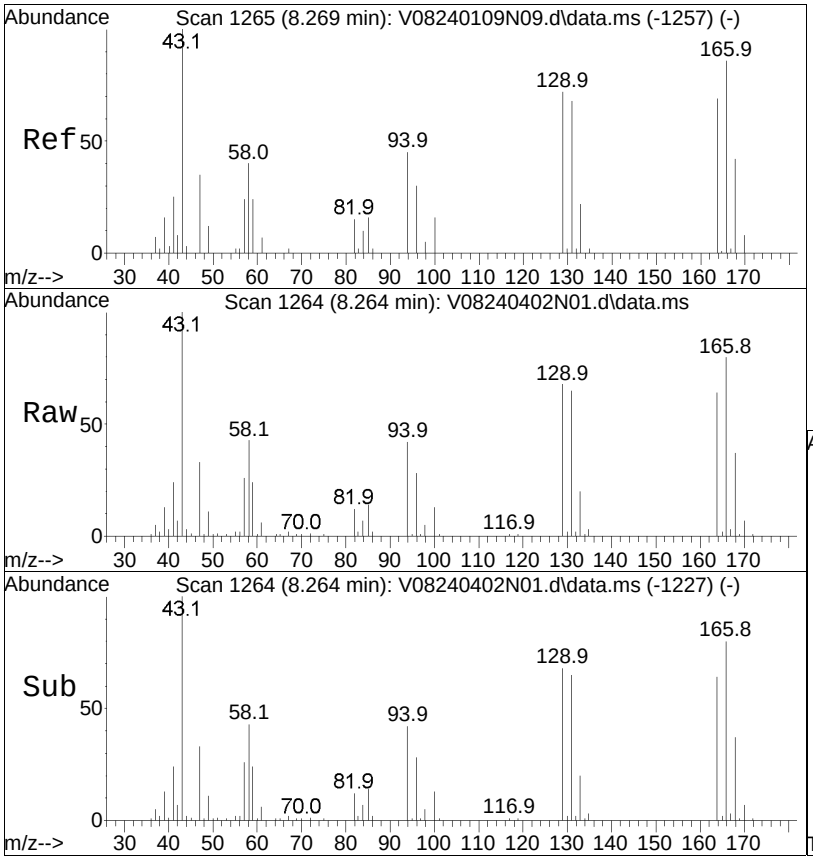


#61
Toluene
Concen: 9.96 ug/L
RT: 7.834 min Scan# 1182
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 92 Resp: 231845

Ion	Ratio	Lower	Upper
92	100		
91	168.8	139.8	209.6

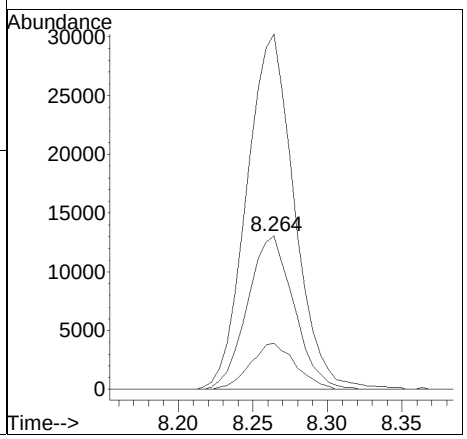


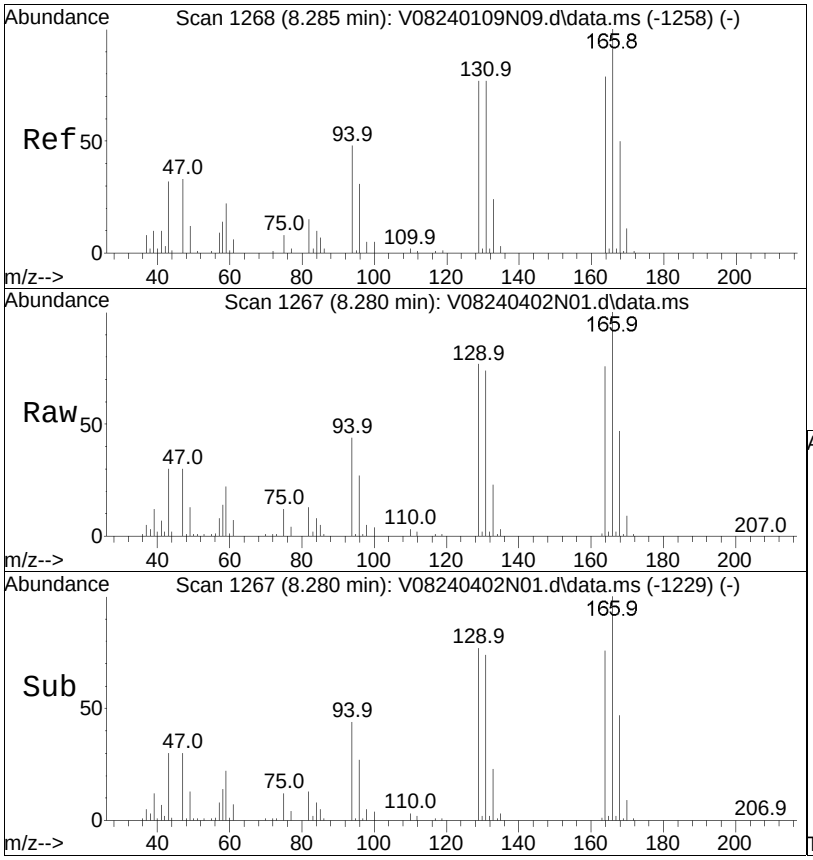


#62
4-Methyl-2-pentanone
Concen: 9.91 ug/L
RT: 8.264 min Scan# 1264
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 58 Resp: 28365

Ion	Ratio	Lower	Upper
58	100		
100	29.4	20.2	30.2
43	237.4	196.6	295.0

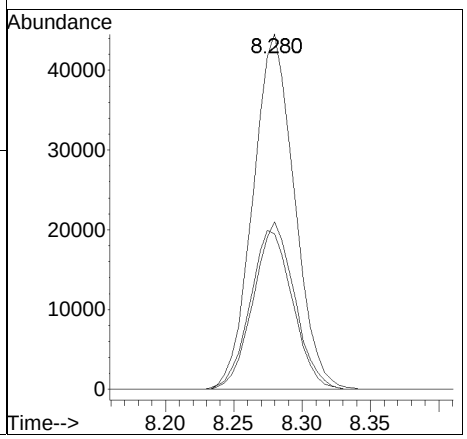


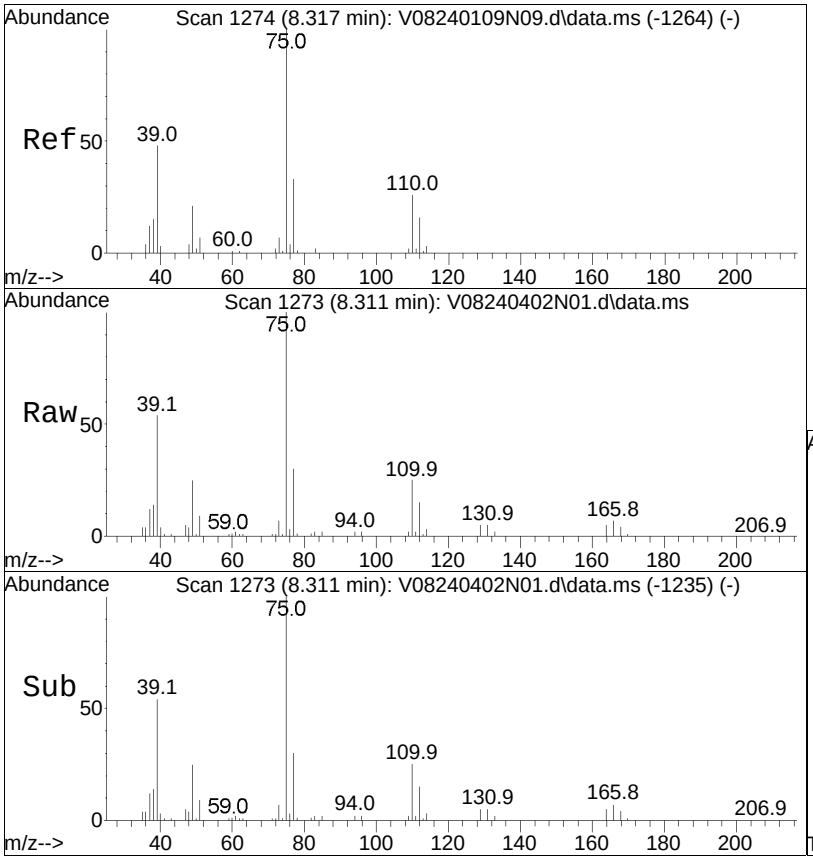


#63
Tetrachloroethene
Concen: 9.73 ug/L
RT: 8.280 min Scan# 1267
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:166 Resp: 94049

Ion	Ratio	Lower	Upper
166	100		
168	46.7	28.2	68.2
94	45.9	38.4	78.4

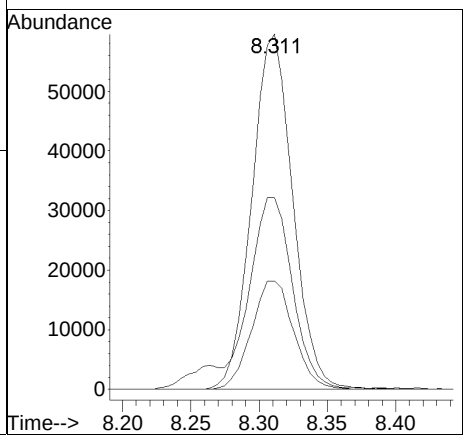


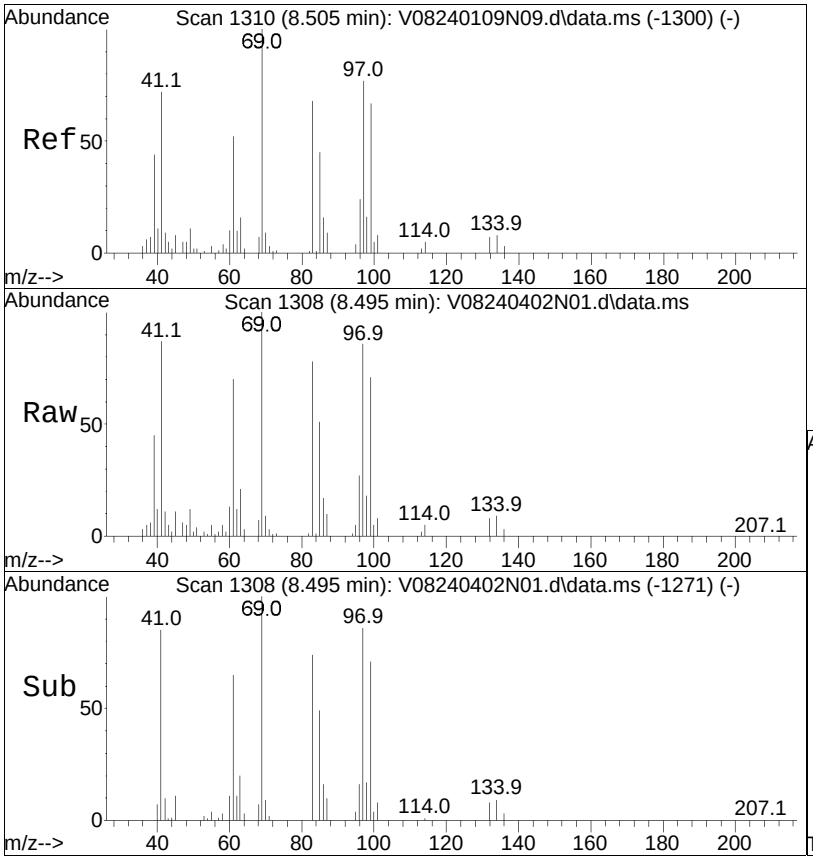


#65
trans-1,3-Dichloropropene
Concen: 10.36 ug/L
RT: 8.311 min Scan# 1273
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 75 Resp: 123985

Ion	Ratio	Lower	Upper
75	100		
77	31.5	12.4	52.4
39	62.4	42.8	82.8

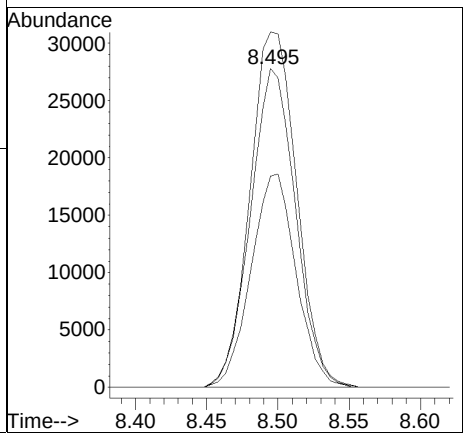


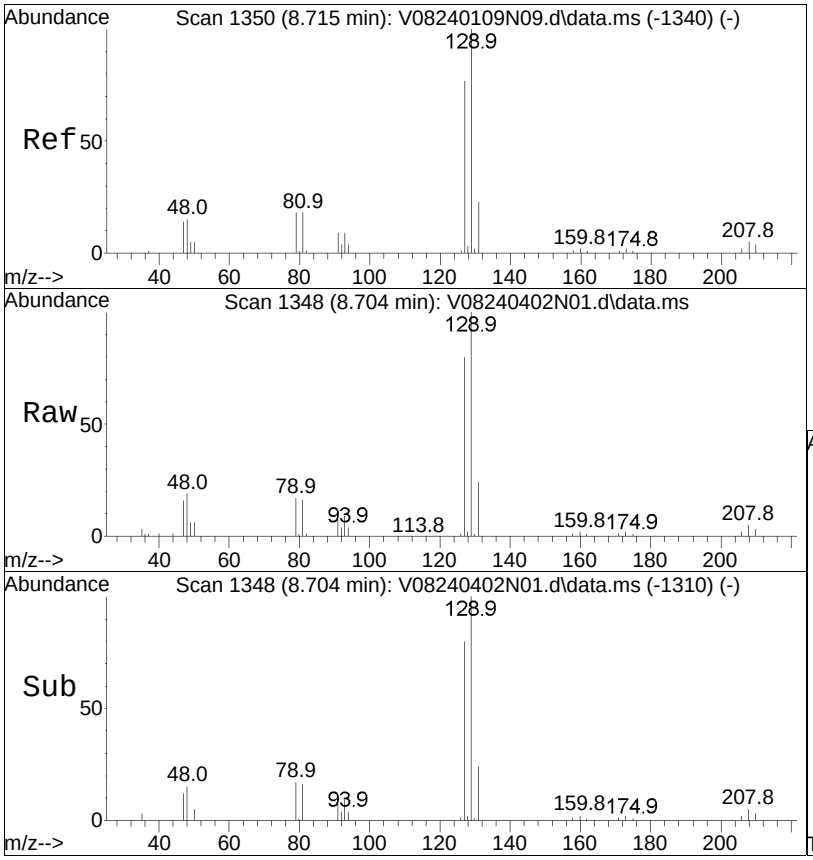


#68
1,1,2-Trichloroethane
Concen: 10.38 ug/L
RT: 8.495 min Scan# 1308
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 83 Resp: 61206

Ion	Ratio	Lower	Upper
83	100		
97	115.7	89.8	129.8
85	66.9	44.4	84.4

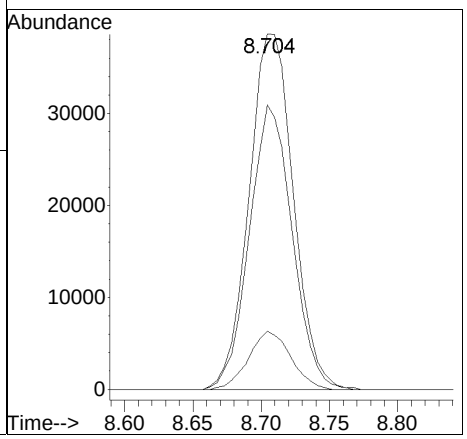


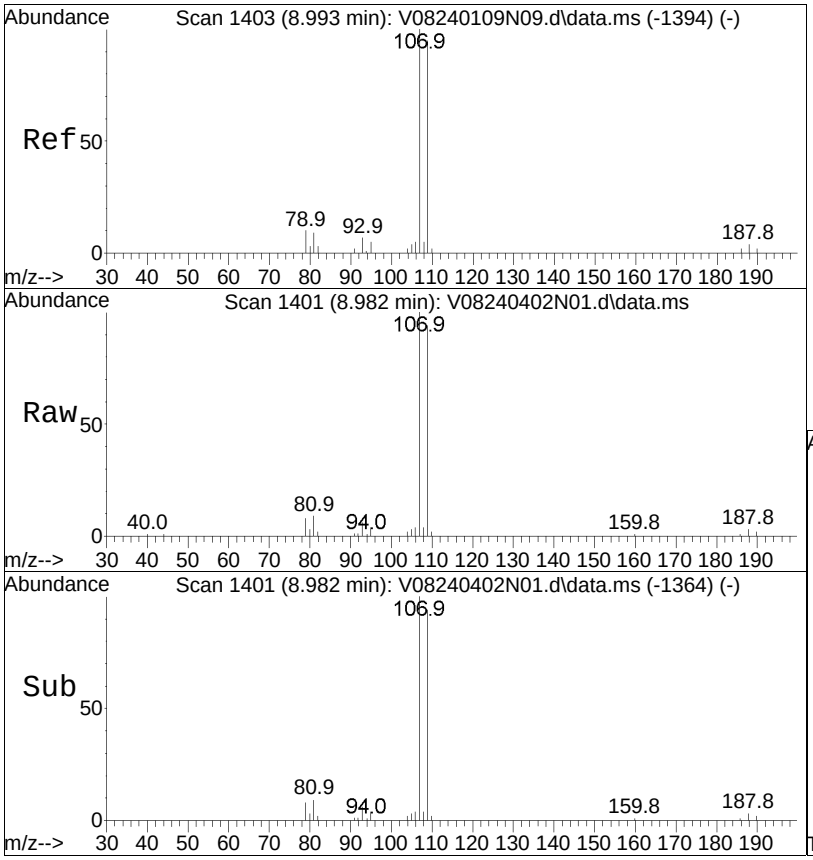


#69
Chlorodibromomethane
Concen: 9.75 ug/L
RT: 8.704 min Scan# 1348
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:129 Resp: 87338

Ion	Ratio	Lower	Upper
129	100		
81	15.6	2.9	42.9
127	77.1	57.8	97.8

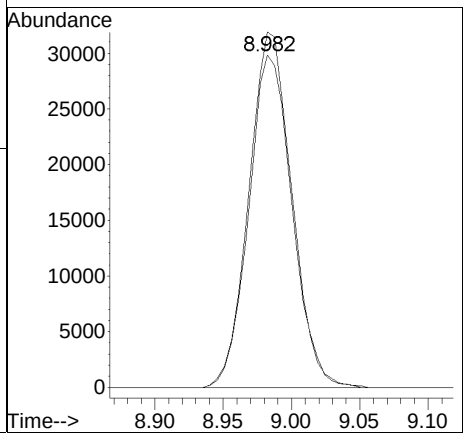


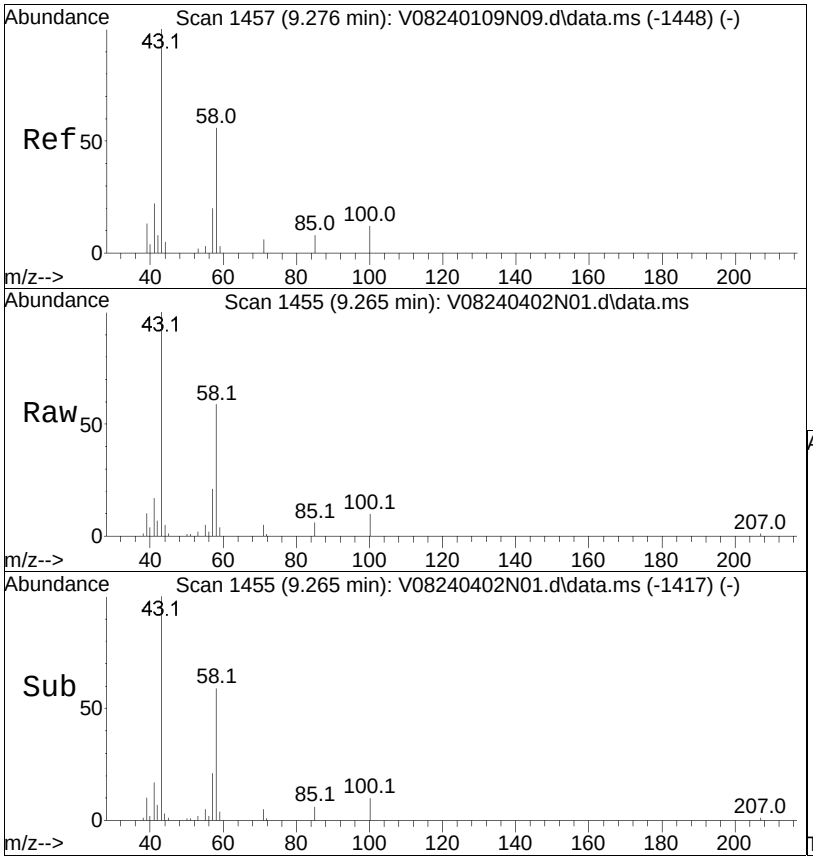


#71
1,2-Dibromoethane
Concen: 10.26 ug/L
RT: 8.982 min Scan# 1401
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:107 Resp: 69720

Ion	Ratio	Lower	Upper
107	100		
109	94.4	74.3	111.5

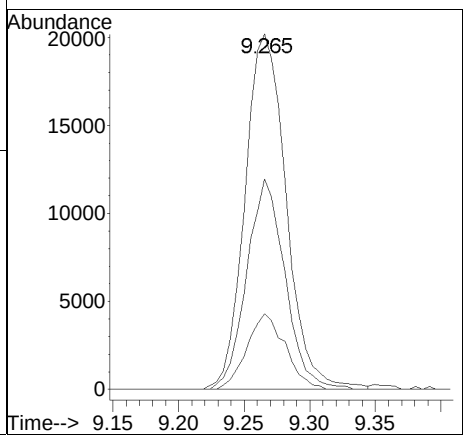


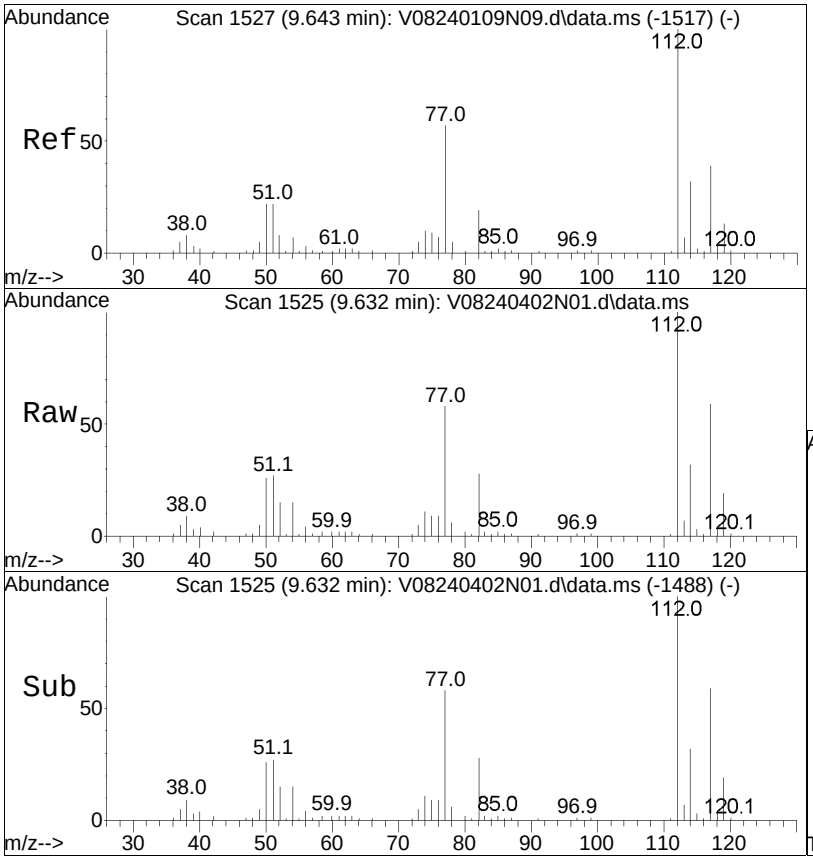


#72
2-Hexanone
Concen: 9.59 ug/L
RT: 9.265 min Scan# 1455
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 43 Resp: 44228

Ion	Ratio	Lower	Upper
43	100		
58	55.0	41.2	61.8
57	19.8	17.2	25.8

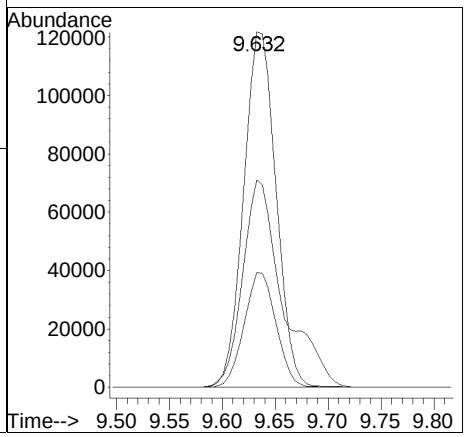


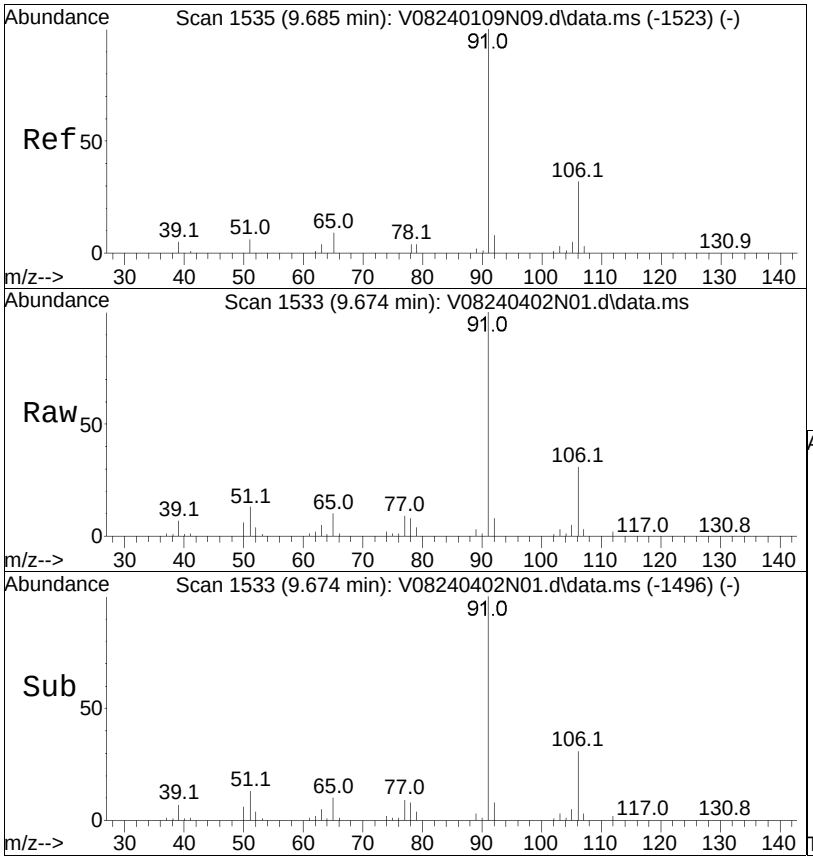


#73
Chlorobenzene
Concen: 9.99 ug/L
RT: 9.632 min Scan# 1525
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:112 Resp: 259903

Ion	Ratio	Lower	Upper
112	100		
77	72.4	55.4	83.0
114	31.8	25.4	38.2

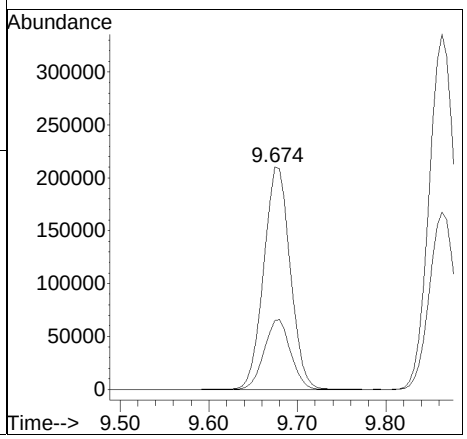


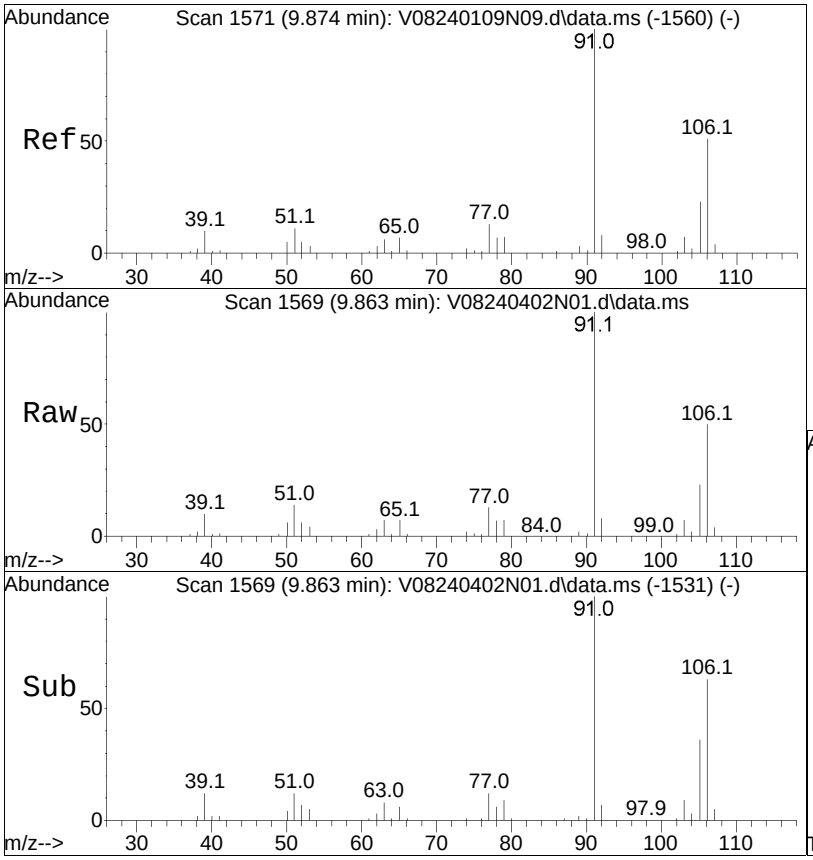


#74
Ethylbenzene
Concen: 10.11 ug/L
RT: 9.674 min Scan# 1533
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 91 Resp: 438188

Ion	Ratio	Lower	Upper
91	100		
106	31.1	24.3	36.5

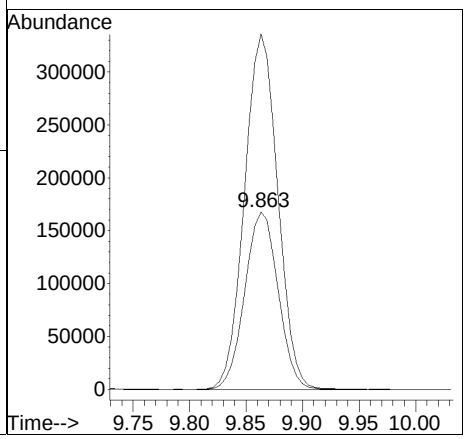


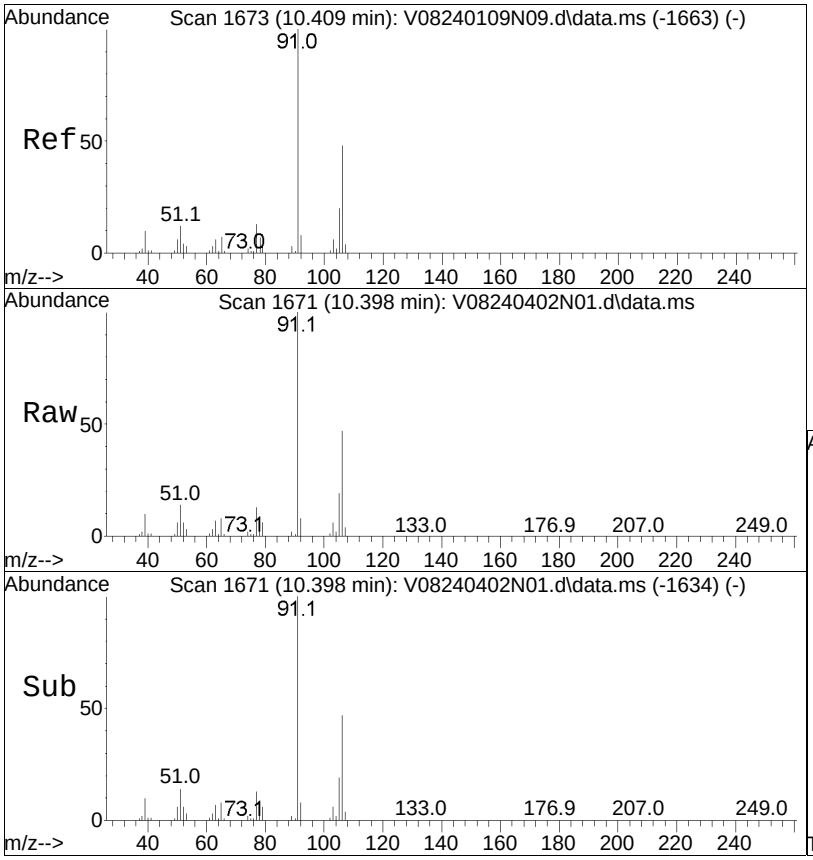


#76
p/m Xylene
Concen: 20.14 ug/L
RT: 9.863 min Scan# 1569
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:106 Resp: 344849

Ion	Ratio	Lower	Upper
106	100		
91	199.6	166.4	249.6

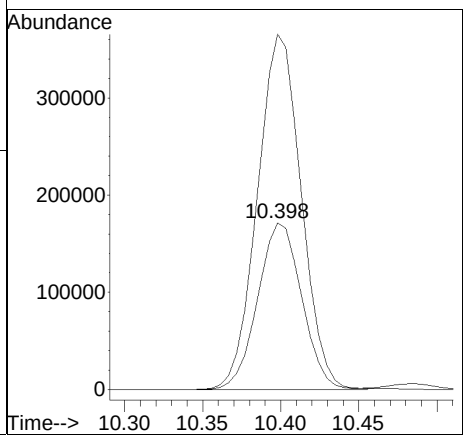


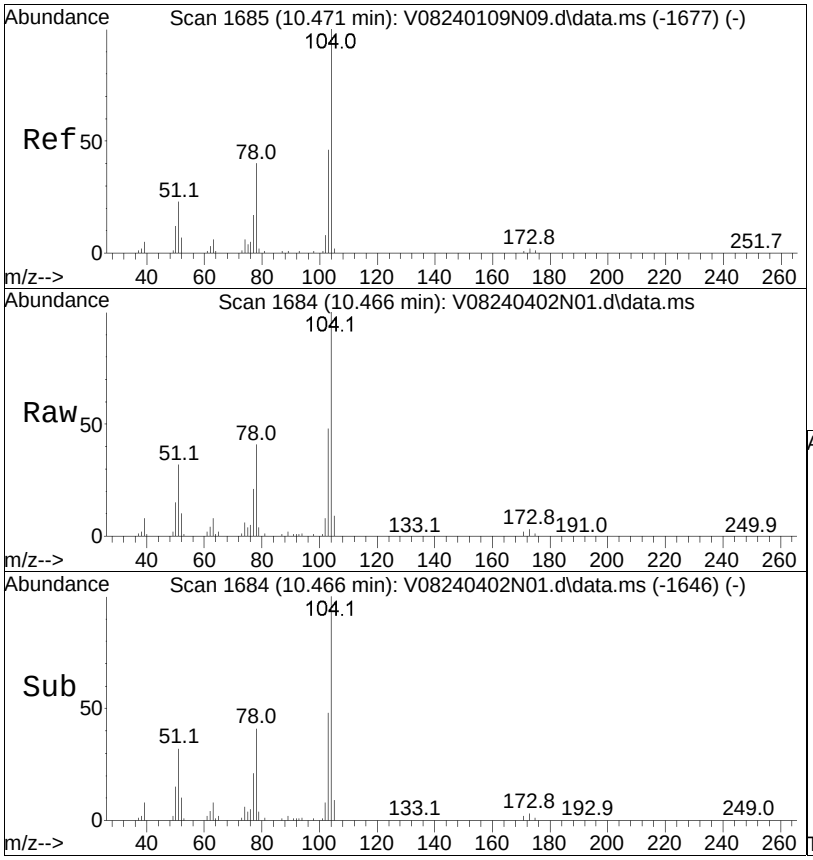


#77
o Xylene
Concen: 20.28 ug/L
RT: 10.398 min Scan# 1671
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:106 Resp: 335093

Ion	Ratio	Lower	Upper
106	100		
91	212.4	182.6	273.8

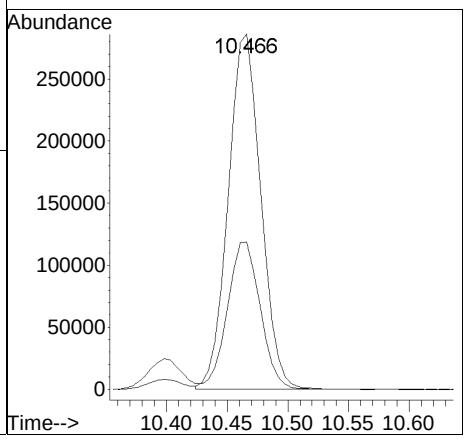


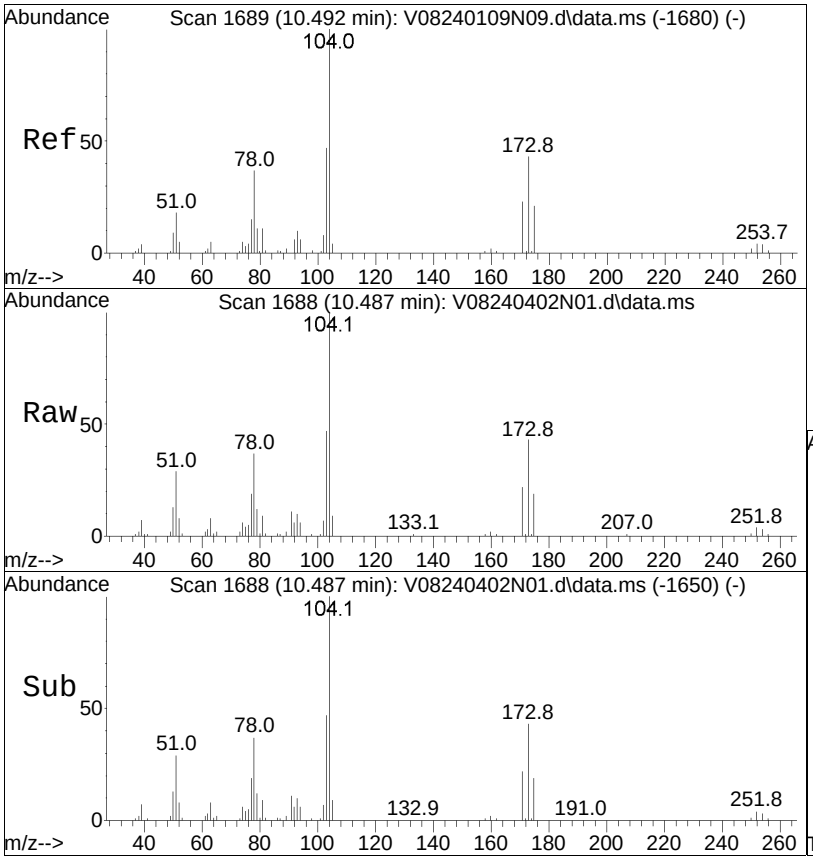


#78
Styrene
Concen: 20.19 ug/L
RT: 10.466 min Scan# 1684
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:104 Resp: 534547

Ion	Ratio	Lower	Upper
104	100		
78	41.8	39.8	59.6

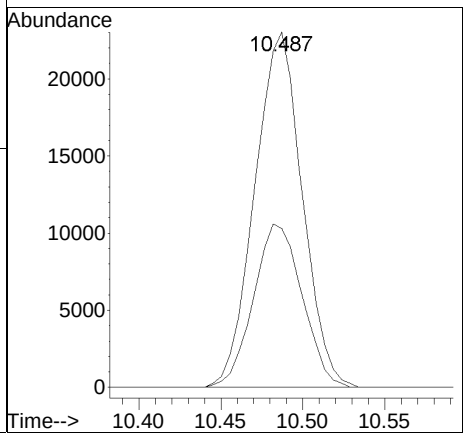


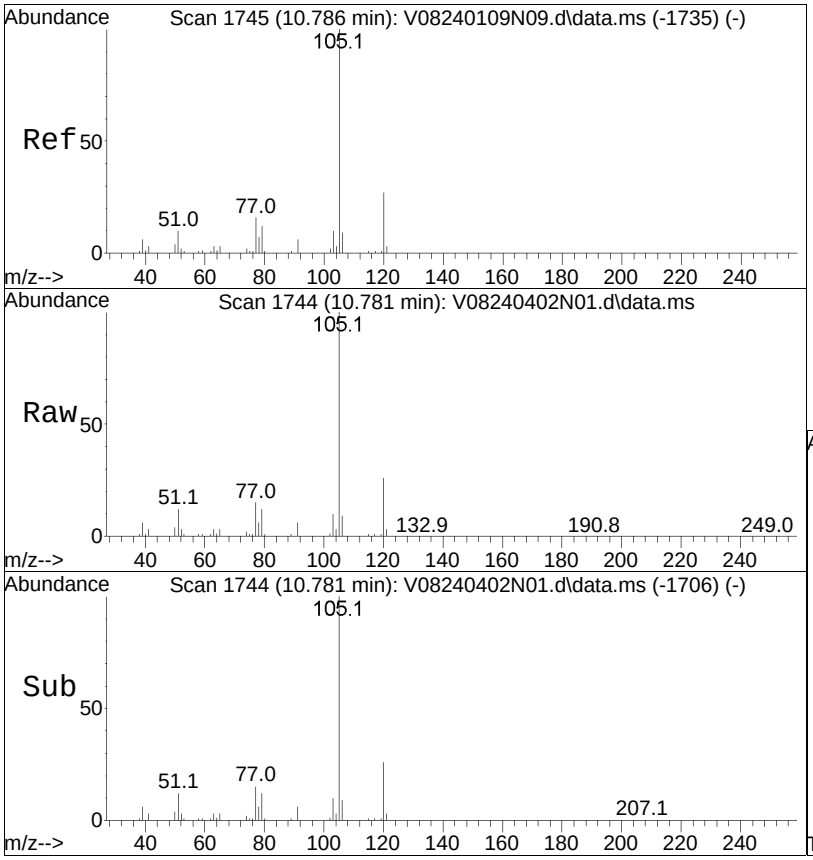


#80
Bromoform
Concen: 10.71 ug/L
RT: 10.487 min Scan# 1688
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:173 Resp: 46441

Ion	Ratio	Lower	Upper
173	100		
175	47.1	31.5	71.5

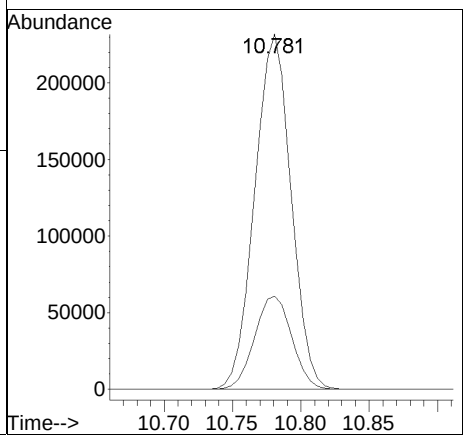


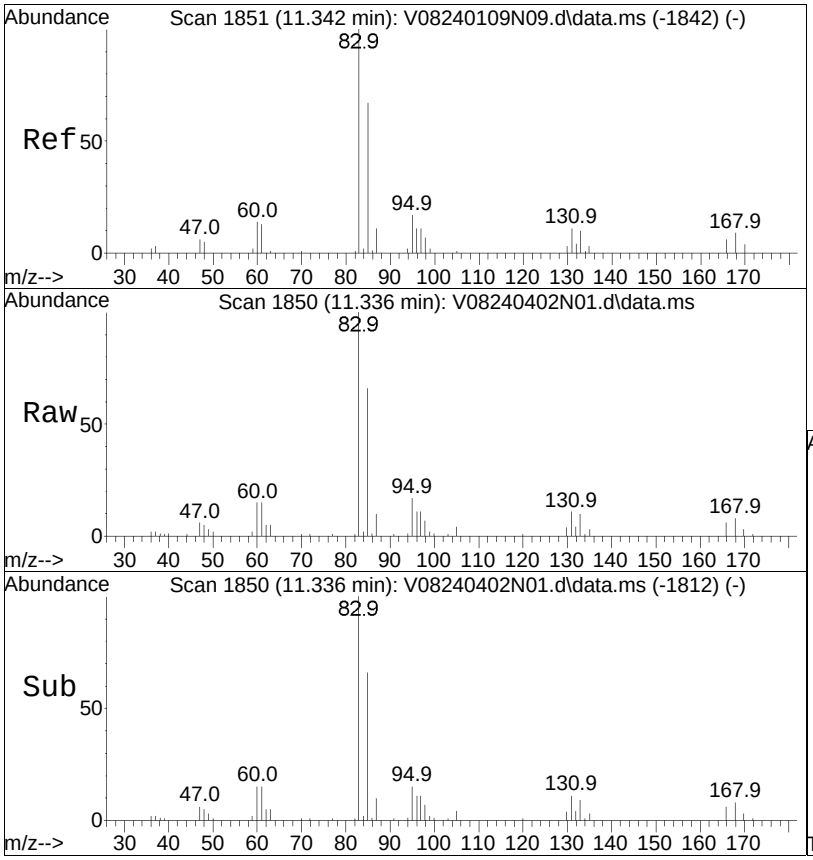


#82
Isopropylbenzene
Concen: 11.02 ug/L
RT: 10.781 min Scan# 1744
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:105 Resp: 428034

Ion	Ratio	Lower	Upper
105	100		
120	26.9	4.8	44.8

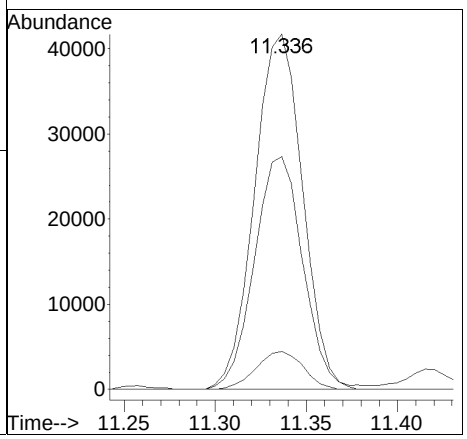


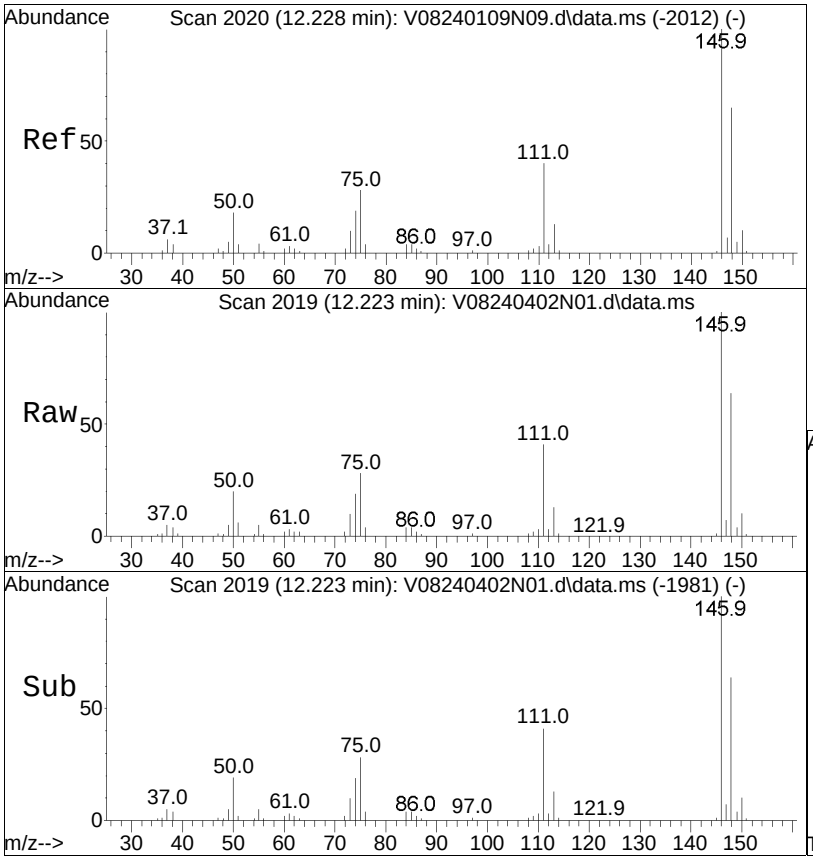


#87
1,1,2,2-Tetrachloroethane
Concen: 10.63 ug/L
RT: 11.336 min Scan# 1850
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion: 83 Resp: 76631

Ion	Ratio	Lower	Upper
83	100		
131	10.5	0.0	30.4
85	66.5	45.4	85.4

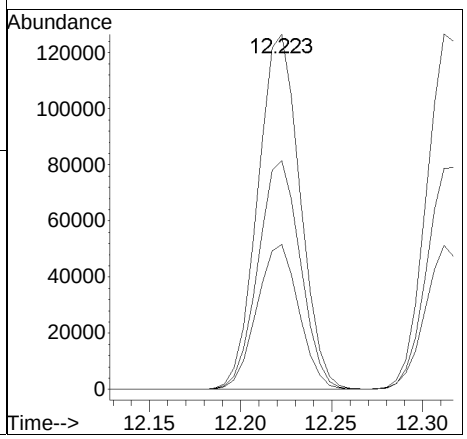


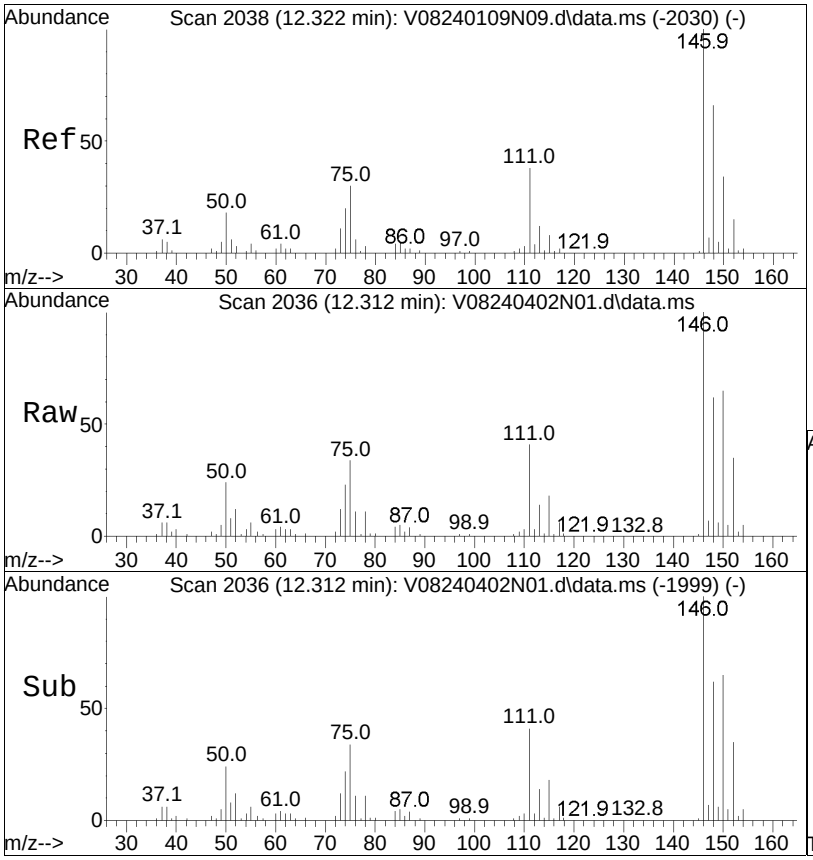


#100
1,3-Dichlorobenzene
Concen: 10.48 ug/L
RT: 12.223 min Scan# 2019
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:146 Resp: 204313

Ion	Ratio	Lower	Upper
146	100		
111	40.6	27.5	57.1
148	64.4	41.9	86.9

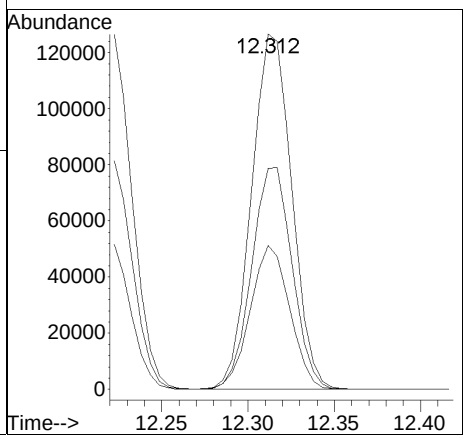


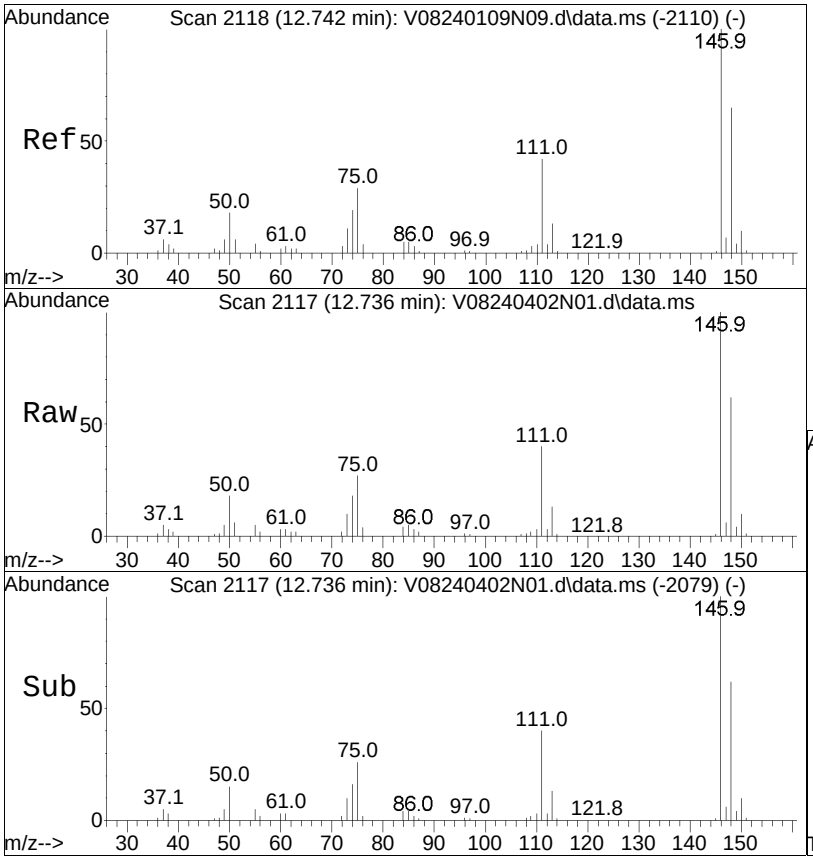


#101
1,4-Dichlorobenzene
Concen: 10.46 ug/L
RT: 12.312 min Scan# 2036
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:146 Resp: 205729

Ion	Ratio	Lower	Upper
146	100		
111	39.7	32.3	48.5
148	62.9	49.9	74.9

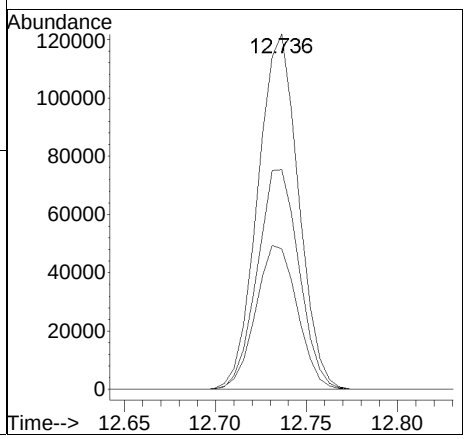


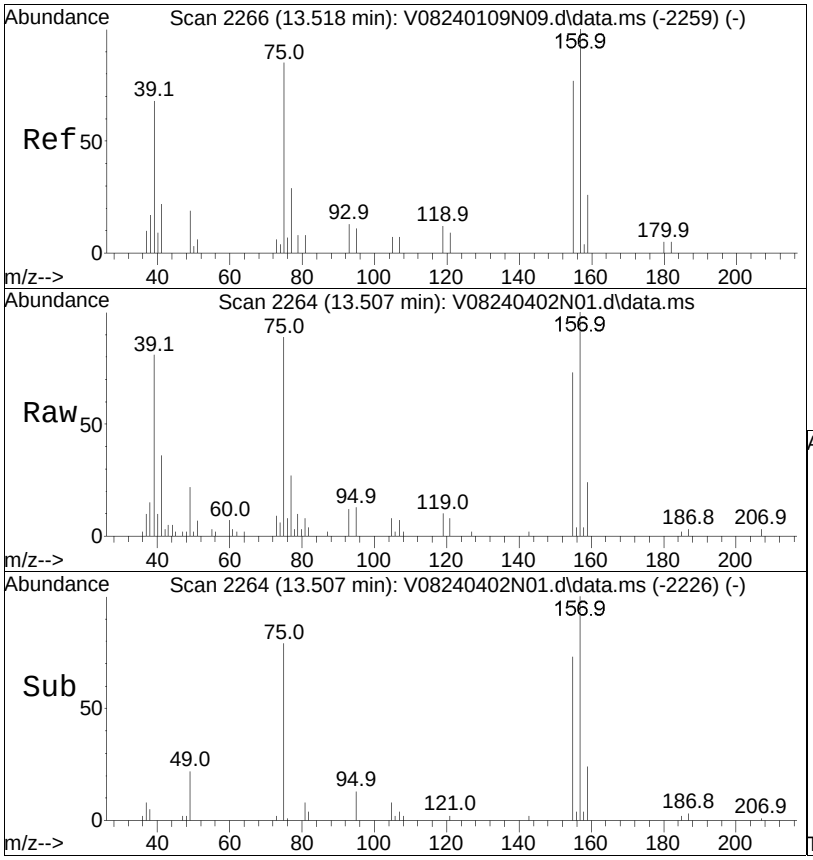


#104
1,2-Dichlorobenzene
Concen: 10.50 ug/L
RT: 12.736 min Scan# 2117
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:146 Resp: 189870

Ion	Ratio	Lower	Upper
146	100		
111	41.4	28.3	58.7
148	63.2	42.3	87.8

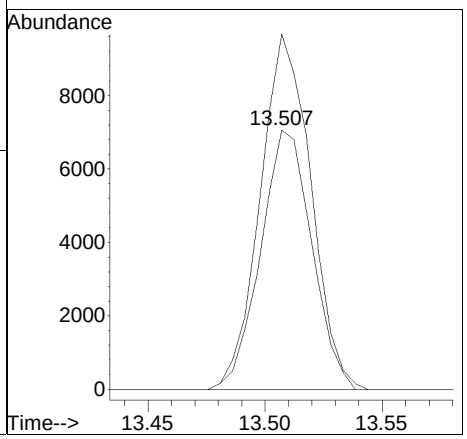


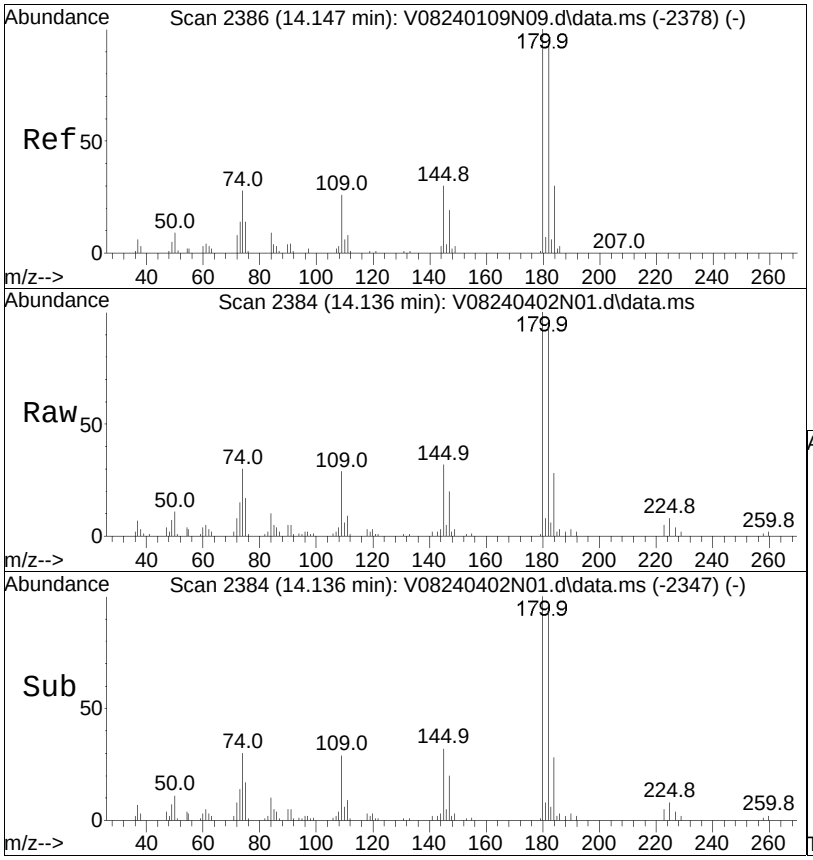


#106
1,2-Dibromo-3-chloropropane
Concen: 10.55 ug/L
RT: 13.507 min Scan# 2264
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:155 Resp: 10733

Ion	Ratio	Lower	Upper
155	100		
157	135.4	94.8	142.2

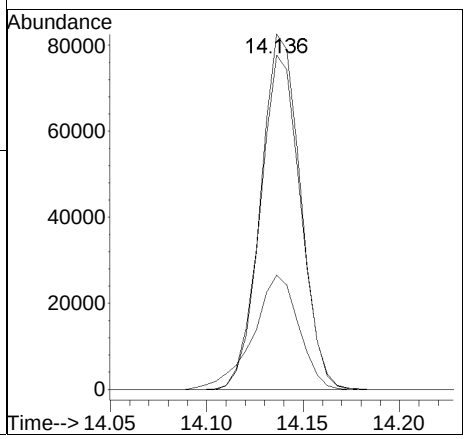


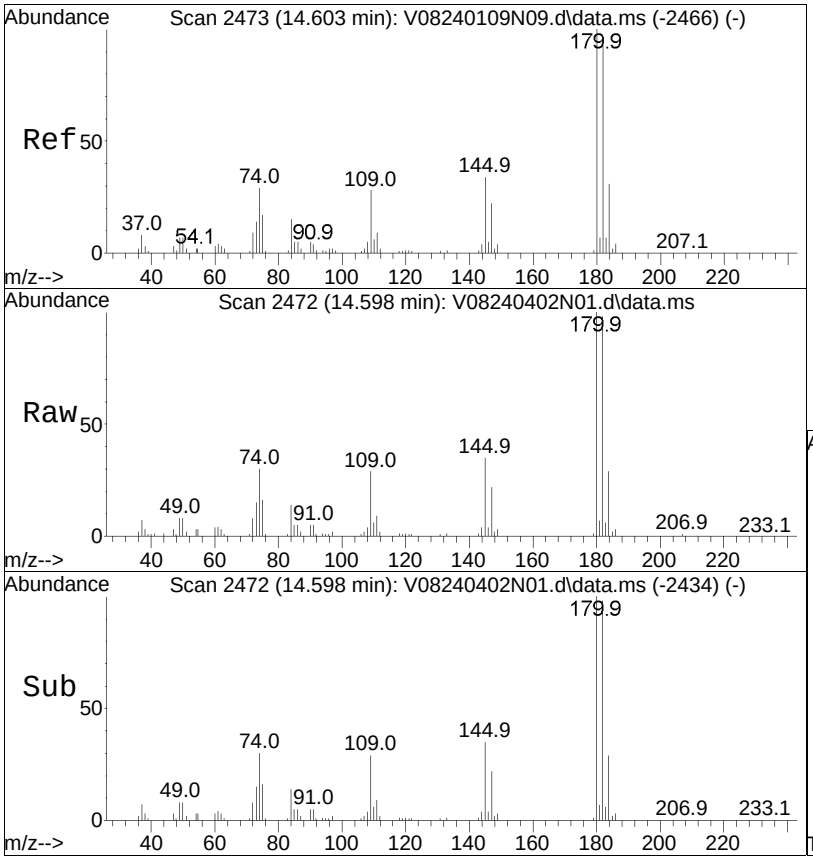


#109
1,2,4-Trichlorobenzene
Concen: 10.18 ug/L
RT: 14.136 min Scan# 2384
Delta R.T. -0.005 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:180 Resp: 119121

Ion	Ratio	Lower	Upper
180	100		
182	94.3	77.3	115.9
145	36.6	28.1	42.1

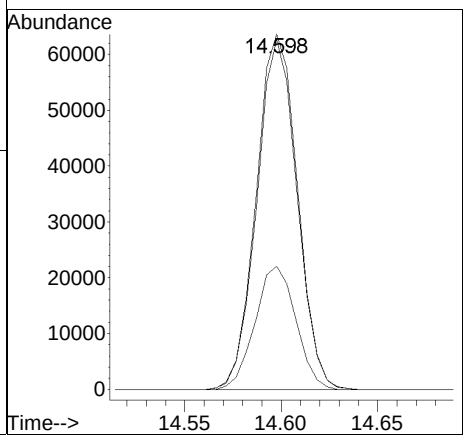




#111
1,2,3-Trichlorobenzene
Concen: 9.24 ug/L
RT: 14.598 min Scan# 2472
Delta R.T. 0.000 min
Lab File: V08240402N01.d
Acq: 2 Apr 2024 5:41 pm

Tgt Ion:180 Resp: 94439

Ion	Ratio	Lower	Upper
180	100		
182	95.8	76.4	114.6
145	34.3	26.4	39.6

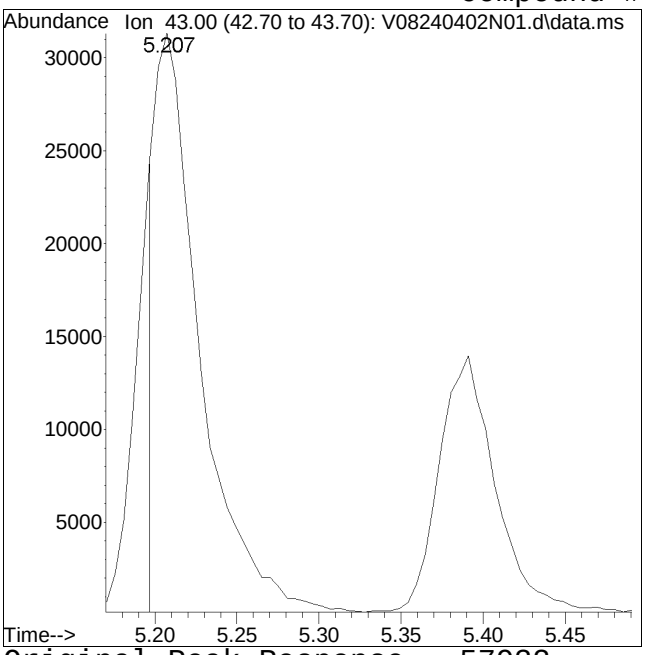


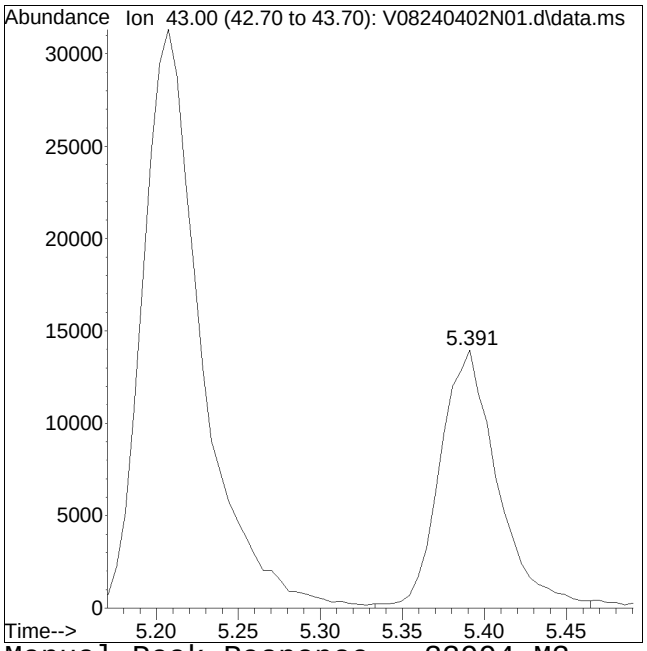
Manual Integration Report

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N01.d
Date Inj'd : 4/2/2024 5:41 pm
Sample : WG1904126-3,31,10,10

QMethod : V108_240322N_8260.m
Operator : VOA108:TMS
Instrument : VOA 108
Quant Date : 4/2/2024 6:14 pm

Compound #39: 2-Butanone





Original Peak Response = 57932 Manual Peak Response = 33994 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N02.d
Acq On : 2 Apr 2024 6:03 pm
Operator : VOA108:TMS
Sample : WG1904126-4,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 02 18:38:58 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.083	96	488515	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 98.39%			
59) Chlorobenzene-d5	9.611	117	355102	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 99.37%			
79) 1,4-Dichlorobenzene-d4	12.296	152	160027	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 100.79%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	127630	9.978	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.78%			
43) 1,2-Dichloroethane-d4	5.800	65	160169	10.201	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.01%			
60) Toluene-d8	7.776	98	472697	10.344	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 103.44%			
83) 4-Bromofluorobenzene	11.095	95	160633	10.885	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 108.85%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	107255	10.306	ug/L	99
3) Chloromethane	1.888	50	154048	8.401	ug/L	99
4) Vinyl chloride	1.962	62	134991	9.094	ug/L	100
5) Bromomethane	2.276	94	36528	6.897	ug/L	99
6) Chloroethane	2.402	64	68401	9.542	ug/L	100
7) Trichlorofluoromethane	2.539	101	110674	9.018	ug/L	97
10) 1,1-Dichloroethene	3.026	96	81654	9.741	ug/L	89
11) Carbon disulfide	3.058	76	278687	9.686	ug/L	97
12) Freon-113	3.068	101	78164	9.496	ug/L	99
15) Methylene chloride	3.582	84	93954	9.320	ug/L	94
17) Acetone	3.624	43	31003	12.622	ug/L	89
18) trans-1,2-Dichloroethene	3.739	96	93863	9.747	ug/L	97
19) Methyl acetate	3.739	43	51616	8.833	ug/L #	88
20) Methyl tert-butyl ether	3.834	73	226679	10.039	ug/L	92
23) 1,1-Dichloroethane	4.316	63	219990	9.465	ug/L	98
28) cis-1,2-Dichloroethene	4.835	96	103924	9.618	ug/L	91
30) Bromochloromethane	5.024	128	47952	9.872	ug/L	78
31) Cyclohexane	5.034	56	204098	9.074	ug/L	94
32) Chloroform	5.097	83	169483	9.792	ug/L	97
34) Carbon tetrachloride	5.239	117	131610	9.556	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N02.d
Acq On : 2 Apr 2024 6:03 pm
Operator : VOA108:TMS
Sample : WG1904126-4,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 02 18:38:58 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve - Megamix plus Diox

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 1,1,1-Trichloroethane	5.302	97	142798	9.554	ug/L	#	97
39) 2-Butanone	5.386	43	34232M3	9.358	ug/L		
41) Benzene	5.669	78	368805	9.646	ug/L		98
44) 1,2-Dichloroethane	5.868	62	141967	9.518	ug/L		98
47) Methyl cyclohexane	6.256	83	140864	9.506	ug/L		100
48) Trichloroethene	6.261	95	103881	10.059	ug/L		93
51) 1,2-Dichloropropane	6.801	63	124035	9.485	ug/L	#	91
54) Bromodichloromethane	6.875	83	125199	9.546	ug/L		99
57) 1,4-Dioxane	7.079	88	27562	474.282	ug/L		94
58) cis-1,3-Dichloropropene	7.561	75	149147	10.075	ug/L		97
61) Toluene	7.834	92	231890	10.020	ug/L		95
62) 4-Methyl-2-pentanone	8.259	58	28046	9.857	ug/L		96
63) Tetrachloroethene	8.280	166	93593	9.742	ug/L		89
65) trans-1,3-Dichloropropene	8.306	75	123623	10.398	ug/L		99
68) 1,1,2-Trichloroethane	8.495	83	60942	10.401	ug/L		94
69) Chlorodibromomethane	8.704	129	86607	9.725	ug/L		96
71) 1,2-Dibromoethane	8.982	107	69524	10.297	ug/L		98
72) 2-Hexanone	9.265	43	43289	9.447	ug/L		93
73) Chlorobenzene	9.632	112	256741	9.928	ug/L		96
74) Ethylbenzene	9.674	91	435108	10.103	ug/L		98
76) p/m Xylene	9.863	106	342267	20.113	ug/L		95
77) o Xylene	10.398	106	336361	20.480	ug/L		90
78) Styrene	10.461	104	538391	20.463	ug/L		89
80) Bromoform	10.487	173	45612	10.438	ug/L		96
82) Isopropylbenzene	10.781	105	426208	10.884	ug/L		96
87) 1,1,2,2-Tetrachloroethane	11.331	83	75501	10.394	ug/L		99
100) 1,3-Dichlorobenzene	12.222	146	207946	10.583	ug/L		98
101) 1,4-Dichlorobenzene	12.312	146	206637	10.429	ug/L		99
104) 1,2-Dichlorobenzene	12.736	146	192135	10.546	ug/L		97
106) 1,2-Dibromo-3-chloropr...	13.507	155	11004	10.729	ug/L		94
109) 1,2,4-Trichlorobenzene	14.136	180	122683	10.403	ug/L		98
111) 1,2,3-Trichlorobenzene	14.598	180	100962	9.804	ug/L		99

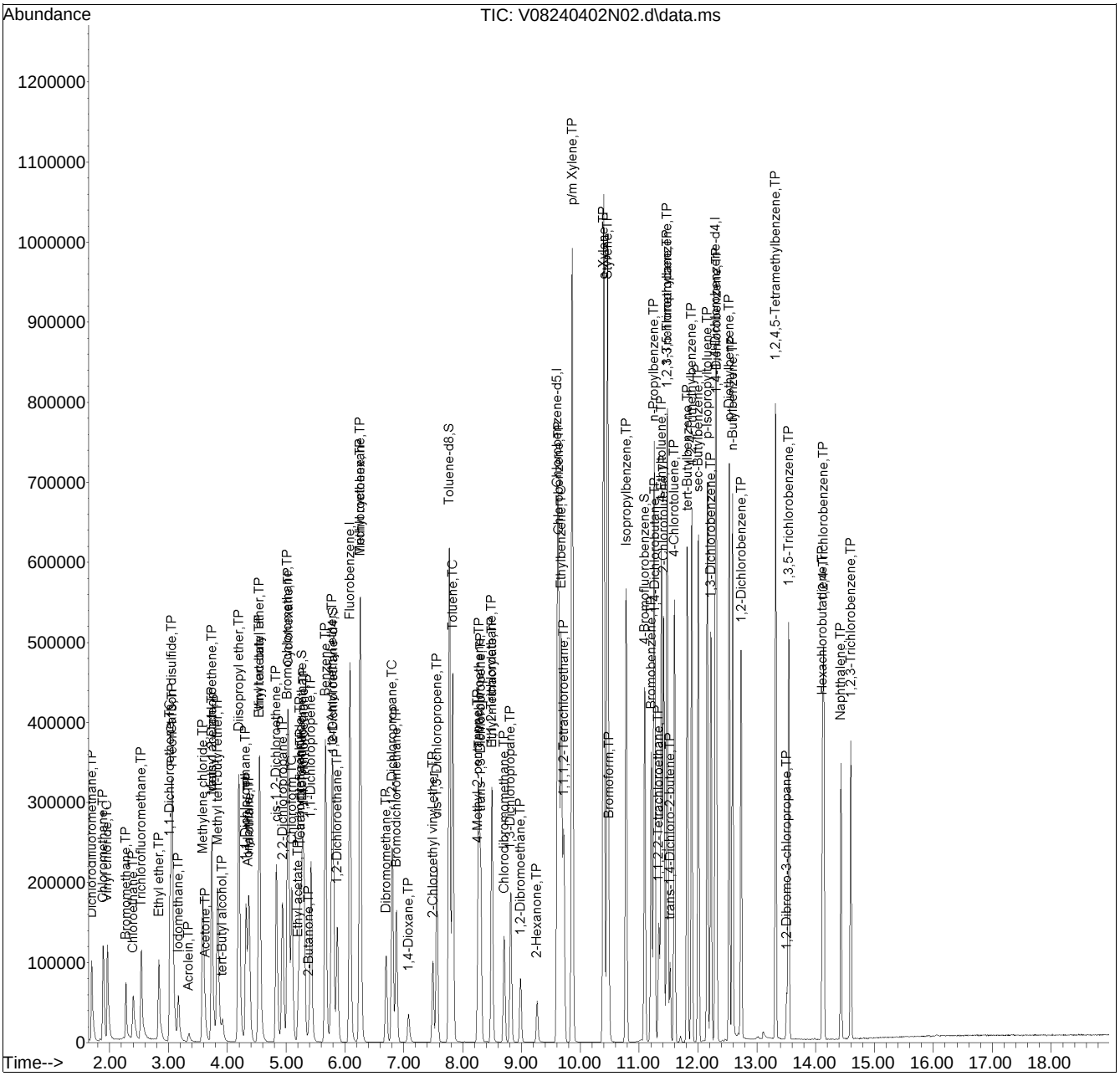
(#) = qualifier out of range (m) = manual integration (+) = signals summed

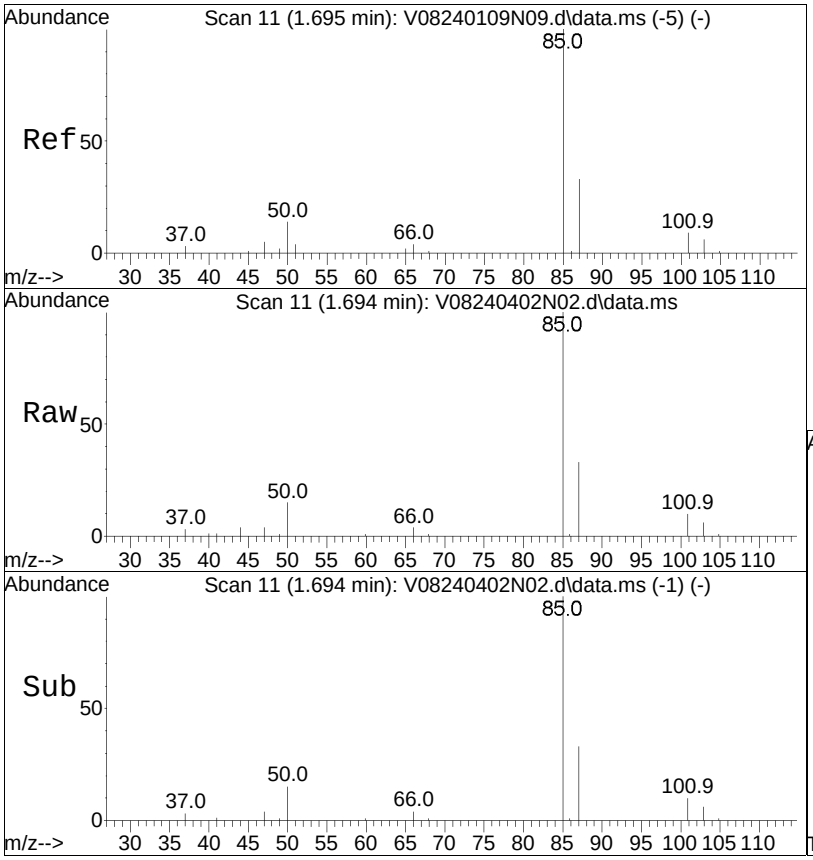
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N02.d
Acq On : 2 Apr 2024 6:03 pm
Operator : VOA108:TMS
Sample : WG1904126-4,31,10,10
Misc : WG1904126,ICAL20974
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 02 18:38:58 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox240402N01.d•

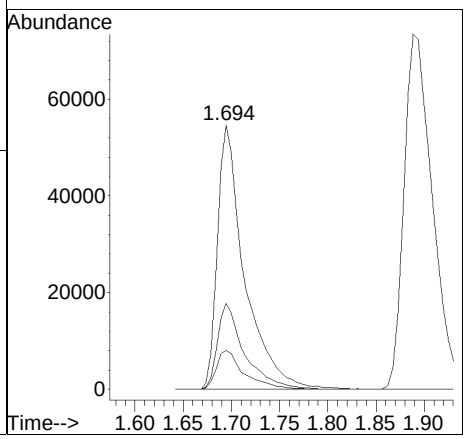


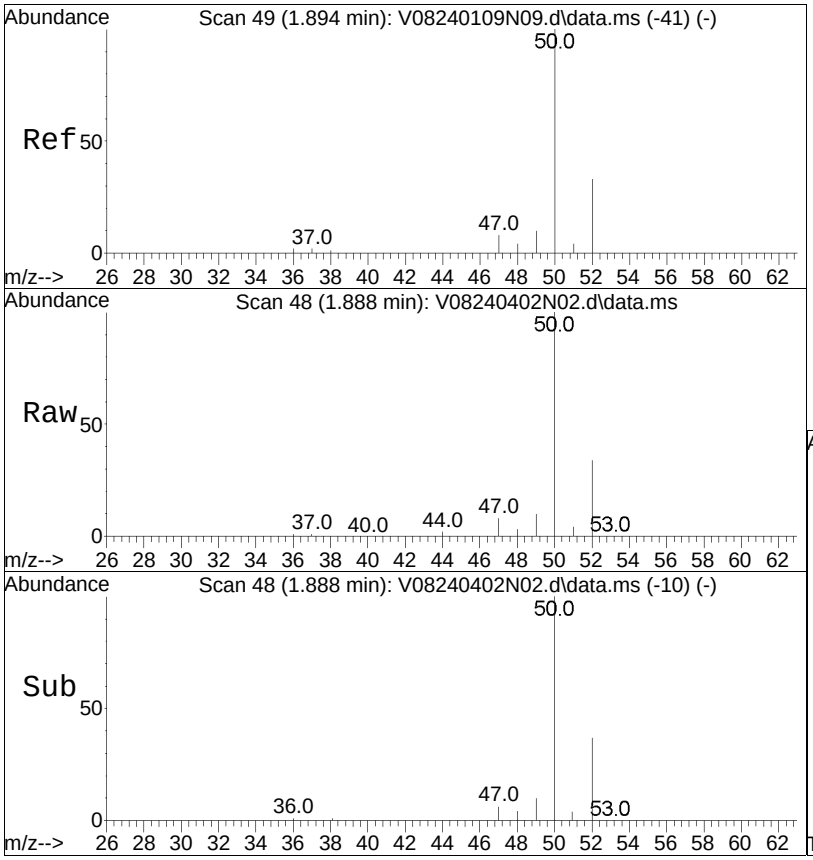


#2
Dichlorodifluoromethane
Concen: 10.31 ug/L
RT: 1.694 min Scan# 11
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 85 Resp: 107255

Ion	Ratio	Lower	Upper
85	100		
87	32.3	21.0	43.6
50	15.1	8.9	18.5

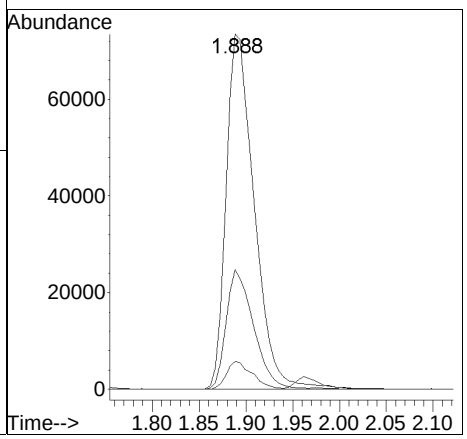


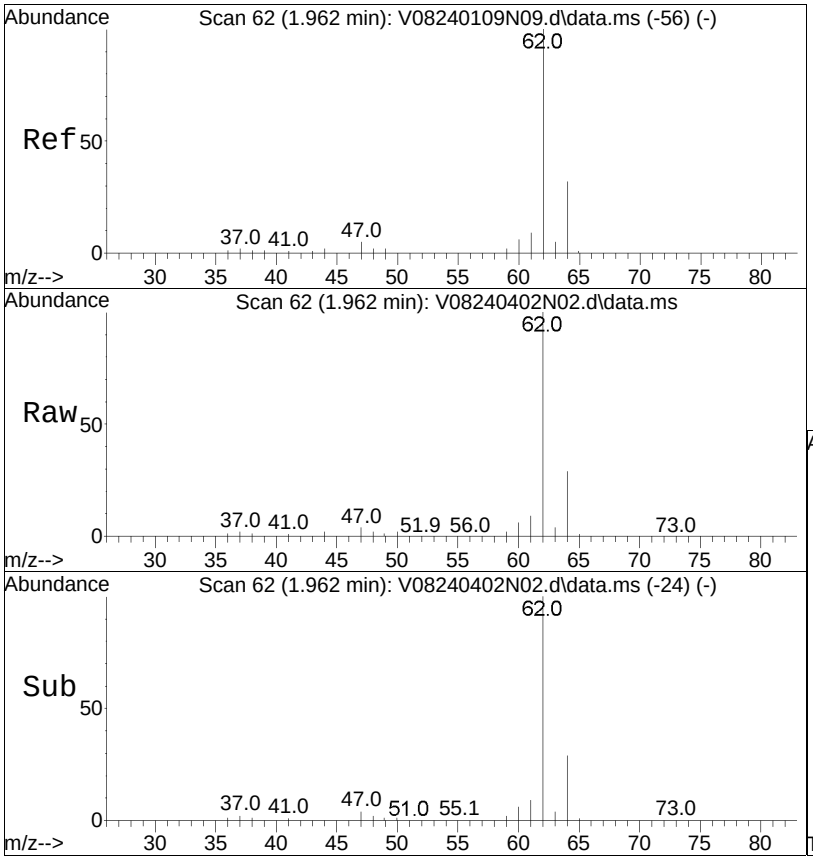


#3
Chloromethane
Concen: 8.40 ug/L
RT: 1.888 min Scan# 48
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 50 Resp: 154048

Ion	Ratio	Lower	Upper
50	100		
52	32.7	12.9	52.9
47	7.3	0.0	28.3

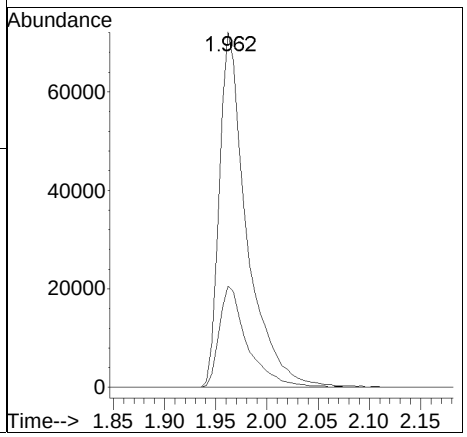


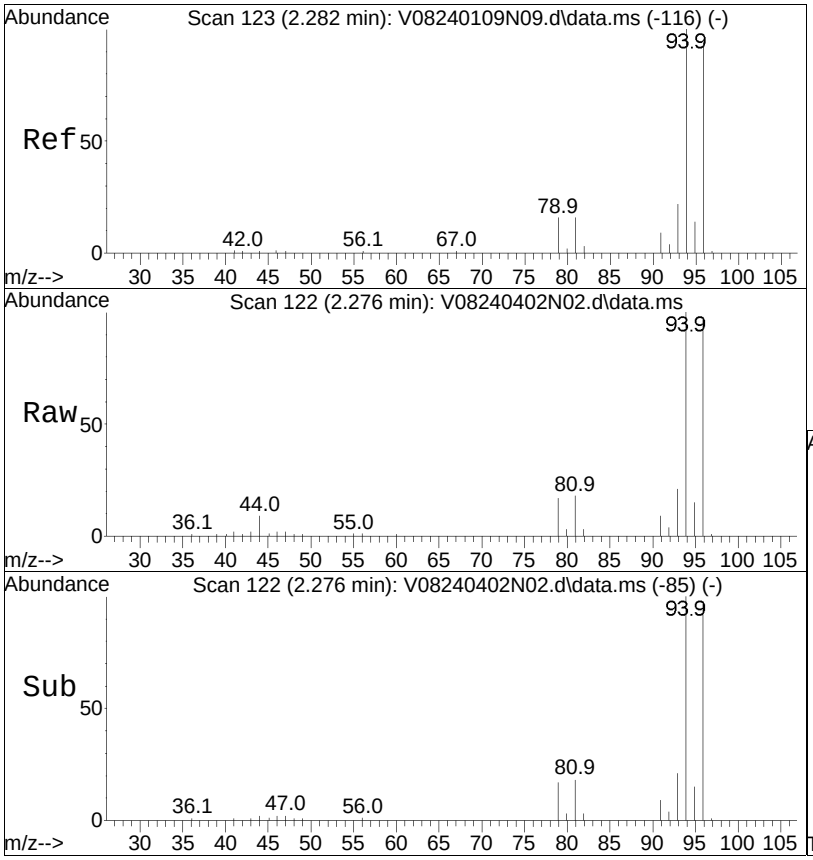


#4
Vinyl chloride
Concen: 9.09 ug/L
RT: 1.962 min Scan# 62
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 62 Resp: 134991

Ion	Ratio	Lower	Upper
62	100		
64	29.3	9.1	49.1

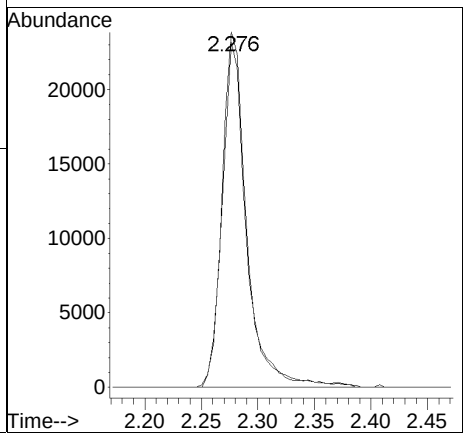


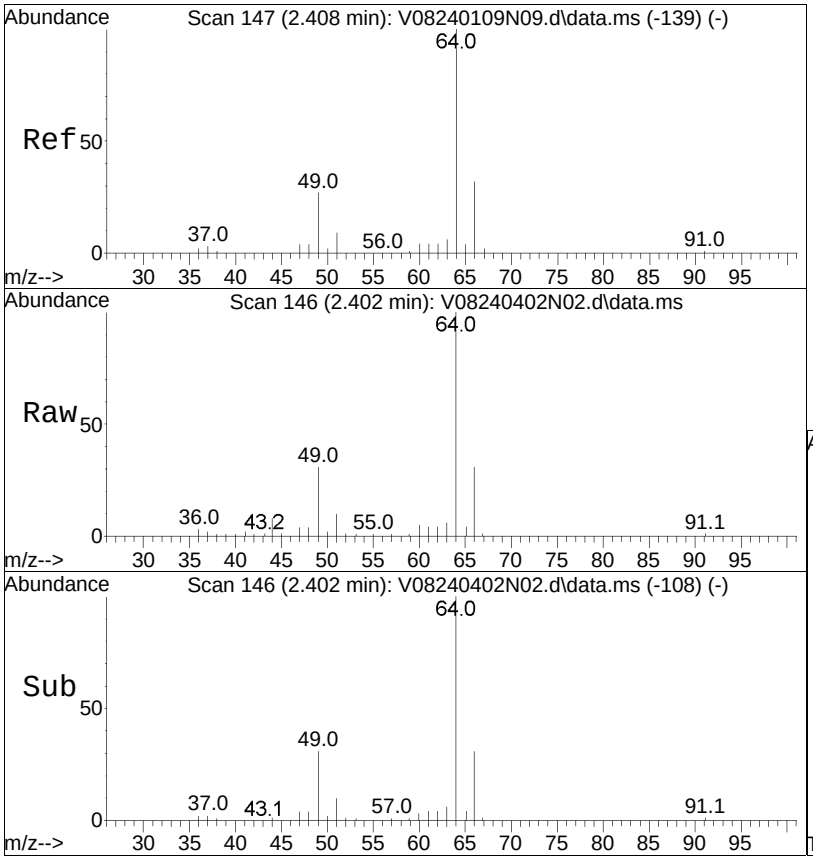


#5
Bromomethane
Concen: 6.90 ug/L
RT: 2.276 min Scan# 122
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 94 Resp: 36528

Ion	Ratio	Lower	Upper
94	100		
96	94.8	75.6	115.6

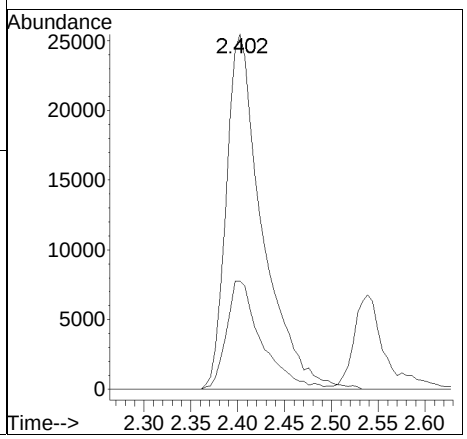


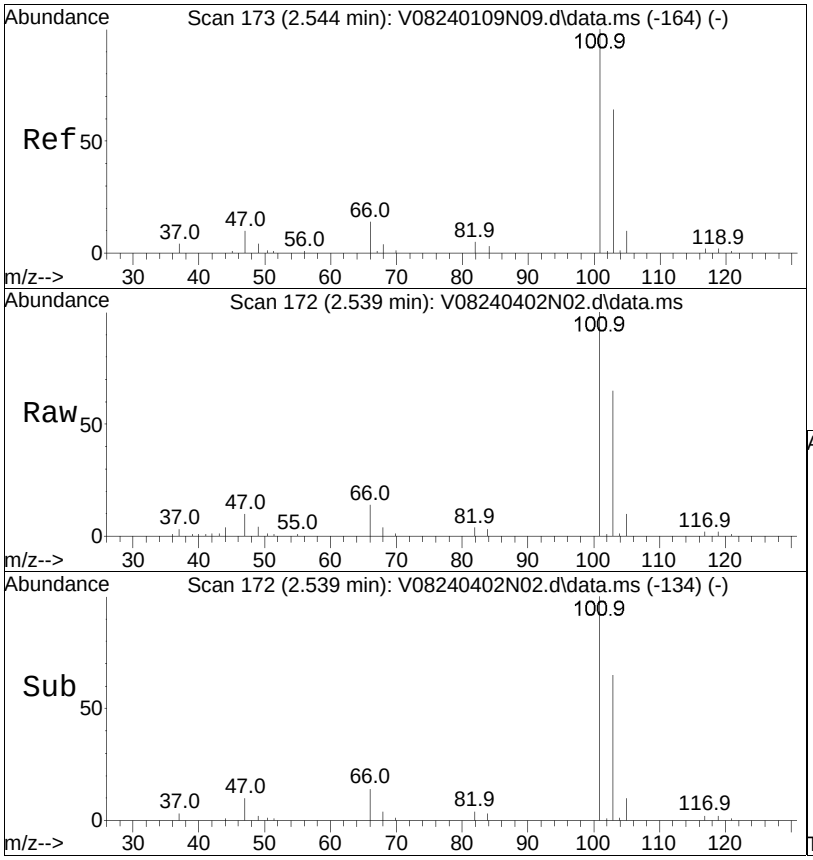


#6
Chloroethane
Concen: 9.54 ug/L
RT: 2.402 min Scan# 146
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 64 Resp: 68401

Ion	Ratio	Lower	Upper
64	100		
66	30.0	9.8	49.8

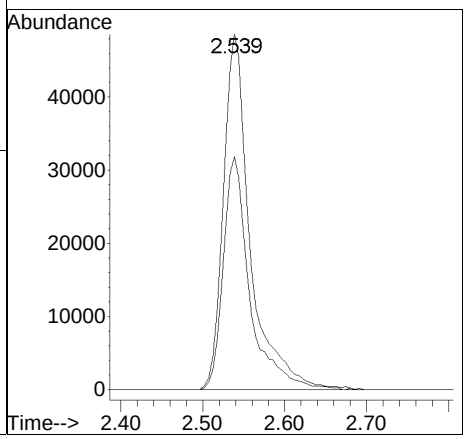


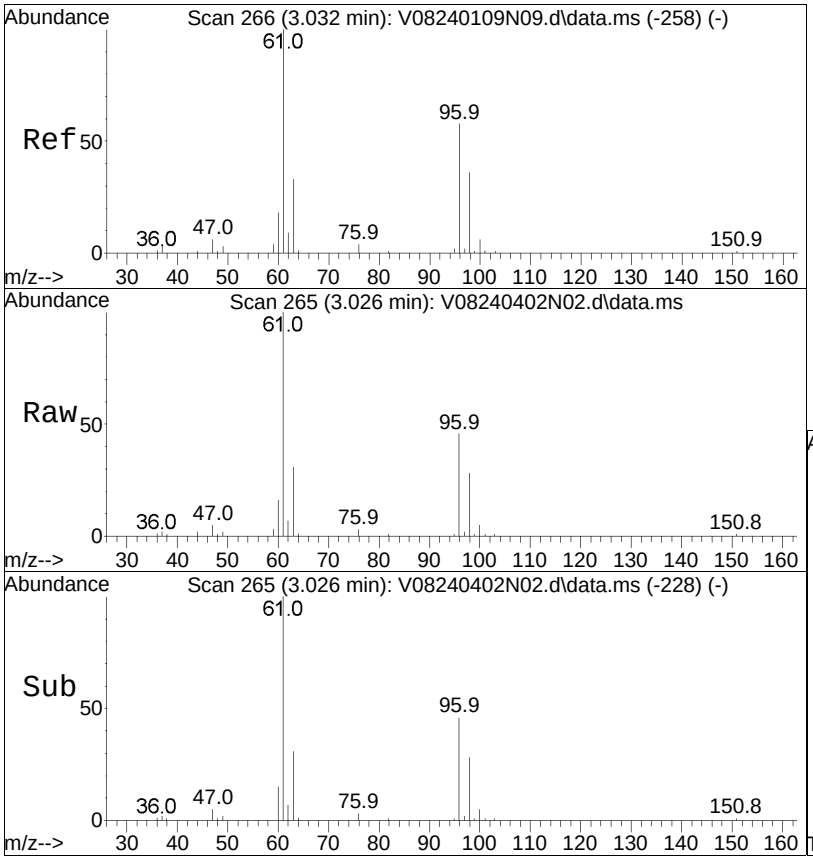


#7
Trichlorofluoromethane
Concen: 9.02 ug/L
RT: 2.539 min Scan# 172
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:101 Resp: 110674

Ion	Ratio	Lower	Upper
101	100		
103	64.7	53.8	80.6

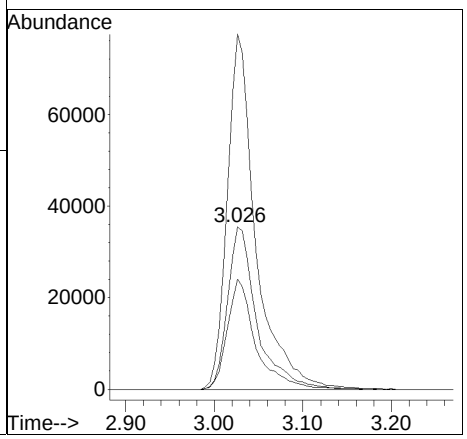


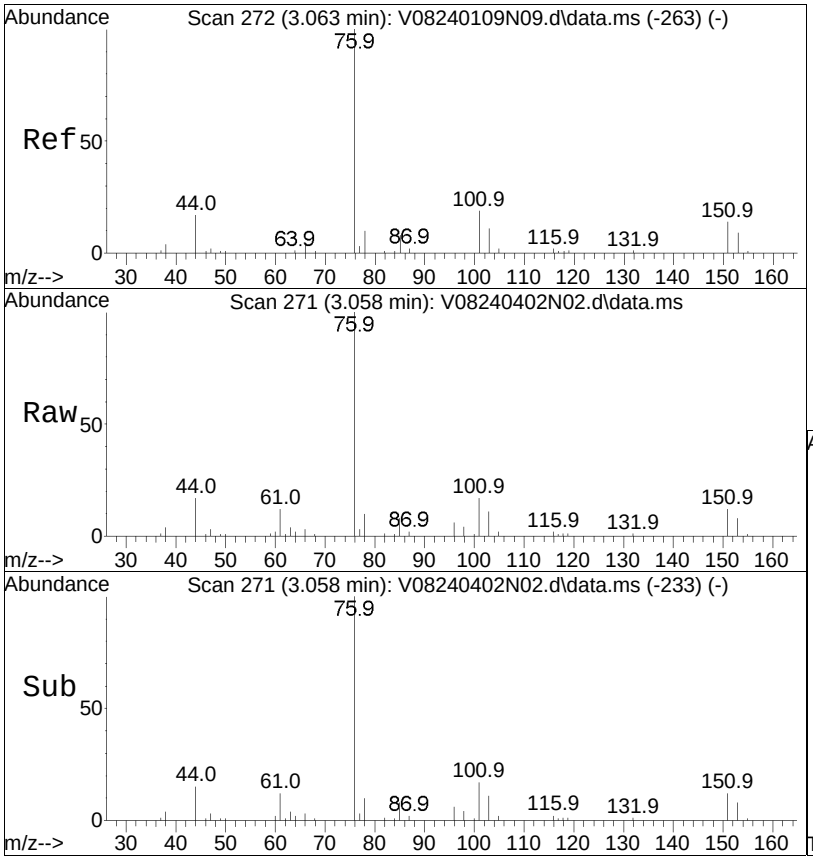


#10
1,1-Dichloroethene
Concen: 9.74 ug/L
RT: 3.026 min Scan# 265
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 96 Resp: 81654

Ion	Ratio	Lower	Upper
96	100		
61	213.3	186.1	279.1
63	66.1	57.6	86.4

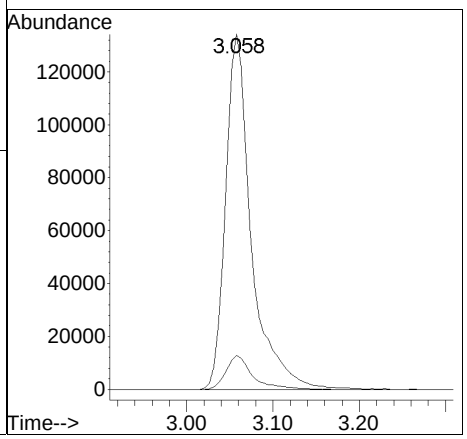


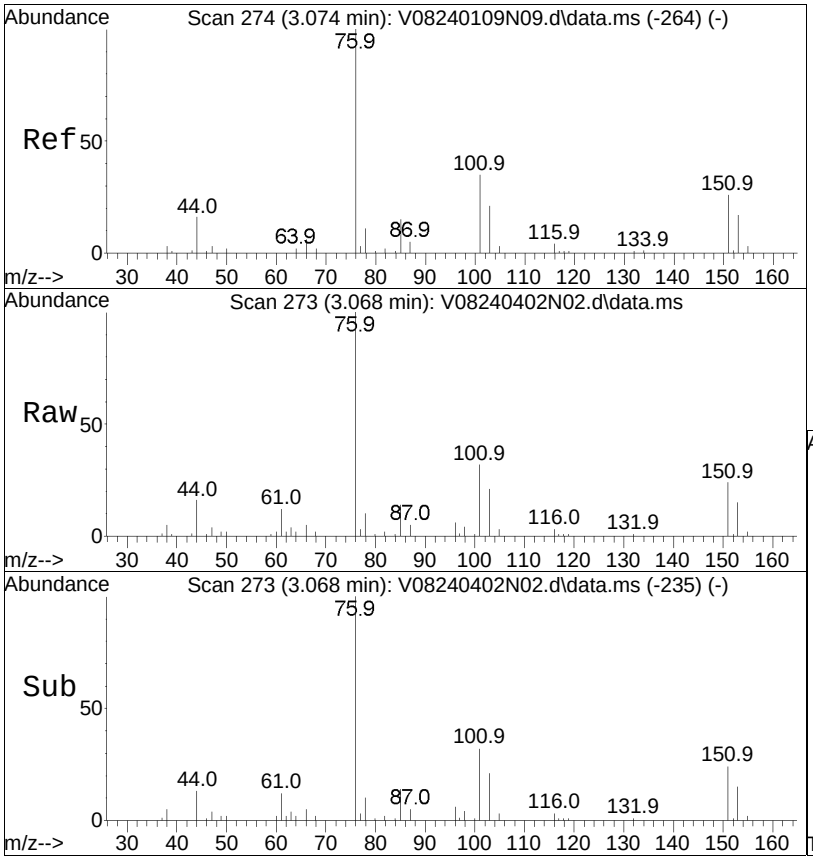


#11
Carbon disulfide
Concen: 9.69 ug/L
RT: 3.058 min Scan# 271
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 76 Resp: 278687

Ion	Ratio	Lower	Upper
76	100		
78	9.9	5.7	11.7

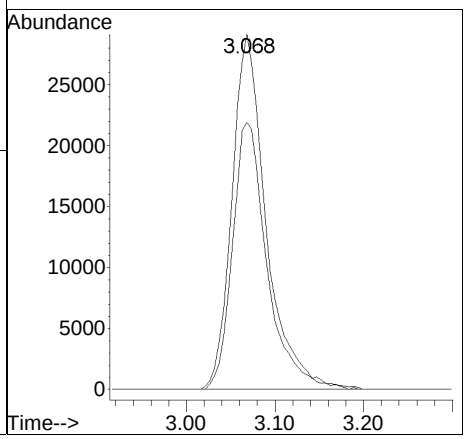


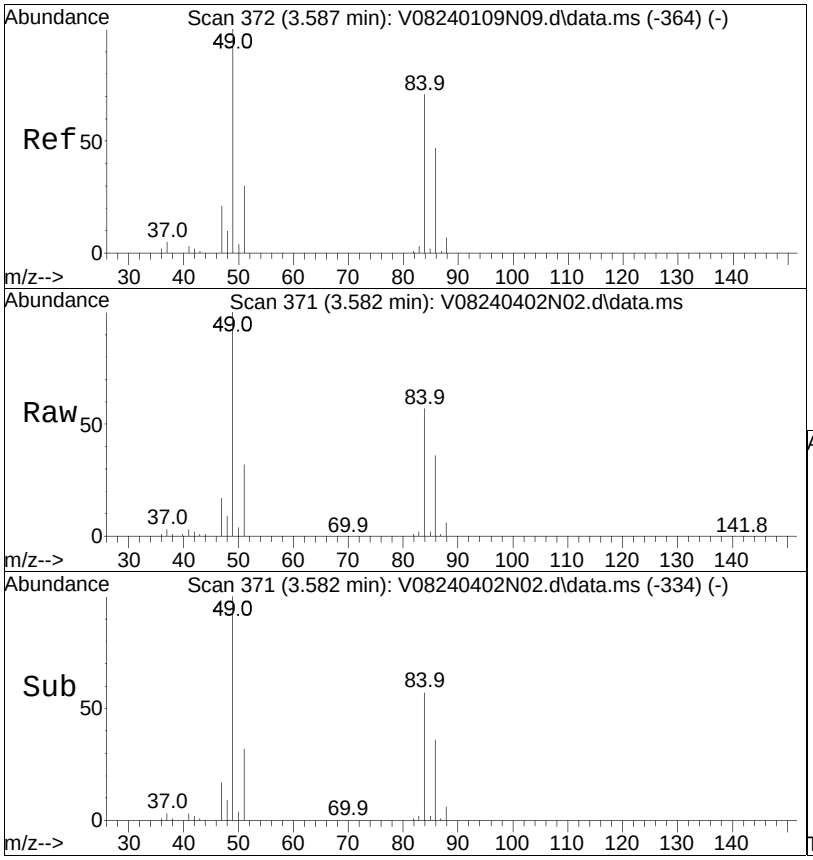


#12
Freon-113
Concen: 9.50 ug/L
RT: 3.068 min Scan# 273
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:101 Resp: 78164

Ion	Ratio	Lower	Upper
101	100		
151	76.0	59.8	89.8

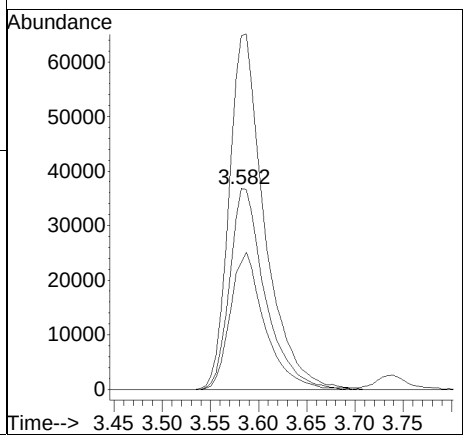


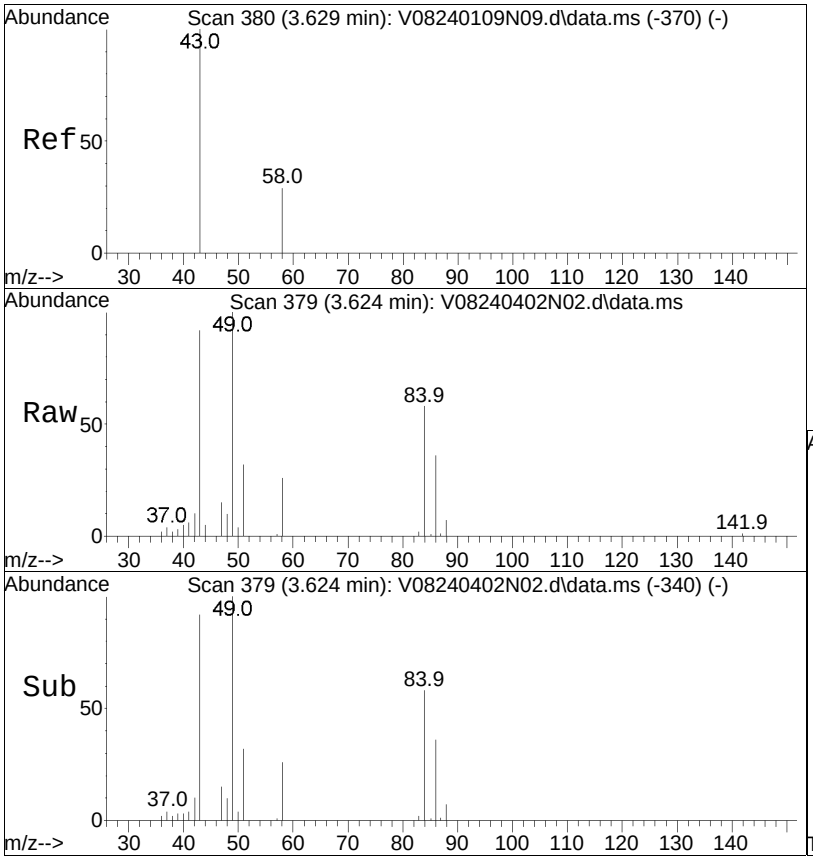


#15
Methylene chloride
Concen: 9.32 ug/L
RT: 3.582 min Scan# 371
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 84 Resp: 93954

Ion	Ratio	Lower	Upper
84	100		
86	66.7	40.4	83.8
49	176.7	120.0	249.2

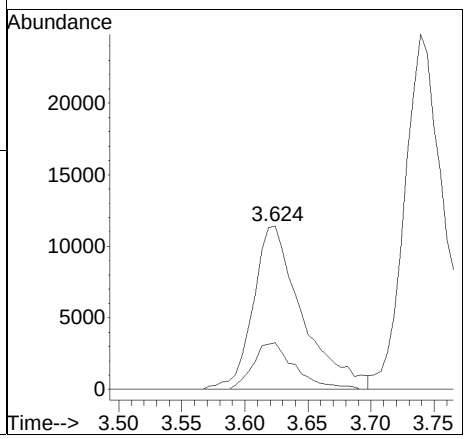


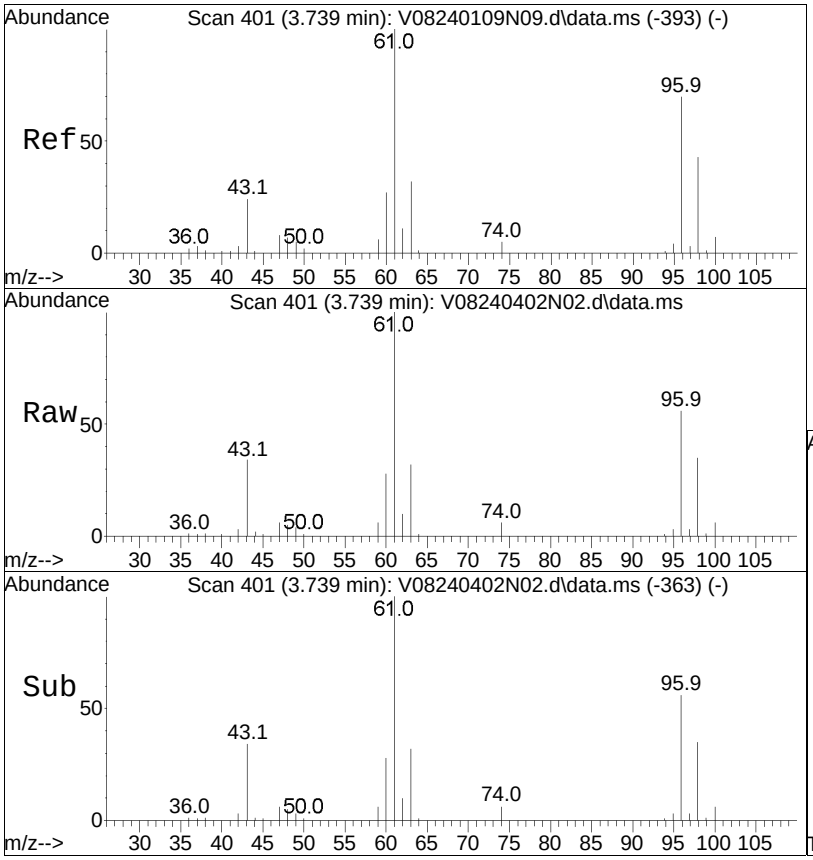


#17
Acetone
Concen: 12.62 ug/L
RT: 3.624 min Scan# 379
Delta R.T. 0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 43 Resp: 31003

Ion	Ratio	Lower	Upper
43	100		
58	24.5	24.2	36.4

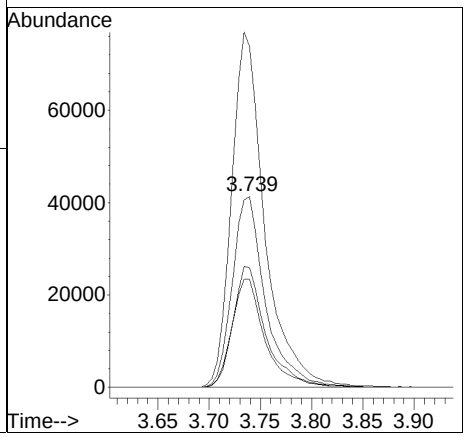


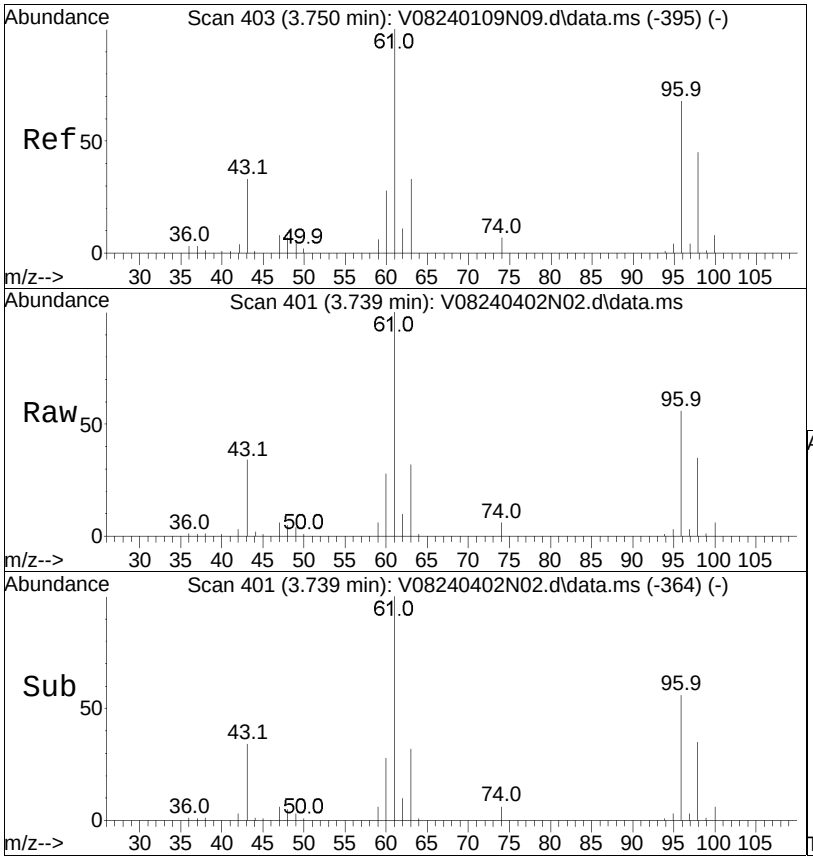


#18
trans-1,2-Dichloroethene
Concen: 9.75 ug/L
RT: 3.739 min Scan# 401
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 96 Resp: 93863

Ion	Ratio	Lower	Upper
96	100		
61	185.1	124.0	257.6
98	62.9	41.2	85.6
63	56.1	38.4	79.7

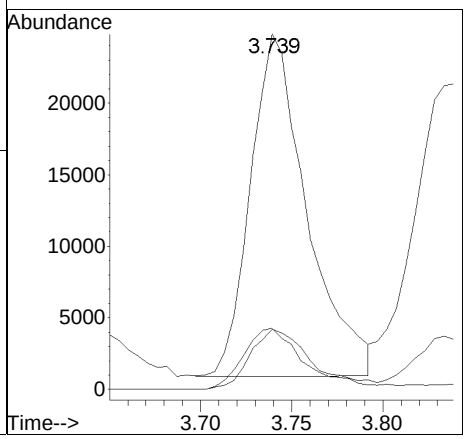


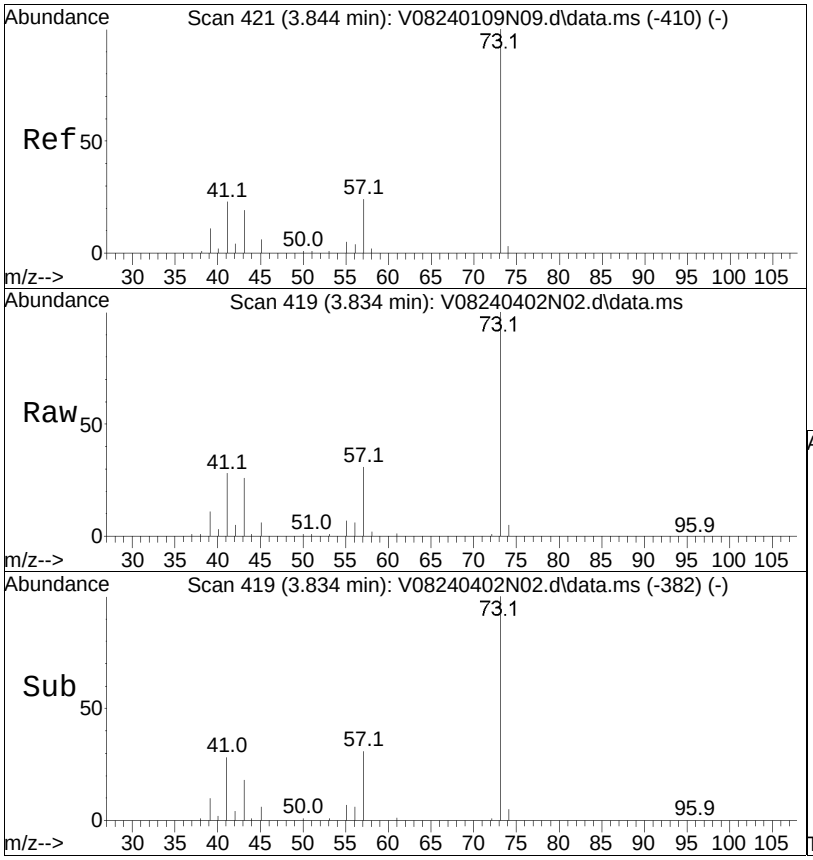


#19
Methyl acetate
Concen: 8.83 ug/L
RT: 3.739 min Scan# 401
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 43 Resp: 51616

Ion	Ratio	Lower	Upper
43	100		
74	19.3	14.2	21.4
59	19.2	5.0	7.6#

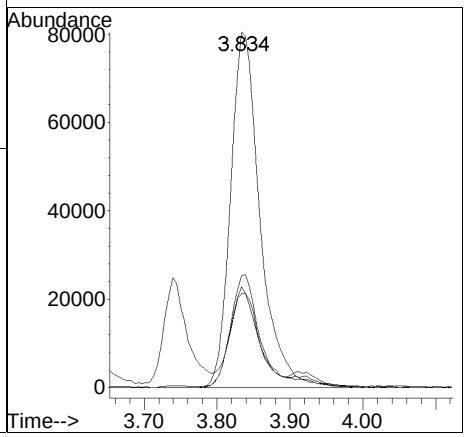


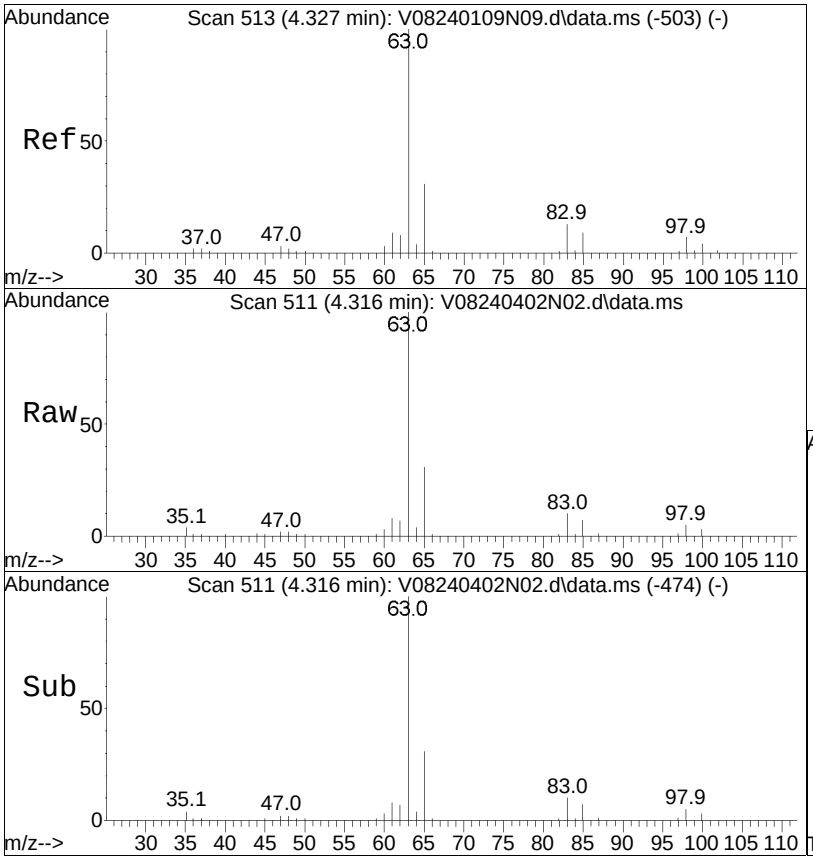


#20
Methyl tert-butyl ether
Concen: 10.04 ug/L
RT: 3.834 min Scan# 419
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 73 Resp: 226679

Ion	Ratio	Lower	Upper
73	100		
57	32.8	17.5	36.3
43	21.9	15.3	31.9
41	27.1	15.3	31.7

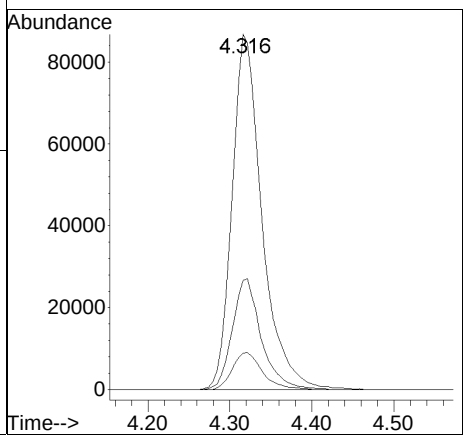


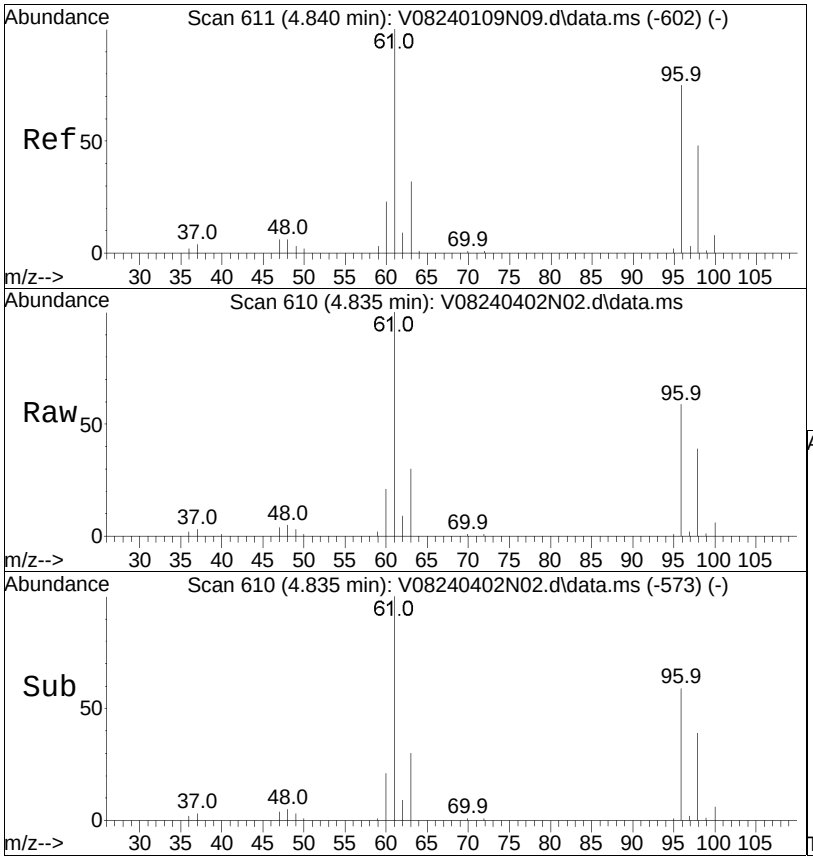


#23
1,1-Dichloroethane
Concen: 9.47 ug/L
RT: 4.316 min Scan# 511
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 63 Resp: 219990

Ion	Ratio	Lower	Upper
63	100		
65	30.1	11.0	51.0
83	10.4	0.0	31.8

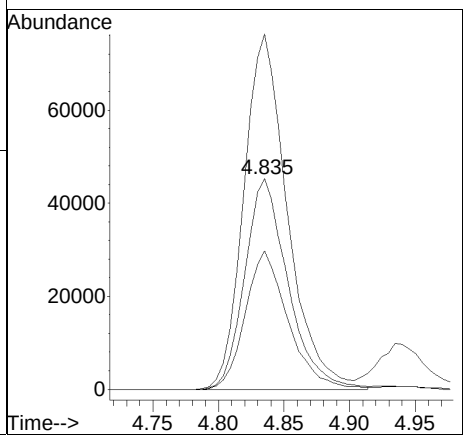


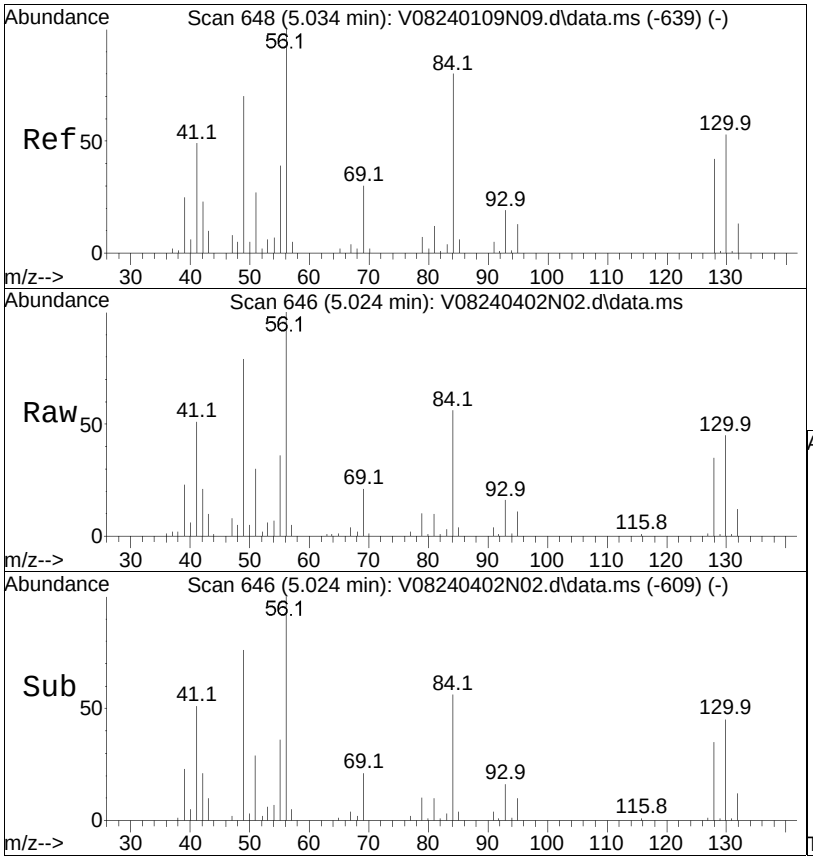


#28
cis-1,2-Dichloroethene
Concen: 9.62 ug/L
RT: 4.835 min Scan# 610
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 96 Resp: 103924

Ion	Ratio	Lower	Upper
96	100		
61	169.7	149.4	224.2
98	65.1	53.4	80.2

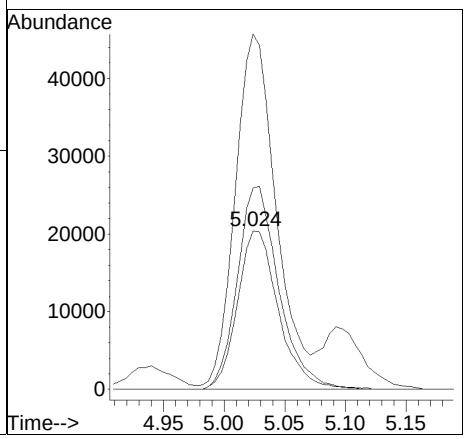


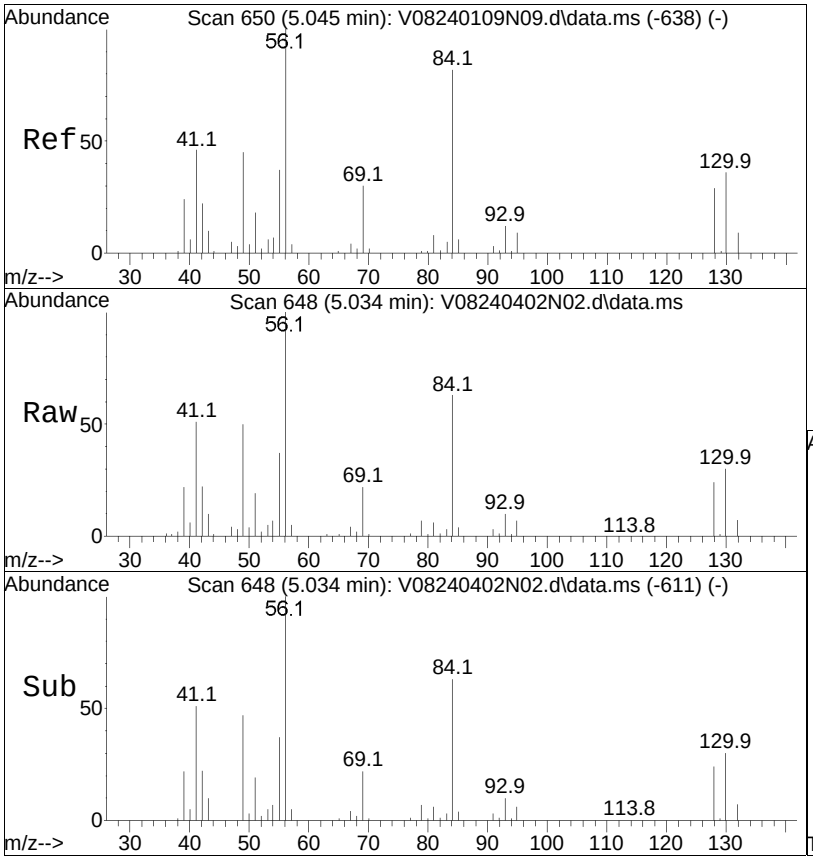


#30
Bromochloromethane
Concen: 9.87 ug/L
RT: 5.024 min Scan# 646
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:128 Resp: 47952

Ion	Ratio	Lower	Upper
128	100		
49	223.3	223.0	334.4
130	129.7	111.4	167.0

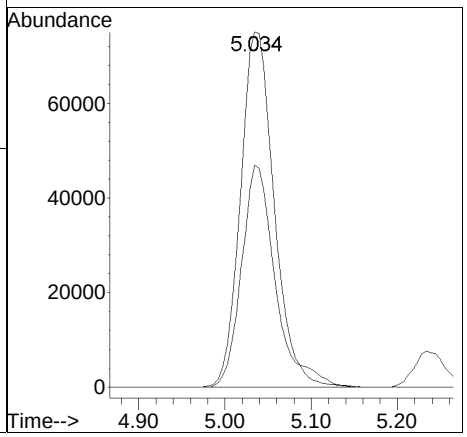


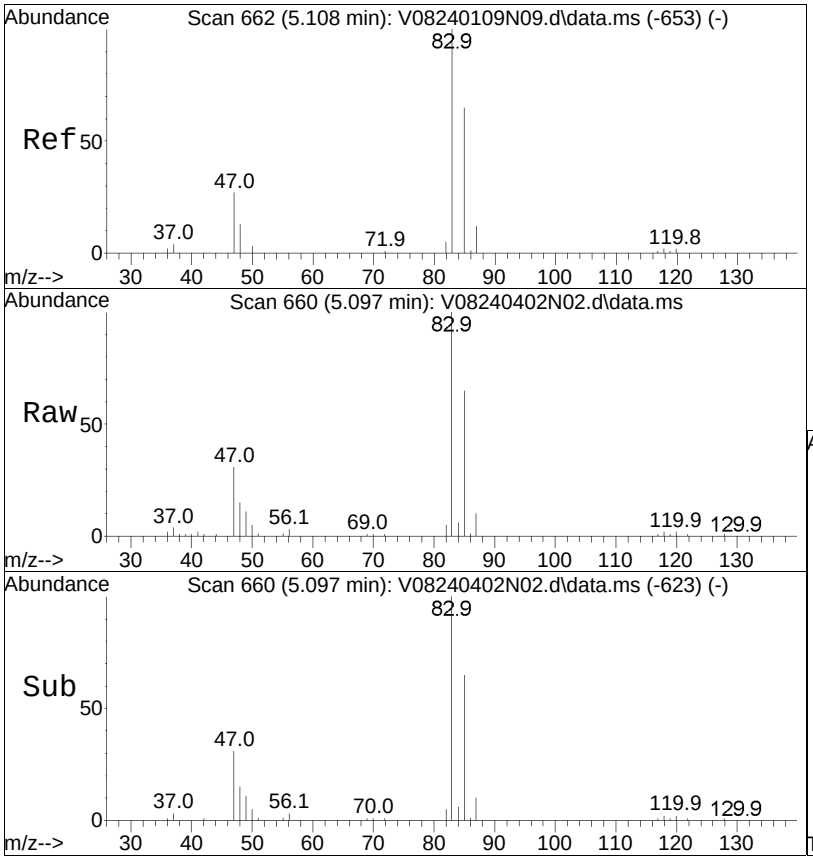


#31
Cyclohexane
Concen: 9.07 ug/L
RT: 5.034 min Scan# 648
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 56 Resp: 204098

Ion	Ratio	Lower	Upper
56	100		
84	63.3	38.4	79.8

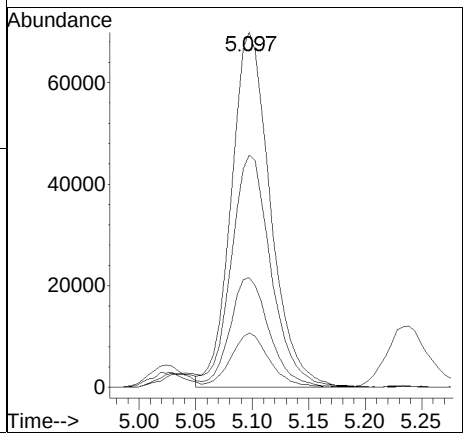


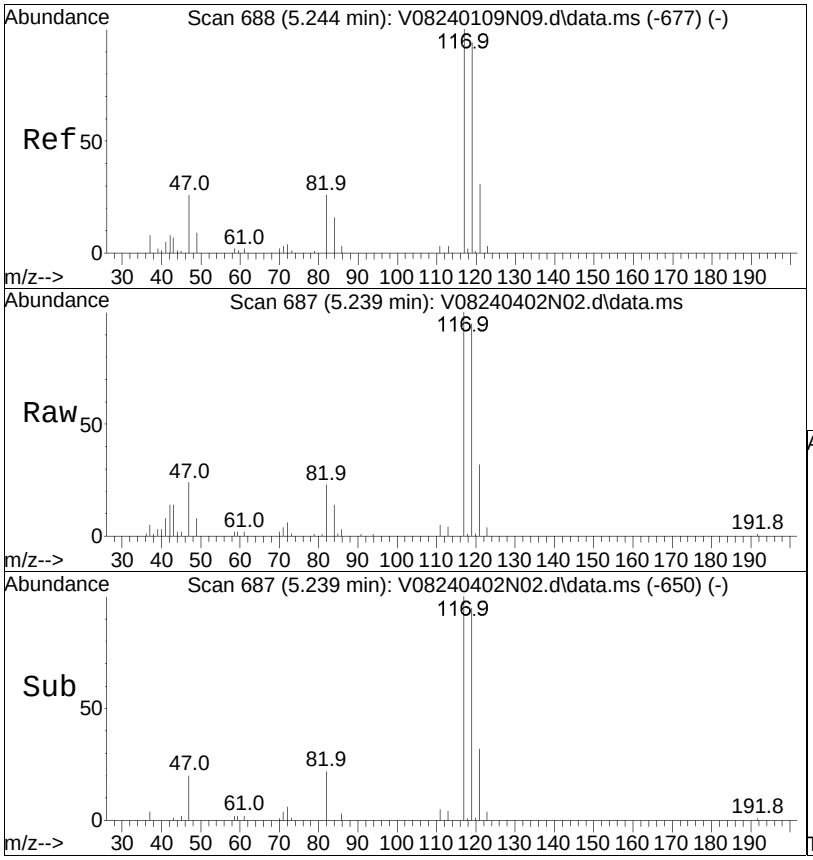


#32
Chloroform
Concen: 9.79 ug/L
RT: 5.097 min Scan# 660
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 83 Resp: 169483

Ion	Ratio	Lower	Upper
83	100		
85	66.3	41.5	86.1
47	30.5	19.0	39.4
48	15.1	9.9	20.5

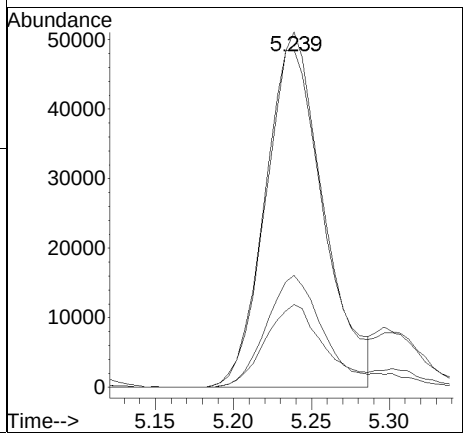


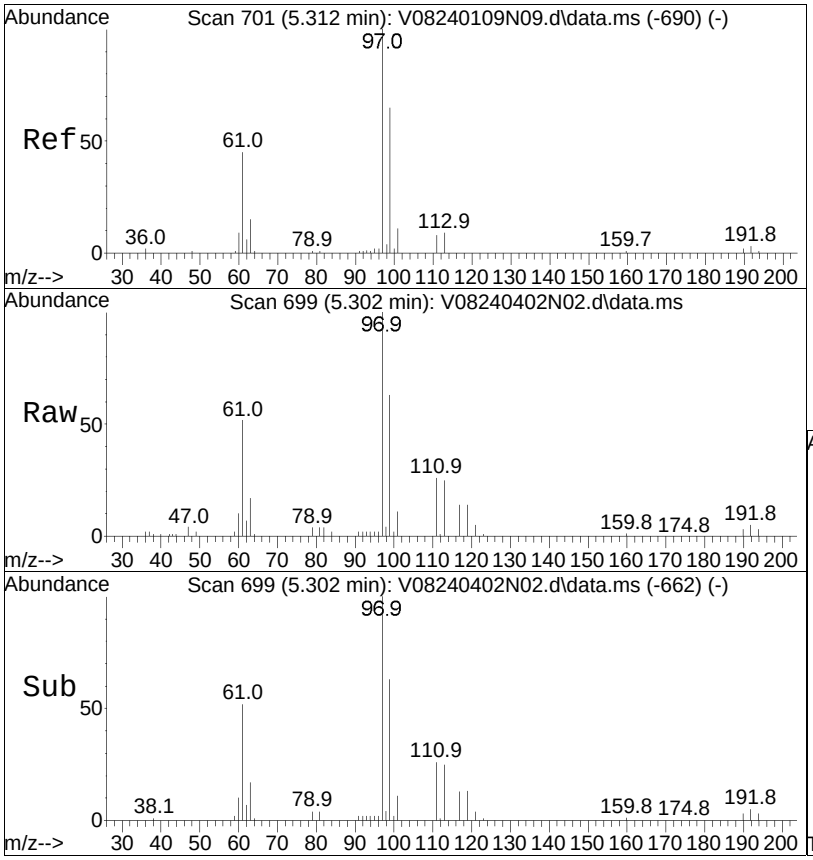


#34
Carbon tetrachloride
Concen: 9.56 ug/L
RT: 5.239 min Scan# 687
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:117 Resp: 131610

Ion	Ratio	Lower	Upper
117	100		
119	96.1	62.4	129.6
121	30.9	19.5	40.5
82	26.8	17.0	35.4

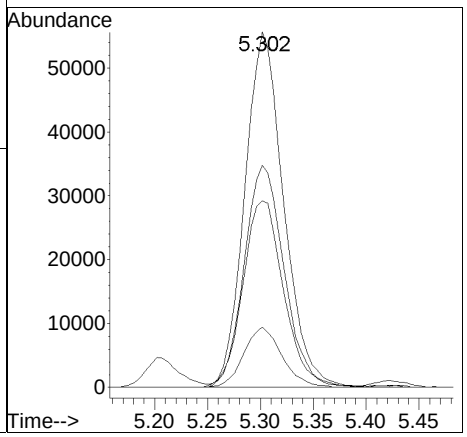


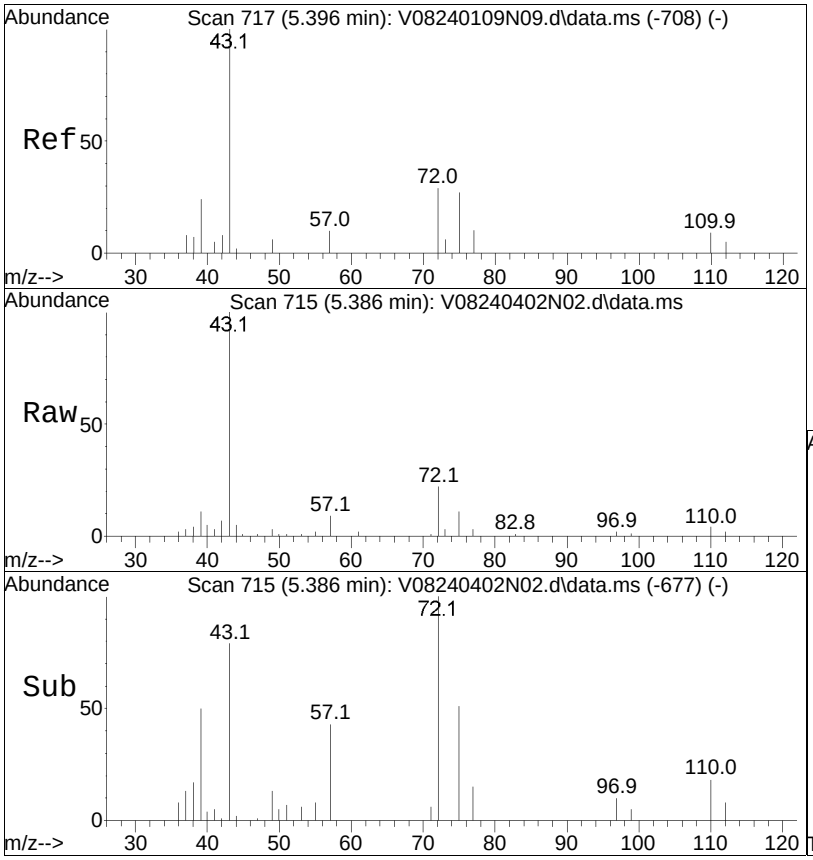


#37
1,1,1-Trichloroethane
Concen: 9.55 ug/L
RT: 5.302 min Scan# 699
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 97 Resp: 142798

Ion	Ratio	Lower	Upper
97	100		
99	64.1	40.7	84.5
61	54.9	35.4	73.4
63	16.6	5.0	10.4#

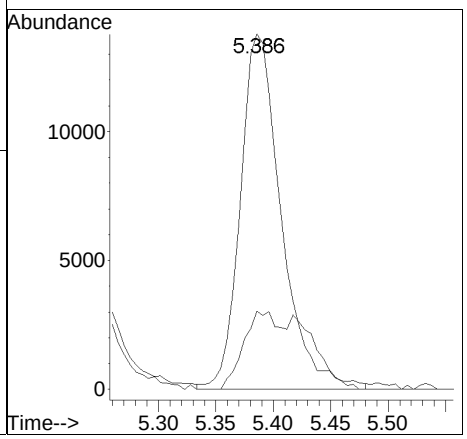


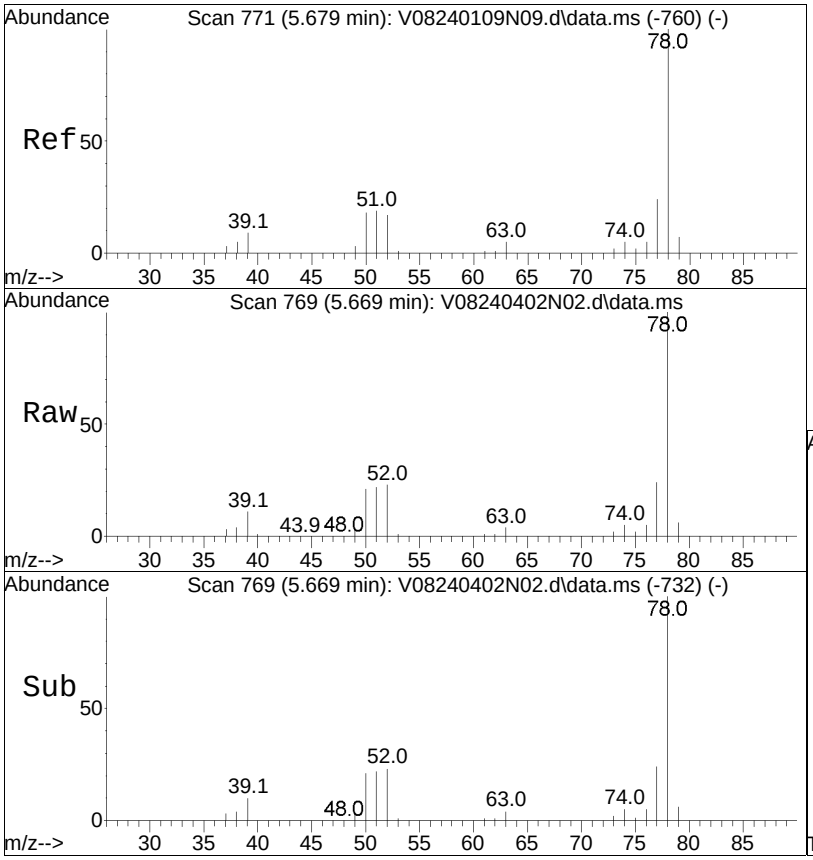


#39
2-Butanone
Concen: 9.36 ug/L M3
RT: 5.386 min Scan# 715
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 43 Resp: 34232

Ion	Ratio	Lower	Upper
43	100		
72	34.3	10.9	16.3#

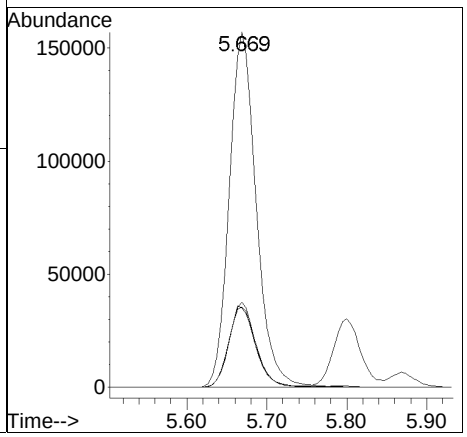


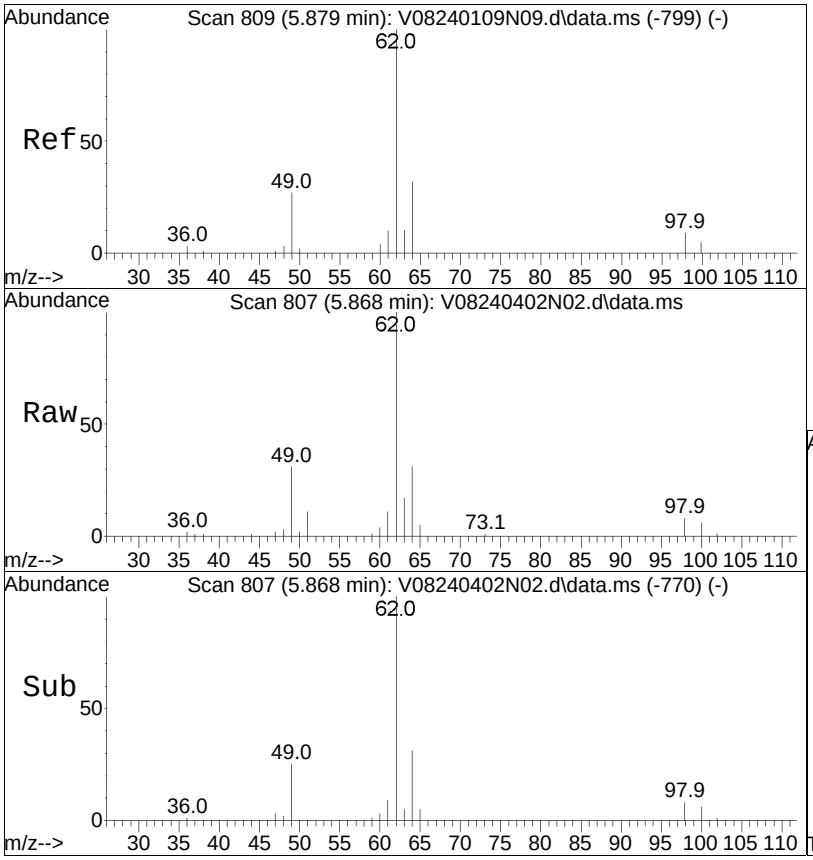


#41
Benzene
Concen: 9.65 ug/L
RT: 5.669 min Scan# 769
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 78 Resp: 368805

Ion	Ratio	Lower	Upper
78	100		
77	23.7	15.7	32.7
51	23.1	16.0	33.2
52	22.7	15.3	31.9

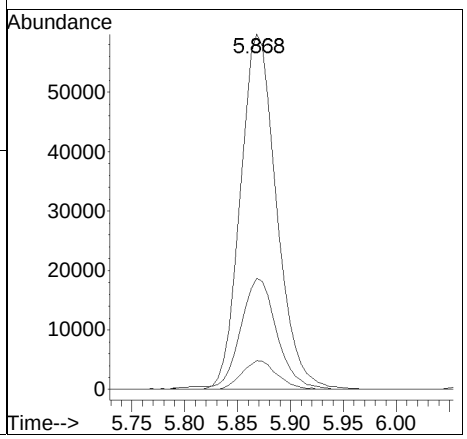


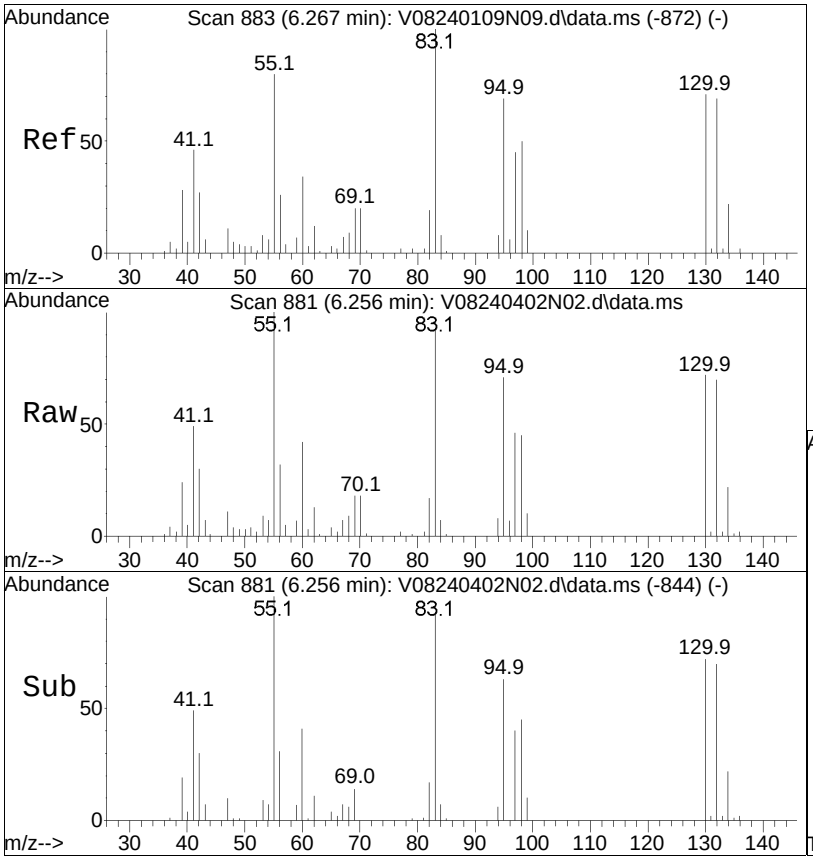


#44
1,2-Dichloroethane
Concen: 9.52 ug/L
RT: 5.868 min Scan# 807
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 62 Resp: 141967

Ion	Ratio	Lower	Upper
62	100		
64	31.9	11.2	51.2
98	7.9	0.0	26.1

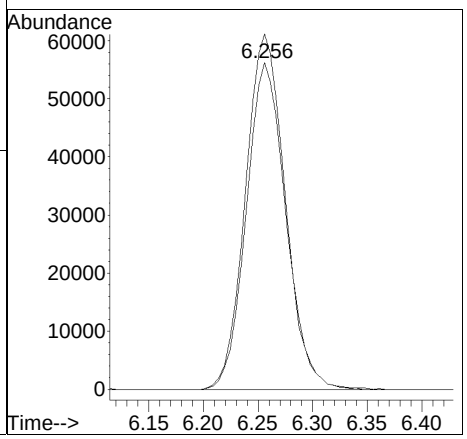


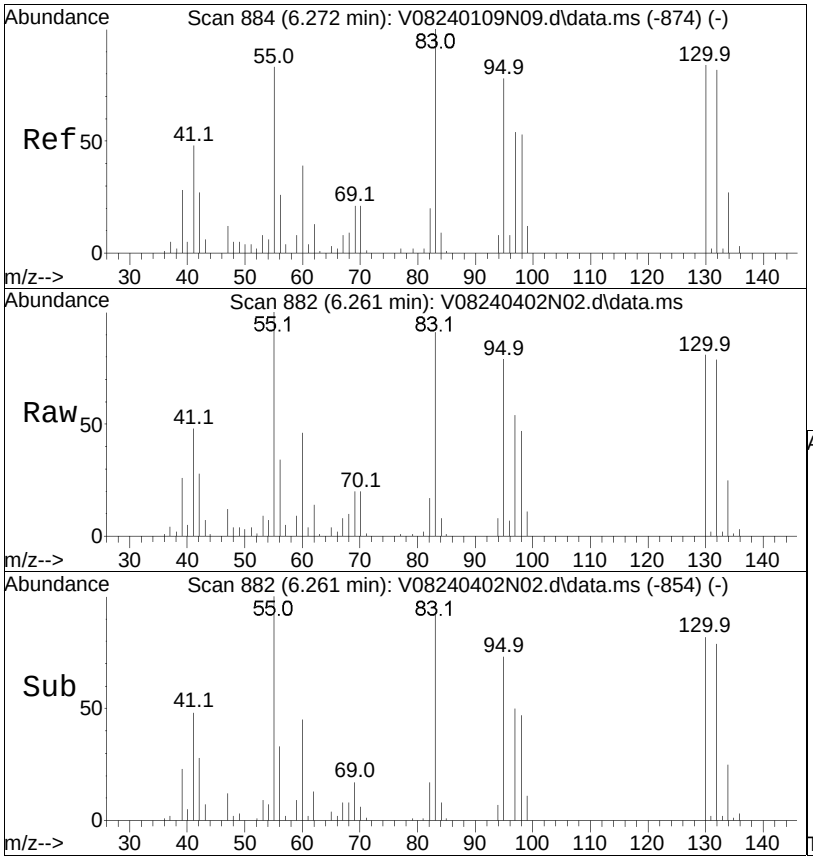


#47
Methyl cyclohexane
Concen: 9.51 ug/L
RT: 6.256 min Scan# 881
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 83 Resp: 140864

Ion	Ratio	Lower	Upper
83	100		
55	110.1	88.3	132.5

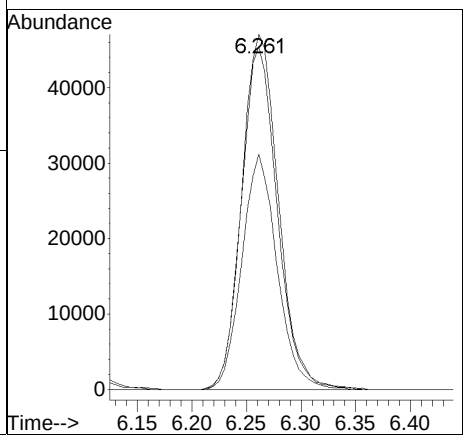


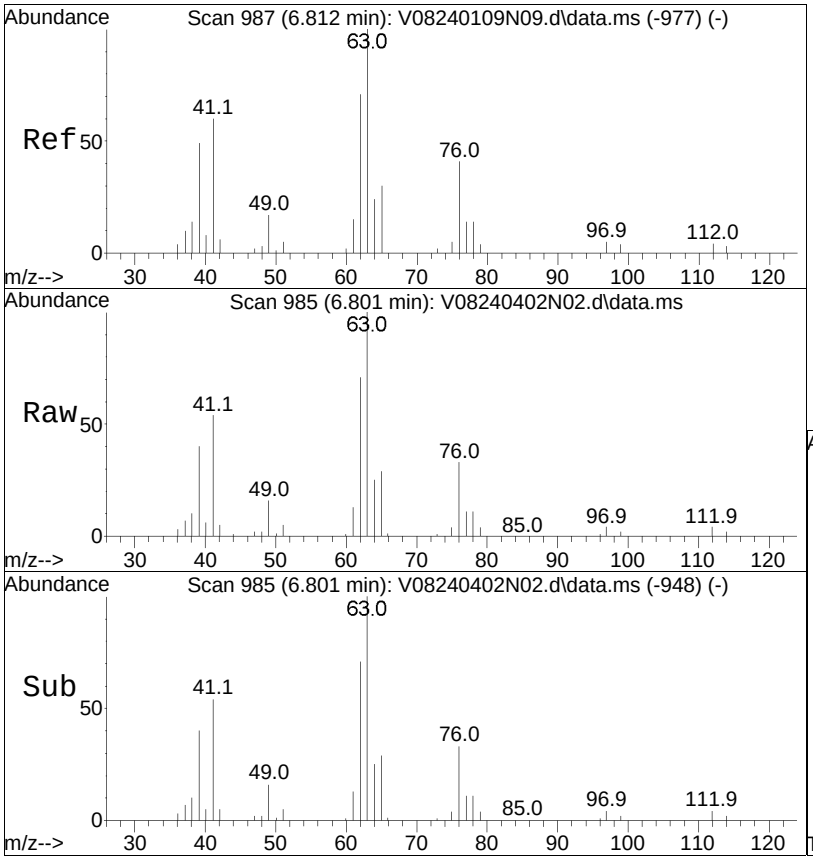


#48
Trichloroethene
Concen: 10.06 ug/L
RT: 6.261 min Scan# 882
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 95 Resp: 103881

Ion	Ratio	Lower	Upper
95	100		
97	67.5	55.5	83.3
130	105.6	76.6	115.0

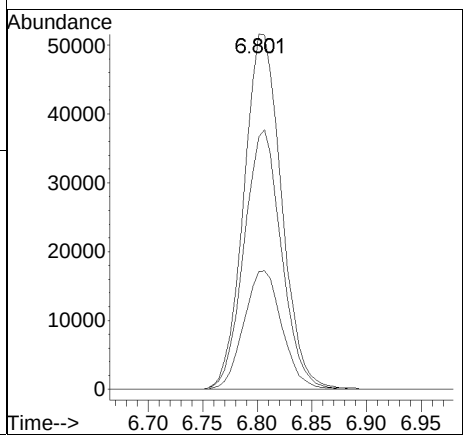


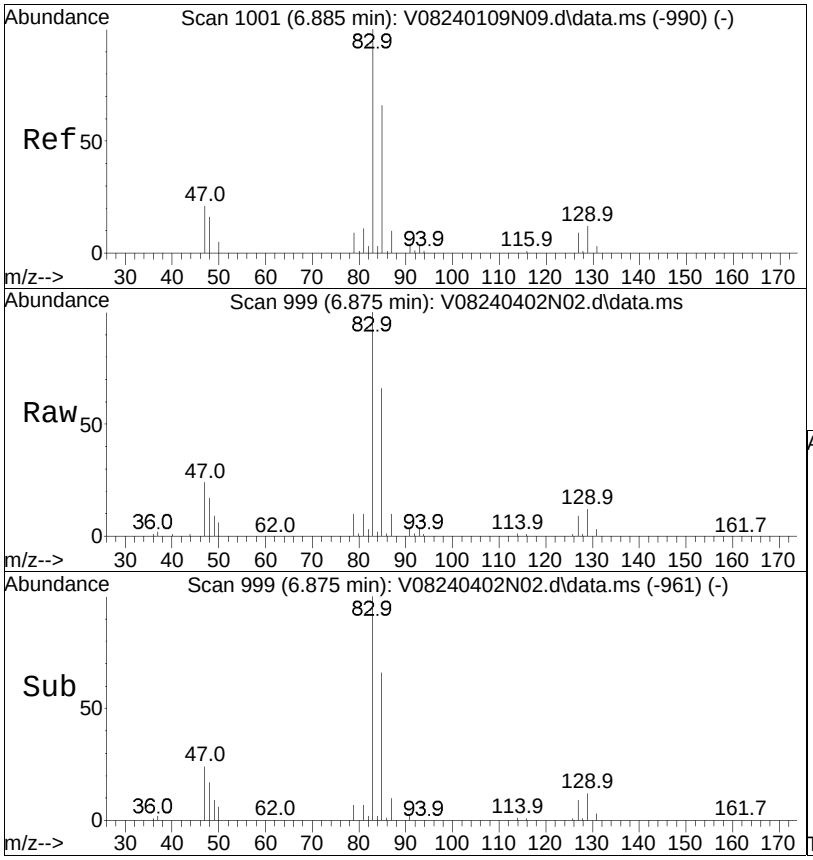


#51
1,2-Dichloropropane
Concen: 9.48 ug/L
RT: 6.801 min Scan# 985
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 63 Resp: 124035

Ion	Ratio	Lower	Upper
63	100		
62	72.4	58.6	87.8
76	33.7	38.0	57.0#

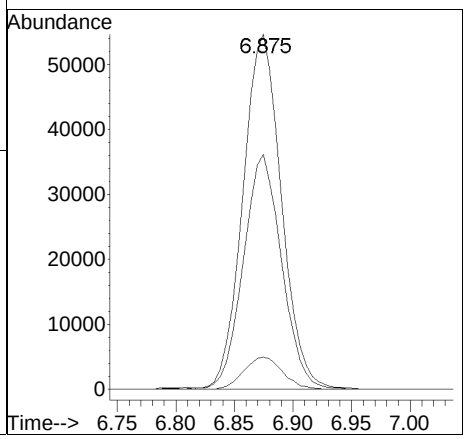


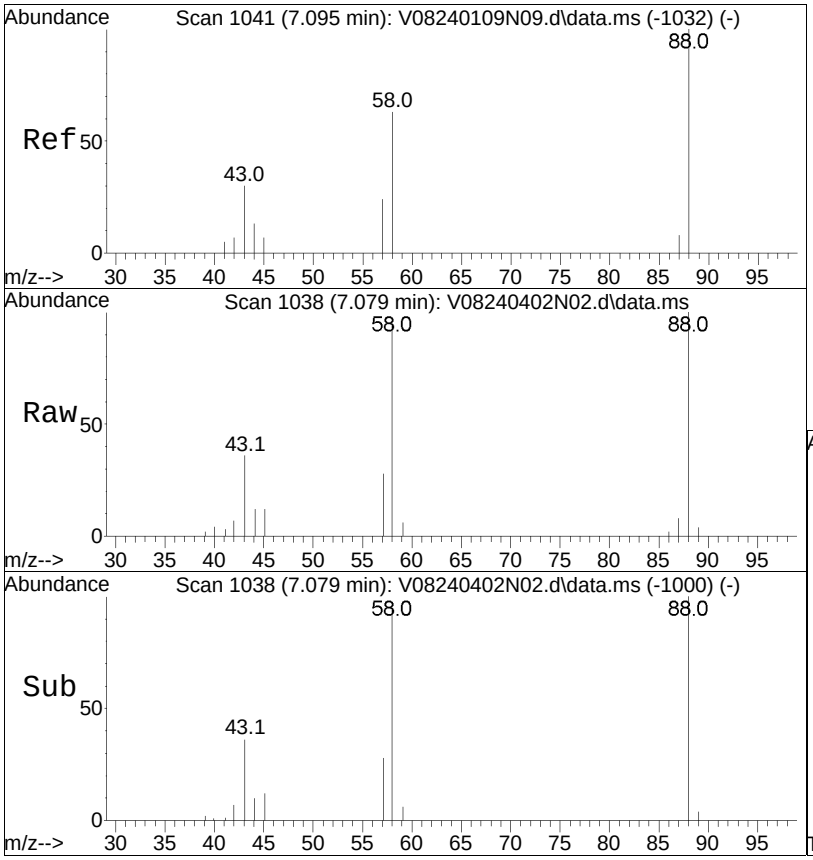


#54
Bromodichloromethane
Concen: 9.55 ug/L
RT: 6.875 min Scan# 999
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 83 Resp: 125199

Ion	Ratio	Lower	Upper
83	100		
85	65.8	52.3	78.5
127	9.2	6.2	9.4

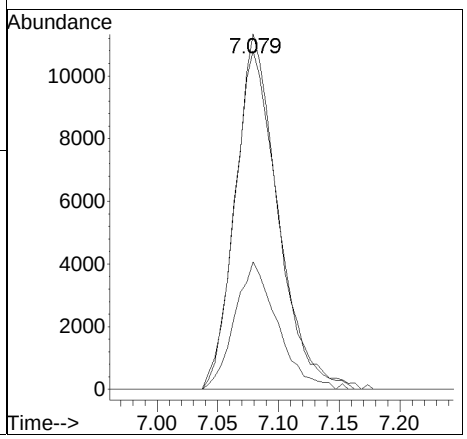


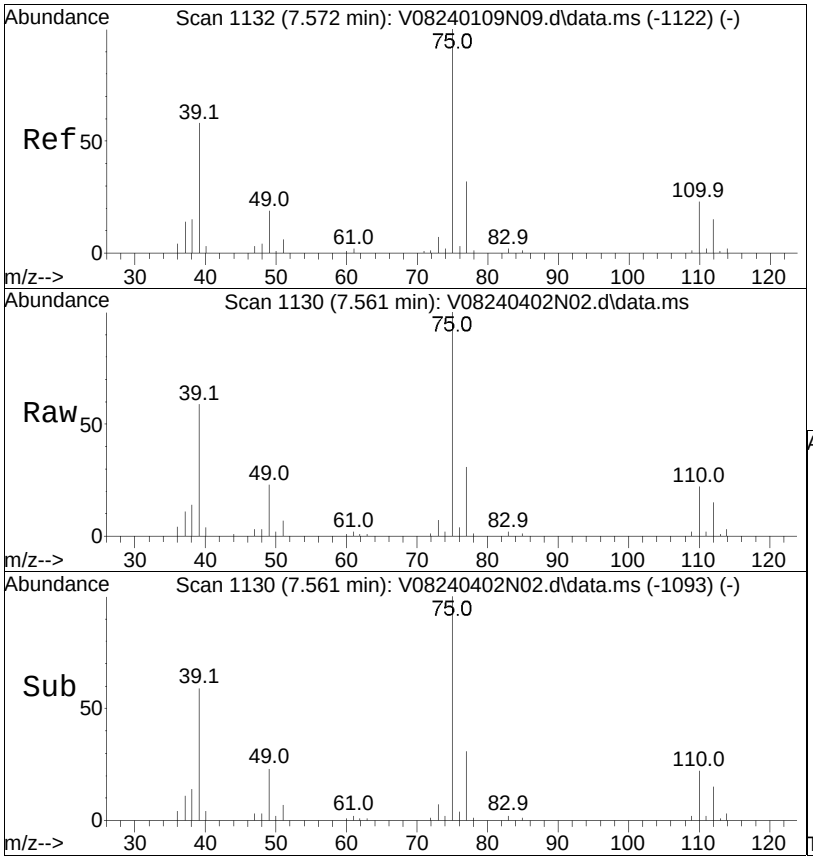


#57
1,4-Dioxane
Concen: 474.28 ug/L
RT: 7.079 min Scan# 1038
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 88 Resp: 27562

Ion	Ratio	Lower	Upper
88	100		
58	98.2	76.7	115.1
43	36.2	36.2	54.2

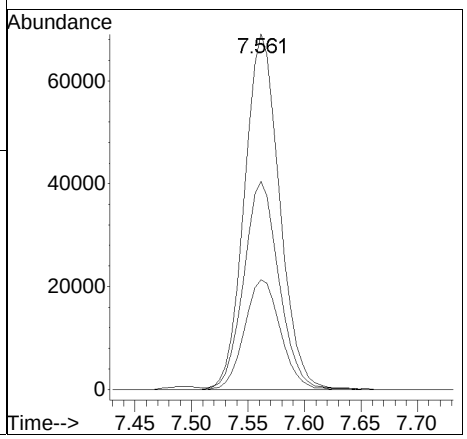


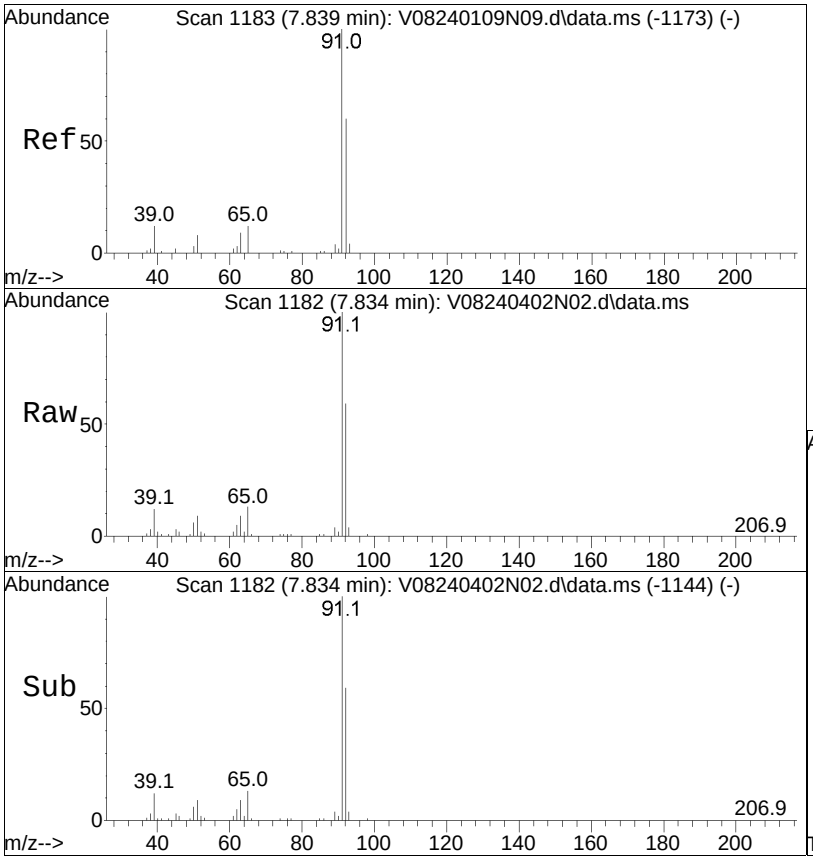


#58
cis-1,3-Dichloropropene
Concen: 10.08 ug/L
RT: 7.561 min Scan# 1130
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 75 Resp: 149147

Ion	Ratio	Lower	Upper
75	100		
77	31.5	25.0	37.4
39	58.8	50.1	75.1

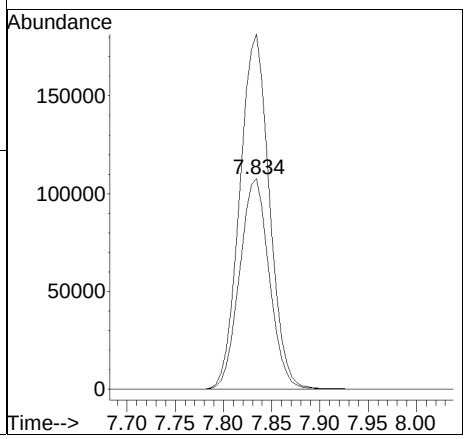


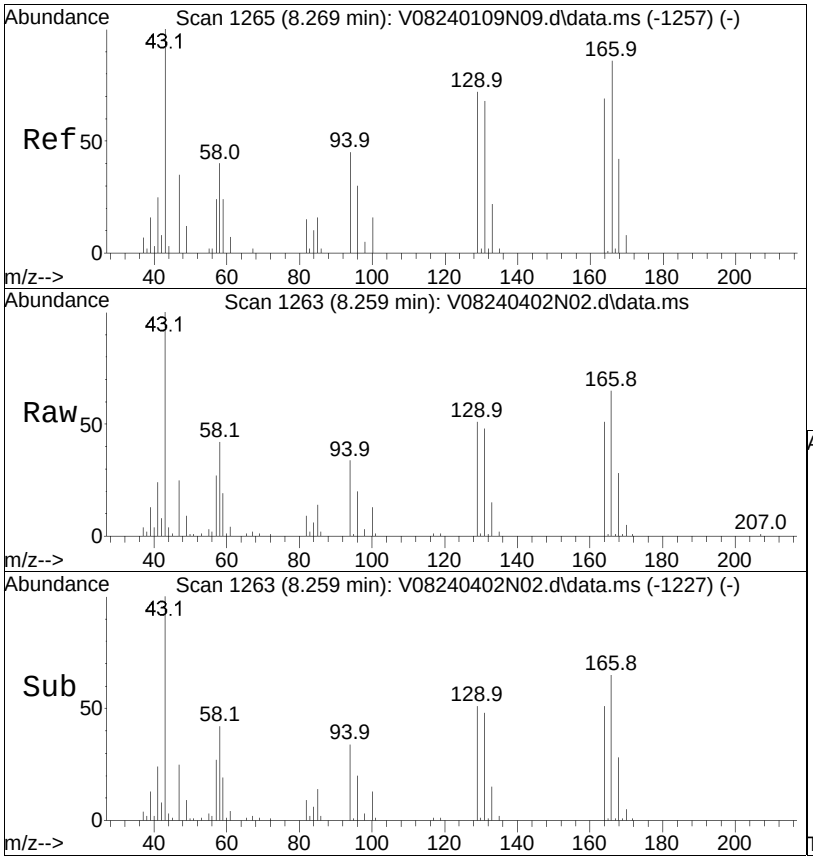


#61
Toluene
Concen: 10.02 ug/L
RT: 7.834 min Scan# 1182
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 92 Resp: 231890

Ion	Ratio	Lower	Upper
92	100		
91	168.0	139.8	209.6

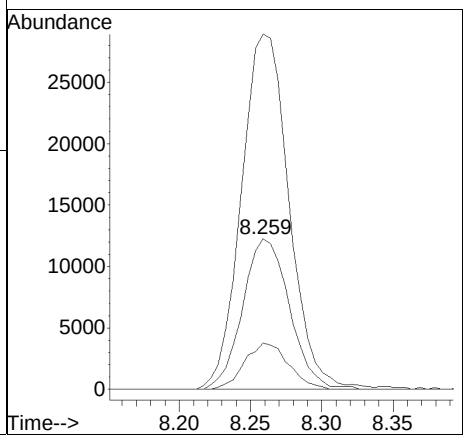


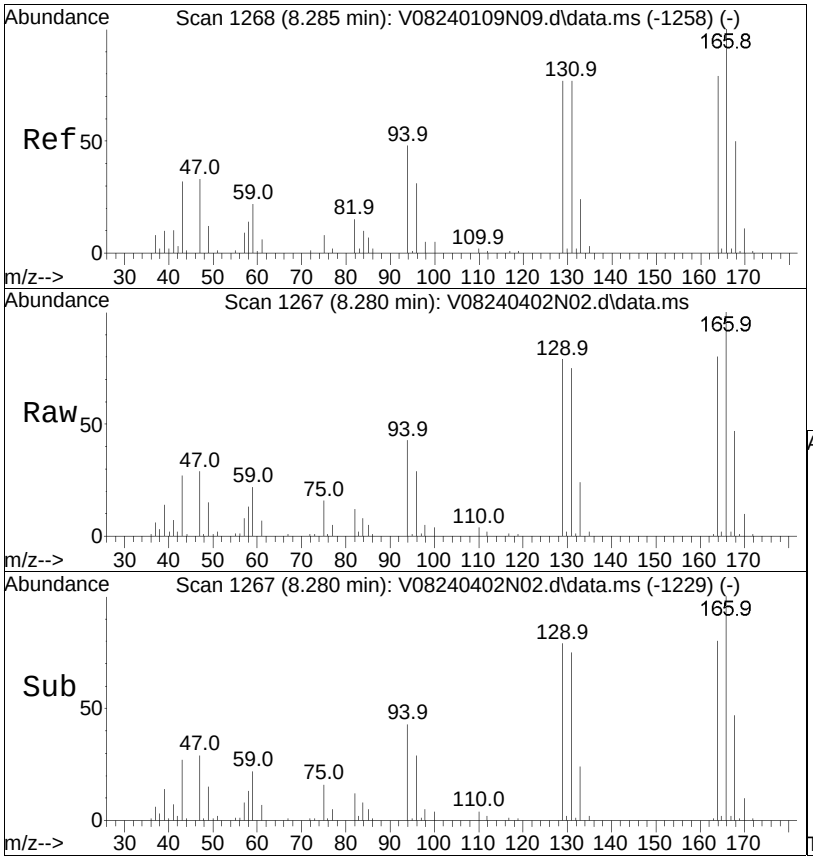


#62
4-Methyl-2-pentanone
Concen: 9.86 ug/L
RT: 8.259 min Scan# 1263
Delta R.T. -0.010 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 58 Resp: 28046

Ion	Ratio	Lower	Upper
58	100		
100	28.9	20.2	30.2
43	239.6	196.6	295.0

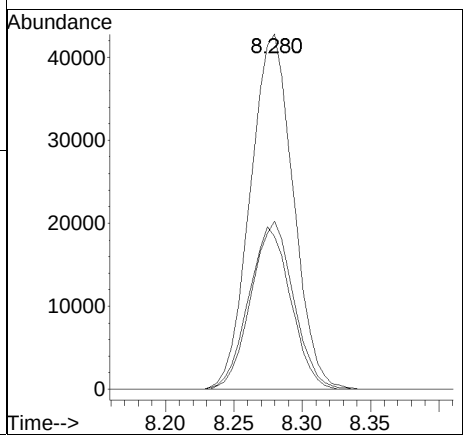


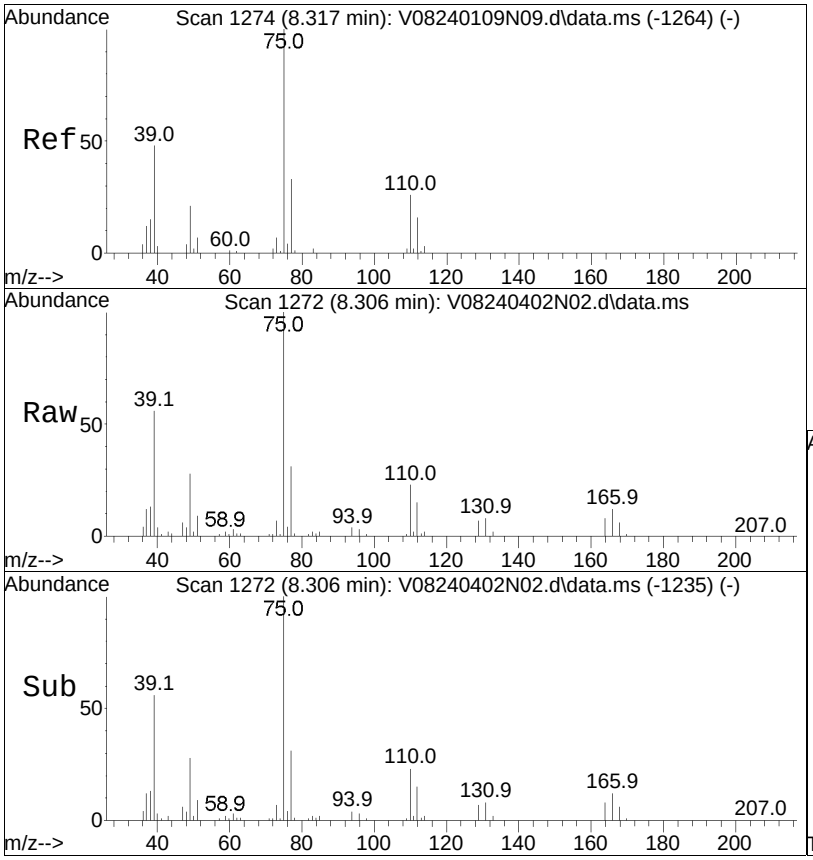


#63
Tetrachloroethene
Concen: 9.74 ug/L
RT: 8.280 min Scan# 1267
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:166 Resp: 93593

Ion	Ratio	Lower	Upper
166	100		
168	46.6	28.2	68.2
94	45.0	38.4	78.4

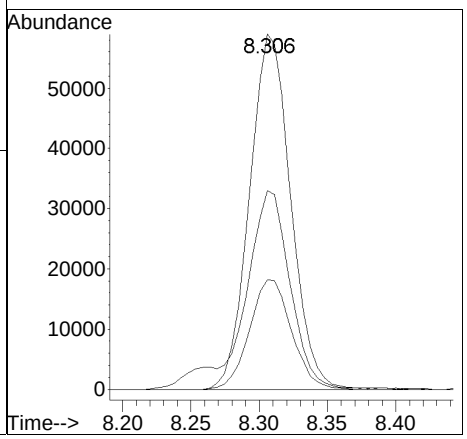


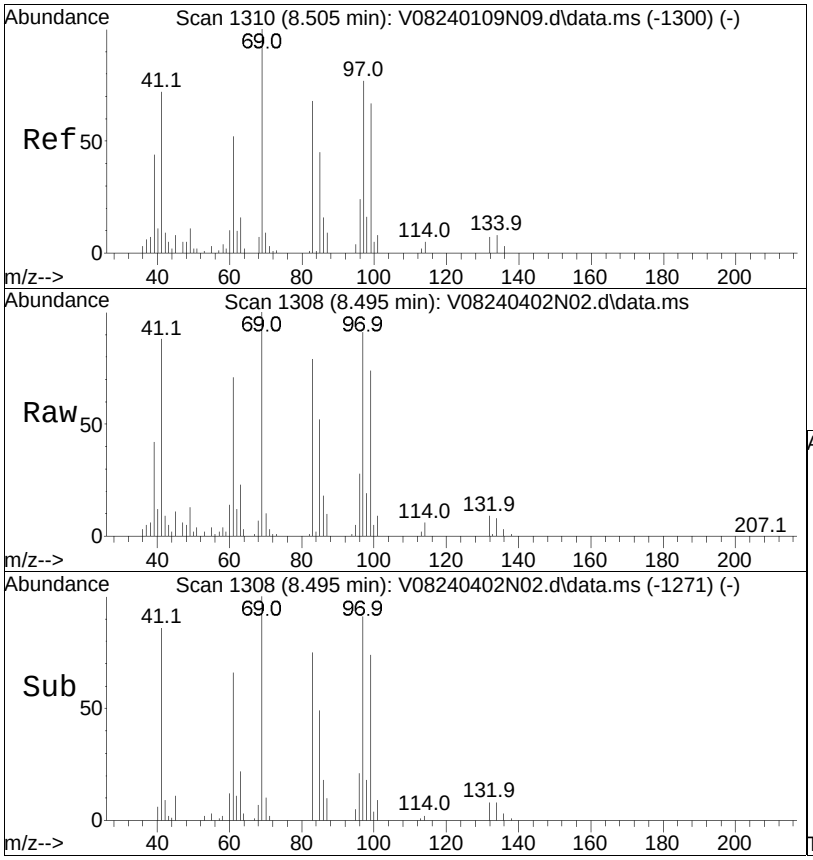


#65
trans-1,3-Dichloropropene
Concen: 10.40 ug/L
RT: 8.306 min Scan# 1272
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 75 Resp: 123623

Ion	Ratio	Lower	Upper
75	100		
77	31.4	12.4	52.4
39	62.3	42.8	82.8

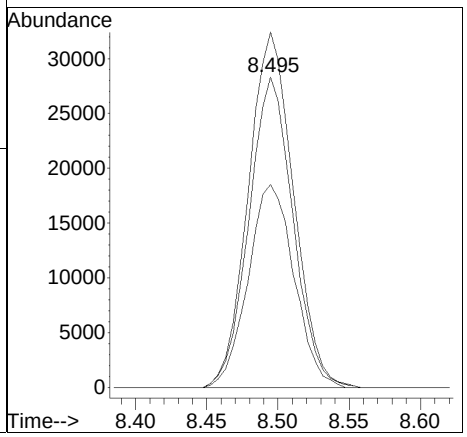


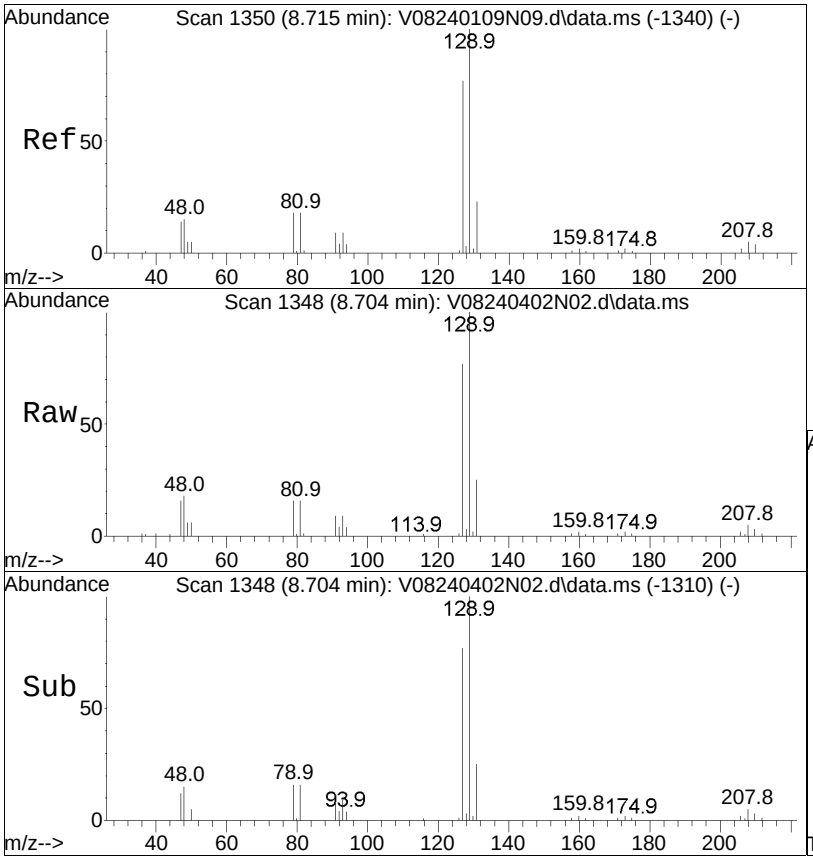


#68
1,1,2-Trichloroethane
Concen: 10.40 ug/L
RT: 8.495 min Scan# 1308
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 83 Resp: 60942

Ion	Ratio	Lower	Upper
83	100		
97	117.2	89.8	129.8
85	68.2	44.4	84.4

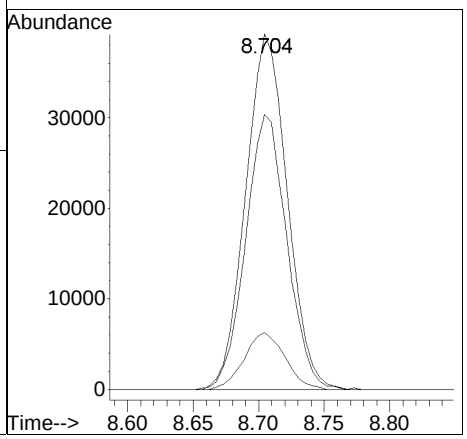


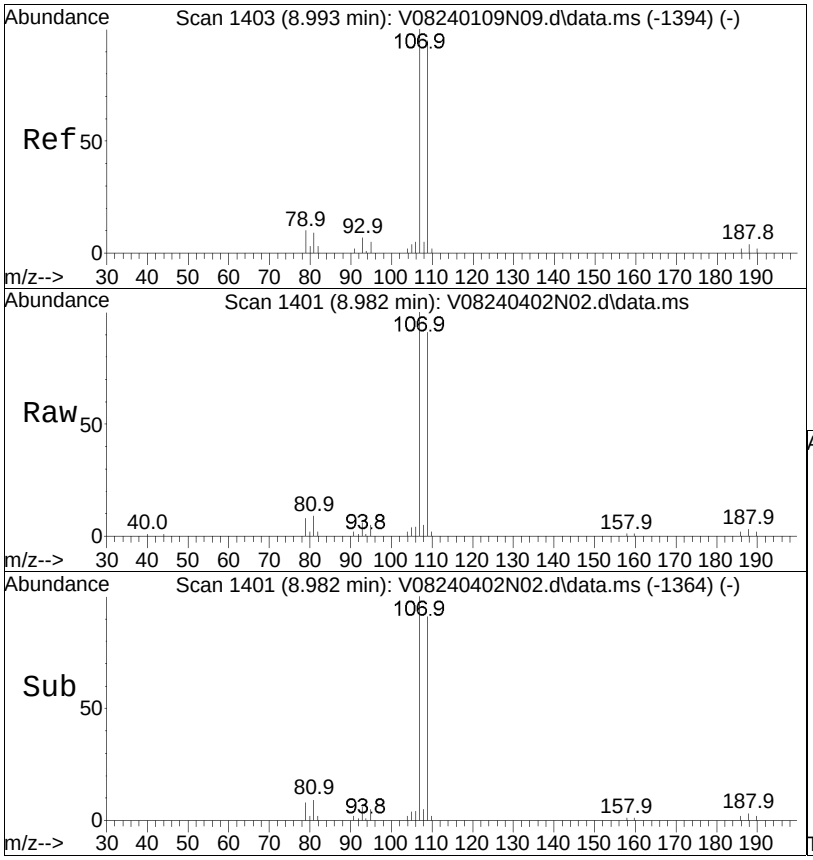


#69
Chlorodibromomethane
Concen: 9.73 ug/L
RT: 8.704 min Scan# 1348
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:129 Resp: 86607

Ion	Ratio	Lower	Upper
129	100		
81	15.7	2.9	42.9
127	76.6	57.8	97.8

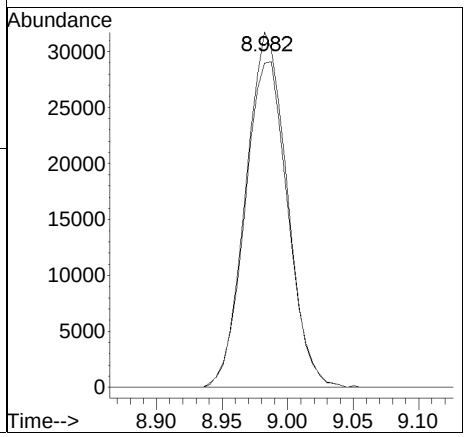


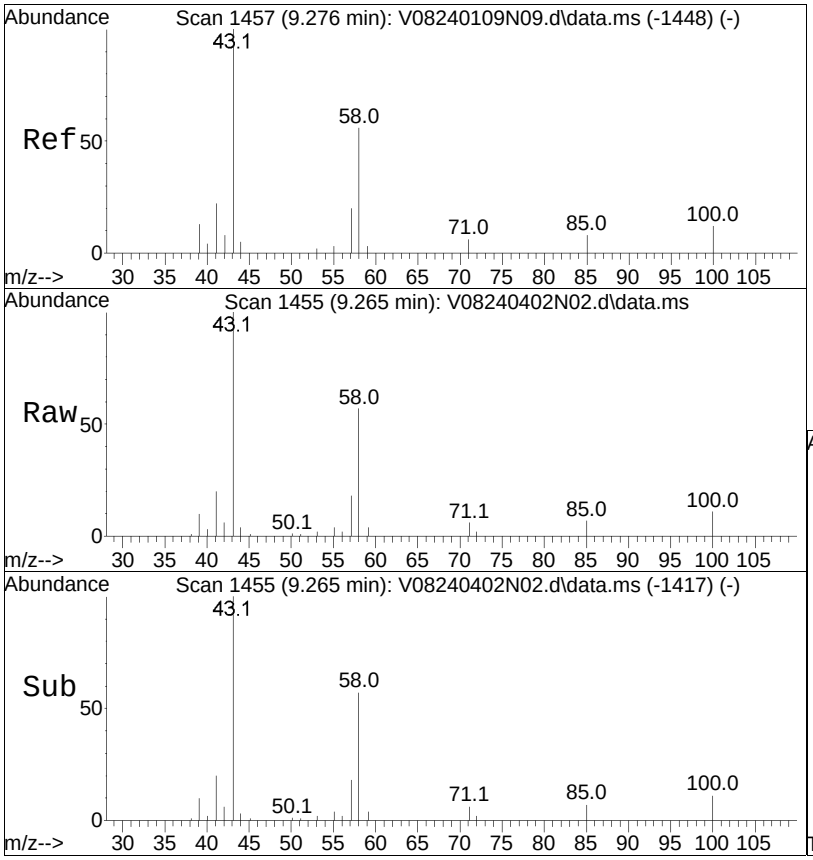


#71
1,2-Dibromoethane
Concen: 10.30 ug/L
RT: 8.982 min Scan# 1401
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:107 Resp: 69524

Ion	Ratio	Lower	Upper
107	100		
109	94.9	74.3	111.5

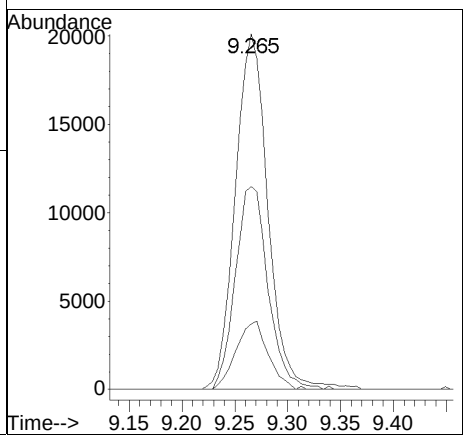


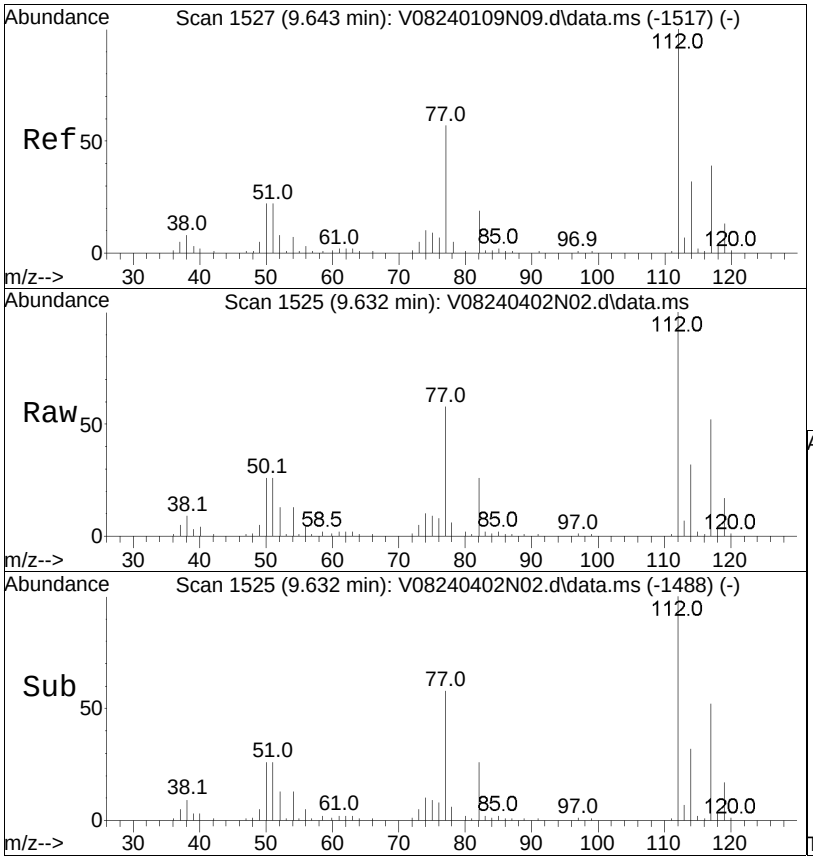


#72
2-Hexanone
Concen: 9.45 ug/L
RT: 9.265 min Scan# 1455
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 43 Resp: 43289

Ion	Ratio	Lower	Upper
43	100		
58	57.2	41.2	61.8
57	18.9	17.2	25.8

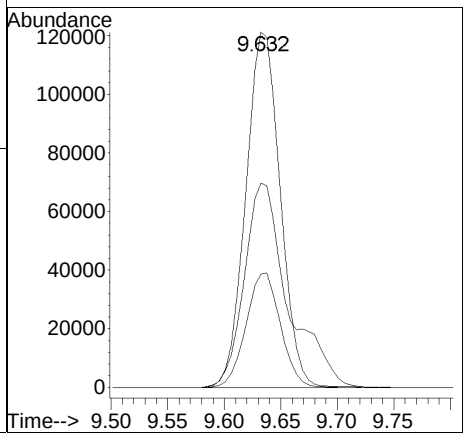


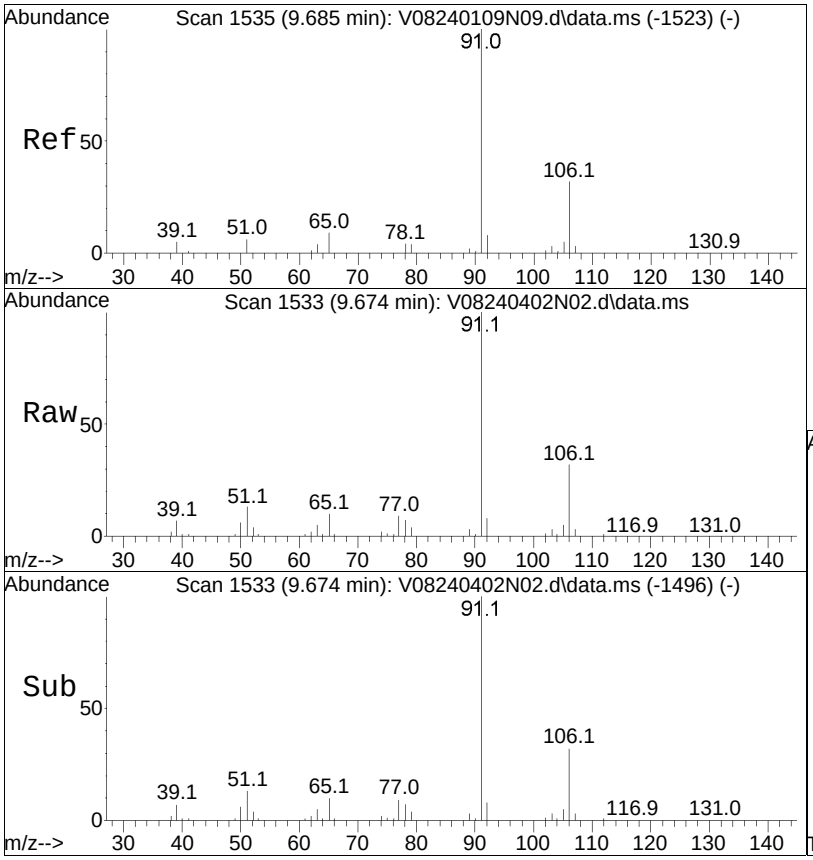


#73
Chlorobenzene
Concen: 9.93 ug/L
RT: 9.632 min Scan# 1525
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:112 Resp: 256741

Ion	Ratio	Lower	Upper
112	100		
77	73.2	55.4	83.0
114	32.1	25.4	38.2

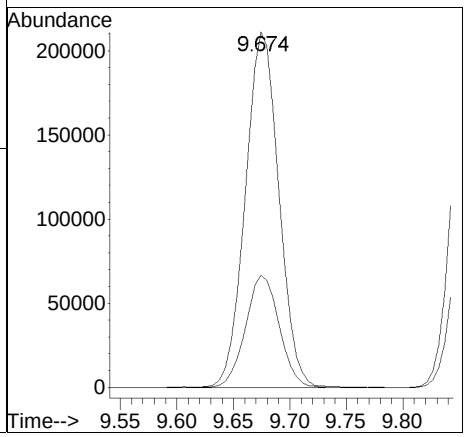


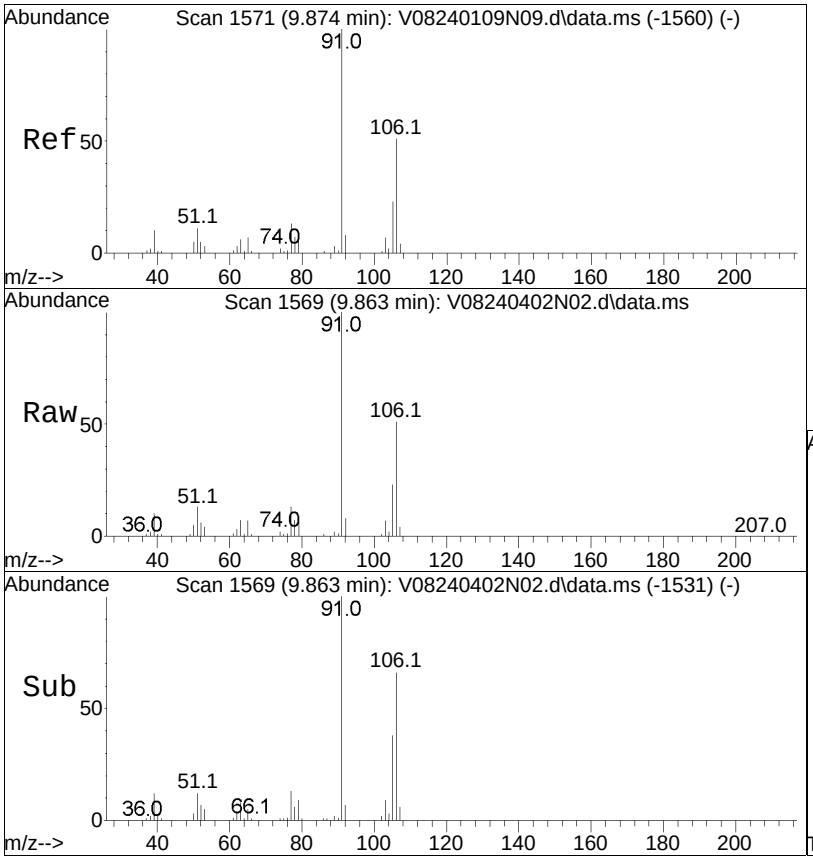


#74
Ethylbenzene
Concen: 10.10 ug/L
RT: 9.674 min Scan# 1533
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 91 Resp: 435108

Ion	Ratio	Lower	Upper
91	100		
106	31.6	24.3	36.5

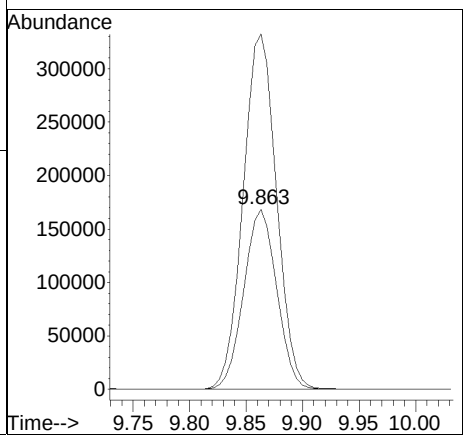


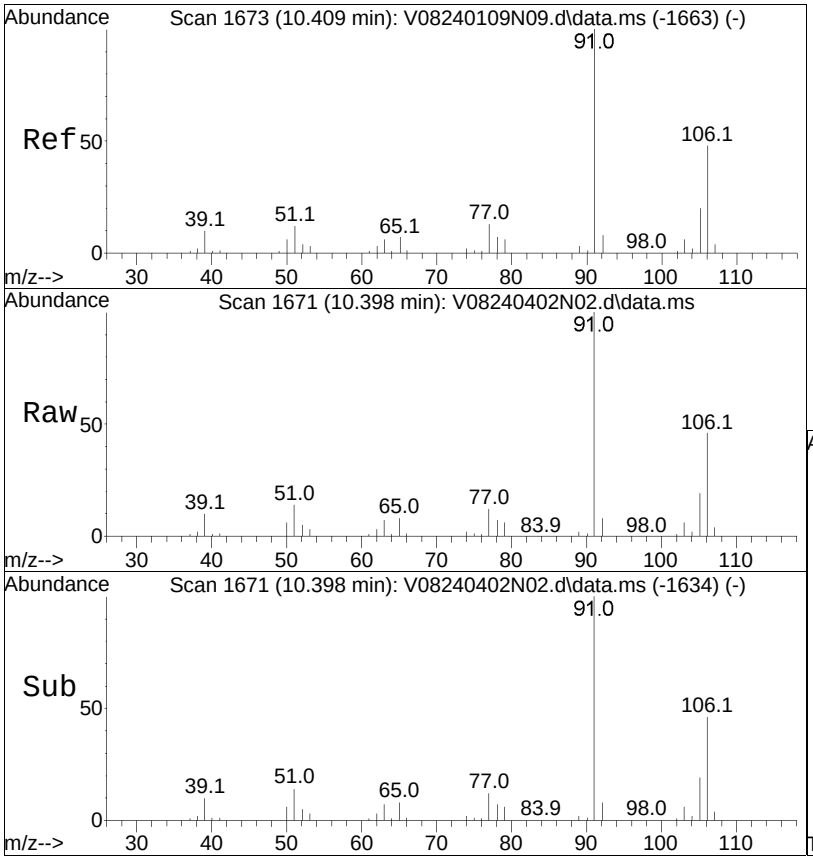


#76
p/m Xylene
Concen: 20.11 ug/L
RT: 9.863 min Scan# 1569
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:106 Resp: 342267

Ion	Ratio	Lower	Upper
106	100		
91	199.7	166.4	249.6

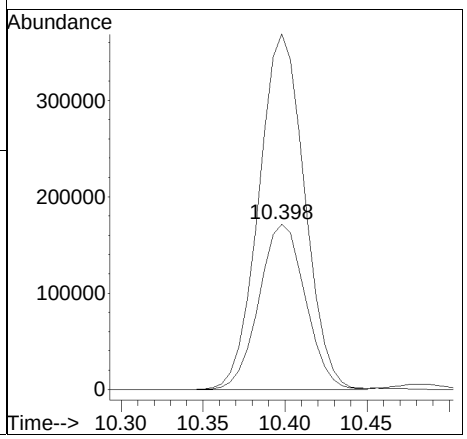


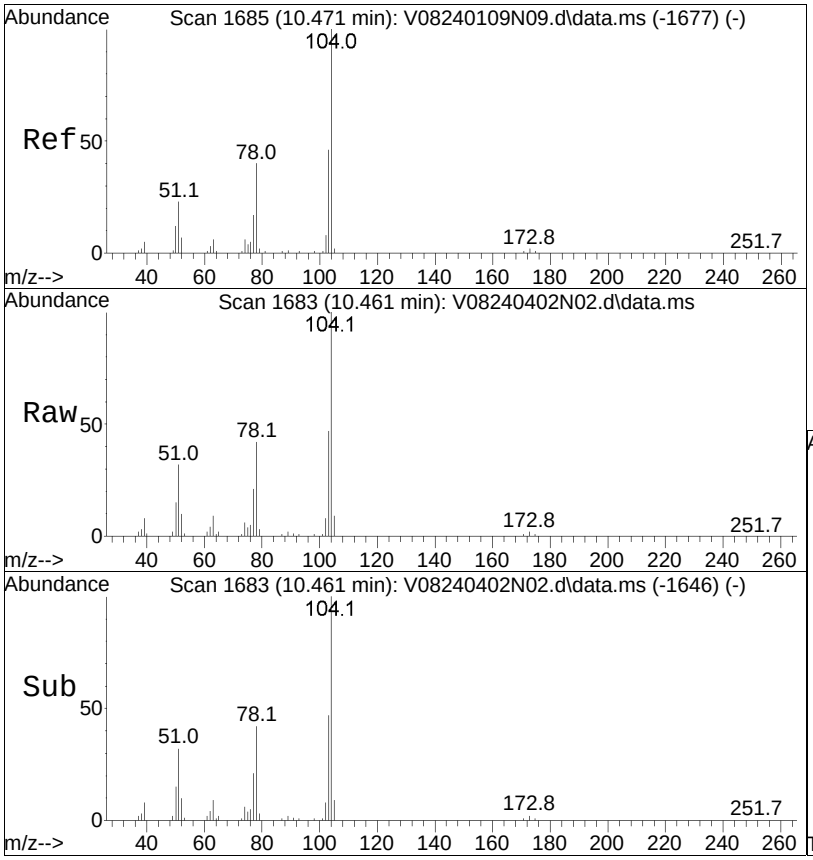


#77
o Xylene
Concen: 20.48 ug/L
RT: 10.398 min Scan# 1671
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:106 Resp: 336361

Ion	Ratio	Lower	Upper
106	100		
91	212.6	182.6	273.8

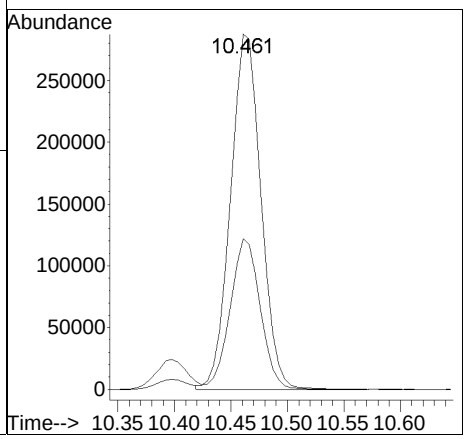


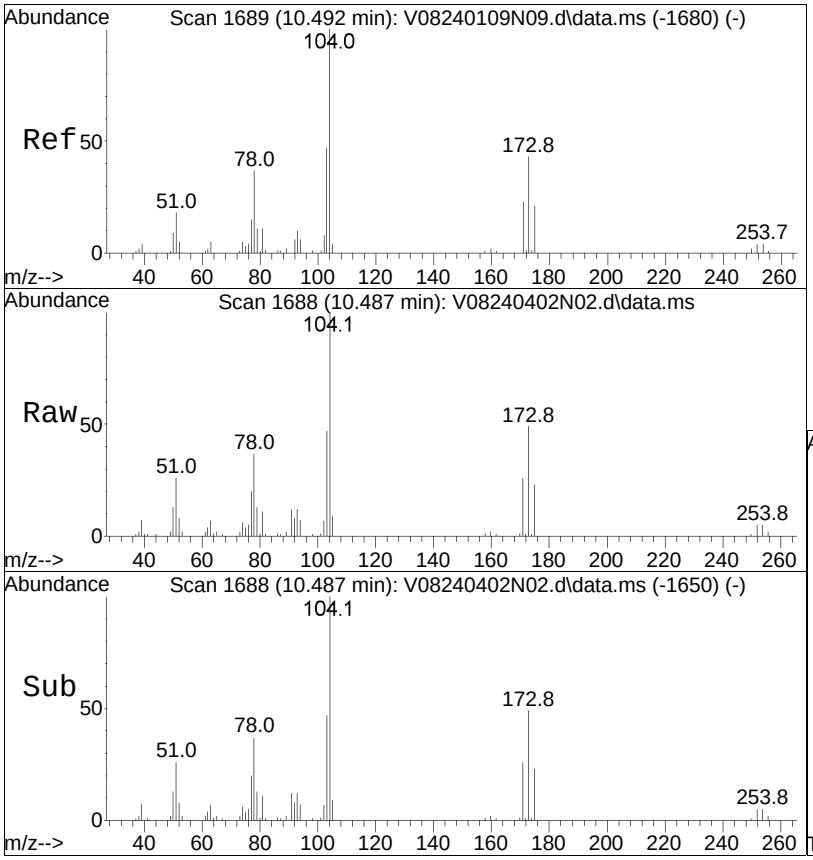


#78
Styrene
Concen: 20.46 ug/L
RT: 10.461 min Scan# 1683
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:104 Resp: 538391

Ion	Ratio	Lower	Upper
104	100		
78	41.9	39.8	59.6

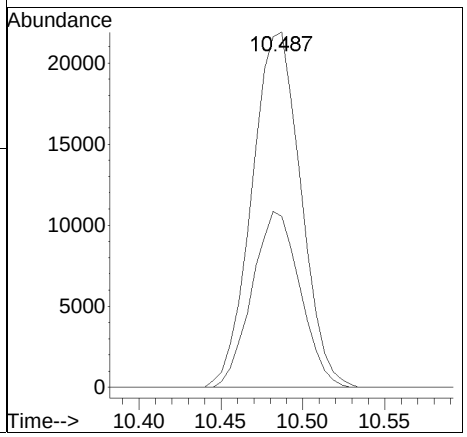


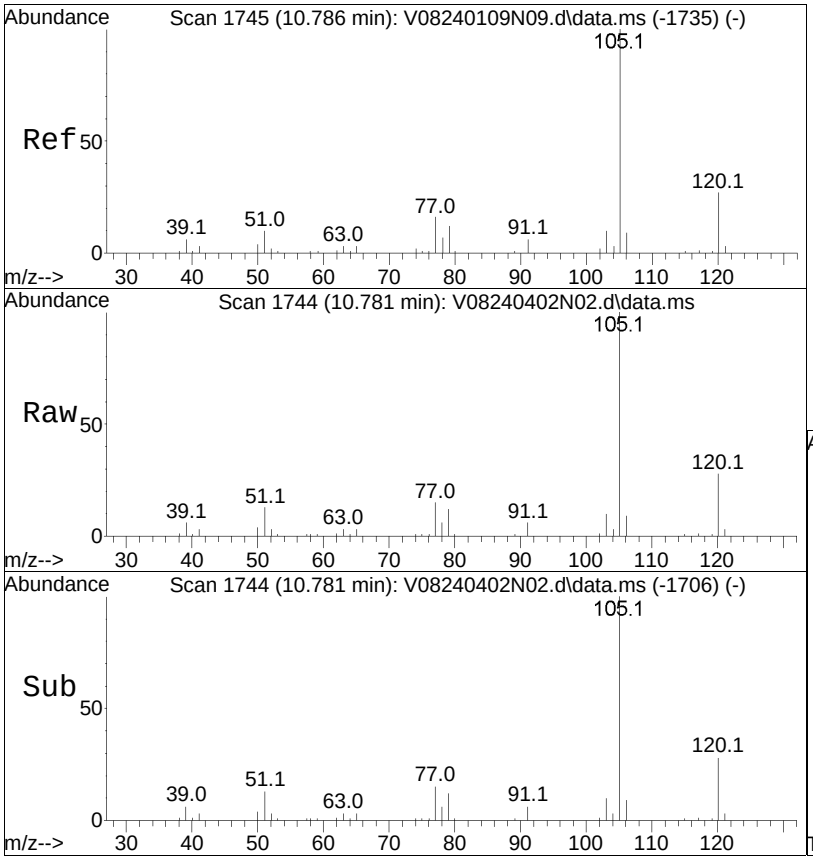


#80
Bromoform
Concen: 10.44 ug/L
RT: 10.487 min Scan# 1688
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:173 Resp: 45612

Ion	Ratio	Lower	Upper
173	100		
175	48.5	31.5	71.5

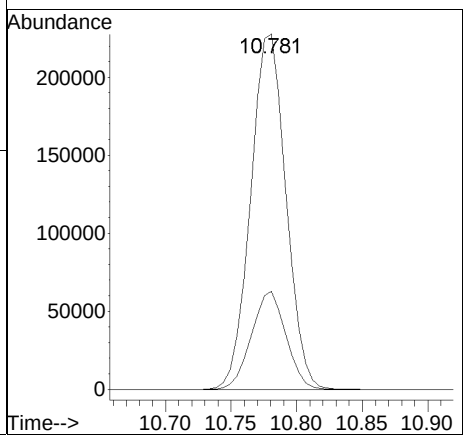


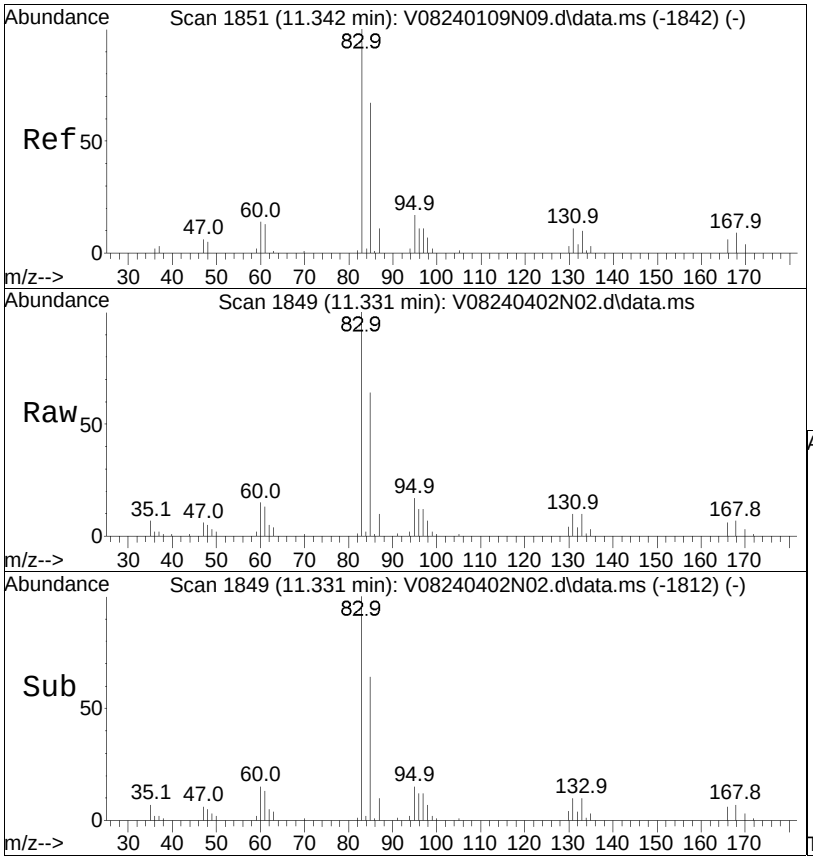


#82
Isopropylbenzene
Concen: 10.88 ug/L
RT: 10.781 min Scan# 1744
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:105 Resp: 426208

Ion	Ratio	Lower	Upper
105	100		
120	26.9	4.8	44.8

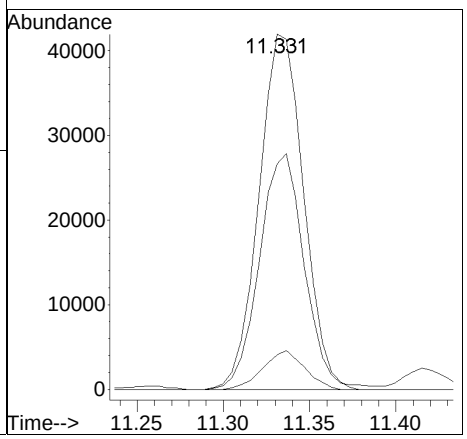


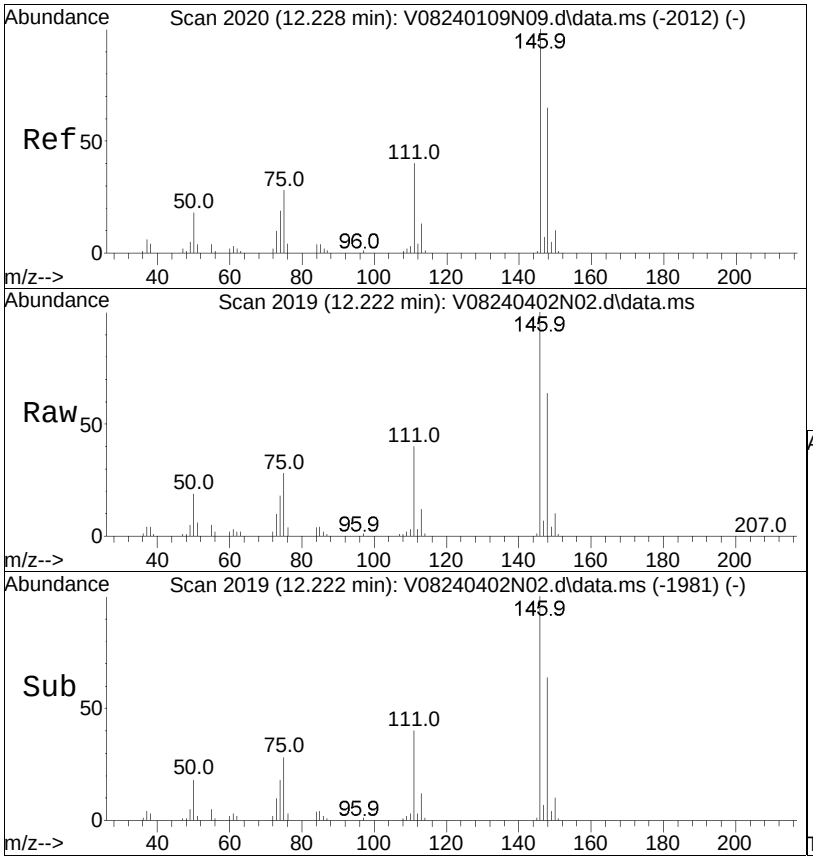


#87
1,1,2,2-Tetrachloroethane
Concen: 10.39 ug/L
RT: 11.331 min Scan# 1849
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion: 83 Resp: 75501

Ion	Ratio	Lower	Upper
83	100		
131	10.2	0.0	30.4
85	66.7	45.4	85.4

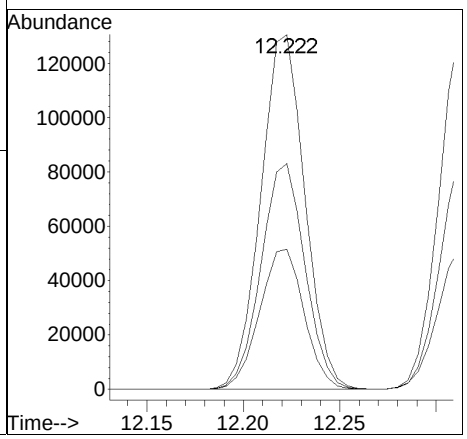


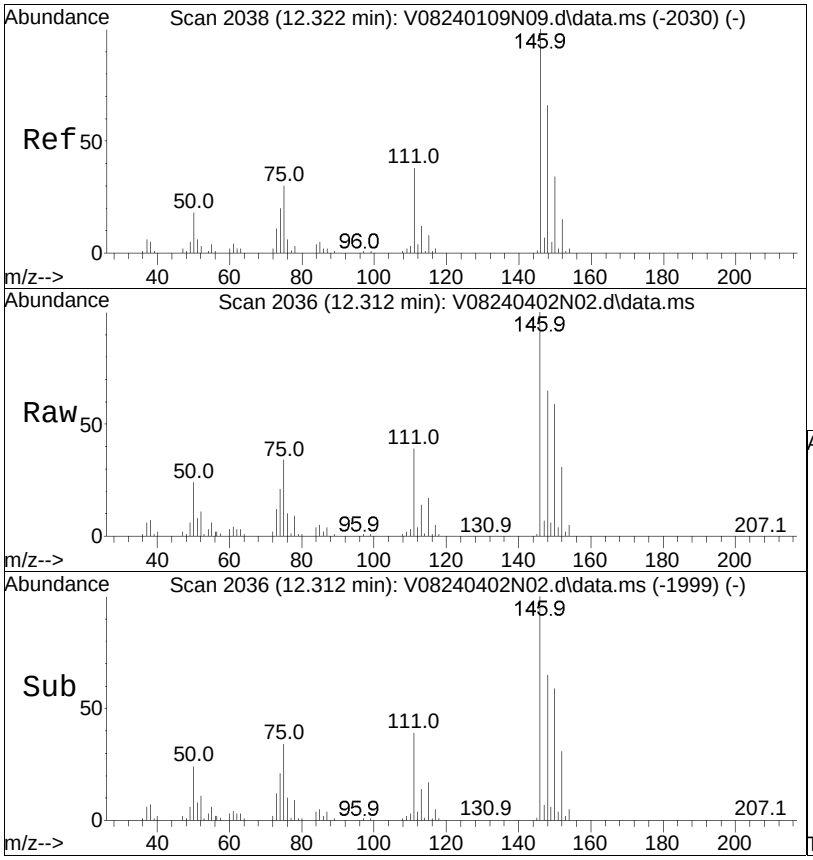


#100
1,3-Dichlorobenzene
Concen: 10.58 ug/L
RT: 12.222 min Scan# 2019
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:146 Resp: 207946

Ion	Ratio	Lower	Upper
146	100		
111	39.9	27.5	57.1
148	63.4	41.9	86.9

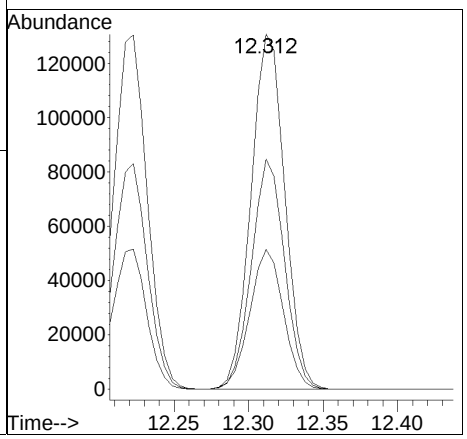


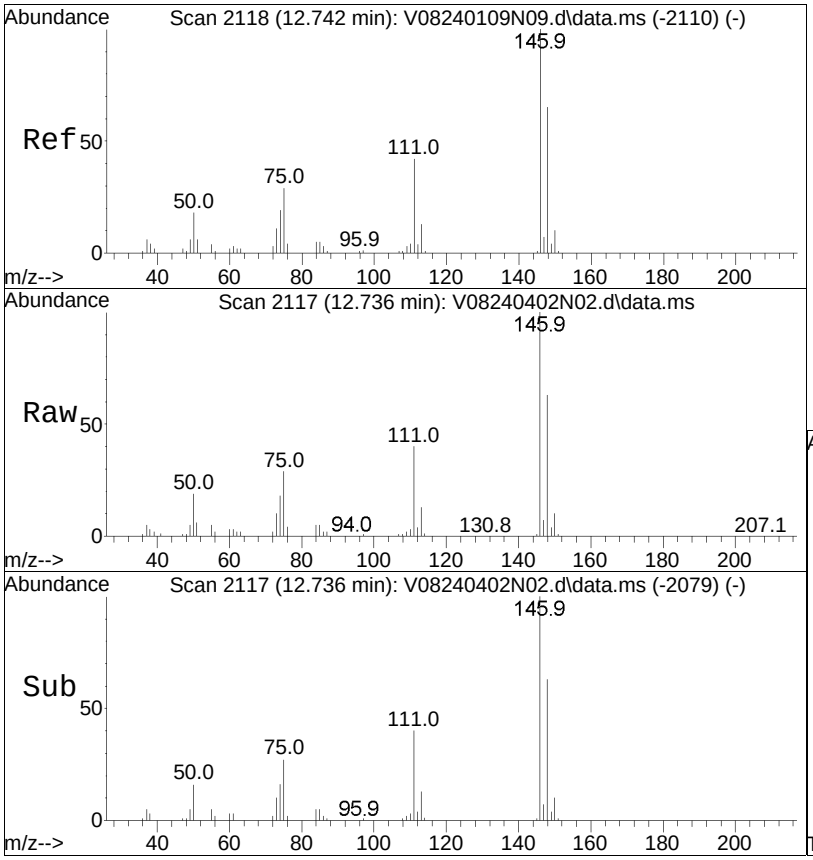


#101
1,4-Dichlorobenzene
Concen: 10.43 ug/L
RT: 12.312 min Scan# 2036
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:146 Resp: 206637

Ion	Ratio	Lower	Upper
146	100		
111	39.4	32.3	48.5
148	63.5	49.9	74.9

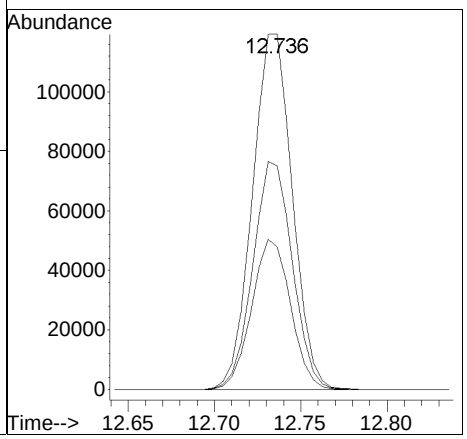


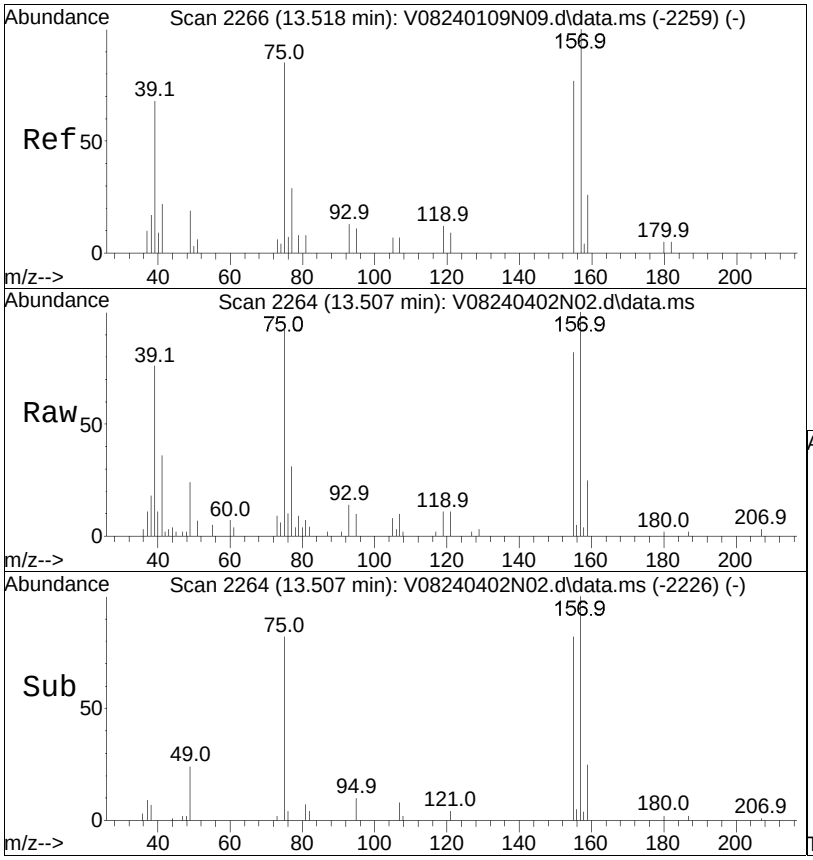


#104
1,2-Dichlorobenzene
Concen: 10.55 ug/L
RT: 12.736 min Scan# 2117
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:146 Resp: 192135

Ion	Ratio	Lower	Upper
146	100		
111	41.2	28.3	58.7
148	63.3	42.3	87.8

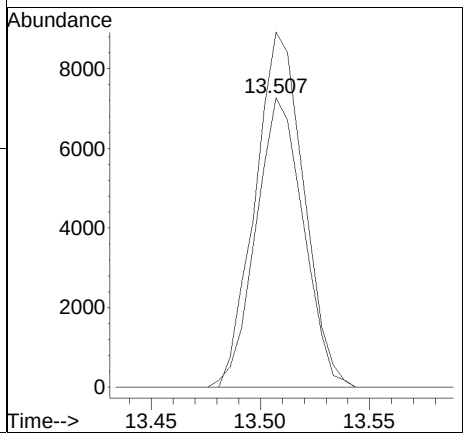


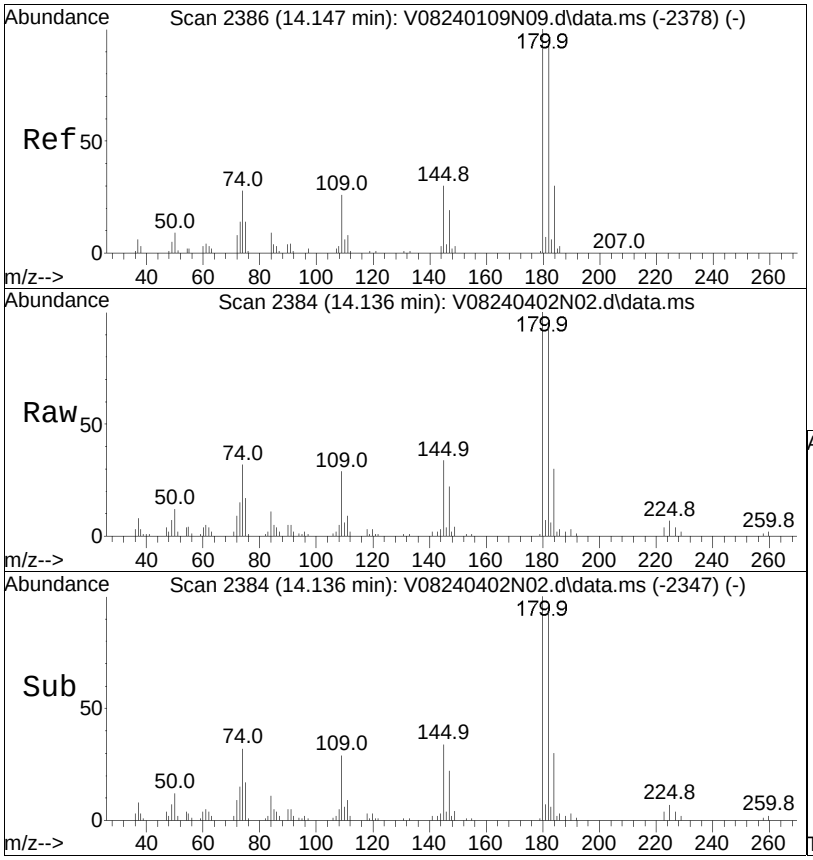


#106
1,2-Dibromo-3-chloropropane
Concen: 10.73 ug/L
RT: 13.507 min Scan# 2264
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:155 Resp: 11004

Ion	Ratio	Lower	Upper
155	100		
157	125.6	94.8	142.2

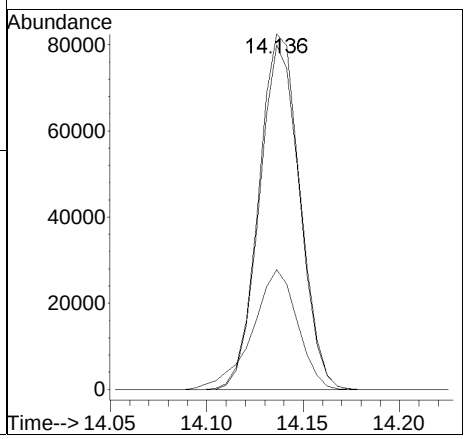


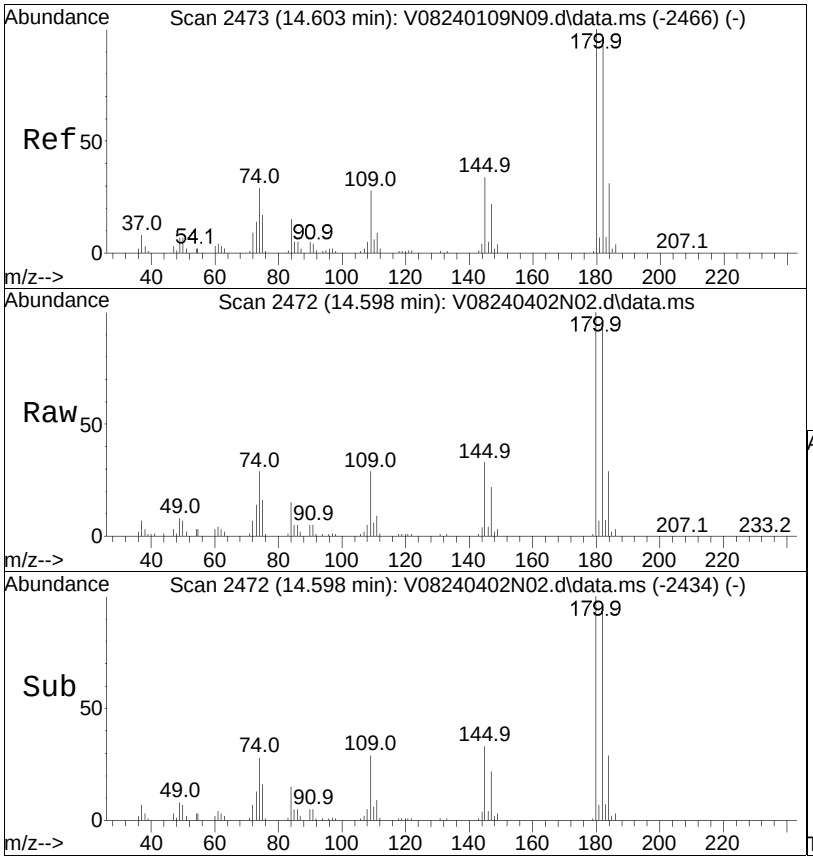


#109
1,2,4-Trichlorobenzene
Concen: 10.40 ug/L
RT: 14.136 min Scan# 2384
Delta R.T. -0.005 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:180 Resp: 122683

Ion	Ratio	Lower	Upper
180	100		
182	94.5	77.3	115.9
145	36.8	28.1	42.1

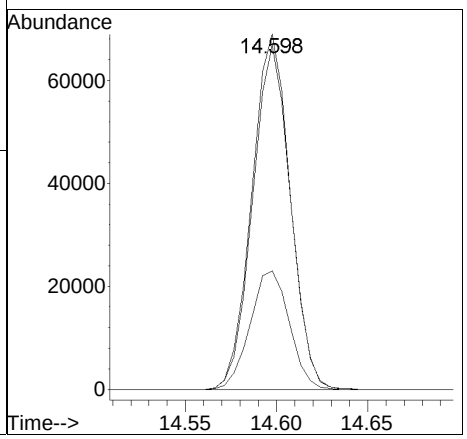




#111
1,2,3-Trichlorobenzene
Concen: 9.80 ug/L
RT: 14.598 min Scan# 2472
Delta R.T. 0.000 min
Lab File: V08240402N02.d
Acq: 2 Apr 2024 6:03 pm

Tgt Ion:180 Resp: 100962

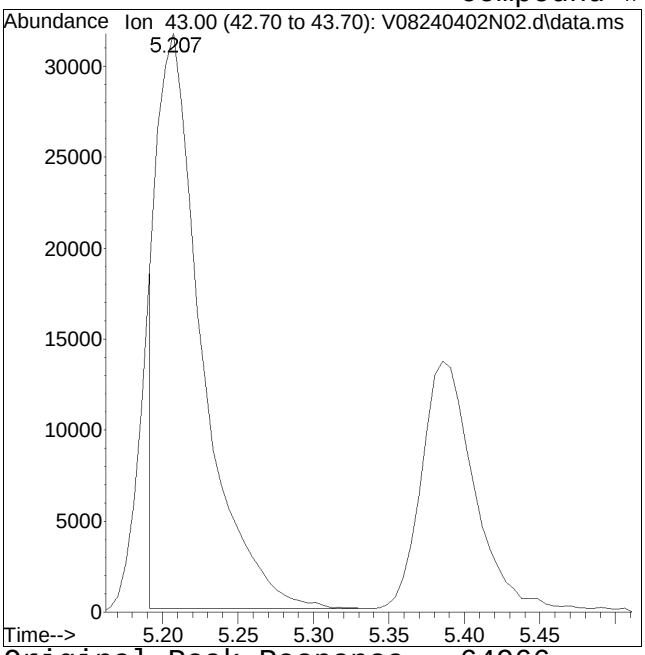
Ion	Ratio	Lower	Upper
180	100		
182	95.4	76.4	114.6
145	34.2	26.4	39.6

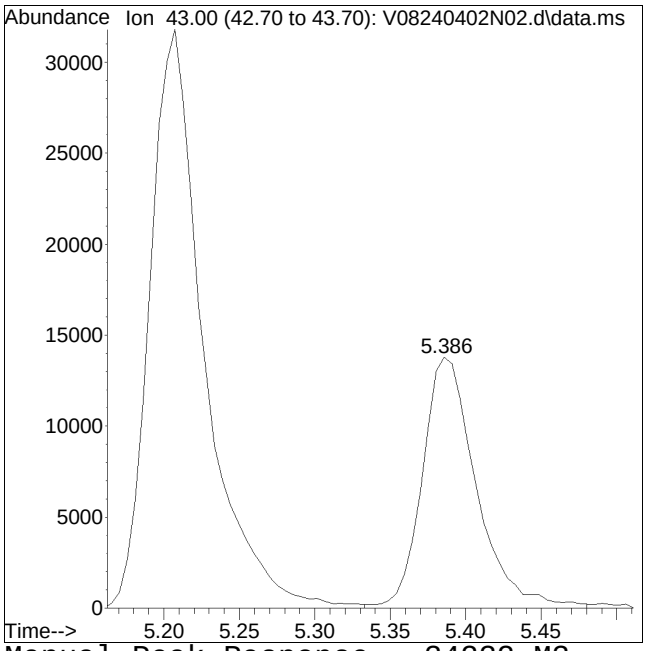


Manual Integration Report

Data Path	: K:\VOA108\2024\240402N\	QMethod	: V108_240322N_8260.m
Data File	: V08240402N02.d	Operator	: VOA108:TMS
Date Inj'd	: 4/2/2024 6:03 pm	Instrument	: VOA 108
Sample	: WG1904126-4,31,10,10	Quant Date	: 4/2/2024 6:36 pm

Compound #39: 2-Butanone





Original Peak Response = 64966 Manual Peak Response = 34232 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N26.d
Acq On : 3 Apr 2024 3:00 am
Operator : VOA108:MJV
Sample : WG1904126-6,31,10,10,,A1
Misc : WG1904126,ICAL20974
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 03 06:00:29 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	444612	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 89.55%			
59) Chlorobenzene-d5	9.617	117	330845	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 92.59%			
79) 1,4-Dichlorobenzene-d4	12.301	152	158644	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 99.92%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.275	113	117229	10.070	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 100.70%			
43) 1,2-Dichloroethane-d4	5.805	65	144662	10.123	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.23%			
60) Toluene-d8	7.776	98	435008	10.217	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 102.17%			
83) 4-Bromofluorobenzene	11.095	95	153918	10.521	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.21%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	122324	12.915	ug/L	98
3) Chloromethane	1.888	50	178349	10.687	ug/L	99
4) Vinyl chloride	1.967	62	156053	11.551	ug/L	99
5) Bromomethane	2.282	94	39837	8.264	ug/L	99
6) Chloroethane	2.402	64	75192	11.525	ug/L	100
7) Trichlorofluoromethane	2.538	101	125103	11.200	ug/L	97
10) 1,1-Dichloroethene	3.031	96	89949	11.790	ug/L	92
11) Carbon disulfide	3.058	76	306798	11.716	ug/L	97
12) Freon-113	3.068	101	86979	11.611	ug/L	99
15) Methylene chloride	3.587	84	97945	10.676	ug/L	98
17) Acetone	3.624	43	29676	13.378	ug/L #	87
18) trans-1,2-Dichloroethene	3.739	96	101030	11.527	ug/L	99
19) Methyl acetate	3.744	43	51548	9.692	ug/L #	89
20) Methyl tert-butyl ether	3.839	73	224175	10.909	ug/L	92
23) 1,1-Dichloroethane	4.321	63	235319	11.125	ug/L	97
28) cis-1,2-Dichloroethene	4.835	96	109159	11.100	ug/L	92
30) Bromochloromethane	5.029	128	48584	10.990	ug/L	83
31) Cyclohexane	5.039	56	236841	11.570	ug/L	98
32) Chloroform	5.102	83	178177	11.311	ug/L	96
34) Carbon tetrachloride	5.244	117	142442	11.364	ug/L	99

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N26.d
Acq On : 3 Apr 2024 3:00 am
Operator : VOA108:MJV
Sample : WG1904126-6,31,10,10,,A1
Misc : WG1904126,ICAL20974
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 03 06:00:29 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 1,1,1-Trichloroethane	5.302	97	157272	11.562	ug/L	#	98
39) 2-Butanone	5.385	43	34224M3	10.280	ug/L		
41) Benzene	5.674	78	392835	11.289	ug/L		99
44) 1,2-Dichloroethane	5.873	62	145051	10.685	ug/L		99
47) Methyl cyclohexane	6.256	83	154969	11.491	ug/L		96
48) Trichloroethene	6.261	95	103599	11.023	ug/L		94
51) 1,2-Dichloropropane	6.806	63	128873	10.828	ug/L	#	92
54) Bromodichloromethane	6.874	83	129970	10.888	ug/L		99
57) 1,4-Dioxane	7.084	88	27601	521.852	ug/L		96
58) cis-1,3-Dichloropropene	7.567	75	148873	11.050	ug/L		100
61) Toluene	7.834	92	242235	11.234	ug/L		94
62) 4-Methyl-2-pentanone	8.264	58	27374	10.326	ug/L		98
63) Tetrachloroethene	8.280	166	99371	11.102	ug/L		89
65) trans-1,3-Dichloropropene	8.311	75	125316	11.313	ug/L		97
68) 1,1,2-Trichloroethane	8.500	83	60553	11.092	ug/L		94
69) Chlorodibromomethane	8.710	129	86952	10.480	ug/L		97
71) 1,2-Dibromoethane	8.987	107	69058	10.978	ug/L		99
72) 2-Hexanone	9.265	43	43720	10.240	ug/L		95
73) Chlorobenzene	9.638	112	264688	10.986	ug/L		96
74) Ethylbenzene	9.680	91	457617	11.405	ug/L		99
76) p/m Xylene	9.863	106	357799	22.567	ug/L		95
77) o Xylene	10.398	106	348078	22.747	ug/L		90
78) Styrene	10.466	104	551095	22.482	ug/L		89
80) Bromoform	10.487	173	44889	10.362	ug/L		96
82) Isopropylbenzene	10.781	105	448602	11.556	ug/L		96
87) 1,1,2,2-Tetrachloroethane	11.336	83	80982	11.246	ug/L		100
100) 1,3-Dichlorobenzene	12.222	146	210065	10.785	ug/L		98
101) 1,4-Dichlorobenzene	12.317	146	208184	10.598	ug/L		98
104) 1,2-Dichlorobenzene	12.736	146	192519	10.659	ug/L		98
106) 1,2-Dibromo-3-chloropr...	13.507	155	10873	10.694	ug/L		91
109) 1,2,4-Trichlorobenzene	14.141	180	123583	10.571	ug/L		97
111) 1,2,3-Trichlorobenzene	14.597	180	99351	9.732	ug/L		99

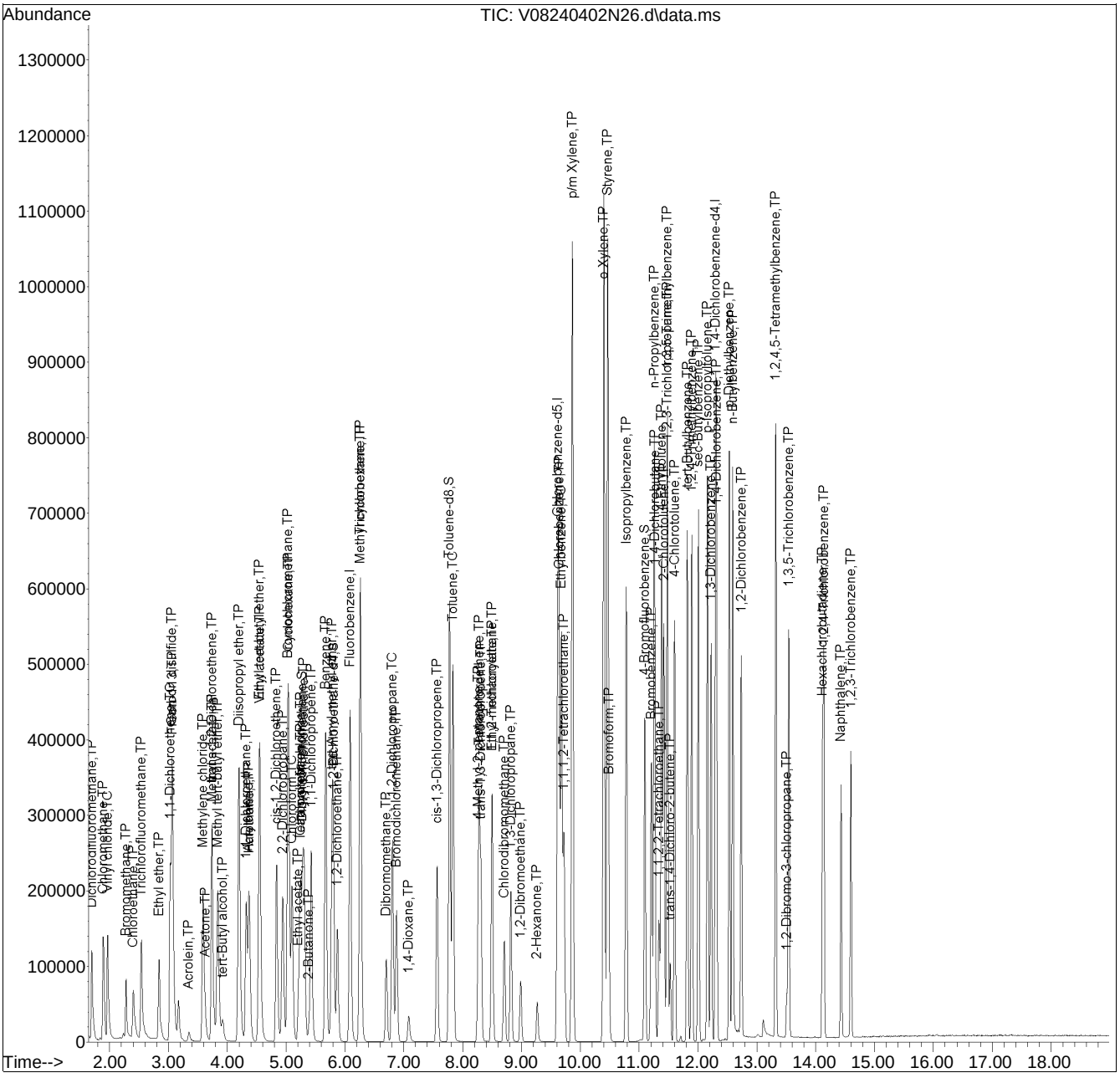
(#) = qualifier out of range (m) = manual integration (+) = signals summed

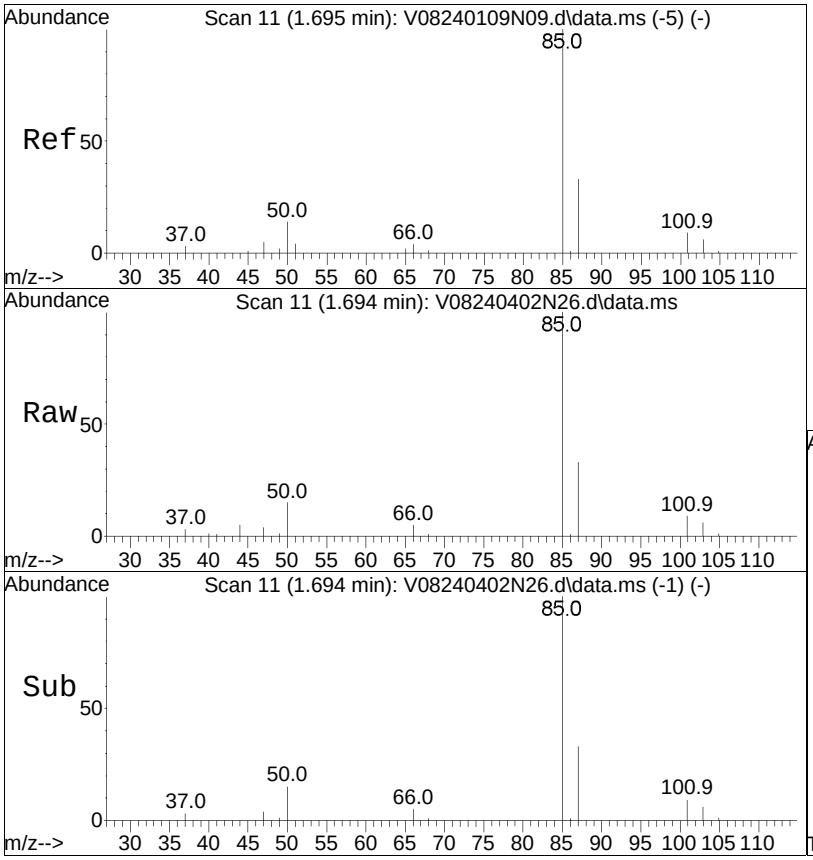
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N26.d
Acq On : 3 Apr 2024 3:00 am
Operator : VOA108:MJV
Sample : WG1904126-6,31,10,10,,A1
Misc : WG1904126,ICAL20974
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 03 06:00:29 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•

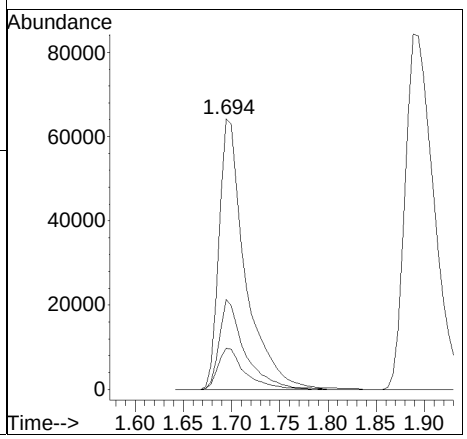


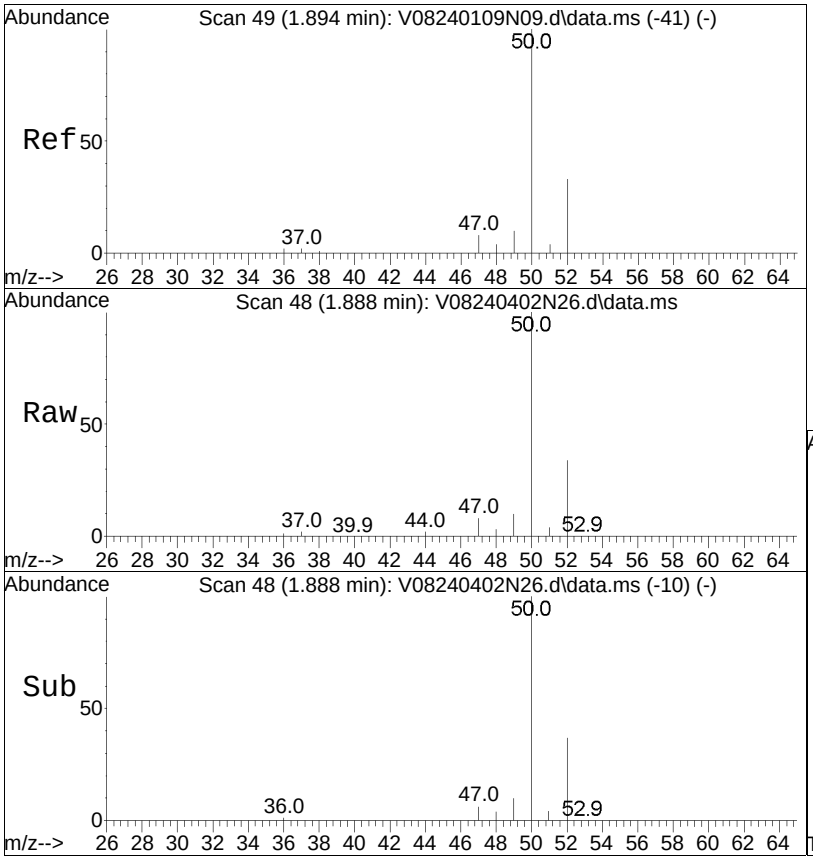


#2
Dichlorodifluoromethane
Concen: 12.91 ug/L
RT: 1.694 min Scan# 11
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 85 Resp: 122324

Ion	Ratio	Lower	Upper
85	100		
87	32.0	21.0	43.6
50	15.6	8.9	18.5

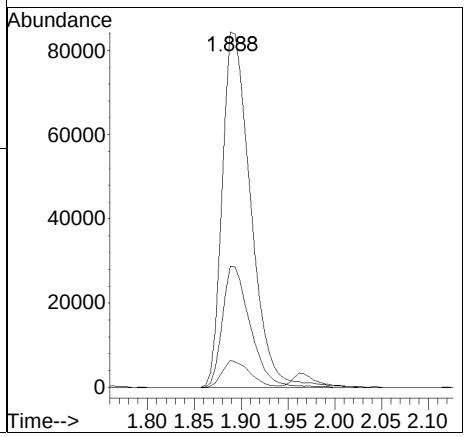


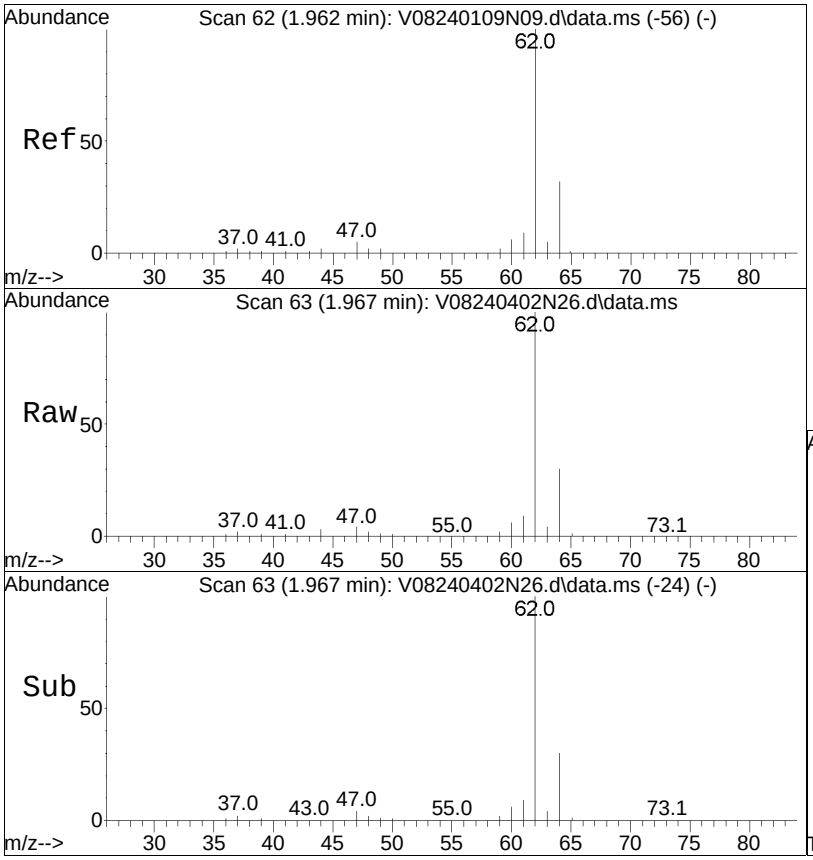


#3
Chloromethane
Concen: 10.69 ug/L
RT: 1.888 min Scan# 48
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 50 Resp: 178349

Ion	Ratio	Lower	Upper
50	100		
52	33.4	12.9	52.9
47	7.4	0.0	28.3

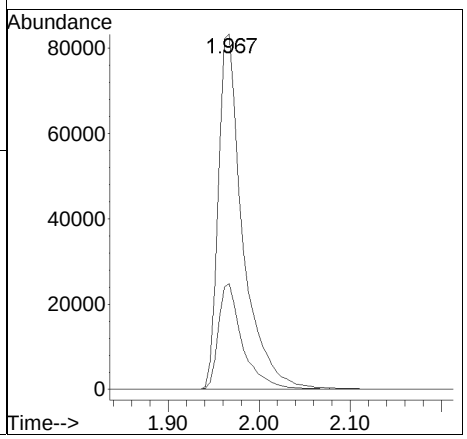


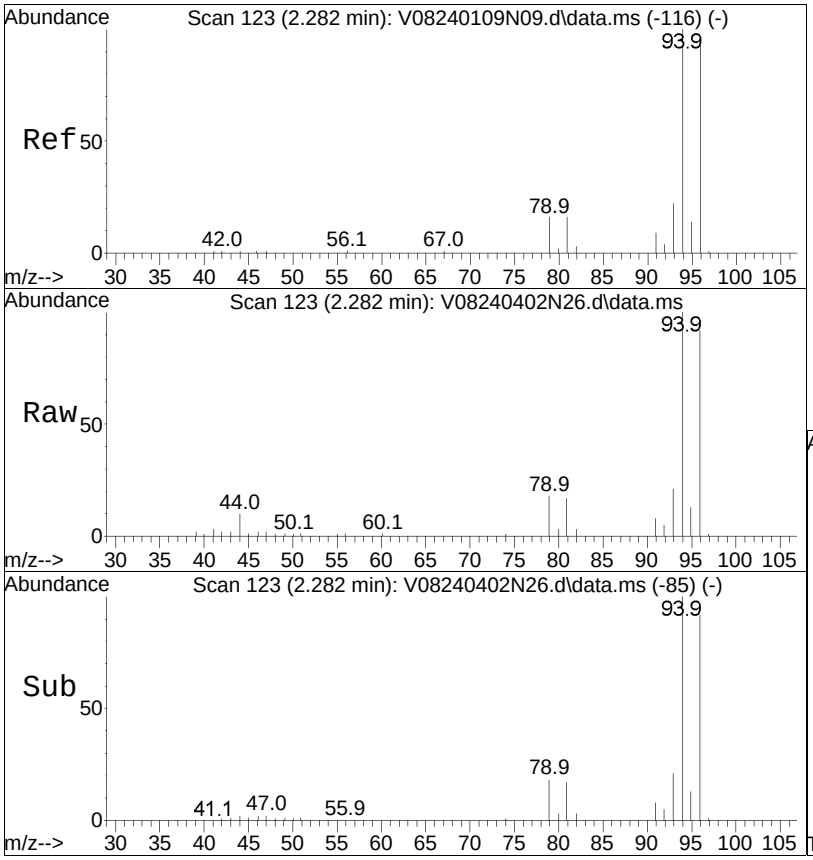


#4
Vinyl chloride
Concen: 11.55 ug/L
RT: 1.967 min Scan# 63
Delta R.T. 0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 62 Resp: 156053

Ion	Ratio	Lower	Upper
62	100		
64	29.4	9.1	49.1

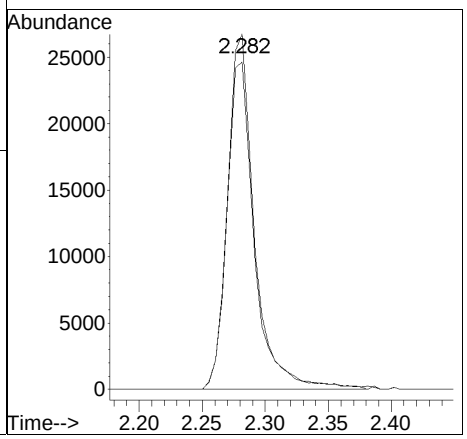


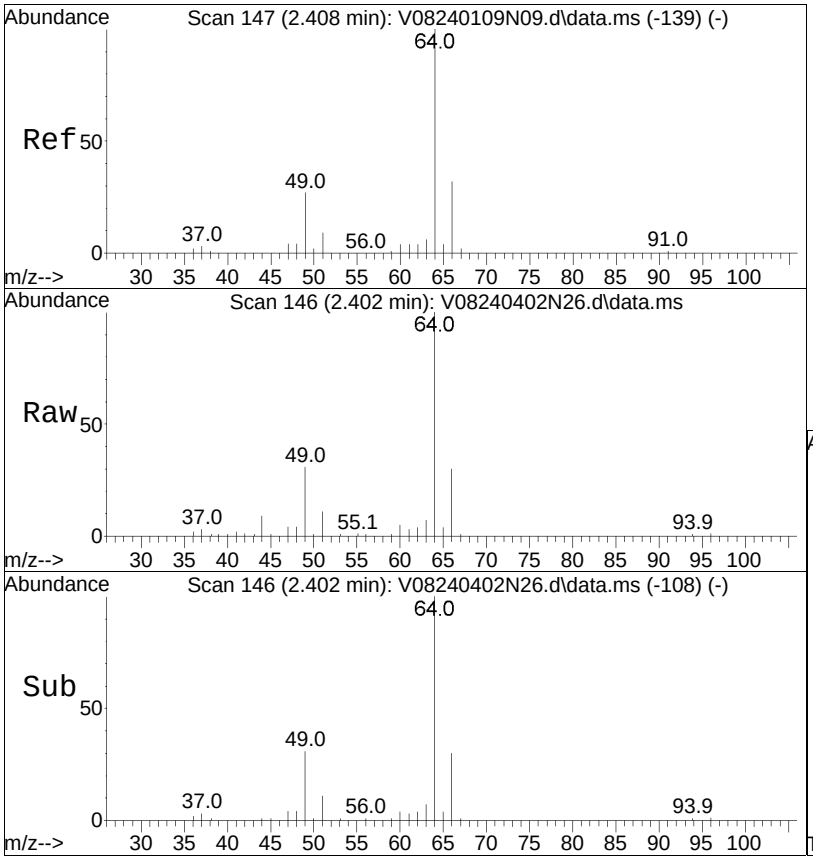


#5
Bromomethane
Concen: 8.26 ug/L
RT: 2.282 min Scan# 123
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 94 Resp: 39837

Ion	Ratio	Lower	Upper
94	100		
96	94.4	75.6	115.6

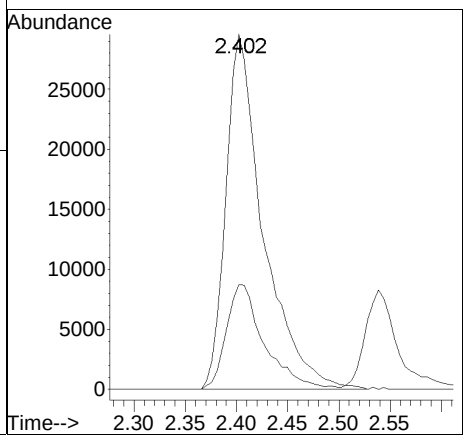


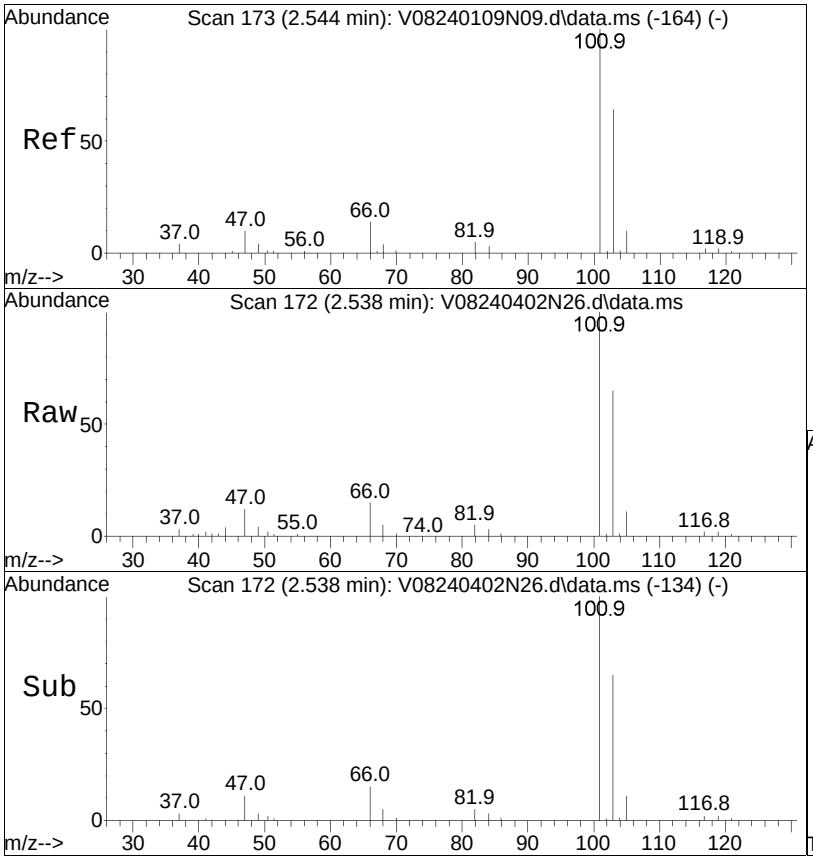


#6
Chloroethane
Concen: 11.53 ug/L
RT: 2.402 min Scan# 146
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 64 Resp: 75192

Ion	Ratio	Lower	Upper
64	100		
66	30.1	9.8	49.8

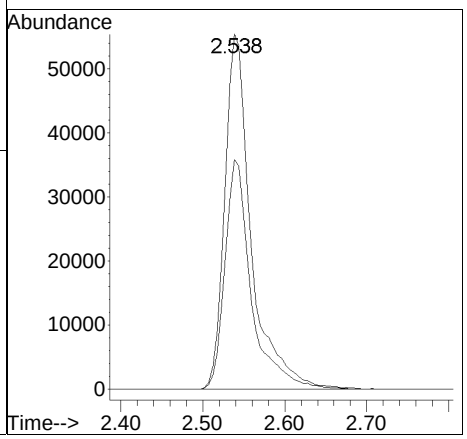


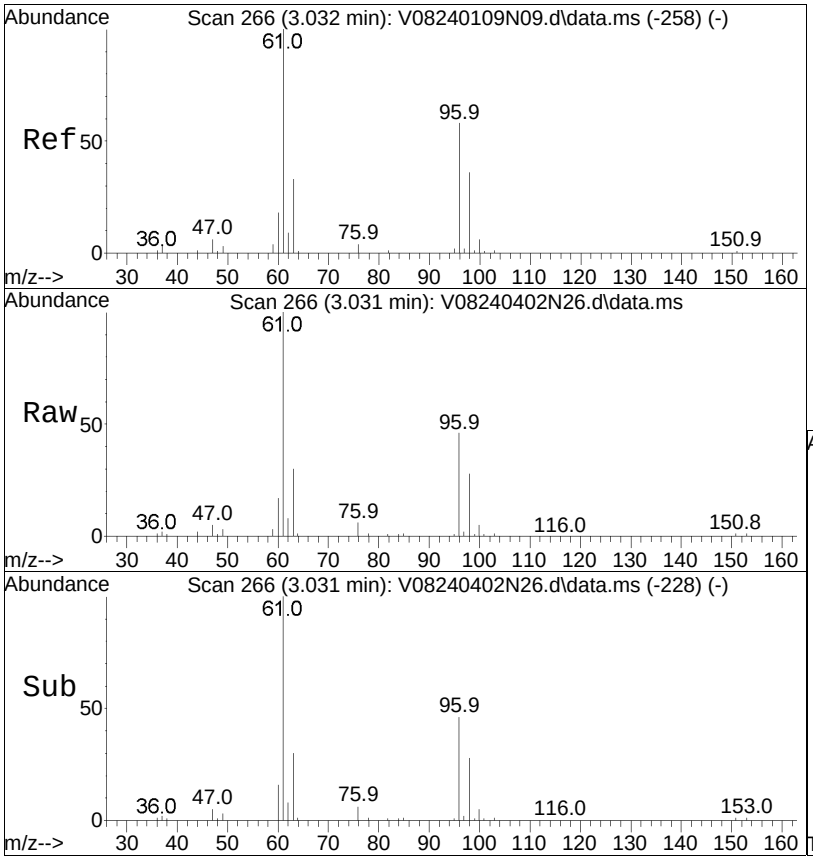


#7
Trichlorofluoromethane
Concen: 11.20 ug/L
RT: 2.538 min Scan# 172
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:101 Resp: 125103

Ion	Ratio	Lower	Upper
101	100		
103	64.5	53.8	80.6

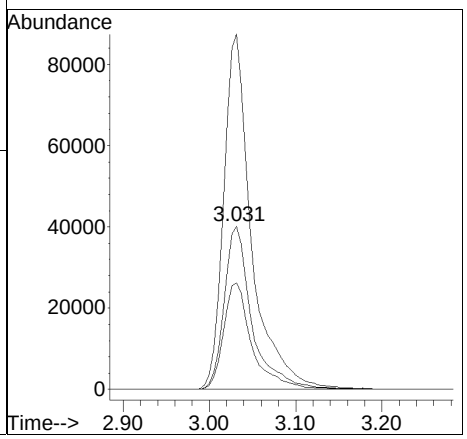


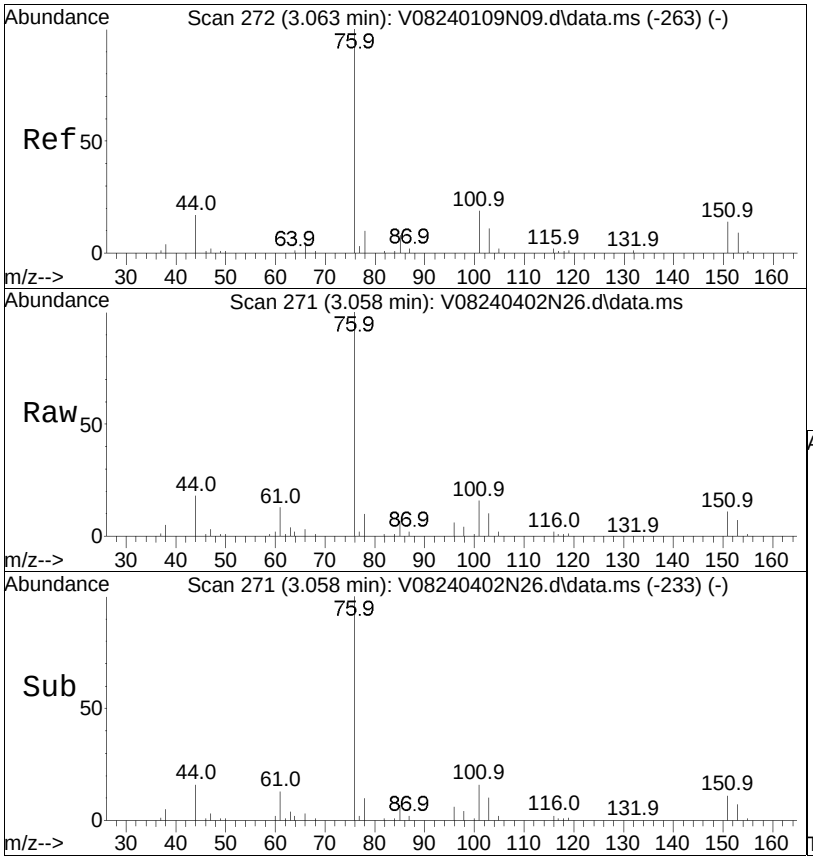


#10
1,1-Dichloroethene
Concen: 11.79 ug/L
RT: 3.031 min Scan# 266
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 96 Resp: 89949

Ion	Ratio	Lower	Upper
96	100		
61	218.8	186.1	279.1
63	67.1	57.6	86.4

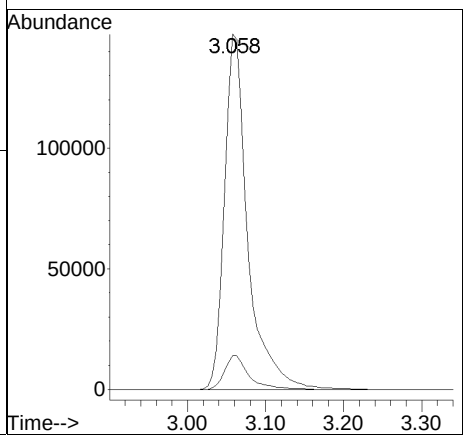


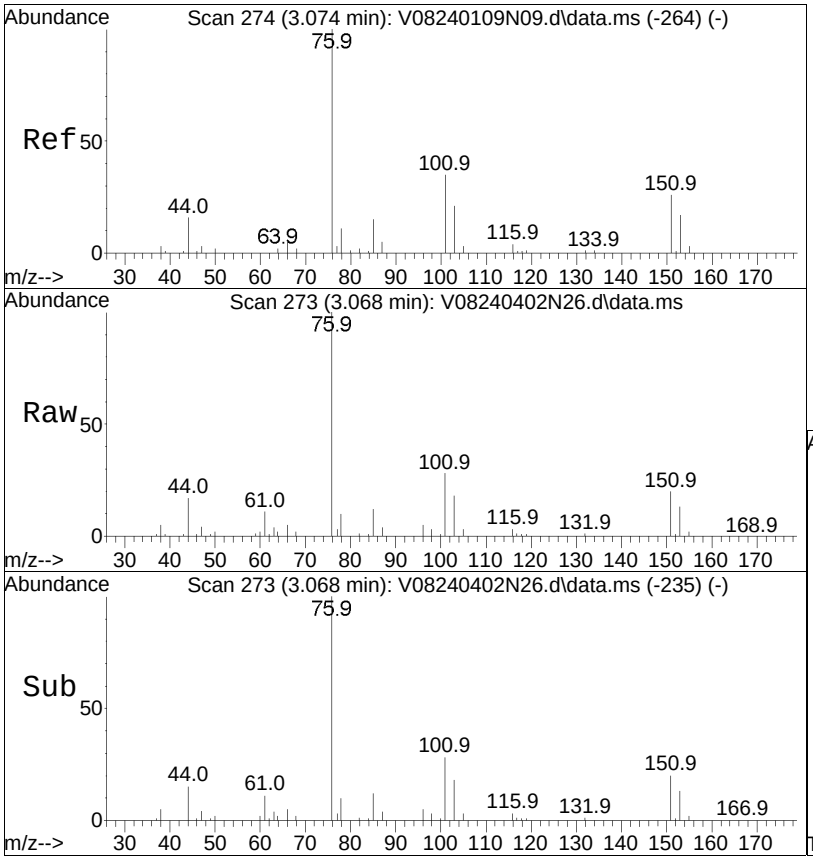


#11
Carbon disulfide
Concen: 11.72 ug/L
RT: 3.058 min Scan# 271
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 76 Resp: 306798

Ion	Ratio	Lower	Upper
76	100		
78	9.9	5.7	11.7

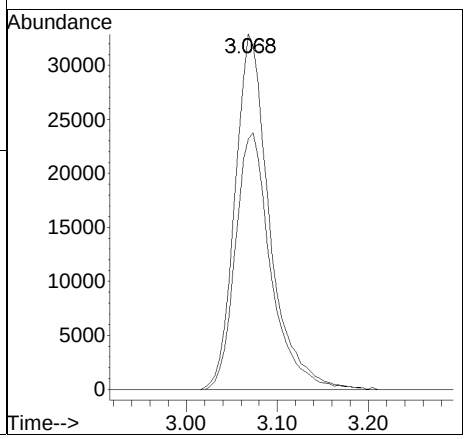


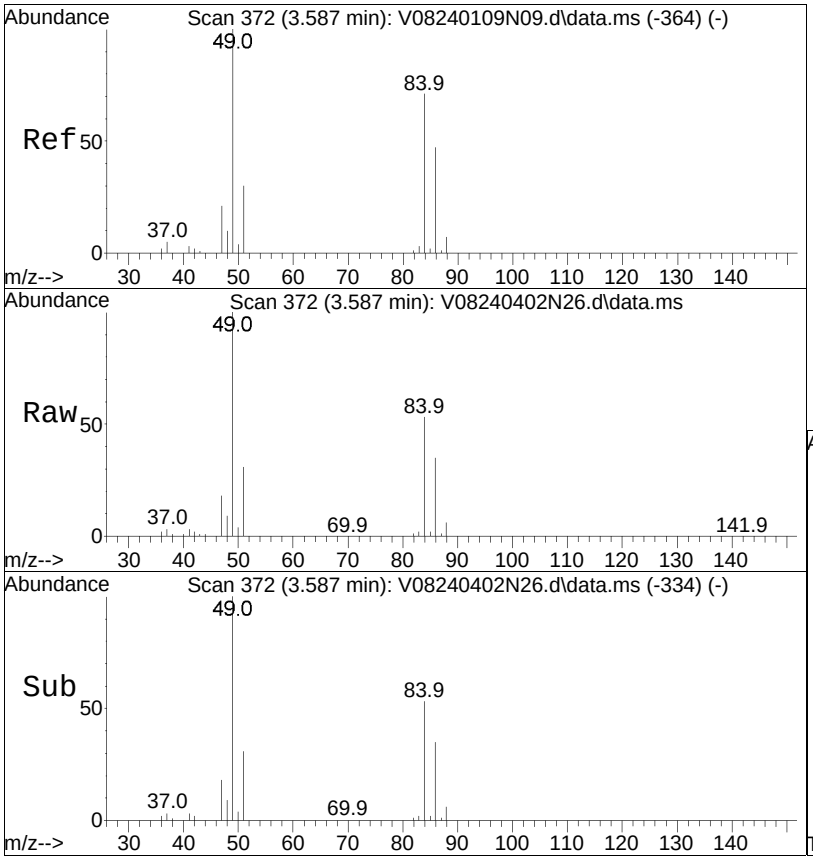


#12
Freon-113
Concen: 11.61 ug/L
RT: 3.068 min Scan# 273
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:101 Resp: 86979

Ion	Ratio	Lower	Upper
101	100		
151	74.3	59.8	89.8

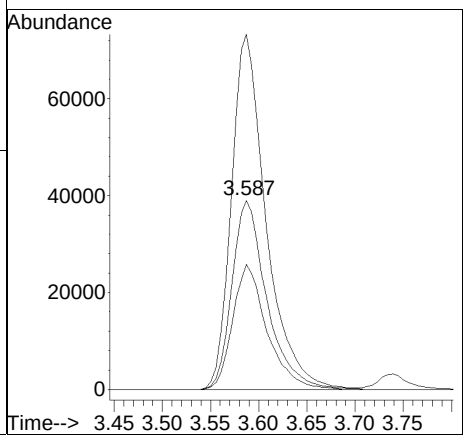


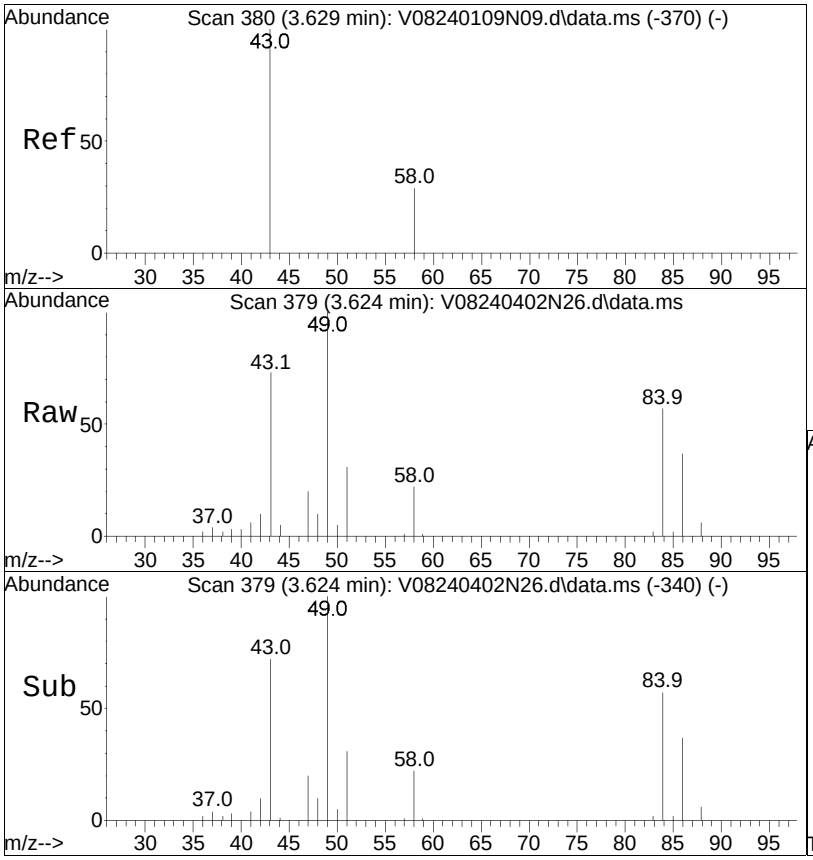


#15
Methylene chloride
Concen: 10.68 ug/L
RT: 3.587 min Scan# 372
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 84 Resp: 97945

Ion	Ratio	Lower	Upper
84	100		
86	65.2	40.4	83.8
49	186.3	120.0	249.2

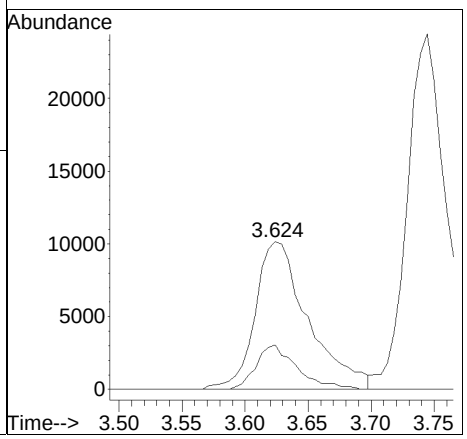


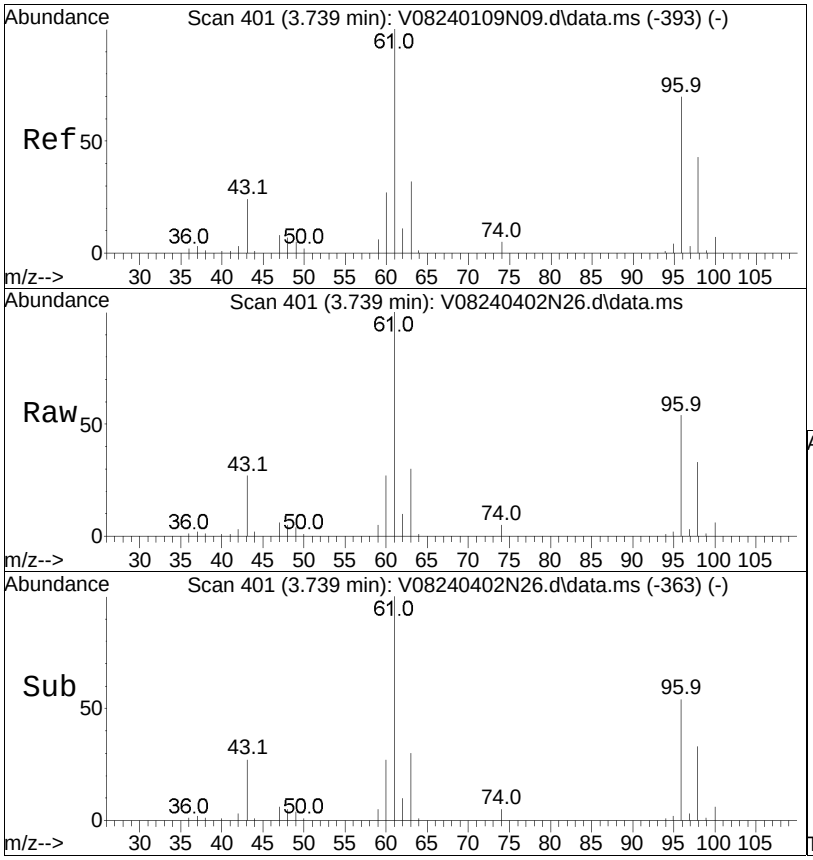


#17
Acetone
Concen: 13.38 ug/L
RT: 3.624 min Scan# 379
Delta R.T. 0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 43 Resp: 29676

Ion	Ratio	Lower	Upper
43	100		
58	23.4	24.2	36.4#

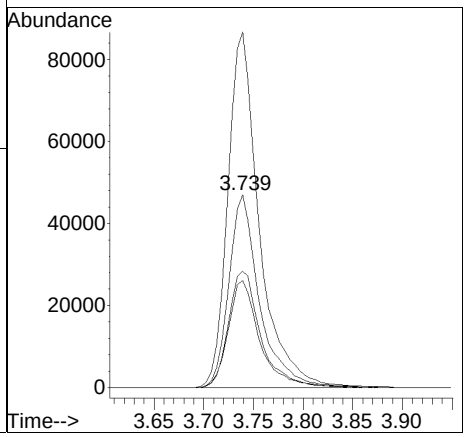


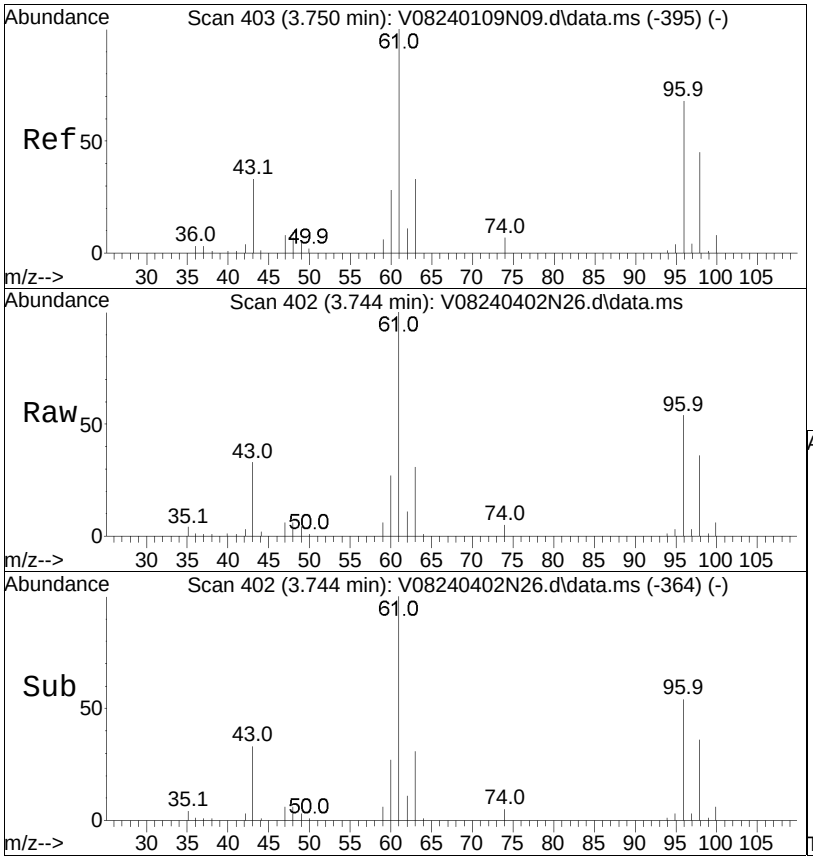


#18
trans-1,2-Dichloroethene
Concen: 11.53 ug/L
RT: 3.739 min Scan# 401
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 96 Resp: 101030

Ion	Ratio	Lower	Upper
96	100		
61	188.8	124.0	257.6
98	63.5	41.2	85.6
63	56.7	38.4	79.7

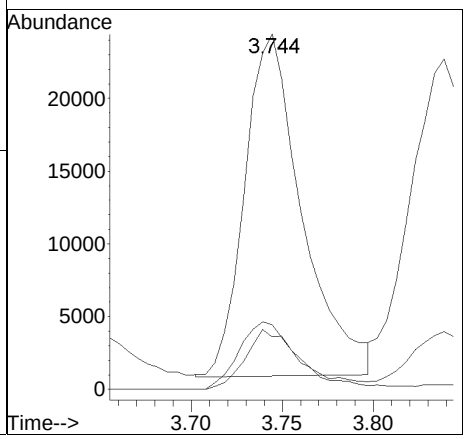


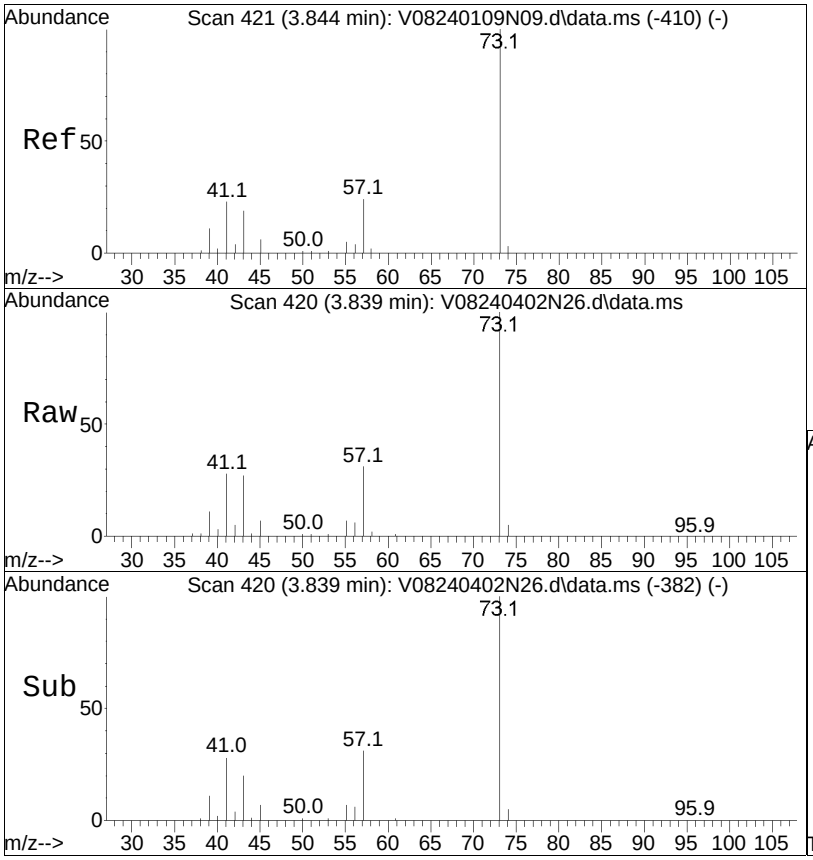


#19
Methyl acetate
Concen: 9.69 ug/L
RT: 3.744 min Scan# 402
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 43 Resp: 51548

Ion	Ratio	Lower	Upper
43	100		
74	17.6	14.2	21.4
59	20.6	5.0	7.6#

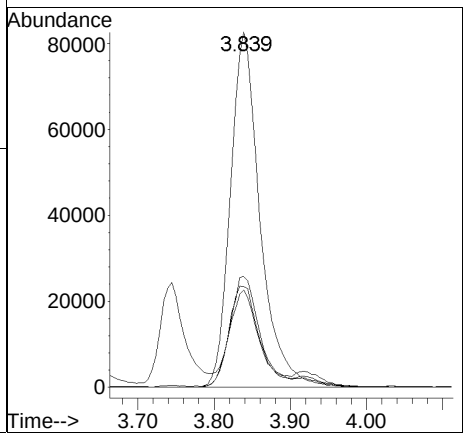


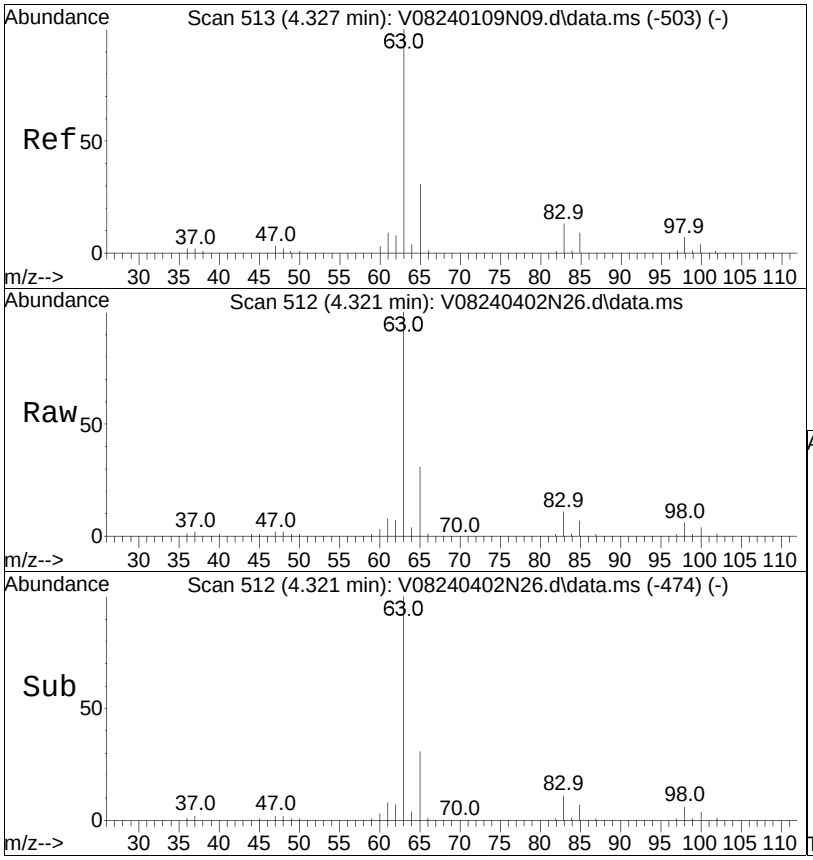


#20
Methyl tert-butyl ether
Concen: 10.91 ug/L
RT: 3.839 min Scan# 420
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 73 Resp: 224175

Ion	Ratio	Lower	Upper
73	100		
57	31.6	17.5	36.3
43	23.0	15.3	31.9
41	29.6	15.3	31.7

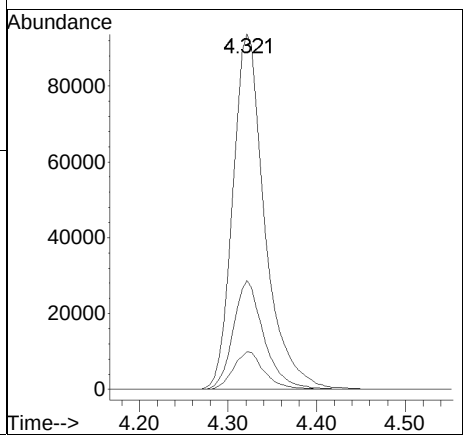


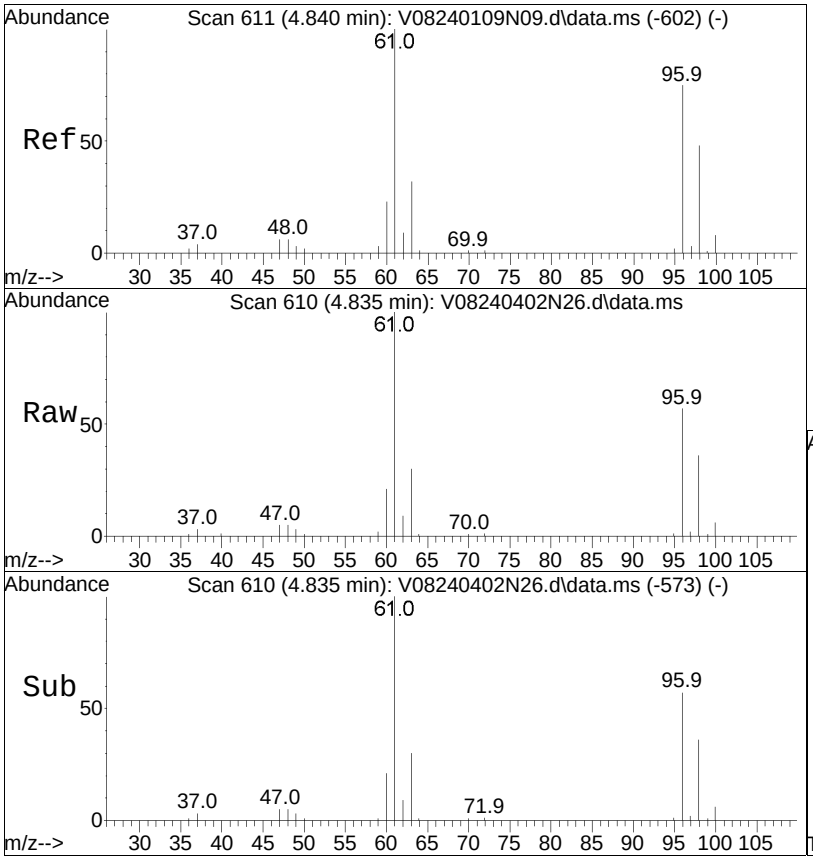


#23
1,1-Dichloroethane
Concen: 11.12 ug/L
RT: 4.321 min Scan# 512
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 63 Resp: 235319

Ion	Ratio	Lower	Upper
63	100		
65	29.4	11.0	51.0
83	10.3	0.0	31.8

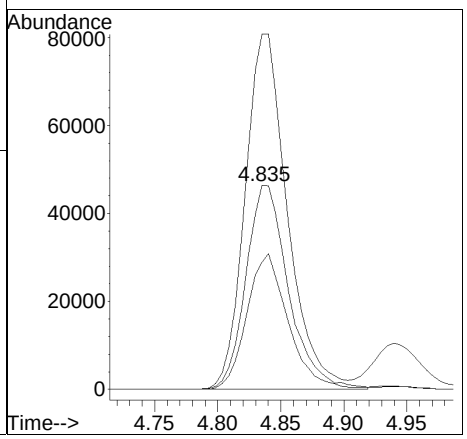


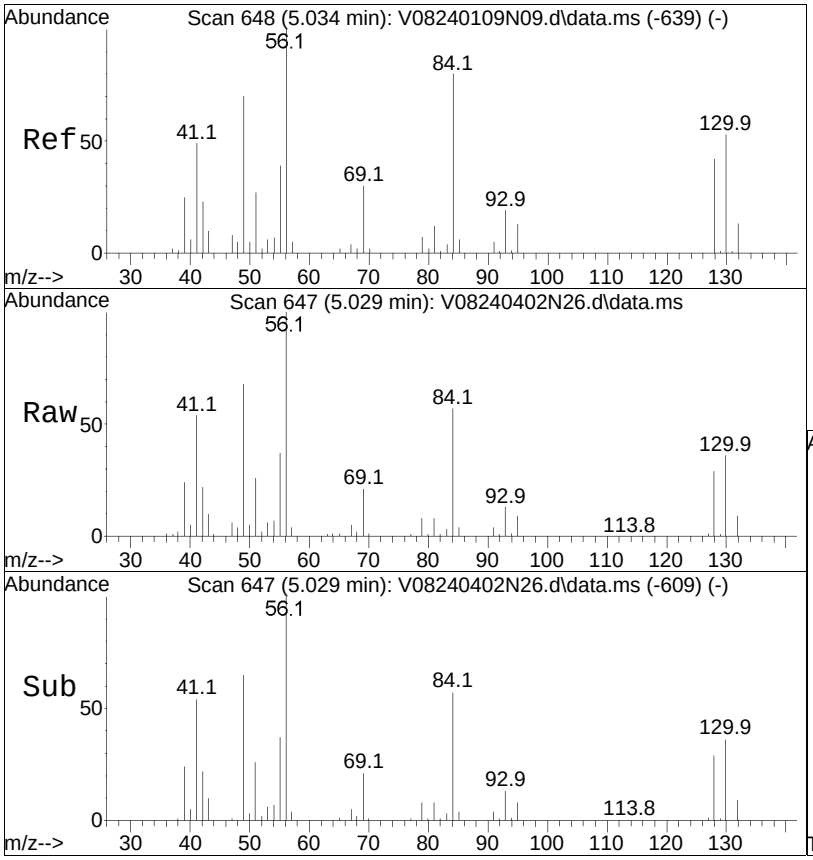


#28
cis-1,2-Dichloroethene
Concen: 11.10 ug/L
RT: 4.835 min Scan# 610
Delta R.T. -0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 96 Resp: 109159

Ion	Ratio	Lower	Upper
96	100		
61	172.7	149.4	224.2
98	64.5	53.4	80.2

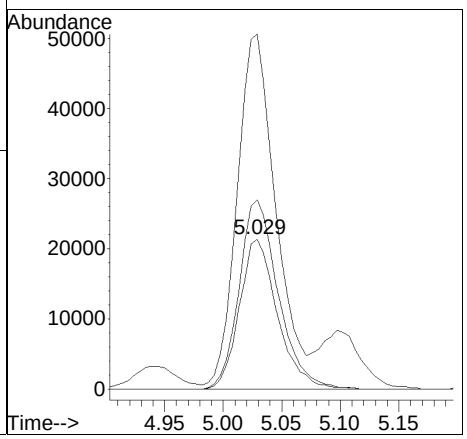


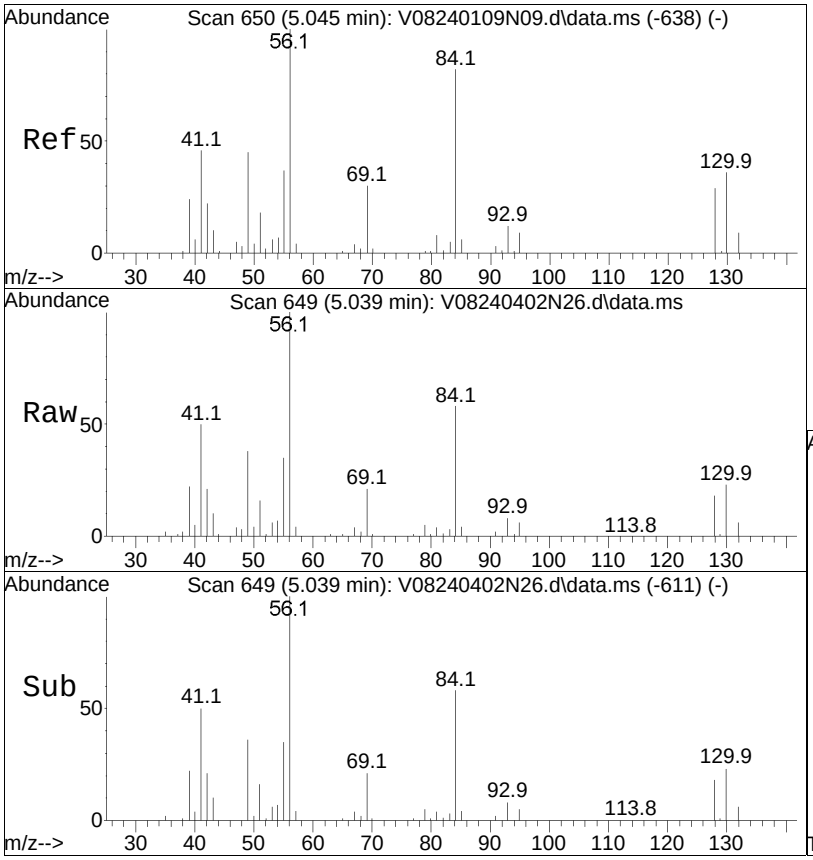


#30
Bromochloromethane
Concen: 10.99 ug/L
RT: 5.029 min Scan# 647
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:128 Resp: 48584

Ion	Ratio	Lower	Upper
128	100		
49	237.9	223.0	334.4
130	129.5	111.4	167.0

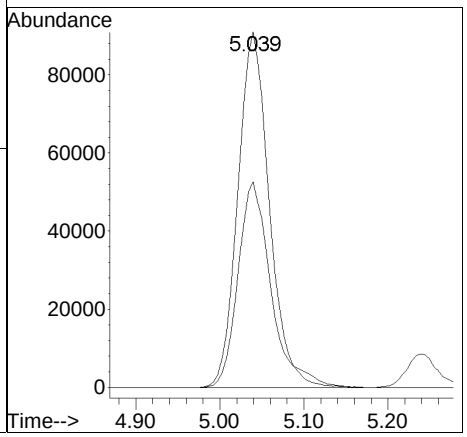


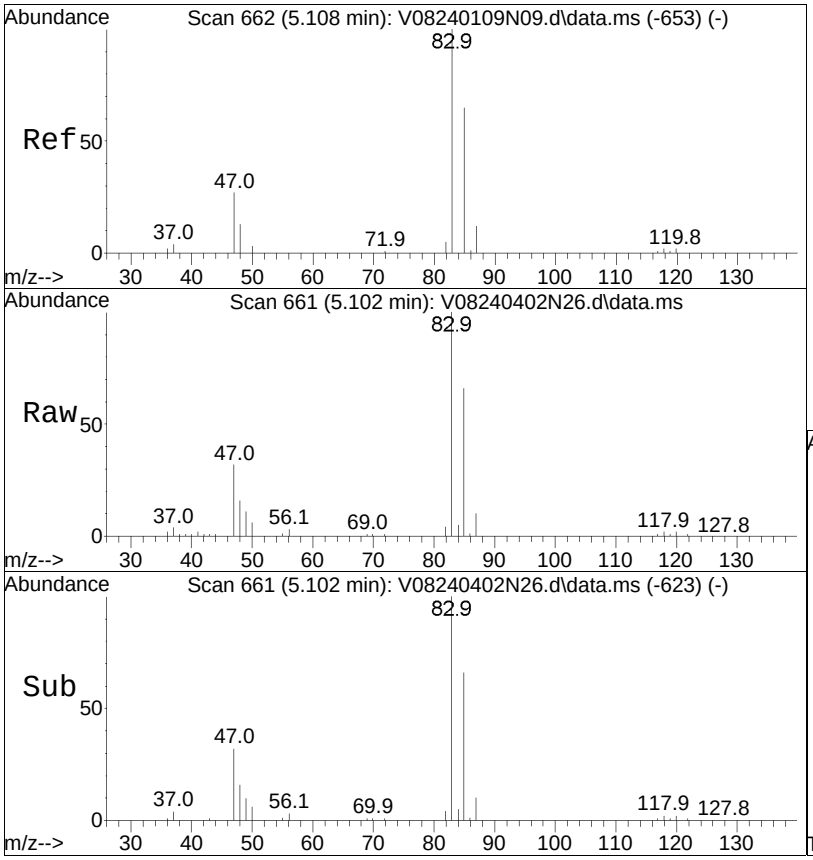


#31
Cyclohexane
Concen: 11.57 ug/L
RT: 5.039 min Scan# 649
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 56 Resp: 236841

Ion	Ratio	Lower	Upper
56	100		
84	60.9	38.4	79.8

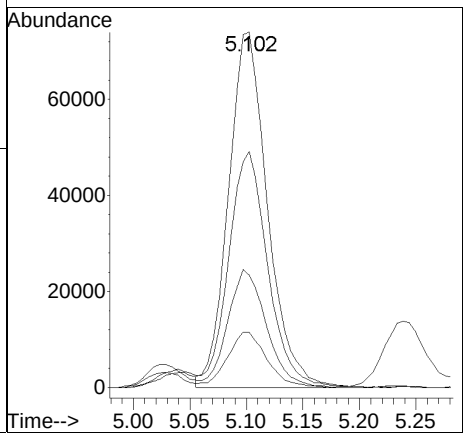


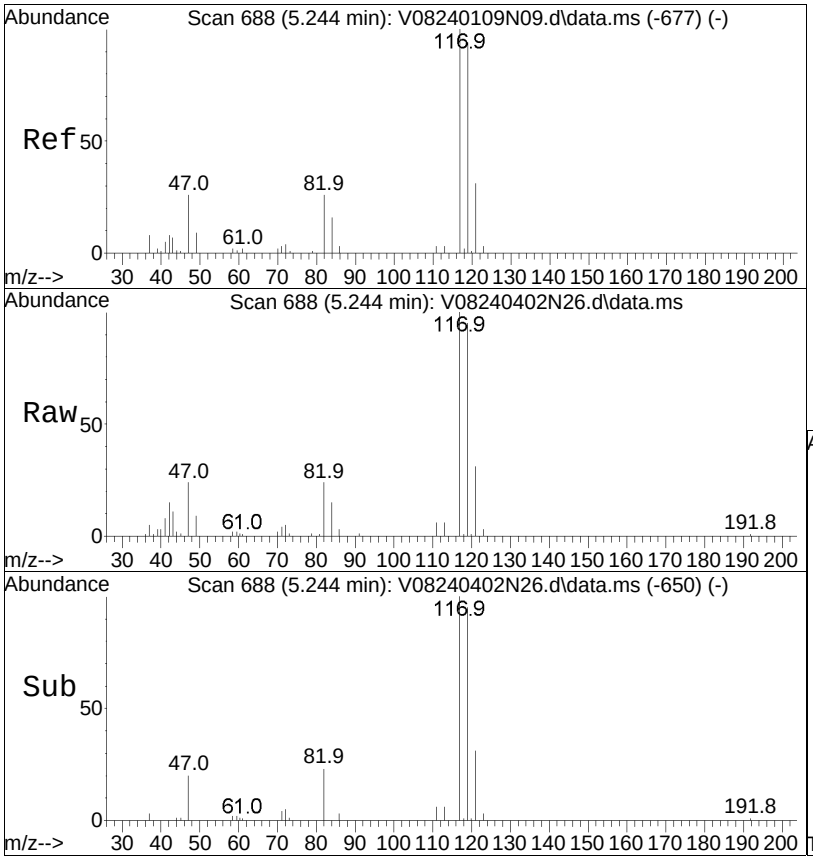


#32
Chloroform
Concen: 11.31 ug/L
RT: 5.102 min Scan# 661
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 83 Resp: 178177

Ion	Ratio	Lower	Upper
83	100		
85	66.2	41.5	86.1
47	32.8	19.0	39.4
48	15.8	9.9	20.5

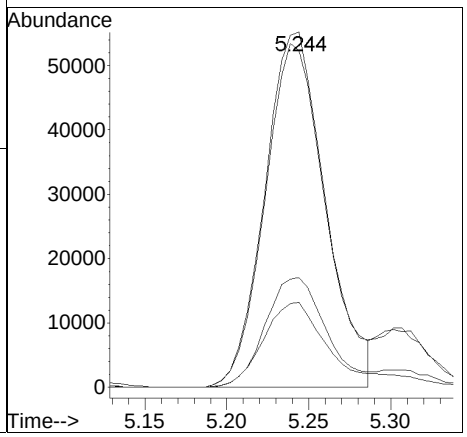


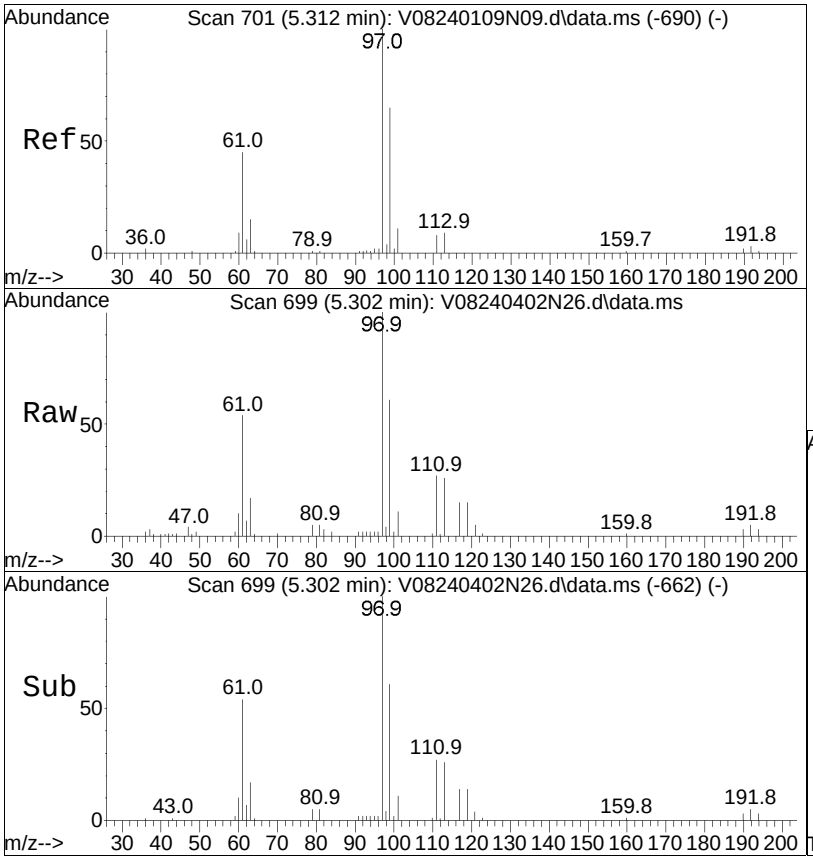


#34
Carbon tetrachloride
Concen: 11.36 ug/L
RT: 5.244 min Scan# 688
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:117 Resp: 142442

Ion	Ratio	Lower	Upper
117	100		
119	96.5	62.4	129.6
121	31.1	19.5	40.5
82	27.6	17.0	35.4

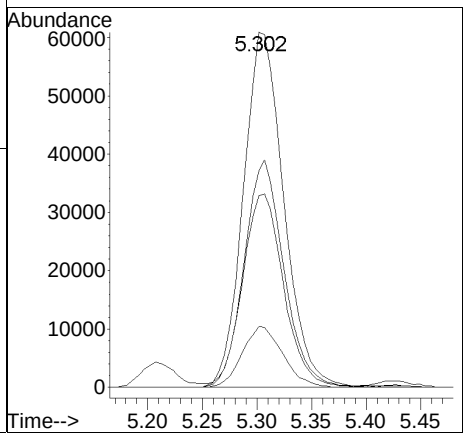


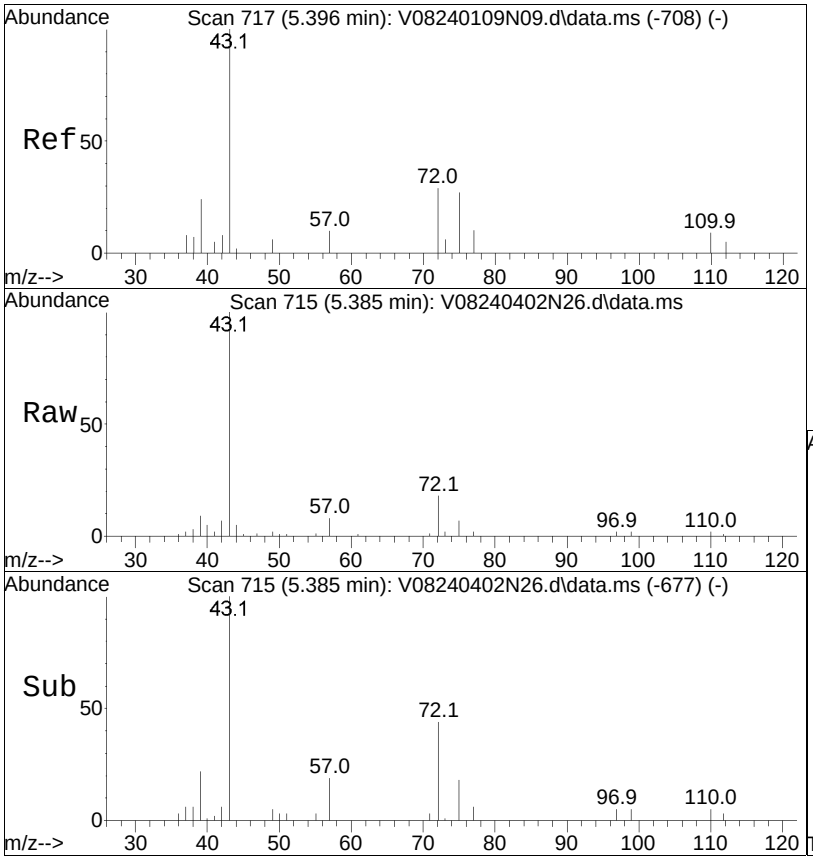


#37
1,1,1-Trichloroethane
Concen: 11.56 ug/L
RT: 5.302 min Scan# 699
Delta R.T. -0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 97 Resp: 157272

Ion	Ratio	Lower	Upper
97	100		
99	62.8	40.7	84.5
61	55.2	35.4	73.4
63	17.2	5.0	10.4#

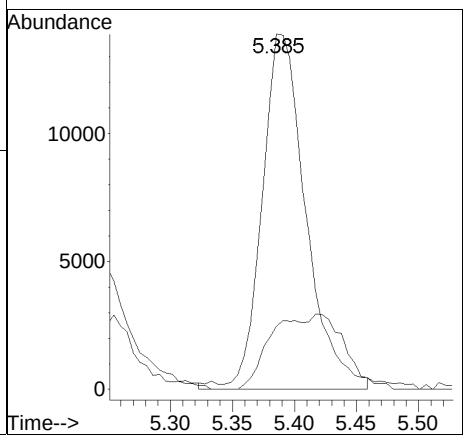


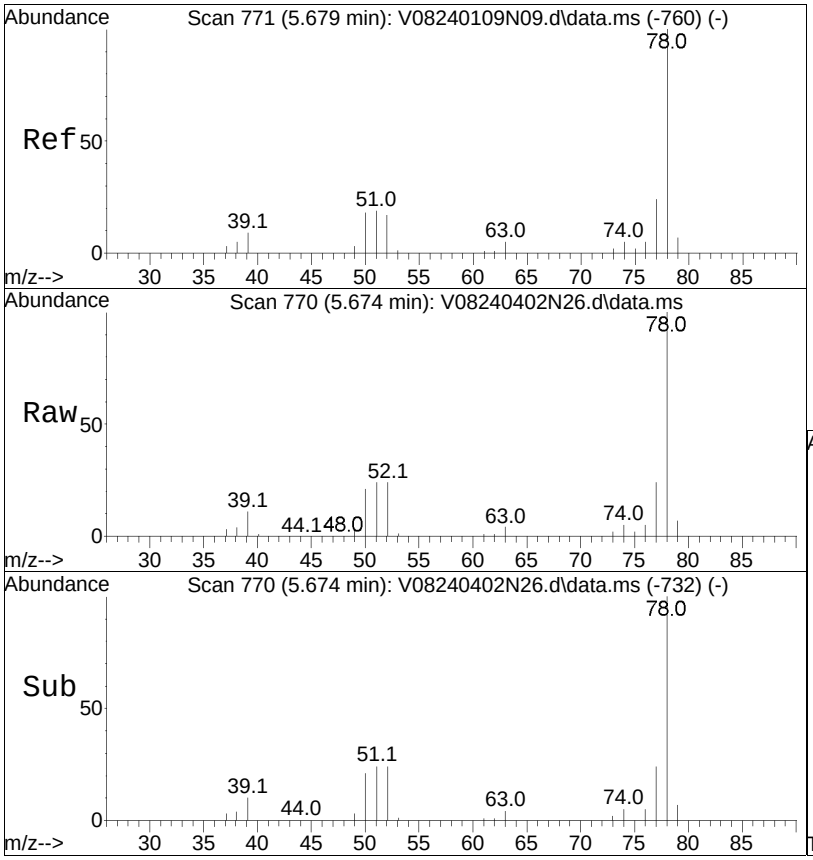


#39
2-Butanone
Concen: 10.28 ug/L M3
RT: 5.385 min Scan# 715
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 43 Resp: 34224

Ion	Ratio	Lower	Upper
43	100		
72	22.9	10.9	16.3#

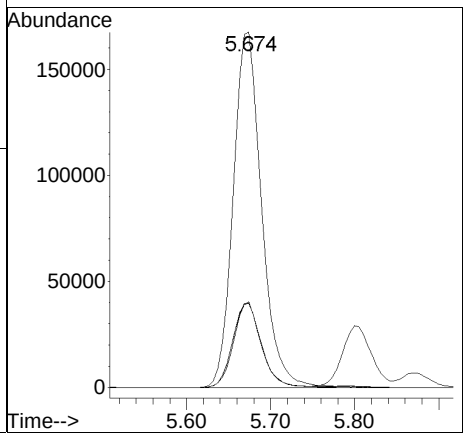


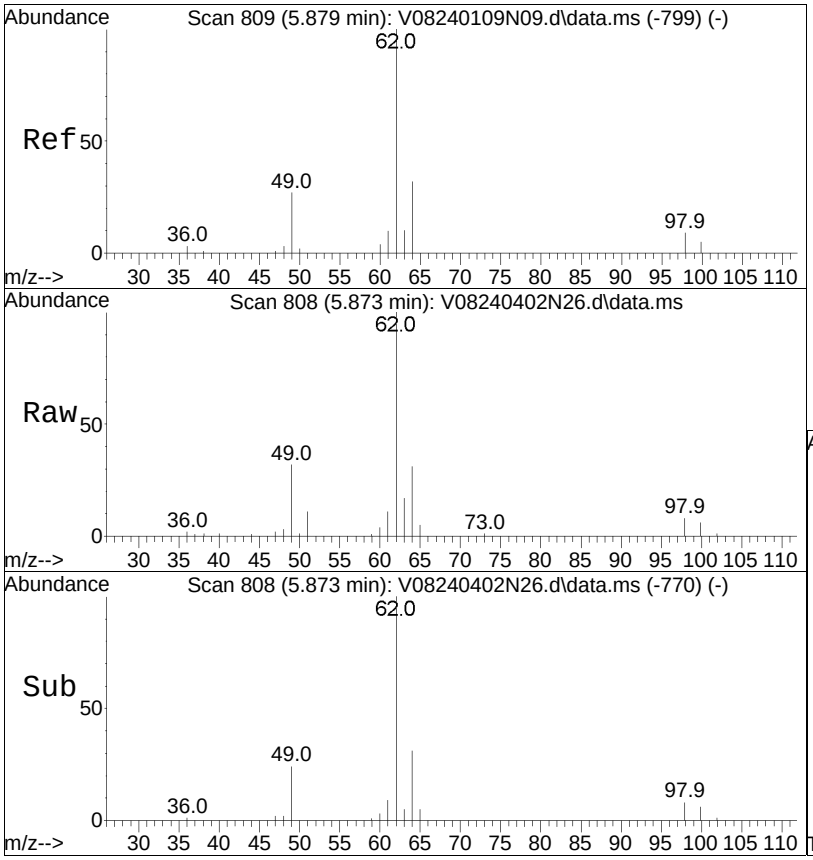


#41
Benzene
Concen: 11.29 ug/L
RT: 5.674 min Scan# 770
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 78 Resp: 392835

Ion	Ratio	Lower	Upper
78	100		
77	23.4	15.7	32.7
51	23.8	16.0	33.2
52	23.8	15.3	31.9

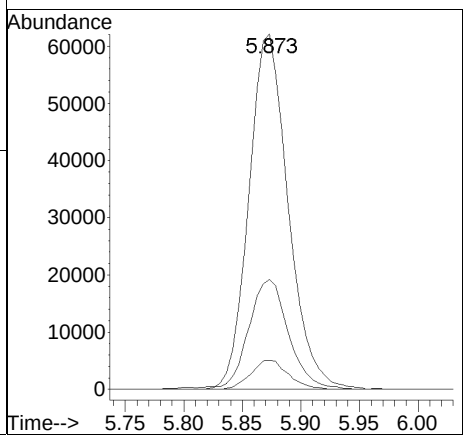


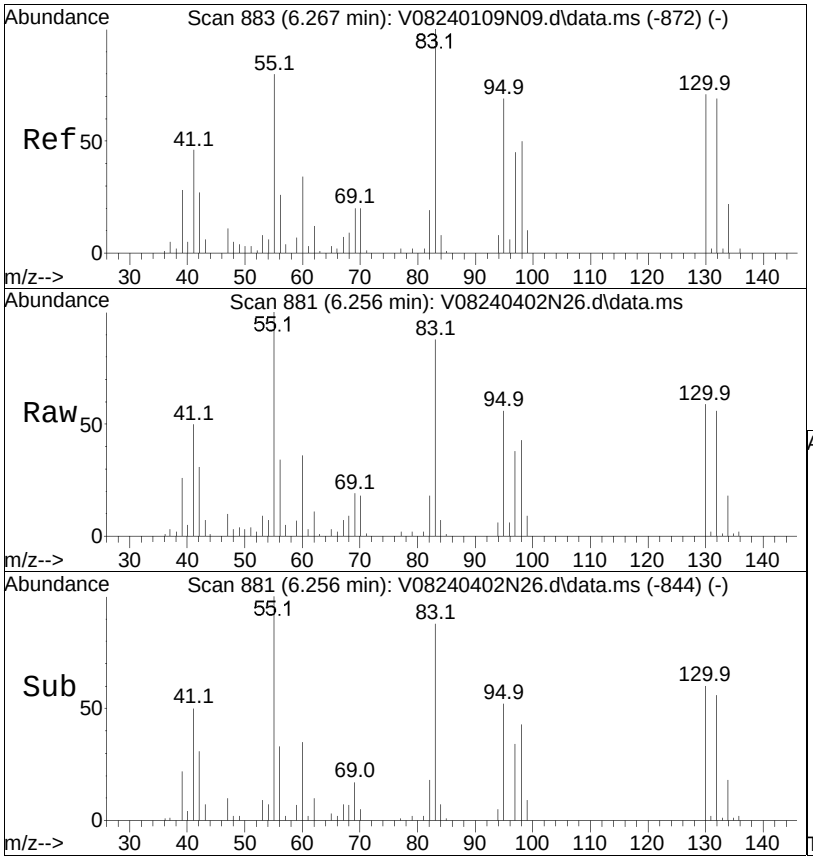


#44
1,2-Dichloroethane
Concen: 10.69 ug/L
RT: 5.873 min Scan# 808
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 62 Resp: 145051

Ion	Ratio	Lower	Upper
62	100		
64	31.5	11.2	51.2
98	7.9	0.0	26.1

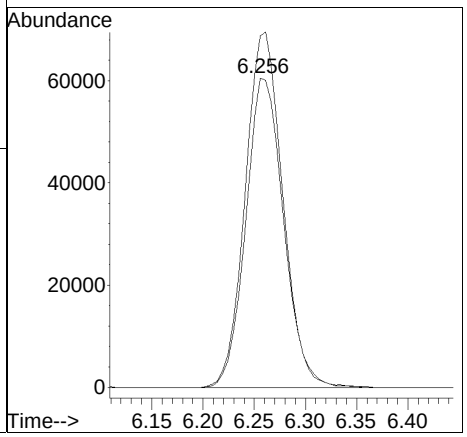


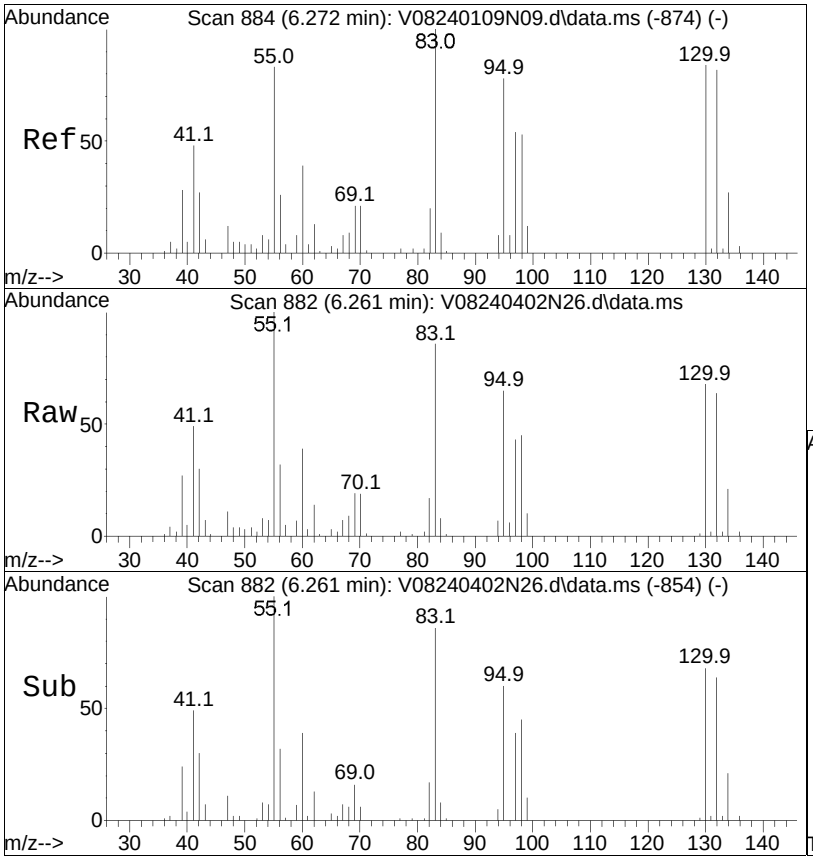


#47
Methyl cyclohexane
Concen: 11.49 ug/L
RT: 6.256 min Scan# 881
Delta R.T. -0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 83 Resp: 154969

Ion	Ratio	Lower	Upper
83	100		
55	114.4	88.3	132.5

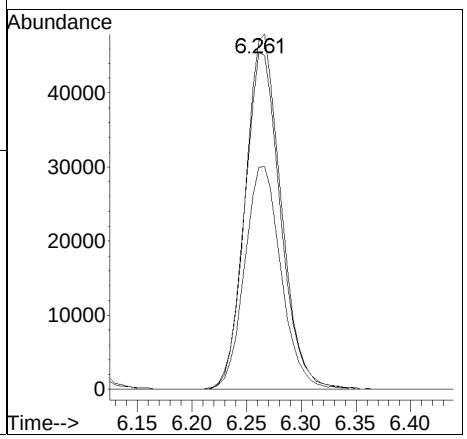


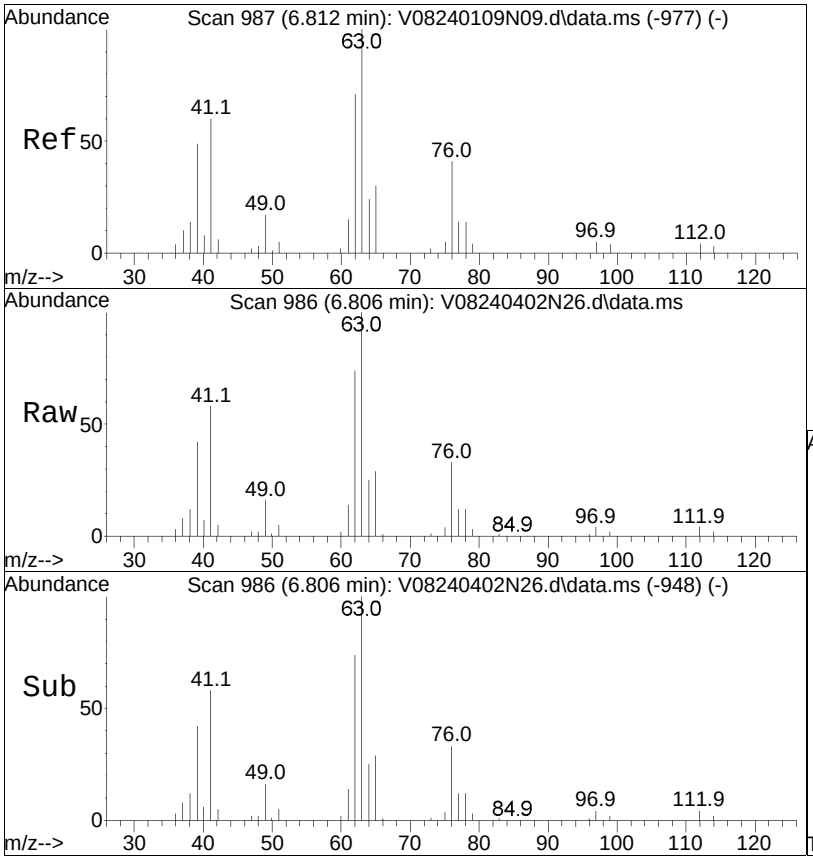


#48
Trichloroethene
Concen: 11.02 ug/L
RT: 6.261 min Scan# 882
Delta R.T. -0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 95 Resp: 103599

Ion	Ratio	Lower	Upper
95	100		
97	67.4	55.5	83.3
130	104.7	76.6	115.0

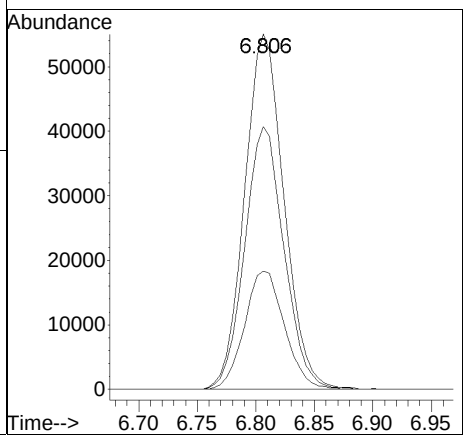


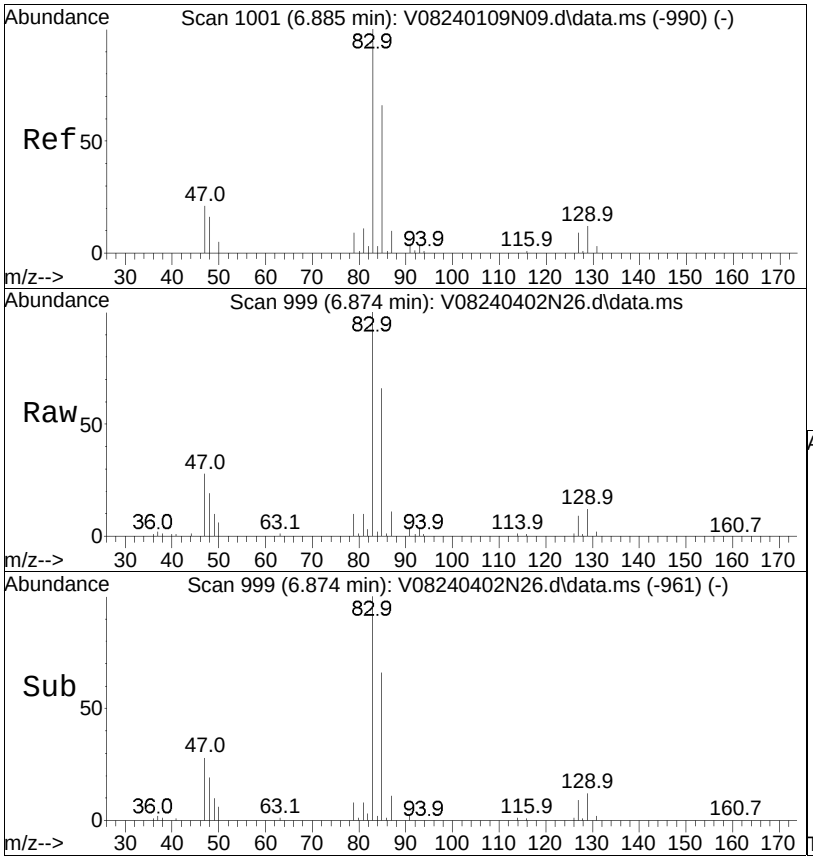


#51
1,2-Dichloropropane
Concen: 10.83 ug/L
RT: 6.806 min Scan# 986
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 63 Resp: 128873

Ion	Ratio	Lower	Upper
63	100		
62	73.7	58.6	87.8
76	33.8	38.0	57.0#

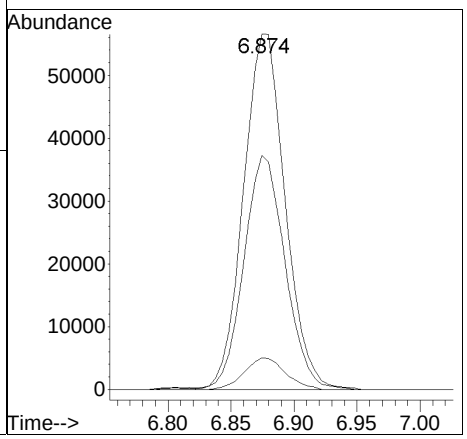


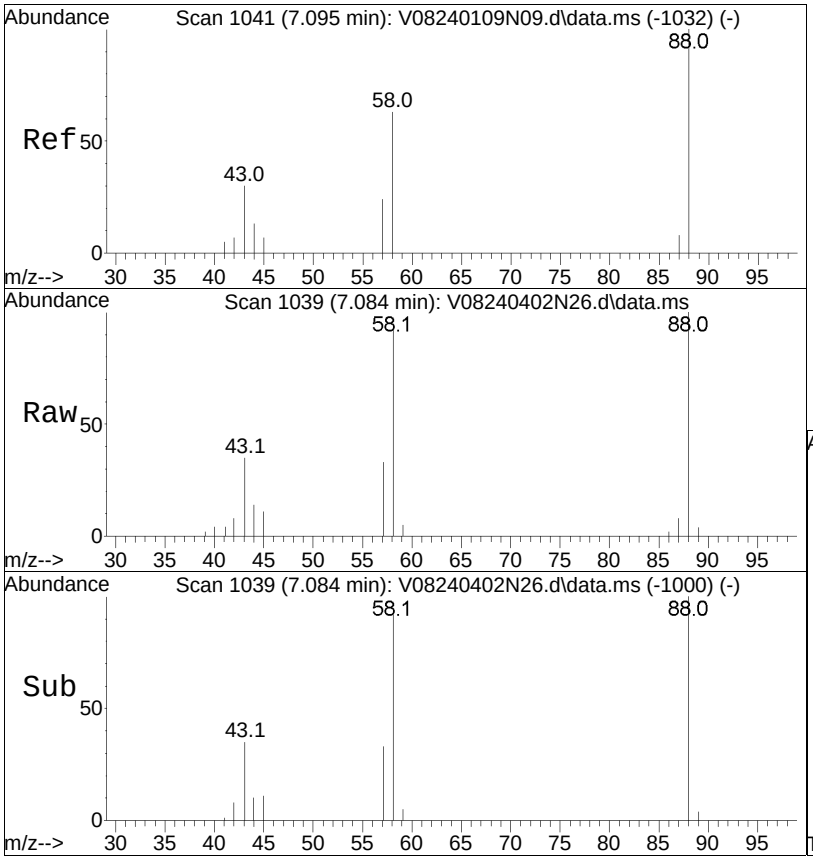


#54
Bromodichloromethane
Concen: 10.89 ug/L
RT: 6.874 min Scan# 999
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 83 Resp: 129970

Ion	Ratio	Lower	Upper
83	100		
85	65.0	52.3	78.5
127	8.7	6.2	9.4

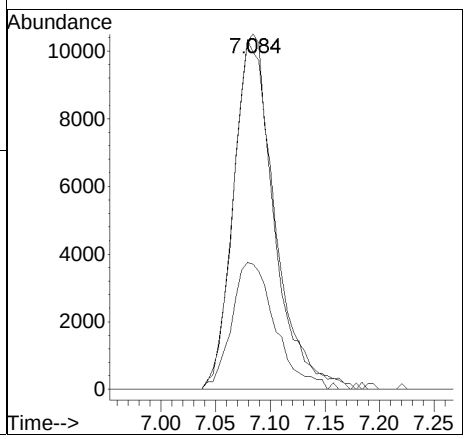


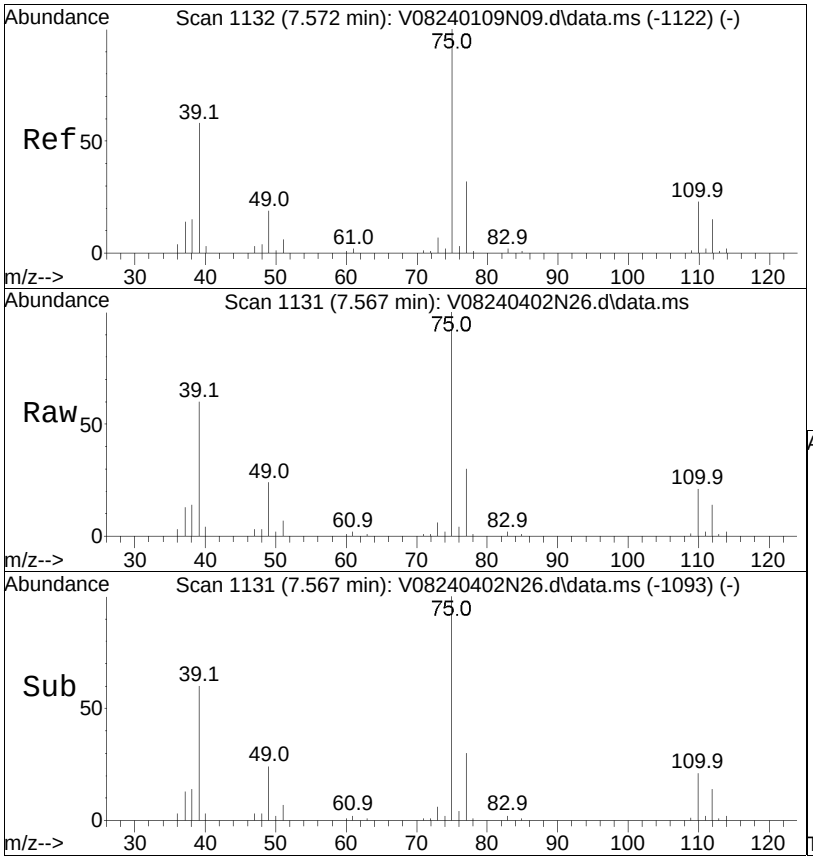


#57
1,4-Dioxane
Concen: 521.85 ug/L
RT: 7.084 min Scan# 1039
Delta R.T. 0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 88 Resp: 27601

Ion	Ratio	Lower	Upper
88	100		
58	96.5	76.7	115.1
43	38.0	36.2	54.2

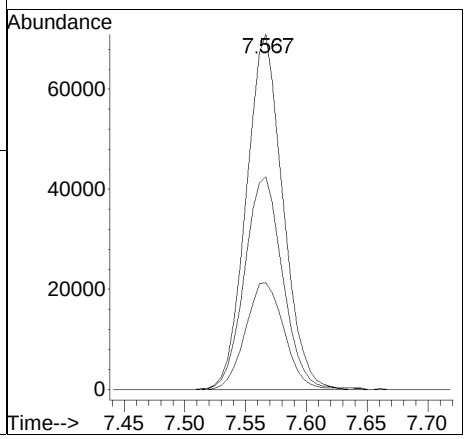


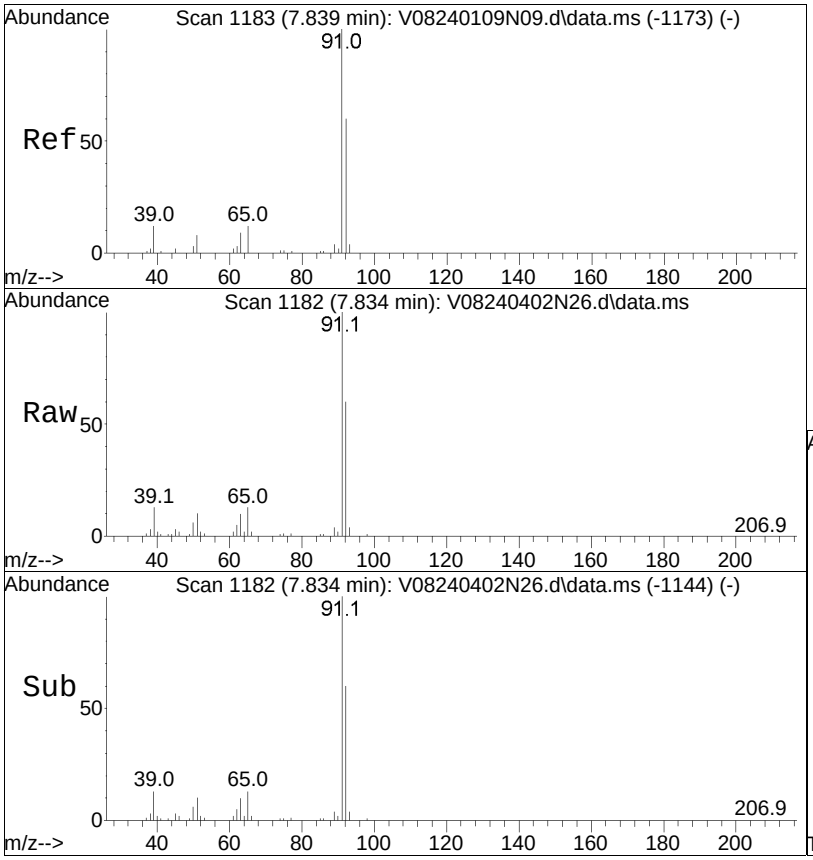


#58
cis-1,3-Dichloropropene
Concen: 11.05 ug/L
RT: 7.567 min Scan# 1131
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 75 Resp: 148873

Ion	Ratio	Lower	Upper
75	100		
77	31.7	25.0	37.4
39	62.4	50.1	75.1

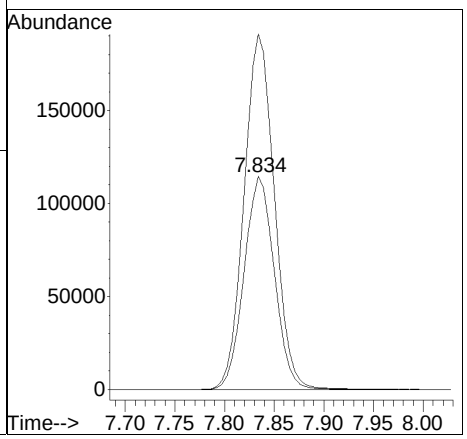


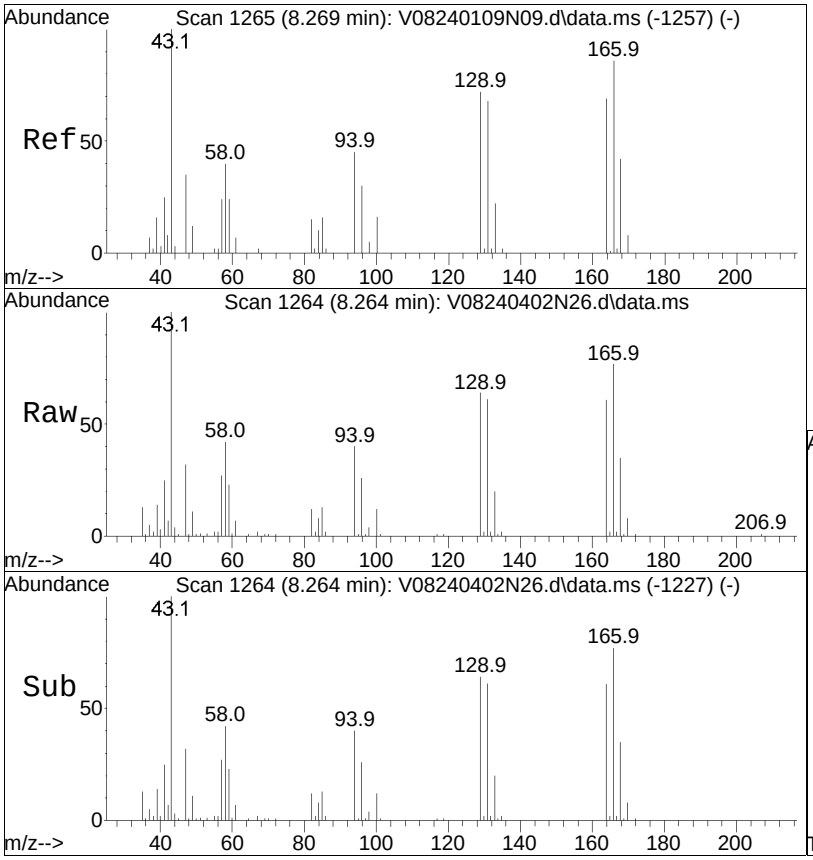


#61
Toluene
Concen: 11.23 ug/L
RT: 7.834 min Scan# 1182
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 92 Resp: 242235

Ion	Ratio	Lower	Upper
92	100		
91	167.0	139.8	209.6

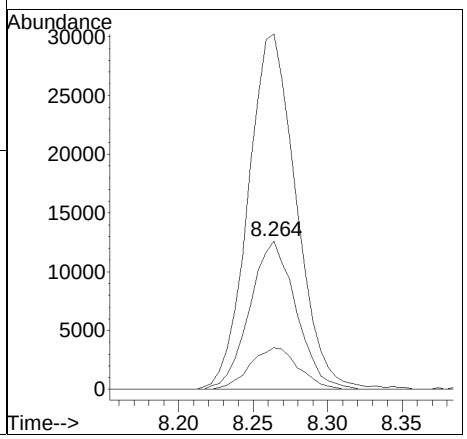


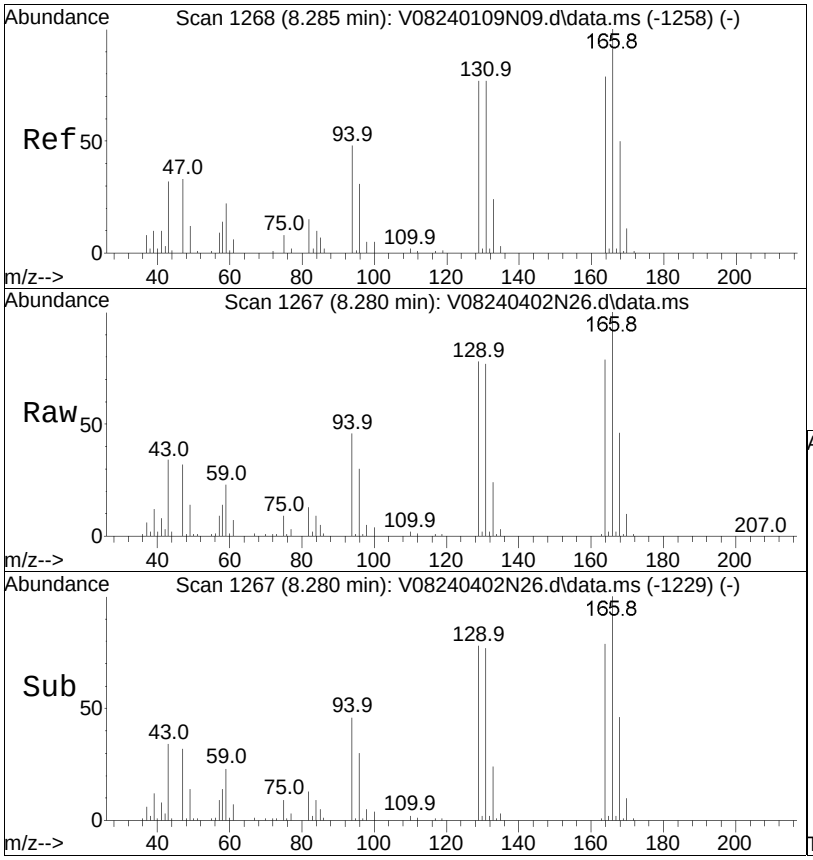


#62
4-Methyl-2-pentanone
Concen: 10.33 ug/L
RT: 8.264 min Scan# 1264
Delta R.T. -0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 58 Resp: 27374

Ion	Ratio	Lower	Upper
58	100		
100	29.4	20.2	30.2
43	248.1	196.6	295.0

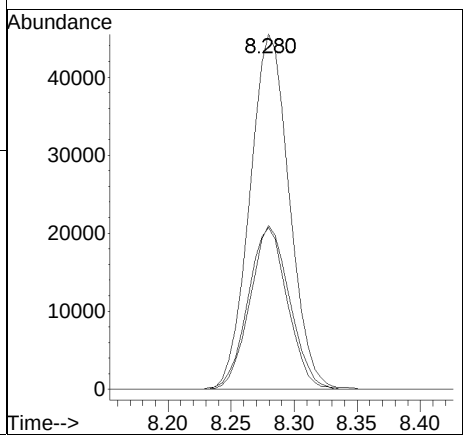


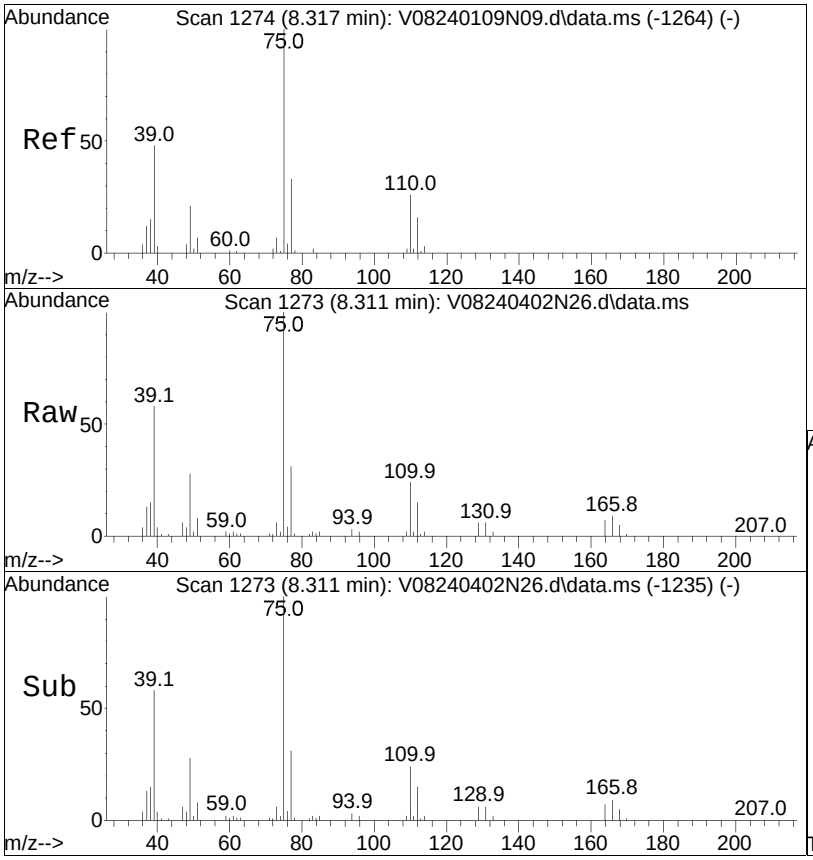


#63
Tetrachloroethene
Concen: 11.10 ug/L
RT: 8.280 min Scan# 1267
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:166 Resp: 99371

Ion	Ratio	Lower	Upper
166	100		
168	46.0	28.2	68.2
94	45.5	38.4	78.4

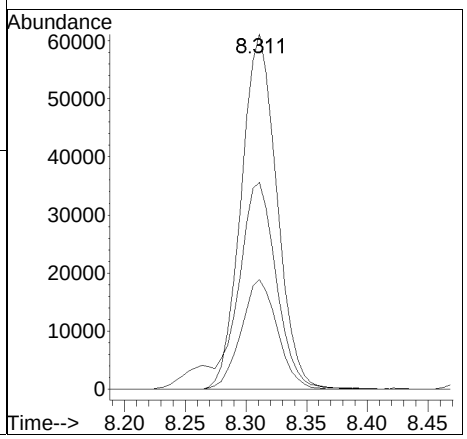


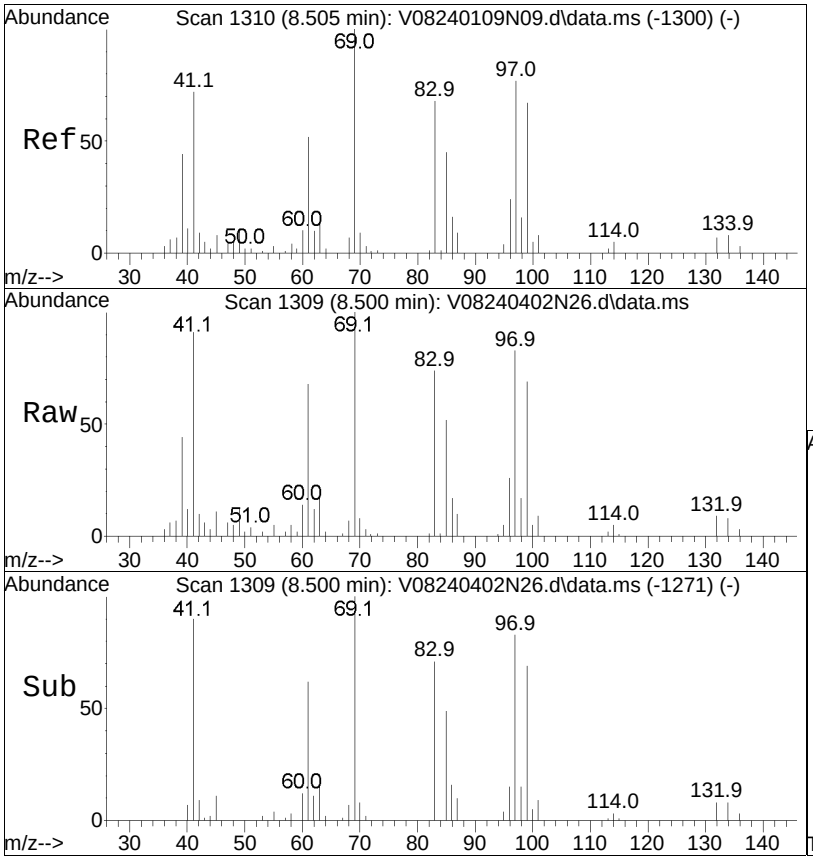


#65
trans-1,3-Dichloropropene
Concen: 11.31 ug/L
RT: 8.311 min Scan# 1273
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 75 Resp: 125316

Ion	Ratio	Lower	Upper
75	100		
77	31.3	12.4	52.4
39	66.0	42.8	82.8

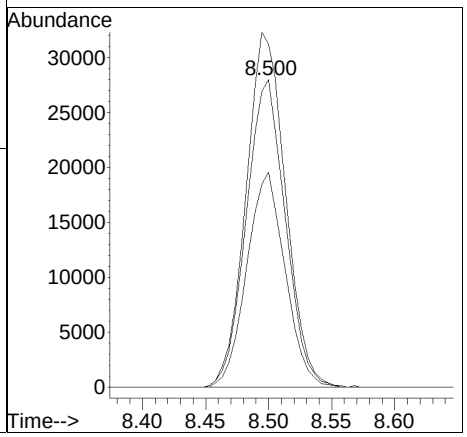


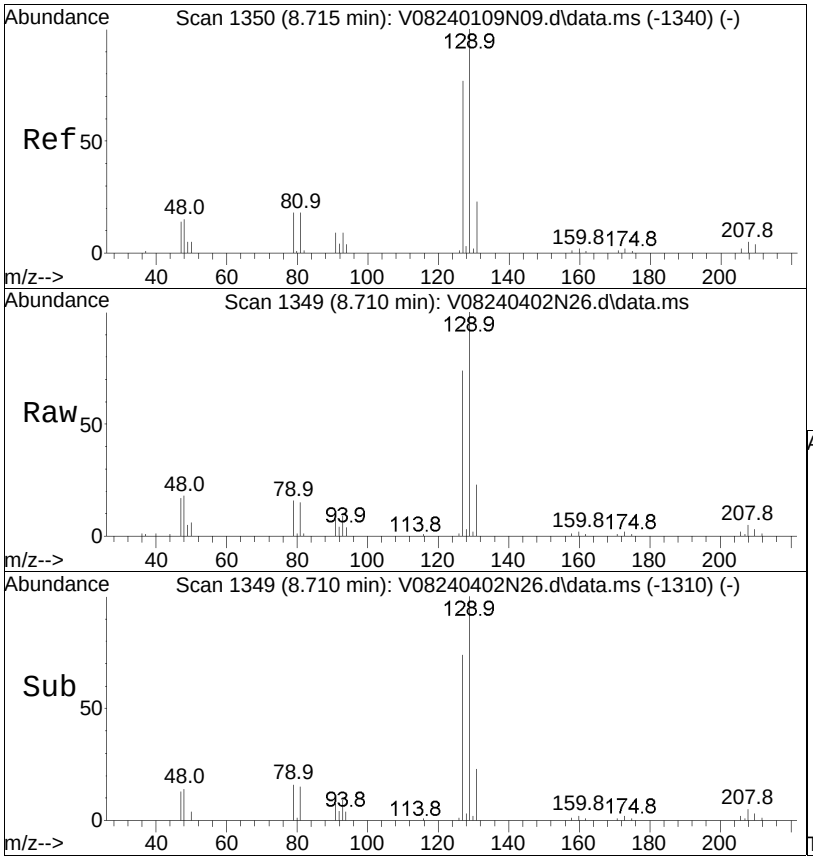


#68
1,1,2-Trichloroethane
Concen: 11.09 ug/L
RT: 8.500 min Scan# 1309
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 83 Resp: 60553

Ion	Ratio	Lower	Upper
83	100		
97	116.5	89.8	129.8
85	68.6	44.4	84.4

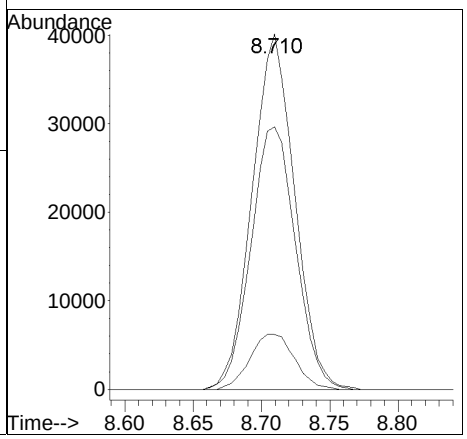


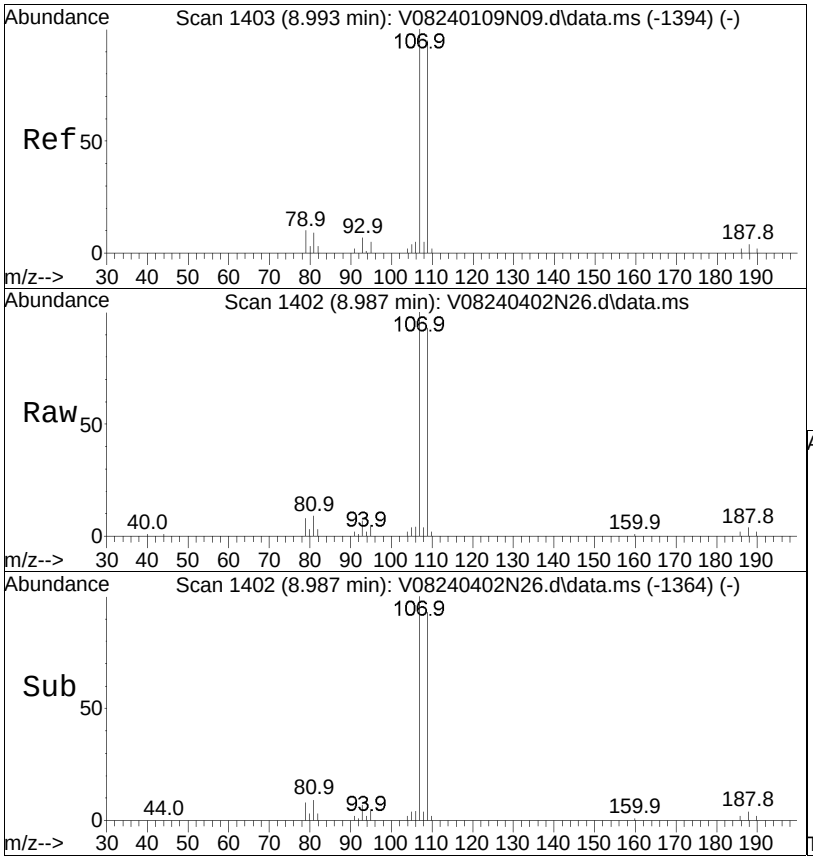


#69
Chlorodibromomethane
Concen: 10.48 ug/L
RT: 8.710 min Scan# 1349
Delta R.T. 0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:129 Resp: 86952

Ion	Ratio	Lower	Upper
129	100		
81	16.3	2.9	42.9
127	77.5	57.8	97.8

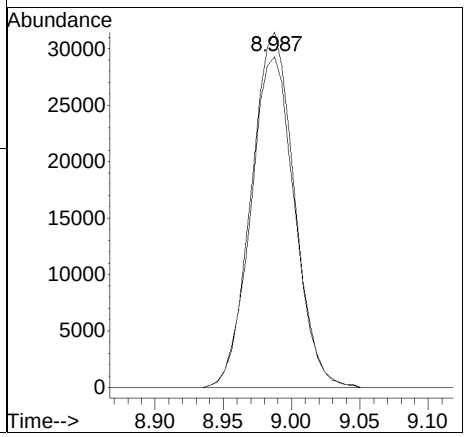


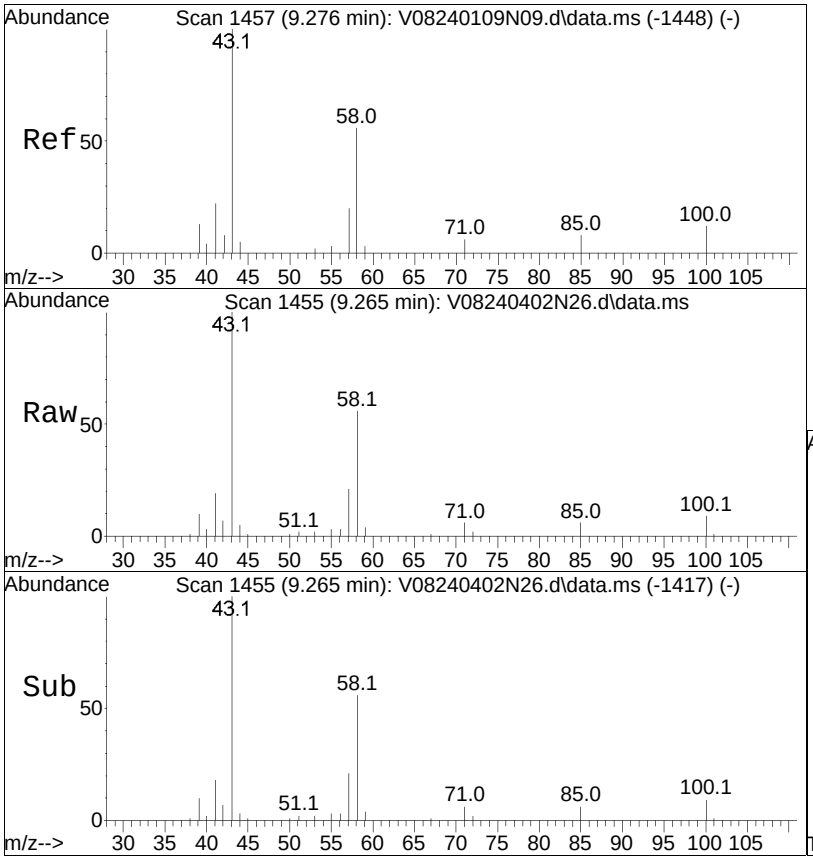


#71
1,2-Dibromoethane
Concen: 10.98 ug/L
RT: 8.987 min Scan# 1402
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:107 Resp: 69058

Ion	Ratio	Lower	Upper
107	100		
109	94.3	74.3	111.5

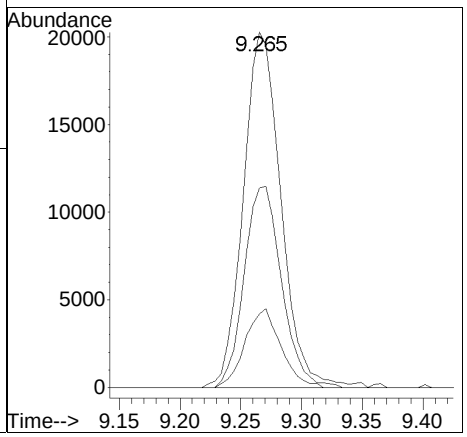


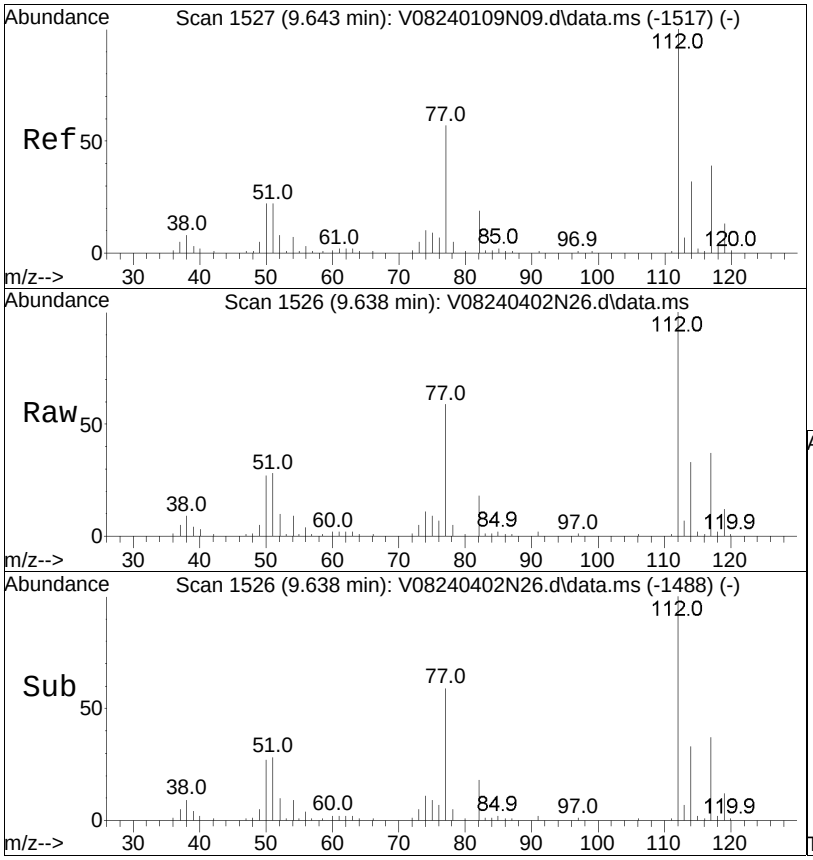


#72
2-Hexanone
Concen: 10.24 ug/L
RT: 9.265 min Scan# 1455
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 43 Resp: 43720

Ion	Ratio	Lower	Upper
43	100		
58	56.2	41.2	61.8
57	21.0	17.2	25.8

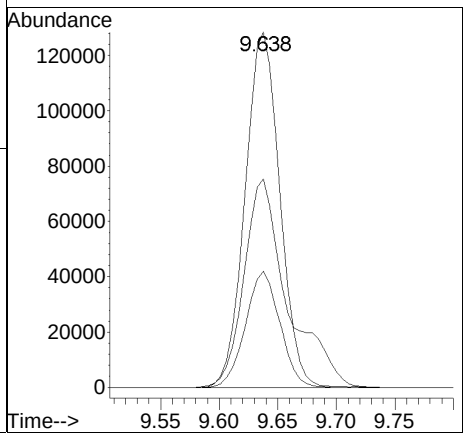


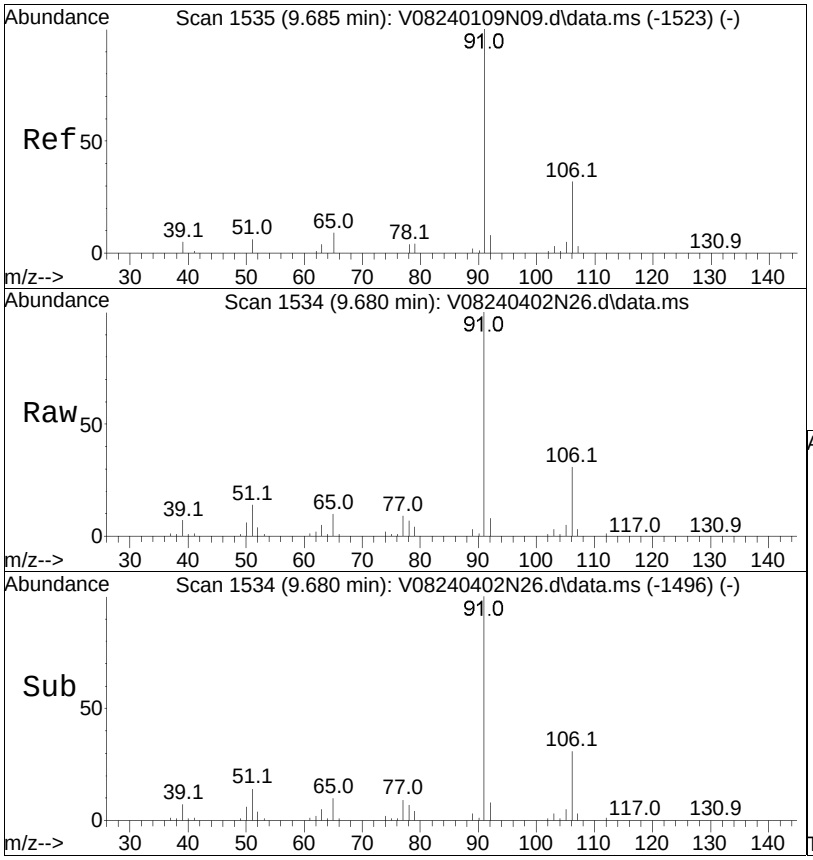


#73
Chlorobenzene
Concen: 10.99 ug/L
RT: 9.638 min Scan# 1526
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:112 Resp: 264688

Ion	Ratio	Lower	Upper
112	100		
77	73.5	55.4	83.0
114	32.3	25.4	38.2

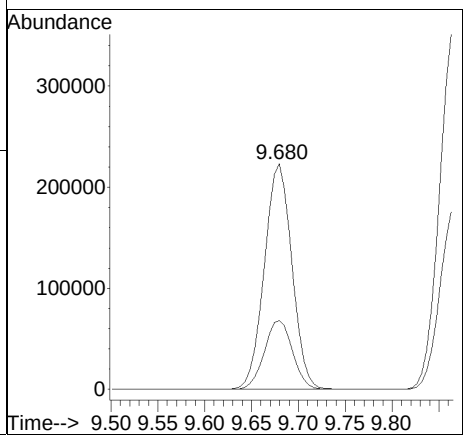


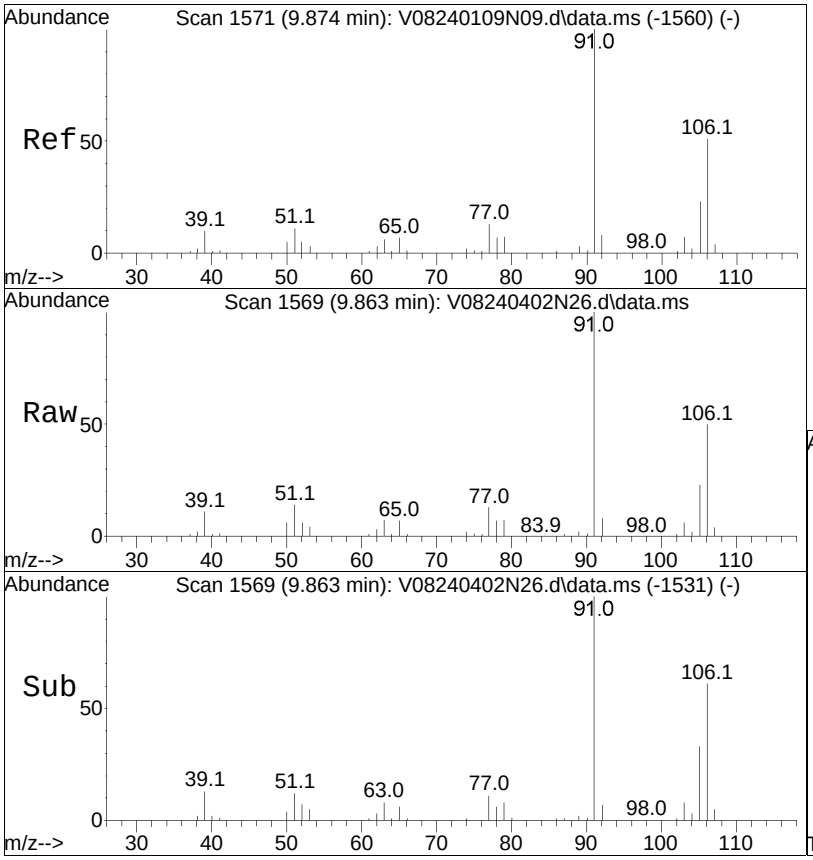


#74
Ethylbenzene
Concen: 11.40 ug/L
RT: 9.680 min Scan# 1534
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 91 Resp: 457617

Ion	Ratio	Lower	Upper
91	100		
106	31.1	24.3	36.5

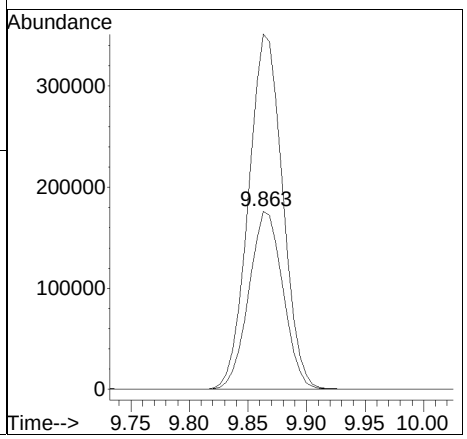


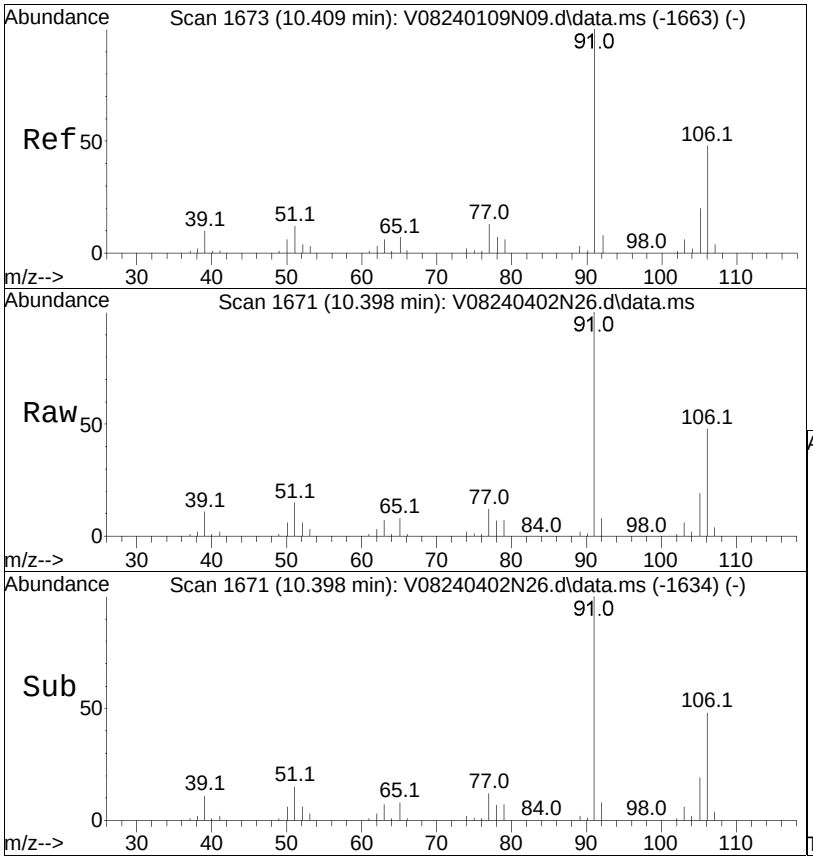


#76
p/m Xylene
Concen: 22.57 ug/L
RT: 9.863 min Scan# 1569
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:106 Resp: 357799

Ion	Ratio	Lower	Upper
106	100		
91	199.6	166.4	249.6

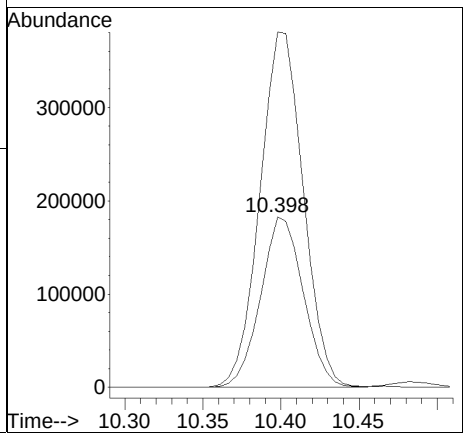


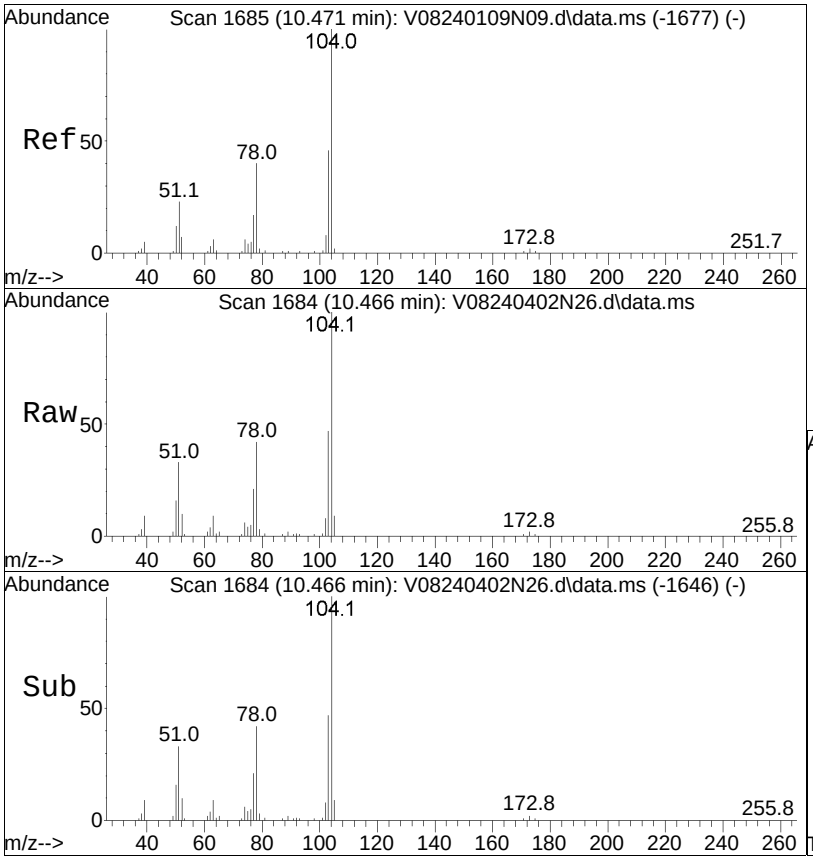


#77
o Xylene
Concen: 22.75 ug/L
RT: 10.398 min Scan# 1671
Delta R.T. -0.005 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:106 Resp: 348078

Ion	Ratio	Lower	Upper
106	100		
91	211.3	182.6	273.8

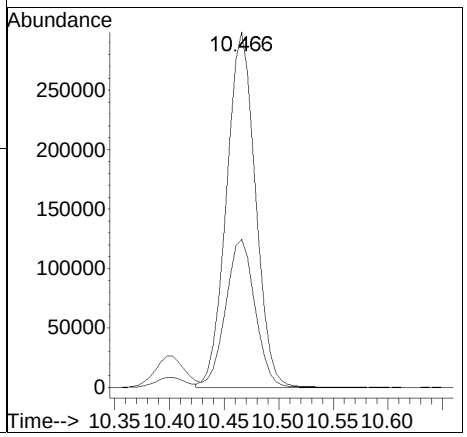


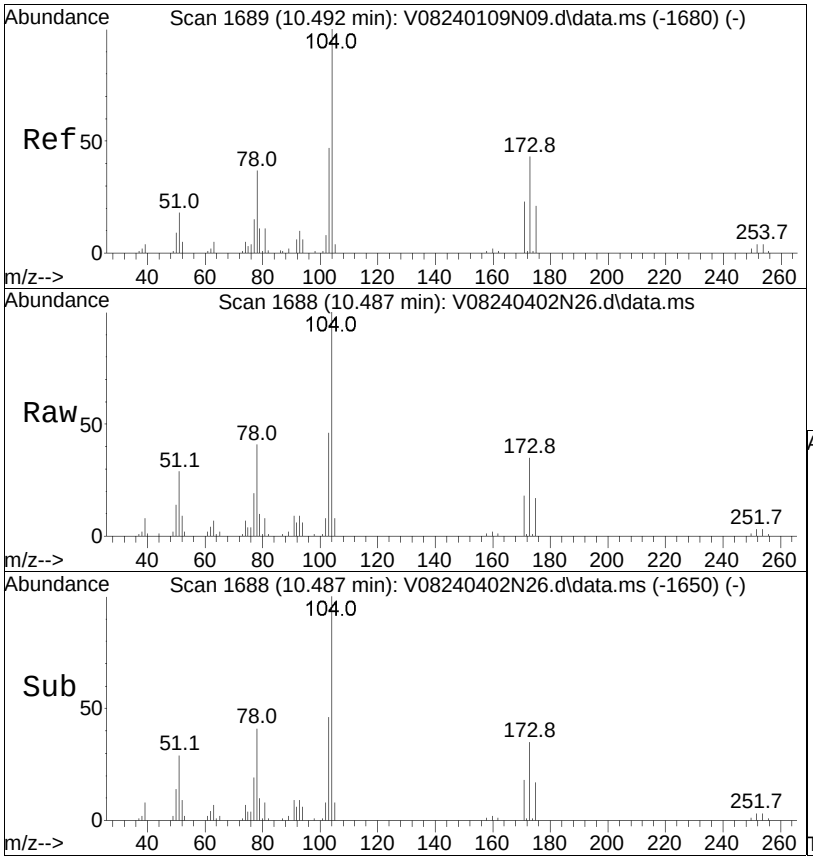


#78
Styrene
Concen: 22.48 ug/L
RT: 10.466 min Scan# 1684
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:104 Resp: 551095

Ion	Ratio	Lower	Upper
104	100		
78	42.2	39.8	59.6

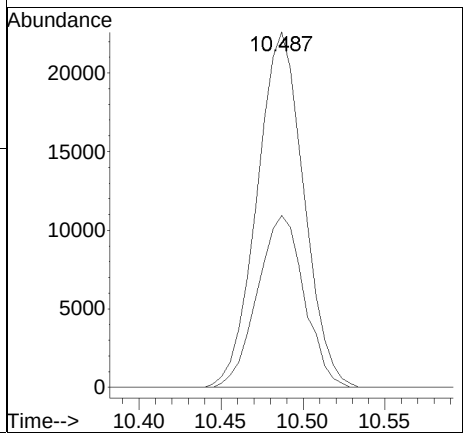


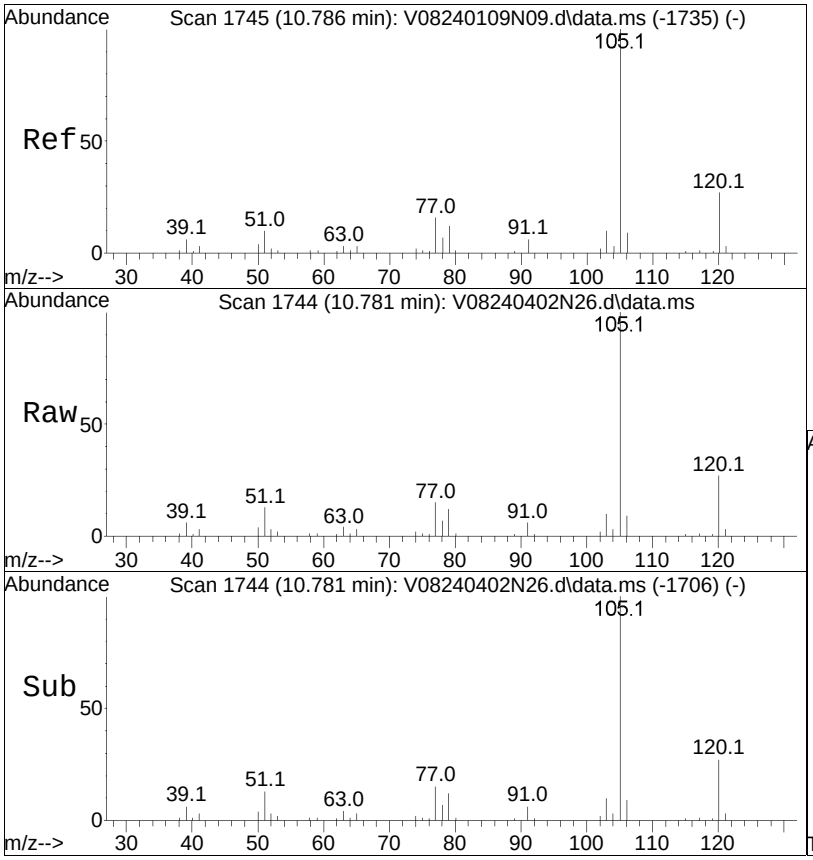


#80
Bromoform
Concen: 10.36 ug/L
RT: 10.487 min Scan# 1688
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:173 Resp: 44889

Ion	Ratio	Lower	Upper
173	100		
175	48.4	31.5	71.5

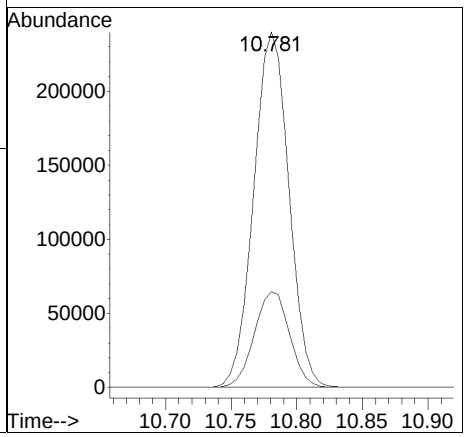


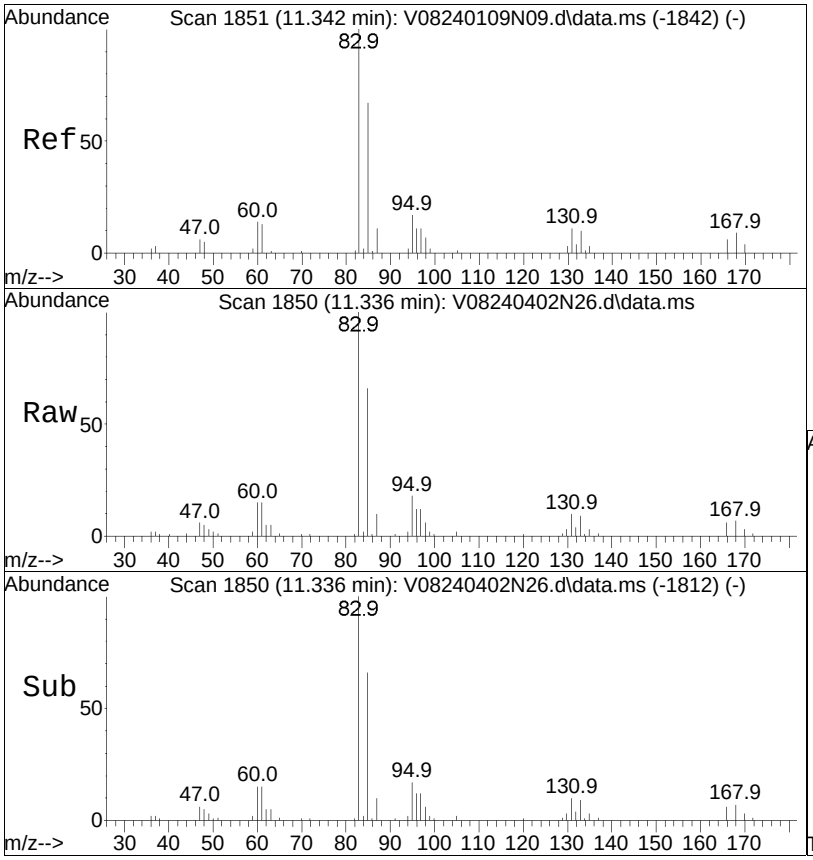


#82
Isopropylbenzene
Concen: 11.56 ug/L
RT: 10.781 min Scan# 1744
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:105 Resp: 448602

Ion	Ratio	Lower	Upper
105	100		
120	26.9	4.8	44.8

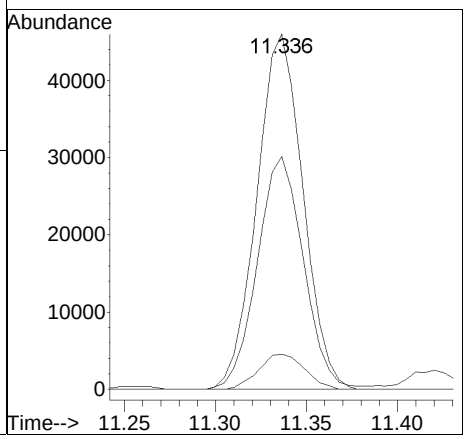


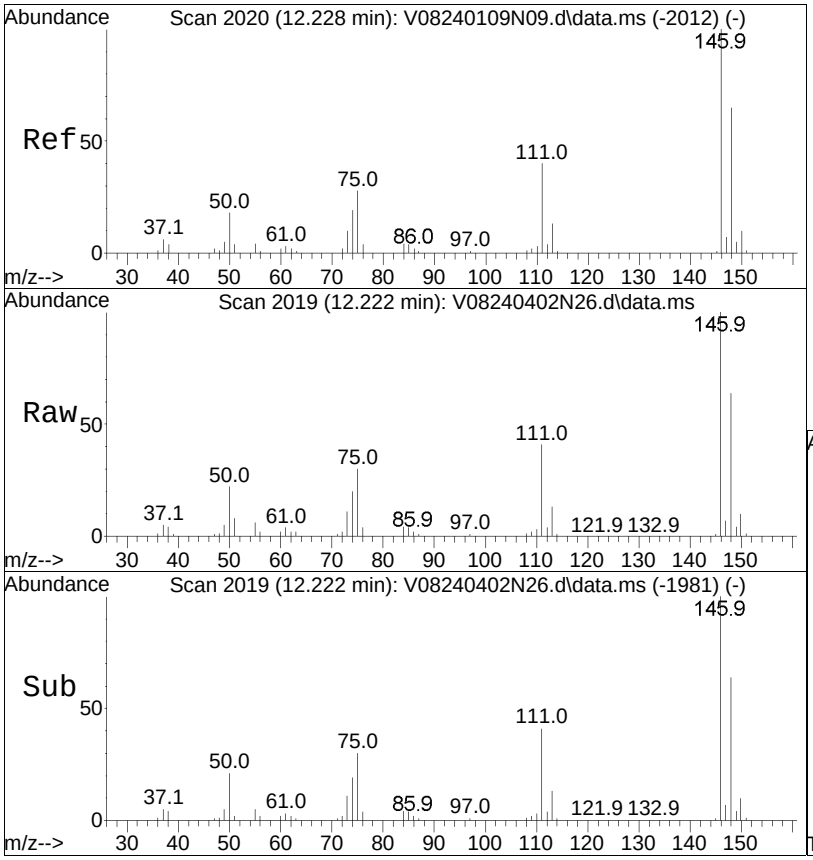


#87
1,1,2,2-Tetrachloroethane
Concen: 11.25 ug/L
RT: 11.336 min Scan# 1850
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion: 83 Resp: 80982

Ion	Ratio	Lower	Upper
83	100		
131	10.0	0.0	30.4
85	65.5	45.4	85.4

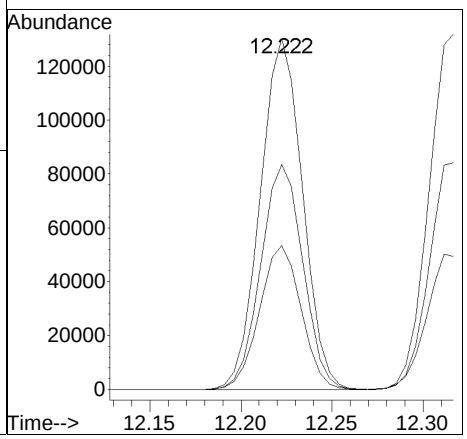


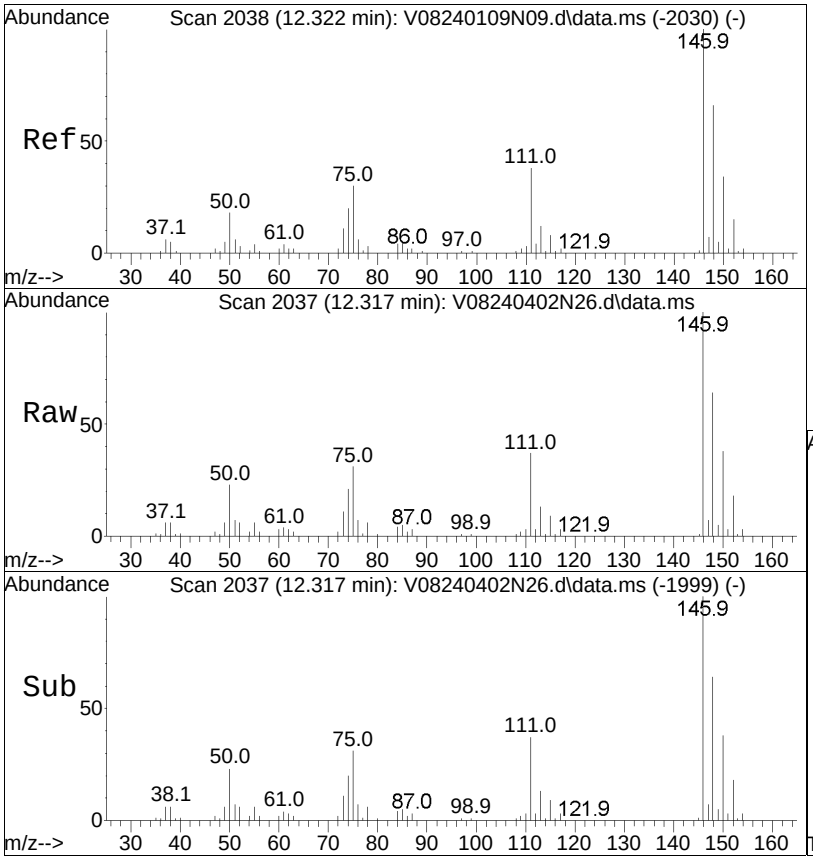


#100
1,3-Dichlorobenzene
Concen: 10.78 ug/L
RT: 12.222 min Scan# 2019
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:146 Resp: 210065

Ion	Ratio	Lower	Upper
146	100		
111	40.3	27.5	57.1
148	63.9	41.9	86.9

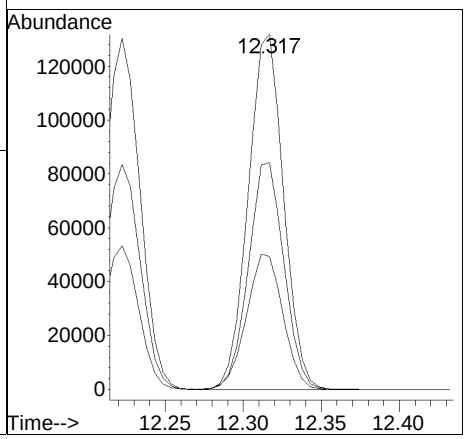


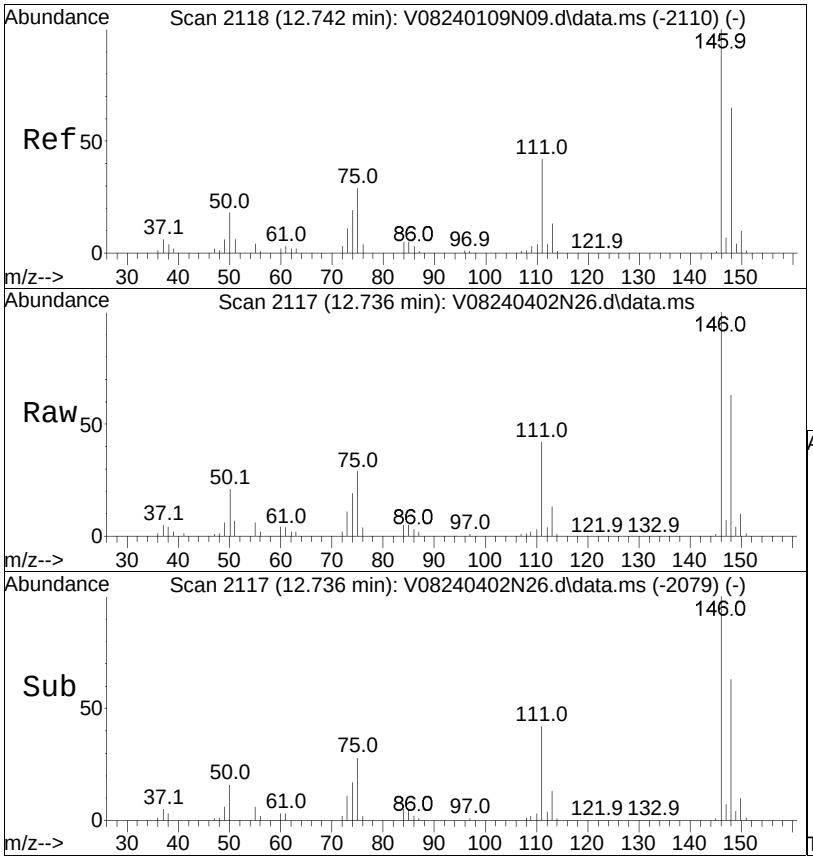


#101
1,4-Dichlorobenzene
Concen: 10.60 ug/L
RT: 12.317 min Scan# 2037
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:146 Resp: 208184

Ion	Ratio	Lower	Upper
146	100		
111	39.3	32.3	48.5
148	64.1	49.9	74.9

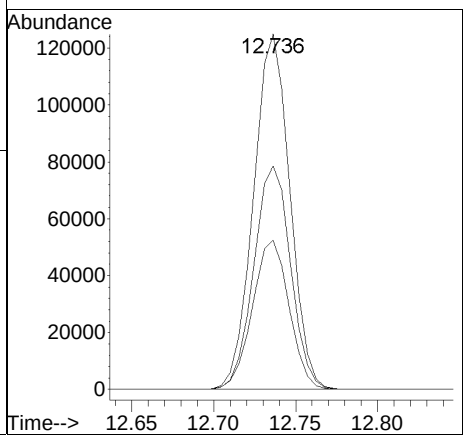


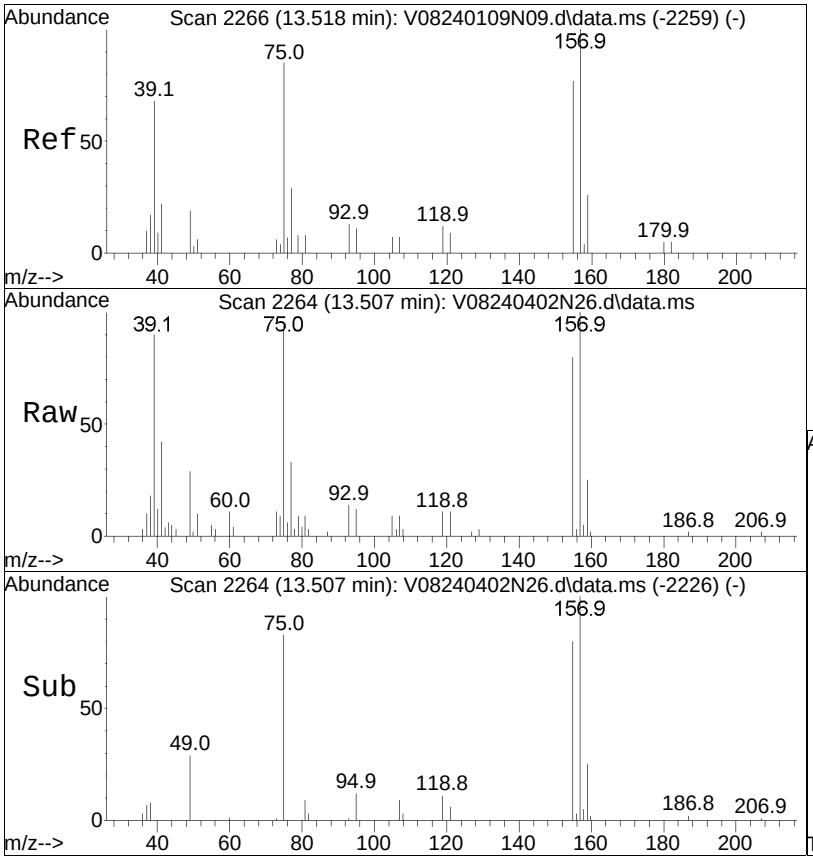


#104
1,2-Dichlorobenzene
Concen: 10.66 ug/L
RT: 12.736 min Scan# 2117
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:146 Resp: 192519

Ion	Ratio	Lower	Upper
146	100		
111	42.5	28.3	58.7
148	63.8	42.3	87.8

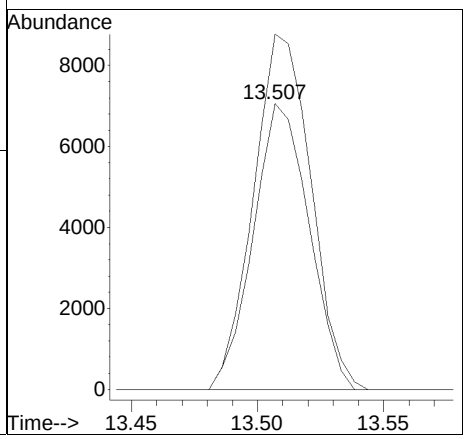


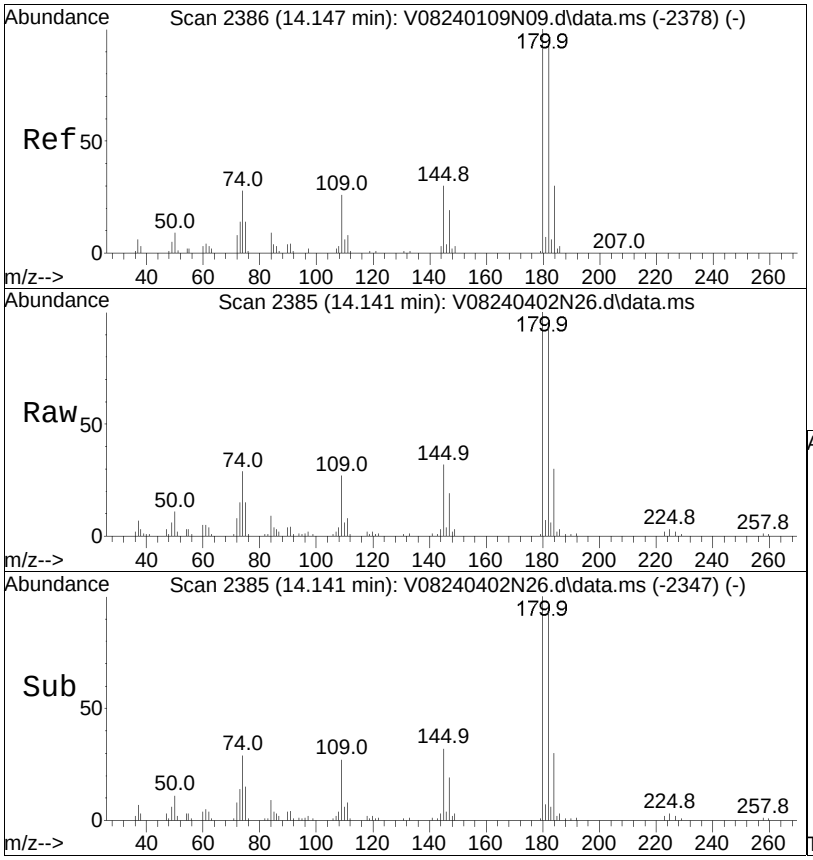


#106
1,2-Dibromo-3-chloropropane
Concen: 10.69 ug/L
RT: 13.507 min Scan# 2264
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:155 Resp: 10873

Ion	Ratio	Lower	Upper
155	100		
157	128.0	94.8	142.2

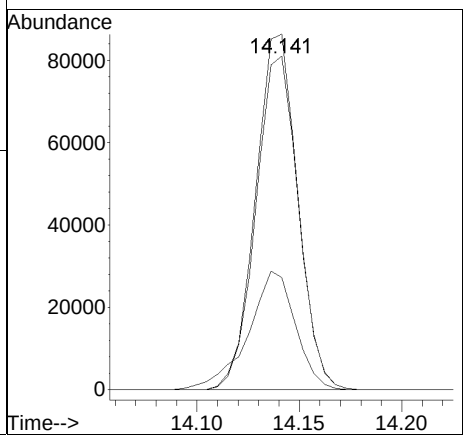


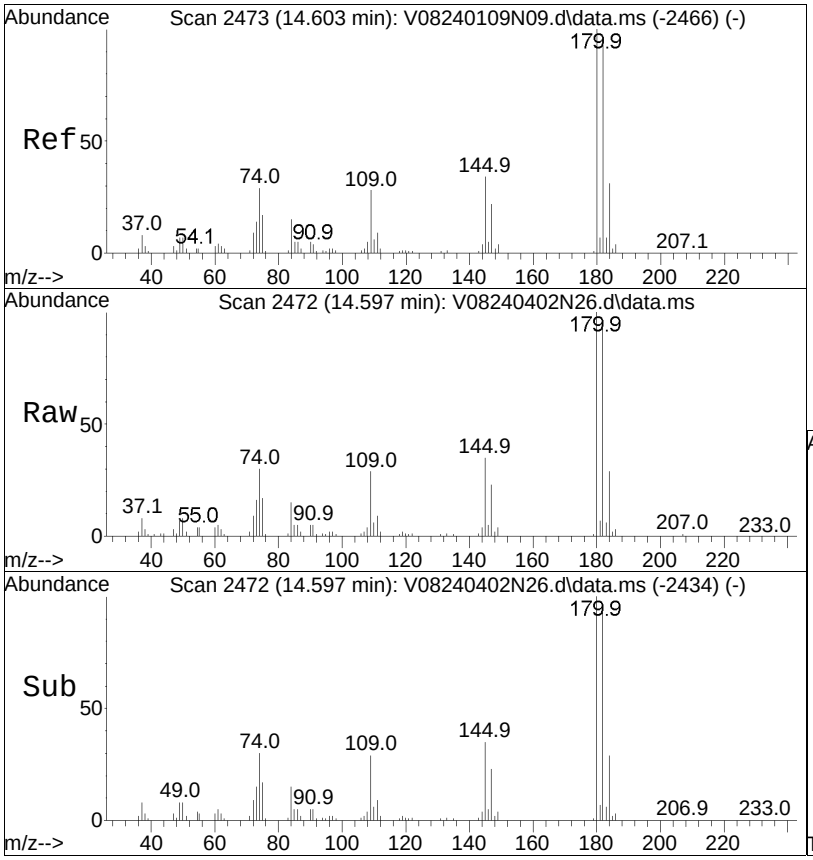


#109
1,2,4-Trichlorobenzene
Concen: 10.57 ug/L
RT: 14.141 min Scan# 2385
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:180 Resp: 123583

Ion	Ratio	Lower	Upper
180	100		
182	94.4	77.3	115.9
145	37.1	28.1	42.1

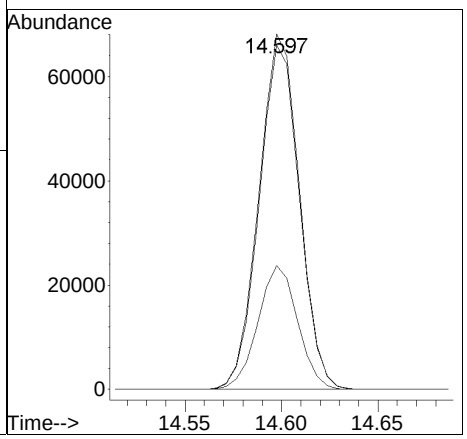




#111
1,2,3-Trichlorobenzene
Concen: 9.73 ug/L
RT: 14.597 min Scan# 2472
Delta R.T. -0.000 min
Lab File: V08240402N26.d
Acq: 3 Apr 2024 3:00 am

Tgt Ion:180 Resp: 99351

Ion	Ratio	Lower	Upper
180	100		
182	96.4	76.4	114.6
145	34.2	26.4	39.6

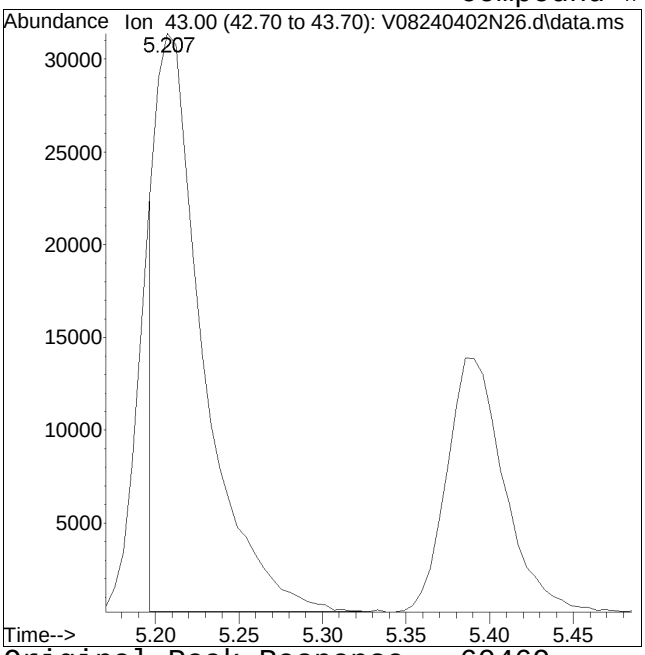


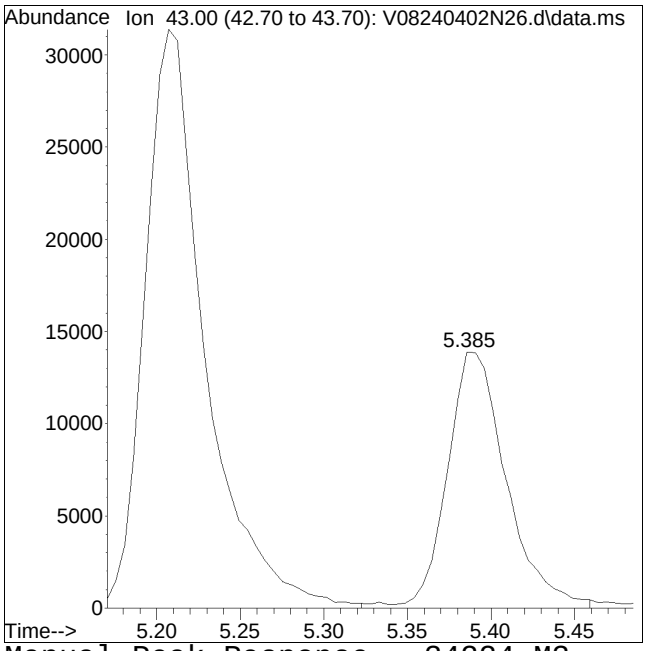
Manual Integration Report

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N26.d
Date Inj'd : 4/3/2024 3:00 am
Sample : WG1904126-6,31,10,10,,A1

QMethod : V108_240322N_8260.m
Operator : VOA108:MJV
Instrument : VOA 108
Quant Date : 4/3/2024 5:33 am

Compound #39: 2-Butanone





Original Peak Response = 60469 Manual Peak Response = 34224 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N27.d
Acq On : 3 Apr 2024 3:22 am
Operator : VOA108:MJV
Sample : WG1904126-7,31,10,10,,A2
Misc : WG1904126,ICAL20974
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 03 06:01:30 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	6.088	96	466426	10.000	ug/L	0.00
Standard Area 1 = 496523			Recovery = 93.94%			
59) Chlorobenzene-d5	9.617	117	344976	10.000	ug/L	0.00
Standard Area 1 = 357338			Recovery = 96.54%			
79) 1,4-Dichlorobenzene-d4	12.301	152	162899	10.000	ug/L	0.00
Standard Area 1 = 158777			Recovery = 102.60%			
System Monitoring Compounds						
36) Dibromofluoromethane	5.281	113	121561	9.954	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.54%			
43) 1,2-Dichloroethane-d4	5.800	65	149727	9.987	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 99.87%			
60) Toluene-d8	7.776	98	451442	10.169	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 101.69%			
83) 4-Bromofluorobenzene	11.095	95	157985	10.517	ug/L	0.00
Spiked Amount 10.000	Range 70 - 130		Recovery = 105.17%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.694	85	123929	12.472	ug/L	99
3) Chloromethane	1.894	50	178991	10.223	ug/L	99
4) Vinyl chloride	1.967	62	157788	11.133	ug/L	100
5) Bromomethane	2.282	94	43539	8.610	ug/L	98
6) Chloroethane	2.402	64	74869	10.939	ug/L	99
7) Trichlorofluoromethane	2.539	101	125549	10.714	ug/L	97
10) 1,1-Dichloroethene	3.031	96	89746	11.214	ug/L	92
11) Carbon disulfide	3.058	76	309111	11.252	ug/L	97
12) Freon-113	3.068	101	87634	11.151	ug/L	99
15) Methylene chloride	3.587	84	96280	10.003	ug/L	97
17) Acetone	3.624	43	29274	12.461	ug/L #	88
18) trans-1,2-Dichloroethene	3.739	96	99533	10.825	ug/L	99
19) Methyl acetate	3.744	43	51349	9.203	ug/L #	89
20) Methyl tert-butyl ether	3.839	73	224027	10.392	ug/L	93
23) 1,1-Dichloroethane	4.321	63	234643	10.574	ug/L	97
28) cis-1,2-Dichloroethene	4.835	96	109904	10.653	ug/L	91
30) Bromochloromethane	5.029	128	48648	10.490	ug/L	82
31) Cyclohexane	5.040	56	238082	11.087	ug/L	98
32) Chloroform	5.102	83	176847	10.701	ug/L	97
34) Carbon tetrachloride	5.239	117	143059	10.880	ug/L	99

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N27.d
Acq On : 3 Apr 2024 3:22 am
Operator : VOA108:MJV
Sample : WG1904126-7,31,10,10,,A2
Misc : WG1904126,ICAL20974
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 03 06:01:30 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - K:\VOA108\2024\240402N\V08240402N01.d
Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 1,1,1-Trichloroethane	5.302	97	156403	10.960	ug/L	#	97
39) 2-Butanone	5.391	43	33546	9.605	ug/L		97
41) Benzene	5.674	78	390563	10.699	ug/L		99
44) 1,2-Dichloroethane	5.873	62	144844	10.171	ug/L		99
47) Methyl cyclohexane	6.261	83	154674	10.932	ug/L		96
48) Trichloroethene	6.266	95	104454	10.594	ug/L		93
51) 1,2-Dichloropropane	6.806	63	129215	10.349	ug/L	#	91
54) Bromodichloromethane	6.875	83	128478	10.260	ug/L		99
57) 1,4-Dioxane	7.084	88	28199	508.224	ug/L		97
58) cis-1,3-Dichloropropene	7.567	75	149823	10.600	ug/L		99
61) Toluene	7.834	92	241101	10.723	ug/L		95
62) 4-Methyl-2-pentanone	8.264	58	27958	10.114	ug/L		99
63) Tetrachloroethene	8.280	166	99458	10.656	ug/L		90
65) trans-1,3-Dichloropropene	8.311	75	124841	10.808	ug/L		97
68) 1,1,2-Trichloroethane	8.500	83	60620	10.650	ug/L		94
69) Chlorodibromomethane	8.710	129	87482	10.112	ug/L		97
71) 1,2-Dibromoethane	8.988	107	68798	10.489	ug/L		98
72) 2-Hexanone	9.271	43	45156	10.143	ug/L		95
73) Chlorobenzene	9.638	112	262861	10.463	ug/L		95
74) Ethylbenzene	9.680	91	455800	10.894	ug/L		98
76) p/m Xylene	9.863	106	356590	21.570	ug/L		95
77) o Xylene	10.403	106	346315	21.705	ug/L		91
78) Styrene	10.466	104	549810	21.511	ug/L		89
80) Bromoform	10.487	173	45306	10.185	ug/L		97
82) Isopropylbenzene	10.781	105	452429	11.350	ug/L		96
87) 1,1,2,2-Tetrachloroethane	11.336	83	79537	10.756	ug/L		96
100) 1,3-Dichlorobenzene	12.222	146	210589	10.529	ug/L		99
101) 1,4-Dichlorobenzene	12.317	146	209859	10.405	ug/L		99
104) 1,2-Dichlorobenzene	12.736	146	194671	10.497	ug/L		97
106) 1,2-Dibromo-3-chloropr...	13.512	155	10814	10.358	ug/L		90
109) 1,2,4-Trichlorobenzene	14.141	180	126059	10.501	ug/L		98
111) 1,2,3-Trichlorobenzene	14.598	180	103602	9.883	ug/L		98

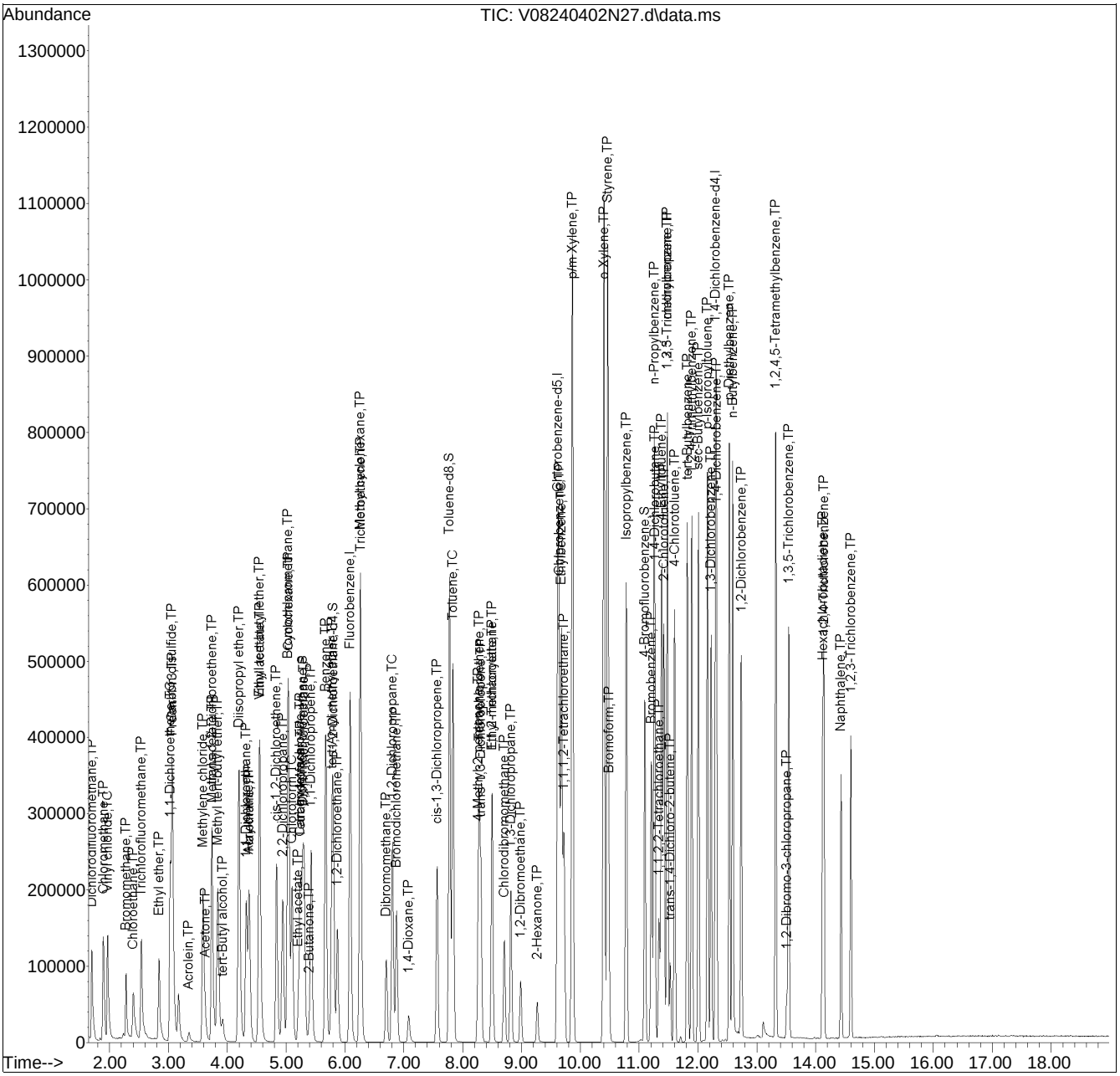
(#) = qualifier out of range (m) = manual integration (+) = signals summed

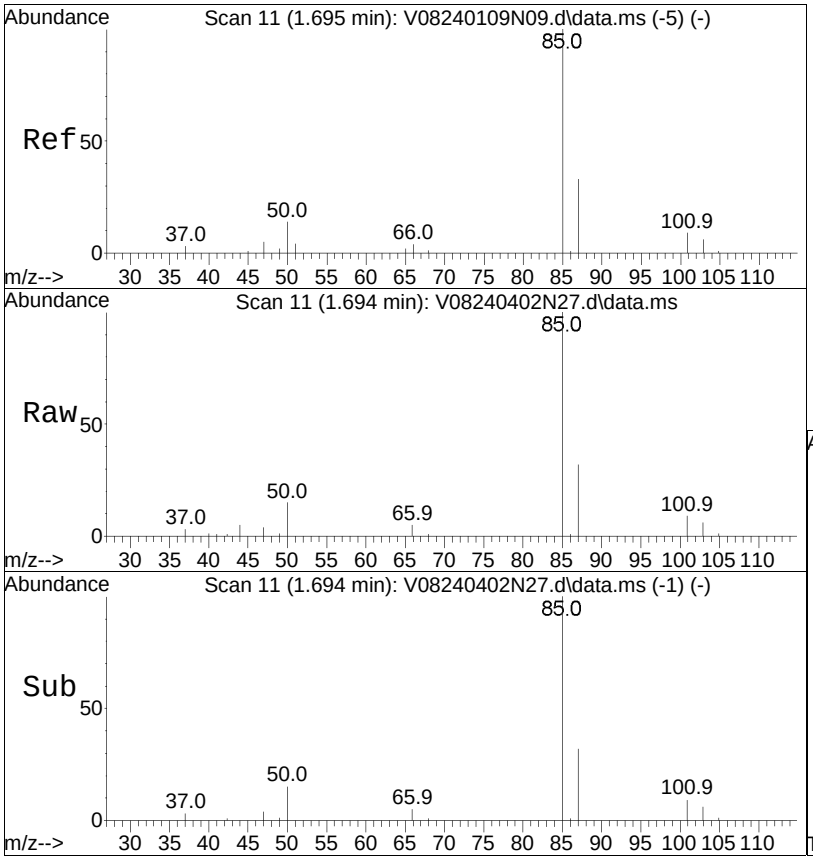
Quantitation Report (QT Reviewed)

Data Path : K:\VOA108\2024\240402N\
Data File : V08240402N27.d
Acq On : 3 Apr 2024 3:22 am
Operator : VOA108:MJV
Sample : WG1904126-7,31,10,10,,A2
Misc : WG1904126,ICAL20974
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 03 06:01:30 2024
Quant Method : K:\VOA108\2024\240402N\V108_240322N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Mon Mar 25 16:26:25 2024
Response via : Initial Calibration

Sub List : 8260-Curve-2CEVE-IODO - Curve-2CEVE-IODOd•

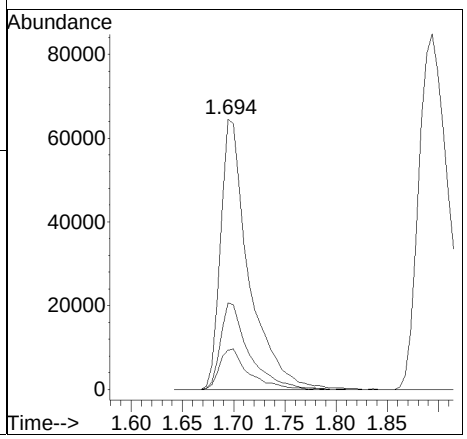


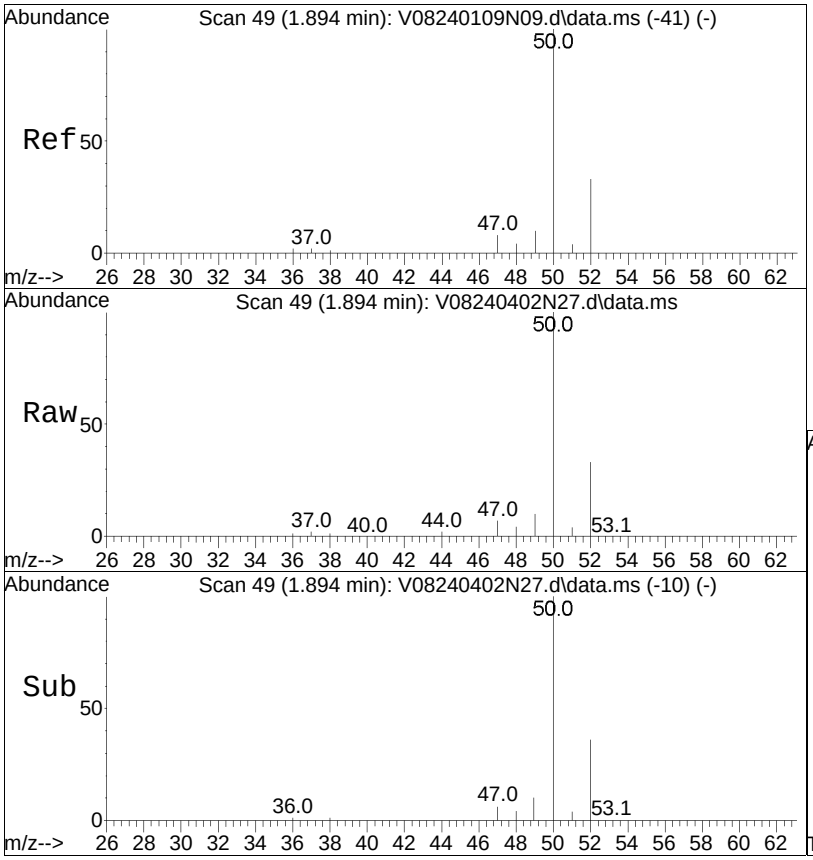


#2
Dichlorodifluoromethane
Concen: 12.47 ug/L
RT: 1.694 min Scan# 11
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 85 Resp: 123929

Ion	Ratio	Lower	Upper
85	100		
87	32.1	21.0	43.6
50	15.3	8.9	18.5

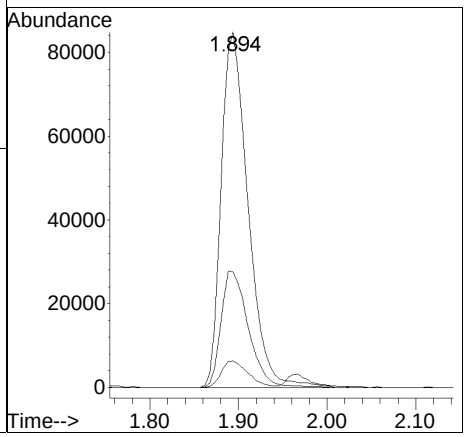


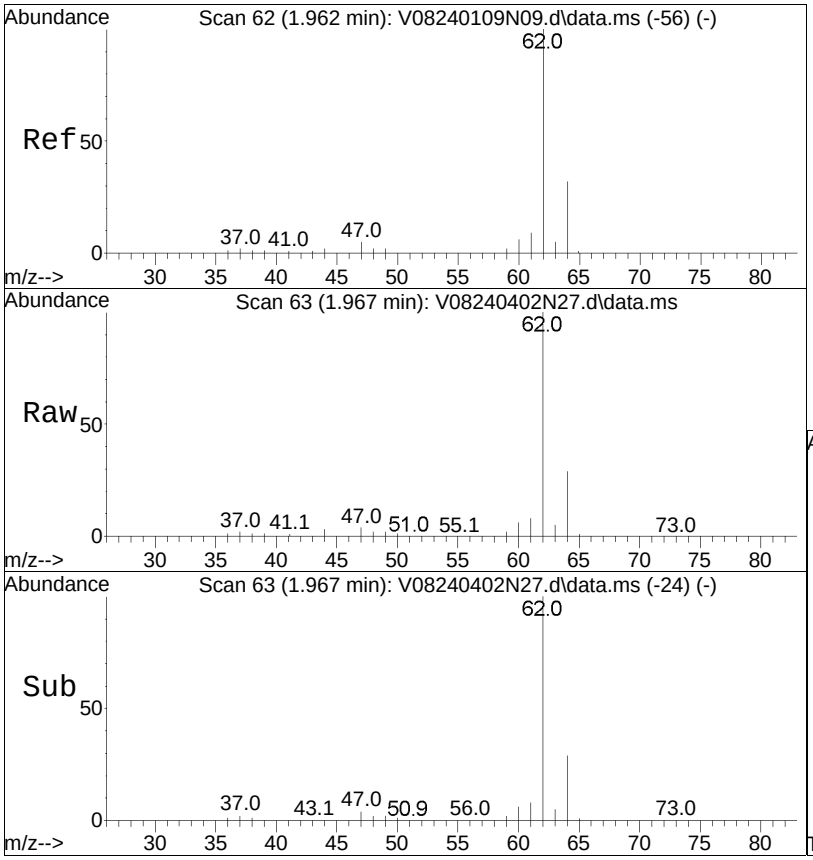


#3
Chloromethane
Concen: 10.22 ug/L
RT: 1.894 min Scan# 49
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 50 Resp: 178991

Ion	Ratio	Lower	Upper
50	100		
52	33.2	12.9	52.9
47	7.4	0.0	28.3

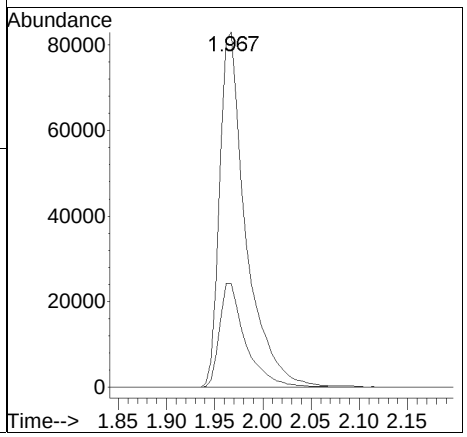


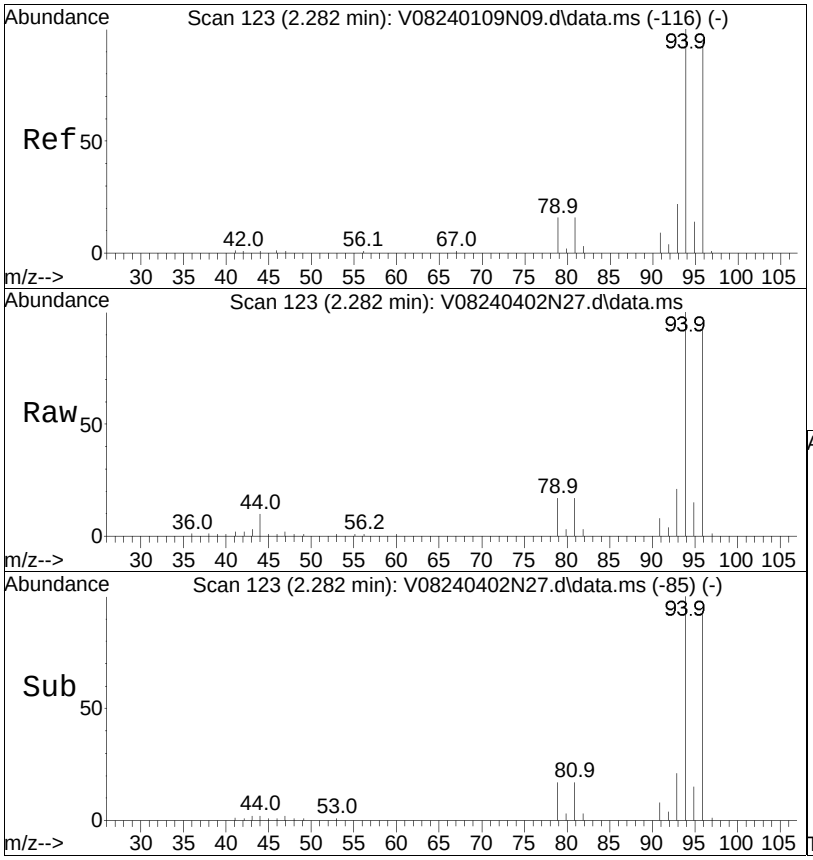


#4
Vinyl chloride
Concen: 11.13 ug/L
RT: 1.967 min Scan# 63
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 62 Resp: 157788

Ion	Ratio	Lower	Upper
62	100		
64	29.1	9.1	49.1

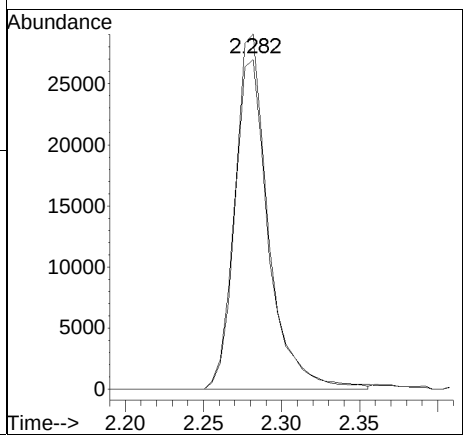


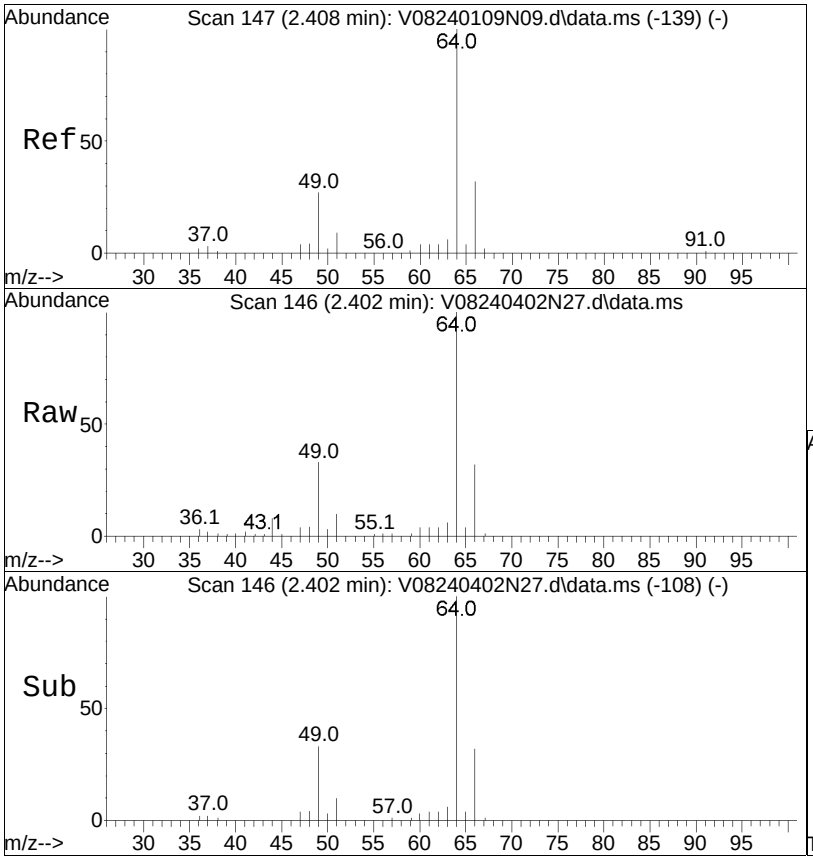


#5
Bromomethane
Concen: 8.61 ug/L
RT: 2.282 min Scan# 123
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 94 Resp: 43539

Ion	Ratio	Lower	Upper
94	100		
96	93.4	75.6	115.6

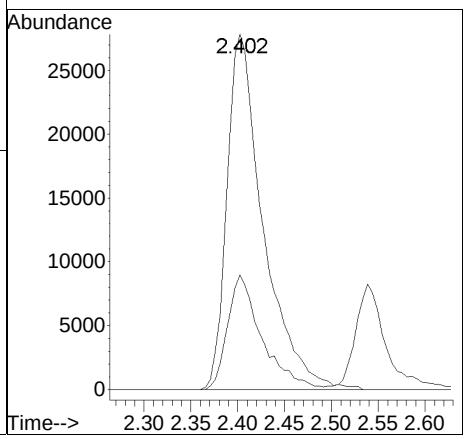


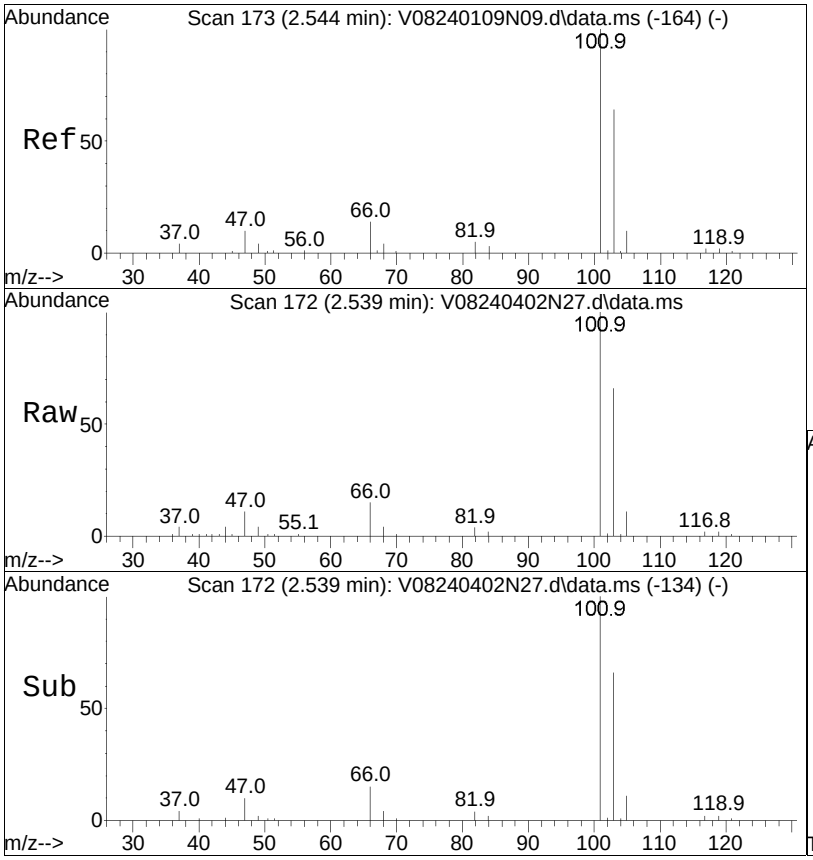


#6
Chloroethane
Concen: 10.94 ug/L
RT: 2.402 min Scan# 146
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 64 Resp: 74869

Ion	Ratio	Lower	Upper
64	100		
66	30.4	9.8	49.8

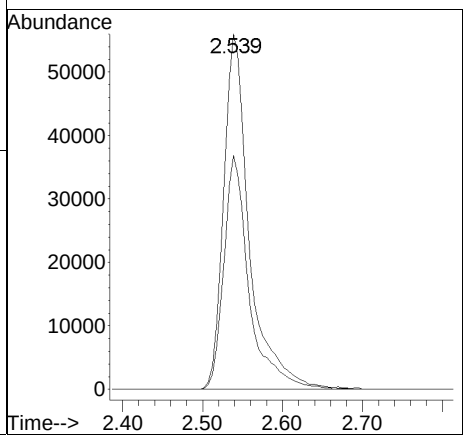


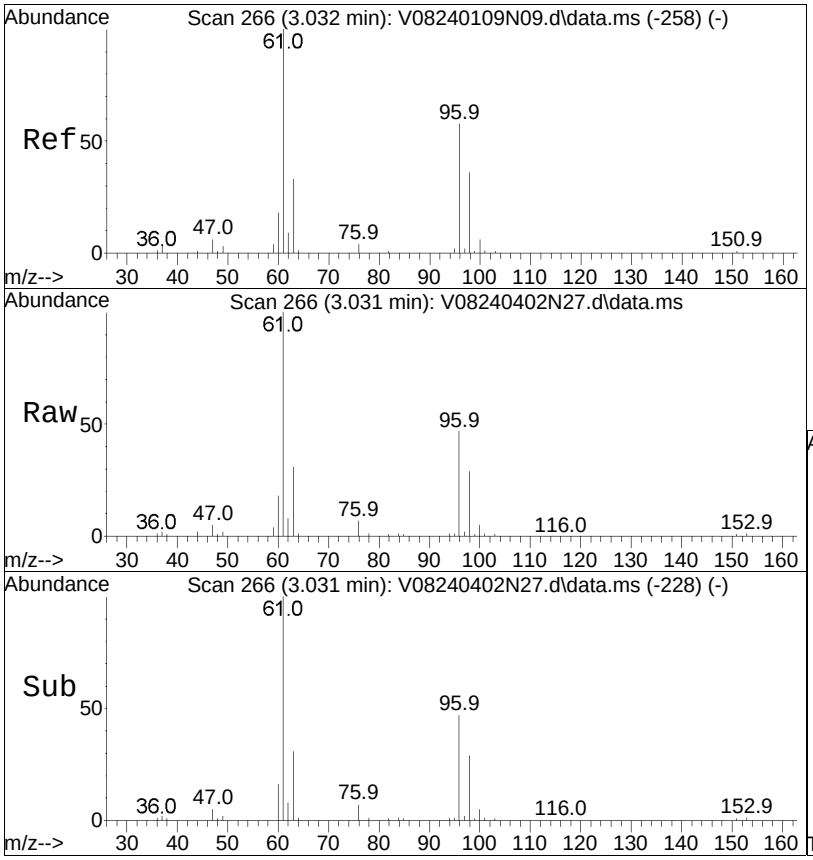


#7
Trichlorofluoromethane
Concen: 10.71 ug/L
RT: 2.539 min Scan# 172
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:101 Resp: 125549

Ion	Ratio	Lower	Upper
101	100		
103	64.7	53.8	80.6

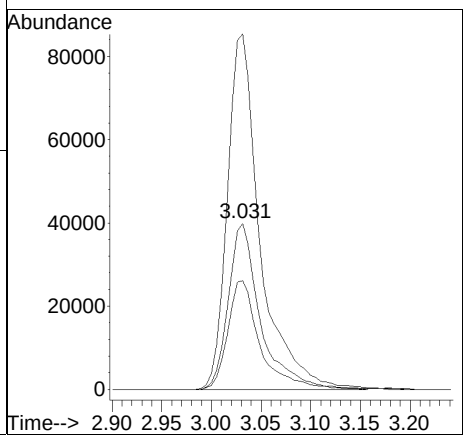


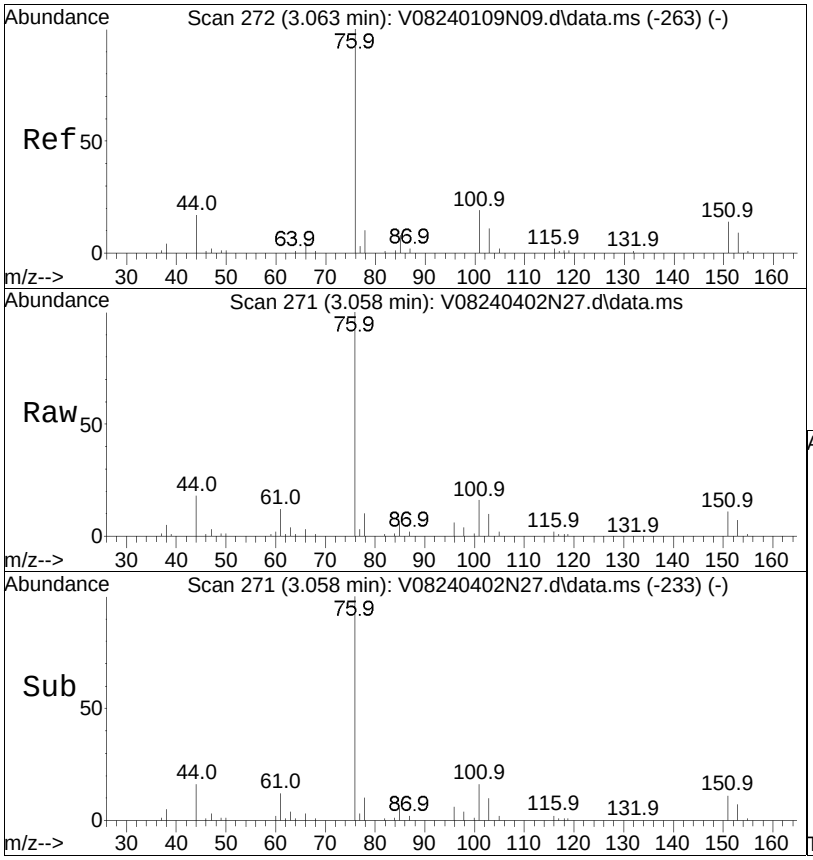


#10
1,1-Dichloroethene
Concen: 11.21 ug/L
RT: 3.031 min Scan# 266
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 96 Resp: 89746

Ion	Ratio	Lower	Upper
96	100		
61	218.8	186.1	279.1
63	66.0	57.6	86.4

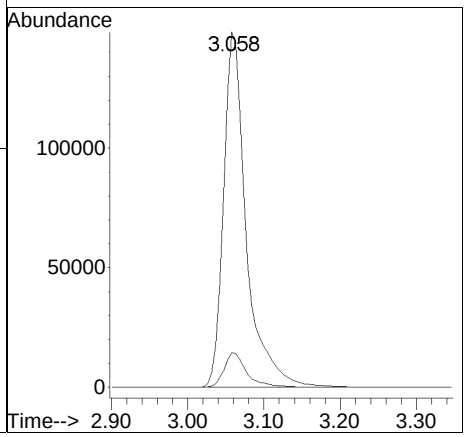


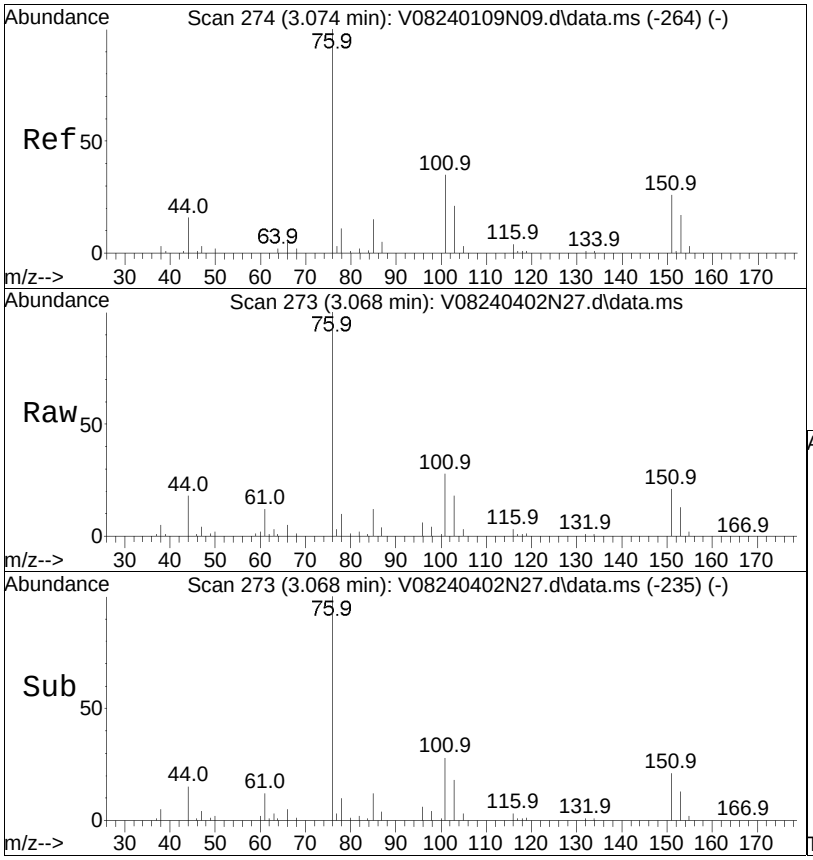


#11
Carbon disulfide
Concen: 11.25 ug/L
RT: 3.058 min Scan# 271
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 76 Resp: 309111

Ion	Ratio	Lower	Upper
76	100		
78	9.8	5.7	11.7

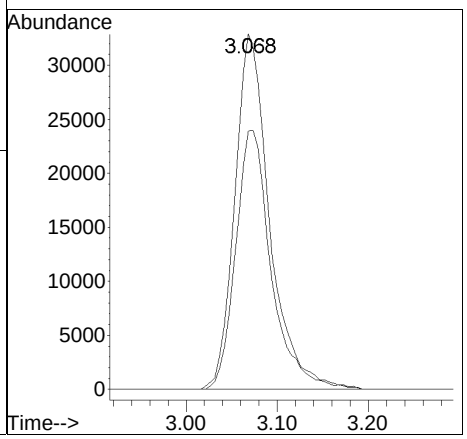


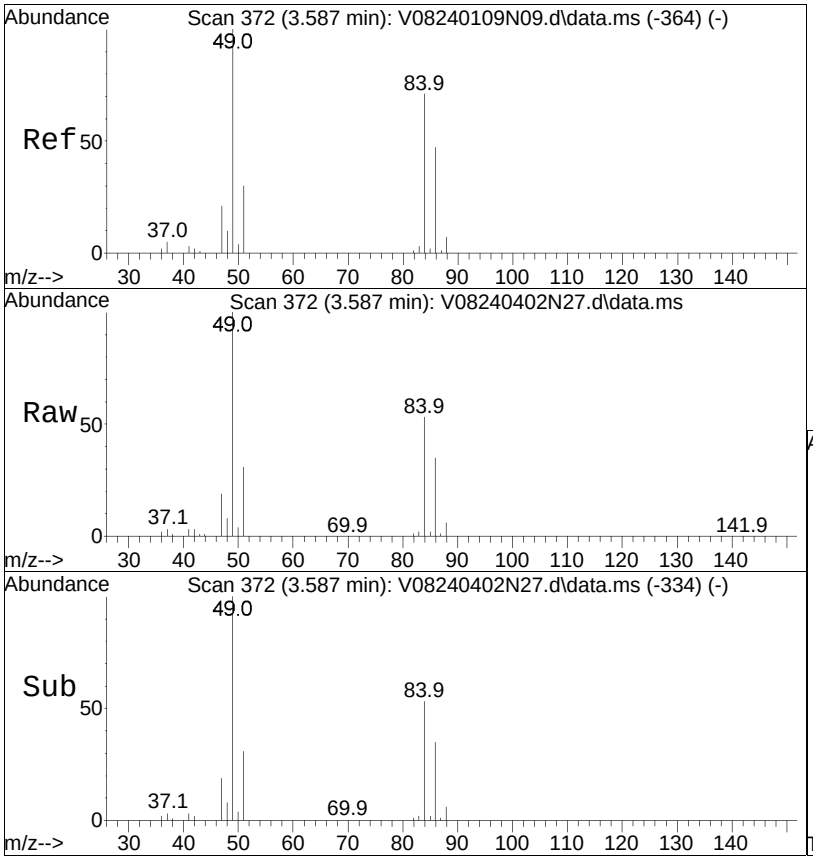


#12
Freon-113
Concen: 11.15 ug/L
RT: 3.068 min Scan# 273
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:101 Resp: 87634

Ion	Ratio	Lower	Upper
101	100		
151	74.3	59.8	89.8

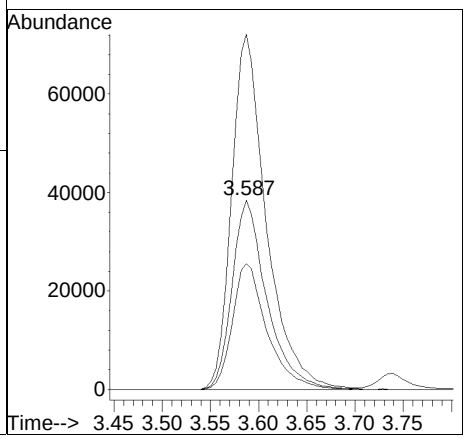


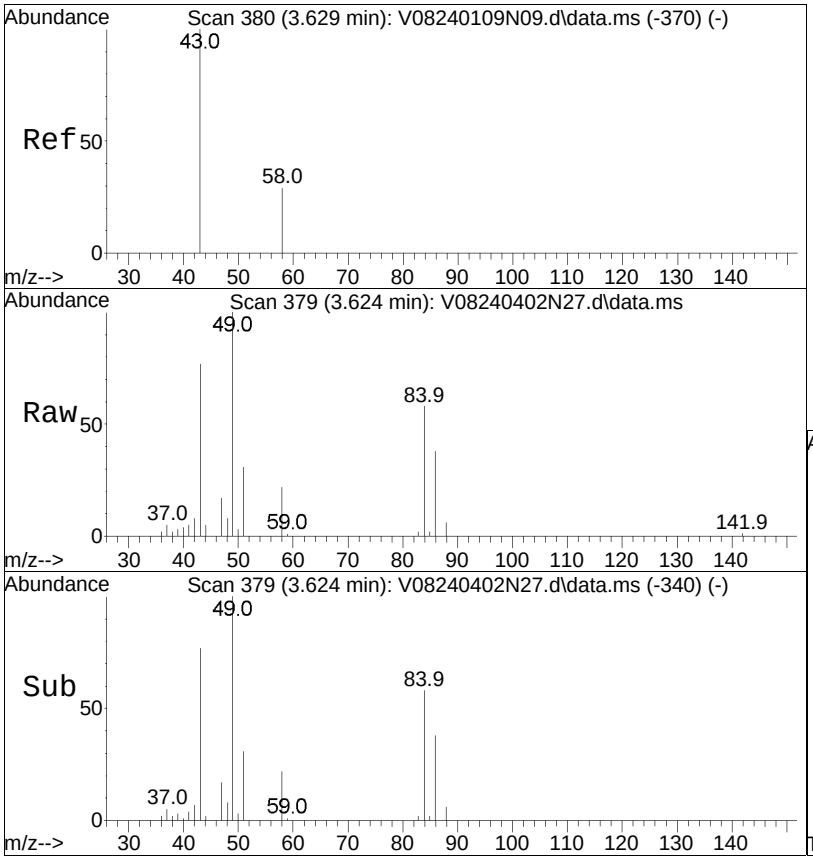


#15
Methylene chloride
Concen: 10.00 ug/L
RT: 3.587 min Scan# 372
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 84 Resp: 96280

Ion	Ratio	Lower	Upper
84	100		
86	66.5	40.4	83.8
49	187.6	120.0	249.2

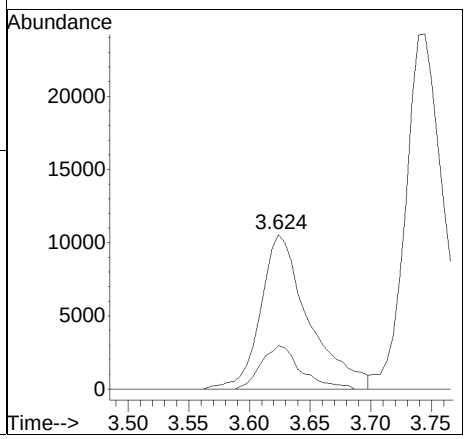


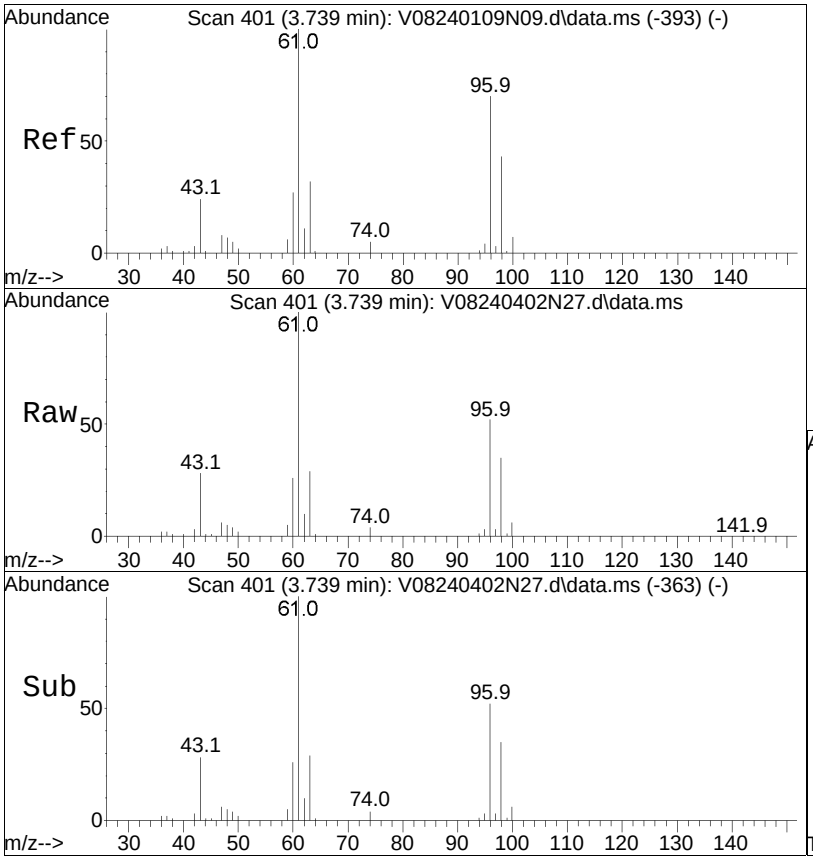


#17
Acetone
Concen: 12.46 ug/L
RT: 3.624 min Scan# 379
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 43 Resp: 29274

Ion	Ratio	Lower	Upper
43	100		
58	23.6	24.2	36.4#

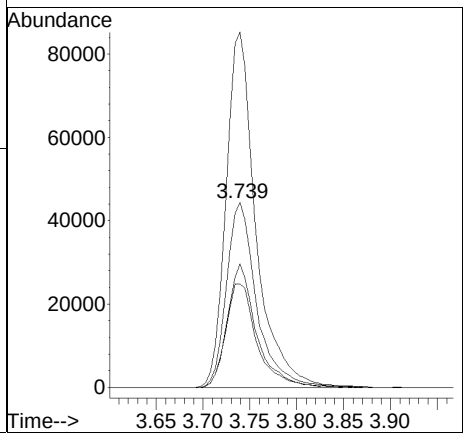


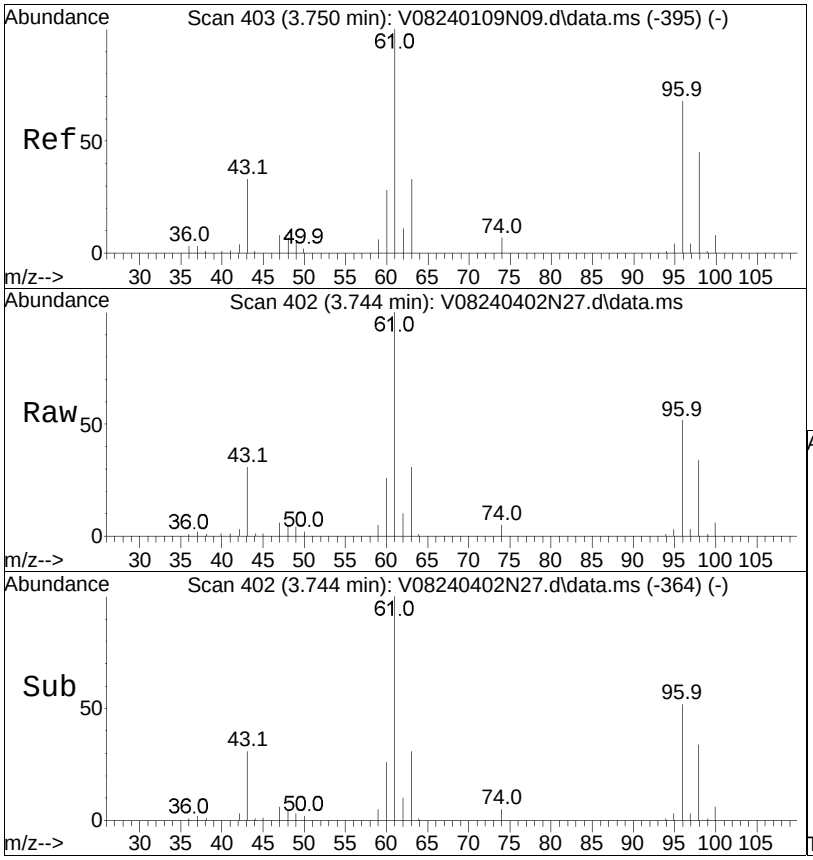


#18
trans-1,2-Dichloroethene
Concen: 10.82 ug/L
RT: 3.739 min Scan# 401
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 96 Resp: 99533

Ion	Ratio	Lower	Upper
96	100		
61	190.0	124.0	257.6
98	64.4	41.2	85.6
63	57.9	38.4	79.7

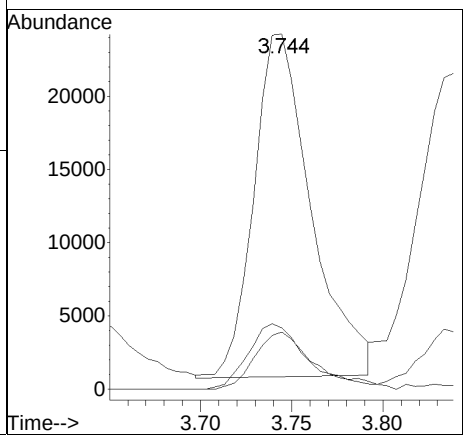


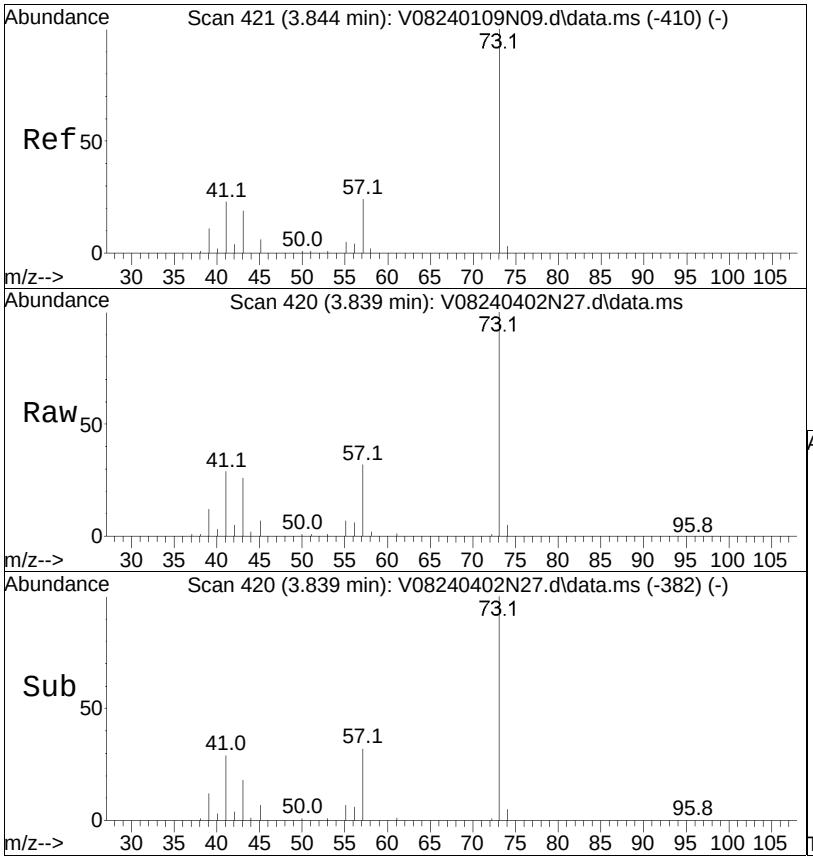


#19
Methyl acetate
Concen: 9.20 ug/L
RT: 3.744 min Scan# 402
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 43 Resp: 51349

Ion	Ratio	Lower	Upper
43	100		
74	17.3	14.2	21.4
59	20.1	5.0	7.6#

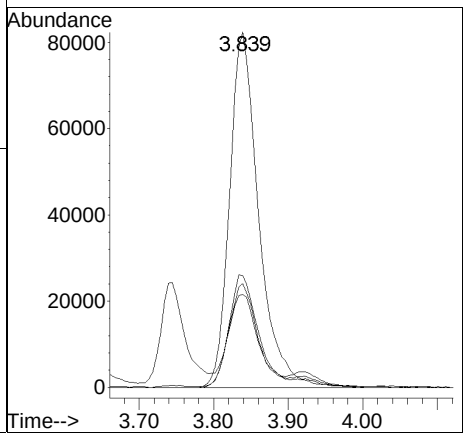


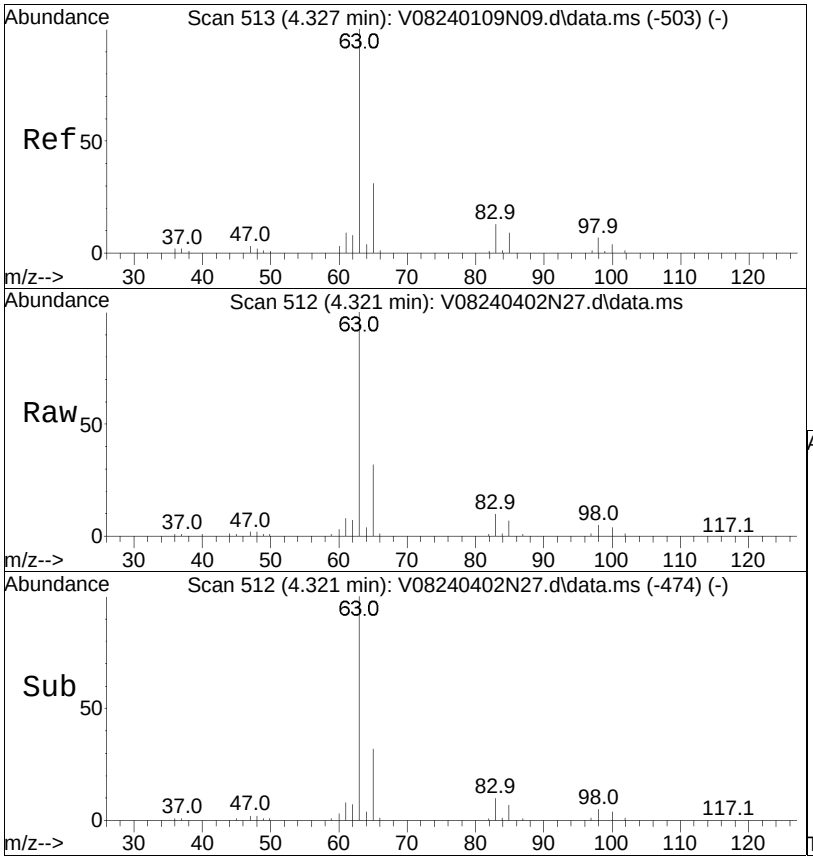


#20
Methyl tert-butyl ether
Concen: 10.39 ug/L
RT: 3.839 min Scan# 420
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 73 Resp: 224027

Ion	Ratio	Lower	Upper
73	100		
57	31.9	17.5	36.3
43	23.1	15.3	31.9
41	28.9	15.3	31.7

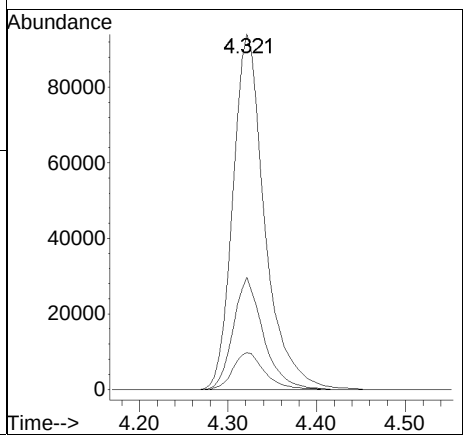


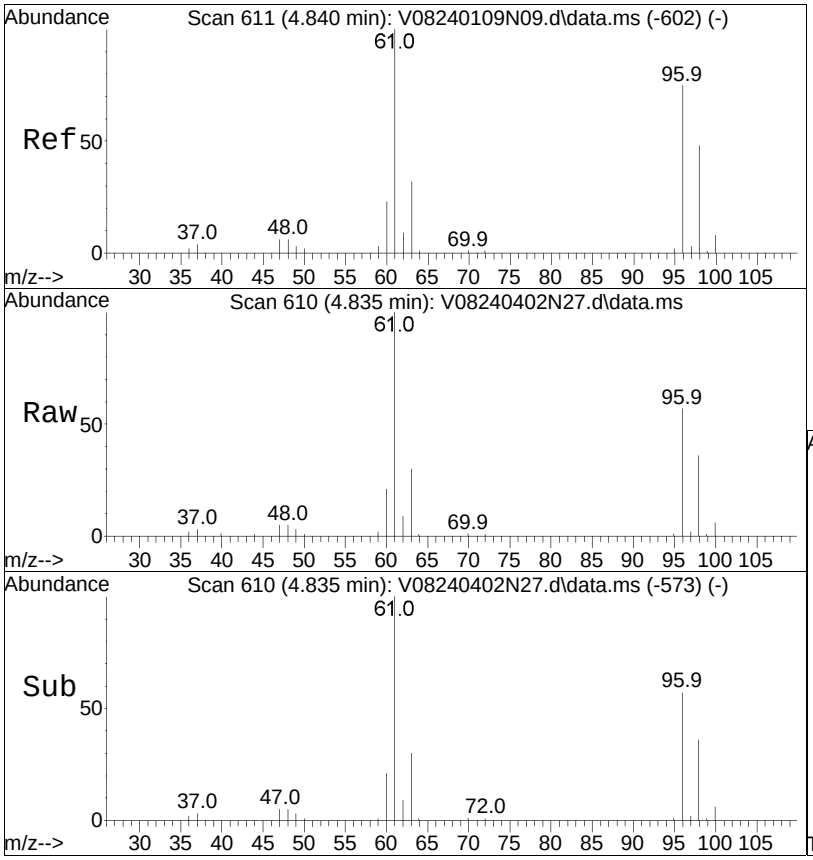


#23
1,1-Dichloroethane
Concen: 10.57 ug/L
RT: 4.321 min Scan# 512
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 63 Resp: 234643

Ion	Ratio	Lower	Upper
63	100		
65	29.8	11.0	51.0
83	10.3	0.0	31.8

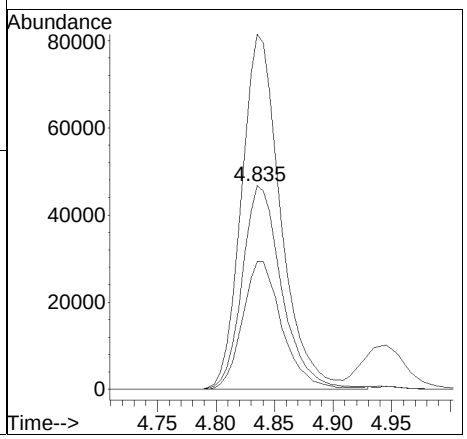


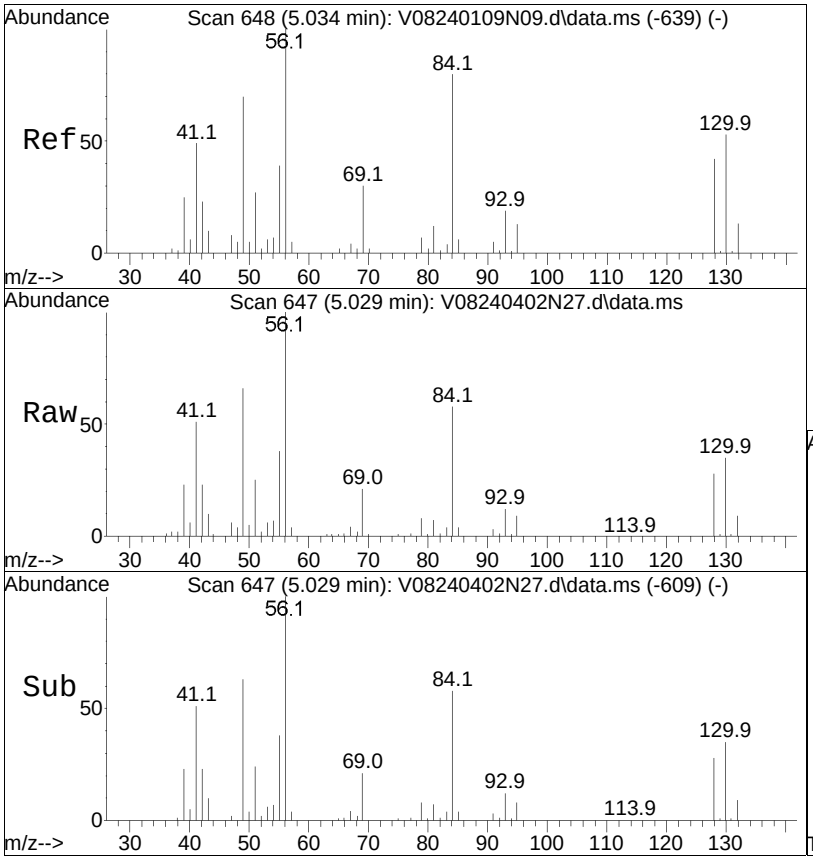


#28
cis-1,2-Dichloroethene
Concen: 10.65 ug/L
RT: 4.835 min Scan# 610
Delta R.T. -0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 96 Resp: 109904

Ion	Ratio	Lower	Upper
96	100		
61	172.1	149.4	224.2
98	62.7	53.4	80.2

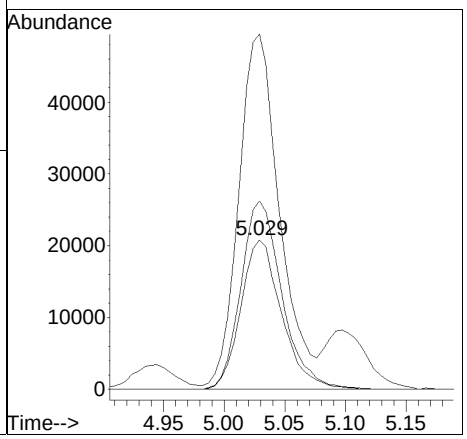


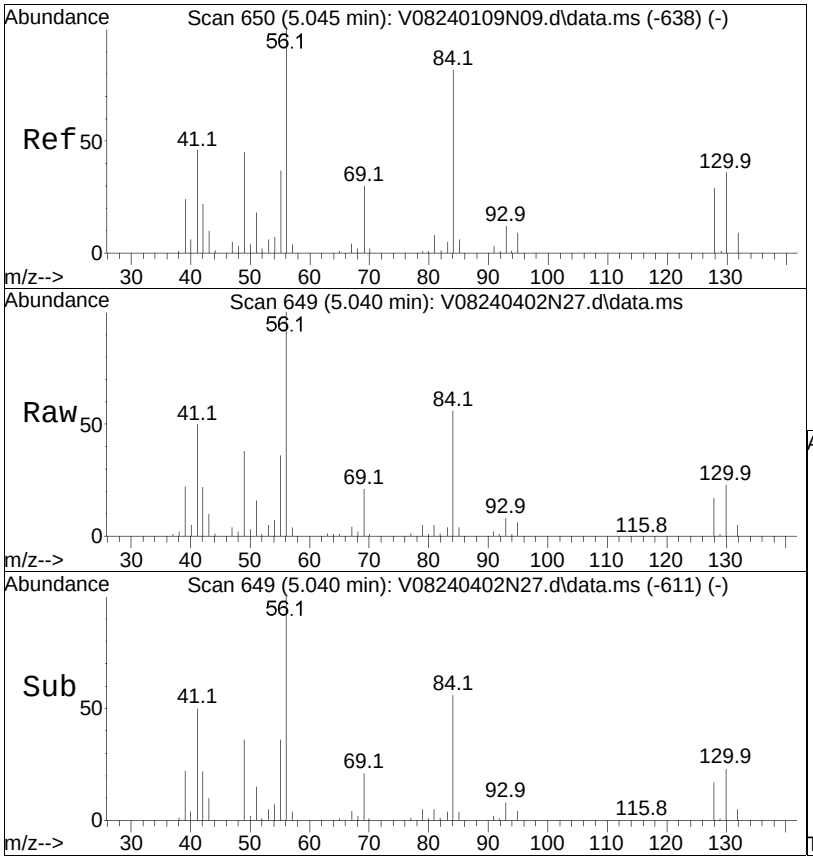


#30
Bromochloromethane
Concen: 10.49 ug/L
RT: 5.029 min Scan# 647
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:128 Resp: 48648

Ion	Ratio	Lower	Upper
128	100		
49	238.2	223.0	334.4
130	126.9	111.4	167.0

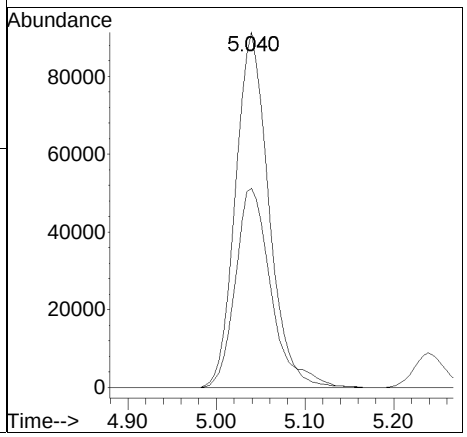


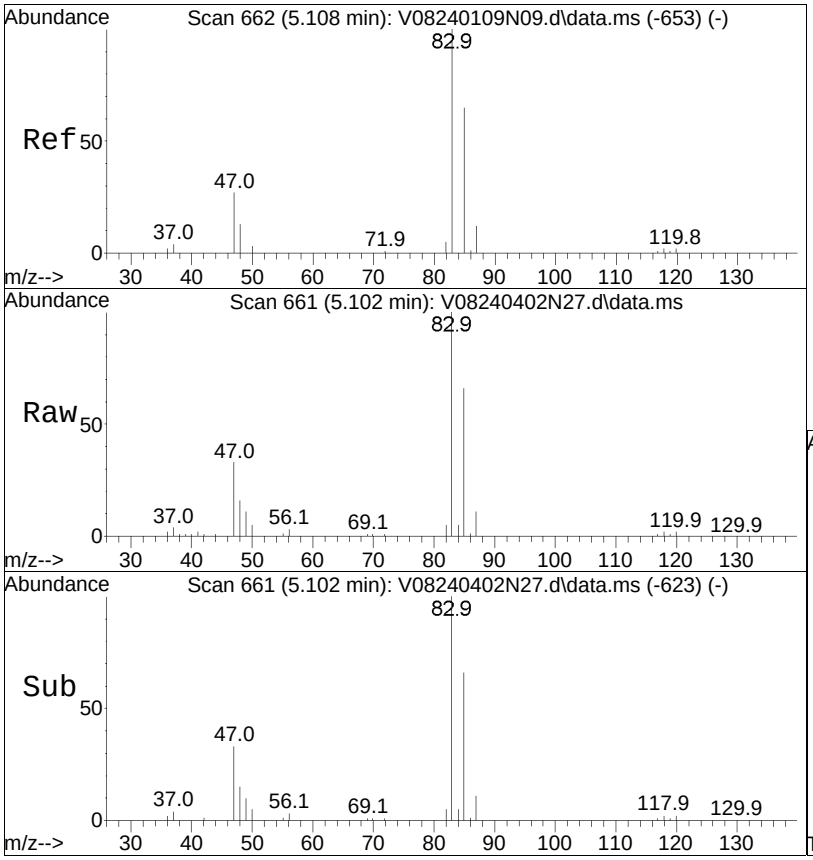


#31
Cyclohexane
Concen: 11.09 ug/L
RT: 5.040 min Scan# 649
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 56 Resp: 238082

Ion	Ratio	Lower	Upper
56	100		
84	60.5	38.4	79.8

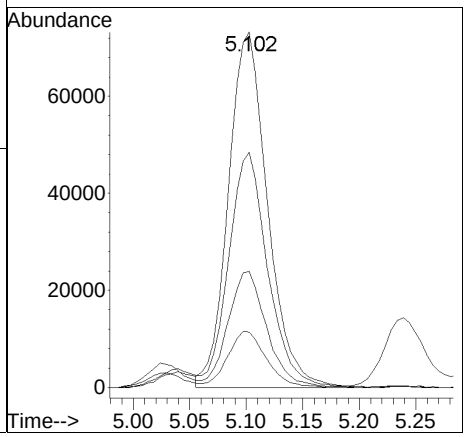


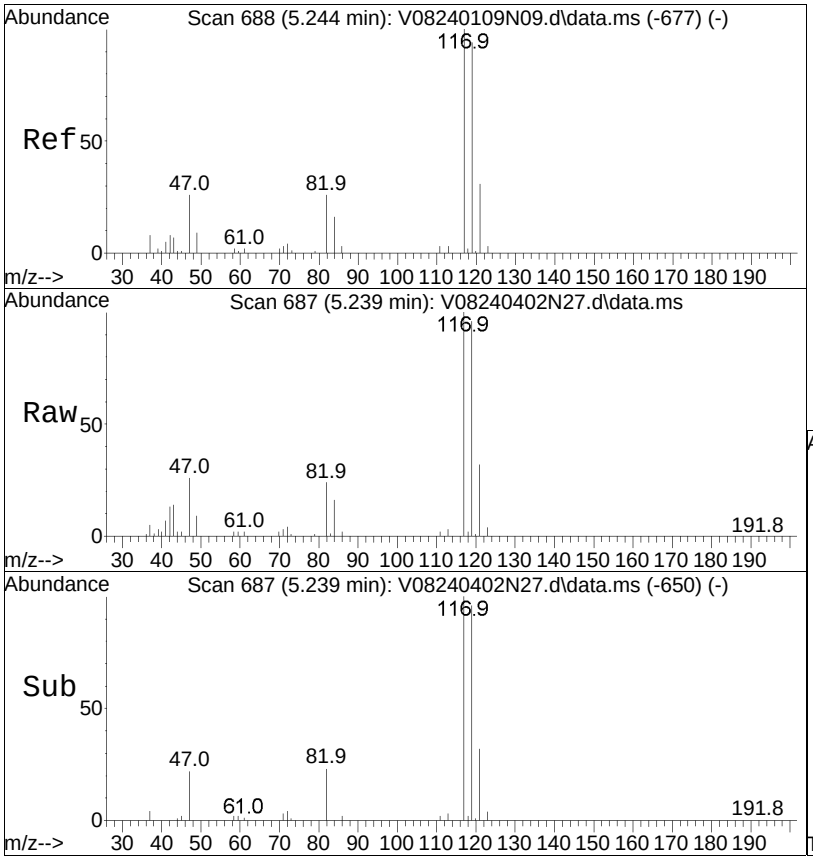


#32
Chloroform
Concen: 10.70 ug/L
RT: 5.102 min Scan# 661
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 83 Resp: 176847

Ion	Ratio	Lower	Upper
83	100		
85	66.0	41.5	86.1
47	31.5	19.0	39.4
48	15.5	9.9	20.5

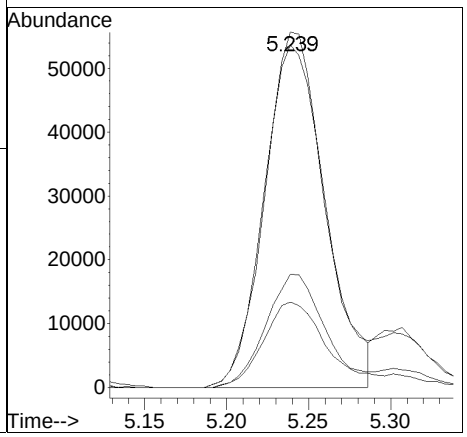


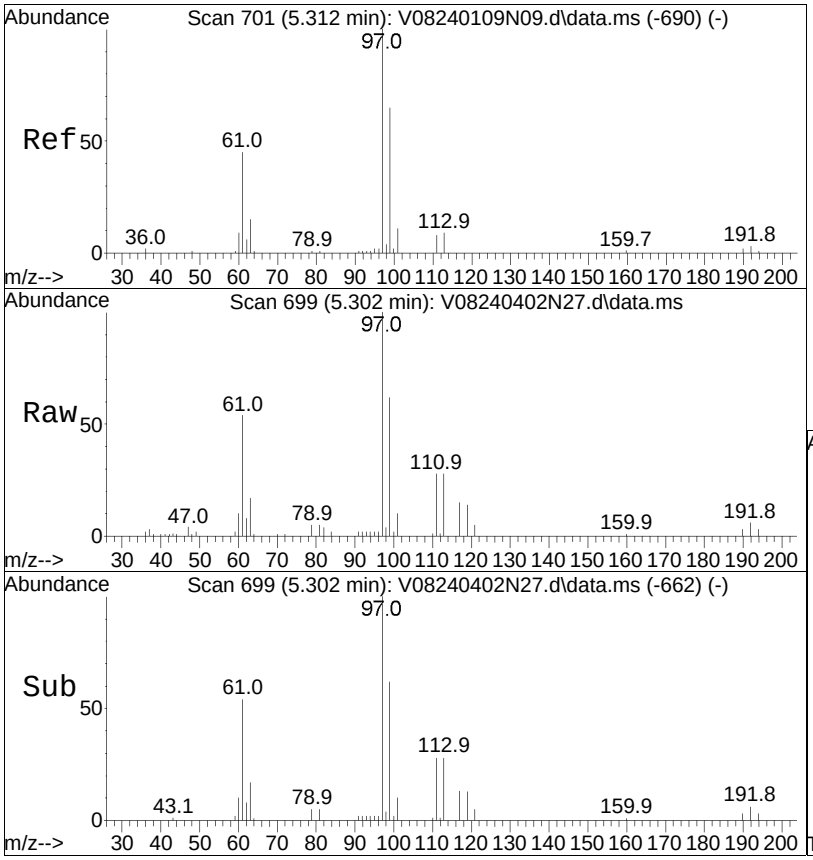


#34
Carbon tetrachloride
Concen: 10.88 ug/L
RT: 5.239 min Scan# 687
Delta R.T. -0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:117 Resp: 143059

Ion	Ratio	Lower	Upper
117	100		
119	96.8	62.4	129.6
121	31.2	19.5	40.5
82	25.4	17.0	35.4

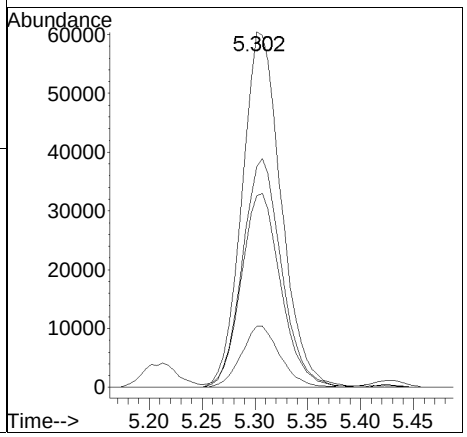


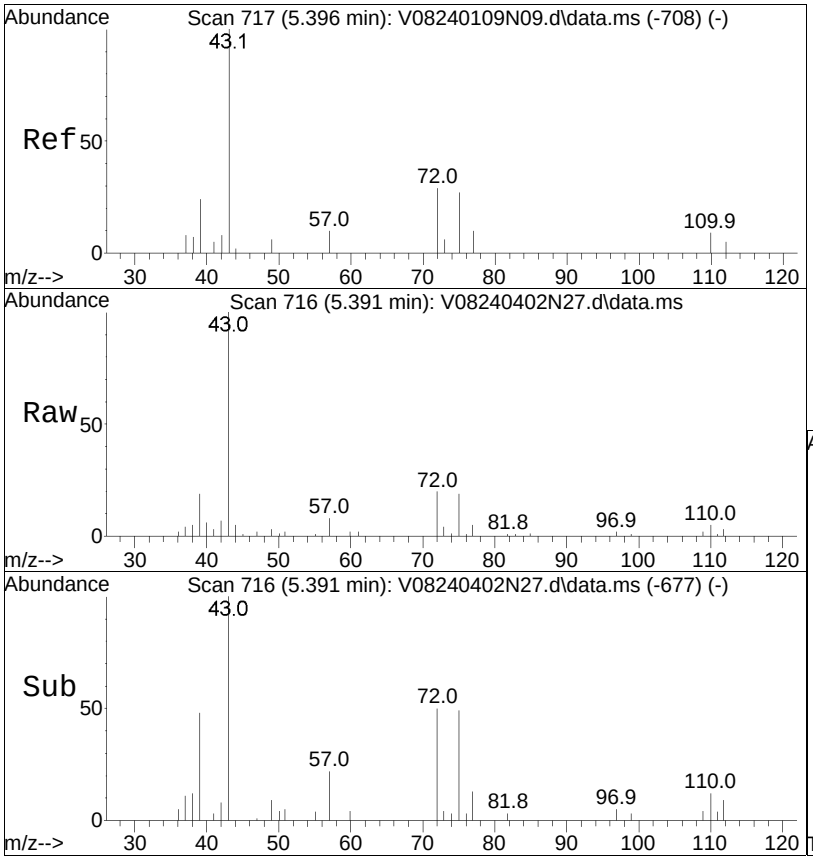


#37
1,1,1-Trichloroethane
Concen: 10.96 ug/L
RT: 5.302 min Scan# 699
Delta R.T. -0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 97 Resp: 156403

Ion	Ratio	Lower	Upper
97	100		
99	64.1	40.7	84.5
61	55.5	35.4	73.4
63	17.0	5.0	10.4#

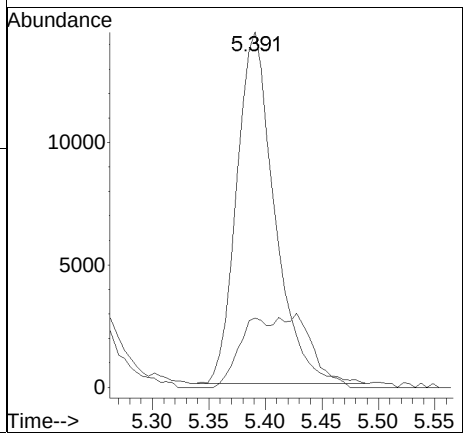


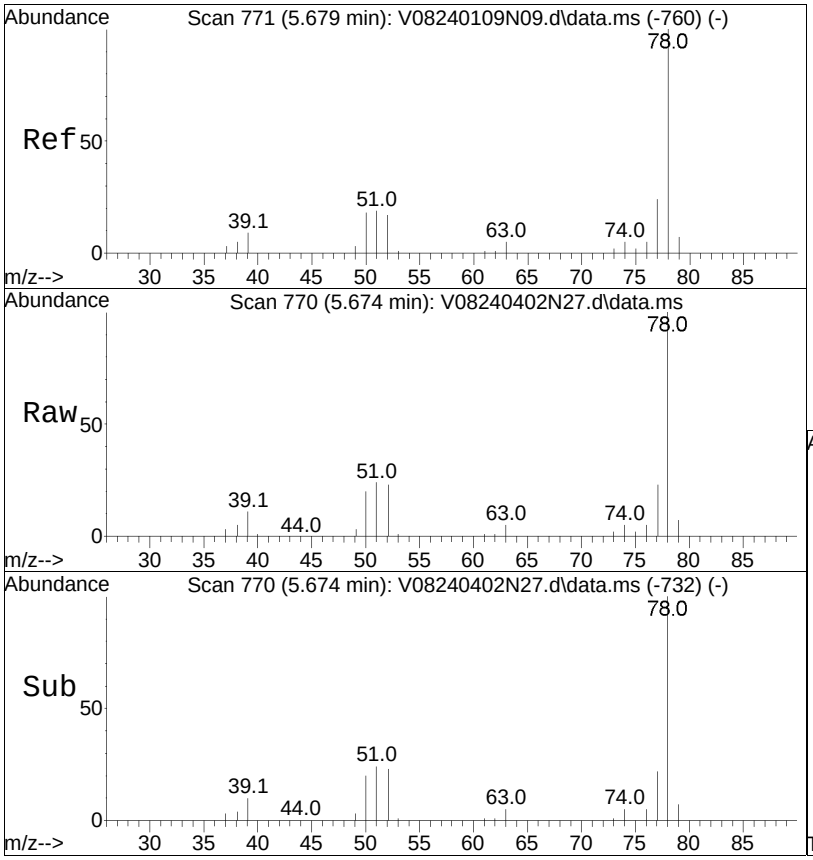


#39
2-Butanone
Concen: 9.61 ug/L
RT: 5.391 min Scan# 716
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 43 Resp: 33546

Ion	Ratio	Lower	Upper
43	100		
72	14.9	10.9	16.3

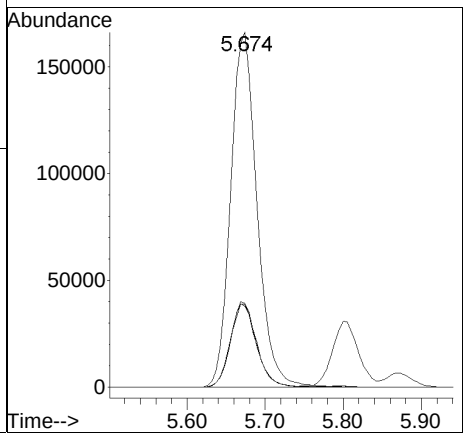


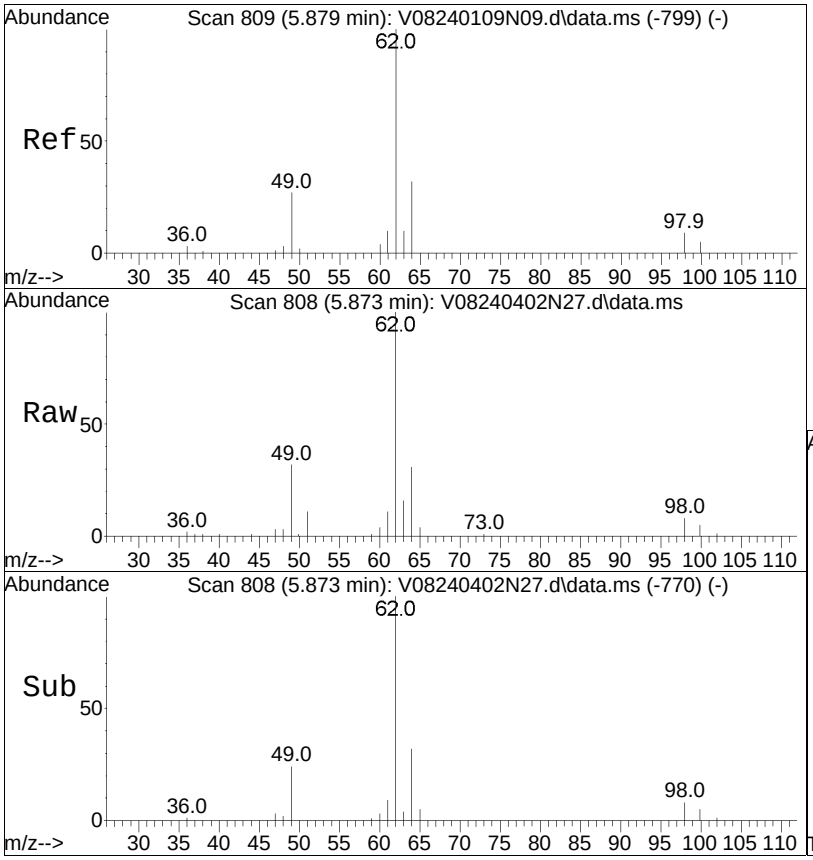


#41
Benzene
Concen: 10.70 ug/L
RT: 5.674 min Scan# 770
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 78 Resp: 390563

Ion	Ratio	Lower	Upper
78	100		
77	23.5	15.7	32.7
51	23.7	16.0	33.2
52	23.5	15.3	31.9

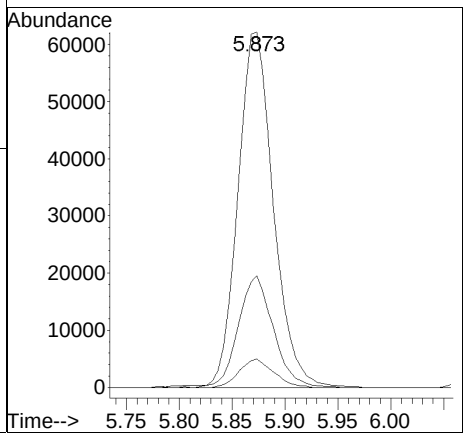


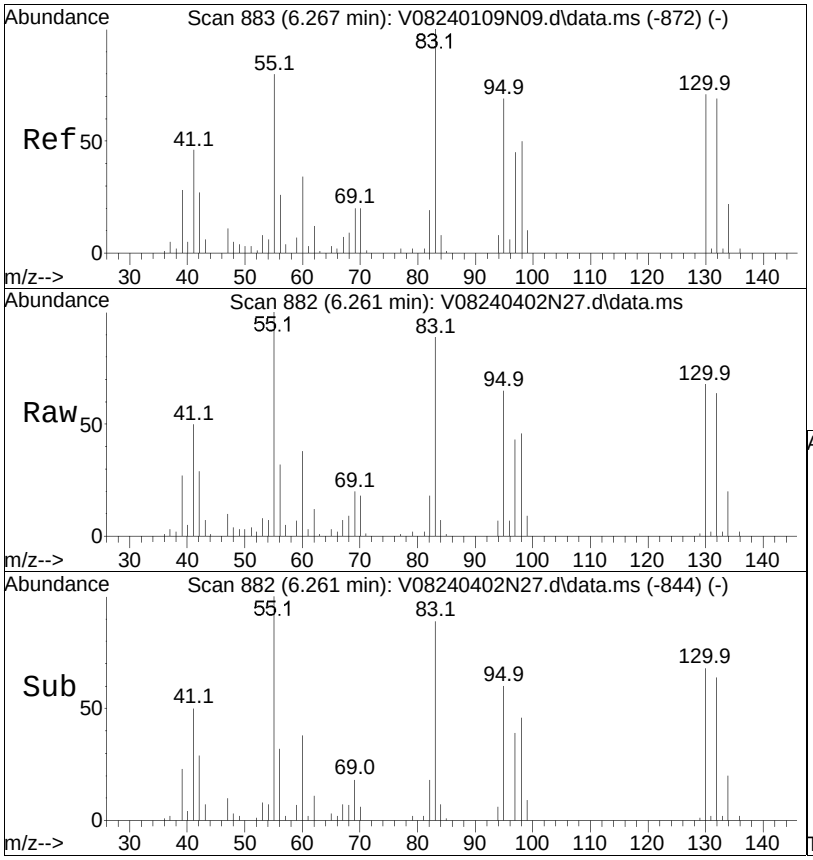


#44
1,2-Dichloroethane
Concen: 10.17 ug/L
RT: 5.873 min Scan# 808
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 62 Resp: 144844

Ion	Ratio	Lower	Upper
62	100		
64	31.4	11.2	51.2
98	7.7	0.0	26.1

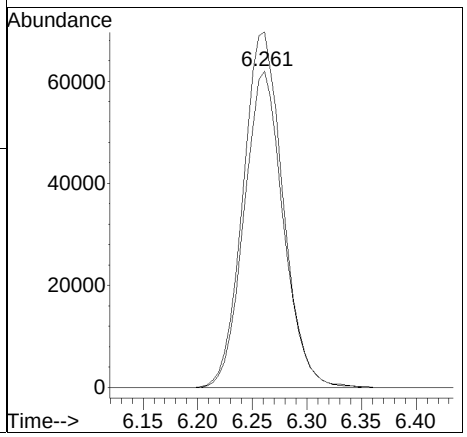


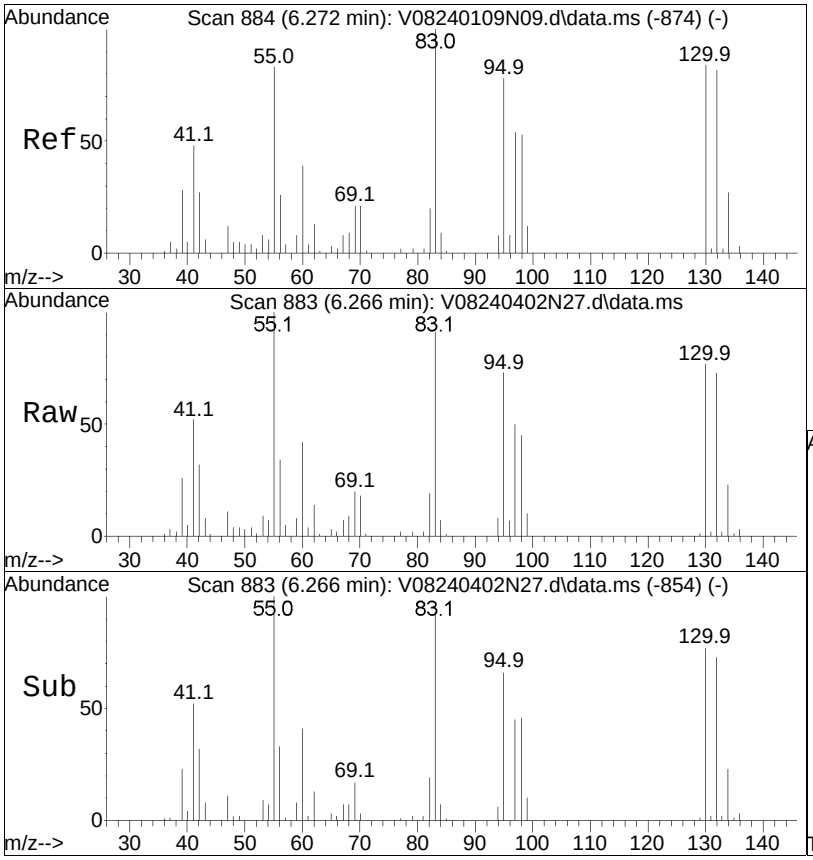


#47
Methyl cyclohexane
Concen: 10.93 ug/L
RT: 6.261 min Scan# 882
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 83 Resp: 154674

Ion	Ratio	Lower	Upper
83	100		
55	114.5	88.3	132.5

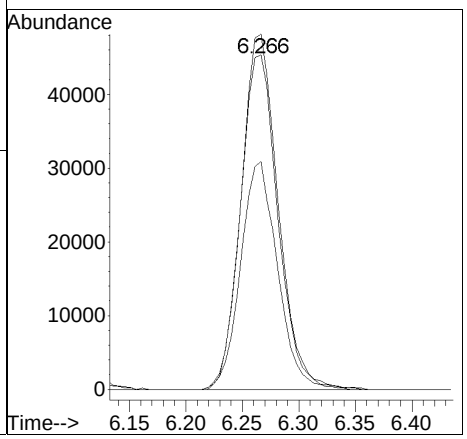


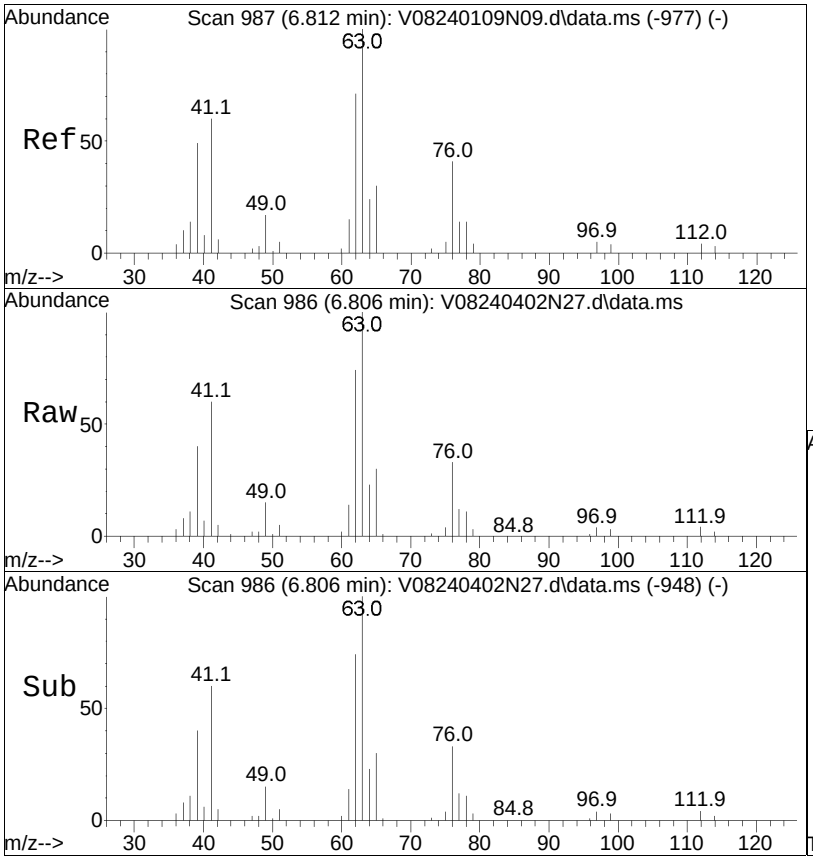


#48
Trichloroethene
Concen: 10.59 ug/L
RT: 6.266 min Scan# 883
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 95 Resp: 104454

Ion	Ratio	Lower	Upper
95	100		
97	67.0	55.5	83.3
130	105.0	76.6	115.0

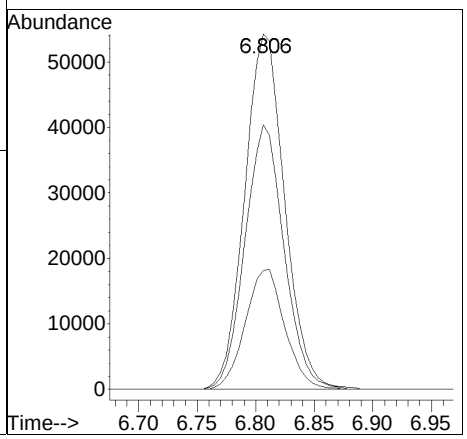


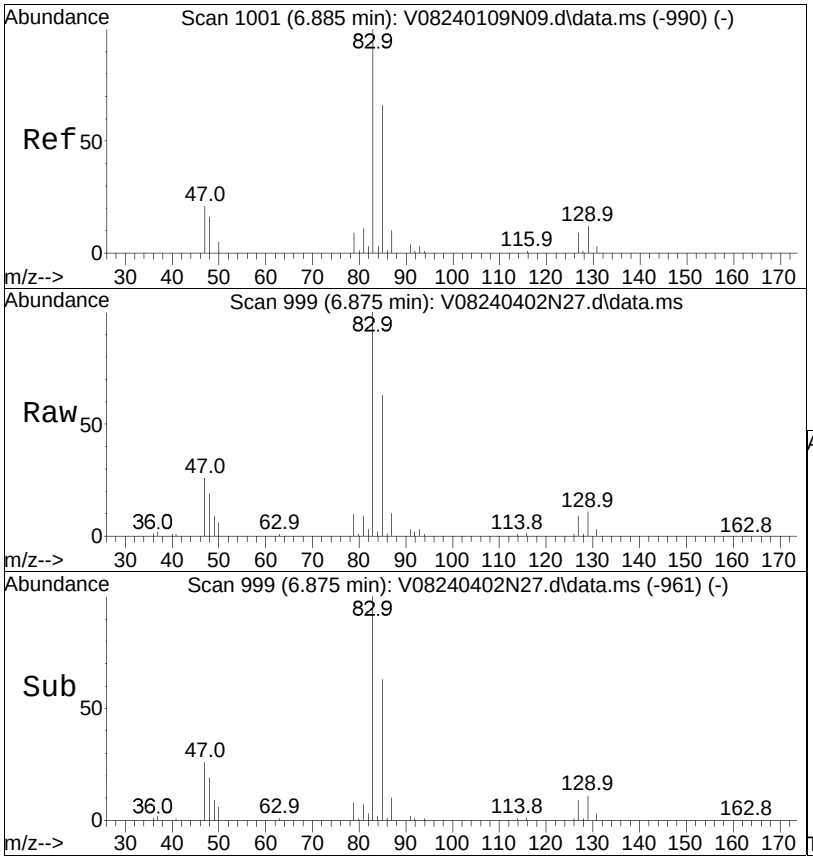


#51
1,2-Dichloropropane
Concen: 10.35 ug/L
RT: 6.806 min Scan# 986
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 63 Resp: 129215

Ion	Ratio	Lower	Upper
63	100		
62	72.9	58.6	87.8
76	33.4	38.0	57.0#

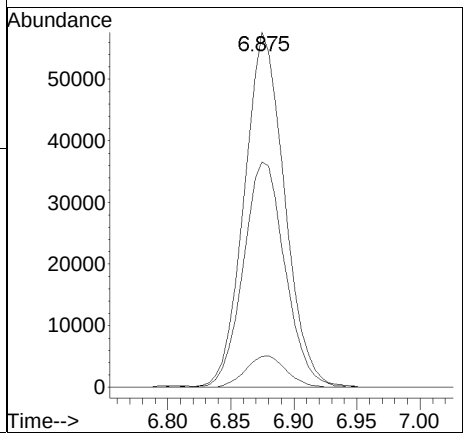


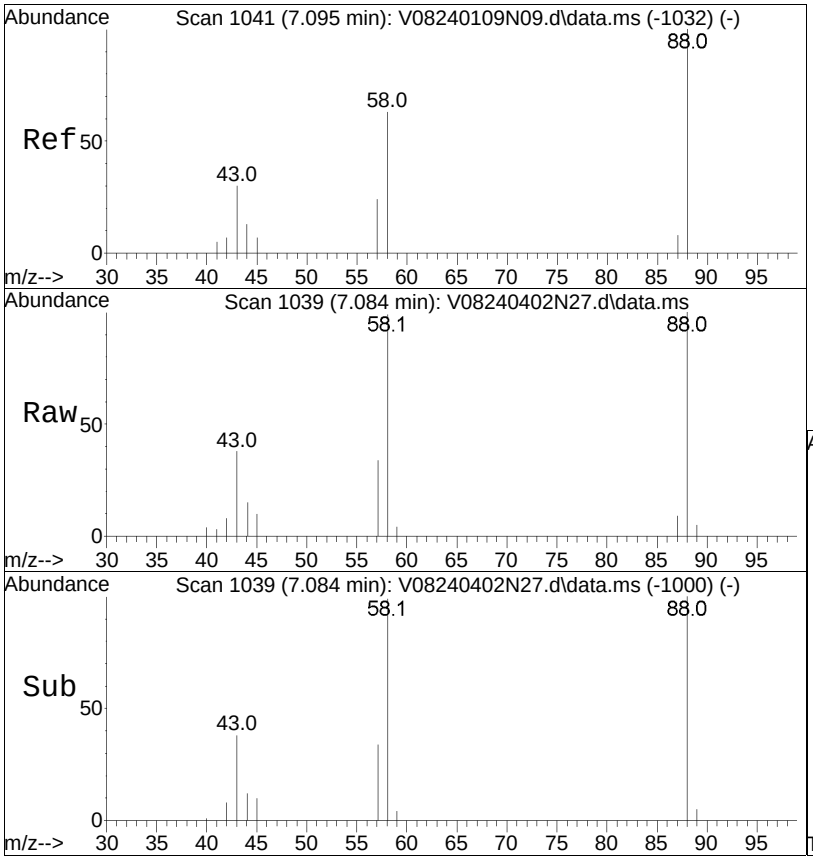


#54
Bromodichloromethane
Concen: 10.26 ug/L
RT: 6.875 min Scan# 999
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 83 Resp: 128478

Ion	Ratio	Lower	Upper
83	100		
85	65.8	52.3	78.5
127	9.0	6.2	9.4

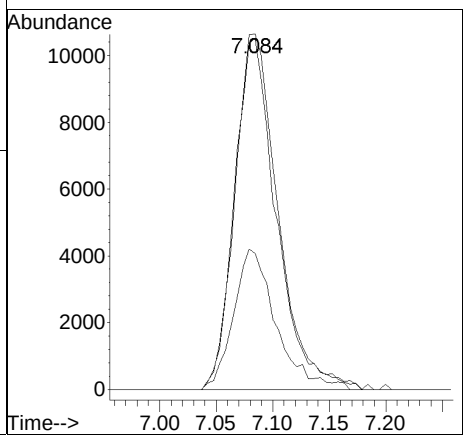


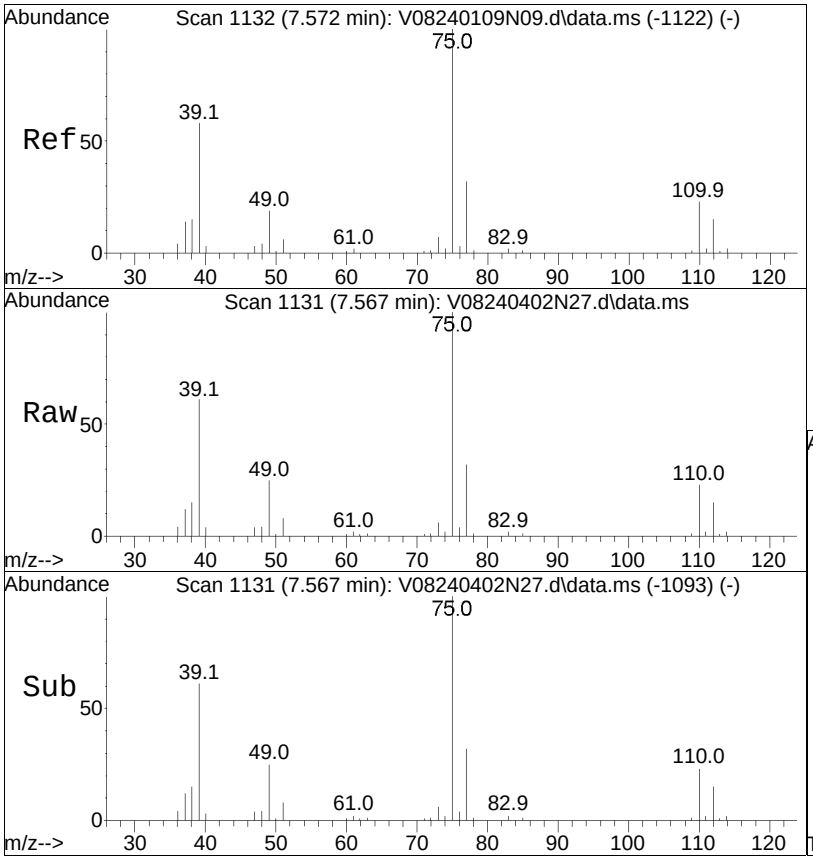


#57
1,4-Dioxane
Concen: 508.22 ug/L
RT: 7.084 min Scan# 1039
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 88 Resp: 28199

Ion	Ratio	Lower	Upper
88	100		
58	96.3	76.7	115.1
43	39.0	36.2	54.2

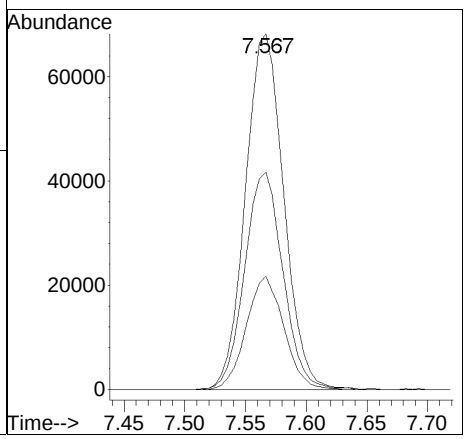


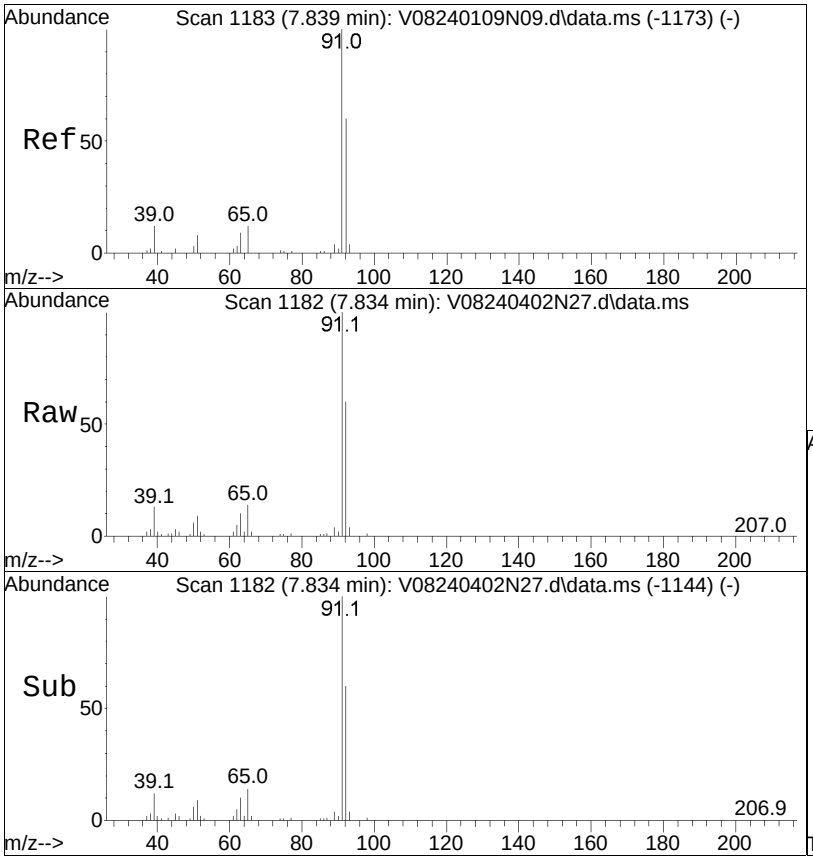


#58
cis-1,3-Dichloropropene
Concen: 10.60 ug/L
RT: 7.567 min Scan# 1131
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 75 Resp: 149823

Ion	Ratio	Lower	Upper
75	100		
77	31.1	25.0	37.4
39	61.1	50.1	75.1

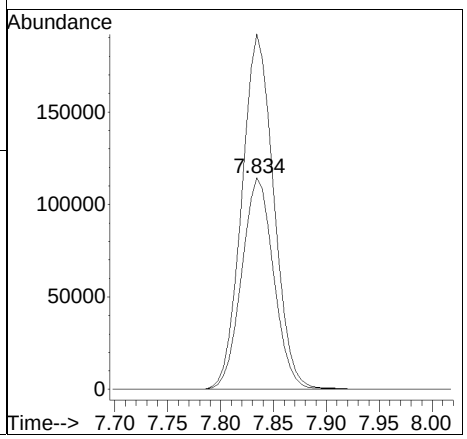


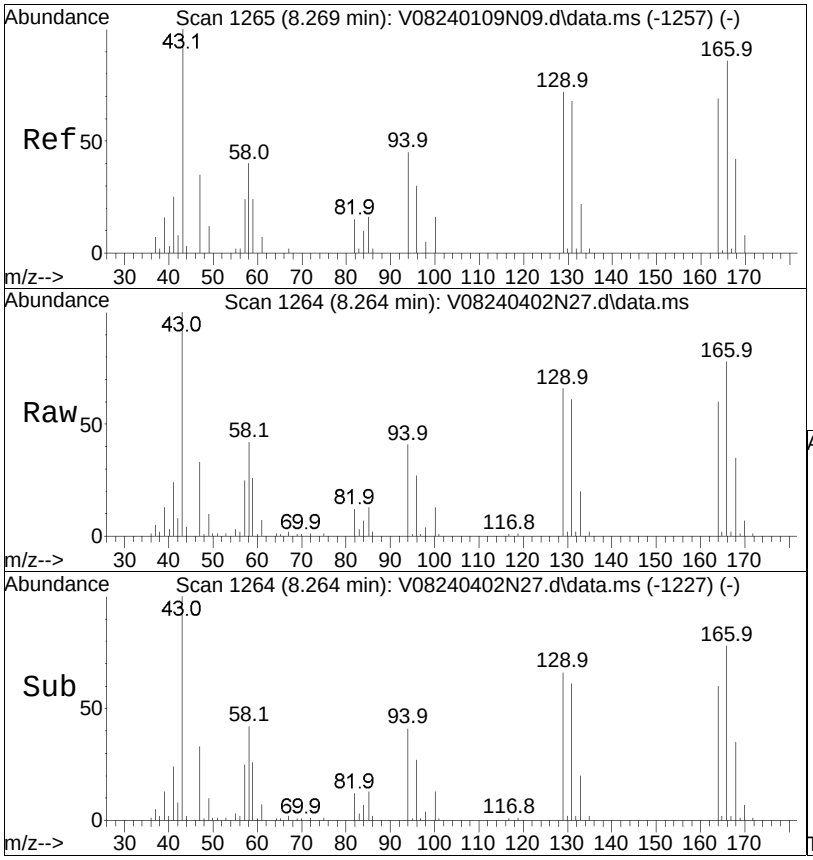


#61
Toluene
Concen: 10.72 ug/L
RT: 7.834 min Scan# 1182
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 92 Resp: 241101

Ion	Ratio	Lower	Upper
92	100		
91	167.9	139.8	209.6

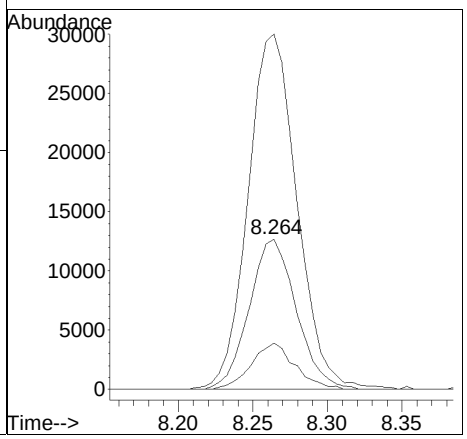


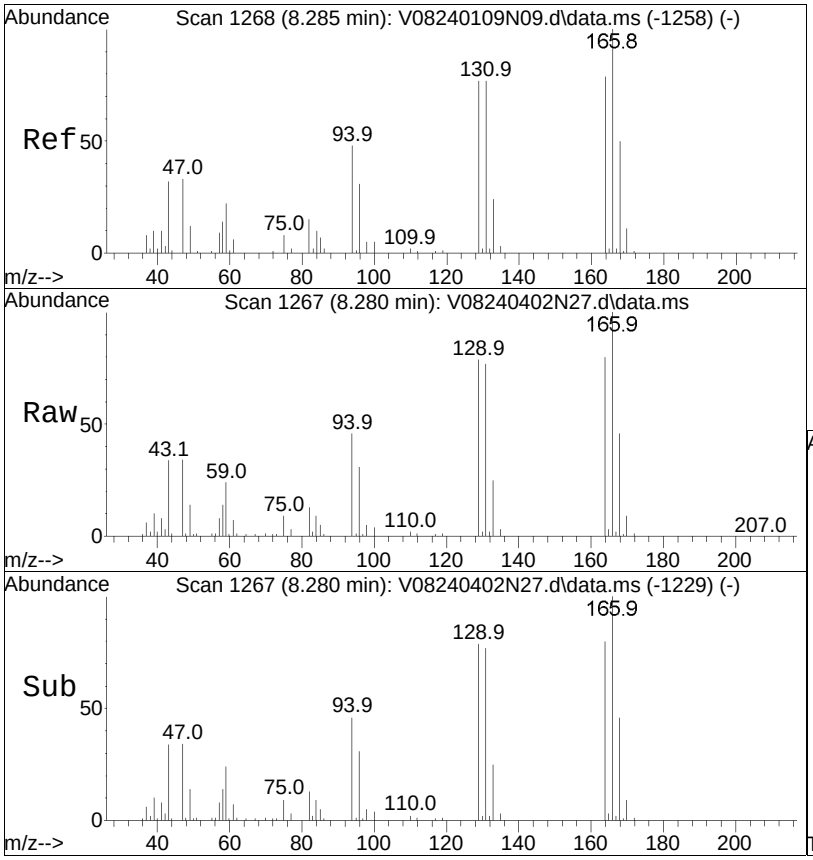


#62
4-Methyl-2-pentanone
Concen: 10.11 ug/L
RT: 8.264 min Scan# 1264
Delta R.T. -0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 58 Resp: 27958

Ion	Ratio	Lower	Upper
58	100		
100	28.8	20.2	30.2
43	245.4	196.6	295.0

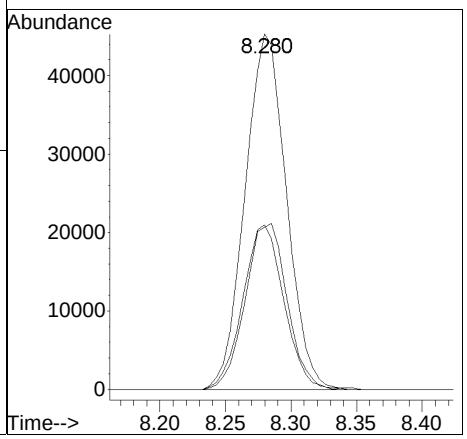


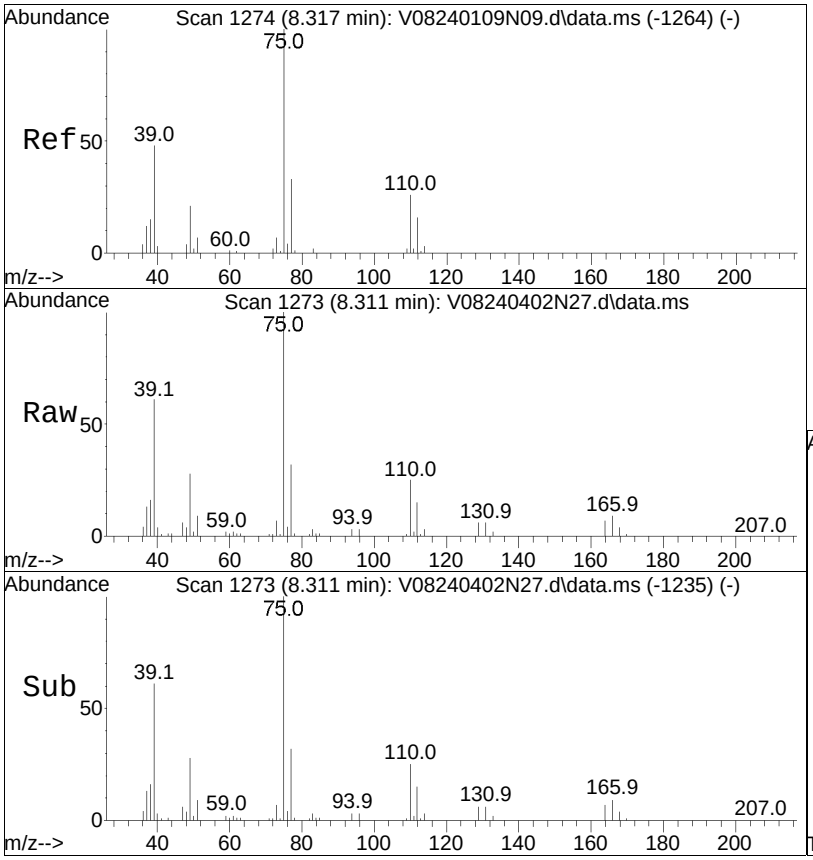


#63
Tetrachloroethene
Concen: 10.66 ug/L
RT: 8.280 min Scan# 1267
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:166 Resp: 99458

Ion	Ratio	Lower	Upper
166	100		
168	47.0	28.2	68.2
94	45.8	38.4	78.4

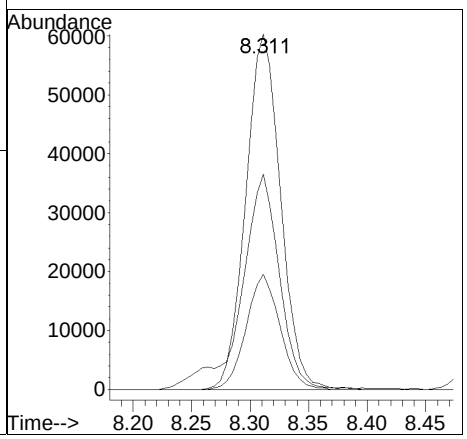


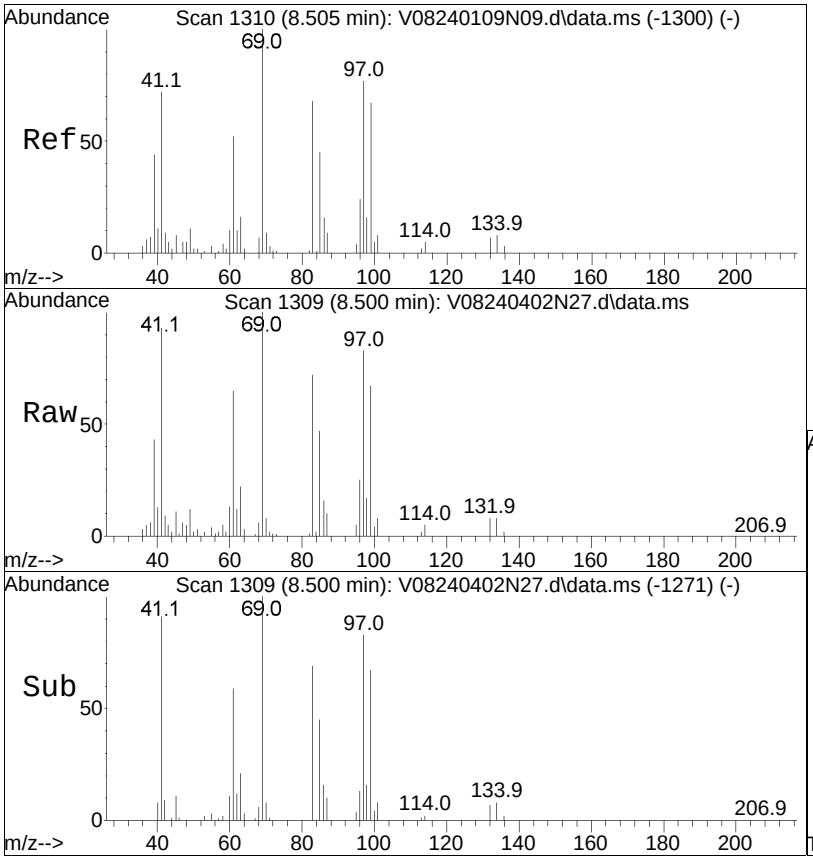


#65
trans-1,3-Dichloropropene
Concen: 10.81 ug/L
RT: 8.311 min Scan# 1273
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 75 Resp: 124841

Ion	Ratio	Lower	Upper
75	100		
77	31.4	12.4	52.4
39	65.9	42.8	82.8

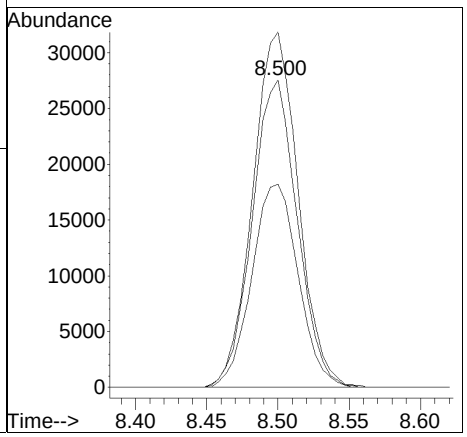


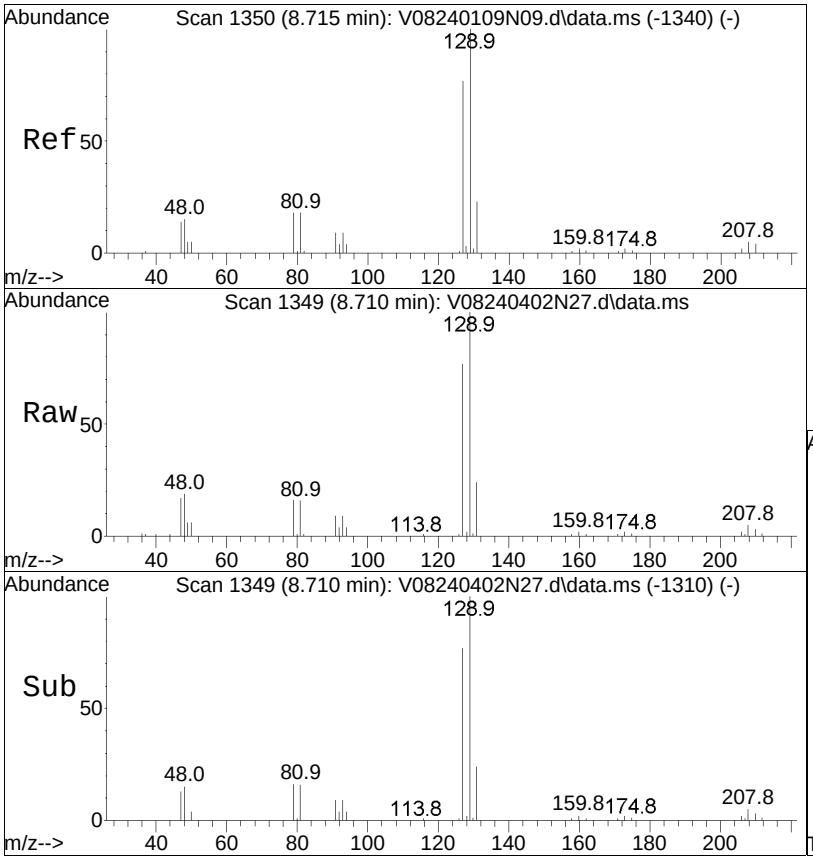


#68
1,1,2-Trichloroethane
Concen: 10.65 ug/L
RT: 8.500 min Scan# 1309
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 83 Resp: 60620

Ion	Ratio	Lower	Upper
83	100		
97	116.8	89.8	129.8
85	68.2	44.4	84.4

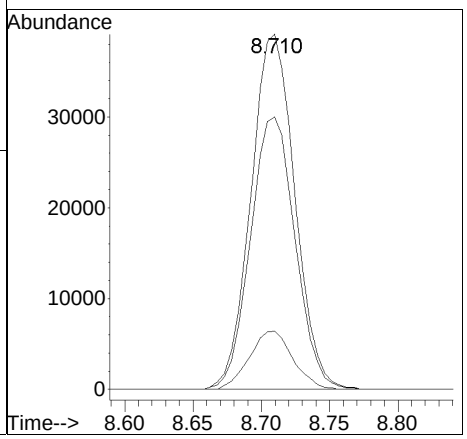


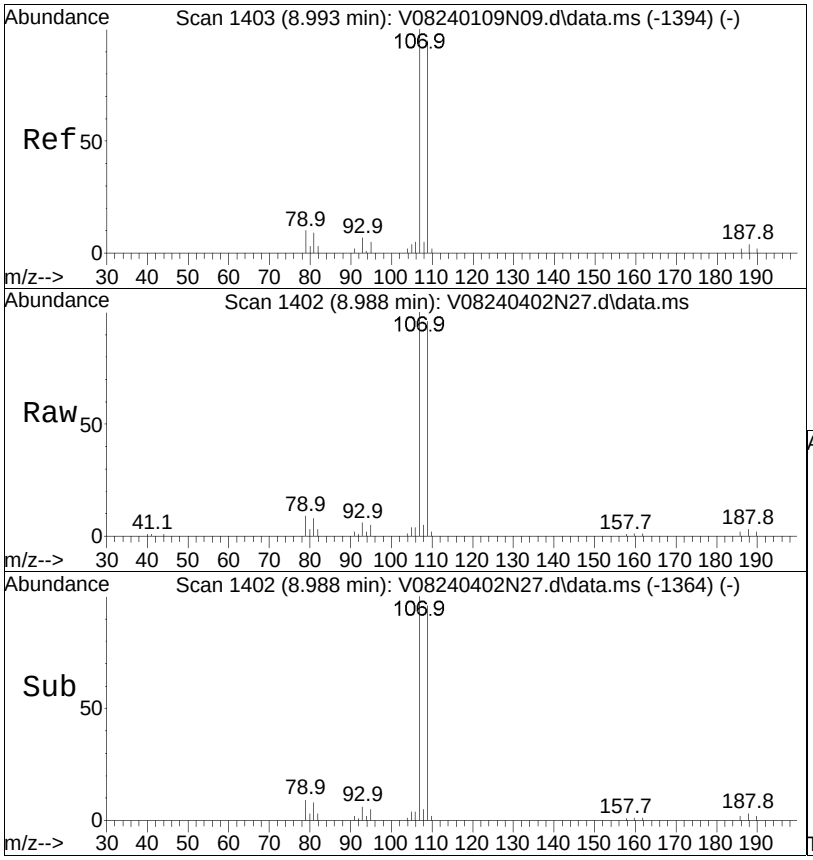


#69
Chlorodibromomethane
Concen: 10.11 ug/L
RT: 8.710 min Scan# 1349
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:129 Resp: 87482

Ion	Ratio	Lower	Upper
129	100		
81	16.3	2.9	42.9
127	77.9	57.8	97.8

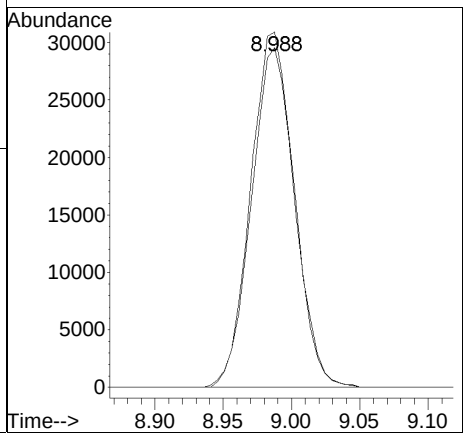


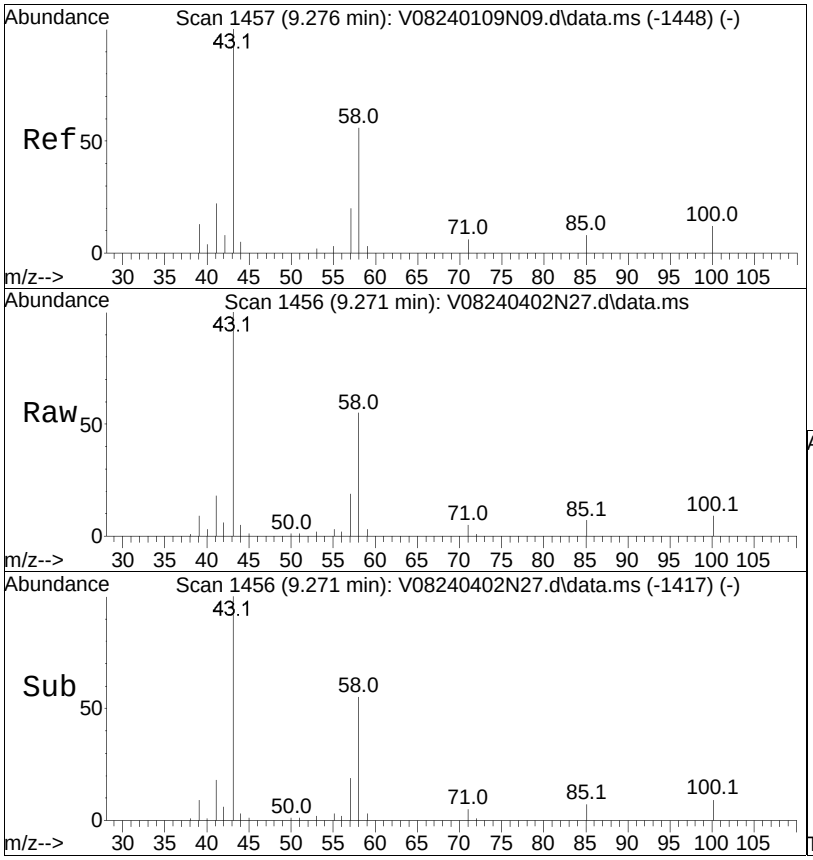


#71
1,2-Dibromoethane
Concen: 10.49 ug/L
RT: 8.988 min Scan# 1402
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:107 Resp: 68798

Ion	Ratio	Lower	Upper
107	100		
109	94.4	74.3	111.5

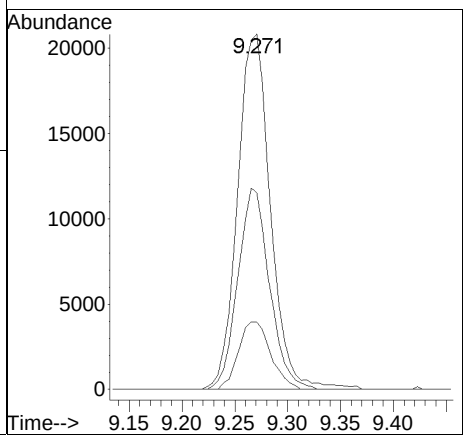


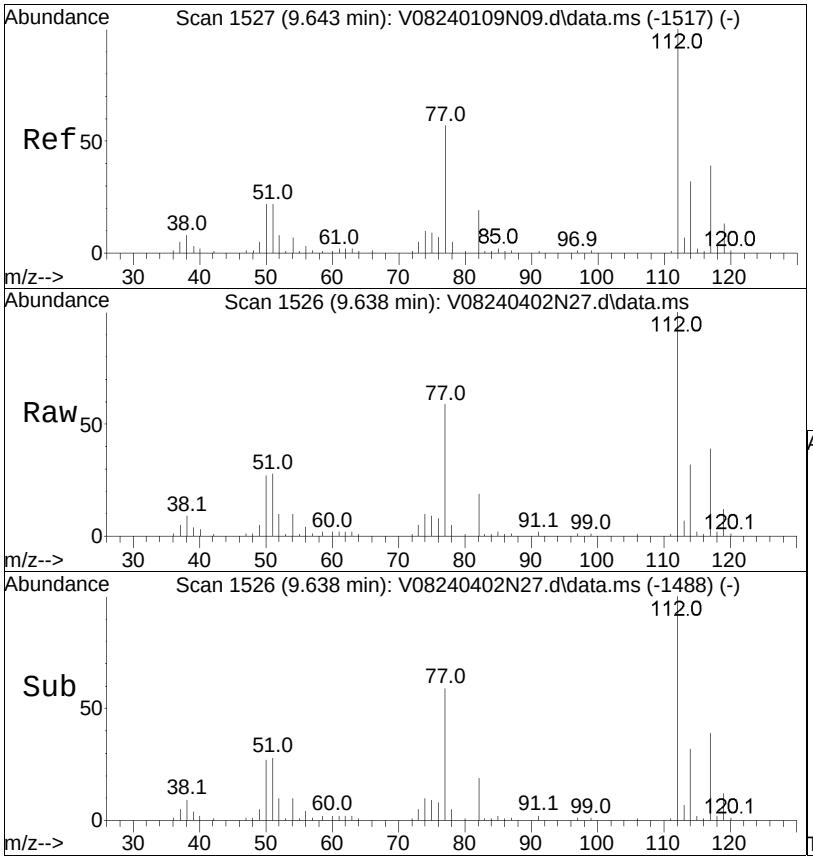


#72
2-Hexanone
Concen: 10.14 ug/L
RT: 9.271 min Scan# 1456
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 43 Resp: 45156

Ion	Ratio	Lower	Upper
43	100		
58	54.4	41.2	61.8
57	18.6	17.2	25.8

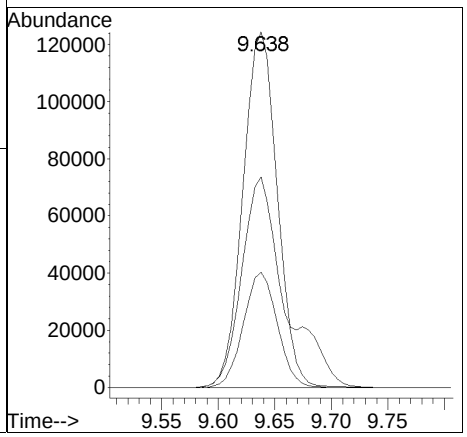


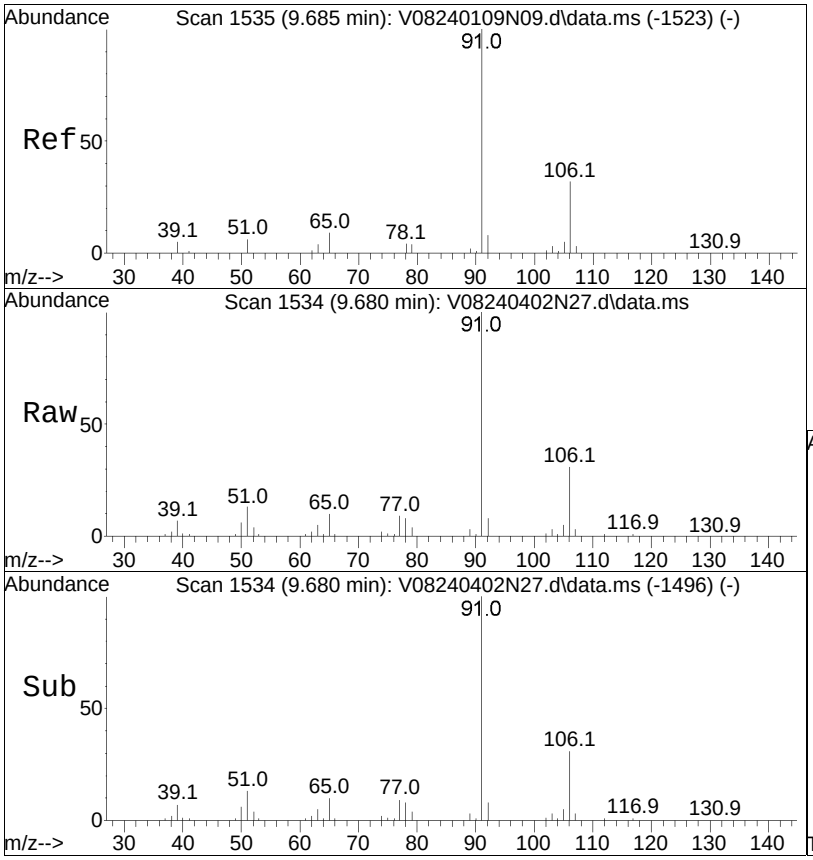


#73
Chlorobenzene
Concen: 10.46 ug/L
RT: 9.638 min Scan# 1526
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:112 Resp: 262861

Ion	Ratio	Lower	Upper
112	100		
77	74.5	55.4	83.0
114	32.0	25.4	38.2

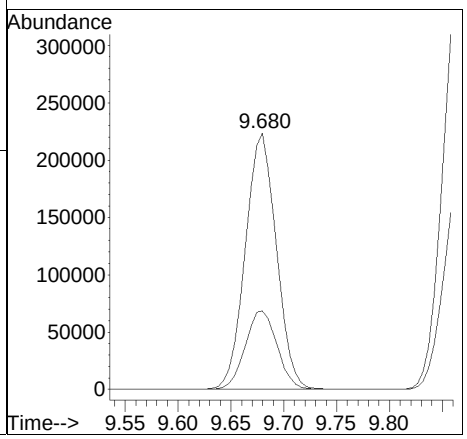


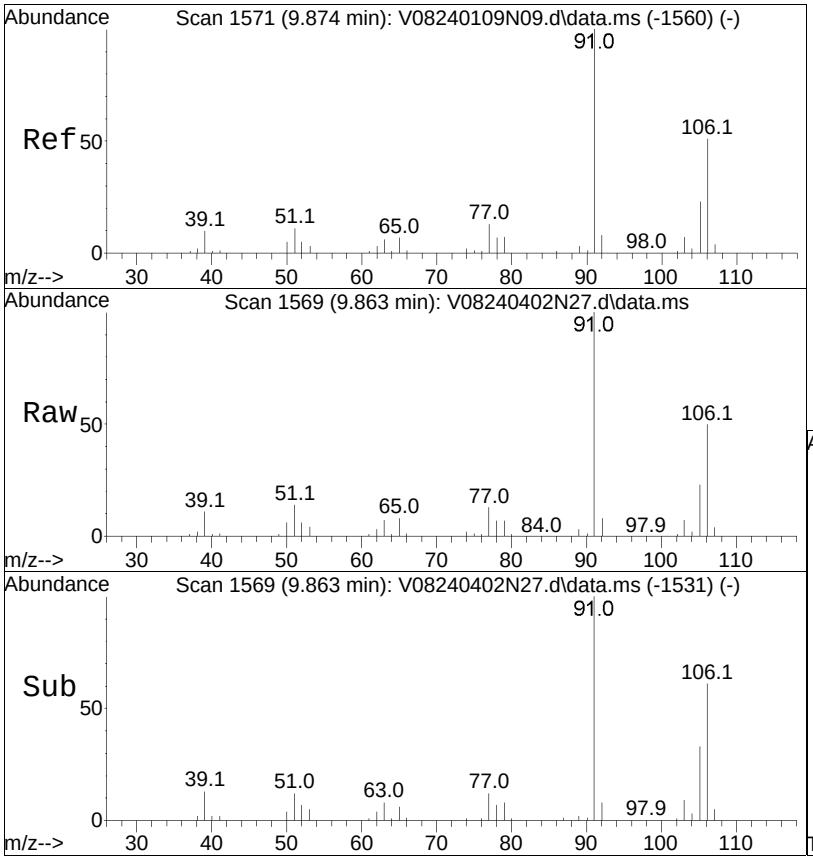


#74
Ethylbenzene
Concen: 10.89 ug/L
RT: 9.680 min Scan# 1534
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 91 Resp: 455800

Ion	Ratio	Lower	Upper
91	100		
106	31.4	24.3	36.5

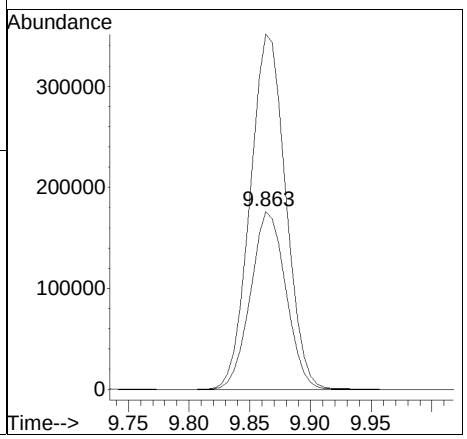


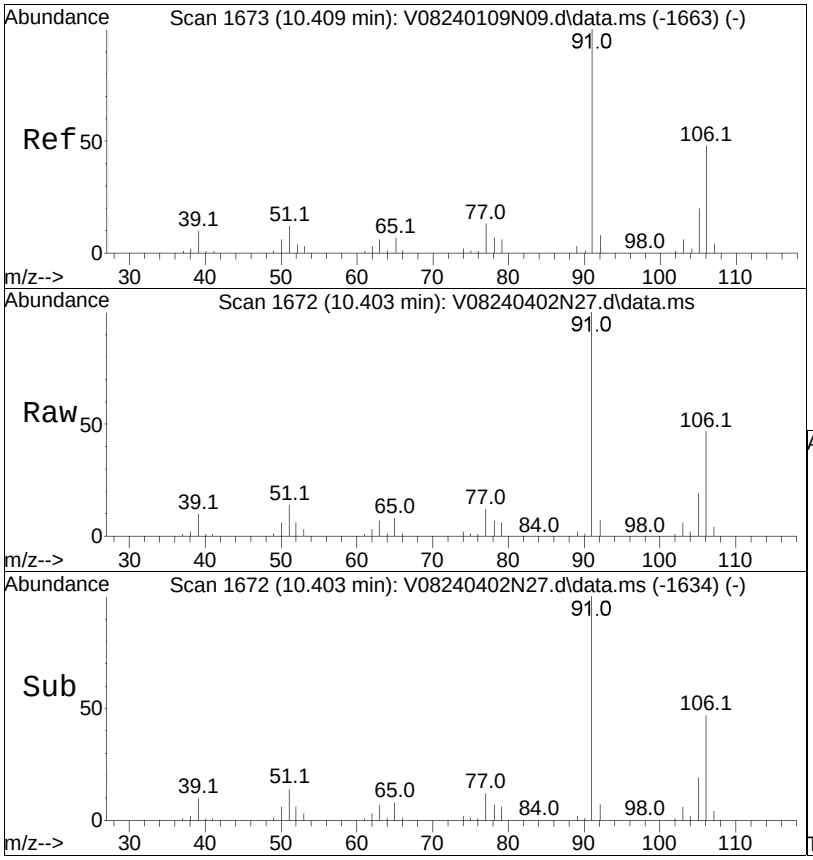


#76
p/m Xylene
Concen: 21.57 ug/L
RT: 9.863 min Scan# 1569
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:106 Resp: 356590

Ion	Ratio	Lower	Upper
106	100		
91	200.9	166.4	249.6

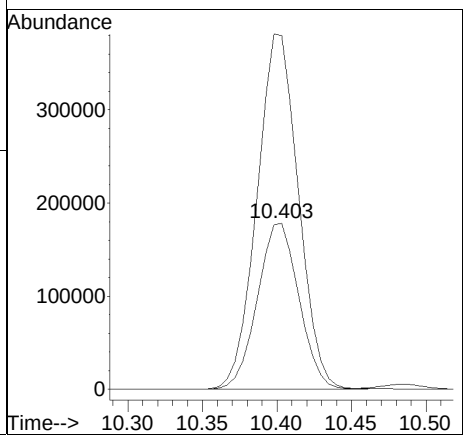


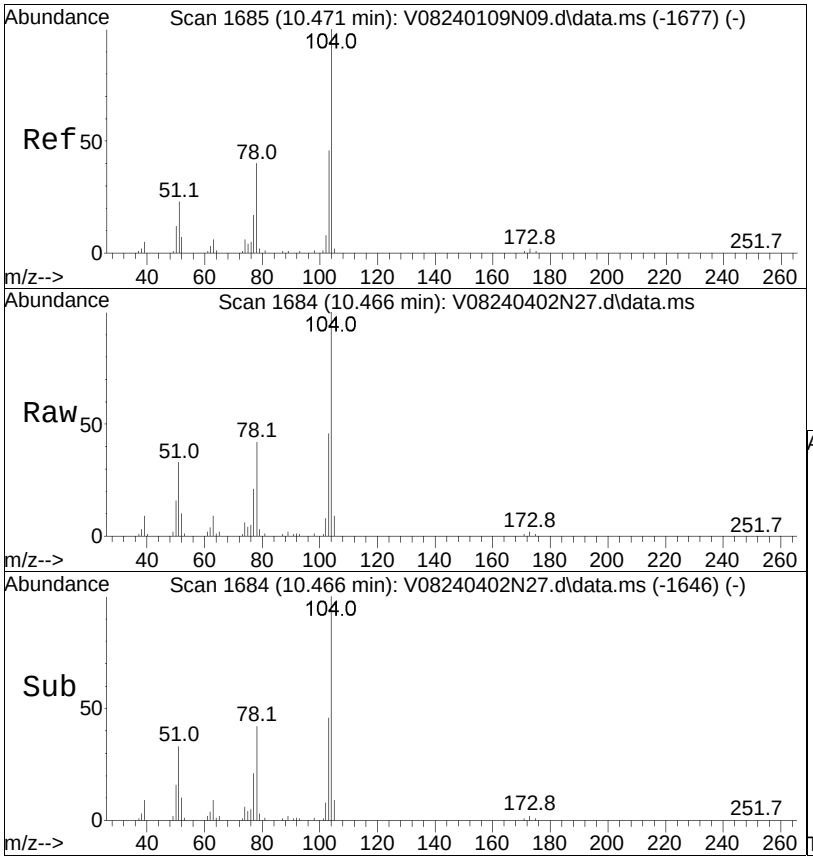


#77
o Xylene
Concen: 21.70 ug/L
RT: 10.403 min Scan# 1672
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:106 Resp: 346315

Ion	Ratio	Lower	Upper
106	100		
91	213.0	182.6	273.8

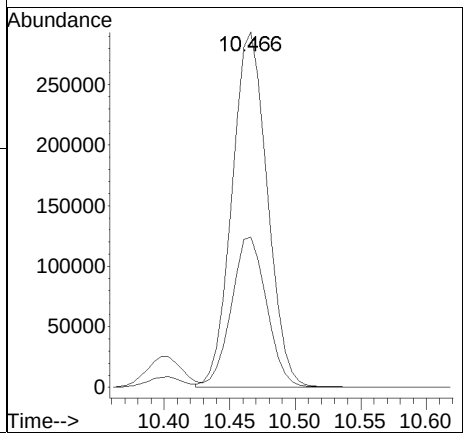


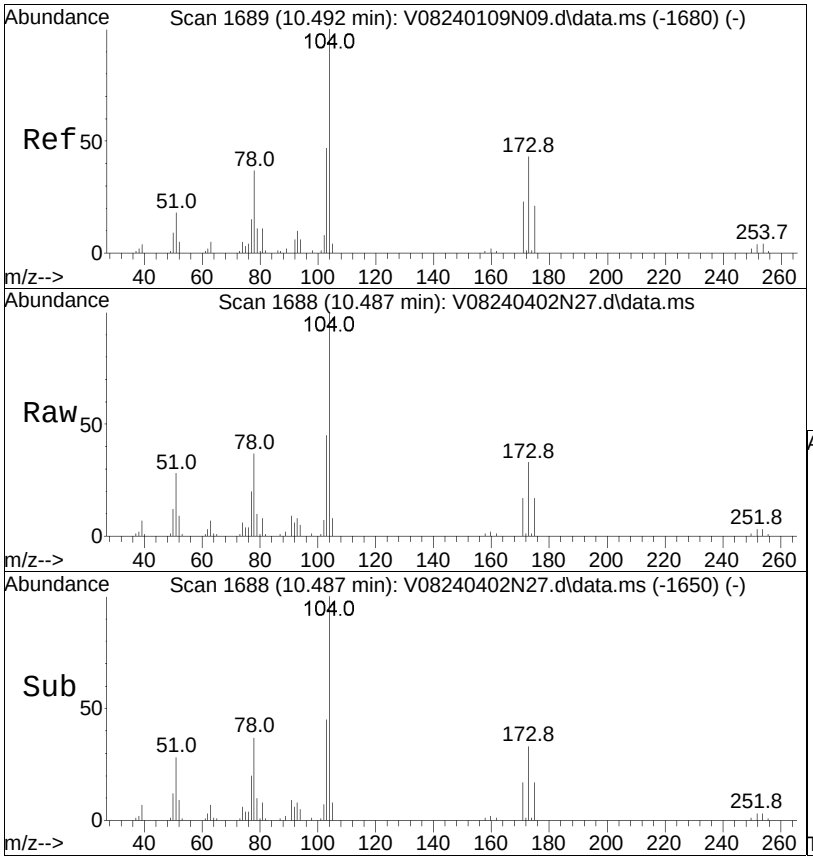


#78
Styrene
Concen: 21.51 ug/L
RT: 10.466 min Scan# 1684
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:104 Resp: 549810

Ion	Ratio	Lower	Upper
104	100		
78	42.3	39.8	59.6

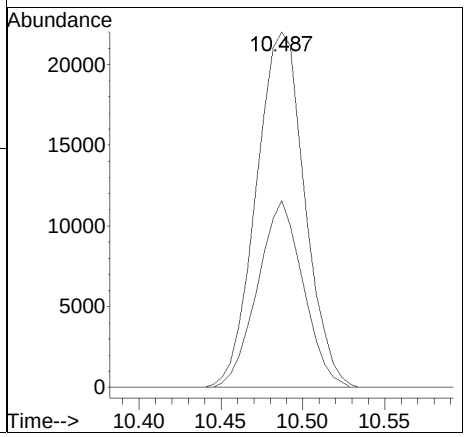


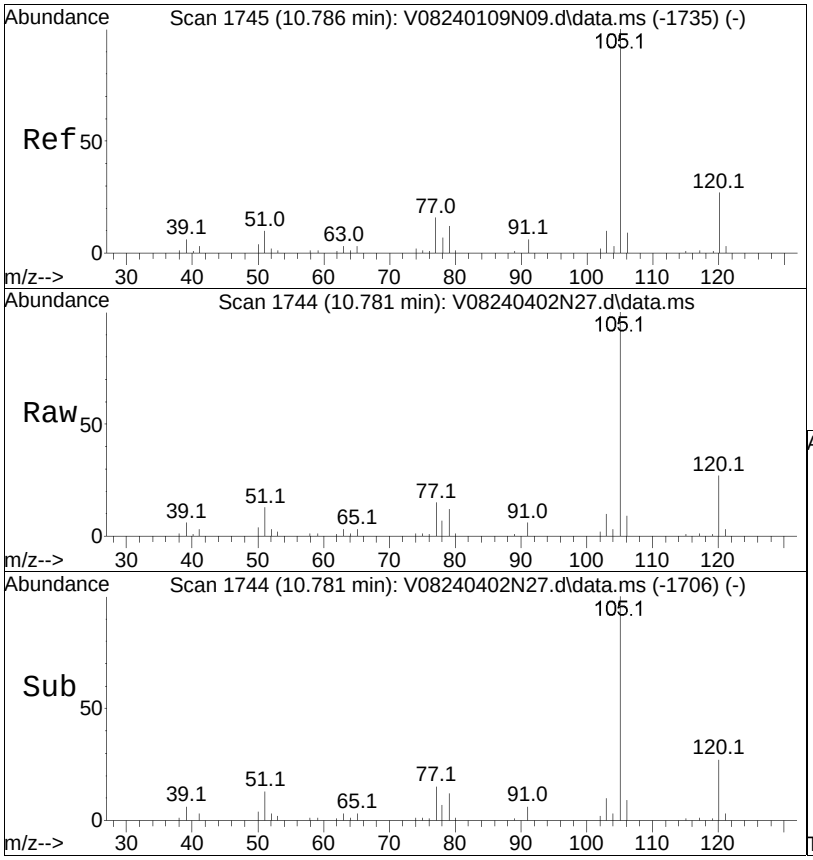


#80
Bromoform
Concen: 10.18 ug/L
RT: 10.487 min Scan# 1688
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:173 Resp: 45306

Ion	Ratio	Lower	Upper
173	100		
175	49.4	31.5	71.5

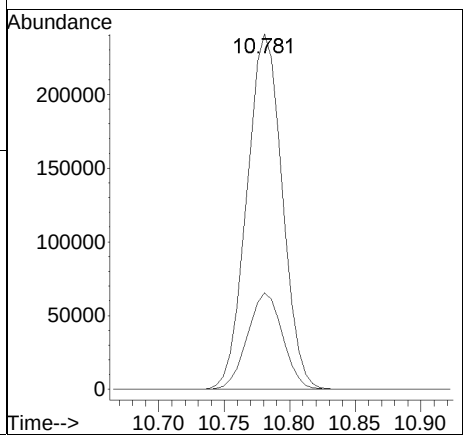


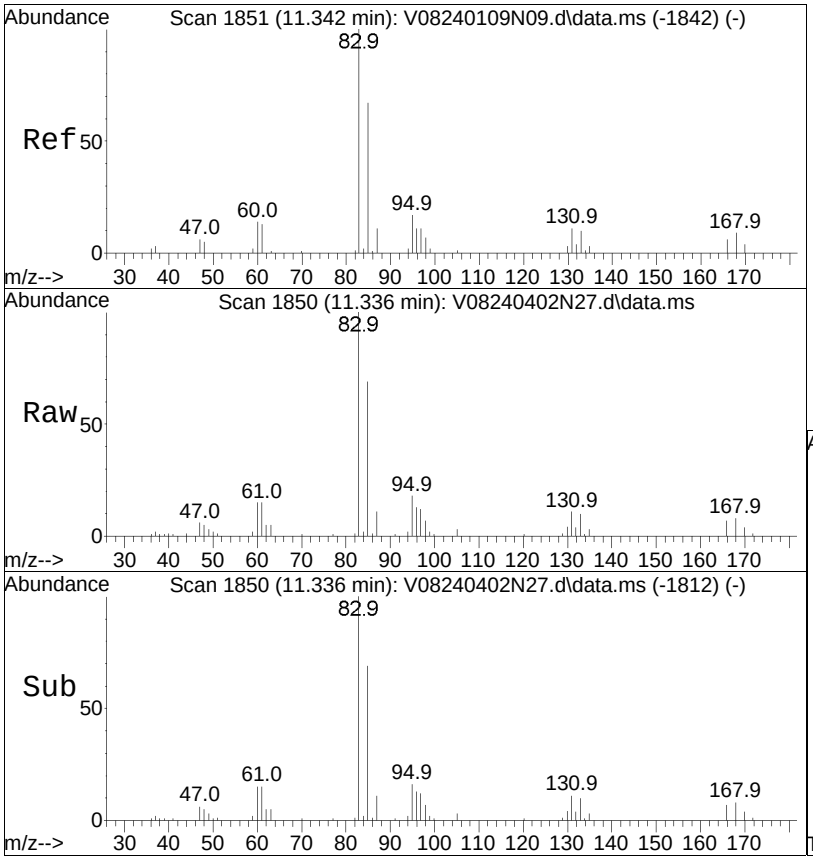


#82
Isopropylbenzene
Concen: 11.35 ug/L
RT: 10.781 min Scan# 1744
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:105 Resp: 452429

Ion	Ratio	Lower	Upper
105	100		
120	27.0	4.8	44.8

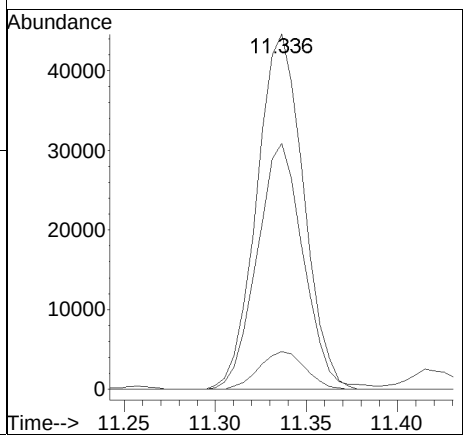


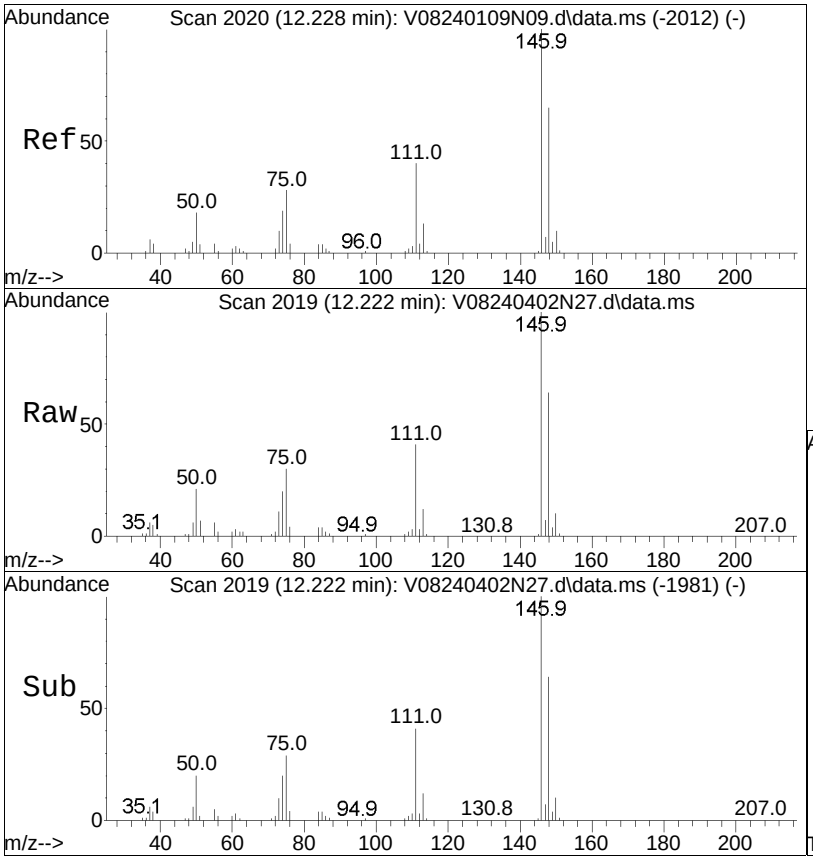


#87
1,1,2,2-Tetrachloroethane
Concen: 10.76 ug/L
RT: 11.336 min Scan# 1850
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion: 83 Resp: 79537

Ion	Ratio	Lower	Upper
83	100		
131	10.6	0.0	30.4
85	68.9	45.4	85.4

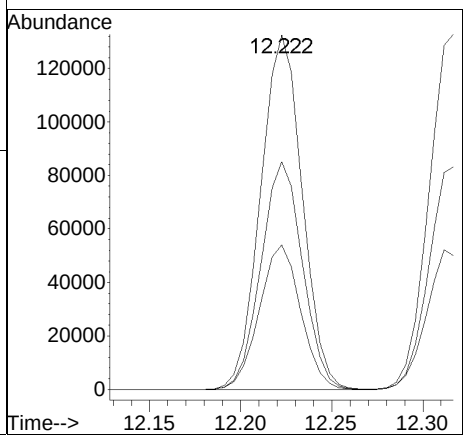


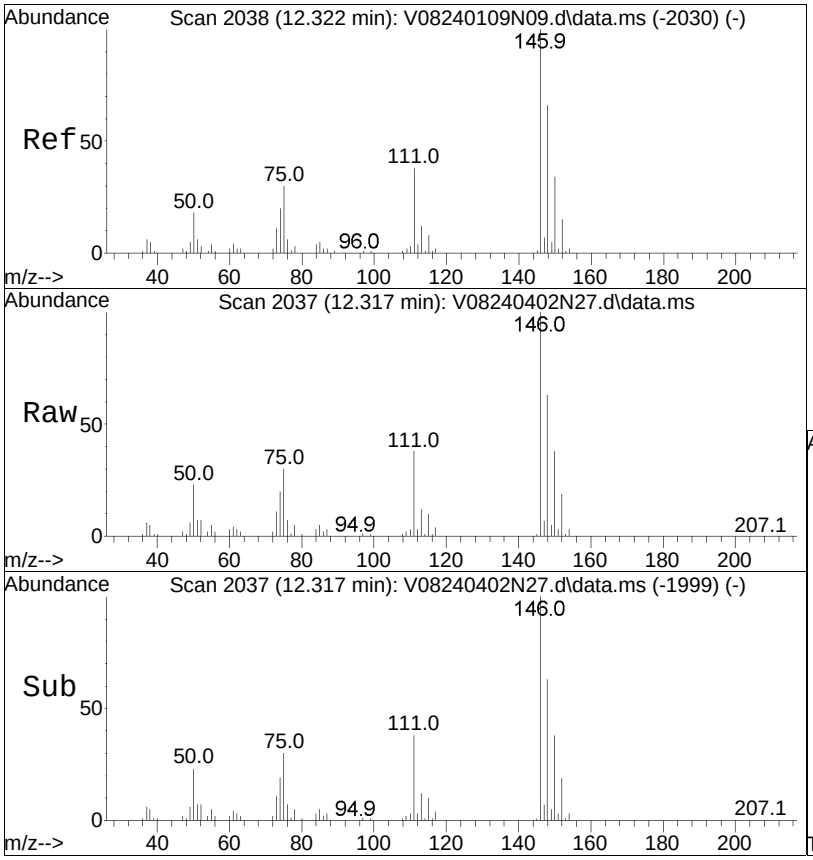


#100
1,3-Dichlorobenzene
Concen: 10.53 ug/L
RT: 12.222 min Scan# 2019
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:146 Resp: 210589

Ion	Ratio	Lower	Upper
146	100		
111	40.5	27.5	57.1
148	63.9	41.9	86.9

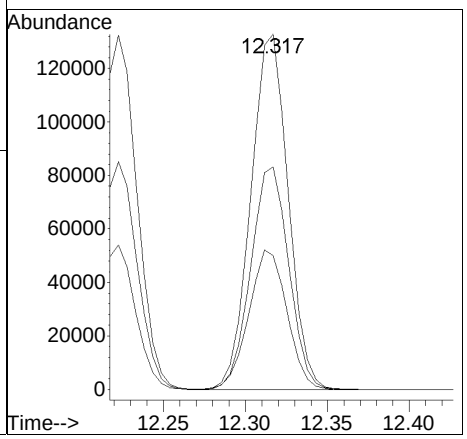


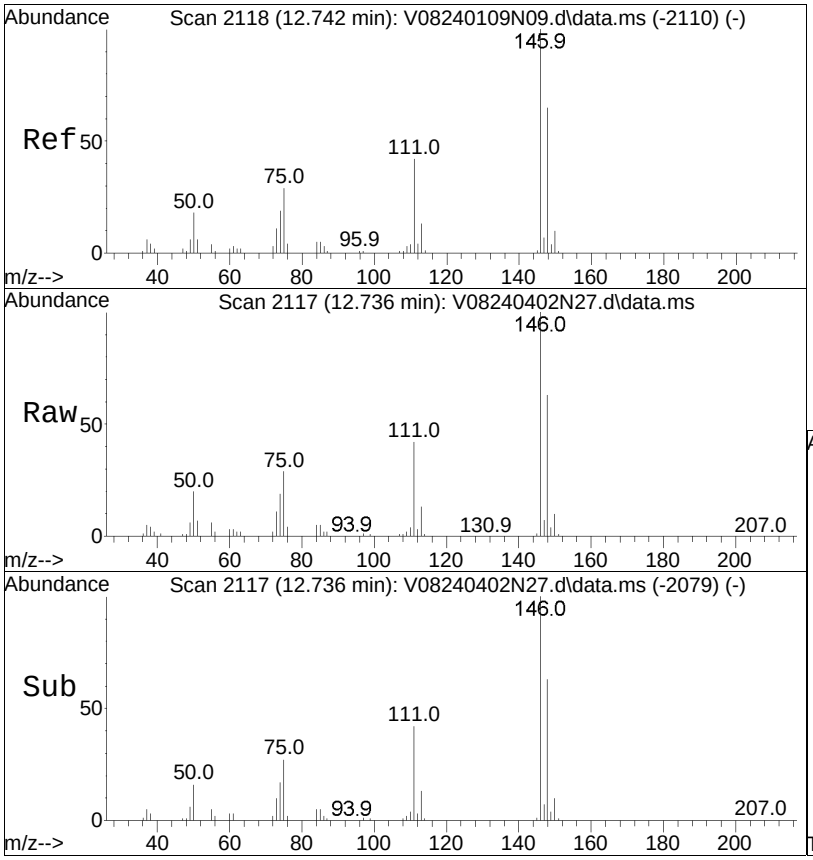


#101
1,4-Dichlorobenzene
Concen: 10.40 ug/L
RT: 12.317 min Scan# 2037
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:146 Resp: 209859

Ion	Ratio	Lower	Upper
146	100		
111	40.2	32.3	48.5
148	63.9	49.9	74.9

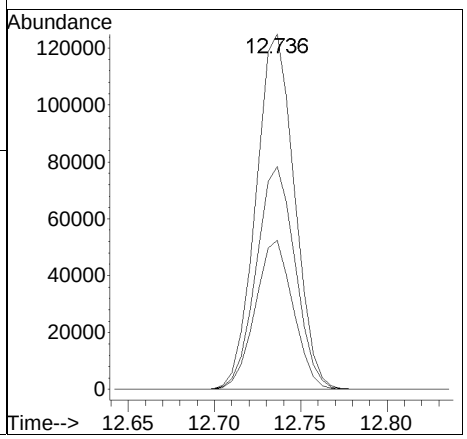


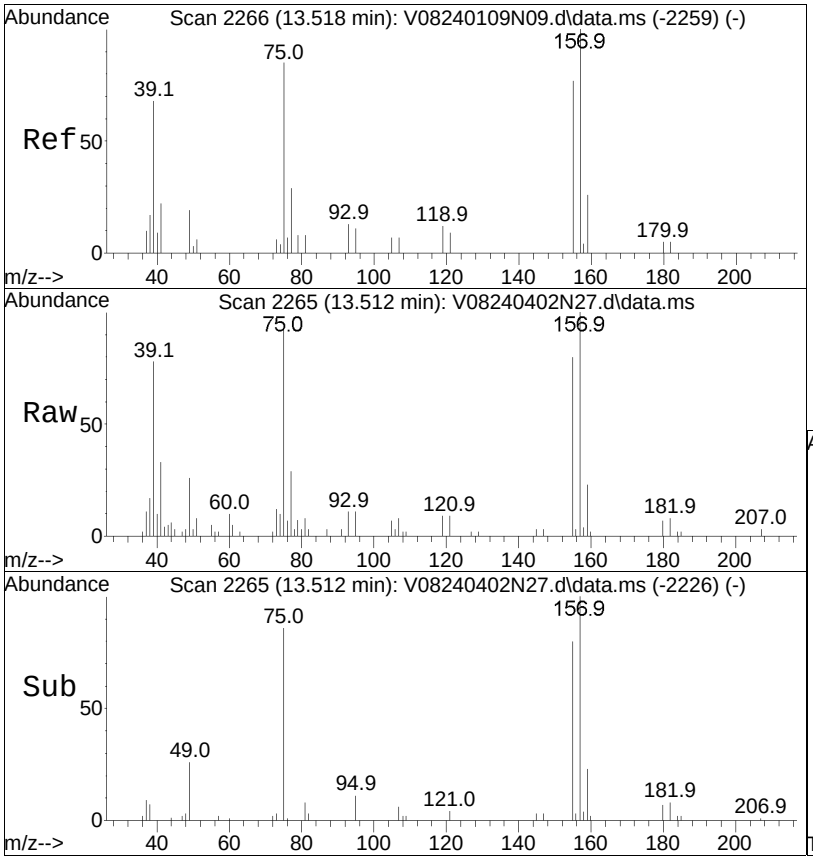


#104
1,2-Dichlorobenzene
Concen: 10.50 ug/L
RT: 12.736 min Scan# 2117
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:146 Resp: 194671

Ion	Ratio	Lower	Upper
146	100		
111	41.2	28.3	58.7
148	63.3	42.3	87.8

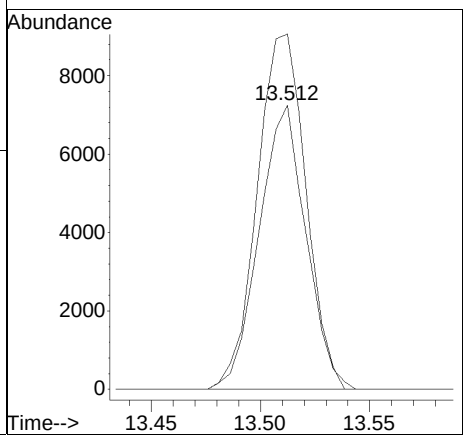


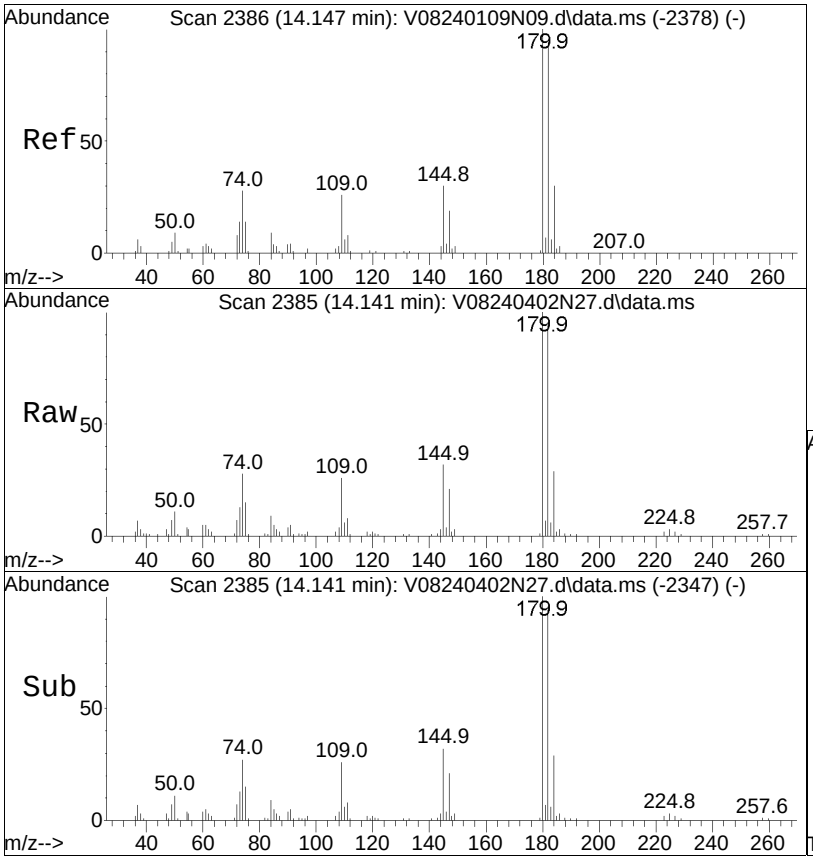


#106
1,2-Dibromo-3-chloropropane
Concen: 10.36 ug/L
RT: 13.512 min Scan# 2265
Delta R.T. 0.005 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:155 Resp: 10814

Ion	Ratio	Lower	Upper
155	100		
157	129.9	94.8	142.2

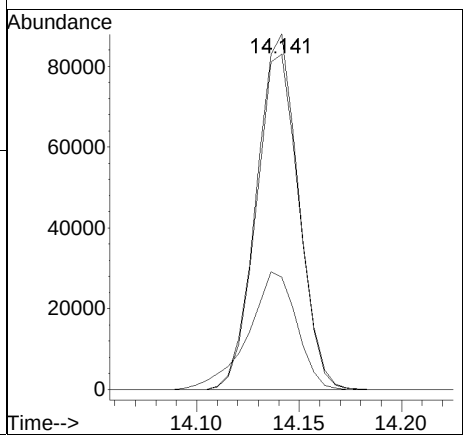


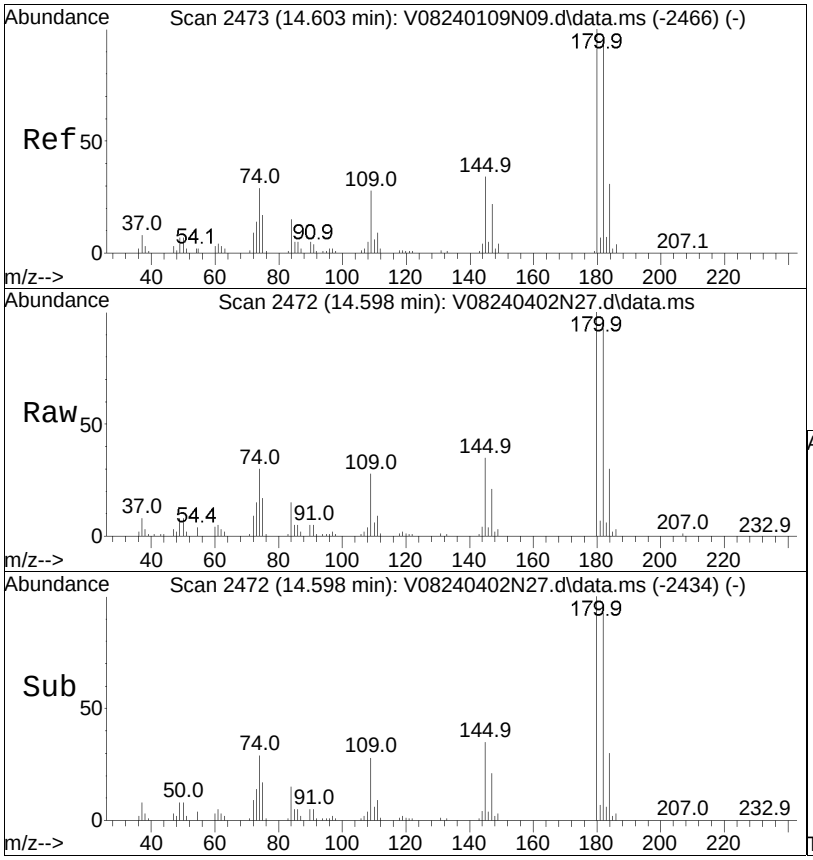


#109
1,2,4-Trichlorobenzene
Concen: 10.50 ug/L
RT: 14.141 min Scan# 2385
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:180 Resp: 126059

Ion	Ratio	Lower	Upper
180	100		
182	95.2	77.3	115.9
145	37.8	28.1	42.1

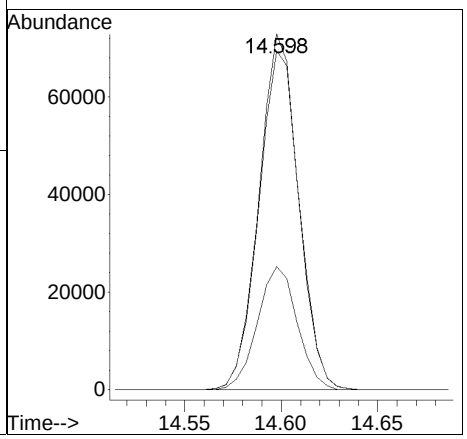




#111
1,2,3-Trichlorobenzene
Concen: 9.88 ug/L
RT: 14.598 min Scan# 2472
Delta R.T. 0.000 min
Lab File: V08240402N27.d
Acq: 3 Apr 2024 3:22 am

Tgt Ion:180 Resp: 103602

Ion	Ratio	Lower	Upper
180	100		
182	96.8	76.4	114.6
145	34.6	26.4	39.6



Calculation of Volatile Organic Compounds

Aqueous Concentration Formula: Amt * DF * Uf * (1/Vo)

Where:
DF = Dilution Factor
Vo = Sample Volume Purged (mL)
Uf = ng Unit Correction Factor (mL)

Soil Concentration Formula: Amt * DF * (1/Wt)

Where:
DF = Dilution Factor
Wt = Weight of Sample (g)

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Apr 10 2024, 12:02 pm

Work Group: WG1904126 for Department: 31 GC/MS - Volatiles

Created: 03-APR-24 Due: Operator: mjv

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2417074-01	MW-3A	S	NYTCL-8260-R2	WATER	DONE	U	0411	0416	S0	Vial-B
L2417074-02	MW-6AR	S	NYTCL-8260-R2	WATER	DONE	U	0411	0416	S0	Vial-B
L2417074-03	MW-7A	S	NYTCL-8260-R2	WATER	DONE	U	0410	0416	S0	Vial-B
L2417074-04	MW-7B	S	NYTCL-8260-R2	WATER	DONE	U	0410	0416	S0	Vial-B
L2417074-05	MW-7C	S	NYTCL-8260-R2	WATER	DONE	U	0410	0416	S0	Vial-B
L2417074-06	DUP	S	NYTCL-8260-R2	WATER	DONE	U	0411	0416	S0	Vial-B
L2417074-07	EQ BLANK	S	NYTCL-8260-R2	WATER	DONE	U	0410	0416	S0	Vial-B
L2417074-08	TRIP BLANK	S	NYTCL-8260-R2	WATER	DONE	U	0410	0416	S0	Vial-B
WG1904126-1	MS BFB Tune Standard	S	NYTCL-8260	WATER	DONE	U				
WG1904126-1	MS BFB Tune Standard	S	NYTCL-8260-R2	WATER	DONE	U				
WG1904126-2	Continuing Calibrati	S	NYTCL-8260	WATER	DONE	U				
WG1904126-2	Continuing Calibrati	S	NYTCL-8260-R2	WATER	DONE	U				
WG1904126-3	Laboratory Control S	S	NYTCL-8260	WATER	DONE	U				
WG1904126-3	Laboratory Control S	S	NYTCL-8260-R2	WATER	DACQ	U				
WG1904126-4	LCS Duplicate	S	NYTCL-8260	WATER	DONE	U				
WG1904126-4	LCS Duplicate	S	NYTCL-8260-R2	WATER	DACQ	U				
WG1904126-5	Laboratory Method Bl	S	NYTCL-8260	WATER	DONE	U				
WG1904126-5	Laboratory Method Bl	S	NYTCL-8260-R2	WATER	DACQ	U				
WG1904126-6	Matrix Spike	S	NYTCL-8260	WATER	DONE	U				
WG1904126-6	Matrix Spike	S	NYTCL-8260-R2	WATER	DACQ	U				
WG1904126-7	Matrix Spike Duplica	S	NYTCL-8260	WATER	DONE	U				
WG1904126-7	Matrix Spike Duplica	S	NYTCL-8260-R2	WATER	DACQ	U				

Comments:

WG1904126-4	WG1904126-3
WG1904126-6	L2417074-02
WG1904126-7	L2417074-02

Inst: VOA108 BFB: V10280 Method GC: 8260-ATOMX
Initials: RAW IS/SS: V10294 Autosampler: 8260
Date **03/22/24** ICAL: V10285C,V10311 Concentrator: 8260
Run **N** ICV: V10298,V10313,V10317,V10299,V10214,V10312 QC: Seq:

Vial	DATA FILE	SAMPLE	pH<2
1	V08240322NBF1	BFB TUNE	
1	V08240322N01	BLK	
2	V08240322N02	BLK	
3	V08240322N03	I8260STD0.19PPB	
4	V08240322N04	I8260STD0.19PPB	
5	V08240322N05	I8260STD0.5PPB	
6	V08240322N06	I8260STD0.5PPB	
7	V08240322N07	I8260STD2PPB	
8	V08240322N08	I8260STD10PPB	
9	V08240322N09	I8260STD30PPB	
10	V08240322N10	I8260STD80PPB	
11	V08240322N11	I8260STD120PPB	
12	V08240322N12	I8260STD200PPB	
13	V08240322N13	BLK	
14	V08240322N14	BLK	
15	V08240322N15	BLK	
16	V08240322N16	BLK	
17	V08240322N17	C8260STC10PPB	
18	V08240322N18	C8260STC10PPB	
19	V08240322N19	BLK	
20	V08240322N20	METHOD BLK	
21	V08240322N21	MDL L2	
22	V08240322N22	MDL L2	
23	V08240322N23	BLK	

Inst: VOA108 BFB: V10345
Initials: TMS IS/SS: V10330
Date **04/02/24** ICAL: V10338A,V10335
Run **N**

Method
GC: 8260-ATOMX
Autosampler: 8260
Concentrator: 8260

QC: Seq:

Vial	DATA FILE	SAMPLE			pH<2
1	V08240402NBF1	BFB TUNE			
1	V08240402N01	8260 CCAL LCS			
2	V08240402N02	8260 CCAL LCSD			
3	V08240402N03	8260 CCAL			
4	V08240402N04	BLK			
5	V08240402N05	METHOD BLK			
6	V08240402N06	L2415140-08,31,10,10,,A	PA/PCE,TCE Only	04/02	pH<2
7	V08240402N07	L2417192-01,31,10,10,,A	NJ/15/TBA		pH<2
8	V08240402N08	L2417192-02,31,10,10,,A	NJ/15/TBA		pH<2
9	V08240402N09	L2417192-03,31,10,10,,A	NJ/15/TBA		pH<2
10	V08240402N10	L2417192-05,31,10,10,,A	NJ/15/TBA		pH<2
11	V08240402N11	L2417192-06,31,10,10,,A	NJ/15/TBA		pH<2
12	V08240402N12	L2417192-07,31,10,10,,A	NJ/15/TBA		pH<2
13	V08240402N13	L2417192-08,31,10,10,,A	NJ/15/TBA	FB	pH<2
14	V08240402N14	L2417192-09,31,10,10,,A	NJ/15/TBA	TB	pH<2
15	V08240402N15	L2416859-14,31,10,10,,C	NJ/CDM/2CEVE/noTICs		pH<2
16	V08240402N16	L2416553-23D,31,5.0,10,,B	NYTCL	COMP	pH<2
17	V08240402N17	L2416553-19,31,10,10,,B	NYTCL	COMP	pH<2
18	V08240402N18	L2417074-01,31,10,10,,A	NYR2/CURVE		pH<2
19	V08240402N19	L2417074-02,31,10,10,,A	NYR2/CURVE		pH<2
20	V08240402N20	L2417074-03,31,10,10,,A	NYR2/CURVE		pH<2
21	V08240402N21	L2417074-04,31,10,10,,A	NYR2/CURVE		pH<2
22	V08240402N22	L2417074-05,31,10,10,,A	NYR2/CURVE		pH<2
23	V08240402N23	L2417074-06,31,10,10,,A	NYR2/CURVE		pH<2
24	V08240402N24	L2417074-07,31,10,10,,A	NYR2/CURVE		pH<2
25	V08240402N25	L2417074-08,31,10,10,,A	NYR2/CURVE	TB	pH<2
26	V08240402N26	L2417074-01MS,31,10,10,,A1	NYR2/CURVE		pH<2
27	V08240402N27	L2417074-01MSD,31,10,10,,A2	NYR2/CURVE		pH<2
28	V08240402N28	HSTD			
29	V08240402N29	BLK			
30	V08240402N30	BLK			

Semivolatiles Data- Method 8270

Semivolatiles QC Summary

Laboratory Control Sample Summary
Form 3
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix (Level)	: WATER (LOW)		
LCS Sample ID	: WG1904510-2 **Analysis Date** : 04/04/24 13:27	**File ID**	: 904512-2
LCSD Sample ID	: WG1904510-3 **Analysis Date** : 04/04/24 13:52	**File ID**	: 904512-3

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Bis(2-chloroethyl)ether	18	11.	61	18	11.	59	3	40-140	30
3,3'-Dichlorobenzidine	18	13.	73	18	12.	68	7	40-140	30
2,4-Dinitrotoluene	18	12.	69	18	12.	65	6	48-143	30
2,6-Dinitrotoluene	18	11.	60	18	11.	62	3	40-140	30
4-Chlorophenyl phenyl ether	18	10.	58	18	10.	57	2	40-140	30
4-Bromophenyl phenyl ether	18	10.	58	18	10.	58	0	40-140	30
Bis(2-chloroisopropyl)ether	18	14.	78	18	14.	76	3	40-140	30
Bis(2-chloroethoxy)methane	18	12.	66	18	11.	63	5	40-140	30
Hexachlorocyclopentadiene	18	7.8	43	18	7.7	42	2	40-140	30
Isophorone	18	13.	72	18	13.	70	3	40-140	30
Nitrobenzene	18	12.	67	18	12.	65	3	40-140	30
NDPA/DPA	18	12.	67	18	12.	64	5	40-140	30
n-Nitrosodi-n-propylamine	18	13.	70	18	12.	67	4	29-132	30
Bis(2-ethylhexyl)phthalate	18	16.	86	18	16.	86	0	40-140	30
Butyl benzyl phthalate	18	14.	76	18	14.	76	0	40-140	30
Di-n-butylphthalate	18	14.	76	18	14.	77	1	40-140	30
Di-n-octylphthalate	18	17.	93	18	17.	92	1	40-140	30
Diethyl phthalate	18	13.	70	18	12.	67	4	40-140	30
Dimethyl phthalate	18	11.	61	18	11.	63	3	40-140	30
Biphenyl	18	11.	62	18	11.	60	3	40-140	30
4-Chloroaniline	18	10.	58	18	10.	56	4	40-140	30
2-Nitroaniline	18	12.	66	18	11.	63	5	52-143	30
3-Nitroaniline	18	13.	70	18	12.	67	4	25-145	30
4-Nitroaniline	18	12.	65	18	12.	65	0	51-143	30
Dibenzofuran	18	12.	64	18	11.	61	5	40-140	30
1,2,4,5-Tetrachlorobenzene	18	9.9	54	18	9.4	52	4	2-134	30

Laboratory Control Sample Summary
Form 3
Semivolatiles

Client : Alpha Geoscience **Lab Number** : L2417074
Project Name : RANCO SAND & GRAVEL **Project Number** : 12123
Matrix (Level) : WATER (LOW)
LCS Sample ID : WG1904510-2 **Analysis Date** : 04/04/24 13:27 **File ID** : 904512-2
LCSD Sample ID : WG1904510-3 **Analysis Date** : 04/04/24 13:52 **File ID** : 904512-3

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Acetophenone	18	14.	76	18	13.	73	4	39-129	30
2,4,6-Trichlorophenol	18	12.	66	18	11.	61	8	30-130	30
p-Chloro-m-cresol	18	13.	73	18	12.	67	9	23-97	30
2-Chlorophenol	18	12.	66	18	12.	65	2	27-123	30
2,4-Dichlorophenol	18	12.	68	18	12.	66	3	30-130	30
2,4-Dimethylphenol	18	14.	75	18	13.	71	5	30-130	30
2-Nitrophenol	18	14.	79	18	14.	76	4	30-130	30
4-Nitrophenol	18	14.	76	18	11.	61	22	10-80	30
2,4-Dinitrophenol	18	6.7	37	18	8.0	44	17	20-130	30
4,6-Dinitro-o-cresol	18	11.	63	18	11.	61	3	20-164	30
Phenol	18	8.8	48	18	8.9	49	2	12-110	30
2-Methylphenol	18	12.	66	18	12.	66	0	30-130	30
3-Methylphenol/4-Methylphenol	18	13.	71	18	12.	68	4	30-130	30
2,4,5-Trichlorophenol	18	12.	65	18	11.	62	5	30-130	30
Carbazole	18	13.	72	18	12.	68	6	55-144	30
Atrazine	18	14.	77	18	13.	72	7	40-140	30
Benzaldehyde	18	13.	73	18	13.	70	4	40-140	30
Caprolactam	18	8.9	49	18	8.8	49	0	10-130	30
2,3,4,6-Tetrachlorophenol	18	12.	65	18	12.	65	0	40-140	30

Matrix Spike Sample Summary
Form 3
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix (Level)**	: WATER (LOW)
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/04/24 18:35
Matrix Spike	: WG1904510-4	**MS Analysis Date**	: 04/04/24 19:00
Matrix Spike Dup	: WG1904510-5	**MSD Analysis Date**	: 04/04/24 19:26

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (ug/l)	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Bis(2-chloroethyl)ether	ND	18.2	9.3	51	18.2	10.	55	7	40-140	30
3,3'-Dichlorobenzidine	ND	18.2	13.	72	18.2	13.	72	0	40-140	30
2,4-Dinitrotoluene	ND	18.2	11.	61	18.2	12.	66	9	48-143	30
2,6-Dinitrotoluene	ND	18.2	10.	55	18.2	11.	61	10	40-140	30
4-Chlorophenyl phenyl ether	ND	18.2	9.2	51	18.2	10.	55	8	40-140	30
4-Bromophenyl phenyl ether	ND	18.2	8.9	49	18.2	10.	55	12	40-140	30
Bis(2-chloroisopropyl)ether	ND	18.2	12.	66	18.2	14.	77	15	40-140	30
Bis(2-chloroethoxy)methane	ND	18.2	10.	55	18.2	11.	61	10	40-140	30
Hexachlorocyclopentadiene	ND	18.2	7.8J	43	18.2	8.4J	46	7	40-140	30
Isophorone	ND	18.2	11.	61	18.2	13.	72	17	40-140	30
Nitrobenzene	ND	18.2	10.	55	18.2	12.	66	18	40-140	30
NDPA/DPA	ND	18.2	11.	61	18.2	12.	66	9	40-140	30
n-Nitrosodi-n-propylamine	ND	18.2	10.	55	18.2	12.	66	18	29-132	30
Bis(2-ethylhexyl)phthalate	ND	18.2	15.	83	18.2	17.	94	13	40-140	30
Butyl benzyl phthalate	ND	18.2	13.	72	18.2	14.	77	7	40-140	30
Di-n-butylphthalate	ND	18.2	13.	72	18.2	14.	77	7	40-140	30
Di-n-octylphthalate	ND	18.2	16.	88	18.2	18.	99	12	40-140	30
Diethyl phthalate	ND	18.2	11.	61	18.2	13.	72	17	40-140	30
Dimethyl phthalate	ND	18.2	10.	55	18.2	11.	61	10	40-140	30
Biphenyl	ND	18.2	10.	55	18.2	11.	61	10	40-140	30
4-Chloroaniline	ND	18.2	9.1	50	18.2	5.6	31 Q	48 Q	40-140	30
2-Nitroaniline	ND	18.2	11.	61	18.2	12.	66	9	52-143	30

Matrix Spike Sample Summary
Form 3
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix (Level)**	: WATER (LOW)
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/04/24 18:35
Matrix Spike	: WG1904510-4	**MS Analysis Date**	: 04/04/24 19:00
Matrix Spike Dup	: WG1904510-5	**MSD Analysis Date**	: 04/04/24 19:26

		Matrix Spike Sample				Matrix Spike Duplicate					
Parameter	Sample Conc. (ug/l)	Spike Added (ug/l)	Spike Conc. (ug/l)	%R		Spike Added (ug/l)	Spike Conc. (ug/l)	%R	RPD	Recovery Limits	RPD Limit
3-Nitroaniline	ND	18.2	12.	66		18.2	12.	66	0	25-145	30
4-Nitroaniline	ND	18.2	12.	66		18.2	14.	77	15	51-143	30
Dibenzofuran	ND	18.2	10.	55		18.2	12.	66	18	40-140	30
1,2,4,5-Tetrachlorobenzene	ND	18.2	9.4J	52		18.2	9.4J	52	0	2-134	30
Acetophenone	ND	18.2	12.	66		18.2	14.	77	15	39-129	30
2,4,6-Trichlorophenol	ND	18.2	12.	66		18.2	12.	66	0	30-130	30
p-Chloro-m-cresol	ND	18.2	12.	66		18.2	13.	72	8	23-97	30
2-Chlorophenol	ND	18.2	10.	55		18.2	12.	66	18	27-123	30
2,4-Dichlorophenol	ND	18.2	11.	61		18.2	12.	66	9	30-130	30
2,4-Dimethylphenol	ND	18.2	10.	55		18.2	10.	55	0	30-130	30
2-Nitrophenol	ND	18.2	12.	66		18.2	13.	72	8	30-130	30
4-Nitrophenol	ND	18.2	12.	66		18.2	14.	77	15	10-80	30
2,4-Dinitrophenol	ND	18.2	ND	0	Q	18.2	7.6J	42	NC	20-130	30
4,6-Dinitro-o-cresol	ND	18.2	8.1J	45		18.2	10.	55	21	20-164	30
Phenol	ND	18.2	7.9	43		18.2	8.5	47	7	12-110	30
2-Methylphenol	ND	18.2	10.	55		18.2	11.	61	10	30-130	30
3-Methylphenol/4-Methylphenol	ND	18.2	11.	61		18.2	12.	66	9	30-130	30
2,4,5-Trichlorophenol	ND	18.2	12.	66		18.2	12.	66	0	30-130	30
Carbazole	ND	18.2	12.	66		18.2	13.	72	8	55-144	30
Atrazine	ND	18.2	12.	66		18.2	13.	72	8	40-140	30
Benzaldehyde	ND	18.2	11.	61		18.2	12.	66	9	40-140	30
Caprolactam	ND	18.2	8.2J	45		18.2	9.1J	50	10	10-130	30

Matrix Spike Sample Summary
Form 3
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix (Level)**	: WATER (LOW)
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/04/24 18:35
Matrix Spike	: WG1904510-4	**MS Analysis Date**	: 04/04/24 19:00
Matrix Spike Dup	: WG1904510-5	**MSD Analysis Date**	: 04/04/24 19:26

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (ug/l)	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	RPD	Recovery Limits	RPD Limit
2,3,4,6-Tetrachlorophenol	ND	18.2	12.	66	18.2	12.	66	0	40-140	30

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: Alpha Geoscience
Project Name: RANCO SAND & GRAVEL

Lab Number: L2417074
Project Number: 12123
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	TOT OUT
MW-3A (L2417074-01)	48	41	68	56	46	59	0
MW-6AR (L2417074-02)	56	45	72	55	47	60	0
MW-7A (L2417074-03)	56	46	72	62	60	74	0
MW-7B (L2417074-04)	51	42	67	56	47	61	0
MW-7C (L2417074-05)	54	43	67	57	54	63	0
DUP (L2417074-06)	44	36	54	49	52	62	0
EQ BLANK (L2417074-07)	51	43	68	60	59	64	0
WG1904510-1BLANK	56	44	71	61	58	68	0
WG1904510-2LCS	59	49	72	56	60	62	0
WG1904510-3LCSD	59	49	70	52	62	61	0
MW-3AMS	52	43	61	52	57	54	0
MW-3AMSD	57	48	69	54	61	58	0

QC LIMITS

(21-120) 2FP = 2-FLUOROPHENOL
(10-120) PHL = PHENOL-D6
(23-120) NBZ = NITROBENZENE-D5
(15-120) FBP = 2-FLUOROBIPHENYL
(10-120) TBP = 2,4,6-TRIBROMOPHENOL
(41-149) TPH = 4-TERPHENYL-D14

*** Values outside of QC limits**

Method Blank Summary
Form 4
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: WG1904510-1	**Lab File ID**	: 904512-1
Instrument ID	: SV107	**Extraction Date**	: 04/03/24
Matrix	: WATER	**Analysis Date**	: 04/04/24 13:02
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1904510-2LCS	WG1904510-2	04/04/24 13:27
WG1904510-3LCSD	WG1904510-3	04/04/24 13:52
MW-3A	L2417074-01	04/04/24 18:35
MW-3AMS	WG1904510-4	04/04/24 19:00
MW-3AMSD	WG1904510-5	04/04/24 19:26
MW-6AR	L2417074-02	04/04/24 19:52
MW-7A	L2417074-03	04/04/24 20:18
MW-7B	L2417074-04	04/04/24 20:43
MW-7C	L2417074-05	04/04/24 21:09
DUP	L2417074-06	04/04/24 21:35
EQ BLANK	L2417074-07	04/04/24 22:01

Instrument Performance Check (Tune) Summary
Form 5
Semivolatiles
Decafluorotriphenylphosphine (DFTPP)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV107	**Analysis Date**	: 02/12/24 15:31
Tune Standard	: R1795987-4	**Tune File ID**	: Tune1_tune

m/e	Ion Abundance Criteria	%Relative Abundance
51	10.0 - 80.0% of Base Peak	34.5
68	Less than 2.0% of mass 69	0.6 (1.6)1
69		100
70	Less than 2.0% of mass 69	0.2 (.5)1
127	10.0 - 80.0% of Base Peak	44
197	Less than 2.0% of mass 198	0.7
198	Base Peak, or >50% of mass 442	100
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 60.0% of Base Peak	19.6
365	Greater than 1.0% of mass 198	1.8
441	Present, but less than 24% of mass 442	16
442	Base Peak, or >50% of mass 198	67.6
443	15.0 - 24.0% of mass 442	13.3 (19.6)2

1-Value is % of mass 69 2-Value is % of mass 442

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
ABNL9	R1795987-15	ABNL9	02/12/24 15:57
ABNL8	R1795987-12	ABNL8	02/12/24 16:22
ABNL7	R1795987-13	ABNL7	02/12/24 16:48
ABNL6	R1795987-10	ABNL6	02/12/24 17:14
ABNL5	R1795987-11	ABNL5	02/12/24 17:40
ABNL4	R1795987-9	ABNL4	02/12/24 18:06
ABNL3	R1795987-8	ABNL3	02/12/24 18:32
ABNL2	R1795987-7	ABNL2	02/12/24 18:59
ABNL1	R1795987-6	ABNL1	02/12/24 19:25
AP9L9	R1795987-32	AP9L9	02/12/24 19:52
AP9L8	R1795987-31	AP9L8	02/12/24 20:18
AP9L7	R1795987-29	AP9L7	02/12/24 20:45
AP9L6	R1795987-30	AP9L6	02/12/24 21:11
AP9L5	R1795987-28	AP9L5	02/12/24 21:38
AP9L4	R1795987-26	AP9L4	02/12/24 22:04
AP9L3	R1795987-27	AP9L3	02/12/24 22:30
AP9L2	R1795987-25	AP9L2	02/12/24 22:56
AP9L1	R1795987-23	AP9L1	02/12/24 23:22
ABN ICV Quant Report	R1795987-1	ABNICV	02/12/24 23:48
AP9 ICV Quant report	R1795987-3	AP9ICV	02/13/24 00:14

Instrument Performance Check (Tune) Summary
Form 5
Semivolatiles
Decafluorotriphenylphosphine (DFTPP)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV107	**Analysis Date**	: 02/13/24 00:40
Tune Standard	: R1795987-5	**Tune File ID**	: Tune2_tune

m/e	Ion Abundance Criteria	%Relative Abundance
51	10.0 - 80.0% of Base Peak	34.3
68	Less than 2.0% of mass 69	0.6 (1.5)1
69		100
70	Less than 2.0% of mass 69	0.2 (.5)1
127	10.0 - 80.0% of Base Peak	44.5
197	Less than 2.0% of mass 198	0.7
198	Base Peak, or >50% of mass 442	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of Base Peak	21.7
365	Greater than 1.0% of mass 198	2.1
441	Present, but less than 24% of mass 442	16.6
442	Base Peak, or >50% of mass 198	76.6
443	15.0 - 24.0% of mass 442	15.1 (19.7)2

1-Value is % of mass 69 2-Value is % of mass 442

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
ADPL9	R1795987-24	ADPL9	02/13/24 01:06
ADPL8	R1795987-22	ADPL8	02/13/24 01:32
ADPL7	R1795987-21	ADPL7	02/13/24 01:58
ADPL6	R1795987-20	ADPL6	02/13/24 02:23
ADPL5	R1795987-19	ADPL5	02/13/24 02:49
ADPL4	R1795987-18	ADPL4	02/13/24 03:15
ADPL3	R1795987-16	ADPL3	02/13/24 03:40
ADPL2	R1795987-17	ADPL2	02/13/24 04:06
ADPL1	R1795987-14	ADPL1	02/13/24 04:31
ADP ICV Quant Report	R1795987-2	ADPICV	02/13/24 04:57

Instrument Performance Check (Tune) Summary
Form 5
Semivolatiles
Decafluorotriphenylphosphine (DFTPP)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV107	**Analysis Date**	: 04/04/24 10:52
Tune Standard	: WG1904833-1	**Tune File ID**	: DEG0404_tune

m/e	Ion Abundance Criteria	%Relative Abundance
51	10.0 - 80.0% of Base Peak	43.1
68	Less than 2.0% of mass 69	0.5 (1.5)1
69		100
70	Less than 2.0% of mass 69	0.2 (.6)1
127	10.0 - 80.0% of Base Peak	48.7
197	Less than 2.0% of mass 198	0.9
198	Base Peak, or >50% of mass 442	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of Base Peak	19.5
365	Greater than 1.0% of mass 198	1.9
441	Present, but less than 24% of mass 442	16.6
442	Base Peak, or >50% of mass 198	81.6
443	15.0 - 24.0% of mass 442	15.7 (19.3)2

1-Value is % of mass 69 2-Value is % of mass 442

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1904833-6TFACTOR-B	WG1904833-6	DEG0404	04/04/24 10:52
WG1904833-7TFACTOR-P	WG1904833-7	DEG0404	04/04/24 10:52
WG1904833-3CCAL	WG1904833-3	ABN0404A	04/04/24 11:45
WG1904833-4CCAL	WG1904833-4	AP90404	04/04/24 12:10
WG1904833-5CCAL	WG1904833-5	ADP0404	04/04/24 12:36
WG1904510-1BLANK	WG1904510-1	904512-1	04/04/24 13:02
WG1904510-2LCS	WG1904510-2	904512-2	04/04/24 13:27
WG1904510-3LCSD	WG1904510-3	904512-3	04/04/24 13:52
MW-3A	L2417074-01	17074-01	04/04/24 18:35
WG1904510-4MS	WG1904510-4	904510-4	04/04/24 19:00
WG1904510-5MSD	WG1904510-5	904510-5	04/04/24 19:26
MW-6AR	L2417074-02	17074-02	04/04/24 19:52
MW-7A	L2417074-03	17074-03	04/04/24 20:18
MW-7B	L2417074-04	17074-04	04/04/24 20:43
MW-7C	L2417074-05	17074-05	04/04/24 21:09
DUP	L2417074-06	17074-06	04/04/24 21:35
EQ BLANK	L2417074-07	17074-07	04/04/24 22:01

Internal Standard Area and RT Summary
Form 8a
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV107	**Analysis Date**	: 04/04/24 11:45:00
Sample No	: WG1904833-3	**Lab File ID**	: ABN0404A

	1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
	Area	RT	Area	RT	Area	RT
WG1904833-3	139992	6.50	528956	7.92	295101	9.68
Upper Limit	279984	7.00	1057912	8.42	590202	10.18
Lower Limit	69996	6.00	264478	7.42	147551	9.18
Sample ID						
WG1904833-4 CCAL	169725	6.50	626345	7.92	336550	9.68
WG1904833-5 CCAL	155385	6.50	-	-	319594	9.67
WG1904510-1 BLANK	151881	6.50	586503	7.92	331438	9.68
WG1904510-2 LCS	152713	6.50	583048	7.92	313352	9.68
WG1904510-3 LCSD	158899	6.50	610495	7.92	346949	9.68
MW-3A	157816	6.50	593503	7.92	337165	9.67
MW-3A MS	161634	6.51	605605	7.92	334166	9.68
MW-3A MSD	158935	6.50	592148	7.92	316979	9.68
MW-6AR	147744	6.50	559261	7.92	305095	9.68
MW-7A	157097	6.50	597725	7.92	341430	9.68
MW-7B	159631	6.50	614411	7.92	345670	9.67
MW-7C	165394	6.50	609530	7.92	344754	9.68
DUP	162429	6.50	608023	7.92	350409	9.68
EQ BLANK	174912	6.50	640708	7.92	351988	9.68

Area Upper Limit = +100% of internal standard area

Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT

RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Internal Standard Area and RT Summary
Form 8a
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV107	**Analysis Date**	: 04/04/24 11:45:00
Sample No	: WG1904833-3	**Lab File ID**	: ABN0404A

	Phenanthrene-d10		Chrysene-d12		Perylene-d12	
	Area	RT	Area	RT	Area	RT
WG1904833-3	561413	11.11	474982	13.75	523541	15.20
Upper Limit	1122826	11.61	949964	14.25	1047082	15.70
Lower Limit	280707	10.61	237491	13.25	261771	14.70
Sample ID						
WG1904833-4 CCAL	633843	11.11	-	-	-	-
WG1904833-5 CCAL	598205	11.11	-	-	-	-
WG1904510-1 BLANK	609551	11.11	467281	13.74	488083	15.20
WG1904510-2 LCS	602766	11.11	468953	13.74	486293	15.20
WG1904510-3 LCSD	628147	11.11	503984	13.74	531734	15.20
MW-3A	672948	11.11	575355	13.73	631899	15.20
MW-3A MS	601154	11.11	469045	13.74	507008	15.20
MW-3A MSD	576686	11.11	445808	13.73	469087	15.20
MW-6AR	575581	11.11	476168	13.73	543378	15.20
MW-7A	673220	11.11	592648	13.74	676294	15.20
MW-7B	667851	11.11	564459	13.74	629687	15.20
MW-7C	651877	11.11	522526	13.74	586599	15.20
DUP	714176	11.11	643287	13.73	674910	15.20
EQ BLANK	675024	11.11	535603	13.73	577310	15.20

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

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Date Created: 03/07/23
Created By: Jason Hebert
File: PM14021-1
Page: 1

ABN Extractables - EPA 8270E (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 1000ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	2	1.06	ug/l	37-111	30	37-111	30	30			
Benzidine	92-87-5	20	8.14	ug/l	10-75	30	10-75	30	30			
1,2,4-Trichlorobenzene	120-82-1	5	0.581	ug/l	39-98	30	39-98	30	30			
Hexachlorobenzene	118-74-1	2	0.69	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroethyl)ether	111-44-4	2	0.884	ug/l	40-140	30	40-140	30	30			
2-Chloronaphthalene	91-58-7	2	0.538	ug/l	40-140	30	40-140	30	30			
1,2-Dichlorobenzene	95-50-1	2	0.636	ug/l	40-140	30	40-140	30	30			
1,3-Dichlorobenzene	541-73-1	2	0.642	ug/l	40-140	30	40-140	30	30			
1,4-Dichlorobenzene	106-46-7	2	0.463	ug/l	36-97	30	36-97	30	30			
3,3'-Dichlorobenzidine	91-94-1	5	0.854	ug/l	40-140	30	40-140	30	30			
2,4-Dinitrotoluene	121-14-2	5	0.382	ug/l	48-143	30	48-143	30	30			
2,6-Dinitrotoluene	606-20-2	5	0.368	ug/l	40-140	30	40-140	30	30			
Azobenzene	122-66-7	2	0.81	ug/l	40-140	30	40-140	30	30			
Fluoranthene	206-44-0	2	0.653	ug/l	40-140	30	40-140	30	30			
4-Chlorophenyl phenyl ether	7005-72-3	2	0.795	ug/l	40-140	30	40-140	30	30			
4-Bromophenyl phenyl ether	101-55-3	2	0.632	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroisopropyl)ether	108-60-1	2	1.75	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroethoxy)methane	111-91-1	5	1.49	ug/l	40-140	30	40-140	30	30			
Hexachlorobutadiene	87-68-3	2	0.6	ug/l	40-140	30	40-140	30	30			
Hexachlorocyclopentadiene	77-47-4	20	0.606	ug/l	40-140	30	40-140	30	30			
Hexachloroethane	67-72-1	2	0.44	ug/l	40-140	30	40-140	30	30			
Isophorone	78-59-1	5	0.657	ug/l	40-140	30	40-140	30	30			
Naphthalene	91-20-3	2	0.669	ug/l	40-140	30	40-140	30	30			
Nitrobenzene	98-95-3	2	0.656	ug/l	40-140	30	40-140	30	30			
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	2	0.65	ug/l	40-140	30	40-140	30	30			
n-Nitrosodi-n-propylamine	621-64-7	5	0.771	ug/l	29-132	30	29-132	30	30			
Bis(2-Ethylhexyl)phthalate	117-81-7	3	1.51	ug/l	40-140	30	40-140	30	30			
Butyl benzyl phthalate	85-68-7	5	2.18	ug/l	40-140	30	40-140	30	30			
Di-n-butylphthalate	84-74-2	5	0.58	ug/l	40-140	30	40-140	30	30			
Di-n-octylphthalate	117-84-0	5	2.39	ug/l	40-140	30	40-140	30	30			
Diethyl phthalate	84-66-2	5	4.3	ug/l	40-140	30	40-140	30	30			
Dimethyl phthalate	131-11-3	5	4.44	ug/l	40-140	30	40-140	30	30			
Benzo(a)anthracene	56-55-3	2	0.767	ug/l	40-140	30	40-140	30	30			
Benzo(a)pyrene	50-32-8	2	0.447	ug/l	40-140	30	40-140	30	30			
Benzo(b)fluoranthene	205-99-2	2	0.814	ug/l	40-140	30	40-140	30	30			
Benzo(k)fluoranthene	207-08-9	2	0.816	ug/l	40-140	30	40-140	30	30			
Chrysene	218-01-9	2	0.828	ug/l	40-140	30	40-140	30	30			
Acenaphthylene	208-96-8	2	0.59	ug/l	45-123	30	45-123	30	30			
Anthracene	120-12-7	2	0.79	ug/l	40-140	30	40-140	30	30			
Benzo(ghi)perylene	191-24-2	2	0.77	ug/l	40-140	30	40-140	30	30			
Fluorene	86-73-7	2	1.05	ug/l	40-140	30	40-140	30	30			
Phenanthrene	85-01-8	2	0.992	ug/l	40-140	30	40-140	30	30			

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

ABN Extractables - EPA 8270E (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 1000ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dibenzo(a,h)anthracene	53-70-3	2	0.452	ug/l	40-140	30	40-140	30	30			
Indeno(1,2,3-cd)Pyrene	193-39-5	2	0.943	ug/l	40-140	30	40-140	30	30			
Pyrene	129-00-0	2	0.704	ug/l	26-127	30	26-127	30	30			
Biphenyl	92-52-4	2	0.635	ug/l	40-140	30	40-140	30	30			
Aniline	62-53-3	2	0.482	ug/l	40-140	30	40-140	30	30			
4-Chloroaniline	106-47-8	5	0.647	ug/l	40-140	30	40-140	30	30			
1-Methylnaphthalene	90-12-0	2	0.595	ug/l	41-103	30	41-103	30	30			
2-Nitroaniline	88-74-4	5	0.519	ug/l	52-143	30	52-143	30	30			
3-Nitroaniline	99-09-2	5	0.574	ug/l	25-145	30	25-145	30	30			
4-Nitroaniline	100-01-6	5	0.581	ug/l	51-143	30	51-143	30	30			
Dibenzofuran	132-64-9	2	0.823	ug/l	40-140	30	40-140	30	30			
2-Methylnaphthalene	91-57-6	2	0.677	ug/l	40-140	30	40-140	30	30			
n-Nitrosodimethylamine	62-75-9	2	0.524	ug/l	22-74	30	22-74	30	30			
2,4,6-Trichlorophenol	88-06-2	5	0.494	ug/l	30-130	30	30-130	30	30			
P-Chloro-M-Cresol	59-50-7	2	0.406	ug/l	23-97	30	23-97	30	30			
2-Chlorophenol	95-57-8	2	0.405	ug/l	27-123	30	27-123	30	30			
2,4-Dichlorophenol	120-83-2	5	0.527	ug/l	30-130	30	30-130	30	30			
2,4-Dimethylphenol	105-67-9	5	1.1	ug/l	30-130	30	30-130	30	30			
2-Nitrophenol	88-75-5	10	0.463	ug/l	30-130	30	30-130	30	30			
4-Nitrophenol	100-02-7	10	1.14	ug/l	10-80	30	10-80	30	30			
2,4-Dinitrophenol	51-28-5	20	3.55	ug/l	20-130	30	20-130	30	30			
4,6-Dinitro-o-cresol	534-52-1	10	5.42	ug/l	20-164	30	20-164	30	30			
Pentachlorophenol	87-86-5	10	1.95	ug/l	9-103	30	9-103	30	30			
Phenol	108-95-2	5	1.3	ug/l	12-110	30	12-110	30	30			
2-Methylphenol	95-48-7	5	1.1	ug/l	30-130	30	30-130	30	30			
3-Methylphenol/4-Methylphenol	106-44-5	5	0.55	ug/l	30-130	30	30-130	30	30			
2,4,5-Trichlorophenol	95-95-4	5	0.381	ug/l	30-130	30	30-130	30	30			
Benzoic Acid	65-85-0	50	12.9	ug/l	10-164	30	10-164	30	30			
Benzyl Alcohol	100-51-6	2	0.698	ug/l	26-116	30	26-116	30	30			
Carbazole	86-74-8	2	0.759	ug/l	55-144	30	55-144	30	30			
Pyridine	110-86-1	3.5	0.905	ug/l	10-66	30	10-66	30	30			
2-Fluorophenol	*367-12-4*									*21-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*15-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-120*		
4-Terphenyl-d14	*1718-51-0*									*41-149*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 03/07/23
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ABN Extractables - EPA 8270E (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	133.6	17.3012	ug/kg	31-137	50	31-137	50	50			
Benzidine	92-87-5	551.1	181.028	ug/kg	10-66	50	10-66	50	50			
1,2,4-Trichlorobenzene	120-82-1	167	19.1048	ug/kg	38-107	50	38-107	50	50			
Hexachlorobenzene	118-74-1	100.2	18.704	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroethyl)ether	111-44-4	150.3	22.6452	ug/kg	40-140	50	40-140	50	50			
2-Chloronaphthalene	91-58-7	167	16.5664	ug/kg	40-140	50	40-140	50	50			
1,2-Dichlorobenzene	95-50-1	167	29.9932	ug/kg	40-140	50	40-140	50	50			
1,3-Dichlorobenzene	541-73-1	167	28.724	ug/kg	40-140	50	40-140	50	50			
1,4-Dichlorobenzene	106-46-7	167	29.1582	ug/kg	28-104	50	28-104	50	50			
3,3'-Dichlorobenzidine	91-94-1	167	44.422	ug/kg	40-140	50	40-140	50	50			
2,4-Dinitrotoluene	121-14-2	167	33.4	ug/kg	40-132	50	40-132	50	50			
2,6-Dinitrotoluene	606-20-2	167	28.6572	ug/kg	40-140	50	40-140	50	50			
Azobenzene	122-66-7	167	16.032	ug/kg	40-140	50	40-140	50	50			
Fluoranthene	206-44-0	100.2	19.1716	ug/kg	40-140	50	40-140	50	50			
4-Chlorophenyl phenyl ether	7005-72-3	167	17.869	ug/kg	40-140	50	40-140	50	50			
4-Bromophenyl phenyl ether	101-55-3	167	25.4842	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroisopropyl)ether	108-60-1	200.4	28.5236	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroethoxy)methane	111-91-1	180.36	16.7334	ug/kg	40-117	50	40-117	50	50			
Hexachlorobutadiene	87-68-3	167	24.4488	ug/kg	40-140	50	40-140	50	50			
Hexachlorocyclopentadiene	77-47-4	477.62	151.302	ug/kg	40-140	50	40-140	50	50			
Hexachloroethane	67-72-1	133.6	27.0206	ug/kg	40-140	50	40-140	50	50			
Isophorone	78-59-1	150.3	21.6766	ug/kg	40-140	50	40-140	50	50			
Naphthalene	91-20-3	167	20.3406	ug/kg	40-140	50	40-140	50	50			
Nitrobenzene	98-95-3	150.3	24.716	ug/kg	40-140	50	40-140	50	50			
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	133.6	19.0046	ug/kg	36-157	50	36-157	50	50			
n-Nitrosodi-n-propylamine	621-64-7	167	25.7848	ug/kg	32-121	50	32-121	50	50			
Bis(2-Ethylhexyl)phthalate	117-81-7	167	57.782	ug/kg	40-140	50	40-140	50	50			
Butyl benzyl phthalate	85-68-7	167	42.084	ug/kg	40-140	50	40-140	50	50			
Di-n-butylphthalate	84-74-2	167	31.6632	ug/kg	40-140	50	40-140	50	50			
Di-n-octylphthalate	117-84-0	167	56.78	ug/kg	40-140	50	40-140	50	50			
Diethyl phthalate	84-66-2	167	15.4642	ug/kg	40-140	50	40-140	50	50			
Dimethyl phthalate	131-11-3	167	35.07	ug/kg	40-140	50	40-140	50	50			
Benzo(a)anthracene	56-55-3	100.2	18.8042	ug/kg	40-140	50	40-140	50	50			
Benzo(a)pyrene	50-32-8	133.6	40.748	ug/kg	40-140	50	40-140	50	50			
Benzo(b)fluoranthene	205-99-2	100.2	28.1228	ug/kg	40-140	50	40-140	50	50			
Benzo(k)fluoranthene	207-08-9	100.2	26.72	ug/kg	40-140	50	40-140	50	50			
Chrysene	218-01-9	100.2	17.368	ug/kg	40-140	50	40-140	50	50			
Acenaphthylene	208-96-8	133.6	25.7848	ug/kg	40-140	50	40-140	50	50			
Anthracene	120-12-7	100.2	32.565	ug/kg	40-140	50	40-140	50	50			
Benzo(ghi)perylene	191-24-2	133.6	19.6392	ug/kg	40-140	50	40-140	50	50			
Fluorene	86-73-7	167	16.2324	ug/kg	40-140	50	40-140	50	50			
Phenanthrene	85-01-8	100.2	20.3072	ug/kg	40-140	50	40-140	50	50			

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Date Created: 03/07/23
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ABN Extractables - EPA 8270E (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dibenzo(a,h)anthracene	53-70-3	100.2	19.3052	ug/kg	40-140	50	40-140	50	50			
Indeno(1,2,3-cd)Pyrene	193-39-5	133.6	23.2798	ug/kg	40-140	50	40-140	50	50			
Pyrene	129-00-0	100.2	16.5998	ug/kg	35-142	50	35-142	50	50			
Biphenyl	92-52-4	380.76	21.71	ug/kg	37-127	50	37-127	50	50			
Aniline	62-53-3	200.4	78.824	ug/kg	40-140	50	40-140	50	50			
4-Chloroaniline	106-47-8	167	30.394	ug/kg	40-140	50	40-140	50	50			
1-Methylnaphthalene	90-12-0	167	19.372	ug/kg	26-130	50	26-130	50	50			
2-Nitroaniline	88-74-4	167	32.1976	ug/kg	47-134	50	47-134	50	50			
3-Nitroaniline	99-09-2	167	31.4962	ug/kg	26-129	50	26-129	50	50			
4-Nitroaniline	100-01-6	167	69.138	ug/kg	41-125	50	41-125	50	50			
Dibenzofuran	132-64-9	167	15.7982	ug/kg	40-140	50	40-140	50	50			
2-Methylnaphthalene	91-57-6	200.4	20.1736	ug/kg	40-140	50	40-140	50	50			
n-Nitrosodimethylamine	62-75-9	334	32.064	ug/kg	22-100	50	22-100	50	50			
2,4,6-Trichlorophenol	88-06-2	100.2	31.6632	ug/kg	30-130	50	30-130	50	50			
P-Chloro-M-Cresol	59-50-7	167	24.883	ug/kg	26-103	50	26-103	50	50			
2-Chlorophenol	95-57-8	167	19.7394	ug/kg	25-102	50	25-102	50	50			
2,4-Dichlorophenol	120-83-2	150.3	26.8536	ug/kg	30-130	50	30-130	50	50			
2,4-Dimethylphenol	105-67-9	167	55.11	ug/kg	30-130	50	30-130	50	50			
2-Nitrophenol	88-75-5	360.72	62.792	ug/kg	30-130	50	30-130	50	50			
4-Nitrophenol	100-02-7	233.8	68.136	ug/kg	11-114	50	11-114	50	50			
2,4-Dinitrophenol	51-28-5	801.6	77.822	ug/kg	4-130	50	4-130	50	50			
4,6-Dinitro-o-cresol	534-52-1	434.2	80.16	ug/kg	10-130	50	10-130	50	50			
Pentachlorophenol	87-86-5	133.6	36.74	ug/kg	17-109	50	17-109	50	50			
Phenol	108-95-2	167	25.217	ug/kg	26-90	50	26-90	50	50			
2-Methylphenol	95-48-7	167	25.885	ug/kg	30-130.	50	30-130.	50	50			
3-Methylphenol/4-Methylphenol	106-44-5	240.48	26.1522	ug/kg	30-130	50	30-130	50	50			
2,4,5-Trichlorophenol	95-95-4	167	31.9972	ug/kg	30-130	50	30-130	50	50			
Benzoic Acid	65-85-0	541.08	169.004	ug/kg	10-110	50	10-110	50	50			
Benzyl Alcohol	100-51-6	167	51.102	ug/kg	40-140	50	40-140	50	50			
Carbazole	86-74-8	167	16.2324	ug/kg	54-128	50	54-128	50	50			
Pyridine	110-86-1	180.36	63.46	ug/kg	10-93	50	10-93	50	50			
2-Fluorophenol	*367-12-4*									*25-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*30-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-136*		
4-Terphenyl-d14	*1718-51-0*									*18-120*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Semivolatile Sample Data

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 18:35
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-01	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 18:35
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-01	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 18:35
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-01	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 19:52
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-02	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 19:52
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-02	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 19:52
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-02	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 20:18
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-03	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 20:18
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-03	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 20:18
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-03	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 20:43
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-04	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 20:43
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-04	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 20:43
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-04	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 21:09
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-05	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 21:09
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-05	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 21:09
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-05	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 21:35
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-06	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 21:35
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-06	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 21:35
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-06	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 22:01
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-07	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 22:01
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-07	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 22:01
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 17074-07	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904510-1	**Date Collected**	: NA
Client ID	: WG1904510-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/04/24 13:02
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 904512-1	**Analyst**	: LJG
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904510-1	**Date Collected**	: NA
Client ID	: WG1904510-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/04/24 13:02
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 904512-1	**Analyst**	: LJG
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
99-09-2	3-Nitroaniline	ND	5.0	0.81	U
100-01-6	4-Nitroaniline	ND	5.0	0.80	U
132-64-9	Dibenzofuran	ND	2.0	0.50	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U
98-86-2	Acetophenone	ND	5.0	0.53	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U
95-57-8	2-Chlorophenol	ND	2.0	0.48	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U
88-75-5	2-Nitrophenol	ND	10	0.85	U
100-02-7	4-Nitrophenol	ND	10	0.67	U
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U
108-95-2	Phenol	ND	5.0	0.57	U
95-48-7	2-Methylphenol	ND	5.0	0.49	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U
86-74-8	Carbazole	ND	2.0	0.49	U
1912-24-9	Atrazine	ND	10	0.76	U
100-52-7	Benzaldehyde	ND	5.0	0.53	U
105-60-2	Caprolactam	ND	10	3.3	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904510-1	**Date Collected**	: NA
Client ID	: WG1904510-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/04/24 13:02
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 904512-1	**Analyst**	: LJG
Sample Amount	: 275 ml	**Instrument ID**	: SV107
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-01.D
Acq On : 4 Apr 2024 6:35 pm
Operator : SV107:sz
Sample : L2417074-01,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 08:07:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 18:55:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	157816	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 112.73%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	157816	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 92.98%			
34) IS1_Naphthalene-d8	7.922	136	593503	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 112.20%			
54) IS2_Naphthalene-d8	7.922	136	593503	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 94.76%			
62) IS1_Acenaphthene-d10	9.674	164	337165	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 114.25%			
82) IS2_Acenaphthene-d10	9.674	164	337165	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 100.18%			
85) IS3_Acenaphthene-d10	9.674	164	337165	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 105.50%			
87) IS1_Phenanthrene-d10	11.110	188	672948	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 119.87%			
99) IS3_Phenanthrene-d10	11.110	188	672948	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 112.49%			
103) IS1_Chrysene-d12	13.733	240	575355	4.000	ug/ml	-0.01
Standard Area 1 = 474982			Recovery = 121.13%			
112) IS1_Perylene-d12	15.198	264	631899	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 120.70%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.692	112	110361	2.385	ug/ml	0.01
Spiked Amount 5.000	Range 15 - 110		Recovery = 47.70%			
7) Phenol-d6	6.169	99	120189	2.049	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 40.98%			
19) Nitrobenzene-d5	7.157	82	90970	1.690	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 67.60%			
45) 2-Fluorobiphenyl	9.033	172	192011	1.406	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 56.24%			
78) 2,4,6-Tribromophenol	10.445	330	29202	2.318	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 46.36%			
95) 4-Terphenyl-d14	12.680	244	217488	1.468	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 58.72%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-01.D
Acq On : 4 Apr 2024 6:35 pm
Operator : SV107:sz
Sample : L2417074-01,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 08:07:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 18:55:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	0.000		0	N.D.		
8) Phenol	0.000		0	N.D.		
9) Bis(2-chloroethyl)ether	0.000		0	N.D.		
14) Bis(2-chloroisopropyl)...	0.000		0	N.D.	d	
15) 2-Methylphenol	0.000		0	N.D.		
17) n-Nitrosodi-n-propylamine	0.000		0	N.D.	d	
18) 3-Methylphenol/4-Methy...	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.	d	
21) Isophorone	0.000		0	N.D.		
22) 2-Nitrophenol	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) Bis(2-chloroethoxy)met...	0.000		0	N.D.		
25) 2,4-Dichlorophenol	0.000		0	N.D.		
28) Benzaldehyde	0.000		0	N.D.		
29) Acetophenone	0.000		0	N.D.		
37) 4-Chloroaniline	0.000		0	N.D.		
39) p-Chloro-m-cresol	0.000		0	N.D.		
42) Hexachlorocyclopentadiene	0.000		0	N.D.		
43) 2,4,6-Trichlorophenol	0.000		0	N.D.		
44) 2,4,5-Trichlorophenol	0.000		0	N.D.		
47) 2-Nitroaniline	0.000		0	N.D.		
50) Dimethyl phthalate	0.000		0	N.D.		
52) 2,6-Dinitrotoluene	0.000		0	N.D.		
59) Caprolactam	0.000		0	N.D.	d	
60) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		
61) Biphenyl	0.000		0	N.D.	d	
63) 3-Nitroaniline	0.000		0	N.D.		
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	0.000		0	N.D.		
67) 2,4-Dinitrotoluene	0.000		0	N.D.		
68) 4-Nitrophenol	0.000		0	N.D.		
70) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
71) Diethyl phthalate	0.000		0	N.D.	d	
73) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74) 4-Nitroaniline	0.000		0	N.D.		
75) 4,6-Dinitro-o-cresol	0.000		0	N.D.		

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-01.D
Acq On : 4 Apr 2024 6:35 pm
Operator : SV107:sz
Sample : L2417074-01,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 08:07:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 18:55:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	0.000		0	N.D.		
79)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
86)	Atrazine	0.000		0	N.D.		
90)	Carbazole	0.000		0	N.D.		
91)	Di-n-butylphthalate	0.000		0	N.D.	d	
96)	Butyl benzyl phthalate	0.000		0	N.D.	d	
105)	3,3'-Dichlorobenzidine	0.000		0	N.D.		
107)	Bis(2-ethylhexyl)phtha...	0.000		0	N.D.	d	
108)	Di-n-octylphthalate	0.000		0	N.D.	d	

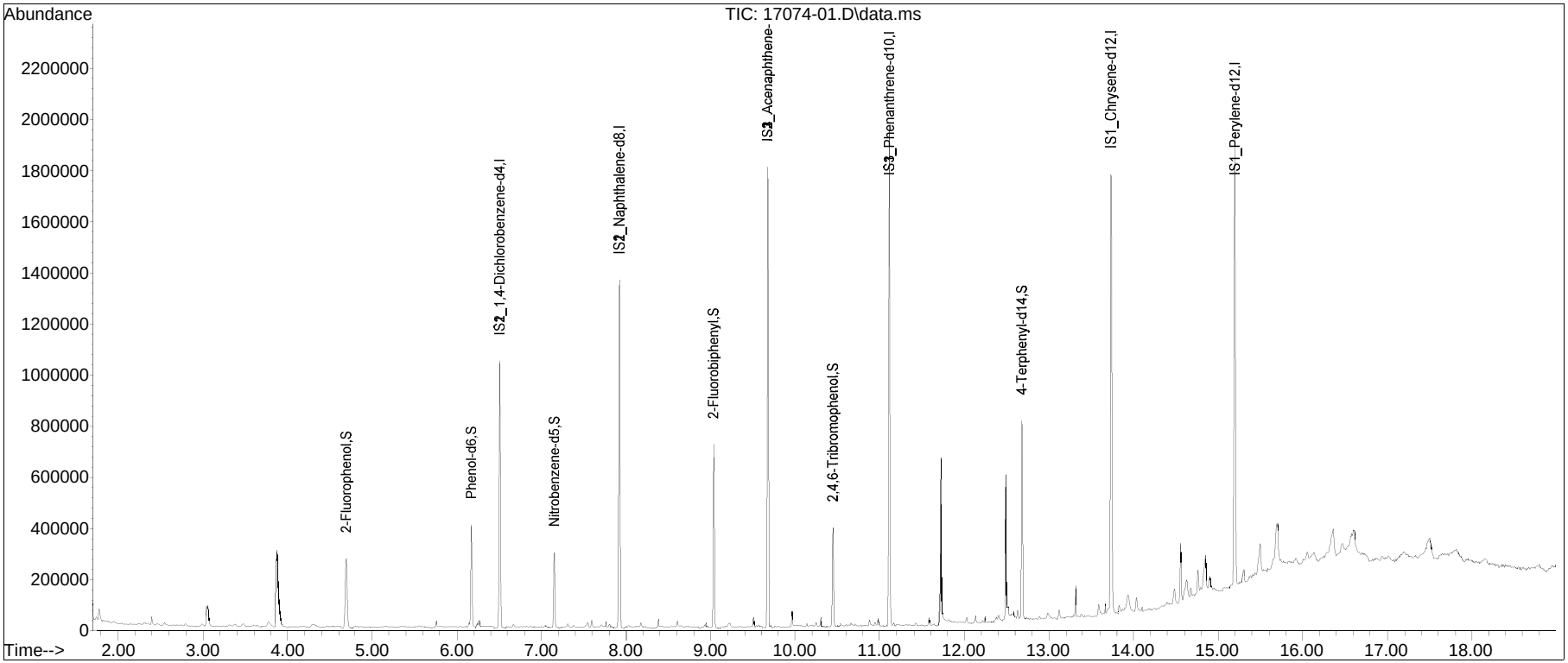
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-01.D
Acq On : 4 Apr 2024 6:35 pm
Operator : SV107:sz
Sample : L2417074-01,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 08:07:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 18:55:01 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 17074-01.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 6:35 pm	Instrument	: SV107
Sample	: L2417074-01,32,,gmr	Quant Date	: 4/4/2024 6:55 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-02.D
Acq On : 4 Apr 2024 7:52 pm
Operator : SV107:sz
Sample : L2417074-02,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 05 08:08:20 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:11:51 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	147744	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 105.54%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	147744	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 87.05%			
34) IS1_Naphthalene-d8	7.922	136	559261	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 105.73%			
54) IS2_Naphthalene-d8	7.922	136	559261	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 89.29%			
62) IS1_Acenaphthene-d10	9.675	164	305095	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 103.39%			
82) IS2_Acenaphthene-d10	9.675	164	305095	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 90.65%			
85) IS3_Acenaphthene-d10	9.675	164	305095	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 95.46%			
87) IS1_Phenanthrene-d10	11.110	188	575581	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 102.52%			
99) IS3_Phenanthrene-d10	11.110	188	575581	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 96.22%			
103) IS1_Chrysene-d12	13.733	240	476168	4.000	ug/ml	-0.01
Standard Area 1 = 474982			Recovery = 100.25%			
112) IS1_Perylene-d12	15.198	264	543378	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 103.79%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.693	112	122076	2.818	ug/ml	0.01
Spiked Amount 5.000	Range 15 - 110		Recovery = 56.36%			
7) Phenol-d6	6.169	99	123250	2.244	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 44.88%			
19) Nitrobenzene-d5	7.151	82	90178	1.790	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 71.60%			
45) 2-Fluorobiphenyl	9.033	172	177140	1.376	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 55.04%			
78) 2,4,6-Tribromophenol	10.445	330	26574	2.331	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 46.62%			
95) 4-Terphenyl-d14	12.680	244	189048	1.492	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 59.68%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-02.D
Acq On : 4 Apr 2024 7:52 pm
Operator : SV107:sz
Sample : L2417074-02,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 05 08:08:20 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:11:51 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	0.000		0	N.D.		
8) Phenol	0.000		0	N.D.		
9) Bis(2-chloroethyl)ether	0.000		0	N.D.		
14) Bis(2-chloroisopropyl)...	0.000		0	N.D.	d	
15) 2-Methylphenol	0.000		0	N.D.		
17) n-Nitrosodi-n-propylamine	0.000		0	N.D.		
18) 3-Methylphenol/4-Methy...	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.	d	
21) Isophorone	0.000		0	N.D.		
22) 2-Nitrophenol	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) Bis(2-chloroethoxy)met...	0.000		0	N.D.		
25) 2,4-Dichlorophenol	0.000		0	N.D.		
28) Benzaldehyde	0.000		0	N.D.		
29) Acetophenone	0.000		0	N.D.		
37) 4-Chloroaniline	0.000		0	N.D.		
39) p-Chloro-m-cresol	0.000		0	N.D.		
42) Hexachlorocyclopentadiene	0.000		0	N.D.		
43) 2,4,6-Trichlorophenol	0.000		0	N.D.		
44) 2,4,5-Trichlorophenol	0.000		0	N.D.		
47) 2-Nitroaniline	0.000		0	N.D.		
50) Dimethyl phthalate	0.000		0	N.D.		
52) 2,6-Dinitrotoluene	0.000		0	N.D.		
59) Caprolactam	0.000		0	N.D.	d	
60) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		
61) Biphenyl	0.000		0	N.D.	d	
63) 3-Nitroaniline	0.000		0	N.D.		
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	0.000		0	N.D.		
67) 2,4-Dinitrotoluene	0.000		0	N.D.		
68) 4-Nitrophenol	0.000		0	N.D.		
70) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
71) Diethyl phthalate	0.000		0	N.D.	d	
73) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74) 4-Nitroaniline	0.000		0	N.D.		
75) 4,6-Dinitro-o-cresol	0.000		0	N.D.		

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-02.D
Acq On : 4 Apr 2024 7:52 pm
Operator : SV107:sz
Sample : L2417074-02,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 05 08:08:20 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:11:51 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	0.000		0	N.D.		
79)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
86)	Atrazine	0.000		0	N.D.		
90)	Carbazole	0.000		0	N.D.		
91)	Di-n-butylphthalate	0.000		0	N.D.	d	
96)	Butyl benzyl phthalate	0.000		0	N.D.	d	
105)	3,3'-Dichlorobenzidine	0.000		0	N.D.		
107)	Bis(2-ethylhexyl)phtha...	0.000		0	N.D.	d	
108)	Di-n-octylphthalate	0.000		0	N.D.	d	

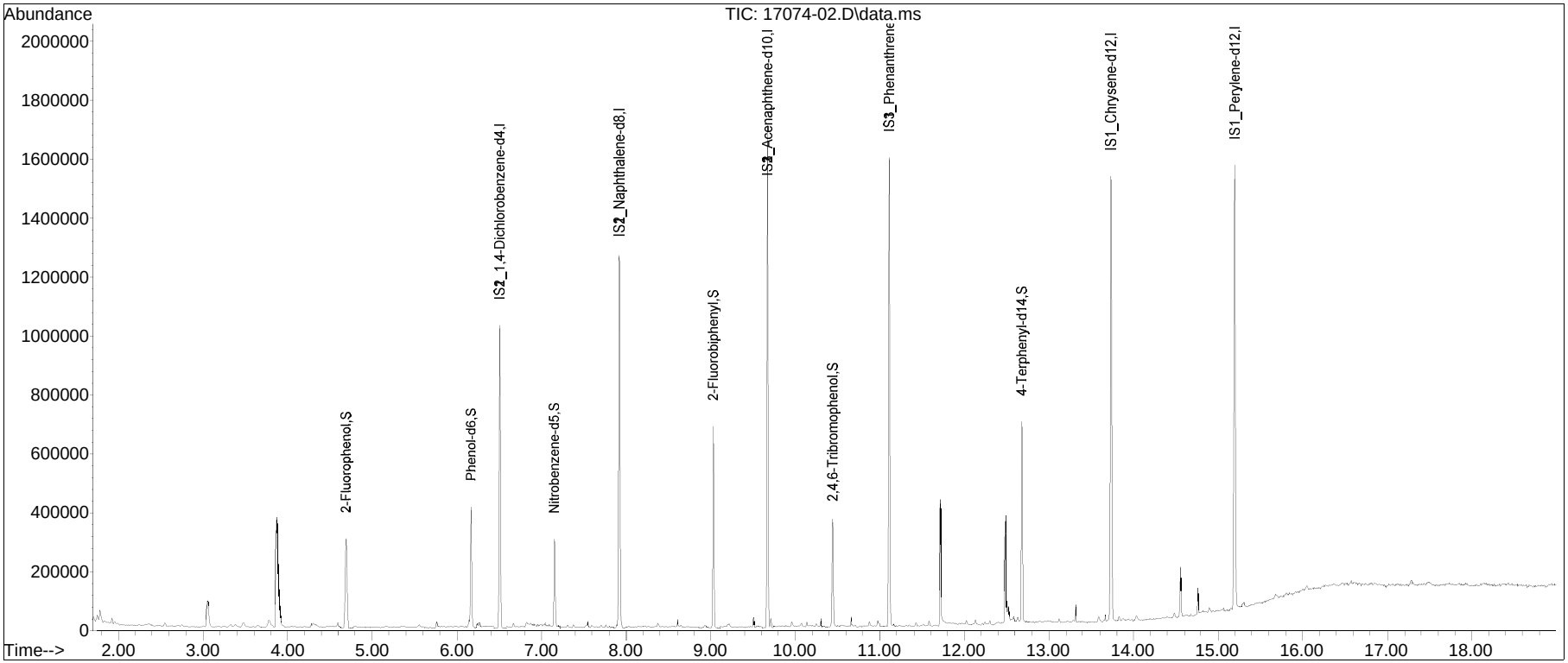
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-02.D
Acq On : 4 Apr 2024 7:52 pm
Operator : SV107:sz
Sample : L2417074-02,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 05 08:08:20 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:11:51 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 17074-02.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 7:52 pm	Instrument	: SV107
Sample	: L2417074-02,32,,gmr	Quant Date	: 4/4/2024 8:11 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-03.D
Acq On : 4 Apr 2024 8:18 pm
Operator : SV107:sz
Sample : L2417074-03,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 05 08:27:26 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:38:32 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	157097	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 112.22%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	157097	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 92.56%			
34) IS1_Naphthalene-d8	7.922	136	597725	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 113.00%			
54) IS2_Naphthalene-d8	7.922	136	597725	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 95.43%			
62) IS1_Acenaphthene-d10	9.675	164	341430	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 115.70%			
82) IS2_Acenaphthene-d10	9.675	164	341430	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 101.45%			
85) IS3_Acenaphthene-d10	9.675	164	341430	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 106.83%			
87) IS1_Phenanthrene-d10	11.110	188	673220	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 119.92%			
99) IS3_Phenanthrene-d10	11.110	188	673220	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 112.54%			
103) IS1_Chrysene-d12	13.739	240	592648	4.000	ug/ml	0.00
Standard Area 1 = 474982			Recovery = 124.77%			
112) IS1_Perylene-d12	15.198	264	676294	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 129.18%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.687	112	129546	2.813	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 56.26%			
7) Phenol-d6	6.169	99	133449	2.285	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 45.70%			
19) Nitrobenzene-d5	7.157	82	96455	1.800	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 72.00%			
45) 2-Fluorobiphenyl	9.033	172	211523	1.538	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 61.52%			
78) 2,4,6-Tribromophenol	10.445	330	38558	3.022	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 60.44%			
95) 4-Terphenyl-d14	12.680	244	272804	1.841	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 73.64%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-03.D
Acq On : 4 Apr 2024 8:18 pm
Operator : SV107:sz
Sample : L2417074-03,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 05 08:27:26 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:38:32 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	0.000		0	N.D.		
8) Phenol	0.000		0	N.D.		
9) Bis(2-chloroethyl)ether	0.000		0	N.D.		
14) Bis(2-chloroisopropyl)...	0.000		0	N.D.	d	
15) 2-Methylphenol	0.000		0	N.D.		
17) n-Nitrosodi-n-propylamine	0.000		0	N.D.	d	
18) 3-Methylphenol/4-Methy...	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.	d	
21) Isophorone	0.000		0	N.D.		
22) 2-Nitrophenol	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) Bis(2-chloroethoxy)met...	0.000		0	N.D.		
25) 2,4-Dichlorophenol	0.000		0	N.D.		
28) Benzaldehyde	0.000		0	N.D.		
29) Acetophenone	0.000		0	N.D.		
37) 4-Chloroaniline	0.000		0	N.D.		
39) p-Chloro-m-cresol	0.000		0	N.D.		
42) Hexachlorocyclopentadiene	0.000		0	N.D.		
43) 2,4,6-Trichlorophenol	0.000		0	N.D.		
44) 2,4,5-Trichlorophenol	0.000		0	N.D.		
47) 2-Nitroaniline	0.000		0	N.D.		
50) Dimethyl phthalate	0.000		0	N.D.		
52) 2,6-Dinitrotoluene	0.000		0	N.D.		
59) Caprolactam	0.000		0	N.D.	d	
60) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		
61) Biphenyl	0.000		0	N.D.		
63) 3-Nitroaniline	0.000		0	N.D.		
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	0.000		0	N.D.		
67) 2,4-Dinitrotoluene	0.000		0	N.D.		
68) 4-Nitrophenol	0.000		0	N.D.		
70) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
71) Diethyl phthalate	0.000		0	N.D.	d	
73) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74) 4-Nitroaniline	0.000		0	N.D.		
75) 4,6-Dinitro-o-cresol	0.000		0	N.D.		

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-03.D
Acq On : 4 Apr 2024 8:18 pm
Operator : SV107:sz
Sample : L2417074-03,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 05 08:27:26 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:38:32 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	0.000		0	N.D.	d	
79)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
86)	Atrazine	0.000		0	N.D.		
90)	Carbazole	0.000		0	N.D.		
91)	Di-n-butylphthalate	0.000		0	N.D.	d	
96)	Butyl benzyl phthalate	0.000		0	N.D.	d	
105)	3,3'-Dichlorobenzidine	0.000		0	N.D.		
107)	Bis(2-ethylhexyl)phtha...	13.839	149	8022	0.220	ug/ml#	93
108)	Di-n-octylphthalate	0.000		0	N.D.	d	

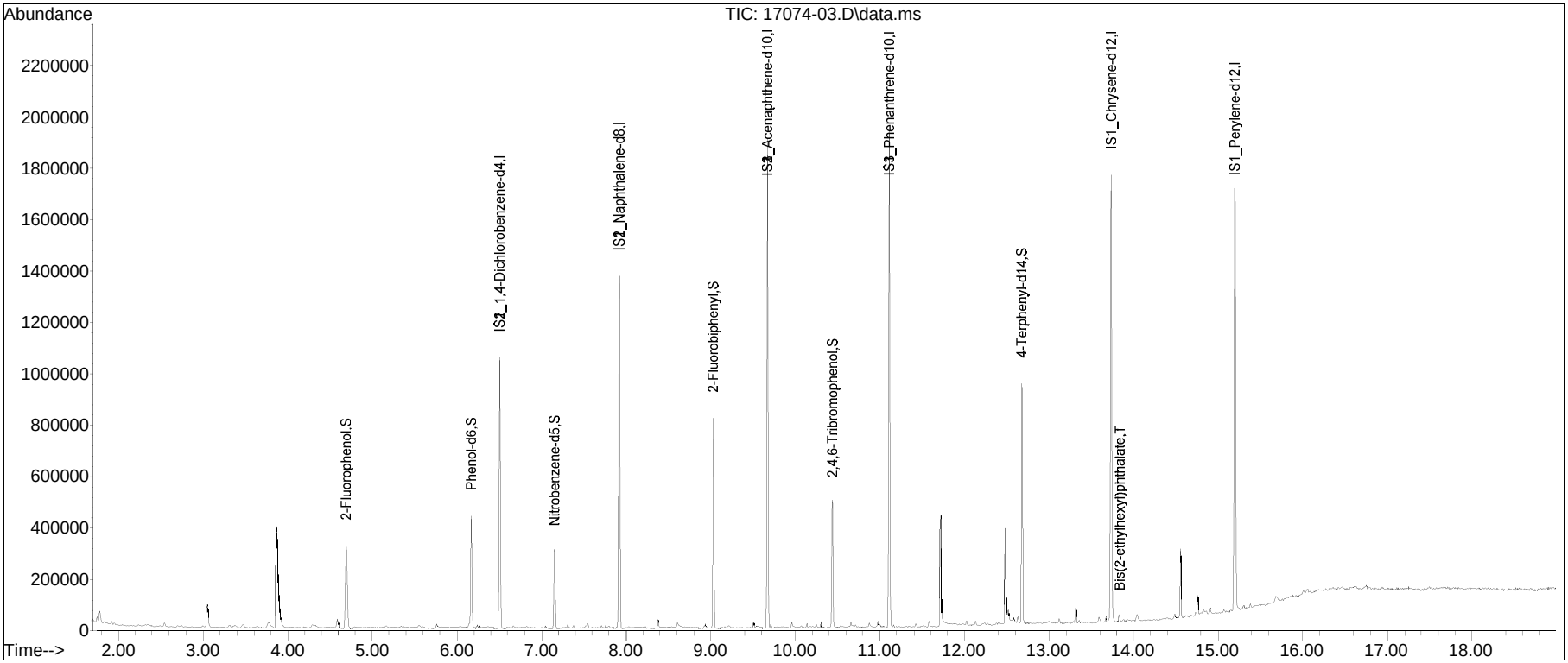
(#) = qualifier out of range (m) = manual integration (+) = signals summed

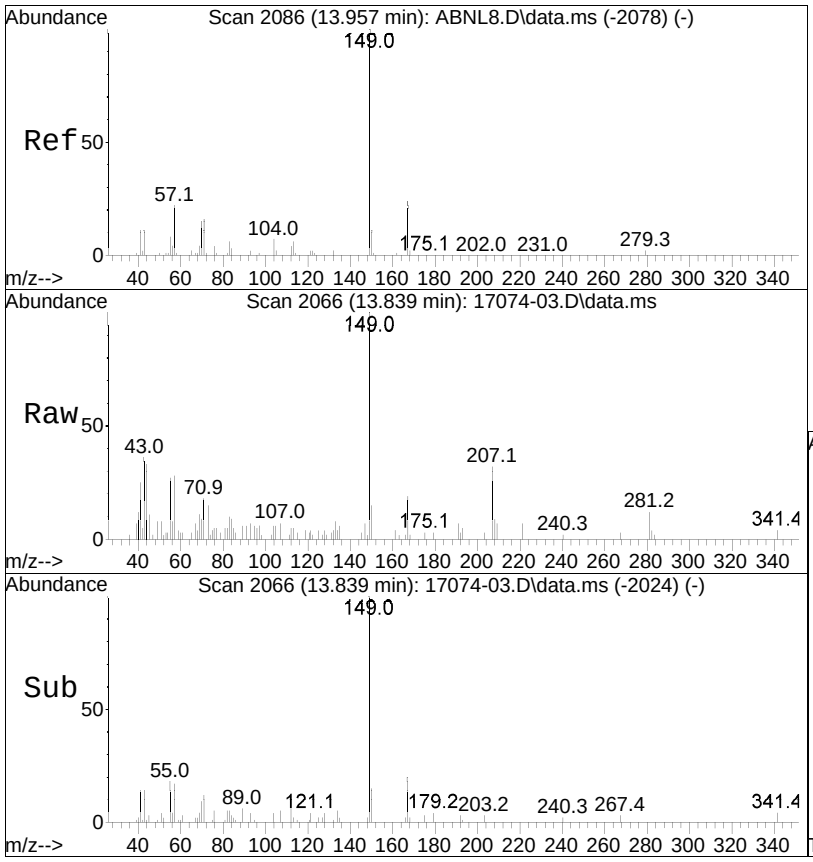
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-03.D
Acq On : 4 Apr 2024 8:18 pm
Operator : SV107:sz
Sample : L2417074-03,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 05 08:27:26 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 20:38:32 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••

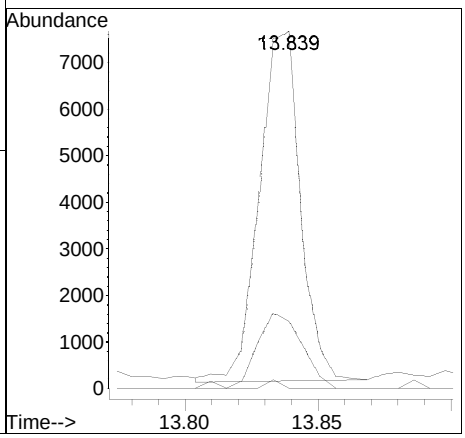




#107
Bis(2-ethylhexyl)phthalate
Concen: 0.22 ug/ml
RT: 13.839 min Scan# 2066
Delta R.T. -0.000 min
Lab File: 17074-03.D
Acq: 4 Apr 2024 8:18 pm

Tgt Ion:149 Resp: 8022

Ion	Ratio	Lower	Upper
149	100		
167	24.0	22.1	33.1
279	0.0	3.0	4.4#



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 17074-03.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 8:18 pm	Instrument	: SV107
Sample	: L2417074-03,32,,gmr	Quant Date	: 4/4/2024 8:38 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-04.D
Acq On : 4 Apr 2024 8:43 pm
Operator : SV107:sz
Sample : L2417074-04,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 05 08:09:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:03:20 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	159631	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 114.03%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	159631	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 94.05%			
34) IS1_Naphthalene-d8	7.922	136	614411	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 116.16%			
54) IS2_Naphthalene-d8	7.922	136	614411	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 98.09%			
62) IS1_Acenaphthene-d10	9.674	164	345670	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 117.14%			
82) IS2_Acenaphthene-d10	9.674	164	345670	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 102.71%			
85) IS3_Acenaphthene-d10	9.674	164	345670	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 108.16%			
87) IS1_Phenanthrene-d10	11.110	188	667851	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 118.96%			
99) IS3_Phenanthrene-d10	11.110	188	667851	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 111.64%			
103) IS1_Chrysene-d12	13.739	240	564459	4.000	ug/ml	0.00
Standard Area 1 = 474982			Recovery = 118.84%			
112) IS1_Perylene-d12	15.198	264	629687	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 120.27%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.687	112	119812	2.560	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 51.20%			
7) Phenol-d6	6.169	99	124885	2.104	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 42.08%			
19) Nitrobenzene-d5	7.151	82	91500	1.681	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 67.24%			
45) 2-Fluorobiphenyl	9.033	172	197824	1.399	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 55.96%			
78) 2,4,6-Tribromophenol	10.445	330	30320	2.347	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 46.94%			
95) 4-Terphenyl-d14	12.680	244	225766	1.536	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 61.44%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-04.D
Acq On : 4 Apr 2024 8:43 pm
Operator : SV107:sz
Sample : L2417074-04,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 05 08:09:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:03:20 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	0.000		0	N.D.		
8) Phenol	0.000		0	N.D.		
9) Bis(2-chloroethyl)ether	0.000		0	N.D.		
14) Bis(2-chloroisopropyl)...	0.000		0	N.D.	d	
15) 2-Methylphenol	0.000		0	N.D.		
17) n-Nitrosodi-n-propylamine	0.000		0	N.D.		
18) 3-Methylphenol/4-Methy...	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.	d	
21) Isophorone	0.000		0	N.D.		
22) 2-Nitrophenol	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) Bis(2-chloroethoxy)met...	0.000		0	N.D.		
25) 2,4-Dichlorophenol	0.000		0	N.D.		
28) Benzaldehyde	0.000		0	N.D.		
29) Acetophenone	0.000		0	N.D.		
37) 4-Chloroaniline	0.000		0	N.D.		
39) p-Chloro-m-cresol	0.000		0	N.D.		
42) Hexachlorocyclopentadiene	0.000		0	N.D.		
43) 2,4,6-Trichlorophenol	0.000		0	N.D.		
44) 2,4,5-Trichlorophenol	0.000		0	N.D.		
47) 2-Nitroaniline	0.000		0	N.D.		
50) Dimethyl phthalate	0.000		0	N.D.		
52) 2,6-Dinitrotoluene	0.000		0	N.D.		
59) Caprolactam	0.000		0	N.D.	d	
60) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		
61) Biphenyl	0.000		0	N.D.		
63) 3-Nitroaniline	0.000		0	N.D.		
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	0.000		0	N.D.		
67) 2,4-Dinitrotoluene	0.000		0	N.D.		
68) 4-Nitrophenol	0.000		0	N.D.		
70) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
71) Diethyl phthalate	0.000		0	N.D.	d	
73) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74) 4-Nitroaniline	0.000		0	N.D.		
75) 4,6-Dinitro-o-cresol	0.000		0	N.D.		

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-04.D
Acq On : 4 Apr 2024 8:43 pm
Operator : SV107:sz
Sample : L2417074-04,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 05 08:09:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:03:20 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	0.000		0	N.D.		
79)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
86)	Atrazine	0.000		0	N.D.		
90)	Carbazole	0.000		0	N.D.		
91)	Di-n-butylphthalate	0.000		0	N.D.	d	
96)	Butyl benzyl phthalate	0.000		0	N.D.	d	
105)	3,3'-Dichlorobenzidine	0.000		0	N.D.		
107)	Bis(2-ethylhexyl)phtha...	13.833	149	5585	0.199	ug/ml#	90
108)	Di-n-octylphthalate	0.000		0	N.D.	d	

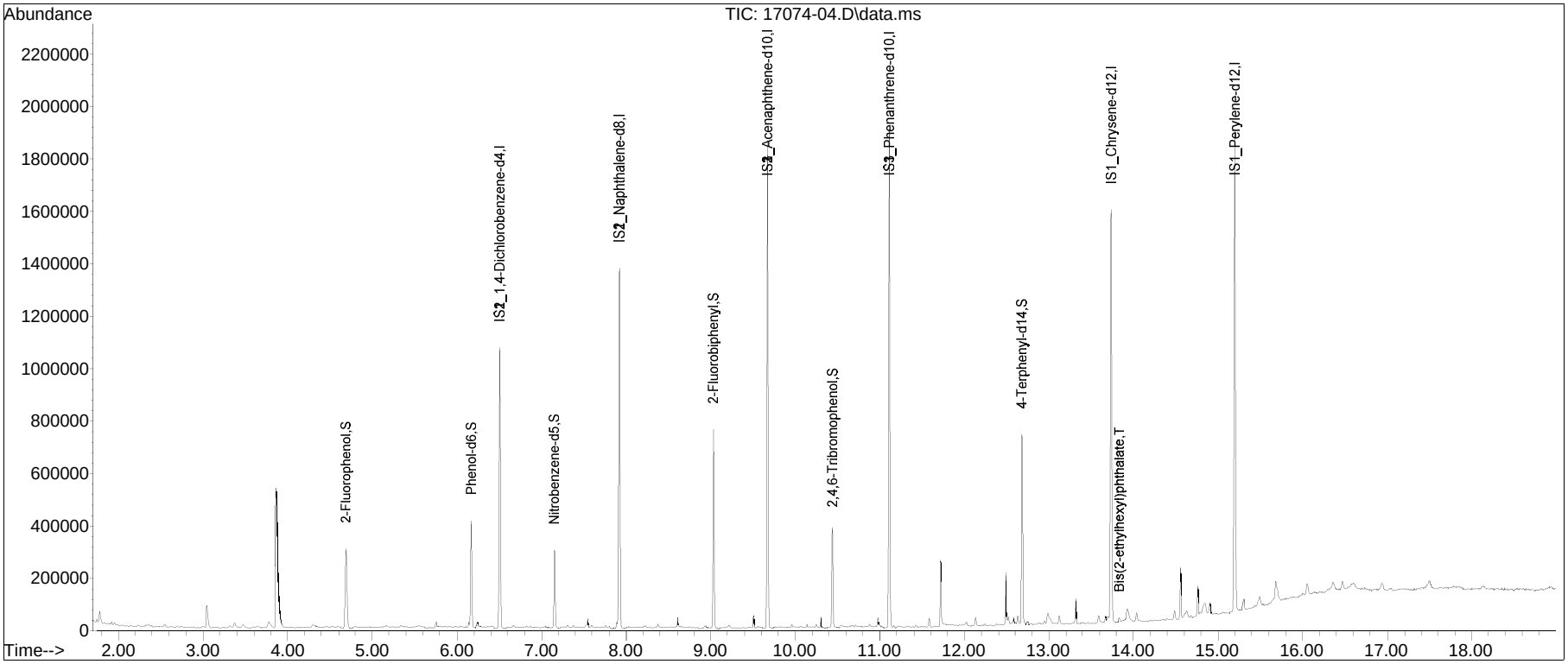
(#) = qualifier out of range (m) = manual integration (+) = signals summed

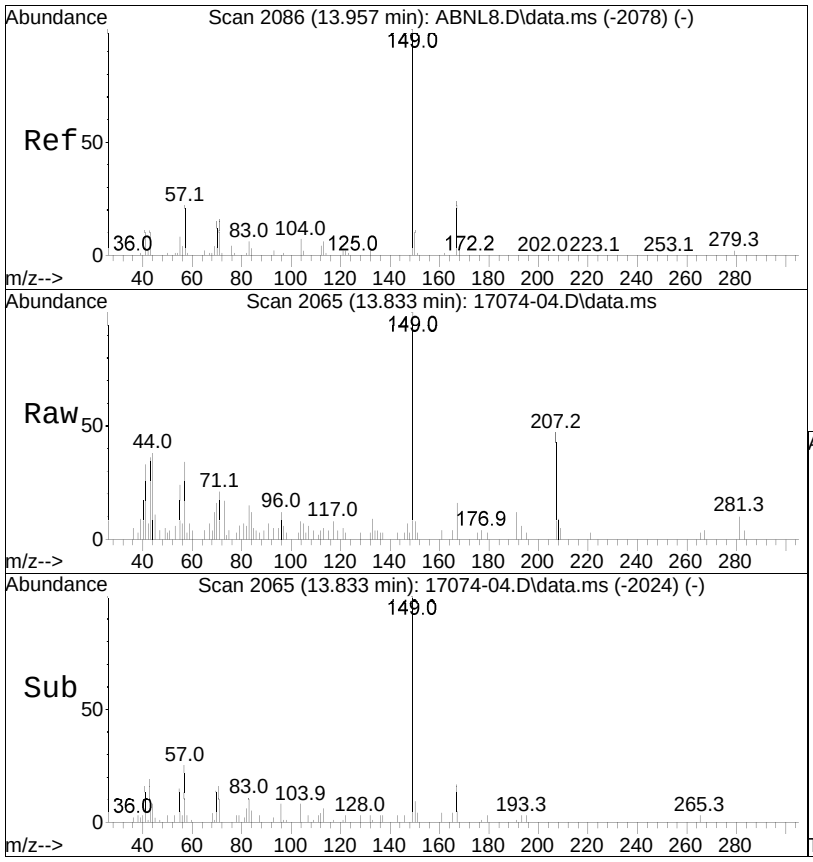
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-04.D
Acq On : 4 Apr 2024 8:43 pm
Operator : SV107:sz
Sample : L2417074-04,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 05 08:09:39 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:03:20 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••

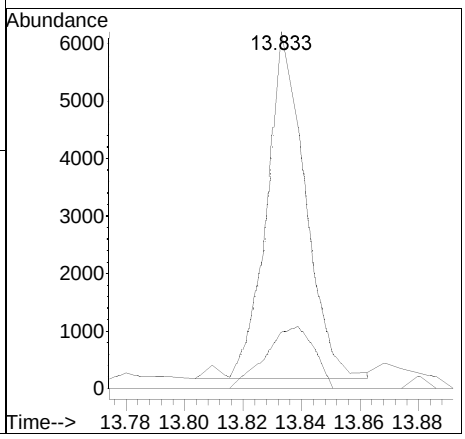




#107
Bis(2-ethylhexyl)phthalate
Concen: 0.20 ug/ml
RT: 13.833 min Scan# 2065
Delta R.T. -0.006 min
Lab File: 17074-04.D
Acq: 4 Apr 2024 8:43 pm

Tgt Ion:149 Resp: 5585

Ion	Ratio	Lower	Upper
149	100		
167	22.3	22.1	33.1
279	0.0	3.0	4.4#



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 17074-04.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 8:43 pm	Instrument	: SV107
Sample	: L2417074-04,32,,gmr	Quant Date	: 4/4/2024 9:03 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-05.D
Acq On : 4 Apr 2024 9:09 pm
Operator : SV107:sz
Sample : L2417074-05,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 05 08:10:21 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:29:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	165394	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 118.15%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	165394	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 97.45%			
34) IS1_Naphthalene-d8	7.922	136	609530	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 115.23%			
54) IS2_Naphthalene-d8	7.922	136	609530	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 97.32%			
62) IS1_Acenaphthene-d10	9.675	164	344754	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 116.83%			
82) IS2_Acenaphthene-d10	9.675	164	344754	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 102.44%			
85) IS3_Acenaphthene-d10	9.675	164	344754	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 107.87%			
87) IS1_Phenanthrene-d10	11.110	188	651877	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 116.11%			
99) IS3_Phenanthrene-d10	11.110	188	651877	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 108.97%			
103) IS1_Chrysene-d12	13.739	240	522526	4.000	ug/ml	0.00
Standard Area 1 = 474982			Recovery = 110.01%			
112) IS1_Perylene-d12	15.198	264	586599	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 112.04%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.693	112	129910	2.679	ug/ml	0.01
Spiked Amount 5.000	Range 15 - 110		Recovery = 53.58%			
7) Phenol-d6	6.169	99	131683	2.142	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 42.84%			
19) Nitrobenzene-d5	7.151	82	95011	1.685	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 67.40%			
45) 2-Fluorobiphenyl	9.033	172	199546	1.423	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 56.92%			
78) 2,4,6-Tribromophenol	10.445	330	35030	2.719	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 54.38%			
95) 4-Terphenyl-d14	12.680	244	227258	1.584	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 63.36%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-05.D
Acq On : 4 Apr 2024 9:09 pm
Operator : SV107:sz
Sample : L2417074-05,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 05 08:10:21 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:29:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	0.000		0	N.D.		
8) Phenol	0.000		0	N.D.		
9) Bis(2-chloroethyl)ether	0.000		0	N.D.		
14) Bis(2-chloroisopropyl)...	0.000		0	N.D.		
15) 2-Methylphenol	0.000		0	N.D.		
17) n-Nitrosodi-n-propylamine	0.000		0	N.D.		
18) 3-Methylphenol/4-Methy...	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.	d	
21) Isophorone	0.000		0	N.D.		
22) 2-Nitrophenol	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) Bis(2-chloroethoxy)met...	0.000		0	N.D.		
25) 2,4-Dichlorophenol	0.000		0	N.D.		
28) Benzaldehyde	0.000		0	N.D.		
29) Acetophenone	0.000		0	N.D.	d	
37) 4-Chloroaniline	0.000		0	N.D.		
39) p-Chloro-m-cresol	0.000		0	N.D.		
42) Hexachlorocyclopentadiene	0.000		0	N.D.		
43) 2,4,6-Trichlorophenol	0.000		0	N.D.		
44) 2,4,5-Trichlorophenol	0.000		0	N.D.		
47) 2-Nitroaniline	0.000		0	N.D.		
50) Dimethyl phthalate	0.000		0	N.D.		
52) 2,6-Dinitrotoluene	0.000		0	N.D.		
59) Caprolactam	0.000		0	N.D.	d	
60) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		
61) Biphenyl	0.000		0	N.D.	d	
63) 3-Nitroaniline	0.000		0	N.D.		
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	0.000		0	N.D.		
67) 2,4-Dinitrotoluene	0.000		0	N.D.		
68) 4-Nitrophenol	0.000		0	N.D.		
70) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
71) Diethyl phthalate	0.000		0	N.D.	d	
73) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74) 4-Nitroaniline	0.000		0	N.D.		
75) 4,6-Dinitro-o-cresol	0.000		0	N.D.		

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-05.D
Acq On : 4 Apr 2024 9:09 pm
Operator : SV107:sz
Sample : L2417074-05,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 05 08:10:21 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:29:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76) NDPA/DPA	0.000		0	N.D.	d	
79) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
86) Atrazine	0.000		0	N.D.		
90) Carbazole	0.000		0	N.D.		
91) Di-n-butylphthalate	0.000		0	N.D.	d	
96) Butyl benzyl phthalate	0.000		0	N.D.	d	
105) 3,3'-Dichlorobenzidine	0.000		0	N.D.		
107) Bis(2-ethylhexyl)phtha...	0.000		0	N.D.	d	
108) Di-n-octylphthalate	0.000		0	N.D.	d	

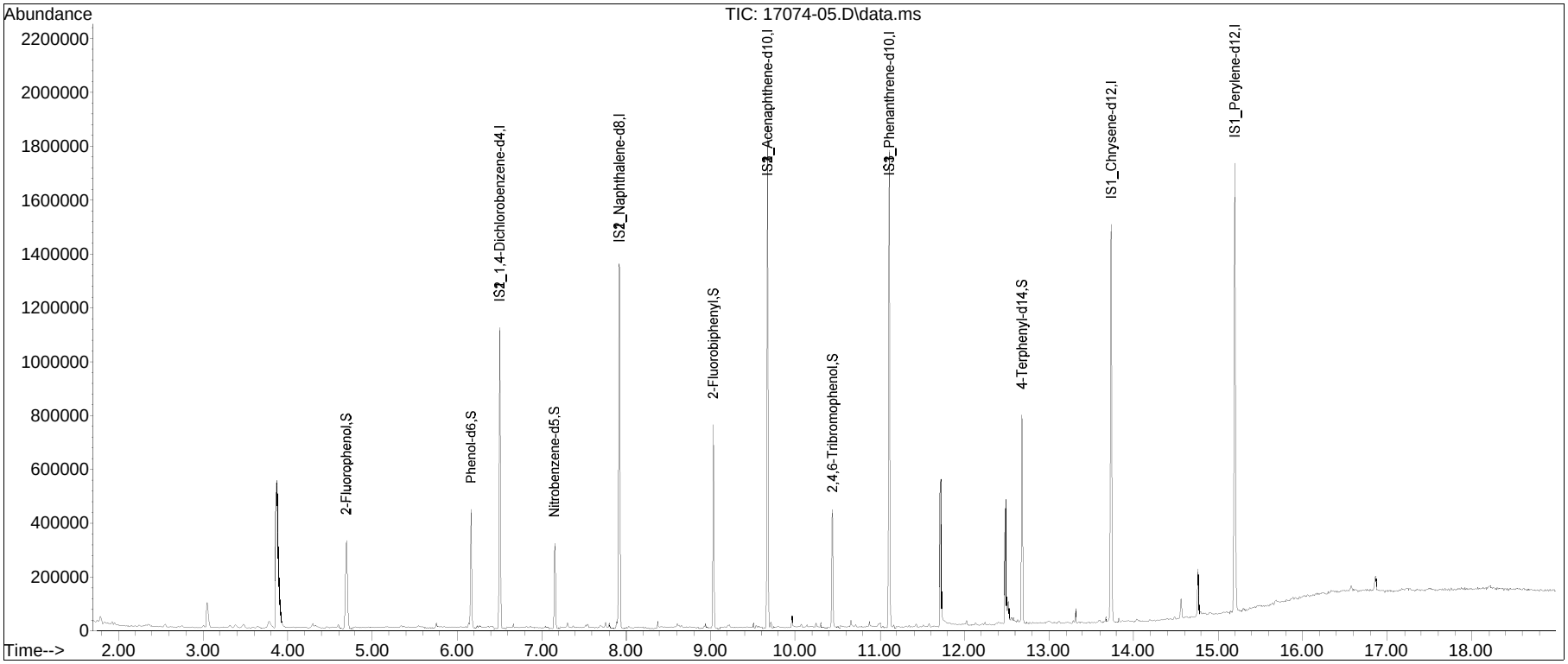
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-05.D
Acq On : 4 Apr 2024 9:09 pm
Operator : SV107:sz
Sample : L2417074-05,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 05 08:10:21 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:29:01 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 17074-05.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 9:09 pm	Instrument	: SV107
Sample	: L2417074-05,32,,gmr	Quant Date	: 4/4/2024 9:29 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-06.D
Acq On : 4 Apr 2024 9:35 pm
Operator : SV107:sz
Sample : L2417074-06,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 05 08:11:05 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:55:20 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	162429	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 116.03%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	162429	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 95.70%			
34) IS1_Naphthalene-d8	7.916	136	608023	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 114.95%			
54) IS2_Naphthalene-d8	7.916	136	608023	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 97.07%			
62) IS1_Acenaphthene-d10	9.675	164	350409	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 118.74%			
82) IS2_Acenaphthene-d10	9.675	164	350409	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 104.12%			
85) IS3_Acenaphthene-d10	9.675	164	350409	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 109.64%			
87) IS1_Phenanthrene-d10	11.110	188	714176	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 127.21%			
99) IS3_Phenanthrene-d10	11.110	188	714176	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 119.39%			
103) IS1_Chrysene-d12	13.733	240	643287	4.000	ug/ml	-0.01
Standard Area 1 = 474982			Recovery = 135.43%			
112) IS1_Perylene-d12	15.198	264	674910	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 128.91%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.687	112	105798	2.222	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 44.44%			
7) Phenol-d6	6.169	99	109927	1.820	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 36.40%			
19) Nitrobenzene-d5	7.151	82	74806	1.350	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 54.00%			
45) 2-Fluorobiphenyl	9.034	172	171065	1.223	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 48.92%			
78) 2,4,6-Tribromophenol	10.445	330	34125	2.606	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 52.12%			
95) 4-Terphenyl-d14	12.680	244	242048	1.539	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 61.56%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-06.D
Acq On : 4 Apr 2024 9:35 pm
Operator : SV107:sz
Sample : L2417074-06,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 05 08:11:05 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:55:20 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	0.000		0	N.D.		
8) Phenol	0.000		0	N.D.		
9) Bis(2-chloroethyl)ether	0.000		0	N.D.		
14) Bis(2-chloroisopropyl)...	0.000		0	N.D.	d	
15) 2-Methylphenol	0.000		0	N.D.		
17) n-Nitrosodi-n-propylamine	0.000		0	N.D.		
18) 3-Methylphenol/4-Methy...	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.	d	
21) Isophorone	0.000		0	N.D.		
22) 2-Nitrophenol	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) Bis(2-chloroethoxy)met...	0.000		0	N.D.		
25) 2,4-Dichlorophenol	0.000		0	N.D.		
28) Benzaldehyde	0.000		0	N.D.		
29) Acetophenone	0.000		0	N.D.		
37) 4-Chloroaniline	0.000		0	N.D.	d	
39) p-Chloro-m-cresol	0.000		0	N.D.		
42) Hexachlorocyclopentadiene	0.000		0	N.D.		
43) 2,4,6-Trichlorophenol	0.000		0	N.D.		
44) 2,4,5-Trichlorophenol	0.000		0	N.D.		
47) 2-Nitroaniline	0.000		0	N.D.		
50) Dimethyl phthalate	0.000		0	N.D.	d	
52) 2,6-Dinitrotoluene	0.000		0	N.D.		
59) Caprolactam	0.000		0	N.D.	d	
60) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		
61) Biphenyl	0.000		0	N.D.	d	
63) 3-Nitroaniline	0.000		0	N.D.		
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	0.000		0	N.D.	d	
67) 2,4-Dinitrotoluene	0.000		0	N.D.		
68) 4-Nitrophenol	0.000		0	N.D.		
70) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
71) Diethyl phthalate	0.000		0	N.D.	d	
73) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74) 4-Nitroaniline	0.000		0	N.D.		
75) 4,6-Dinitro-o-cresol	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-06.D
Acq On : 4 Apr 2024 9:35 pm
Operator : SV107:sz
Sample : L2417074-06,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 05 08:11:05 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:55:20 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	0.000		0	N.D.	d	
79)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
86)	Atrazine	0.000		0	N.D.		
90)	Carbazole	0.000		0	N.D.	d	
91)	Di-n-butylphthalate	0.000		0	N.D.	d	
96)	Butyl benzyl phthalate	0.000		0	N.D.	d	
105)	3,3'-Dichlorobenzidine	0.000		0	N.D.		
107)	Bis(2-ethylhexyl)phtha...	0.000		0	N.D.	d	
108)	Di-n-octylphthalate	0.000		0	N.D.	d	

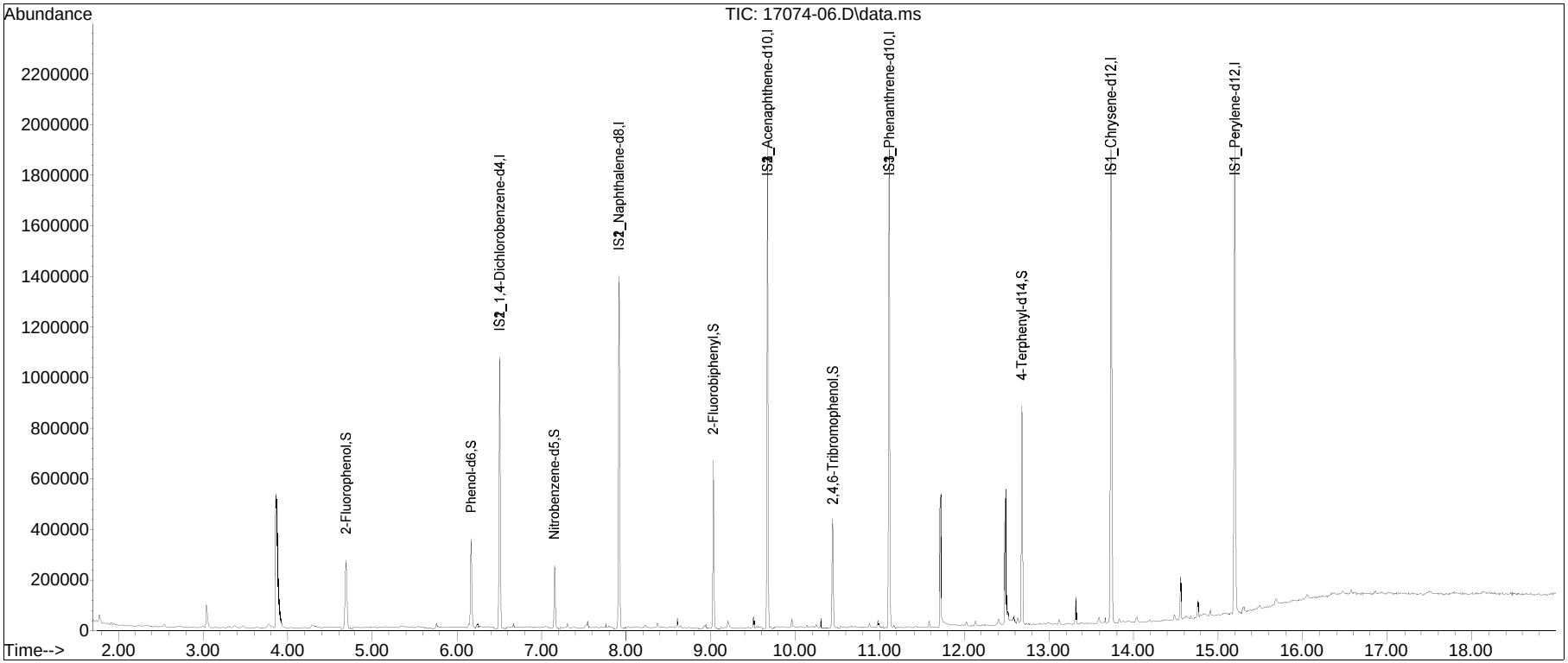
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-06.D
Acq On : 4 Apr 2024 9:35 pm
Operator : SV107:sz
Sample : L2417074-06,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 05 08:11:05 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 21:55:20 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 17074-06.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 9:35 pm	Instrument	: SV107
Sample	: L2417074-06,32,,gmr	Quant Date	: 4/4/2024 9:55 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-07.D
Acq On : 4 Apr 2024 10:01 pm
Operator : SV107:sz
Sample : L2417074-07,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 05 08:11:52 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 22:21:00 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	174912	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 124.94%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	174912	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 103.06%			
34) IS1_Naphthalene-d8	7.916	136	640708	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 121.13%			
54) IS2_Naphthalene-d8	7.916	136	640708	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 102.29%			
62) IS1_Acenaphthene-d10	9.675	164	351988	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 119.28%			
82) IS2_Acenaphthene-d10	9.675	164	351988	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 104.59%			
85) IS3_Acenaphthene-d10	9.675	164	351988	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 110.14%			
87) IS1_Phenanthrene-d10	11.110	188	675024	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 120.24%			
99) IS3_Phenanthrene-d10	11.110	188	675024	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 112.84%			
103) IS1_Chrysene-d12	13.733	240	535603	4.000	ug/ml	-0.01
Standard Area 1 = 474982			Recovery = 112.76%			
112) IS1_Perylene-d12	15.198	264	577310	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 110.27%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.687	112	131747	2.569	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 51.38%			
7) Phenol-d6	6.169	99	138195	2.125	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 42.50%			
19) Nitrobenzene-d5	7.151	82	101096	1.695	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 67.80%			
45) 2-Fluorobiphenyl	9.033	172	220472	1.495	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 59.80%			
78) 2,4,6-Tribromophenol	10.445	330	38605	2.935	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 58.70%			
95) 4-Terphenyl-d14	12.680	244	238989	1.608	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 64.32%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-07.D
Acq On : 4 Apr 2024 10:01 pm
Operator : SV107:sz
Sample : L2417074-07,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 05 08:11:52 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 22:21:00 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	0.000		0	N.D.		
8) Phenol	0.000		0	N.D.	d	
9) Bis(2-chloroethyl)ether	0.000		0	N.D.		
14) Bis(2-chloroisopropyl)...	0.000		0	N.D.	d	
15) 2-Methylphenol	0.000		0	N.D.		
17) n-Nitrosodi-n-propylamine	0.000		0	N.D.	d	
18) 3-Methylphenol/4-Methy...	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.	d	
21) Isophorone	0.000		0	N.D.	d	
22) 2-Nitrophenol	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) Bis(2-chloroethoxy)met...	0.000		0	N.D.		
25) 2,4-Dichlorophenol	0.000		0	N.D.		
28) Benzaldehyde	0.000		0	N.D.	d	
29) Acetophenone	0.000		0	N.D.	d	
37) 4-Chloroaniline	0.000		0	N.D.	d	
39) p-Chloro-m-cresol	0.000		0	N.D.		
42) Hexachlorocyclopentadiene	0.000		0	N.D.		
43) 2,4,6-Trichlorophenol	0.000		0	N.D.		
44) 2,4,5-Trichlorophenol	0.000		0	N.D.		
47) 2-Nitroaniline	0.000		0	N.D.		
50) Dimethyl phthalate	0.000		0	N.D.		
52) 2,6-Dinitrotoluene	0.000		0	N.D.		
59) Caprolactam	0.000		0	N.D.	d	
60) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		
61) Biphenyl	0.000		0	N.D.		
63) 3-Nitroaniline	0.000		0	N.D.	d	
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	0.000		0	N.D.		
67) 2,4-Dinitrotoluene	0.000		0	N.D.		
68) 4-Nitrophenol	0.000		0	N.D.		
70) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
71) Diethyl phthalate	0.000		0	N.D.	d	
73) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74) 4-Nitroaniline	0.000		0	N.D.		
75) 4,6-Dinitro-o-cresol	0.000		0	N.D.		

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-07.D
Acq On : 4 Apr 2024 10:01 pm
Operator : SV107:sz
Sample : L2417074-07,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 05 08:11:52 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 22:21:00 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	0.000		0	N.D.	d	
79)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
86)	Atrazine	0.000		0	N.D.		
90)	Carbazole	0.000		0	N.D.		
91)	Di-n-butylphthalate	0.000		0	N.D.	d	
96)	Butyl benzyl phthalate	0.000		0	N.D.		
105)	3,3'-Dichlorobenzidine	0.000		0	N.D.		
107)	Bis(2-ethylhexyl)phtha...	0.000		0	N.D.	d	
108)	Di-n-octylphthalate	0.000		0	N.D.	d	

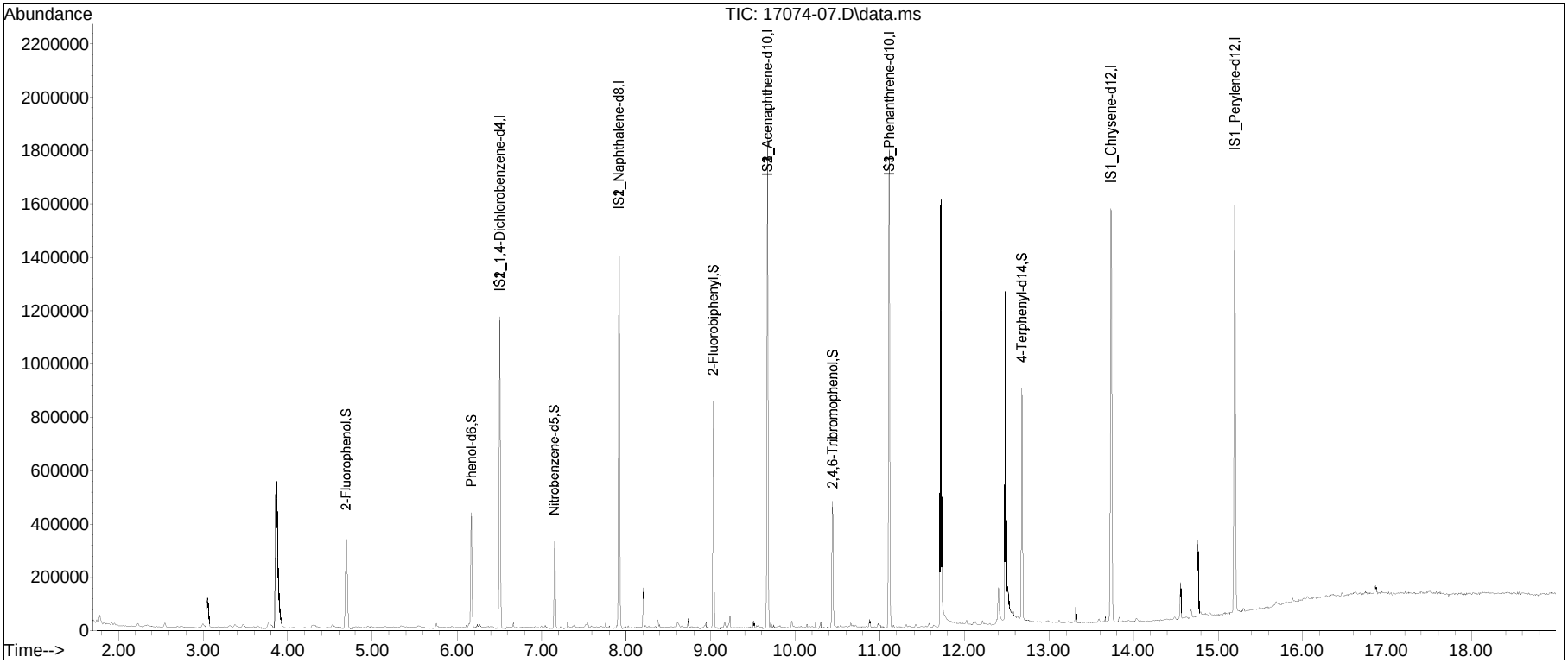
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 17074-07.D
Acq On : 4 Apr 2024 10:01 pm
Operator : SV107:sz
Sample : L2417074-07,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 05 08:11:52 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 22:21:00 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 17074-07.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 10:01 pm	Instrument	: SV107
Sample	: L2417074-07,32,,gmr	Quant Date	: 4/4/2024 10:21 pm

There are no manual integrations or false positives in this file.

Semivolatiles Standards Data

Initial Calibration

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: SV107**	**Ical Ref**	**: ICAL20861**
Calibration dates	**: 02/12/24 15:57 02/13/24 04:31**		

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	Avg	%RSD
1)	I	IS1_1,4-Dichlorobenzene-d4	----------ISTD----------										
2)	t	N-Nitrosodimethylamine	0.694	0.761	0.873	0.879	0.832	0.862	0.859	0.865	0.796	0.824	7.62
3)	t	Pyridine			0.816	1.116	1.305	1.254	1.353	1.316	1.256	1.172	1.198	14.42
4)	S	2-Fluorophenol	1.161	1.068	1.176	1.188	1.158	1.240	1.208	1.194	1.162	1.173	4.04
5)	T	Aniline	1.734	1.738	1.814	1.827	1.658	1.828	1.789	1.783	1.731	1.767	3.19
6)	t	2-Chlorophenol	1.155	1.206	1.294	1.334	1.273	1.366	1.337	1.332	1.294	1.288	5.29
7)	S	Phenol-d6	1.386	1.334	1.447	1.564	1.475	1.592	1.551	1.536	1.498	1.487	5.76
8)	T	Phenol	1.540	1.510	1.662	1.704	1.578	1.695	1.631	1.664	1.607	1.621	4.20
9)	T	bis(2-Chloroethyl)ether	1.547	1.382	1.351	1.402	1.267	1.333	1.301	1.280	1.246	1.345	6.84
10)	T	1,3-Dichlorobenzene	1.836	1.616	1.635	1.636	1.546	1.601	1.525	1.508	1.466	1.596	6.76
11)	T	1,4-Dichlorobenzene	1.915	1.672	1.694	1.677	1.570	1.619	1.565	1.541	1.483	1.637	7.67
12)	T	1,2-Dichlorobenzene	1.770	1.572	1.656	1.608	1.509	1.563	1.496	1.461	1.407	1.560	7.01
13)	t	Benzyl alcohol	0.997	0.948	1.011	1.081	1.025	1.129	1.131	1.150	1.121	1.066	6.79
14)	T	bis(2-chloroisopropyl)ether	2.073	1.802	1.854	1.866	1.741	1.855	1.806	1.735	1.618	1.817	6.84
15)	T	2-Methylphenol	1.023	1.009	1.098	1.181	1.119	1.213	1.207	1.196	1.168	1.135	6.84
16)	T	Hexachloroethane	0.587	0.603	0.595	0.604	0.557	0.597	0.578	0.568	0.559	0.583	3.15
17)	T	n-Nitrosodi-n-propylamine	0.851	0.799	0.876	0.937	0.878	0.980	0.987	0.979	0.953	0.916	7.30
18)	T	3-Methylphenol/4-Methylphenol	1.167	1.053	1.197	1.273	1.195	1.332	1.285	1.289	1.261	1.228	6.90
19)	S	Nitrobenzene-d5	1.279	1.209	1.289	1.426	1.304	1.475	1.457	1.461	1.376	1.364	7.09
20)	T	Nitrobenzene	1.299	1.234	1.366	1.410	1.388	1.496	1.490	1.471	1.417	1.397	6.28
21)	T	Isophorone	2.096	2.151	2.220	2.428	2.382	2.640	2.603	2.628	2.517	2.407	8.71
22)	T	2-Nitrophenol				0.461	0.508	0.526	0.609	0.630	0.660	0.623	0.574	13.02
23)	T	2,4-Dimethylphenol	0.843	0.864	0.926	1.011	0.937	1.019	1.001	1.006	1.005	0.957	7.04
24)	T	bis(2-Chloroethoxy)methane	1.669	1.537	1.617	1.689	1.572	1.696	1.640	1.632	1.565	1.624	3.49
25)	T	2,4-Dichlorophenol	0.945	0.934	1.085	1.161	1.099	1.249	1.214	1.199	1.196	1.120	10.26
26)	T	1,2,4-Trichlorobenzene	1.734	1.522	1.512	1.529	1.368	1.435	1.402	1.345	1.306	1.461	8.92
27)	I	IS2_1,4-Dichlorobenzene-d4	----------ISTD----------										
28)	T	Benzaldehyde	0.981	0.908	0.911	0.985	0.950	0.967	1.036	1.067	1.083	0.987	6.39
29)	T	Acetophenone	1.581	1.562	1.574	1.701	1.599	1.649	1.758	1.819	1.839	1.676	6.45
30)	T	m-Toluidine	1.590	1.486	1.537	1.615	1.574	1.642	1.793	1.847	1.872	1.662	8.44
31)	T	2-Chloroaniline	1.517	1.408	1.407	1.476	1.417	1.436	1.542	1.588	1.610	1.489	5.27
32)	I	IS3_1,4-Dichlorobenzene-d4	----------ISTD----------										
33)	T	n-Decane	1.711	1.510	1.526	1.373	1.392	1.372	1.411	1.428	1.428	1.461	7.43
34)	I	IS1_Naphthalene-d8	----------ISTD----------										
35)	T	Naphthalene	1.313	1.205	1.191	1.203	1.047	1.077	1.053	1.028	0.983	1.122	9.71
36)	T	Benzoic Acid					0.137	0.163	0.211	0.239	0.266	0.260	*Q	0.9983

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: SV107**	**Ical Ref**	**: ICAL20861**
Calibration dates	**: 02/12/24 15:57 02/13/24 04:31**		

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D

	Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	Avg	%RSD
37) T	4-Chloroaniline	0.130	0.130	0.137	0.145	0.135	0.144	0.140	0.142	0.134	0.137	4.18
38) T	Hexachlorobutadiene	0.266	0.245	0.246	0.251	0.210	0.217	0.210	0.205	0.198	0.228	10.71
39) T	p-Chloro-m-cresol	0.235	0.225	0.264	0.289	0.278	0.309	0.314	0.325	0.324	0.285	13.09
40) T	2-Methylnaphthalene	0.829	0.747	0.781	0.781	0.699	0.734	0.721	0.712	0.706	0.746	5.83
41) T	1-Methylnaphthalene	0.288	0.262	0.257	0.271	0.237	0.248	0.246	0.245	0.241	0.255	6.45
42) T	Hexachlorocyclopentadiene	0.160	0.155	0.169	0.168	0.153	0.165	0.169	0.173	0.173	0.165	4.54
43) T	2,4,6-Trichlorophenol	0.199	0.192	0.201	0.225	0.221	0.232	0.246	0.260	0.253	0.225	10.94
44) T	2,4,5-Trichlorophenol	0.196	0.188	0.224	0.272	0.243	0.267	0.265	0.272	0.273	0.244	13.88
45) S	2-Fluorobiphenyl	1.047	0.971	0.974	1.003	0.865	0.894	0.868	0.854	0.808	0.920	8.74
46) T	2-Chloronaphthalene	0.826	0.735	0.790	0.824	0.704	0.730	0.722	0.720	0.694	0.749	6.73
47) T	2-Nitroaniline			0.147	0.172	0.168	0.204	0.217	0.232	0.230	*L	0.9985
48) T	1,4-Dinitrobenzene			0.064	0.075	0.076	0.094	0.102	0.112	0.110	*L	0.9977
49) T	1,3-Dinitrobenzene			0.076	0.088	0.093	0.114	0.121	0.130	0.128	0.107	19.97
50) T	Dimethyl phthalate	0.818	0.755	0.834	0.900	0.794	0.866	0.828	0.843	0.809	0.828	5.01
51) T	Acenaphthylene	1.075	1.029	1.126	1.206	1.089	1.175	1.170	1.167	1.108	1.127	5.07
52) T	2,6-Dinitrotoluene		0.105	0.122	0.150	0.150	0.175	0.177	0.181	0.180	*L	0.9994
53) T	1,2-Dinitrobenzene		0.041	0.051	0.066	0.064	0.074	0.076	0.079	0.077	*L	0.9993
54) I	IS2_Naphthalene-d8	----------ISTD----------										
55) T	a-Terpineol	0.241	0.226	0.228	0.232	0.230	0.251	0.273	0.291	0.294	0.252	10.94
56) T	3-Chloroaniline	0.149	0.145	0.140	0.153	0.143	0.151	0.158	0.162	0.162	0.152	5.24
57) T	2,6-Dichlorophenol	0.253	0.227	0.237	0.244	0.255	0.272	0.293	0.304	0.308	0.266	11.13
58) T	1-chloro-2-nitrobenzene	0.101	0.101	0.115	0.118	0.110	0.118	0.128	0.138	0.139	0.119	11.80
59) T	Caprolactam				0.092	0.102	0.124	0.143	0.157	0.159	*L	0.9980
60) T	1,2,4,5-Tetrachlorobenzene	0.452	0.418	0.427	0.409	0.375	0.383	0.380	0.382	0.388	0.402	6.58
61) T	Biphenyl	1.015	0.932	0.924	0.878	0.841	0.861	0.880	0.887	0.867	0.898	5.82
62) I	IS1_Acenaphthene-d10	----------ISTD----------										
63) T	3-Nitroaniline			0.254	0.283	0.289	0.321	0.328	0.327	0.317	0.303	9.22
64) T	Acenaphthene	1.304	1.190	1.207	1.177	1.056	1.068	1.074	1.051	1.020	1.128	8.45
65) T	2,4-Dinitrophenol				0.082	0.098	0.126	0.143	0.164	0.162	*L	0.9977
66) T	Dibenzofuran	2.117	2.032	2.023	1.988	1.719	1.752	1.772	1.701	1.557	1.851	10.37
67) T	2,4-Dinitrotoluene		0.222	0.282	0.329	0.330	0.371	0.400	0.418	0.405	*L	0.9988
68) T	4-Nitrophenol				0.215	0.228	0.257	0.275	0.284	0.272	0.255	10.96
69) T	2,3,5,6-Tetrachlorophenol	0.266	0.259	0.291	0.329	0.320	0.341	0.356	0.351	0.337	0.317	11.39
70) T	2,3,4,6-Tetrachlorophenol	0.242	0.274	0.321	0.354	0.334	0.335	0.353	0.347	0.330	0.321	11.90
71) T	Diethyl phthalate	1.268	1.292	1.344	1.396	1.246	1.269	1.309	1.318	1.274	1.302	3.57
72) T	Fluorene	1.523	1.411	1.459	1.496	1.323	1.335	1.365	1.354	1.257	1.392	6.30

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: SV107**	**Ical Ref**	**: ICAL20861**
Calibration dates	**: 02/12/24 15:57 02/13/24 04:31**		

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	Avg	%RSD
73)	T	4-Chlorophenyl-phenylether	0.848	0.789	0.775	0.782	0.668	0.661	0.663	0.653	0.610	0.717	11.46
74)	T	4-Nitroaniline			0.243	0.302	0.292	0.312	0.340	0.335	0.312	0.305	10.59
75)	T	4,6-Dinitro-o-cresol			0.107	0.134	0.151	0.173	0.198	0.224	0.213	*L	0.9969
76)	T	NDPA/DPA	1.036	1.085	1.174	1.223	1.079	1.111	1.131	1.140	1.068	1.116	5.17
77)	T	Azobenzene	1.203	1.184	1.336	1.434	1.313	1.354	1.367	1.362	1.256	1.312	6.28
78)	S	2,4,6-Tribromophenol	0.123	0.128	0.143	0.157	0.153	0.155	0.160	0.168	0.159	0.149	10.27
79)	T	4-Bromophenyl-phenylether	0.422	0.381	0.394	0.419	0.351	0.364	0.354	0.353	0.347	0.376	7.85
80)	T	Hexachlorobenzene	0.471	0.461	0.454	0.459	0.390	0.386	0.381	0.369	0.366	0.415	10.74
81)	T	Pentachlorophenol			0.164	0.199	0.209	0.222	0.249	0.270	0.262	*L	0.9984
82)	I	IS2_Acenaphthene-d10	----------ISTD----------										
83)	T	Dichloran				0.086	0.090	0.110	0.139	0.167	0.182	*Q	0.9979
84)	T	Pentachloronitrobenzene				0.108	0.105	0.130	0.146	0.161	0.174	*L	0.9957
85)	I	IS3_Acenaphthene-d10	----------ISTD----------										
86)	T	Atrazine		0.242	0.247	0.257	0.287	0.326	0.360	0.399		*Q	0.9990
87)	I	IS1_Phenanthrene-d10	----------ISTD----------										
88)	T	Phenanthrene	1.350	1.225	1.165	1.190	1.016	1.036	1.034	1.010	0.982	1.112	11.32
89)	T	Anthracene	1.154	1.043	1.040	1.097	0.987	1.036	1.056	1.033	1.009	1.051	4.69
90)	T	Carbazole	0.866	0.822	0.937	1.014	0.936	1.000	1.014	1.017	0.970	0.953	7.35
91)	T	Di-n-butylphthalate			0.794	0.917	0.905	1.055	1.125	1.172	1.129	1.014	14.07
92)	T	Fluoranthene	1.206	1.159	1.182	1.236	1.113	1.199	1.249	1.257	1.164	1.196	3.92
93)	T	Benzidine				0.500	0.550	0.680	0.732	0.705	0.708	0.646	14.90
94)	T	Pyrene	1.335	1.241	1.295	1.329	1.229	1.324	1.356	1.329	1.210	1.294	4.12
95)	S	4-Terphenyl-d14	0.913	0.834	0.901	0.938	0.828	0.872	0.893	0.897	0.849	0.881	4.24
96)	T	Butyl benzyl phthalate			0.248	0.291	0.325	0.421	0.479	0.542	0.557	*Q	0.9979
97)	I	IS2_Phenanthrene-d10	----------ISTD----------										
98)	T	Diphenamid	0.365	0.300	0.304	0.305	0.316	0.374	0.413	0.449	0.501	0.370	19.51
99)	I	IS3_Phenanthrene-d10	----------ISTD----------										
100)	T	n-Octadecane	0.331	0.326	0.322	0.338	0.368	0.380	0.411	0.428	0.411	0.368	11.20
101)	T	Parathion			0.043	0.041	0.047	0.056	0.074	0.099	0.112	*Q	0.9961
102)	T	3,3'-Dimethylbenzidine				0.324	0.428	0.513	0.647	0.764	0.738	*Q	0.9963
103)	I	IS1_Chrysene-d12	----------ISTD----------										
104)	T	Benzo[a]anthracene	1.528	1.364	1.346	1.397	1.280	1.303	1.365	1.326	1.225	1.348	6.30
105)	T	3,3'-Dichlorobenzidine		0.278	0.311	0.370	0.406	0.445	0.478	0.497	0.468	0.407	19.81
106)	T	Chrysene		1.588	1.531	1.498	1.330	1.286	1.275	1.221	1.127	1.357	12.05
107)	T	bis(2-Ethylhexyl)phthalate		0.398	0.421	0.514	0.611	0.691	0.785	0.827		*Q	0.9981
108)	T	Di-n-octylphthalate			0.592	0.693	0.849	1.048	1.276	1.412		*Q	0.9977

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: SV107**	**Ical Ref**	**: ICAL20861**
Calibration dates	**: 02/12/24 15:57 02/13/24 04:31**		

Calibration Files

L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	Avg	%RSD
109)	T	Benzo(b)fluoranthene	1.180	1.087	1.136	1.228	1.115	1.114	1.224	1.230	1.201	1.169	4.80
110)	T	Benzo(k)fluoranthene	1.136	1.114	1.225	1.313	1.273	1.260	1.248	1.187	1.120	1.208	6.01
111)	T	Benzo(a)pyrene	0.866	0.905	1.008	1.094	1.065	1.101	1.144	1.149	1.097	1.048	9.68
112)	I	IS1_Perylene-d12	----------ISTD----------										
113)	T	Indeno(1,2,3-cd)pyrene	0.929	0.817	0.818	0.893	0.889	0.986	1.051	1.064	1.028	0.942	10.09
114)	T	Dibenzo[a,h]anthracene	0.887	0.872	0.984	1.037	0.967	1.031	1.064	1.047	0.998	0.987	6.97
115)	T	Benzo(g,h,i)perylene	1.070	0.997	1.067	1.061	0.952	1.015	1.032	0.923	0.801	0.991	8.85

Response Factor Report SV107

Method Path : I:\8270\SV107\240211ical\
Method File : FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Thu Mar 14 09:55:34 2024
Response Via : Initial Calibration

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	Avg	%RSD
1)	I	IS1_1,4-Dichlorobenzene-d4	ISTD										
2)	t	N-Nitrosodimethylamine	0.694	0.761	0.873	0.879	0.832	0.862	0.859	0.865	0.796	0.824	7.62
3)	t	Pyridine		0.816	1.116	1.305	1.254	1.353	1.316	1.256	1.172	1.198	14.42
4)	S	2-Fluorophenol	1.161	1.068	1.176	1.188	1.158	1.240	1.208	1.194	1.162	1.173	4.04
5)	T	Aniline	1.734	1.738	1.814	1.827	1.658	1.828	1.789	1.783	1.731	1.767	3.19
6)	t	2-Chlorophenol	1.155	1.206	1.294	1.334	1.273	1.366	1.337	1.332	1.294	1.288	5.29
7)	S	Phenol-d6	1.386	1.334	1.447	1.564	1.475	1.592	1.551	1.536	1.498	1.487	5.76
8)	T	Phenol	1.540	1.510	1.662	1.704	1.578	1.695	1.631	1.664	1.607	1.621	4.20
9)	T	bis(2-Chloroethyl)ether	1.547	1.382	1.351	1.402	1.267	1.333	1.301	1.280	1.246	1.345	6.84
10)	T	1,3-Dichlorobenzene	1.836	1.616	1.635	1.636	1.546	1.601	1.525	1.508	1.466	1.596	6.76
11)	T	1,4-Dichlorobenzene	1.915	1.672	1.694	1.677	1.570	1.619	1.565	1.541	1.483	1.637	7.67
12)	T	1,2-Dichlorobenzene	1.770	1.572	1.656	1.608	1.509	1.563	1.496	1.461	1.407	1.560	7.01
13)	t	Benzyl alcohol	0.997	0.948	1.011	1.081	1.025	1.129	1.131	1.150	1.121	1.066	6.79
14)	T	bis(2-chloroisopropyl)ether	2.073	1.802	1.854	1.866	1.741	1.855	1.806	1.735	1.618	1.817	6.84
15)	T	2-Methylphenol	1.023	1.009	1.098	1.181	1.119	1.213	1.207	1.196	1.168	1.135	6.84
16)	T	Hexachloroethane	0.587	0.603	0.595	0.604	0.557	0.597	0.578	0.568	0.559	0.583	3.15
17)	T	n-Nitrosodi-n-propylamine	0.851	0.799	0.876	0.937	0.878	0.980	0.987	0.979	0.953	0.916	7.30
18)	T	3-Methylphenol/4-Methylphenol	1.167	1.053	1.197	1.273	1.195	1.332	1.285	1.289	1.261	1.228	6.90
19)	S	Nitrobenzene-d5	1.279	1.209	1.289	1.426	1.304	1.475	1.457	1.461	1.376	1.364	7.09
20)	T	Nitrobenzene	1.299	1.234	1.366	1.410	1.388	1.496	1.490	1.471	1.417	1.397	6.28
21)	T	Isophorone	2.096	2.151	2.220	2.428	2.382	2.640	2.603	2.628	2.517	2.407	8.71
22)	T	2-Nitrophenol			0.461	0.508	0.526	0.609	0.630	0.660	0.623	0.574	13.02
23)	T	2,4-Dimethylphenol	0.843	0.864	0.926	1.011	0.937	1.019	1.001	1.006	1.005	0.957	7.04
24)	T	bis(2-Chloroethoxy)methane	1.669	1.537	1.617	1.689	1.572	1.696	1.640	1.632	1.565	1.624	3.49
25)	T	2,4-Dichlorophenol	0.945	0.934	1.085	1.161	1.099	1.249	1.214	1.199	1.196	1.120	10.26
26)	T	1,2,4-Trichlorobenzene	1.734	1.522	1.512	1.529	1.368	1.435	1.402	1.345	1.306	1.461	8.92
27)	I	IS2_1,4-Dichlorobenzene-d4	ISTD										
28)	T	Benzaldehyde	0.981	0.908	0.911	0.985	0.950	0.967	1.036	1.067	1.083	0.987	6.39
29)	T	Acetophenone	1.581	1.562	1.574	1.701	1.599	1.649	1.758	1.819	1.839	1.676	6.45
30)	T	m-Toluidine	1.590	1.486	1.537	1.615	1.574	1.642	1.793	1.847	1.872	1.662	8.44
31)	T	2-Chloroaniline	1.517	1.408	1.407	1.476	1.417	1.436	1.542	1.588	1.610	1.489	5.27
32)	I	IS3_1,4-Dichlorobenzene-d4	ISTD										
33)	T	n-Decane	1.711	1.510	1.526	1.373	1.392	1.372	1.411	1.428	1.428	1.461	7.43
34)	I	IS1_Naphthalene-d8	ISTD										
35)	T	Naphthalene	1.313	1.205	1.191	1.203	1.047	1.077	1.053	1.028	0.983	1.122	9.71
36)	T	Benzoic Acid				0.137	0.163	0.211	0.239	0.266	0.260	*Q	0.9983
37)	T	4-Chloroaniline	0.130	0.130	0.137	0.145	0.135	0.144	0.140	0.142	0.134	0.137	4.18
38)	T	Hexachlorobutadiene	0.266	0.245	0.246	0.251	0.210	0.217	0.210	0.205	0.198	0.228	10.71
39)	T	p-Chloro-m-cresol	0.235	0.225	0.264	0.289	0.278	0.309	0.314	0.325	0.324	0.285	13.09
40)	T	2-Methylnaphthalene	0.829	0.747	0.781	0.781	0.699	0.734	0.721	0.712	0.706	0.746	5.83
41)	T	1-Methylnaphthalene	0.288	0.262	0.257	0.271	0.237	0.248	0.246	0.245	0.241	0.255	6.45
42)	T	Hexachlorocyclopentadiene	0.160	0.155	0.169	0.168	0.153	0.165	0.169	0.173	0.173	0.165	4.54
43)	T	2,4,6-Trichlorophenol	0.199	0.192	0.201	0.225	0.221	0.232	0.246	0.260	0.253	0.225	10.94
44)	T	2,4,5-Trichlorophenol	0.196	0.188	0.224	0.272	0.243	0.267	0.265	0.272	0.273	0.244	13.88
45)	S	2-Fluorobiphenyl	1.047	0.971	0.974	1.003	0.865	0.894	0.868	0.854	0.808	0.920	8.74

Response Factor Report SV107

Method Path : I:\8270\SV107\240211ical\
Method File : FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Thu Mar 14 09:55:34 2024
Response Via : Initial Calibration

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	Avg	%RSD	
46)	T	2-Chloronaphthalene	0.826	0.735	0.790	0.824	0.704	0.730	0.722	0.720	0.694	0.749	6.73	
47)	T	2-Nitroaniline			0.147	0.172	0.168	0.204	0.217	0.232	0.230		*L	0.9985
48)	T	1,4-Dinitrobenzene			0.064	0.075	0.076	0.094	0.102	0.112	0.110		*L	0.9977
49)	T	1,3-Dinitrobenzene			0.076	0.088	0.093	0.114	0.121	0.130	0.128	0.107	19.97	
50)	T	Dimethyl phthalate	0.818	0.755	0.834	0.900	0.794	0.866	0.828	0.843	0.809	0.828	5.01	
51)	T	Acenaphthylene	1.075	1.029	1.126	1.206	1.089	1.175	1.170	1.167	1.108	1.127	5.07	
52)	T	2,6-Dinitrotoluene		0.105	0.122	0.150	0.150	0.175	0.177	0.181	0.180		*L	0.9994
53)	T	1,2-Dinitrobenzene		0.041	0.051	0.066	0.064	0.074	0.076	0.079	0.077		*L	0.9993
54)	I	IS2_Naphthalene-d8	----------ISTD----------											
55)	T	a-Terpineol	0.241	0.226	0.228	0.232	0.230	0.251	0.273	0.291	0.294	0.252	10.94	
56)	T	3-Chloroaniline	0.149	0.145	0.140	0.153	0.143	0.151	0.158	0.162	0.162	0.152	5.24	
57)	T	2,6-Dichlorophenol	0.253	0.227	0.237	0.244	0.255	0.272	0.293	0.304	0.308	0.266	11.13	
58)	T	1-chloro-2-nitrobenzene	0.101	0.101	0.115	0.118	0.110	0.118	0.128	0.138	0.139	0.119	11.80	
59)	T	Caprolactam				0.092	0.102	0.124	0.143	0.157	0.159		*L	0.9980
60)	T	1,2,4,5-Tetrachlorobenzene	0.452	0.418	0.427	0.409	0.375	0.383	0.380	0.382	0.388	0.402	6.58	
61)	T	Biphenyl	1.015	0.932	0.924	0.878	0.841	0.861	0.880	0.887	0.867	0.898	5.82	
62)	I	IS1_Acenaphthene-d10	----------ISTD----------											
63)	T	3-Nitroaniline			0.254	0.283	0.289	0.321	0.328	0.327	0.317	0.303	9.22	
64)	T	Acenaphthene	1.304	1.190	1.207	1.177	1.056	1.068	1.074	1.051	1.020	1.128	8.45	
65)	T	2,4-Dinitrophenol				0.082	0.098	0.126	0.143	0.164	0.162		*L	0.9977
66)	T	Dibenzofuran	2.117	2.032	2.023	1.988	1.719	1.752	1.772	1.701	1.557	1.851	10.37	
67)	T	2,4-Dinitrotoluene		0.222	0.282	0.329	0.330	0.371	0.400	0.418	0.405		*L	0.9988
68)	T	4-Nitrophenol				0.215	0.228	0.257	0.275	0.284	0.272	0.255	10.96	
69)	T	2,3,5,6-Tetrachlorophenol	0.266	0.259	0.291	0.329	0.320	0.341	0.356	0.351	0.337	0.317	11.39	
70)	T	2,3,4,6-Tetrachlorophenol	0.242	0.274	0.321	0.354	0.334	0.335	0.353	0.347	0.330	0.321	11.90	
71)	T	Diethyl phthalate	1.268	1.292	1.344	1.396	1.246	1.269	1.309	1.318	1.274	1.302	3.57	
72)	T	Fluorene	1.523	1.411	1.459	1.496	1.323	1.335	1.365	1.354	1.257	1.392	6.30	
73)	T	4-Chlorophenyl-phenylether	0.848	0.789	0.775	0.782	0.668	0.661	0.663	0.653	0.610	0.717	11.46	
74)	T	4-Nitroaniline			0.243	0.302	0.292	0.312	0.340	0.335	0.312	0.305	10.59	
75)	T	4,6-Dinitro-o-cresol			0.107	0.134	0.151	0.173	0.198	0.224	0.213		*L	0.9969
76)	T	NDPA/DPA	1.036	1.085	1.174	1.223	1.079	1.111	1.131	1.140	1.068	1.116	5.17	
77)	T	Azobenzene	1.203	1.184	1.336	1.434	1.313	1.354	1.367	1.362	1.256	1.312	6.28	
78)	S	2,4,6-Tribromophenol	0.123	0.128	0.143	0.157	0.153	0.155	0.160	0.168	0.159	0.149	10.27	
79)	T	4-Bromophenyl-phenylether	0.422	0.381	0.394	0.419	0.351	0.364	0.354	0.353	0.347	0.376	7.85	
80)	T	Hexachlorobenzene	0.471	0.461	0.454	0.459	0.390	0.386	0.381	0.369	0.366	0.415	10.74	
81)	T	Pentachlorophenol			0.164	0.199	0.209	0.222	0.249	0.270	0.262		*L	0.9984
82)	I	IS2_Acenaphthene-d10	----------ISTD----------											
83)	T	Dichloran				0.086	0.090	0.110	0.139	0.167	0.182		*Q	0.9979
84)	T	Pentachloronitrobenzene				0.108	0.105	0.130	0.146	0.161	0.174		*L	0.9957
85)	I	IS3_Acenaphthene-d10	----------ISTD----------											
86)	T	Atrazine		0.242	0.247	0.257	0.287	0.326	0.360	0.399			*Q	0.9990
87)	I	IS1_Phenanthrene-d10	----------ISTD----------											
88)	T	Phenanthrene	1.350	1.225	1.165	1.190	1.016	1.036	1.034	1.010	0.982	1.112	11.32	
89)	T	Anthracene	1.154	1.043	1.040	1.097	0.987	1.036	1.056	1.033	1.009	1.051	4.69	
90)	T	Carbazole	0.866	0.822	0.937	1.014	0.936	1.000	1.014	1.017	0.970	0.953	7.35	

Response Factor Report SV107

Method Path : I:\8270\SV107\240211ical\
Method File : FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Thu Mar 14 09:55:34 2024
Response Via : Initial Calibration

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D

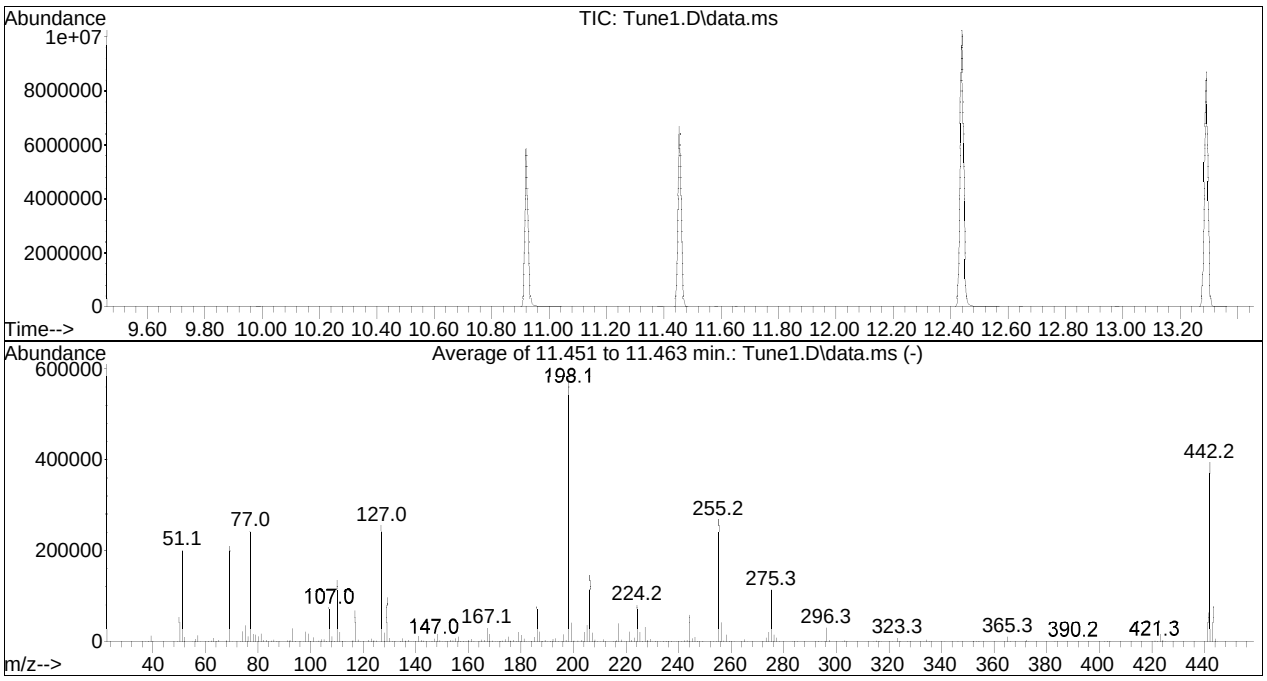
		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	Avg	%RSD
91)	T	Di-n-butylphthalate			0.794	0.917	0.905	1.055	1.125	1.172	1.129	1.014	14.07
92)	T	Fluoranthene	1.206	1.159	1.182	1.236	1.113	1.199	1.249	1.257	1.164	1.196	3.92
93)	T	Benzidine				0.500	0.550	0.680	0.732	0.705	0.708	0.646	14.90
94)	T	Pyrene	1.335	1.241	1.295	1.329	1.229	1.324	1.356	1.329	1.210	1.294	4.12
95)	S	4-Terphenyl-d14	0.913	0.834	0.901	0.938	0.828	0.872	0.893	0.897	0.849	0.881	4.24
96)	T	Butyl benzyl phthalate			0.248	0.291	0.325	0.421	0.479	0.542	0.557	*Q	0.9979
97)	I	IS2_Phenanthrene-d10	----------ISTD----------										
98)	T	Diphenamid	0.365	0.300	0.304	0.305	0.316	0.374	0.413	0.449	0.501	0.370	19.51
99)	I	IS3_Phenanthrene-d10	----------ISTD----------										
100)	T	n-Octadecane	0.331	0.326	0.322	0.338	0.368	0.380	0.411	0.428	0.411	0.368	11.20
101)	T	Parathion			0.043	0.041	0.047	0.056	0.074	0.099	0.112	*Q	0.9961
102)	T	3,3'-Dimethylbenzidine				0.324	0.428	0.513	0.647	0.764	0.738	*Q	0.9963
103)	I	IS1_Chrysene-d12	----------ISTD----------										
104)	T	Benzo[a]anthracene	1.528	1.364	1.346	1.397	1.280	1.303	1.365	1.326	1.225	1.348	6.30
105)	T	3,3'-Dichlorobenzidine		0.278	0.311	0.370	0.406	0.445	0.478	0.497	0.468	0.407	19.81
106)	T	Chrysene		1.588	1.531	1.498	1.330	1.286	1.275	1.221	1.127	1.357	12.05
107)	T	bis(2-Ethylhexyl)phthalate		0.398	0.421	0.514	0.611	0.691	0.785	0.827		*Q	0.9981
108)	T	Di-n-octylphthalate			0.592	0.693	0.849	1.048	1.276	1.412		*Q	0.9977
109)	T	Benzo(b)fluoranthene	1.180	1.087	1.136	1.228	1.115	1.114	1.224	1.230	1.201	1.169	4.80
110)	T	Benzo(k)fluoranthene	1.136	1.114	1.225	1.313	1.273	1.260	1.248	1.187	1.120	1.208	6.01
111)	T	Benzo(a)pyrene	0.866	0.905	1.008	1.094	1.065	1.101	1.144	1.149	1.097	1.048	9.68
112)	I	IS1_Perylene-d12	----------ISTD----------										
113)	T	Indeno(1,2,3-cd)pyrene	0.929	0.817	0.818	0.893	0.889	0.986	1.051	1.064	1.028	0.942	10.09
114)	T	Dibenzo[a,h]anthracene	0.887	0.872	0.984	1.037	0.967	1.031	1.064	1.047	0.998	0.987	6.97
115)	T	Benzo(g,h,i)perylene	1.070	0.997	1.067	1.061	0.952	1.015	1.032	0.923	0.801	0.991	8.85

(#) = Out of Range

Data Path : I:\8270\SV107\240211ical\
Data File : Tune1.D
Acq On : 12 Feb 2024 3:31 pm
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Tue Feb 13 09:47:34 2024



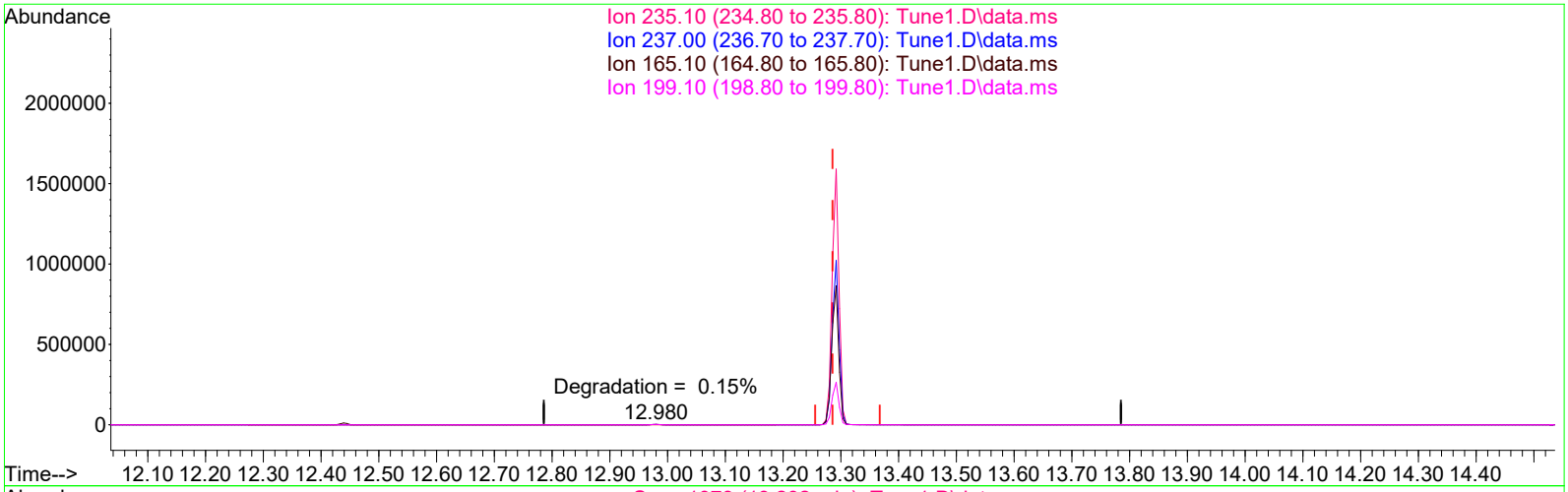
Spectrum Information: Average of 11.451 to 11.463 min.

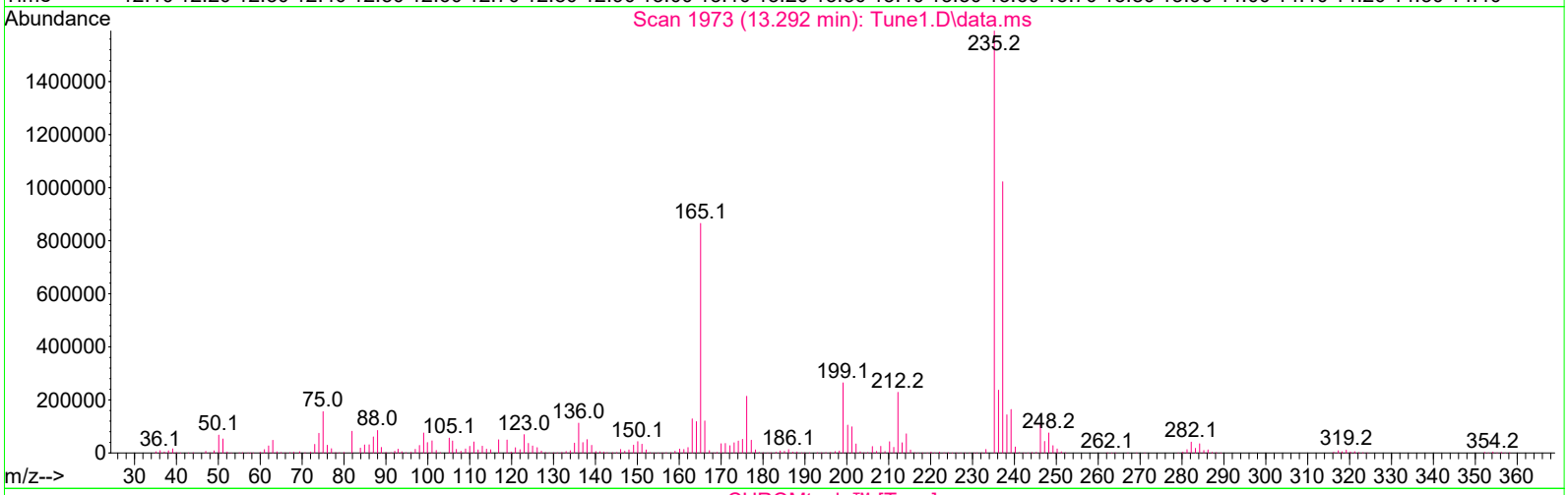
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.5	200363	PASS
68	69	0.00	2	1.6	3378	PASS
69	69	100	100	100.0	208587	PASS
70	69	0.00	2	0.5	1016	PASS
127	198	10	80	44.0	255248	PASS
197	198	0.00	2	0.7	4294	PASS
198	198	100	100	100.0	580715	PASS
199	198	5	9	6.7	39088	PASS
275	198	10	60	19.6	113536	PASS
365	198	1	100	1.8	10549	PASS
441	442	0.01	24	16.0	62653	PASS
442	198	50	100	67.6	392704	PASS
443	442	15	24	19.6	77093	PASS

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240211ical\
Data File : Tune1.D
Acq On : 12 Feb 2024 3:31 pm
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Feb 12 16:22:29 2024
Quant Method : I:\8270\SV107\240211ical\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sat Feb 10 10:31:24 2024
Response via : Initial Calibration





CHROMtools™ [Tune]

(6) DDT (T)

13.292min (+ 0.006) 217.58

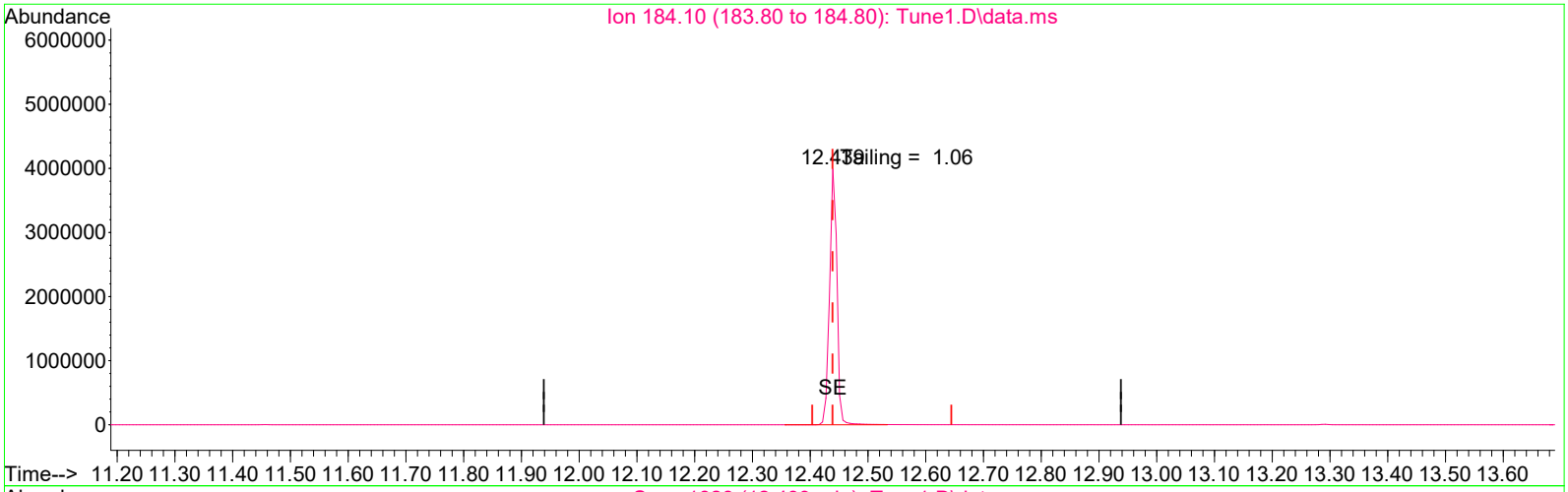
response 1326294

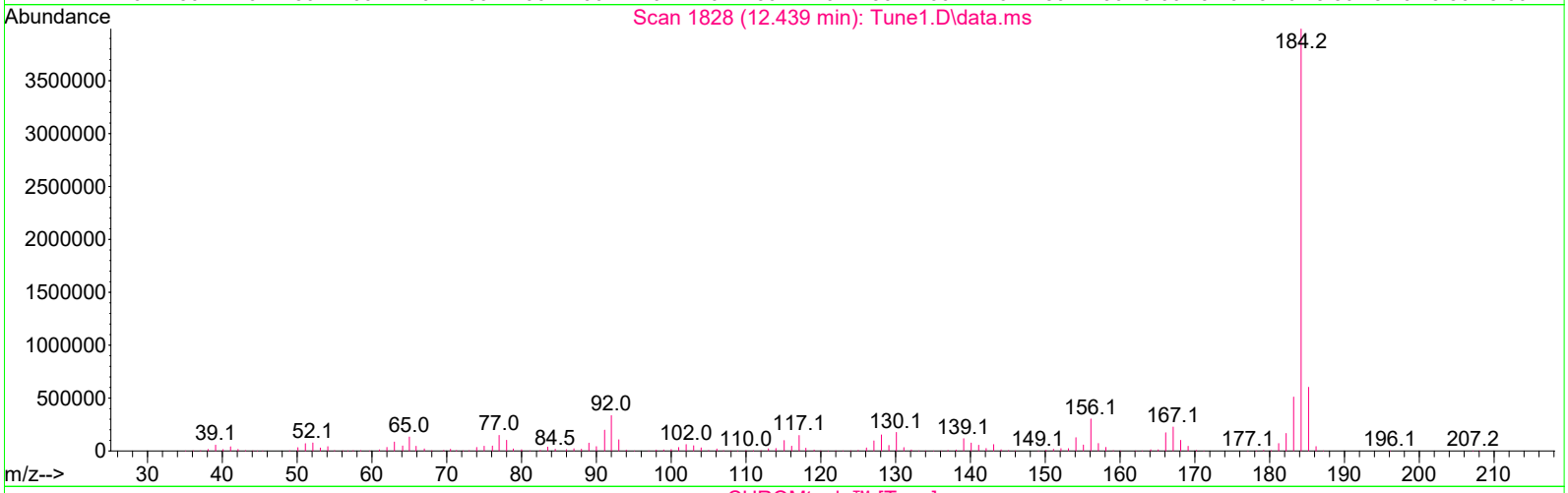
Ion	Exp%	Act%
235.10	100.00	100.00
237.00	63.80	64.19
165.10	51.00	54.95
199.10	15.70	16.67

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240211ical\
Data File : Tune1.D
Acq On : 12 Feb 2024 3:31 pm
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Feb 12 16:22:29 2024
Quant Method : I:\8270\SV107\240211ical\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sat Feb 10 10:31:24 2024
Response via : Initial Calibration





CHROMtools™ [Tune]

(3) Benzidine (T)

12.439min (0.000) 349.08

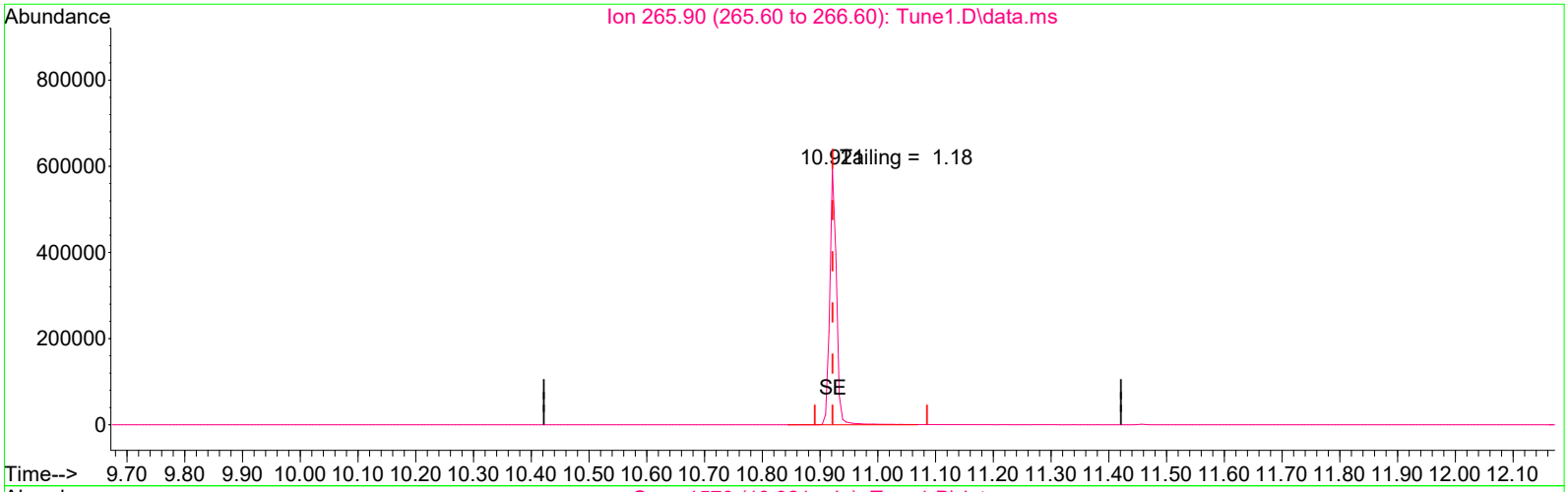
response 3553649

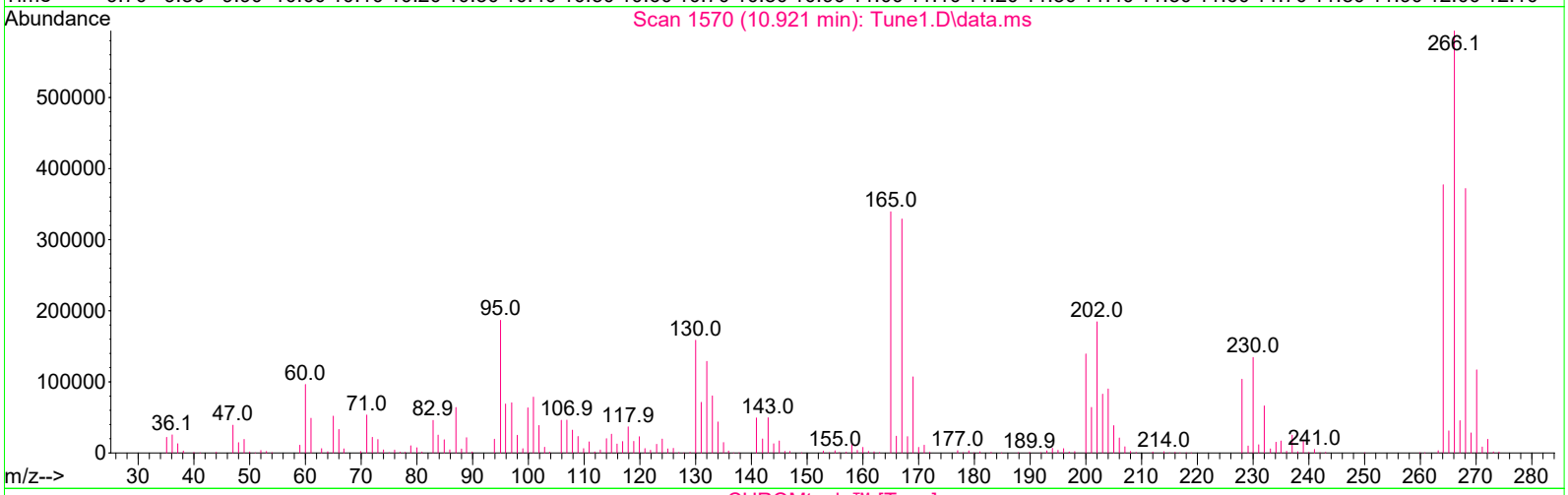
Ion	Exp%	Act%
184.10	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240211ical\
Data File : Tune1.D
Acq On : 12 Feb 2024 3:31 pm
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Feb 12 16:22:29 2024
Quant Method : I:\8270\SV107\240211ical\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sat Feb 10 10:31:24 2024
Response via : Initial Calibration





CHROMtools™ [Tune]

(1) Pentachlorophenol (T)

10.921min (-0.001) 226.83

response 476423

Ion	Exp%	Act%
265.90	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL9.D
Acq On : 12 Feb 2024 3:57 pm
Operator : SV107:mrg
Sample : IL1,32,,ABNL50 Lot# 10489
Misc : WG1886439
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 07:22:08 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	113383	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 117.55%			
34) IS1_Naphthalene-d8	7.892	136	425241	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 114.68%			
62) IS1_Acenaphthene-d10	9.657	164	272721	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 116.86%			
87) IS1_Phenanthrene-d10	11.098	188	515105	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 111.82%			
103) IS1_Chrysene-d12	13.751	240	499103	4.000	ug/ml	0.01
Standard Area 1 = 446698			Recovery = 111.73%			
112) IS1_Perylene-d12	15.209	264	489254	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 106.62%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.545	112	1646985	49.546	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 990.92%#			
7) Phenol-d6	6.098	99	2123650	50.381	ug/ml	0.02
Spiked Amount 5.000	Range 15 - 110		Recovery = 1007.62%#			
19) Nitrobenzene-d5	7.133	82	1950373	50.442	ug/ml	0.01
Spiked Amount 2.500	Range 30 - 130		Recovery = 2017.68%#			
45) 2-Fluorobiphenyl	9.022	172	4293739	43.878	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 1755.12%#			
78) 2,4,6-Tribromophenol	10.433	330	542309	53.215	ug/ml	0.01
Spiked Amount 5.000	Range 15 - 110		Recovery = 1064.30%#			
95) 4-Terphenyl-d14	12.692	244	5468777	48.225	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 1929.00%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.151	74	1128442	48.290	ug/ml#	61
3) Pyridine	2.175	79	1660959	48.901	ug/ml#	57
5) Aniline	6.063	93	2452888	48.977	ug/ml	99
6) 2-Chlorophenol	6.204	128	1834318	50.247	ug/ml	95
8) Phenol	6.116	94	2278837	49.592	ug/ml	96
9) Bis(2-chloroethyl)ether	6.198	93	1765272	46.288	ug/ml#	83
10) 1,3-Dichlorobenzene	6.392	146	2077277	45.907	ug/ml	98
11) 1,4-Dichlorobenzene	6.492	146	2102089	45.293	ug/ml	98
12) 1,2-Dichlorobenzene	6.663	146	1994698	45.099	ug/ml	98

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL9.D
Acq On : 12 Feb 2024 3:57 pm
Operator : SV107:mrg
Sample : IL1,32,,ABNL50 Lot# 10489
Misc : WG1886439
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 07:22:08 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.681	79	1588386	52.574	ug/ml	98
14) Bis(2-chloroisopropyl)...	6.857	45	2293304	44.537	ug/ml#	42
15) 2-Methylphenol	6.845	108	1655564	51.466	ug/ml	98
16) Hexachloroethane	7.051	117	792090	47.929	ug/ml#	68
17) n-Nitrosodi-n-propylamine	7.010	70	1350501	52.039	ug/ml#	92
18) 3-Methylphenol/4-Methy...	7.033	108	1787609	51.355	ug/ml	99
20) Nitrobenzene	7.151	77	2008702	50.732	ug/ml	98
21) Isophorone	7.439	82	3567650	52.284	ug/ml	97
22) 2-Nitrophenol	7.504	139	882455	54.259	ug/ml#	93
23) 2,4-Dimethylphenol	7.604	107	1423666	52.495	ug/ml	97
24) Bis(2-chloroethoxy)met...	7.704	93	2217451	48.167	ug/ml	98
25) 2,4-Dichlorophenol	7.769	162	1694755	53.380	ug/ml	95
26) 1,2,4-Trichlorobenzene	7.851	180	1850899	44.682	ug/ml	97
35) Naphthalene	7.916	128	5227804	43.819	ug/ml	97
36) Benzoic Acid	7.798	105	1381395M3	49.578	ug/ml	
37) 4-Chloroaniline	7.998	65	712948	48.795	ug/ml	94
38) Hexachlorobutadiene	8.075	225	1050460	43.411	ug/ml	98
39) p-Chloro-m-cresol	8.522	107	1720285	56.820	ug/ml	99
40) 2-Methylnaphthalene	8.633	142	3751606	47.335	ug/ml	97
41) 1-Methylnaphthalene	8.727	115	1281010	47.268	ug/ml	95
42) Hexachlorocyclopentadiene	8.798	237	919804	52.378	ug/ml	99
43) 2,4,6-Trichlorophenol	8.927	196	1346025	56.194	ug/ml	99
44) 2,4,5-Trichlorophenol	8.957	196	1450506	55.825	ug/ml	99
46) 2-Chloronaphthalene	9.116	162	3688908	46.310	ug/ml	97
47) 2-Nitroaniline	9.233	138	1221565	50.328	ug/ml	92
48) 1,4-Dinitrobenzene	9.380	168	586944	50.427	ug/ml	85
49) 1,3-Dinitrobenzene	9.451	168	682065	59.840	ug/ml#	1
50) Dimethyl phthalate	9.451	163	4301785	48.898	ug/ml#	97
51) Acenaphthylene	9.516	152	5887469	49.133	ug/ml	95
52) 2,6-Dinitrotoluene	9.486	165	957010	50.094	ug/ml#	83
53) 1,2-Dinitrobenzene	9.533	168	406742	49.772	ug/ml#	1
63) 3-Nitroaniline	9.645	138	1079795	52.325	ug/ml	99
64) Acenaphthene	9.692	154	3478330	45.247	ug/ml	91
65) 2,4-Dinitrophenol	9.745	184	551445	50.232	ug/ml	91
66) Dibenzofuran	9.863	168	5306593	42.043	ug/ml	99
67) 2,4-Dinitrotoluene	9.874	165	1380394	49.878	ug/ml	96
68) 4-Nitrophenol	9.822	65	927784	53.328	ug/ml#	92
69) 2,3,5,6-Tetrachlorophenol	9.951	232	1147656	53.158	ug/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL9.D
Acq On : 12 Feb 2024 3:57 pm
Operator : SV107:mrg
Sample : IL1,32,,ABNL50 Lot# 10489
Misc : WG1886439
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 07:22:08 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70) 2,3,4,6-Tetrachlorophenol	9.992	232	1125773	51.434	ug/ml	97
71) Diethyl phthalate	10.139	149	4342609	48.932	ug/ml	98
72) Fluorene	10.198	166	4284124	45.156	ug/ml	93
73) 4-Chlorophenyl phenyl ...	10.216	204	2080026	42.566	ug/ml	92
74) 4-Nitroaniline	10.245	138	1065303	51.236	ug/ml#	89
75) 4,6-Dinitro-o-cresol	10.274	198	727849	49.234	ug/ml#	66
76) NDPA/DPA	10.339	169	3639731	47.815	ug/ml	93
77) Azobenzene	10.374	77	4282397	47.868	ug/ml	96
79) 4-Bromophenyl phenyl e...	10.692	248	1181442	46.059	ug/ml	90
80) Hexachlorobenzene	10.727	284	1246070	44.016	ug/ml	90
81) Pentachlorophenol	10.921	266	893447	50.006	ug/ml	99
88) Phenanthrene	11.127	178	6320925	44.145	ug/ml	95
89) Anthracene	11.174	178	6495889	48.018	ug/ml	94
90) Carbazole	11.345	167	6243927	50.885	ug/ml	95
91) Di-n-butylphthalate	11.739	149	7269888	55.677	ug/ml	97
92) Fluoranthene	12.280	202	7495807	48.667	ug/ml#	93
93) Benzidine	12.439	184	4557693	54.805	ug/ml#	95
94) Pyrene	12.498	202	7793756	46.761	ug/ml	93
96) Butyl benzyl phthalate	13.221	149	3585525	49.546	ug/ml	92
104) Benzo(a)anthracene	13.739	228	7641811	45.422	ug/ml	95
105) 3,3'-Dichlorobenzidine	13.739	252	2916792	57.491	ug/ml#	97
106) Chrysene	13.780	228	7032080	41.529	ug/ml	93
107) Bis(2-ethylhexyl)phtha...	13.862	149	5252835	49.615	ug/ml#	96
108) Di-n-octylphthalate	14.556	149	8574443	49.371	ug/ml#	73
109) Benzo(b)fluoranthene	14.851	252	7494987	51.402	ug/ml	95
110) Benzo(k)fluoranthene	14.880	252	6987339	46.339	ug/ml	94
111) Benzo(a)pyrene	15.162	252	6842555	52.343	ug/ml	95
113) Indeno(1,2,3-cd)pyrene	16.209	276	6284052M6	54.560	ug/mL	
114) Dibenzo(a,h)anthracene	16.239	278	6101988	50.524	ug/ml	93
115) Benzo(ghi)perylene	16.462	276	4895846	40.398	ug/ml	93

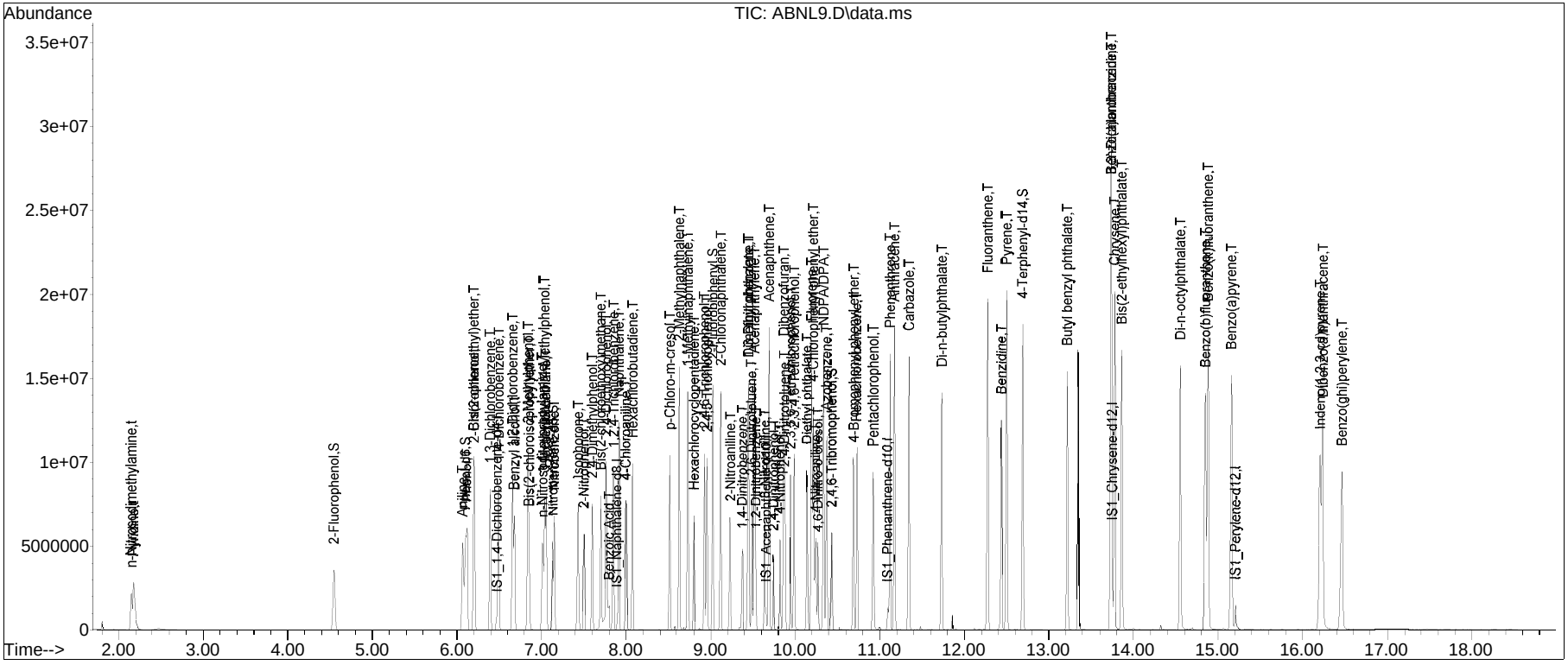
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL9.D
Acq On : 12 Feb 2024 3:57 pm
Operator : SV107:mrg
Sample : IL1,32,,ABNL50 Lot# 10489
Misc : WG1886439
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 07:22:08 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

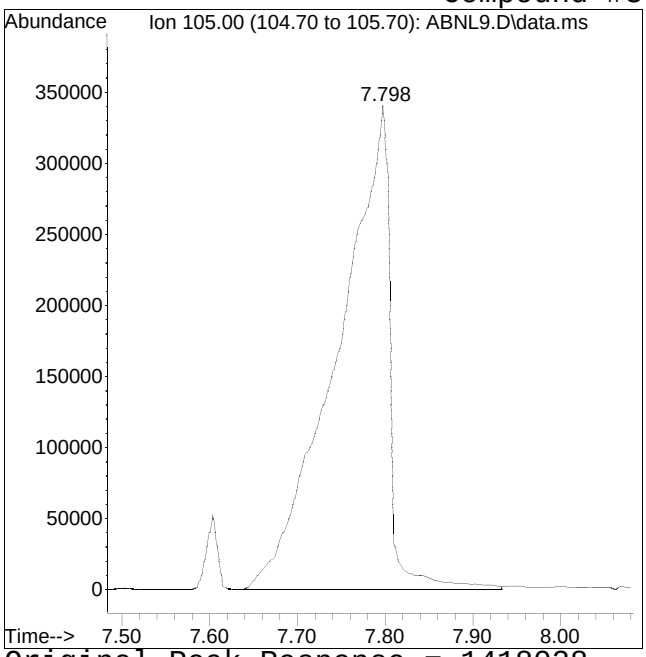
Sub List : ABNical - ABN ical sublistal\AP9L6.D•

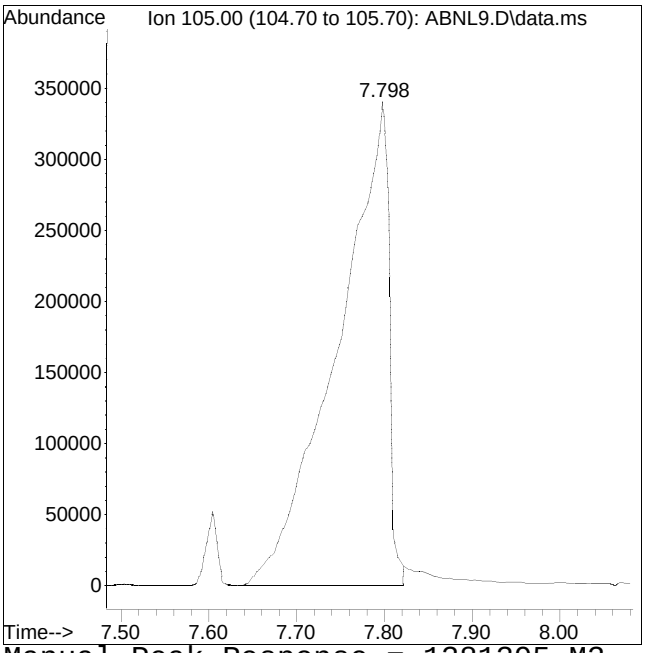


Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL9.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 3:57 pm Instrument : SV107
Sample : IL1,32,,ABNL50 Lot# 10489 Quant Date : 2/18/2024 7:22 am

Compound #36: Benzoic Acid





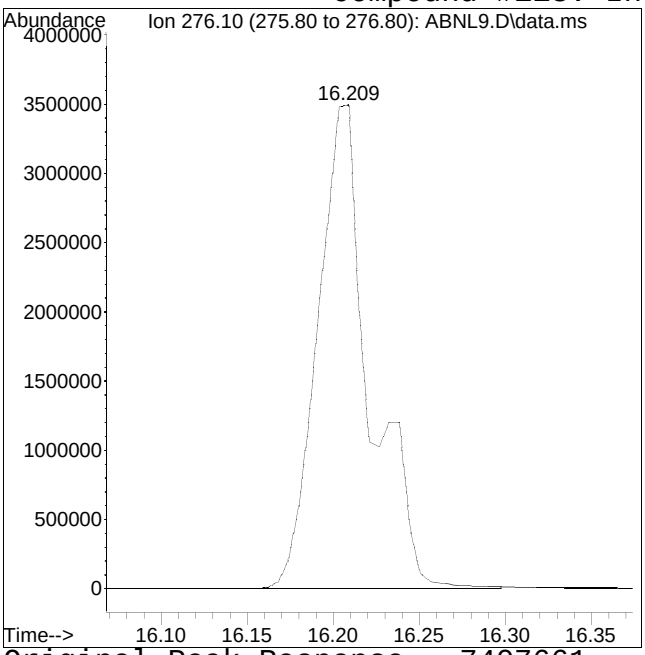
Original Peak Response = 1418028 Manual Peak Response = 1381395 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

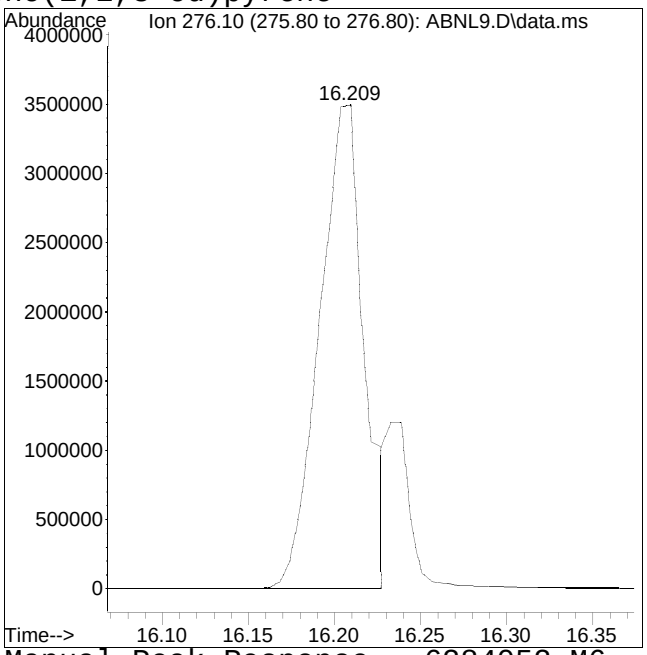
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL9.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 3:57 pm Instrument : SV107
Sample : IL1,32,,ABNL50 Lot# 10489 Quant Date : 2/18/2024 7:22 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 7407661



Manual Peak Response = 6284052 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL8.D
Acq On : 12 Feb 2024 4:22 pm
Operator : SV107:mrg
Sample : IL2,32,,ABNL25 Lot# 10490
Misc : WG1886439
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 18 07:21:56 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	113283	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 117.45%			
34) IS1_Naphthalene-d8	7.892	136	426146	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 114.92%			
62) IS1_Acenaphthene-d10	9.657	164	268939	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 115.24%			
87) IS1_Phenanthrene-d10	11.098	188	534354	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 116.00%			
103) IS1_Chrysene-d12	13.745	240	524791	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 117.48%			
112) IS1_Perylene-d12	15.204	264	523593	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 114.11%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.546	112	845053	25.444	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 508.88%#			
7) Phenol-d6	6.087	99	1087243	25.816	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 516.32%#			
19) Nitrobenzene-d5	7.128	82	1034151	26.769	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 1070.76%#			
45) 2-Fluorobiphenyl	9.016	172	2275590	23.205	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 928.20%#			
78) 2,4,6-Tribromophenol	10.428	330	283094	28.170	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 563.40%#			
95) 4-Terphenyl-d14	12.686	244	2995604	25.464	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 1018.56%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.152	74	612557	26.236	ug/ml#	61
3) Pyridine	2.181	79	888930	26.194	ug/ml#	59
5) Aniline	6.063	93	1262614	25.233	ug/ml	99
6) 2-Chlorophenol	6.198	128	942929	25.852	ug/ml	96
8) Phenol	6.104	94	1177995	25.658	ug/ml	96
9) Bis(2-chloroethyl)ether	6.192	93	906327	23.786	ug/ml#	81
10) 1,3-Dichlorobenzene	6.387	146	1067905	23.621	ug/ml	98
11) 1,4-Dichlorobenzene	6.487	146	1091157	23.532	ug/ml	97
12) 1,2-Dichlorobenzene	6.663	146	1034431	23.409	ug/ml	97

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL8.D
Acq On : 12 Feb 2024 4:22 pm
Operator : SV107:mrg
Sample : IL2,32,,ABNL25 Lot# 10490
Misc : WG1886439
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 18 07:21:56 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.675	79	814433	26.981	ug/ml	98
14) Bis(2-chloroisopropyl)...	6.851	45	1228086	23.871	ug/ml#	46
15) 2-Methylphenol	6.840	108	846448	26.336	ug/ml	98
16) Hexachloroethane	7.051	117	401986	24.345	ug/ml#	67
17) n-Nitrosodi-n-propylamine	7.004	70	693191	26.734	ug/ml#	92
18) 3-Methylphenol/4-Methy...	7.028	108	912762	26.245	ug/ml	98
20) Nitrobenzene	7.145	77	1041703	26.333	ug/ml	98
21) Isophorone	7.428	82	1860672	27.292	ug/ml	96
22) 2-Nitrophenol	7.498	139	467288	28.757	ug/ml	93
23) 2,4-Dimethylphenol	7.598	107	712306	26.288	ug/ml	97
24) Bis(2-chloroethoxy)met...	7.698	93	1155518	25.122	ug/ml	98
25) 2,4-Dichlorophenol	7.763	162	848946	26.763	ug/ml	96
26) 1,2,4-Trichlorobenzene	7.845	180	952049	23.003	ug/ml	97
35) Naphthalene	7.916	128	2738875	22.908	ug/ml	98
36) Benzoic Acid	7.757	105	708390	26.013	ug/ml	97
37) 4-Chloroaniline	7.998	65	378188	25.829	ug/ml	95
38) Hexachlorobutadiene	8.069	225	547148	22.563	ug/ml	98
39) p-Chloro-m-cresol	8.516	107	865872	28.539	ug/ml	99
40) 2-Methylnaphthalene	8.634	142	1895714	23.868	ug/ml	96
41) 1-Methylnaphthalene	8.728	115	652198	24.014	ug/ml	97
42) Hexachlorocyclopentadiene	8.798	237	461051	26.199	ug/ml	98
43) 2,4,6-Trichlorophenol	8.922	196	692086	28.832	ug/ml	99
44) 2,4,5-Trichlorophenol	8.951	196	723958	27.803	ug/ml	100
46) 2-Chloronaphthalene	9.110	162	1916507	24.008	ug/ml	97
47) 2-Nitroaniline	9.228	138	617489	25.523	ug/ml	93
48) 1,4-Dinitrobenzene	9.369	168	298088	25.721	ug/ml	85
49) 1,3-Dinitrobenzene	9.445	168	346029	30.294	ug/ml#	1
50) Dimethyl phthalate	9.439	163	2244629	25.460	ug/ml#	98
51) Acenaphthylene	9.516	152	3108888	25.890	ug/ml	97
52) 2,6-Dinitrotoluene	9.481	165	482655	25.274	ug/ml#	84
53) 1,2-Dinitrobenzene	9.522	168	209416	25.636	ug/ml#	1
63) 3-Nitroaniline	9.633	138	549779	27.016	ug/ml	99
64) Acenaphthene	9.686	154	1765794	23.293	ug/ml	91
65) 2,4-Dinitrophenol	9.733	184	275268	25.780	ug/ml	91
66) Dibenzofuran	9.863	168	2858785	22.968	ug/ml	97
67) 2,4-Dinitrotoluene	9.869	165	702608	25.812	ug/ml	96
68) 4-Nitrophenol	9.816	65	478050	27.864	ug/ml#	92
69) 2,3,5,6-Tetrachlorophenol	9.945	232	590089	27.717	ug/ml	100

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL8.D
Acq On : 12 Feb 2024 4:22 pm
Operator : SV107:mrg
Sample : IL2,32,,ABNL25 Lot# 10490
Misc : WG1886439
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 18 07:21:56 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70) 2,3,4,6-Tetrachlorophenol	9.986	232	582924	27.007	ug/ml	99
71) Diethyl phthalate	10.133	149	2214898	25.308	ug/ml	98
72) Fluorene	10.192	166	2276384	24.331	ug/ml	93
73) 4-Chlorophenyl phenyl ...	10.216	204	1097098	22.767	ug/ml	90
74) 4-Nitroaniline	10.228	138	562341	27.426	ug/ml#	88
75) 4,6-Dinitro-o-cresol	10.263	198	376618	26.899	ug/ml#	64
76) NDPA/DPA	10.333	169	1916934	25.537	ug/ml	94
77) Azobenzene	10.369	77	2289608	25.953	ug/ml	97
79) 4-Bromophenyl phenyl e...	10.686	248	593924	23.480	ug/ml#	90
80) Hexachlorobenzene	10.727	284	620362	22.222	ug/ml	90
81) Pentachlorophenol	10.922	266	454111	25.905	ug/ml	100
88) Phenanthrene	11.122	178	3374072	22.716	ug/ml	97
89) Anthracene	11.169	178	3450070	24.584	ug/ml	96
90) Carbazole	11.339	167	3396573	26.683	ug/ml	97
91) Di-n-butylphthalate	11.733	149	3915153	28.904	ug/ml	98
92) Fluoranthene	12.274	202	4197078	26.268	ug/ml#	93
93) Benzidine	12.433	184	2355178	27.300	ug/ml#	95
94) Pyrene	12.492	202	4437730	25.666	ug/ml	97
96) Butyl benzyl phthalate	13.221	149	1810766	26.145	ug/ml	93
104) Benzo(a)anthracene	13.733	228	4349888	24.590	ug/ml	97
105) 3,3'-Dichlorobenzidine	13.733	252	1630790	30.570	ug/ml#	98
106) Chrysene	13.774	228	4005871	22.499	ug/ml	96
107) Bis(2-ethylhexyl)phtha...	13.863	149	2713705	25.840	ug/ml#	95
108) Di-n-octylphthalate	14.551	149	4630611	26.468	ug/ml#	73
109) Benzo(b)fluoranthene	14.845	252	4035492	26.321	ug/ml#	95
110) Benzo(k)fluoranthene	14.874	252	3893770	24.559	ug/ml#	94
111) Benzo(a)pyrene	15.157	252	3770262	27.430	ug/ml#	94
113) Indeno(1,2,3-cd)pyrene	16.198	276	3483332M6	28.260	ug/mL	
114) Dibenzo(a,h)anthracene	16.227	278	3425905	26.506	ug/ml#	93
115) Benzo(ghi)perylene	16.451	276	3021560	23.297	ug/ml#	92

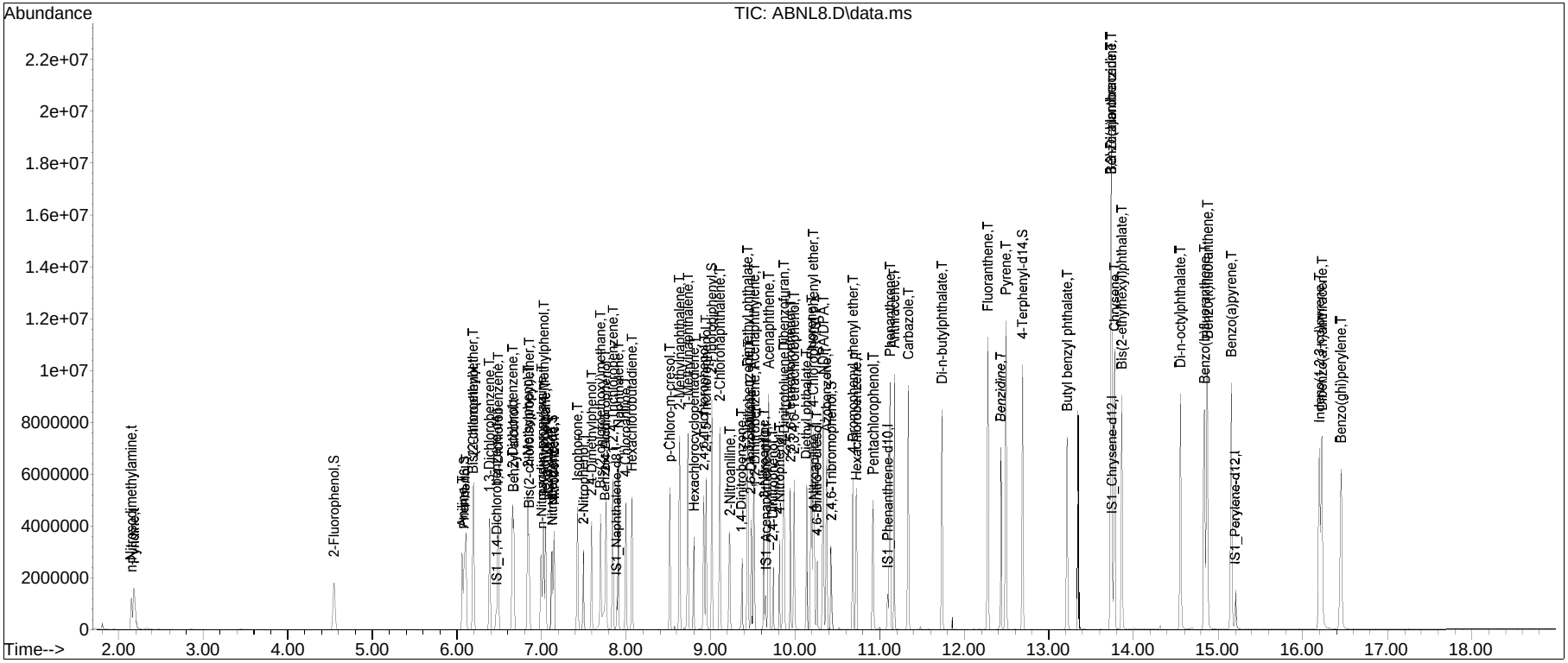
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL8.D
Acq On : 12 Feb 2024 4:22 pm
Operator : SV107:mrg
Sample : IL2,32,,ABNL25 Lot# 10490
Misc : WG1886439
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 18 07:21:56 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

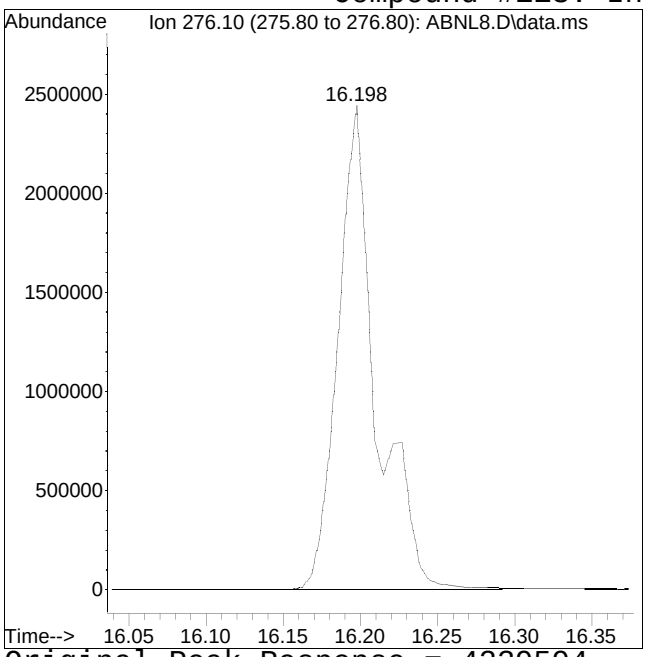
Sub List : ABNical - ABN ical sublistal\AP9L6.D•



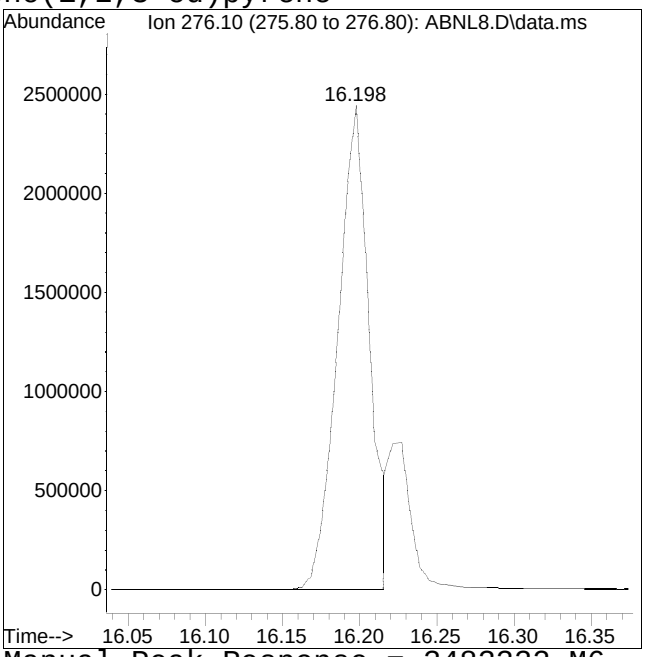
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL8.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 4:22 pm Instrument : SV107
Sample : IL2,32,,ABNL25 Lot# 10490 Quant Date : 2/18/2024 7:22 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 4239594



Manual Peak Response = 3483332 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL7.D
Acq On : 12 Feb 2024 4:48 pm
Operator : SV107:mrg
Sample : IL3,32,,ABNL10 Lot# 10491
Misc : WG1886439
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 07:21:44 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	105267	4.000	ug/ml	# 0.00
Standard Area 1 = 96456			Recovery = 109.13%			
34) IS1_Naphthalene-d8	7.892	136	396323	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 106.88%			
62) IS1_Acenaphthene-d10	9.651	164	243290	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 104.25%			
87) IS1_Phenanthrene-d10	11.092	188	479552	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 104.10%			
103) IS1_Chrysene-d12	13.739	240	461720	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 103.36%			
112) IS1_Perylene-d12	15.204	264	468273	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 102.05%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.540	112	317999	10.304	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 206.08%#			
7) Phenol-d6	6.081	99	408174	10.430	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 208.60%#			
19) Nitrobenzene-d5	7.122	82	383489	10.683	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 427.32%#			
45) 2-Fluorobiphenyl	9.016	172	860074	9.430	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 377.20%#			
78) 2,4,6-Tribromophenol	10.422	330	97089	10.680	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 213.60%#			
95) 4-Terphenyl-d14	12.686	244	1070917	10.144	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 405.76%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.146	74	225957	10.415	ug/ml#	61
3) Pyridine	2.175	79	346217	10.979	ug/ml#	60
5) Aniline	6.057	93	470838	10.126	ug/ml	99
6) 2-Chlorophenol	6.198	128	351849	10.381	ug/ml	95
8) Phenol	6.098	94	429312	10.063	ug/ml	98
9) Bis(2-chloroethyl)ether	6.193	93	342331	9.668	ug/ml#	81
10) 1,3-Dichlorobenzene	6.387	146	401248	9.551	ug/ml	97
11) 1,4-Dichlorobenzene	6.487	146	411752	9.556	ug/ml	98
12) 1,2-Dichlorobenzene	6.657	146	393830	9.591	ug/ml	97

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL7.D
Acq On : 12 Feb 2024 4:48 pm
Operator : SV107:mrg
Sample : IL3,32,,ABNL10 Lot# 10491
Misc : WG1886439
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 07:21:44 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.669	79	297741	10.615	ug/ml	99
14) Bis(2-chloroisopropyl)...	6.851	45	475312	9.942	ug/ml#	47
15) 2-Methylphenol	6.834	108	317604	10.634	ug/ml	99
16) Hexachloroethane	7.045	117	152040	9.909	ug/ml#	66
17) n-Nitrosodi-n-propylamine	6.998	70	259657	10.777	ug/ml#	90
18) 3-Methylphenol/4-Methy...	7.022	108	338127	10.463	ug/ml	99
20) Nitrobenzene	7.140	77	392017	10.664	ug/ml	97
21) Isophorone	7.422	82	685095	10.814	ug/ml	96
22) 2-Nitrophenol	7.498	139	165785	10.979	ug/ml	93
23) 2,4-Dimethylphenol	7.592	107	263347	10.459	ug/ml	96
24) Bis(2-chloroethoxy)met...	7.698	93	431583	10.098	ug/ml	100
25) 2,4-Dichlorophenol	7.757	162	319379	10.835	ug/ml	95
26) 1,2,4-Trichlorobenzene	7.845	180	368835	9.590	ug/ml	98
35) Naphthalene	7.910	128	1043071	9.381	ug/ml	99
36) Benzoic Acid	7.710	105	236646	9.831	ug/ml	97
37) 4-Chloroaniline	7.992	65	138430	10.166	ug/ml	93
38) Hexachlorobutadiene	8.069	225	208472	9.244	ug/ml	98
39) p-Chloro-m-cresol	8.516	107	311099	11.025	ug/ml	98
40) 2-Methylnaphthalene	8.628	142	714540	9.673	ug/ml	97
41) 1-Methylnaphthalene	8.722	115	243657	9.647	ug/ml	97
42) Hexachlorocyclopentadiene	8.798	237	167858	10.256	ug/ml	99
43) 2,4,6-Trichlorophenol	8.922	196	243376	10.902	ug/ml	99
44) 2,4,5-Trichlorophenol	8.951	196	262513	10.840	ug/ml	99
46) 2-Chloronaphthalene	9.110	162	715007	9.631	ug/ml	97
47) 2-Nitroaniline	9.222	138	214614	9.711	ug/ml	93
48) 1,4-Dinitrobenzene	9.369	168	100626	9.549	ug/ml	87
49) 1,3-Dinitrobenzene	9.439	168	120082	11.304	ug/ml#	1
50) Dimethyl phthalate	9.433	163	820249	10.004	ug/ml#	97
51) Acenaphthylene	9.510	152	1159020	10.378	ug/ml	98
52) 2,6-Dinitrotoluene	9.475	165	175714	9.971	ug/ml#	85
53) 1,2-Dinitrobenzene	9.516	168	75151	9.973	ug/ml#	1
63) 3-Nitroaniline	9.628	138	199389	10.831	ug/ml	98
64) Acenaphthene	9.686	154	653281	9.526	ug/ml	89
65) 2,4-Dinitrophenol	9.733	184	87085	9.481	ug/ml	93
66) Dibenzofuran	9.857	168	1077832	9.572	ug/ml	95
67) 2,4-Dinitrotoluene	9.863	165	243057	9.957	ug/ml	96
68) 4-Nitrophenol	9.810	65	167257	10.777	ug/ml#	92
69) 2,3,5,6-Tetrachlorophenol	9.945	232	216711	11.252	ug/ml	98

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL7.D
Acq On : 12 Feb 2024 4:48 pm
Operator : SV107:mrg
Sample : IL3,32,,ABNL10 Lot# 10491
Misc : WG1886439
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 07:21:44 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70)	2,3,4,6-Tetrachlorophenol	9.986	232	214679	10.995	ug/ml	97
71)	Diethyl phthalate	10.128	149	796456	10.060	ug/ml	99
72)	Fluorene	10.192	166	830453	9.812	ug/ml	94
73)	4-Chlorophenyl phenyl ...	10.216	204	403101	9.247	ug/ml	90
74)	4-Nitroaniline	10.216	138	206539	11.135	ug/ml	87
75)	4,6-Dinitro-o-cresol	10.257	198	120157	9.896	ug/ml#	64
76)	NDPA/DPA	10.328	169	688106	10.133	ug/ml	94
77)	Azobenzene	10.363	77	831659	10.421	ug/ml	98
79)	4-Bromophenyl phenyl e...	10.686	248	215223	9.405	ug/ml	89
80)	Hexachlorobenzene	10.722	284	231547	9.169	ug/ml	88
81)	Pentachlorophenol	10.922	266	151724	9.738	ug/ml	99
88)	Phenanthrene	11.116	178	1239083	9.295	ug/ml	99
89)	Anthracene	11.169	178	1266266	10.054	ug/ml	98
90)	Carbazole	11.333	167	1215228	10.638	ug/ml	98
91)	Di-n-butylphthalate	11.733	149	1348877	11.096	ug/ml	99
92)	Fluoranthene	12.274	202	1496889	10.439	ug/ml#	93
93)	Benzidine	12.427	184	877481	11.334	ug/ml#	94
94)	Pyrene	12.486	202	1625248	10.474	ug/ml	99
96)	Butyl benzyl phthalate	13.216	149	573688	9.976	ug/ml	93
104)	Benzo(a)anthracene	13.727	228	1575737	10.124	ug/ml	98
105)	3,3'-Dichlorobenzidine	13.733	252	551561	11.752	ug/ml#	98
106)	Chrysene	13.768	228	1471852	9.396	ug/ml	98
107)	Bis(2-ethylhexyl)phtha...	13.863	149	906034	10.287	ug/ml#	94
108)	Di-n-octylphthalate	14.551	149	1472714	10.084	ug/ml#	73
109)	Benzo(b)fluoranthene	14.839	252	1412988	10.475	ug/ml#	95
110)	Benzo(k)fluoranthene	14.868	252	1440880	10.329	ug/ml#	94
111)	Benzo(a)pyrene	15.151	252	1320516	10.919	ug/ml#	95
113)	Indeno(1,2,3-cd)pyrene	16.192	276	1229885M6	11.157	ug/mL	
114)	Dibenzo(a,h)anthracene	16.221	278	1245950	10.779	ug/ml#	93
115)	Benzo(ghi)perylene	16.445	276	1207834	10.413	ug/ml#	91

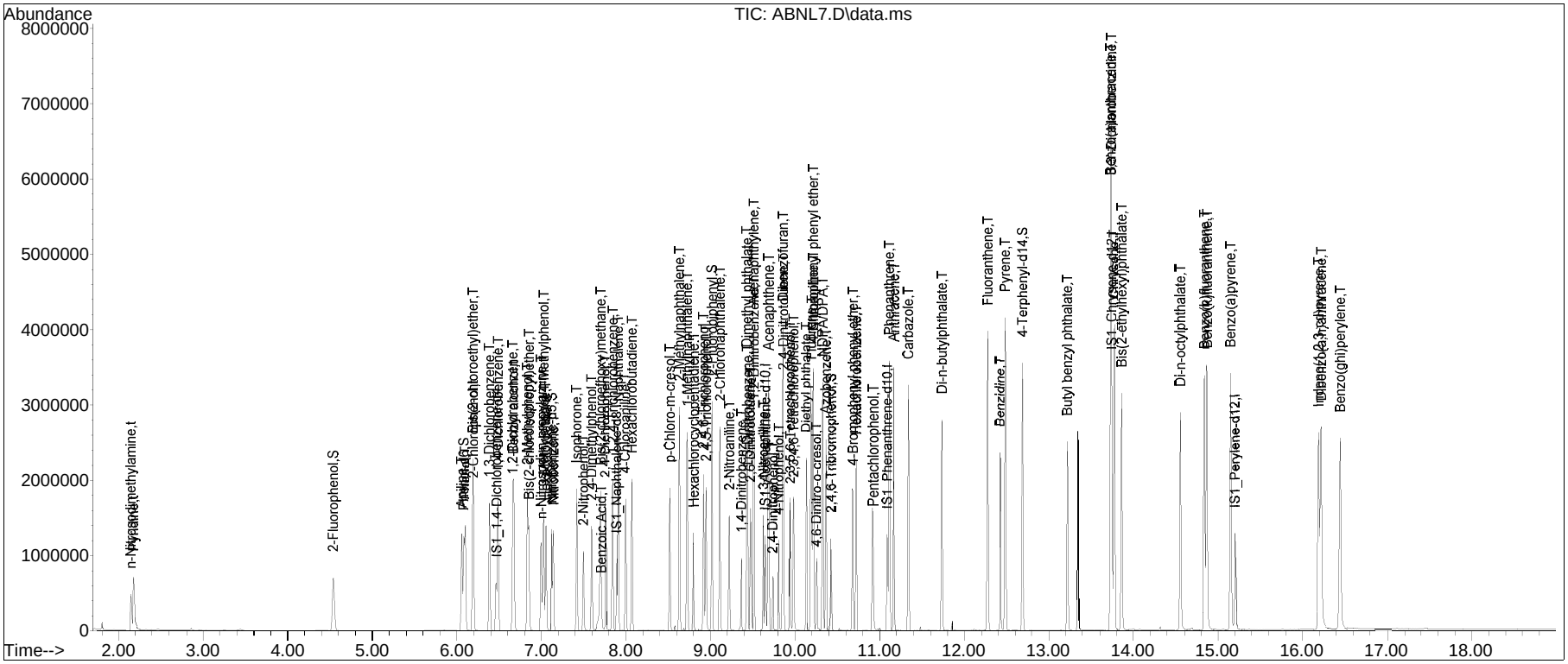
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL7.D
Acq On : 12 Feb 2024 4:48 pm
Operator : SV107:mrg
Sample : IL3,32,,ABNL10 Lot# 10491
Misc : WG1886439
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 07:21:44 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

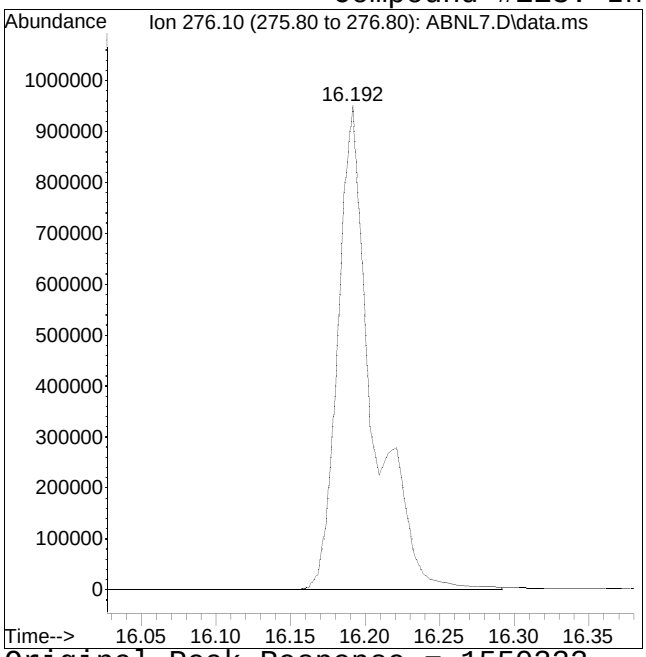
Sub List : ABNical - ABN ical sublistal\AP9L6.D•



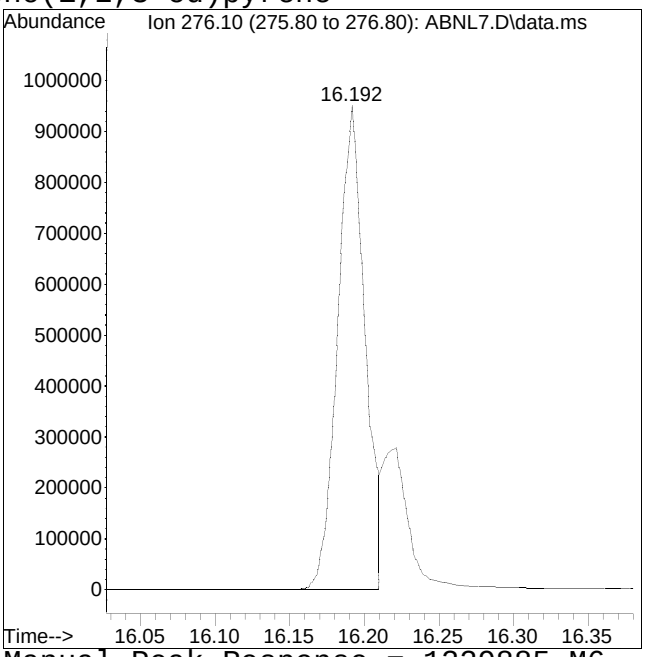
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL7.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 4:48 pm Instrument : SV107
Sample : IL3,32,,ABNL10 Lot# 10491 Quant Date : 2/18/2024 7:22 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 1550333



Manual Peak Response = 1229885 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL6.D
Acq On : 12 Feb 2024 5:14 pm
Operator : SV107:mrg
Sample : IL4,32,,ABNL5 Lot# 10492
Misc : WG1886439
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 07:21:33 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.463	152	96456	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 100.00%			
34) IS1_Naphthalene-d8	7.892	136	370815	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 100.00%			
62) IS1_Acenaphthene-d10	9.651	164	233374	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 100.00%			
87) IS1_Phenanthrene-d10	11.092	188	460653	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 100.00%			
103) IS1_Chrysene-d12	13.739	240	446698	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 100.00%			
112) IS1_Perylene-d12	15.204	264	458865	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 100.00%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.539	112	149524	5.287	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 105.74%			
7) Phenol-d6	6.081	99	191955	5.353	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 107.06%			
19) Nitrobenzene-d5	7.122	82	177834	5.406	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 216.24%#			
45) 2-Fluorobiphenyl	9.016	172	414511	4.858	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 194.32%#			
78) 2,4,6-Tribromophenol	10.421	330	45315	5.196	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 103.92%			
95) 4-Terphenyl-d14	12.686	244	502370	4.954	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 198.16%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.151	74	103892	5.226	ug/ml#	63
3) Pyridine	2.181	79	163134	5.646	ug/ml#	61
5) Aniline	6.057	93	220462	5.174	ug/ml	99
6) 2-Chlorophenol	6.192	128	164678	5.303	ug/ml	94
8) Phenol	6.098	94	204376	5.228	ug/ml	98
9) Bis(2-chloroethyl)ether	6.192	93	160776	4.956	ug/ml#	81
10) 1,3-Dichlorobenzene	6.386	146	193011	5.014	ug/ml	97
11) 1,4-Dichlorobenzene	6.486	146	195153	4.943	ug/ml	97
12) 1,2-Dichlorobenzene	6.657	146	188442	5.008	ug/ml	98

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL6.D
Acq On : 12 Feb 2024 5:14 pm
Operator : SV107:mrg
Sample : IL4,32,,ABNL5 Lot# 10492
Misc : WG1886439
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 07:21:33 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.669	79	136070	5.294	ug/ml	99
14) Bis(2-chloroisopropyl)...	6.851	45	223706	5.107	ug/ml#	47
15) 2-Methylphenol	6.833	108	146218	5.343	ug/ml	98
16) Hexachloroethane	7.045	117	71956	5.118	ug/ml#	66
17) n-Nitrosodi-n-propylamine	6.992	70	118169	5.353	ug/ml#	91
18) 3-Methylphenol/4-Methy...	7.022	108	160607	5.424	ug/ml	99
20) Nitrobenzene	7.139	77	180354	5.354	ug/ml	96
21) Isophorone	7.422	82	318277	5.483	ug/ml	95
22) 2-Nitrophenol	7.498	139	73392	5.305	ug/ml	94
23) 2,4-Dimethylphenol	7.592	107	122870	5.326	ug/ml	96
24) Bis(2-chloroethoxy)met...	7.698	93	204495	5.222	ug/ml	99
25) 2,4-Dichlorophenol	7.757	162	150545	5.574	ug/ml	96
26) 1,2,4-Trichlorobenzene	7.845	180	173051	4.911	ug/ml	96
35) Naphthalene	7.910	128	499397	4.800	ug/ml	99
36) Benzoic Acid	7.680	105	97915	4.710	ug/ml	99
37) 4-Chloroaniline	7.992	65	66876	5.249	ug/ml	97
38) Hexachlorobutadiene	8.069	225	100750	4.775	ug/ml	97
39) p-Chloro-m-cresol	8.516	107	143351	5.430	ug/ml	98
40) 2-Methylnaphthalene	8.627	142	339999	4.919	ug/ml	97
41) 1-Methylnaphthalene	8.722	115	114811	4.858	ug/ml	97
42) Hexachlorocyclopentadiene	8.798	237	76684	5.008	ug/ml	99
43) 2,4,6-Trichlorophenol	8.922	196	107651	5.154	ug/ml	97
44) 2,4,5-Trichlorophenol	8.951	196	123793	5.464	ug/ml	98
46) 2-Chloronaphthalene	9.110	162	338348	4.871	ug/ml	97
47) 2-Nitroaniline	9.222	138	94332	4.709	ug/ml	94
48) 1,4-Dinitrobenzene	9.363	168	43647	4.606	ug/ml	89
49) 1,3-Dinitrobenzene	9.433	168	52957	5.328	ug/ml#	1
50) Dimethyl phthalate	9.427	163	401349	5.232	ug/ml#	98
51) Acenaphthylene	9.510	152	544414	5.210	ug/ml	98
52) 2,6-Dinitrotoluene	9.474	165	81054	4.980	ug/ml#	86
53) 1,2-Dinitrobenzene	9.510	168	34227	4.923	ug/ml#	1
63) 3-Nitroaniline	9.627	138	93550	5.298	ug/ml	99
64) Acenaphthene	9.686	154	311654	4.738	ug/ml	91
65) 2,4-Dinitrophenol	9.727	184	36857	4.582	ug/ml	91
66) Dibenzofuran	9.857	168	511073	4.732	ug/ml	95
67) 2,4-Dinitrotoluene	9.863	165	108320	4.701	ug/ml	96
68) 4-Nitrophenol	9.804	65	74856	5.028	ug/ml#	92
69) 2,3,5,6-Tetrachlorophenol	9.939	232	99448	5.383	ug/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL6.D
Acq On : 12 Feb 2024 5:14 pm
Operator : SV107:mrg
Sample : IL4,32,,ABNL5 Lot# 10492
Misc : WG1886439
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 07:21:33 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70)	2,3,4,6-Tetrachlorophenol	9.986	232	97650	5.214	ug/ml	98
71)	Diethyl phthalate	10.127	149	370162	4.874	ug/ml	98
72)	Fluorene	10.192	166	389368	4.796	ug/ml	93
73)	4-Chlorophenyl phenyl ...	10.210	204	192969	4.615	ug/ml	90
74)	4-Nitroaniline	10.216	138	90978	5.113	ug/ml	87
75)	4,6-Dinitro-o-cresol	10.251	198	50543	4.494	ug/ml#	66
76)	NDPA/DPA	10.327	169	324149	4.976	ug/ml	94
77)	Azobenzene	10.363	77	395062	5.161	ug/ml	98
79)	4-Bromophenyl phenyl e...	10.686	248	106271	4.841	ug/ml#	89
80)	Hexachlorobenzene	10.721	284	112711	4.653	ug/ml	88
81)	Pentachlorophenol	10.916	266	64828	4.487	ug/ml	98
88)	Phenanthrene	11.116	178	596280	4.657	ug/ml	99
89)	Anthracene	11.168	178	596665	4.932	ug/ml	98
90)	Carbazole	11.333	167	576024	5.249	ug/ml	98
91)	Di-n-butylphthalate	11.733	149	607619	5.204	ug/ml	99
92)	Fluoranthene	12.274	202	690246	5.011	ug/ml#	93
93)	Benzidine	12.427	184	391271	5.261	ug/ml#	94
94)	Pyrene	12.486	202	762145	5.113	ug/ml	99
96)	Butyl benzyl phthalate	13.215	149	242435	4.672	ug/ml	93
104)	Benzo(a)anthracene	13.727	228	727769	4.833	ug/ml	99
105)	3,3'-Dichlorobenzidine	13.727	252	248403	5.470	ug/ml#	97
106)	Chrysene	13.762	228	717791	4.736	ug/ml	98
107)	Bis(2-ethylhexyl)phtha...	13.862	149	385866	4.687	ug/ml#	93
108)	Di-n-octylphthalate	14.551	149	584962	4.423	ug/ml#	73
109)	Benzo(b)fluoranthene	14.833	252	622136	4.767	ug/ml#	95
110)	Benzo(k)fluoranthene	14.862	252	703681	5.214	ug/ml#	95
111)	Benzo(a)pyrene	15.145	252	614697	5.254	ug/ml#	94
113)	Indeno(1,2,3-cd)pyrene	16.186	276	565274M6	5.233	ug/mL	
114)	Dibenzo(a,h)anthracene	16.215	278	591322	5.220	ug/ml#	93
115)	Benzo(ghi)perylene	16.439	276	581917	5.120	ug/ml#	90

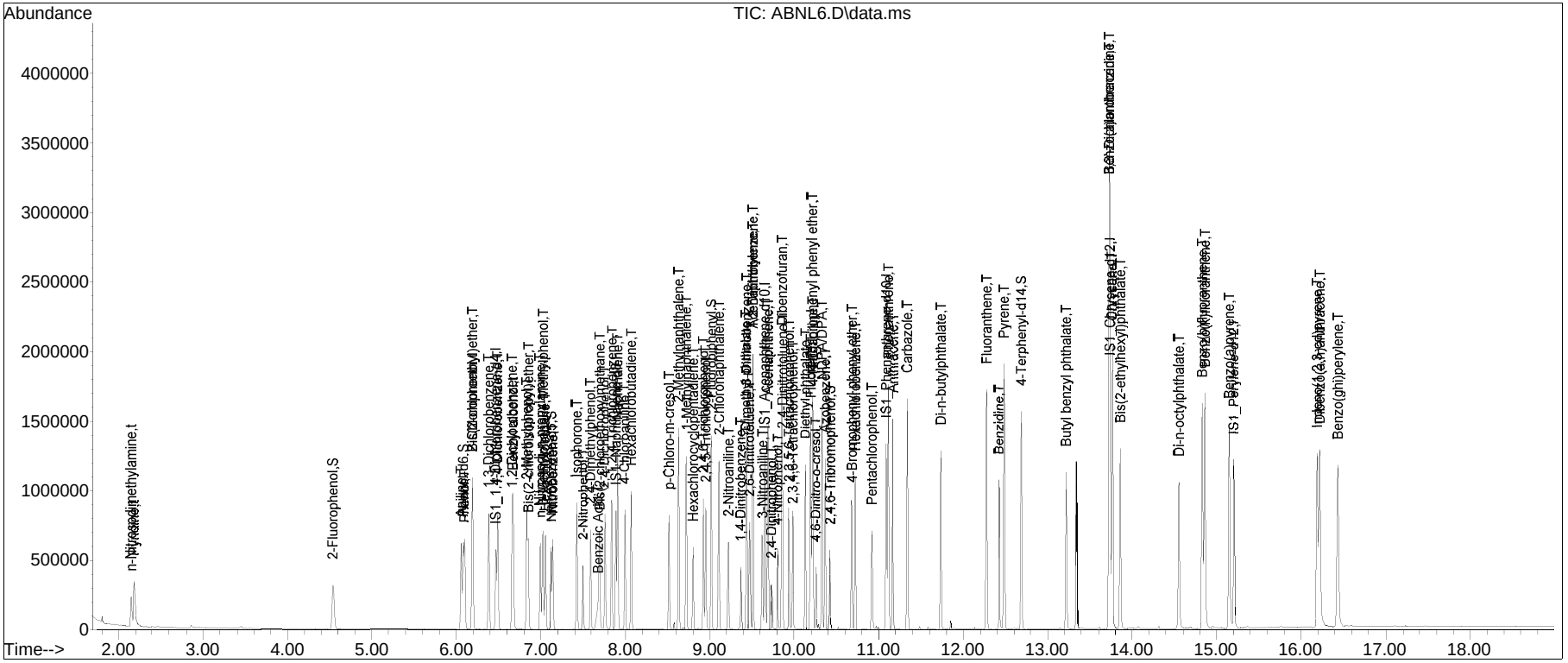
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL6.D
Acq On : 12 Feb 2024 5:14 pm
Operator : SV107:mrg
Sample : IL4,32,,ABNL5 Lot# 10492
Misc : WG1886439
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 07:21:33 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

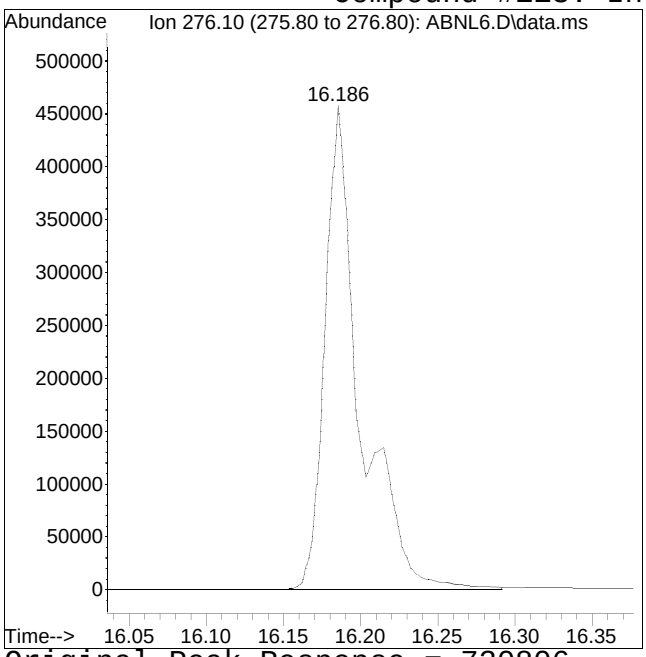
Sub List : ABNical - ABN ical sublistal\AP9L6.D•



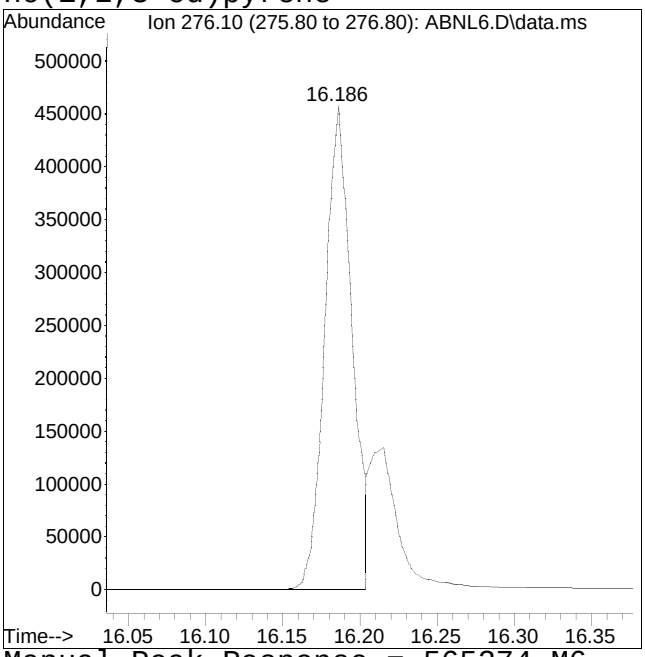
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL6.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 5:14 pm Instrument : SV107
Sample : IL4,32,,ABNL5 Lot# 10492 Quant Date : 2/18/2024 7:21 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 730806



Manual Peak Response = 565274 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL5.D
Acq On : 12 Feb 2024 5:40 pm
Operator : SV107:mrg
Sample : IL5,32,,ABNL2.5 Lot# 10493
Misc : WG1886439
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 18 07:21:21 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	102512	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 106.28%			
34) IS1_Naphthalene-d8	7.892	136	388631	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 104.80%			
62) IS1_Acenaphthene-d10	9.651	164	235649	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 100.97%			
87) IS1_Phenanthrene-d10	11.092	188	480609	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 104.33%			
103) IS1_Chrysene-d12	13.733	240	418759	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 93.75%			
112) IS1_Perylene-d12	15.204	264	451089	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 98.31%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.540	112	74168	2.468	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 49.36%			
7) Phenol-d6	6.081	99	94510	2.480	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 49.60%			
19) Nitrobenzene-d5	7.122	82	83553	2.390	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 95.60%			
45) 2-Fluorobiphenyl	9.010	172	210144	2.350	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 94.00%			
78) 2,4,6-Tribromophenol	10.422	330	22527	2.558	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 51.16%			
95) 4-Terphenyl-d14	12.686	244	248736	2.351	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 94.04%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.152	74	53291	2.522	ug/ml#	63
3) Pyridine	2.187	79	80335	2.616	ug/ml#	60
5) Aniline	6.057	93	106208	2.346	ug/ml	99
6) 2-Chlorophenol	6.192	128	81580	2.472	ug/ml	96
8) Phenol	6.092	94	101084	2.433	ug/ml	98
9) Bis(2-chloroethyl)ether	6.192	93	81166	2.354	ug/ml#	81
10) 1,3-Dichlorobenzene	6.387	146	99021	2.420	ug/ml	98
11) 1,4-Dichlorobenzene	6.487	146	100585	2.397	ug/ml	97
12) 1,2-Dichlorobenzene	6.657	146	96686	2.418	ug/ml	97

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL5.D
Acq On : 12 Feb 2024 5:40 pm
Operator : SV107:mrg
Sample : IL5,32,,ABNL2.5 Lot# 10493
Misc : WG1886439
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 18 07:21:21 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.669	79	65683	2.405	ug/ml	99
14) Bis(2-chloroisopropyl)...	6.851	45	111522	2.395	ug/ml#	47
15) 2-Methylphenol	6.834	108	71722	2.466	ug/ml	98
16) Hexachloroethane	7.045	117	35687	2.388	ug/ml#	64
17) n-Nitrosodi-n-propylamine	6.992	70	56255	2.398	ug/ml#	90
18) 3-Methylphenol/4-Methy...	7.022	108	76546	2.432	ug/ml	99
20) Nitrobenzene	7.139	77	88951	2.485	ug/ml	95
21) Isophorone	7.422	82	152617	2.474	ug/ml	96
22) 2-Nitrophenol	7.498	139	33678	2.290	ug/ml#	93
23) 2,4-Dimethylphenol	7.592	107	60003	2.447	ug/ml	96
24) Bis(2-chloroethoxy)met...	7.698	93	100742	2.420	ug/ml#	97
25) 2,4-Dichlorophenol	7.757	162	70411	2.453	ug/ml	95
26) 1,2,4-Trichlorobenzene	7.845	180	87625	2.340	ug/ml	97
35) Naphthalene	7.910	128	254256	2.332	ug/ml	99
36) Benzoic Acid	7.669	105	39640	2.207	ug/ml	98
37) 4-Chloroaniline	7.992	65	32723	2.451	ug/ml	96
38) Hexachlorobutadiene	8.069	225	51028	2.307	ug/ml	97
39) p-Chloro-m-cresol	8.516	107	67528	2.441	ug/ml	99
40) 2-Methylnaphthalene	8.628	142	169804	2.344	ug/ml	97
41) 1-Methylnaphthalene	8.722	115	57539	2.323	ug/ml	97
42) Hexachlorocyclopentadiene	8.798	237	37138	2.314	ug/ml	97
43) 2,4,6-Trichlorophenol	8.922	196	53600	2.448	ug/ml	99
44) 2,4,5-Trichlorophenol	8.951	196	58983	2.484	ug/ml	98
46) 2-Chloronaphthalene	9.110	162	170929	2.348	ug/ml	96
47) 2-Nitroaniline	9.222	138	40840	2.107	ug/ml	95
48) 1,4-Dinitrobenzene	9.363	168	18456	2.058	ug/ml	93
49) 1,3-Dinitrobenzene	9.433	168	22528	2.163	ug/ml#	1
50) Dimethyl phthalate	9.427	163	192931	2.400	ug/ml#	98
51) Acenaphthylene	9.510	152	264465	2.415	ug/ml	99
52) 2,6-Dinitrotoluene	9.475	165	36505	2.212	ug/ml#	87
53) 1,2-Dinitrobenzene	9.510	168	15497	2.202	ug/ml#	1
63) 3-Nitroaniline	9.622	138	42580	2.388	ug/ml	100
64) Acenaphthene	9.680	154	155601	2.343	ug/ml	92
65) 2,4-Dinitrophenol	9.727	184	14371	2.208	ug/ml	94
66) Dibenzofuran	9.857	168	253195	2.322	ug/ml	96
67) 2,4-Dinitrotoluene	9.863	165	48660	2.169	ug/ml	91
68) 4-Nitrophenol	9.804	65	33626	2.237	ug/ml#	92
69) 2,3,5,6-Tetrachlorophenol	9.939	232	47074	2.523	ug/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL5.D
Acq On : 12 Feb 2024 5:40 pm
Operator : SV107:mrg
Sample : IL5,32,,ABNL2.5 Lot# 10493
Misc : WG1886439
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 18 07:21:21 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70) 2,3,4,6-Tetrachlorophenol	9.980	232	49186	2.601	ug/ml	99
71) Diethyl phthalate	10.127	149	183455	2.392	ug/ml	98
72) Fluorene	10.186	166	194827	2.377	ug/ml	92
73) 4-Chlorophenyl phenyl ...	10.210	204	98449	2.332	ug/ml	89
74) 4-Nitroaniline	10.210	138	42942	2.390	ug/ml#	89
75) 4,6-Dinitro-o-cresol	10.251	198	22214	2.079	ug/ml#	64
76) NDPA/DPA	10.327	169	158940	2.416	ug/ml	94
77) Azobenzene	10.363	77	193309	2.501	ug/ml	97
79) 4-Bromophenyl phenyl e...	10.686	248	51711	2.333	ug/ml#	88
80) Hexachlorobenzene	10.722	284	57432	2.348	ug/ml	89
81) Pentachlorophenol	10.916	266	30815	2.255	ug/ml	99
88) Phenanthrene	11.116	178	305208	2.285	ug/ml	99
89) Anthracene	11.169	178	296346	2.348	ug/ml	98
90) Carbazole	11.333	167	281076	2.455	ug/ml	98
91) Di-n-butylphthalate	11.733	149	271822	2.231	ug/ml	99
92) Fluoranthene	12.274	202	334319	2.326	ug/ml#	93
93) Benzidine	12.427	184	165245	2.130	ug/ml#	94
94) Pyrene	12.486	202	369305	2.375	ug/ml	99
96) Butyl benzyl phthalate	13.215	149	97555	2.042	ug/ml	93
104) Benzo(a)anthracene	13.727	228	335093	2.374	ug/ml	99
105) 3,3'-Dichlorobenzidine	13.727	252	106264	2.496	ug/ml#	97
106) Chrysene	13.762	228	348209	2.451	ug/ml	99
107) Bis(2-ethylhexyl)phtha...	13.863	149	159870	2.180	ug/ml#	93
108) Di-n-octylphthalate	14.551	149	222219	2.047	ug/ml#	74
109) Benzo(b)fluoranthene	14.833	252	291937	2.386	ug/ml#	95
110) Benzo(k)fluoranthene	14.862	252	333082	2.633	ug/ml#	95
111) Benzo(a)pyrene	15.145	252	278706	2.541	ug/ml#	94
113) Indeno(1,2,3-cd)pyrene	16.186	276	250678	2.361	ug/mL#	91
114) Dibenzo(a,h)anthracene	16.215	278	272564	2.448	ug/ml#	92
115) Benzo(ghi)perylene	16.433	276	268433	2.402	ug/ml#	90

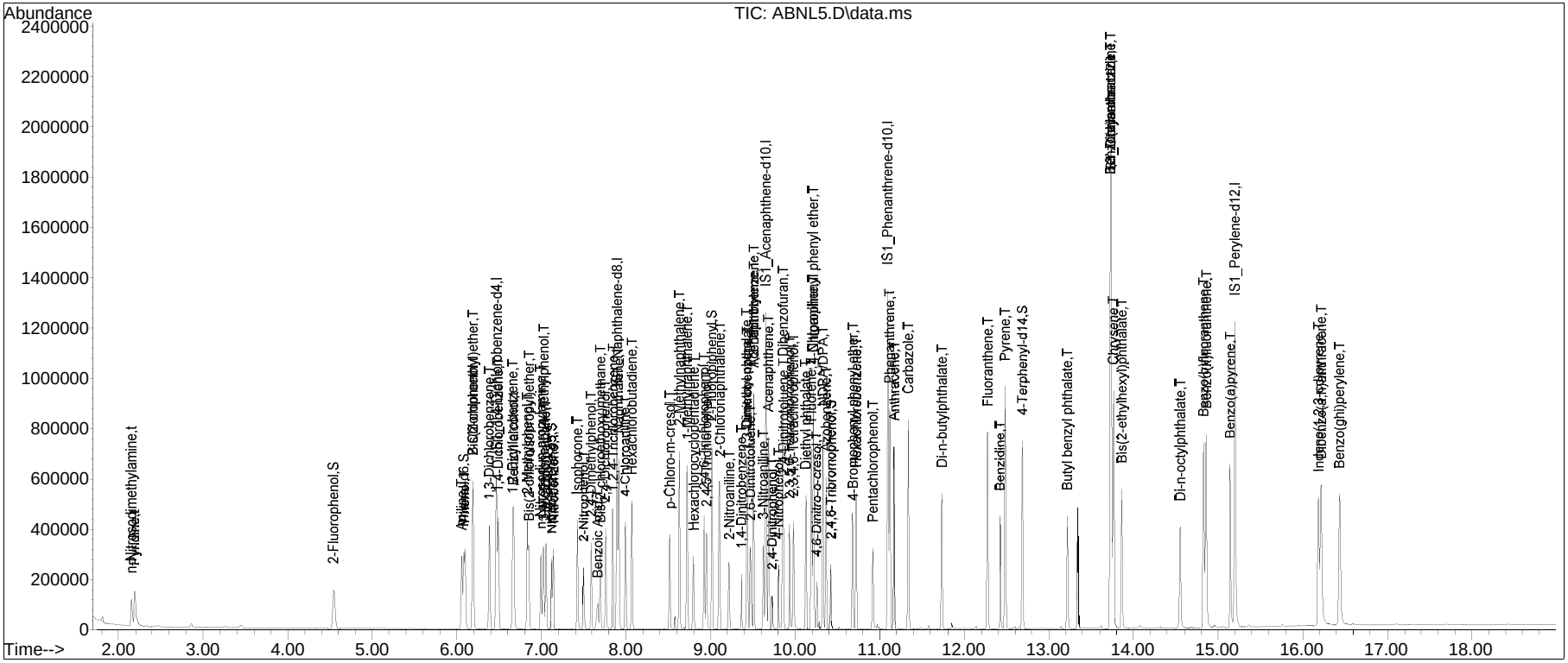
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL5.D
Acq On : 12 Feb 2024 5:40 pm
Operator : SV107:mrg
Sample : IL5,32,,ABNL2.5 Lot# 10493
Misc : WG1886439
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 18 07:21:21 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ABNical - ABN ical sublistal\AP9L6.D•



FS240211SV107RVT.m Sun Feb 18 08:22:11 2024 Page: 4

Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ABNL5.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 5:40 pm	Instrument	: SV107
Sample	: IL5,32,,ABNL2.5 Lot# 10493	Quant Date	: 2/18/2024 7:21 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL4.D
Acq On : 12 Feb 2024 6:06 pm
Operator : SV107:mrg
Sample : IL6,32,,ABNL1 Lot# 10494
Misc : WG1886439
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 18 07:21:10 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	98403	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 102.02%			
34) IS1_Naphthalene-d8	7.887	136	357218	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 96.33%			
62) IS1_Acenaphthene-d10	9.651	164	219160	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 93.91%			
87) IS1_Phenanthrene-d10	11.092	188	446418	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 96.91%			
103) IS1_Chrysene-d12	13.733	240	385465	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 86.29%			
112) IS1_Perylene-d12	15.204	264	397453	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 86.62%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.540	112	29236	1.013	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 20.26%			
7) Phenol-d6	6.081	99	38472	1.052	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 21.04%			
19) Nitrobenzene-d5	7.122	82	35086	1.046	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 41.84%			
45) 2-Fluorobiphenyl	9.010	172	89597	1.090	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 43.60%			
78) 2,4,6-Tribromophenol	10.422	330	8578	1.047	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 20.94%			
95) 4-Terphenyl-d14	12.680	244	104647	1.065	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 42.60%			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.158	74	21628	1.066	ug/ml#	65
3) Pyridine	2.199	79	32093	1.089	ug/ml#	52
5) Aniline	6.057	93	44934	1.034	ug/ml	98
6) 2-Chlorophenol	6.193	128	32816	1.036	ug/ml	95
8) Phenol	6.093	94	41917	1.051	ug/ml	99
9) Bis(2-chloroethyl)ether	6.193	93	34483	1.042	ug/ml#	85
10) 1,3-Dichlorobenzene	6.387	146	40245	1.025	ug/ml	97
11) 1,4-Dichlorobenzene	6.487	146	41267	1.025	ug/ml	95
12) 1,2-Dichlorobenzene	6.657	146	39548	1.030	ug/ml	97

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL4.D
Acq On : 12 Feb 2024 6:06 pm
Operator : SV107:mrg
Sample : IL6,32,,ABNL1 Lot# 10494
Misc : WG1886439
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 18 07:21:10 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
13) Benzyl alcohol	6.669	79	26582	1.014 ug/ml	98
14) Bis(2-chloroisopropyl)...	6.851	45	45903	1.027 ug/ml#	45
15) 2-Methylphenol	6.834	108	29050	1.041 ug/ml	98
16) Hexachloroethane	7.045	117	14855	1.036 ug/ml#	63
17) n-Nitrosodi-n-propylamine	6.992	70	23045	1.023 ug/ml#	87
18) 3-Methylphenol/4-Methy...	7.022	108	31321	1.037 ug/ml	97
20) Nitrobenzene	7.140	77	34685	1.009 ug/ml	94
21) Isophorone	7.422	82	59724	1.008 ug/ml	96
22) 2-Nitrophenol	7.498	139	12505	0.886 ug/ml#	92
23) 2,4-Dimethylphenol	7.592	107	24860	1.056 ug/ml	98
24) Bis(2-chloroethoxy)met...	7.692	93	41562	1.040 ug/ml#	96
25) 2,4-Dichlorophenol	7.757	162	28550	1.036 ug/ml	94
26) 1,2,4-Trichlorobenzene	7.839	180	37609	1.046 ug/ml	98
35) Naphthalene	7.910	128	107389	1.072 ug/ml	99
36) Benzoic Acid	7.651	105	12259	1.160 ug/ml	93
37) 4-Chloroaniline	7.992	65	12982	1.058 ug/ml	95
38) Hexachlorobutadiene	8.069	225	22392	1.102 ug/ml	97
39) p-Chloro-m-cresol	8.516	107	25820	1.015 ug/ml	98
40) 2-Methylnaphthalene	8.628	142	69719	1.047 ug/ml	96
41) 1-Methylnaphthalene	8.722	115	24243	1.065 ug/ml	95
42) Hexachlorocyclopentadiene	8.798	237	15024	1.018 ug/ml	97
43) 2,4,6-Trichlorophenol	8.922	196	20049	0.996 ug/ml	98
44) 2,4,5-Trichlorophenol	8.951	196	24293	1.113 ug/ml	98
46) 2-Chloronaphthalene	9.110	162	73555	1.099 ug/ml	96
47) 2-Nitroaniline	9.216	138	15343	1.025 ug/ml	92
48) 1,4-Dinitrobenzene	9.363	168	6719	1.017 ug/ml	92
49) 1,3-Dinitrobenzene	9.434	168	7837	0.818 ug/ml#	1
50) Dimethyl phthalate	9.428	163	80384	1.088 ug/ml#	99
51) Acenaphthylene	9.510	152	107727	1.070 ug/ml	98
52) 2,6-Dinitrotoluene	9.469	165	13407	0.960 ug/ml	90
53) 1,2-Dinitrobenzene	9.510	168	5902	0.990 ug/ml#	1
63) 3-Nitroaniline	9.622	138	15508	0.935 ug/ml	98
64) Acenaphthene	9.681	154	64472	1.044 ug/ml	89
65) 2,4-Dinitrophenol	9.728	184	4487	1.216 ug/ml	93
66) Dibenzofuran	9.857	168	108920	1.074 ug/ml	96
67) 2,4-Dinitrotoluene	9.857	165	18021	0.948 ug/ml#	86
68) 4-Nitrophenol	9.804	65	11756	0.841 ug/ml#	92
69) 2,3,5,6-Tetrachlorophenol	9.939	232	18009	1.038 ug/ml	98

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL4.D
Acq On : 12 Feb 2024 6:06 pm
Operator : SV107:mrg
Sample : IL6,32,,ABNL1 Lot# 10494
Misc : WG1886439
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 18 07:21:10 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70)	2,3,4,6-Tetrachlorophenol	9.981	232	19373	1.101	ug/ml	98
71)	Diethyl phthalate	10.122	149	76503	1.073	ug/ml	98
72)	Fluorene	10.186	166	81940	1.075	ug/ml	92
73)	4-Chlorophenyl phenyl ...	10.210	204	42848	1.091	ug/ml	90
74)	4-Nitroaniline	10.210	138	16549	0.990	ug/ml	90
75)	4,6-Dinitro-o-cresol	10.251	198	7325	0.870	ug/ml#	67
76)	NDPA/DPA	10.328	169	67015	1.096	ug/ml	96
77)	Azobenzene	10.363	77	78583	1.093	ug/ml	98
79)	4-Bromophenyl phenyl e...	10.680	248	22970	1.114	ug/ml#	87
80)	Hexachlorobenzene	10.722	284	25156	1.106	ug/ml	89
81)	Pentachlorophenol	10.916	266	10919	1.027	ug/ml	97
88)	Phenanthrene	11.116	178	132861	1.071	ug/ml	100
89)	Anthracene	11.163	178	122399	1.044	ug/ml	99
90)	Carbazole	11.333	167	113192	1.064	ug/ml	99
91)	Di-n-butylphthalate	11.727	149	102359	0.905	ug/ml	99
92)	Fluoranthene	12.269	202	137978	1.034	ug/ml#	93
93)	Benzidine	12.427	184	55820	0.774	ug/ml#	94
94)	Pyrene	12.486	202	148297	1.027	ug/ml	98
96)	Butyl benzyl phthalate	13.216	149	32445	0.968	ug/ml	96
104)	Benzo(a)anthracene	13.727	228	134659	1.036	ug/ml	99
105)	3,3'-Dichlorobenzidine	13.727	252	35683	0.911	ug/ml	98
106)	Chrysene	13.763	228	144978	1.109	ug/ml	98
107)	Bis(2-ethylhexyl)phtha...	13.863	149	49566	0.851	ug/ml#	92
108)	Di-n-octylphthalate	14.545	149	66755	0.950	ug/ml#	75
109)	Benzo(b)fluoranthene	14.833	252	118367	1.051	ug/ml#	96
110)	Benzo(k)fluoranthene	14.857	252	126563	1.087	ug/ml#	95
111)	Benzo(a)pyrene	15.145	252	105453	1.044	ug/ml#	93
113)	Indeno(1,2,3-cd)pyrene	16.180	276	88753M6	0.949	ug/mL	
114)	Dibenzo(a,h)anthracene	16.210	278	103074	1.051	ug/ml#	92
115)	Benzo(ghi)perylene	16.433	276	105472	1.071	ug/ml#	90

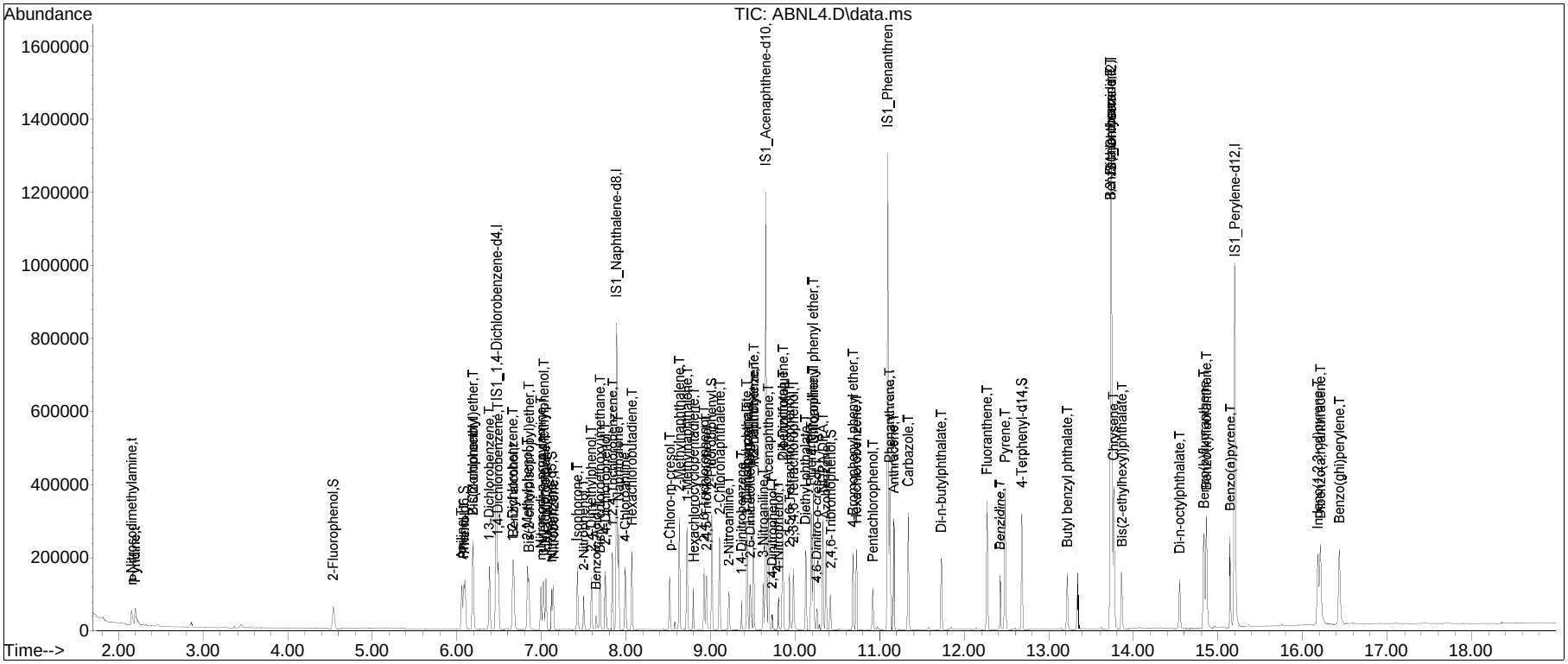
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL4.D
Acq On : 12 Feb 2024 6:06 pm
Operator : SV107:mrg
Sample : IL6,32,,ABNL1 Lot# 10494
Misc : WG1886439
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 18 07:21:10 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

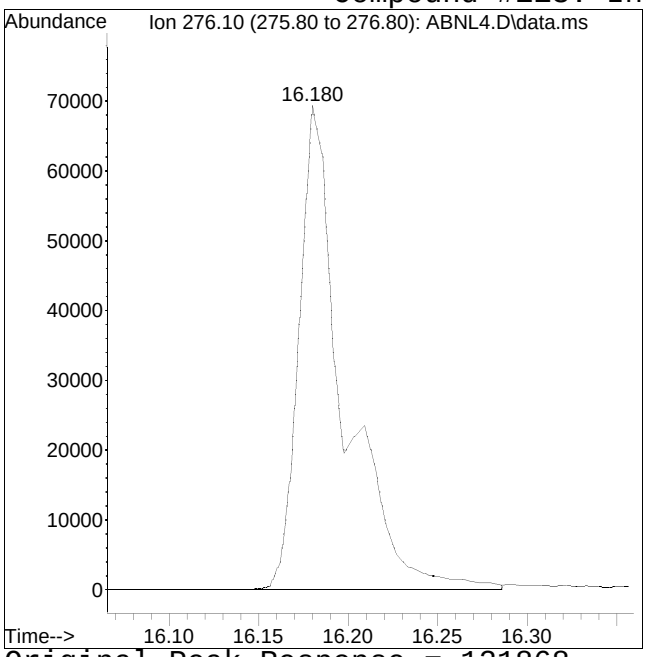
Sub List : ABNical - ABN ical sublistal\AP9L6.D•



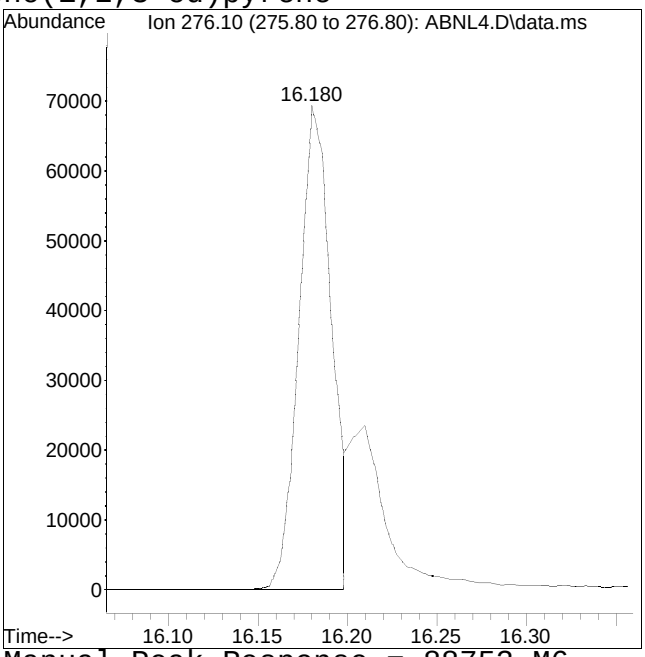
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL4.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 6:06 pm Instrument : SV107
Sample : IL6,32,,ABNL1 Lot# 10494 Quant Date : 2/18/2024 7:21 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 121868



Manual Peak Response = 88753 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL3.D
Acq On : 12 Feb 2024 6:32 pm
Operator : SV107:mrg
Sample : IL7,32,,ABNL0.5 Lot# 10495
Misc : WG1886439
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 18 07:58:35 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:58:44 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	102475	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 106.24%			
34) IS1_Naphthalene-d8	7.886	136	365692	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 98.62%			
62) IS1_Acenaphthene-d10	9.651	164	215502	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 92.34%			
87) IS1_Phenanthrene-d10	11.092	188	445017	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 96.61%			
103) IS1_Chrysene-d12	13.733	240	381003	4.000	ug/ml	# 0.00
Standard Area 1 = 446698			Recovery = 85.29%			
112) IS1_Perylene-d12	15.204	264	390167	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 85.03%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.545	112	15062	0.501	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 10.02%#			
7) Phenol-d6	6.081	99	18536	0.487	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 9.74%#			
19) Nitrobenzene-d5	7.122	82	16517	0.473	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 18.92%#			
45) 2-Fluorobiphenyl	9.010	172	44529	0.529	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 21.16%#			
78) 2,4,6-Tribromophenol	10.422	330	3846	0.478	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 9.56%#			
95) 4-Terphenyl-d14	12.680	244	50124	0.512	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 20.48%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.163	74	11181	0.529	ug/ml#	64
3) Pyridine	2.210	79	14293	0.466	ug/ml#	54
5) Aniline	6.057	93	23232	0.513	ug/ml	98
6) 2-Chlorophenol	6.192	128	16569	0.502	ug/ml	94
8) Phenol	6.092	94	21289	0.513	ug/ml	98
9) Bis(2-chloroethyl)ether	6.192	93	17307	0.502	ug/ml#	82
10) 1,3-Dichlorobenzene	6.386	146	20938	0.512	ug/ml	97
11) 1,4-Dichlorobenzene	6.486	146	21698	0.517	ug/ml	94
12) 1,2-Dichlorobenzene	6.657	146	21216	0.531	ug/ml	97

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL3.D
Acq On : 12 Feb 2024 6:32 pm
Operator : SV107:mrg
Sample : IL7,32,,ABNL0.5 Lot# 10495
Misc : WG1886439
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 18 07:58:35 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:58:44 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.669	79	12954	0.474	ug/ml	97
14) Bis(2-chloroisopropyl)...	6.851	45	23744	0.510	ug/ml#	48
15) 2-Methylphenol	6.834	108	14070	0.484	ug/ml	98
16) Hexachloroethane	7.045	117	7626	0.511	ug/ml#	64
17) n-Nitrosodi-n-propylamine	6.992	70	11217	0.478	ug/ml#	86
18) 3-Methylphenol/4-Methy...	7.022	108	15337	0.488	ug/ml	100
20) Nitrobenzene	7.139	77	17496	0.489	ug/ml	92
21) Isophorone	7.422	82	28435	0.461	ug/ml	98
22) 2-Nitrophenol	7.498	139	5906	0.402	ug/ml#	95
23) 2,4-Dimethylphenol	7.592	107	11865	0.484	ug/ml	94
24) Bis(2-chloroethoxy)met...	7.698	93	20708	0.498	ug/ml#	97
25) 2,4-Dichlorophenol	7.757	162	13893	0.484	ug/ml	95
26) 1,2,4-Trichlorobenzene	7.839	180	19372	0.517	ug/ml	97
35) Naphthalene	7.910	128	54458	0.531	ug/ml	99
36) Benzoic Acid	7.722	105	438	0.647	ug/ml#	12
37) 4-Chloroaniline	7.992	65	6246	0.497	ug/ml	94
38) Hexachlorobutadiene	8.069	225	11226	0.539	ug/ml	98
39) p-Chloro-m-cresol	8.516	107	12056	0.463	ug/ml	99
40) 2-Methylnaphthalene	8.628	142	35720	0.524	ug/ml	98
41) 1-Methylnaphthalene	8.722	115	11744	0.504	ug/ml	100
42) Hexachlorocyclopentadiene	8.798	237	7747	0.513	ug/ml	94
43) 2,4,6-Trichlorophenol	8.922	196	9182	0.446	ug/ml	96
44) 2,4,5-Trichlorophenol	8.951	196	10251	0.459	ug/ml	98
46) 2-Chloronaphthalene	9.110	162	36107	0.527	ug/ml	96
47) 2-Nitroaniline	9.222	138	6710	0.596	ug/ml	94
48) 1,4-Dinitrobenzene	9.363	168	2917	0.623	ug/ml	99
49) 1,3-Dinitrobenzene	9.433	168	3488	0.356	ug/ml#	1
50) Dimethyl phthalate	9.427	163	38117	0.504	ug/ml#	97
51) Acenaphthylene	9.510	152	51487	0.500	ug/ml	97
52) 2,6-Dinitrotoluene	9.475	165	5586	0.466	ug/ml	93
53) 1,2-Dinitrobenzene	9.510	168	2354	0.466	ug/ml#	1
63) 3-Nitroaniline	9.622	138	6848	0.420	ug/ml	98
64) Acenaphthene	9.680	154	32513	0.535	ug/ml	89
65) 2,4-Dinitrophenol	9.727	184	1658	0.903	ug/ml	97
66) Dibenzofuran	9.857	168	54498	0.546	ug/ml	94
67) 2,4-Dinitrotoluene	9.857	165	7588	0.486	ug/ml#	78
68) 4-Nitrophenol	9.804	65	5026	0.366	ug/ml	89
69) 2,3,5,6-Tetrachlorophenol	9.939	232	7850	0.460	ug/ml	98

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL3.D
Acq On : 12 Feb 2024 6:32 pm
Operator : SV107:mrg
Sample : IL7,32,,ABNL0.5 Lot# 10495
Misc : WG1886439
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 18 07:58:35 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:58:44 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70) 2,3,4,6-Tetrachlorophenol	9.980	232	8655	0.500	ug/ml	98
71) Diethyl phthalate	10.127	149	36192	0.516	ug/ml	99
72) Fluorene	10.186	166	39314	0.524	ug/ml	94
73) 4-Chlorophenyl phenyl ...	10.210	204	20888	0.541	ug/ml	89
74) 4-Nitroaniline	10.210	138	6535	0.398	ug/ml#	90
75) 4,6-Dinitro-o-cresol	10.251	198	2890	0.629	ug/ml#	77
76) NDPA/DPA	10.327	169	31615	0.526	ug/ml	93
77) Azobenzene	10.363	77	35989	0.509	ug/ml	97
79) 4-Bromophenyl phenyl e...	10.686	248	10615	0.524	ug/ml#	86
80) Hexachlorobenzene	10.721	284	12243	0.547	ug/ml#	86
81) Pentachlorophenol	10.916	266	4424	0.582	ug/ml	96
88) Phenanthrene	11.116	178	64811	0.524	ug/ml	99
89) Anthracene	11.169	178	57856	0.495	ug/ml	98
90) Carbazole	11.333	167	52109	0.492	ug/ml	99
91) Di-n-butylphthalate	11.733	149	44158	0.391	ug/ml	99
92) Fluoranthene	12.268	202	65748	0.494	ug/ml#	92
93) Benzidine	12.427	184	23255	0.324	ug/ml#	94
94) Pyrene	12.486	202	72061	0.500	ug/ml	99
96) Butyl benzyl phthalate	13.215	149	13822	0.623	ug/ml	95
104) Benzo(a)anthracene	13.727	228	64087	0.499	ug/ml	99
105) 3,3'-Dichlorobenzidine	13.727	252	14820	0.383	ug/ml	99
106) Chrysene	13.762	228	72901	0.564	ug/ml	98
107) Bis(2-ethylhexyl)phtha...	13.862	149	20044	0.444	ug/ml#	93
108) Di-n-octylphthalate	14.545	149	28204	0.584	ug/ml#	75
109) Benzo(b)fluoranthene	14.833	252	54104	0.486	ug/ml#	95
110) Benzo(k)fluoranthene	14.857	252	58328	0.507	ug/ml#	93
111) Benzo(a)pyrene	15.145	252	48054	0.482	ug/ml#	93
113) Indeno(1,2,3-cd)pyrene	16.180	276	39899M6	0.434	ug/mL	
114) Dibenzo(a,h)anthracene	16.209	278	47998	0.498	ug/ml#	92
115) Benzo(ghi)perylene	16.433	276	52035	0.538	ug/ml#	90

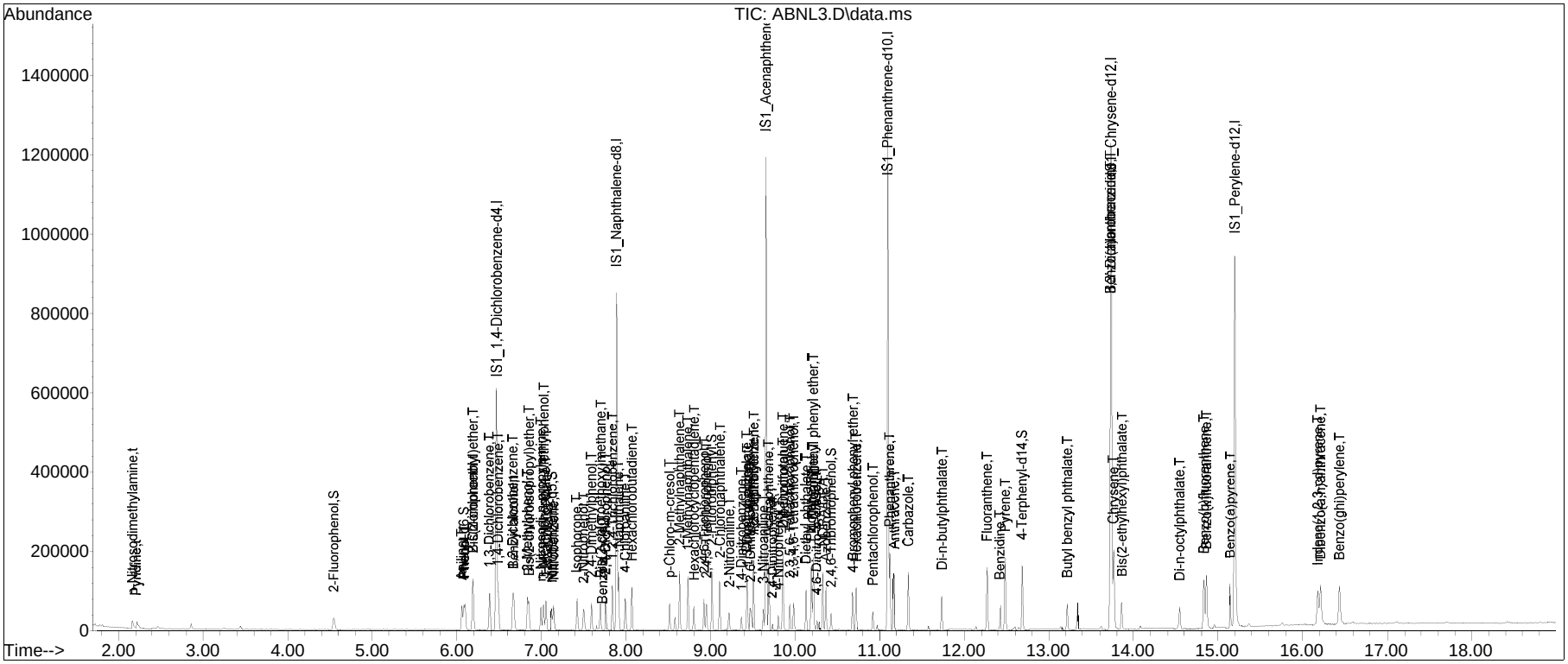
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL3.D
Acq On : 12 Feb 2024 6:32 pm
Operator : SV107:mrg
Sample : IL7,32,,ABNL0.5 Lot# 10495
Misc : WG1886439
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 18 07:58:35 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:58:44 2024
Response via : Initial Calibration

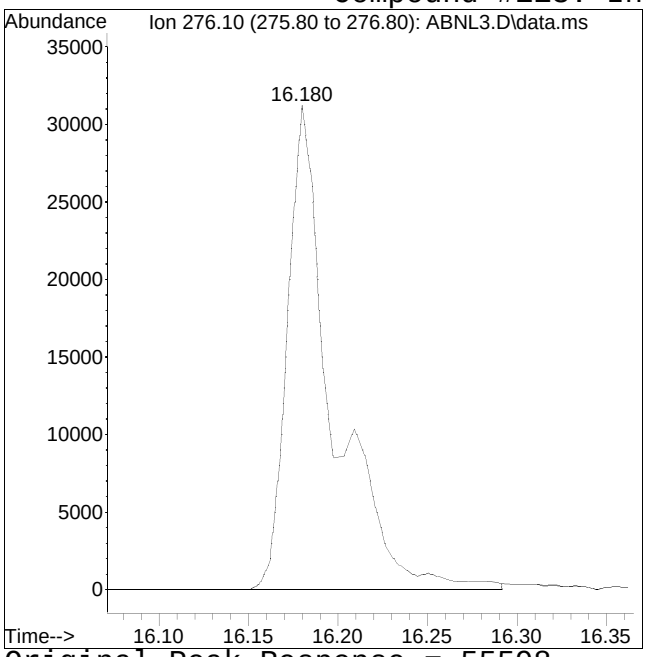
Sub List : ABNical - ABN ical sublistal\AP9L6.D•



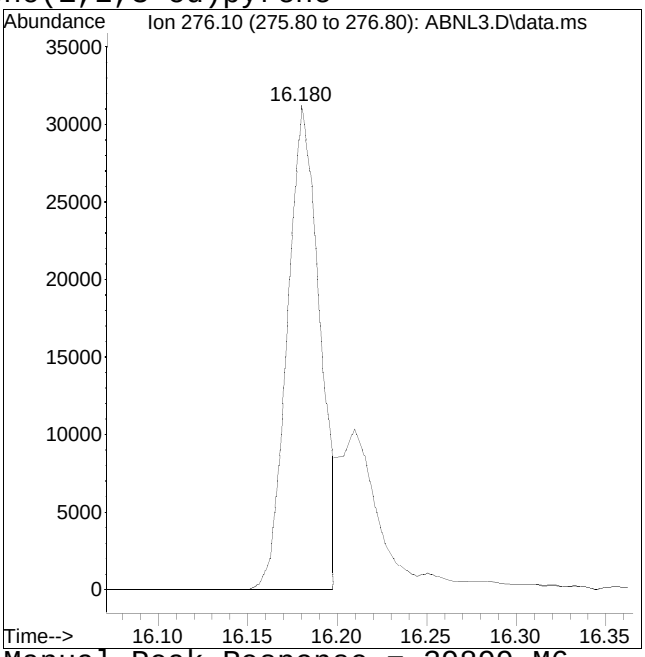
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL3.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 6:32 pm Instrument : SV107
Sample : IL7,32,,ABNL0.5 Lot# 10495Quant Date : 2/18/2024 7:58 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 55598



Manual Peak Response = 39899 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL2.D
Acq On : 12 Feb 2024 6:59 pm
Operator : SV107:mrg
Sample : IL8,32,,ABNL0.2 Lot# 10496
Misc : WG1886439
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 18 08:02:27 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:02:38 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	101954	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 105.70%			
34) IS1_Naphthalene-d8	7.886	136	369747	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 99.71%			
62) IS1_Acenaphthene-d10	9.651	164	213823	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 91.62%			
87) IS1_Phenanthrene-d10	11.092	188	454099	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 98.58%			
103) IS1_Chrysene-d12	13.733	240	379771	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 85.02%			
112) IS1_Perylene-d12	15.198	264	381953	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 83.24%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.545	112	5444	0.182	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 3.64%#			
7) Phenol-d6	6.081	99	6802	0.179	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 3.58%#			
19) Nitrobenzene-d5	7.122	82	6163	0.177	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 7.08%#			
45) 2-Fluorobiphenyl	9.010	172	17943	0.211	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 8.44%#			
78) 2,4,6-Tribromophenol	10.422	330	1367	0.171	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 3.42%#			
95) 4-Terphenyl-d14	12.686	244	18930	0.189	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 7.56%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.169	74	3877	0.185	ug/ml#	71
3) Pyridine	2.257	79	4159M1	0.136	ug/ml	
5) Aniline	6.057	93	8862	0.197	ug/ml	99
6) 2-Chlorophenol	6.192	128	6149	0.187	ug/ml	94
8) Phenol	6.098	94	7696	0.186	ug/ml	97
9) Bis(2-chloroethyl)ether	6.192	93	7047	0.205	ug/ml	88
10) 1,3-Dichlorobenzene	6.387	146	8239	0.202	ug/ml	96
11) 1,4-Dichlorobenzene	6.487	146	8523	0.204	ug/ml#	86
12) 1,2-Dichlorobenzene	6.657	146	8013	0.201	ug/ml	96

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL2.D
Acq On : 12 Feb 2024 6:59 pm
Operator : SV107:mrg
Sample : IL8,32,,ABNL0.2 Lot# 10496
Misc : WG1886439
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 18 08:02:27 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:02:38 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.675	79	4831	0.178	ug/ml	95
14) Bis(2-chloroisopropyl)...	6.851	45	9185	0.198	ug/ml#	46
15) 2-Methylphenol	6.834	108	5142	0.178	ug/ml	93
16) Hexachloroethane	7.045	117	3073	0.207	ug/ml#	74
17) n-Nitrosodi-n-propylamine	6.992	70	4075	0.175	ug/ml#	82
18) 3-Methylphenol/4-Methy...	7.022	108	5367	0.171	ug/ml	98
20) Nitrobenzene	7.139	77	6293	0.177	ug/ml	92
21) Isophorone	7.422	82	10967	0.179	ug/ml#	94
22) 2-Nitrophenol	7.498	139	2170	0.148	ug/ml#	88
23) 2,4-Dimethylphenol	7.592	107	4404	0.181	ug/ml	95
24) Bis(2-chloroethoxy)met...	7.692	93	7835	0.189	ug/ml#	94
25) 2,4-Dichlorophenol	7.757	162	4763	0.167	ug/ml	93
26) 1,2,4-Trichlorobenzene	7.839	180	7760	0.208	ug/ml	97
35) Naphthalene	7.910	128	22269	0.215	ug/ml	100
36) Benzoic Acid	7.651	105	433	0.646	ug/ml#	27
37) 4-Chloroaniline	7.992	65	2405	0.189	ug/ml	97
38) Hexachlorobutadiene	8.069	225	4533	0.215	ug/ml	95
39) p-Chloro-m-cresol	8.516	107	4167	0.158	ug/ml	93
40) 2-Methylnaphthalene	8.628	142	13813	0.200	ug/ml	95
41) 1-Methylnaphthalene	8.722	115	4839	0.205	ug/ml	92
42) Hexachlorocyclopentadiene	8.798	237	2868	0.188	ug/ml#	94
43) 2,4,6-Trichlorophenol	8.922	196	3548	0.170	ug/ml	95
44) 2,4,5-Trichlorophenol	8.951	196	3476	0.154	ug/ml	98
46) 2-Chloronaphthalene	9.110	162	13597	0.196	ug/ml	94
47) 2-Nitroaniline	9.222	138	2206	0.380	ug/ml	98
48) 1,4-Dinitrobenzene	9.363	168	985	0.431	ug/ml	96
49) 1,3-Dinitrobenzene	9.433	168	1179	0.119	ug/ml#	1
50) Dimethyl phthalate	9.428	163	13967	0.183	ug/ml#	97
51) Acenaphthylene	9.510	152	19025	0.183	ug/ml	99
52) 2,6-Dinitrotoluene	9.469	165	1942	0.299	ug/ml	90
53) 1,2-Dinitrobenzene	9.510	168	759	0.239	ug/ml#	1
63) 3-Nitroaniline	9.622	138	1972	0.122	ug/ml#	87
64) Acenaphthene	9.680	154	12725	0.211	ug/ml	90
65) 2,4-Dinitrophenol	9.733	184	411	0.762	ug/ml#	25
66) Dibenzofuran	9.857	168	21726	0.220	ug/ml	98
67) 2,4-Dinitrotoluene	9.863	165	2378	0.249	ug/ml#	67
68) 4-Nitrophenol	9.804	65	1601	0.117	ug/ml	90
69) 2,3,5,6-Tetrachlorophenol	9.939	232	2771	0.164	ug/ml	95

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL2.D
Acq On : 12 Feb 2024 6:59 pm
Operator : SV107:mrg
Sample : IL8,32,,ABNL0.2 Lot# 10496
Misc : WG1886439
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 18 08:02:27 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:02:38 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70) 2,3,4,6-Tetrachlorophenol	9.980	232	2927	0.171	ug/ml	96
71) Diethyl phthalate	10.127	149	13809	0.198	ug/ml	98
72) Fluorene	10.186	166	15090	0.203	ug/ml	93
73) 4-Chlorophenyl phenyl ...	10.210	204	8439	0.220	ug/ml#	86
74) 4-Nitroaniline	10.210	138	2127	0.130	ug/ml#	95
75) 4,6-Dinitro-o-cresol	10.251	198	834	0.452	ug/ml#	70
76) NDPA/DPA	10.327	169	11604	0.194	ug/ml	93
77) Azobenzene	10.363	77	12655	0.180	ug/ml	98
79) 4-Bromophenyl phenyl e...	10.686	248	4077	0.203	ug/ml	89
80) Hexachlorobenzene	10.722	284	4925	0.222	ug/ml	89
81) Pentachlorophenol	10.916	266	1608	0.384	ug/ml	97
88) Phenanthrene	11.116	178	27806	0.220	ug/ml	98
89) Anthracene	11.163	178	23671	0.198	ug/ml	99
90) Carbazole	11.333	167	18665	0.173	ug/ml	98
91) Di-n-butylphthalate	11.727	149	16994	0.148	ug/ml	99
92) Fluoranthene	12.269	202	26321	0.194	ug/ml#	92
93) Benzidine	12.427	184	8322	0.114	ug/ml#	94
94) Pyrene	12.486	202	28181	0.192	ug/ml	98
96) Butyl benzyl phthalate	13.216	149	5141	0.459	ug/ml	96
104) Benzo(a)anthracene	13.727	228	25898	0.202	ug/ml	99
105) 3,3'-Dichlorobenzidine	13.727	252	5278	0.137	ug/ml#	91
106) Chrysene	13.763	228	30148	0.234	ug/ml	97
107) Bis(2-ethylhexyl)phtha...	13.863	149	7558	0.257	ug/ml#	87
108) Di-n-octylphthalate	14.545	149	10792	0.419	ug/ml#	74
109) Benzo(b)fluoranthene	14.827	252	20644	0.186	ug/ml#	94
110) Benzo(k)fluoranthene	14.857	252	21145	0.184	ug/ml#	95
111) Benzo(a)pyrene	15.145	252	17190	0.173	ug/ml#	95
113) Indeno(1,2,3-cd)pyrene	16.180	276	15607M6	0.174	ug/mL	
114) Dibenzo(a,h)anthracene	16.209	278	16651	0.177	ug/ml#	92
115) Benzo(ghi)perylene	16.433	276	19036	0.201	ug/ml#	90

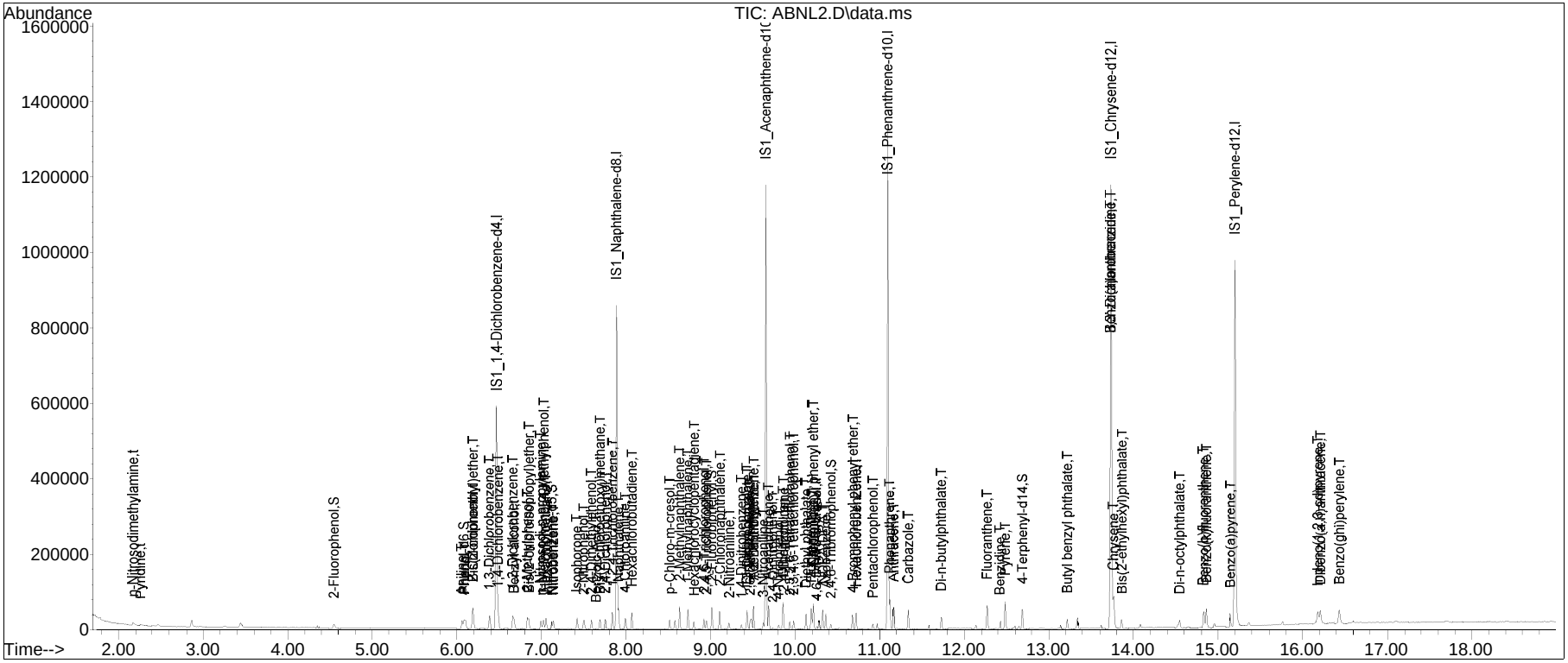
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL2.D
Acq On : 12 Feb 2024 6:59 pm
Operator : SV107:mrg
Sample : IL8,32,,ABNL0.2 Lot# 10496
Misc : WG1886439
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 18 08:02:27 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:02:38 2024
Response via : Initial Calibration

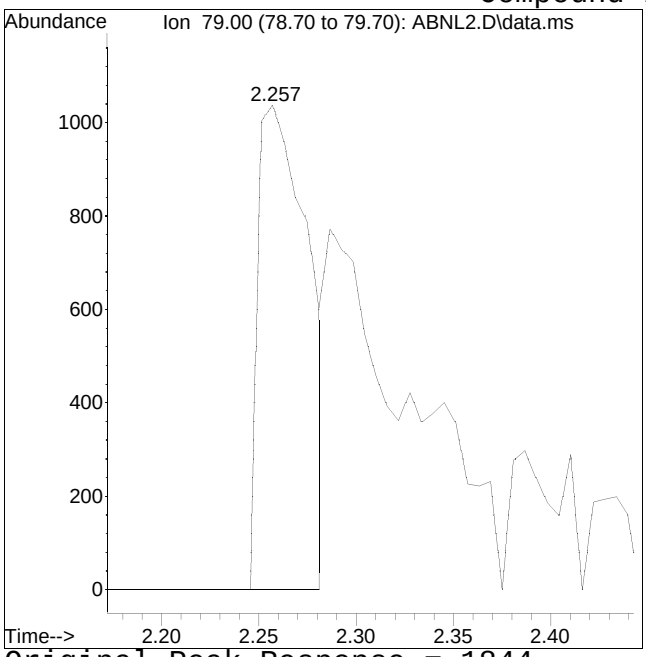
Sub List : ABNical - ABN ical sublistal\AP9L6.D•



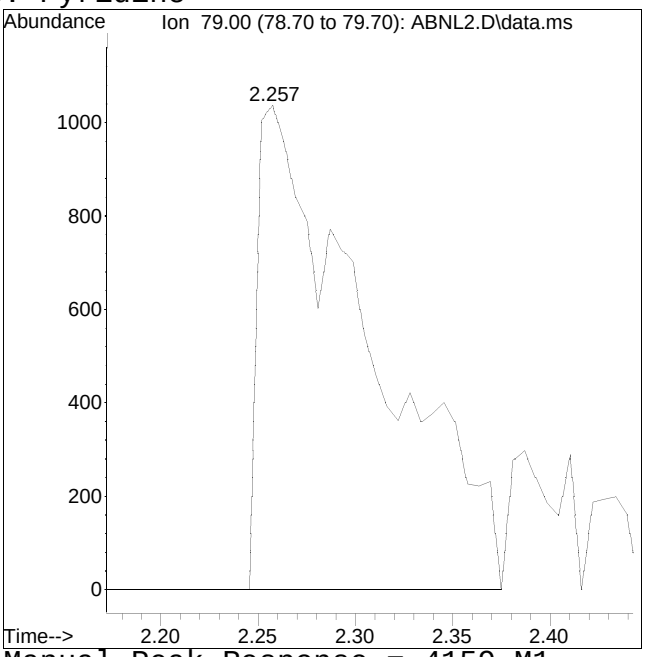
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL2.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 6:59 pm Instrument : SV107
Sample : IL8,32,,ABNL0.2 Lot# 10496 Quant Date : 2/18/2024 8:02 am

Compound #3: Pyridine



Original Peak Response = 1844



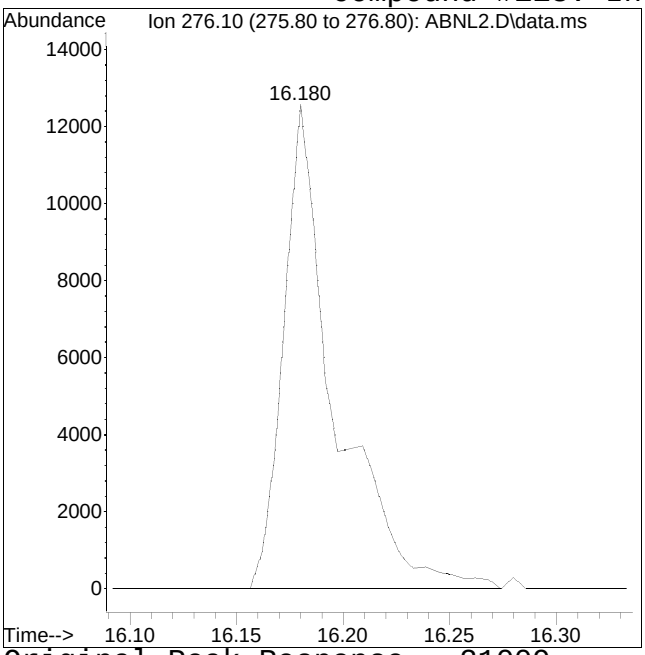
Manual Peak Response = 4159 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

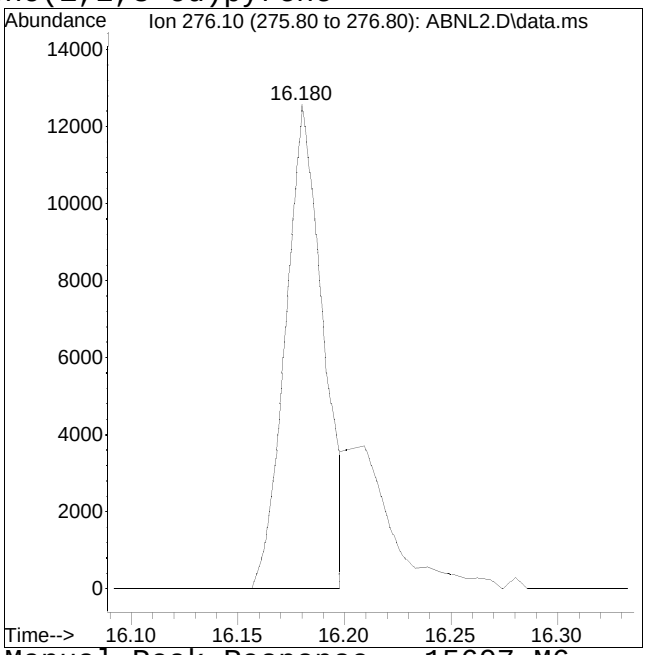
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL2.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 6:59 pm Instrument : SV107
Sample : IL8,32,,ABNL0.2 Lot# 10496 Quant Date : 2/18/2024 8:02 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 21009



Manual Peak Response = 15607 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL1.D
Acq On : 12 Feb 2024 7:25 pm
Operator : SV107:mrg
Sample : IL9,32,,ABNL0.1 Lot# 10497
Misc : WG1886439
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 18 07:20:37 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.463	152	103227	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 107.02%			
34) IS1_Naphthalene-d8	7.887	136	374404	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 100.97%			
62) IS1_Acenaphthene-d10	9.651	164	216965	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 92.97%			
87) IS1_Phenanthrene-d10	11.092	188	454702	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 98.71%			
103) IS1_Chrysene-d12	13.733	240	366936	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 82.14%			
112) IS1_Perylene-d12	15.198	264	371284	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 80.91%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.546	112	2995	0.099	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 1.98%#			
7) Phenol-d6	6.081	99	3577	0.093	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 1.86%#			
19) Nitrobenzene-d5	7.122	82	3301	0.094	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 3.76%#			
45) 2-Fluorobiphenyl	9.010	172	9798	0.114	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 4.56%#			
78) 2,4,6-Tribromophenol	10.422	330	665	0.082	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 1.64%#			
95) 4-Terphenyl-d14	12.680	244	10378	0.104	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 4.16%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.175	74	1790	0.084	ug/ml#	81
3) Pyridine	2.316	79	1666M1	0.054	ug/ml	
5) Aniline	6.063	93	4474	0.098	ug/ml	91
6) 2-Chlorophenol	6.198	128	2981	0.090	ug/ml	94
8) Phenol	6.098	94	3974	0.095	ug/ml	98
9) Bis(2-chloroethyl)ether	6.193	93	3992	0.115	ug/ml	95
10) 1,3-Dichlorobenzene	6.387	146	4737	0.115	ug/ml	95
11) 1,4-Dichlorobenzene	6.487	146	4942	0.117	ug/ml#	82
12) 1,2-Dichlorobenzene	6.657	146	4569	0.113	ug/ml	94

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL1.D
Acq On : 12 Feb 2024 7:25 pm
Operator : SV107:mrg
Sample : IL9,32,,ABNL0.1 Lot# 10497
Misc : WG1886439
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 18 07:20:37 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.675	79	2573	0.094	ug/ml	98
14) Bis(2-chloroisopropyl)...	6.845	45	5350	0.114	ug/ml#	62
15) 2-Methylphenol	6.834	108	2640	0.090	ug/ml	96
16) Hexachloroethane	7.045	117	1515	0.101	ug/ml#	57
17) n-Nitrosodi-n-propylamine	6.992	70	2197	0.093	ug/ml#	59
18) 3-Methylphenol/4-Methy...	7.022	108	3011	0.095	ug/ml#	96
20) Nitrobenzene	7.140	77	3352	0.093	ug/ml#	86
21) Isophorone	7.422	82	5410	0.087	ug/ml#	94
22) 2-Nitrophenol	7.498	139	1077	0.073	ug/ml#	76
23) 2,4-Dimethylphenol	7.592	107	2176	0.088	ug/ml	96
24) Bis(2-chloroethoxy)met...	7.698	93	4307	0.103	ug/ml#	98
25) 2,4-Dichlorophenol	7.757	162	2439	0.084	ug/ml	95
26) 1,2,4-Trichlorobenzene	7.840	180	4475	0.119	ug/ml	96
35) Naphthalene	7.910	128	12289	0.117	ug/ml	98
36) Benzoic Acid	0.000		0	N.D.		
37) 4-Chloroaniline	7.992	65	1217	0.095	ug/ml	87
38) Hexachlorobutadiene	8.069	225	2491	0.117	ug/ml	99
39) p-Chloro-m-cresol	8.516	107	2198	0.082	ug/ml	96
40) 2-Methylnaphthalene	8.628	142	7761	0.111	ug/ml	99
41) 1-Methylnaphthalene	8.722	115	2694	0.113	ug/ml	94
42) Hexachlorocyclopentadiene	8.798	237	1497	0.097	ug/ml#	92
43) 2,4,6-Trichlorophenol	8.922	196	1862	0.088	ug/ml	94
44) 2,4,5-Trichlorophenol	8.951	196	1833	0.080	ug/ml	97
46) 2-Chloronaphthalene	9.110	162	7729	0.110	ug/ml	96
47) 2-Nitroaniline	9.216	138	1201	0.332	ug/ml	96
48) 1,4-Dinitrobenzene	9.363	168	432	0.376	ug/ml#	75
49) 1,3-Dinitrobenzene	9.434	168	594	0.059	ug/ml#	1
50) Dimethyl phthalate	9.428	163	7658	0.099	ug/ml#	95
51) Acenaphthylene	9.510	152	10059	0.095	ug/ml	97
52) 2,6-Dinitrotoluene	9.475	165	941	0.183	ug/ml	99
53) 1,2-Dinitrobenzene	9.510	168	416	0.190	ug/ml#	1
63) 3-Nitroaniline	9.622	138	898	0.055	ug/ml#	64
64) Acenaphthene	9.681	154	7073	0.116	ug/ml	88
65) 2,4-Dinitrophenol	0.000		0	N.D.		
66) Dibenzofuran	9.857	168	11485	0.114	ug/ml	98
67) 2,4-Dinitrotoluene	9.863	165	1150	0.192	ug/ml#	59
68) 4-Nitrophenol	9.804	65	656	0.047	ug/ml#	83
69) 2,3,5,6-Tetrachlorophenol	9.939	232	1443	0.084	ug/ml	92

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL1.D
Acq On : 12 Feb 2024 7:25 pm
Operator : SV107:mrg
Sample : IL9,32,,ABNL0.1 Lot# 10497
Misc : WG1886439
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 18 07:20:37 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70)	2,3,4,6-Tetrachlorophenol	9.981	232	1312	0.075	ug/ml	95
71)	Diethyl phthalate	10.128	149	6878	0.097	ug/ml	98
72)	Fluorene	10.186	166	8263	0.109	ug/ml	95
73)	4-Chlorophenyl phenyl ...	10.210	204	4600	0.118	ug/ml#	83
74)	4-Nitroaniline	10.210	138	906	0.055	ug/ml#	85
75)	4,6-Dinitro-o-cresol	0.000		0	N.D.		
76)	NDPA/DPA	10.328	169	5621	0.093	ug/ml	95
77)	Azobenzene	10.363	77	6524	0.092	ug/ml	96
79)	4-Bromophenyl phenyl e...	10.680	248	2290	0.112	ug/ml	88
80)	Hexachlorobenzene	10.722	284	2555	0.113	ug/ml#	85
81)	Pentachlorophenol	10.916	266	812	0.327	ug/ml	94
88)	Phenanthrene	11.116	178	15342	0.121	ug/ml	97
89)	Anthracene	11.163	178	13122	0.110	ug/ml	98
90)	Carbazole	11.333	167	9847	0.091	ug/ml#	95
91)	Di-n-butylphthalate	11.727	149	8889	0.077	ug/ml	97
92)	Fluoranthene	12.269	202	13706	0.101	ug/ml#	92
93)	Benzidine	12.427	184	3820	0.052	ug/ml#	86
94)	Pyrene	12.486	202	15178	0.103	ug/ml	99
96)	Butyl benzyl phthalate	13.216	149	2806	0.416	ug/ml	93
104)	Benzo(a)anthracene	13.727	228	14019	0.113	ug/ml	98
105)	3,3'-Dichlorobenzidine	13.727	252	2521	0.068	ug/ml#	89
106)	Chrysene	13.763	228	16994	0.137	ug/ml	99
107)	Bis(2-ethylhexyl)phtha...	13.863	149	3685	0.225	ug/ml#	92
108)	Di-n-octylphthalate	14.545	149	5768	0.466	ug/ml#	75
109)	Benzo(b)fluoranthene	14.833	252	10828	0.101	ug/ml#	94
110)	Benzo(k)fluoranthene	14.857	252	10423	0.094	ug/ml#	93
111)	Benzo(a)pyrene	15.145	252	7941	0.083	ug/ml#	92
113)	Indeno(1,2,3-cd)pyrene	16.180	276	8625M6	0.099	ug/mL	
114)	Dibenzo(a,h)anthracene	16.210	278	8230	0.090	ug/ml#	88
115)	Benzo(ghi)perylene	16.433	276	9931	0.108	ug/ml#	89

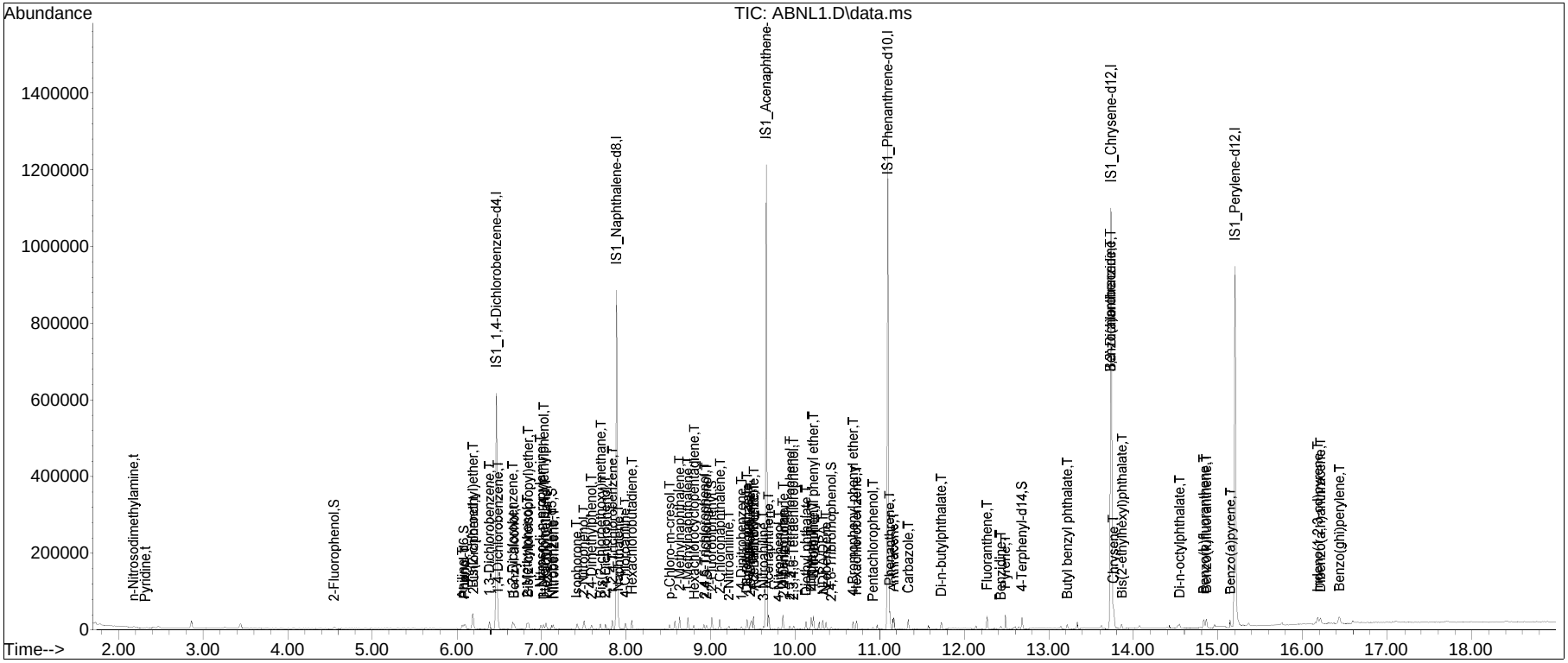
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNL1.D
Acq On : 12 Feb 2024 7:25 pm
Operator : SV107:mrg
Sample : IL9,32,,ABNL0.1 Lot# 10497
Misc : WG1886439
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 18 07:20:37 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

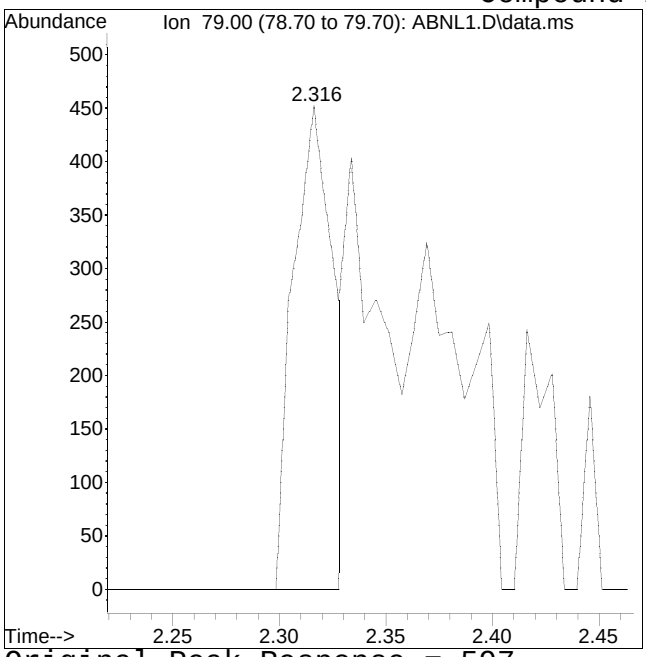
Sub List : ABNical - ABN ical sublistal\AP9L6.D•



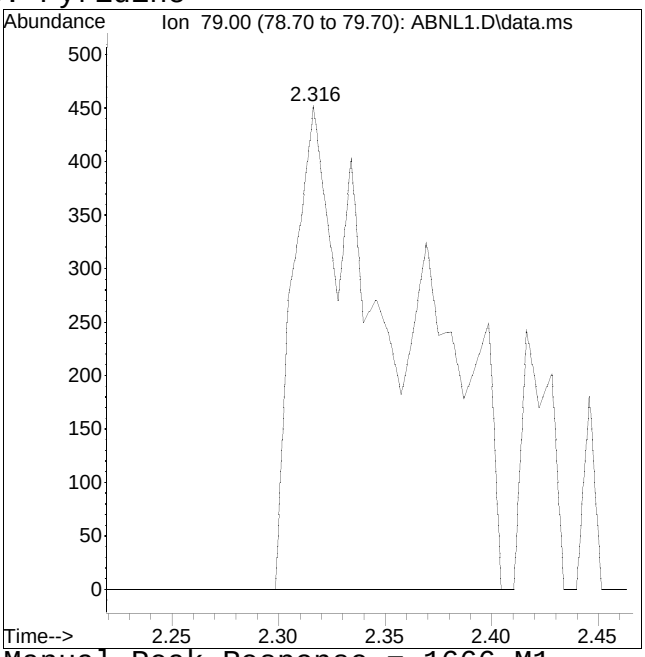
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL1.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 7:25 pm Instrument : SV107
Sample : IL9,32,,ABNL0.1 Lot# 10497 Quant Date : 2/18/2024 7:20 am

Compound #3: Pyridine



Original Peak Response = 597



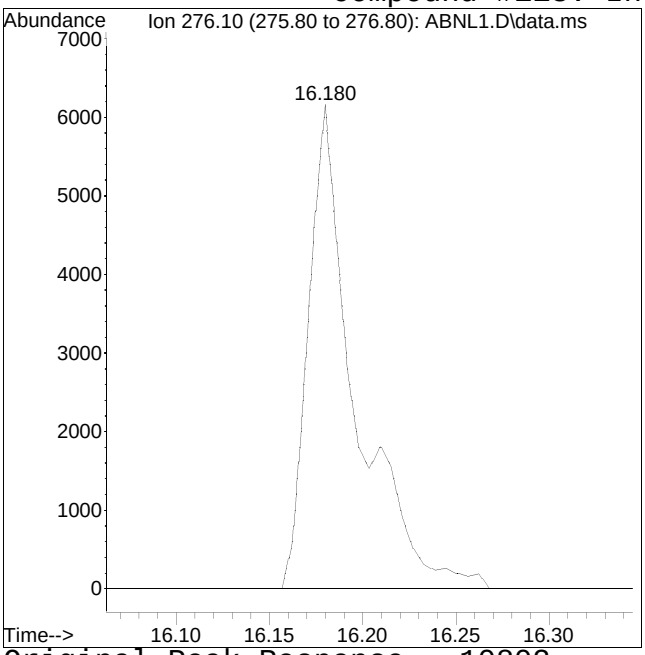
Manual Peak Response = 1666 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

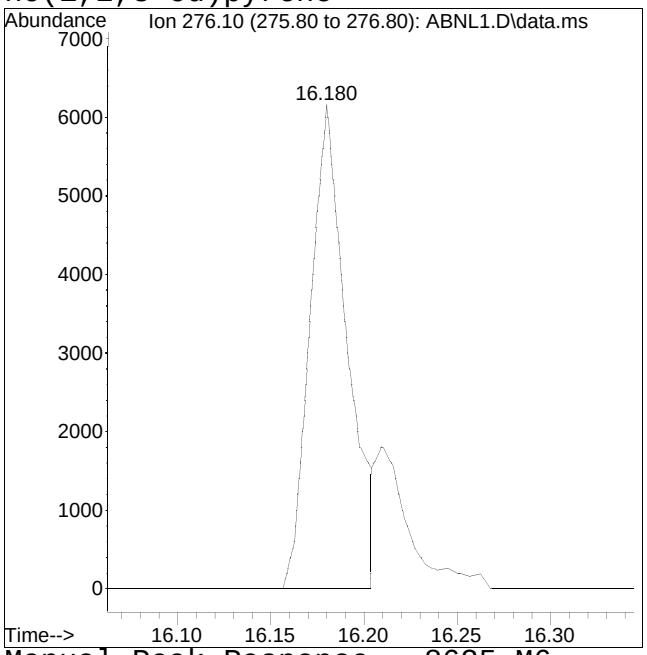
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNL1.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 7:25 pm Instrument : SV107
Sample : IL9,32,,ABNL0.1 Lot# 10497 Quant Date : 2/18/2024 7:20 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 10802



Manual Peak Response = 8625 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L9.D
Acq On : 12 Feb 2024 7:52 pm
Operator : SV107:mrg
Sample : IL1,32,,AP9L50 Lot# 10546
Misc : WG1886439
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 18 07:26:43 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.469	152	90659	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 97.40%			
54) IS2_Naphthalene-d8	7.892	136	332932	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 98.84%			
82) IS2_Acenaphthene-d10	9.651	164	190417	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 96.13%			
97) IS2_Phenanthrene-d10	11.092	188	384376	4.000	ug/ml	# 0.00
Standard Area 3 = 418394			Recovery = 91.87%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.898	105	1226964	54.824	ug/ml	97
29) Acetophenone	6.969	105	2083682	54.858	ug/ml#	80
30) m-Toluidine	7.063	106	2121063	56.314	ug/ml	95
31) 2-Chloroaniline	7.469	127	1824054	54.048	ug/ml	94
55) a-Terpineol	7.969	59	1223451	58.381	ug/ml#	79
56) 3-Chloroaniline	7.981	65	675870	53.547	ug/ml	87
57) 2,6-Dichlorophenol	8.004	162	1281091	57.891	ug/ml	97
58) 1-chloro-2-nitrobenzene	8.275	111	579097	58.641	ug/ml#	1
59) Caprolactam	8.339	55	661882	50.662	ug/ml#	69
60) 1,2,4,5-Tetrachloroben...	8.804	216	1614609	48.308	ug/ml	98
61) Biphenyl	9.110	154	3606194	48.238	ug/ml	97
83) Dichloran	10.792	206	433482	49.634	ug/ml#	70
84) Pentachloronitrobenzene	10.933	237	414436	51.898	ug/ml#	83
98) Diphenamid	12.010	167	2405049	67.719	ug/ml	84

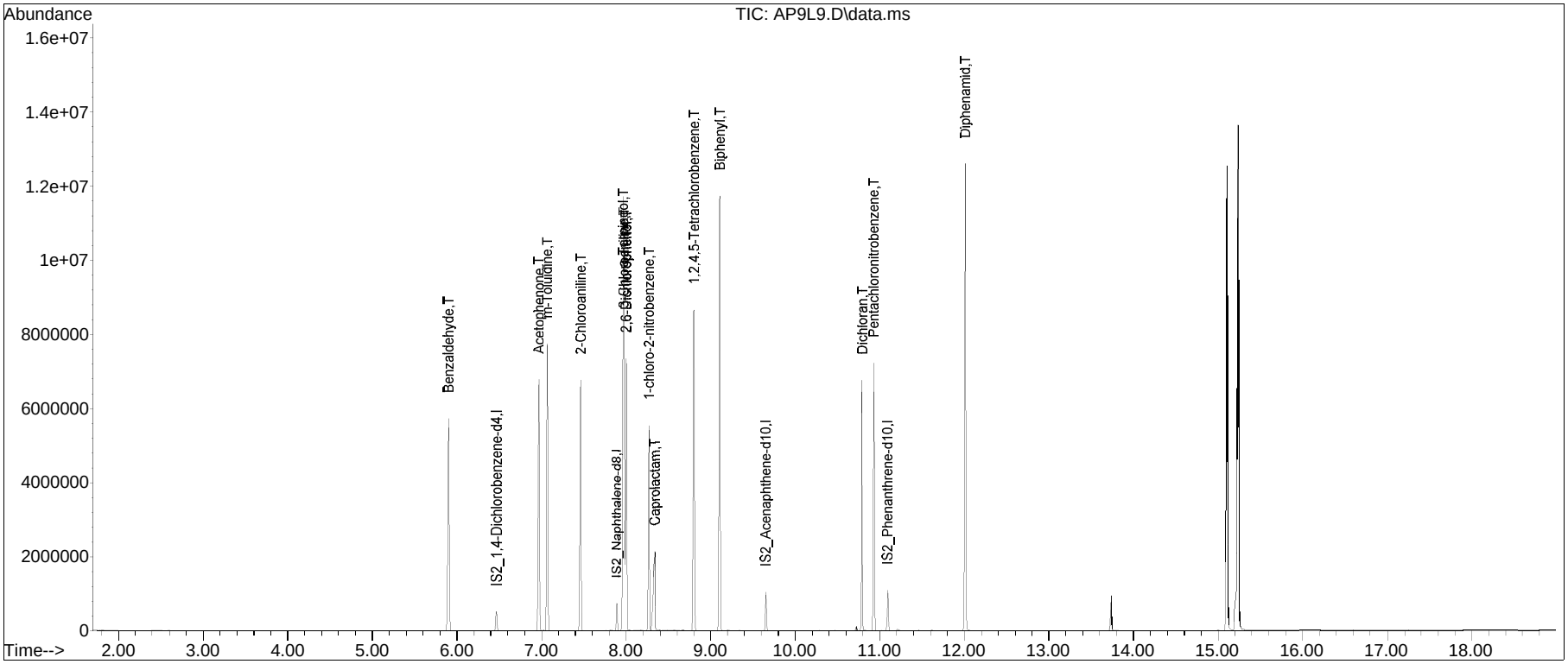
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L9.D
Acq On : 12 Feb 2024 7:52 pm
Operator : SV107:mrg
Sample : IL1,32,,AP9L50 Lot# 10546
Misc : WG1886439
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 18 07:26:43 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L9.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 7:52 pm	Instrument	: SV107
Sample	: IL1,32,,AP9L50 Lot# 10546	Quant Date	: 2/18/2024 7:26 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L8.D
Acq On : 12 Feb 2024 8:18 pm
Operator : SV107:mrg
Sample : IL2,32,,AP9L25 Lot# 10547
Misc : WG1886439
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 18 07:26:28 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.463	152	85740	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 92.12%			
54) IS2_Naphthalene-d8	7.887	136	314369	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 93.33%			
82) IS2_Acenaphthene-d10	9.651	164	184523	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 93.16%			
97) IS2_Phenanthrene-d10	11.092	188	386756	4.000	ug/ml #	0.00
Standard Area 3 = 418394			Recovery = 92.44%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.893	105	571873	27.019	ug/ml	97
29) Acetophenone	6.963	105	974658	27.132	ug/ml#	80
30) m-Toluidine	7.063	106	989941	27.791	ug/ml	94
31) 2-Chloroaniline	7.463	127	850862	26.658	ug/ml	95
55) a-Terpineol	7.969	59	572276	28.921	ug/ml#	81
56) 3-Chloroaniline	7.975	65	318287	26.706	ug/ml	84
57) 2,6-Dichlorophenol	7.998	162	596755	28.559	ug/ml	96
58) 1-chloro-2-nitrobenzene	8.269	111	270727	29.033	ug/ml#	1
59) Caprolactam	8.322	55	308576	25.335	ug/ml#	69
60) 1,2,4,5-Tetrachloroben...	8.798	216	750132	23.769	ug/ml	98
61) Biphenyl	9.104	154	1742633	24.687	ug/ml	98
83) Dichloran	10.786	206	192021	26.038	ug/ml#	70
84) Pentachloronitrobenzene	10.933	237	185929	24.377	ug/ml#	83
98) Diphenamid	12.004	167	1085388	30.373	ug/ml	85

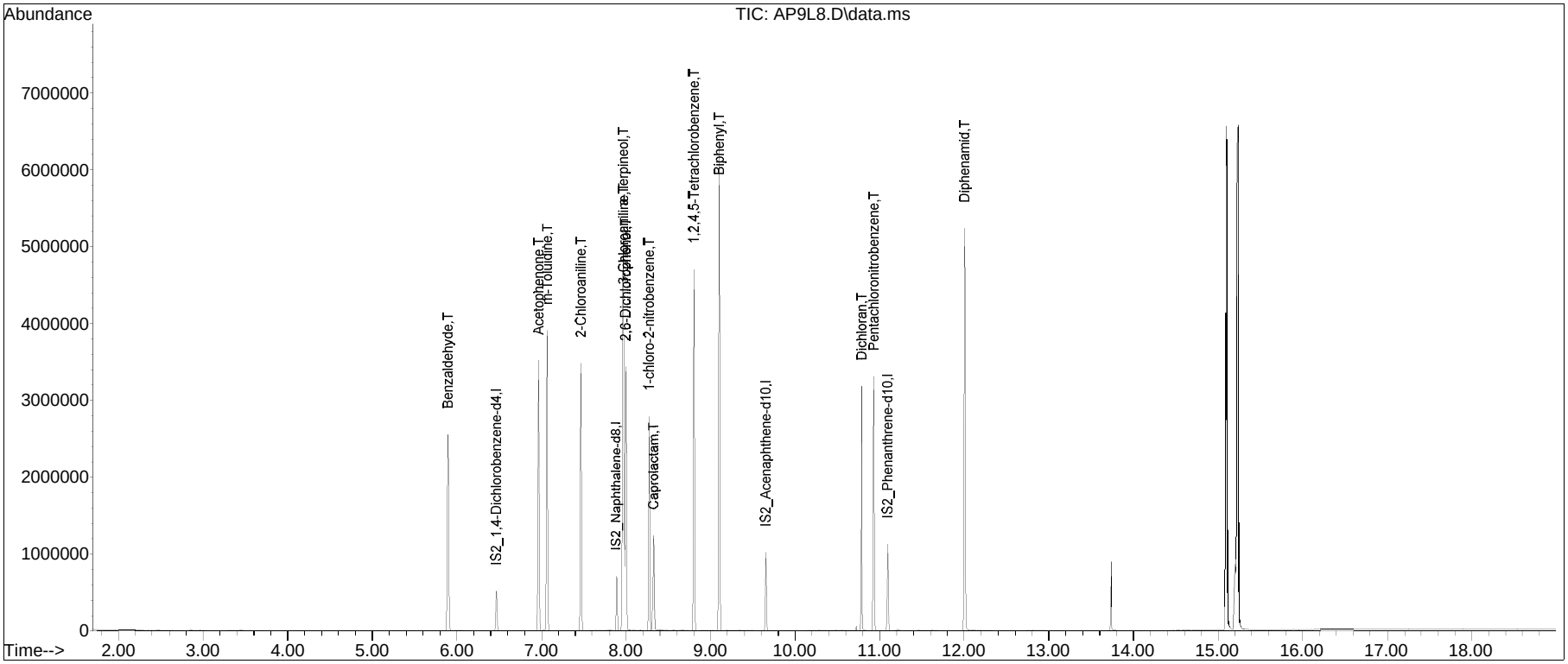
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L8.D
Acq On : 12 Feb 2024 8:18 pm
Operator : SV107:mrg
Sample : IL2,32,,AP9L25 Lot# 10547
Misc : WG1886439
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 18 07:26:28 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L8.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 8:18 pm	Instrument	: SV107
Sample	: IL2,32,,AP9L25 Lot# 10547	Quant Date	: 2/18/2024 7:26 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L7.D
Acq On : 12 Feb 2024 8:45 pm
Operator : SV107:mrg
Sample : IL3,32,,AP9L10 Lot# 10548
Misc : WG1886439
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 18 07:26:14 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.469	152	102277	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 109.88%			
54) IS2_Naphthalene-d8	7.892	136	377965	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 112.21%			
82) IS2_Acenaphthene-d10	9.651	164	224578	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 113.38%			
97) IS2_Phenanthrene-d10	11.092	188	465085	4.000	ug/ml	# 0.00
Standard Area 3 = 418394			Recovery = 111.16%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.892	105	264837	10.489	ug/ml	98
29) Acetophenone	6.963	105	449629	10.493	ug/ml#	81
30) m-Toluidine	7.063	106	458422	10.789	ug/ml	94
31) 2-Chloroaniline	7.463	127	394299	10.356	ug/ml	95
55) a-Terpineol	7.963	59	258396	10.861	ug/ml#	79
56) 3-Chloroaniline	7.975	65	148971	10.396	ug/ml	84
57) 2,6-Dichlorophenol	7.998	162	276305	10.998	ug/ml	96
58) 1-chloro-2-nitrobenzene	8.269	111	120730	10.769	ug/ml#	1
59) Caprolactam	8.316	55	134752	9.606	ug/ml#	68
60) 1,2,4,5-Tetrachloroben...	8.798	216	358703	9.453	ug/ml	98
61) Biphenyl	9.104	154	831229	9.794	ug/ml	99
83) Dichloran	10.786	206	77927	9.941	ug/ml#	72
84) Pentachloronitrobenzene	10.933	237	82217	9.271	ug/ml#	84
98) Diphenamid	12.004	167	480642	11.185	ug/ml	85

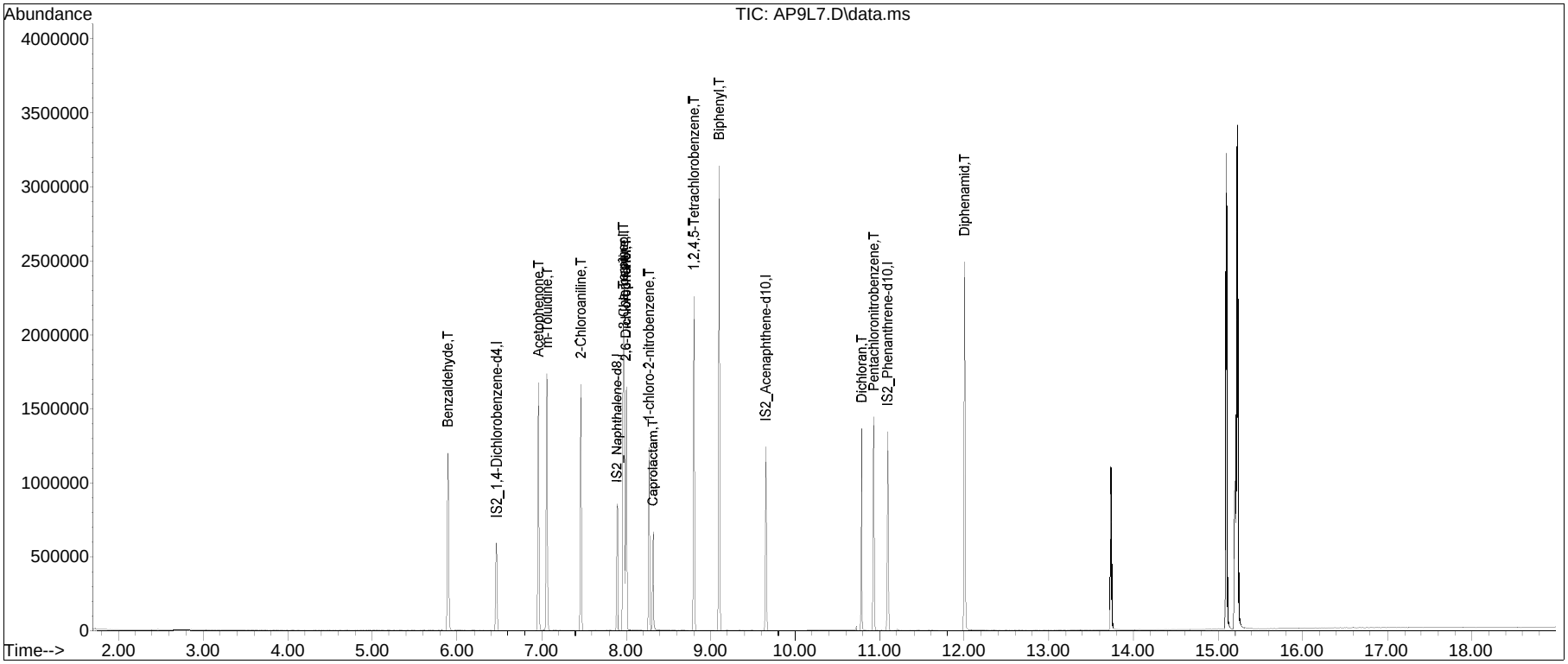
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L7.D
Acq On : 12 Feb 2024 8:45 pm
Operator : SV107:mrg
Sample : IL3,32,,AP9L10 Lot# 10548
Misc : WG1886439
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 18 07:26:14 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L7.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 8:45 pm	Instrument	: SV107
Sample	: IL3,32,,AP9L10 Lot# 10548	Quant Date	: 2/18/2024 7:26 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L6.D
Acq On : 12 Feb 2024 9:11 pm
Operator : SV107:mrg
Sample : IL4,32,,AP9L5 Lot# 10549
Misc : WG1886439
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 18 07:26:00 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.469	152	93077	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 100.00%			
54) IS2_Naphthalene-d8	7.887	136	336846	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 100.00%			
82) IS2_Acenaphthene-d10	9.651	164	198075	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 100.00%			
97) IS2_Phenanthrene-d10	11.092	188	418394	4.000	ug/ml	# 0.00
Standard Area 3 = 418394			Recovery = 100.00%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.893	105	112530	4.898	ug/ml	97
29) Acetophenone	6.963	105	191912	4.921	ug/ml#	81
30) m-Toluidine	7.063	106	191045	4.940	ug/ml	95
31) 2-Chloroaniline	7.463	127	167076	4.822	ug/ml#	94
55) a-Terpineol	7.963	59	105684	4.984	ug/ml#	78
56) 3-Chloroaniline	7.975	65	63692	4.988	ug/ml	84
57) 2,6-Dichlorophenol	7.998	162	114627	5.120	ug/ml	97
58) 1-chloro-2-nitrobenzene	8.269	111	49566	4.961	ug/ml#	1
59) Caprolactam	8.304	55	52022	4.520	ug/ml#	72
60) 1,2,4,5-Tetrachloroben...	8.798	216	161423	4.774	ug/ml	96
61) Biphenyl	9.104	154	362436	4.792	ug/ml	99
83) Dichloran	10.786	206	27203	4.429	ug/ml#	75
84) Pentachloronitrobenzene	10.933	237	32144	4.472	ug/ml#	82
98) Diphenamid	12.004	167	195445	5.056	ug/ml	83

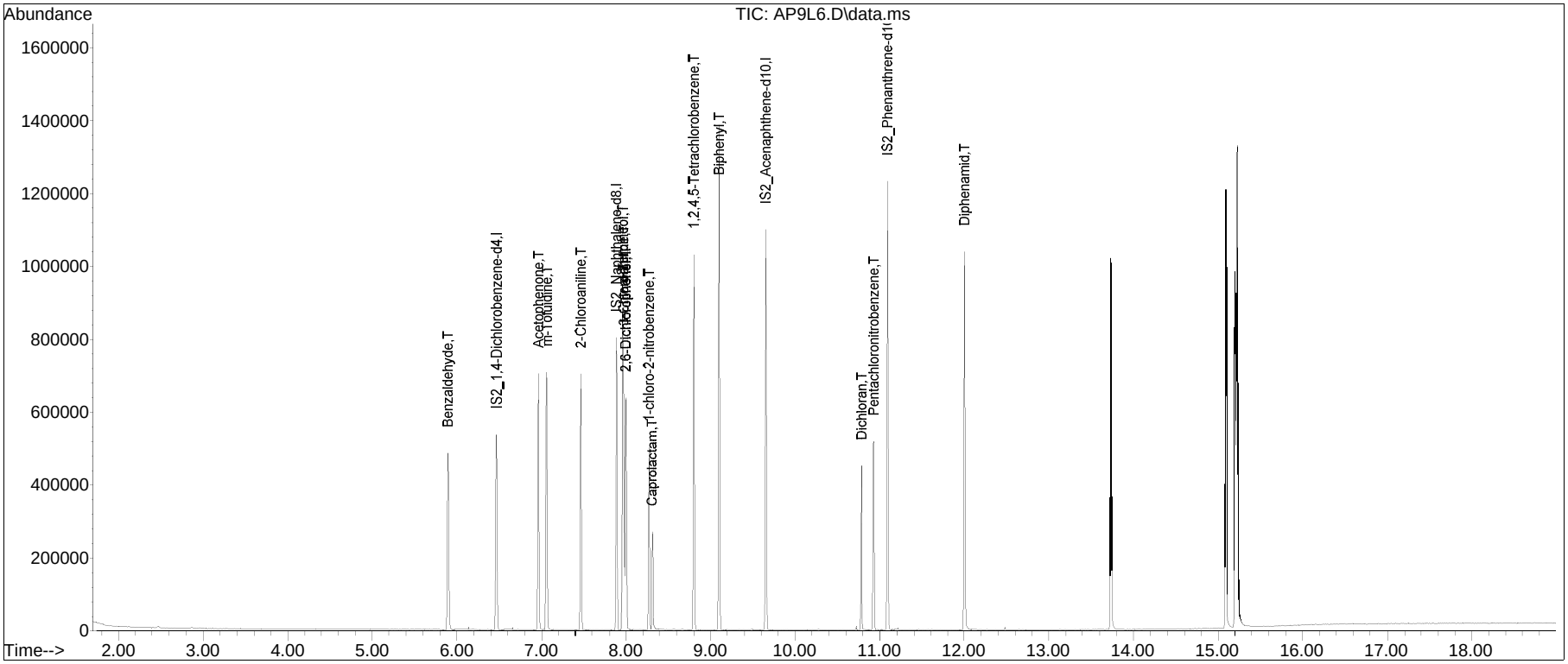
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L6.D
Acq On : 12 Feb 2024 9:11 pm
Operator : SV107:mrg
Sample : IL4,32,,AP9L5 Lot# 10549
Misc : WG1886439
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 18 07:26:00 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L6.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 9:11 pm	Instrument	: SV107
Sample	: IL4,32,,AP9L5 Lot# 10549	Quant Date	: 2/18/2024 7:26 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L5.D
Acq On : 12 Feb 2024 9:38 pm
Operator : SV107:mrg
Sample : IL5,32,,AP9L2.5 Lot# 10550
Misc : WG1886439
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 18 07:25:45 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.463	152	91835	4.000	ug/ml	0.00
Standard Area 1 = 93077			Recovery =	98.67%		
54) IS2_Naphthalene-d8	7.886	136	337157	4.000	ug/ml	0.00
Standard Area 1 = 336846			Recovery =	100.09%		
82) IS2_Acenaphthene-d10	9.651	164	195012	4.000	ug/ml	0.00
Standard Area 1 = 198075			Recovery =	98.45%		
97) IS2_Phenanthrene-d10	11.092	188	398477	4.000	ug/ml	# 0.00
Standard Area 1 = 418394			Recovery =	95.24%		
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.898	105	54541	2.406	ug/ml	98
29) Acetophenone	6.963	105	91798	2.386	ug/ml#	82
30) m-Toluidine	7.063	106	90335	2.368	ug/ml	95
31) 2-Chloroaniline	7.463	127	81320	2.379	ug/ml	95
55) a-Terpineol	7.963	59	48372	2.279	ug/ml#	76
56) 3-Chloroaniline	7.975	65	30238	2.366	ug/ml	84
57) 2,6-Dichlorophenol	7.998	162	53676	2.395	ug/ml	96
58) 1-chloro-2-nitrobenzene	8.269	111	23135	2.313	ug/ml#	1
59) Caprolactam	8.304	55	21576	2.244	ug/ml#	71
60) 1,2,4,5-Tetrachloroben...	8.798	216	79052	2.336	ug/ml	98
61) Biphenyl	9.104	154	177244	2.341	ug/ml	99
83) Dichloran	10.786	206	10950	2.188	ug/ml#	75
84) Pentachloronitrobenzene	10.933	237	12780	2.194	ug/ml#	82
98) Diphenamid	12.004	167	78632	2.136	ug/ml	84

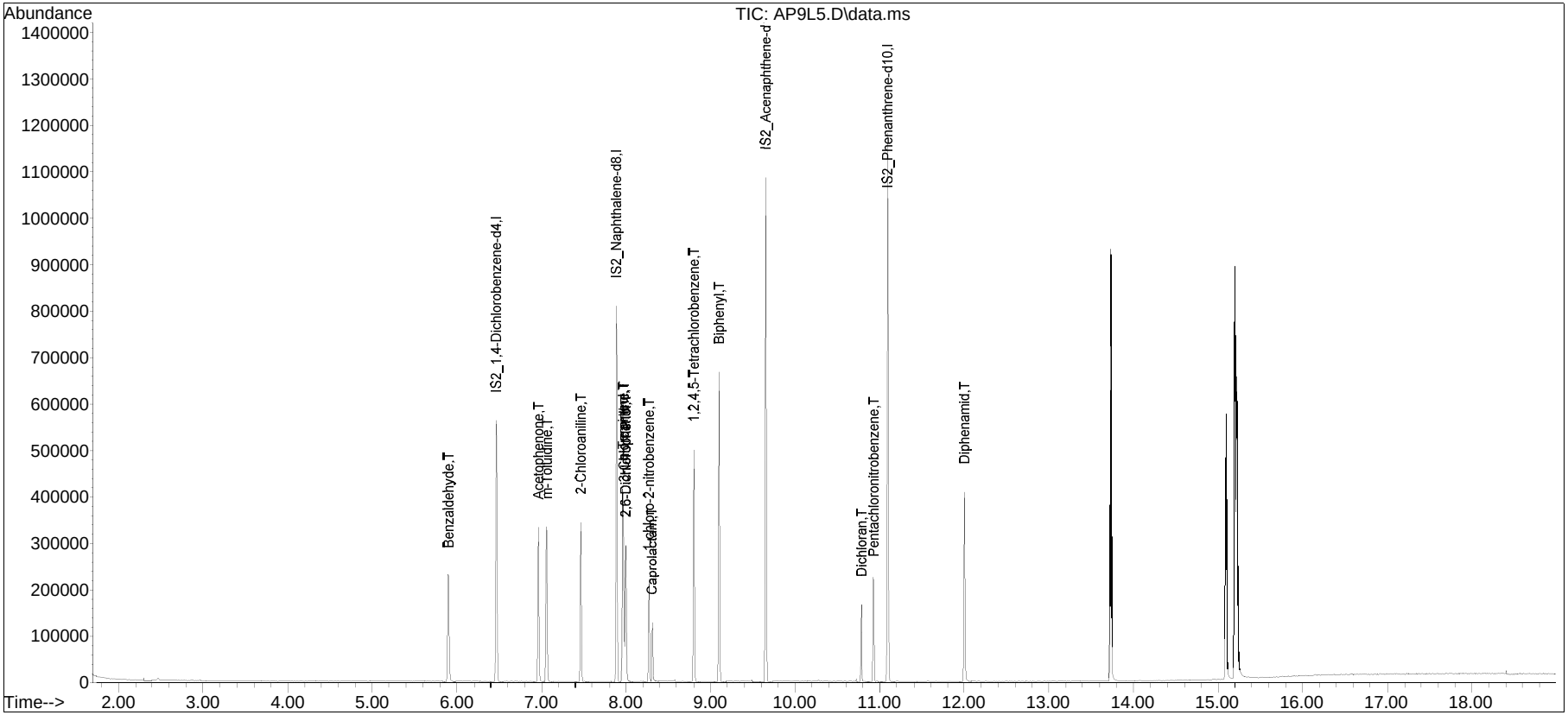
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L5.D
Acq On : 12 Feb 2024 9:38 pm
Operator : SV107:mrg
Sample : IL5,32,,AP9L2.5 Lot# 10550
Misc : WG1886439
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 18 07:25:45 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L5.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 9:38 pm	Instrument	: SV107
Sample	: IL5,32,,AP9L2.5 Lot# 10550	Quant Date	: 2/18/2024 7:26 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L4.D
Acq On : 12 Feb 2024 10:04 pm
Operator : SV107:mrg
Sample : IL6,32,,AP9L1 Lot# 10551
Misc : WG1886439
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 18 07:25:30 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.469	152	92482	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery =	99.36%		
54) IS2_Naphthalene-d8	7.887	136	338835	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery =	100.59%		
82) IS2_Acenaphthene-d10	9.651	164	196693	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery =	99.30%		
97) IS2_Phenanthrene-d10	11.092	188	416760	4.000	ug/ml #	0.00
Standard Area 3 = 418394			Recovery =	99.61%		
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.898	105	22772	0.997	ug/ml	99
29) Acetophenone	6.963	105	39339	1.015	ug/ml#	81
30) m-Toluidine	7.063	106	37339	0.972	ug/ml	94
31) 2-Chloroaniline	7.463	127	34126	0.991	ug/ml	94
55) a-Terpineol	7.963	59	19644	0.921	ug/ml#	70
56) 3-Chloroaniline	7.975	65	12961	1.009	ug/ml	78
57) 2,6-Dichlorophenol	7.998	162	20665	0.918	ug/ml	93
58) 1-chloro-2-nitrobenzene	8.269	111	9972	0.992	ug/ml#	1
59) Caprolactam	8.304	55	7802	1.214	ug/ml#	72
60) 1,2,4,5-Tetrachloroben...	8.798	216	34673	1.019	ug/ml	97
61) Biphenyl	9.104	154	74399	0.978	ug/ml	98
83) Dichloran	10.786	206	4226	1.210	ug/ml#	77
84) Pentachloronitrobenzene	10.933	237	5318	1.288	ug/ml#	81
98) Diphenamid	12.004	167	31756	0.825	ug/ml#	80

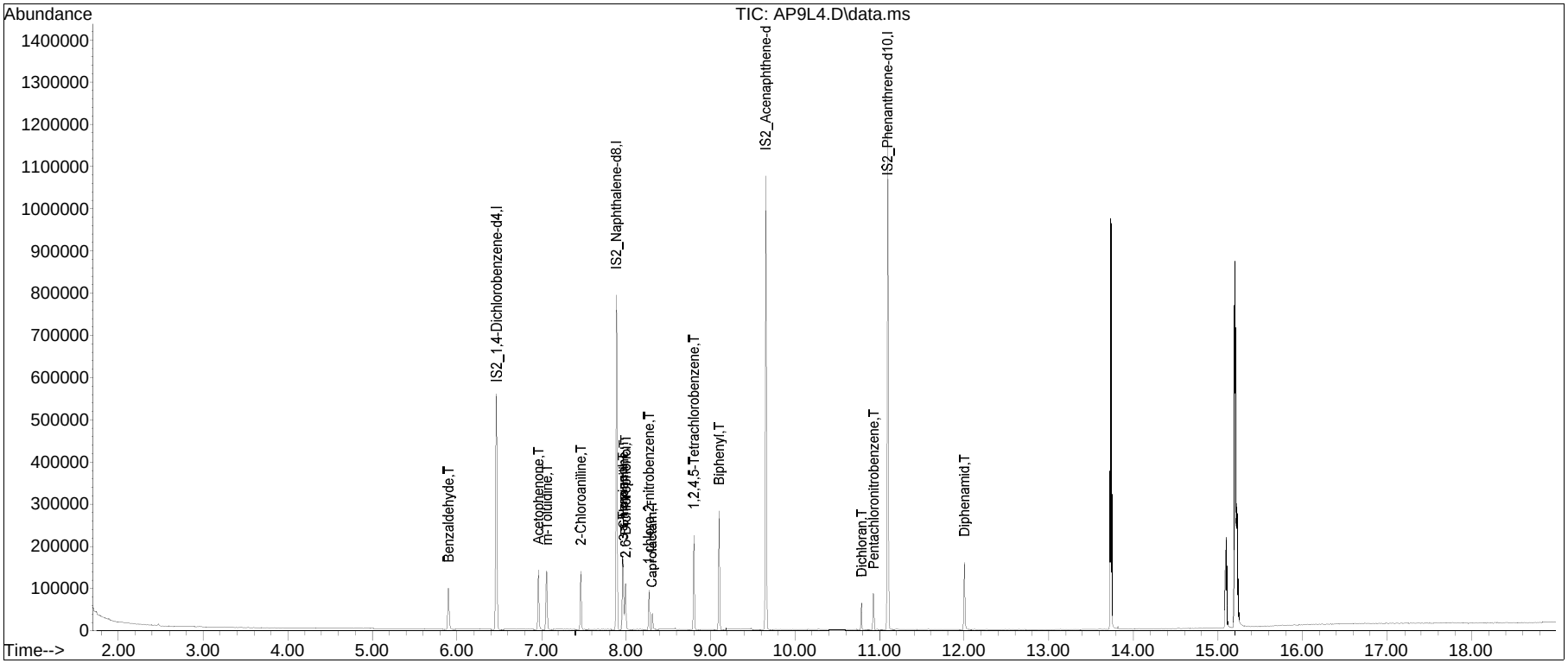
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L4.D
Acq On : 12 Feb 2024 10:04 pm
Operator : SV107:mrg
Sample : IL6,32,,AP9L1 Lot# 10551
Misc : WG1886439
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 18 07:25:30 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L4.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 10:04 pm	Instrument	: SV107
Sample	: IL6,32,,AP9L1 Lot# 10551	Quant Date	: 2/18/2024 7:25 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L3.D
Acq On : 12 Feb 2024 10:30 pm
Operator : SV107:mrg
Sample : IL7,32,,AP9L0.5 Lot# 10552
Misc : WG1886439
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 18 07:25:16 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.469	152	92045	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 98.89%			
54) IS2_Naphthalene-d8	7.886	136	338321	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 100.44%			
82) IS2_Acenaphthene-d10	9.651	164	194234	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 98.06%			
97) IS2_Phenanthrene-d10	11.092	188	407043	4.000	ug/ml #	0.00
Standard Area 3 = 418394			Recovery = 97.29%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.898	105	10477	0.461	ug/ml	97
29) Acetophenone	6.963	105	18111	0.470	ug/ml#	87
30) m-Toluidine	7.063	106	17686	0.462	ug/ml	95
31) 2-Chloroaniline	7.463	127	16194	0.473	ug/ml	93
55) a-Terpineol	7.963	59	9631	0.452	ug/ml#	66
56) 3-Chloroaniline	7.975	65	5924	0.462	ug/ml	84
57) 2,6-Dichlorophenol	7.998	162	10043	0.447	ug/ml	93
58) 1-chloro-2-nitrobenzene	8.269	111	4882	0.486	ug/ml#	1
59) Caprolactam	8.304	55	3764	0.914	ug/ml#	79
60) 1,2,4,5-Tetrachloroben...	8.798	216	18057	0.532	ug/ml	94
61) Biphenyl	9.104	154	39058	0.514	ug/ml	98
83) Dichloran	10.786	206	2076	0.903	ug/ml#	80
84) Pentachloronitrobenzene	10.927	237	2573	0.963	ug/ml#	81
98) Diphenamid	12.004	167	15486	0.412	ug/ml	82

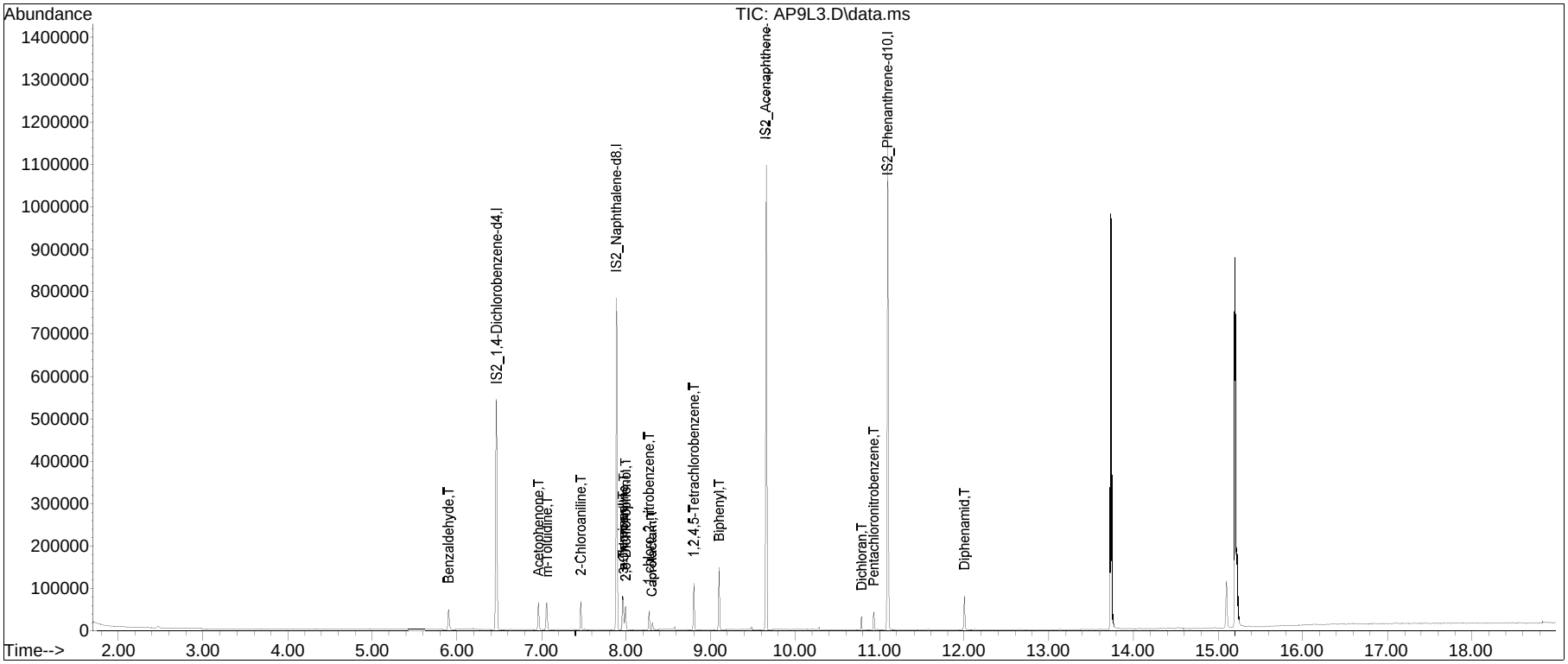
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L3.D
Acq On : 12 Feb 2024 10:30 pm
Operator : SV107:mrg
Sample : IL7,32,,AP9L0.5 Lot# 10552
Misc : WG1886439
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 18 07:25:16 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L3.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 10:30 pm	Instrument	: SV107
Sample	: IL7,32,,AP9L0.5 Lot# 10552	Quant Date	: 2/18/2024 7:25 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L2.D
Acq On : 12 Feb 2024 10:56 pm
Operator : SV107:mrg
Sample : IL8,32,,AP9L0.2 Lot# 10553
Misc : WG1886439
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 18 07:25:03 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.463	152	91134	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 97.91%			
54) IS2_Naphthalene-d8	7.886	136	328047	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 97.39%			
82) IS2_Acenaphthene-d10	9.651	164	186448	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 94.13%			
97) IS2_Phenanthrene-d10	11.092	188	391906	4.000	ug/ml	# 0.00
Standard Area 3 = 418394			Recovery = 93.67%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.898	105	4136	0.184	ug/ml	99
29) Acetophenone	6.963	105	7116	0.186	ug/ml#	80
30) m-Toluidine	7.063	106	6772	0.179	ug/ml	96
31) 2-Chloroaniline	7.463	127	6417	0.189	ug/ml#	92
55) a-Terpineol	7.963	59	3705	0.179	ug/ml#	71
56) 3-Chloroaniline	7.975	65	2386	0.192	ug/ml#	79
57) 2,6-Dichlorophenol	7.998	162	3731	0.171	ug/ml	90
58) 1-chloro-2-nitrobenzene	8.269	111	1663	0.171	ug/ml#	1
59) Caprolactam	8.310	55	1074	0.716	ug/ml#	66
60) 1,2,4,5-Tetrachloroben...	8.798	216	6858	0.208	ug/ml#	97
61) Biphenyl	9.104	154	15287	0.208	ug/ml	96
83) Dichloran	10.786	206	861	0.730	ug/ml#	73
84) Pentachloronitrobenzene	10.927	237	894	0.764	ug/ml	84
98) Diphenamid	12.004	167	5882	0.162	ug/ml#	81

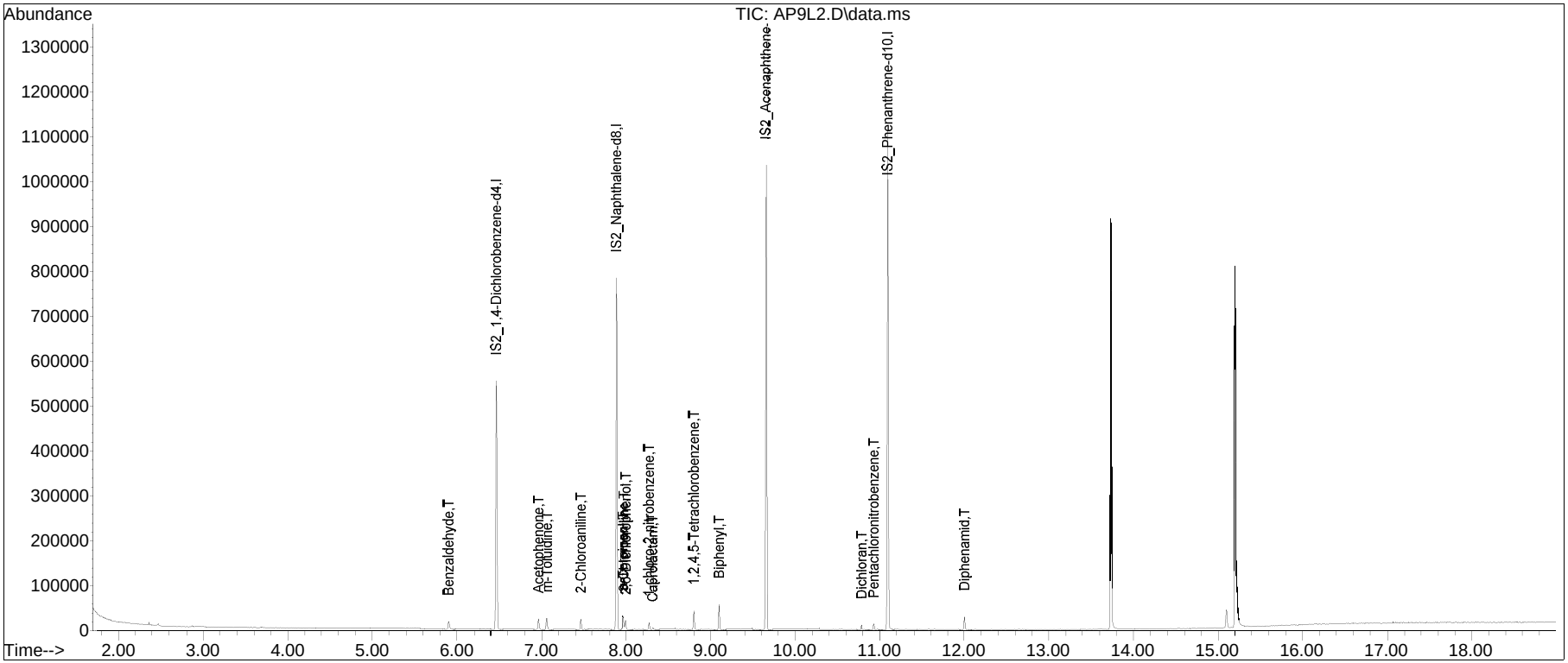
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L2.D
Acq On : 12 Feb 2024 10:56 pm
Operator : SV107:mrg
Sample : IL8,32,,AP9L0.2 Lot# 10553
Misc : WG1886439
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 18 07:25:03 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L2.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 10:56 pm	Instrument	: SV107
Sample	: IL8,32,,AP9L0.2 Lot# 10553	Quant Date	: 2/18/2024 7:25 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L1.D
Acq On : 12 Feb 2024 11:22 pm
Operator : SV107:mrg
Sample : IL9,32,,AP9L0.1 Lot# 10554
Misc : WG1886439
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 18 07:24:50 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.469	152	89294	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 95.94%			
54) IS2_Naphthalene-d8	7.886	136	316277	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 93.89%			
82) IS2_Acenaphthene-d10	9.651	164	179407	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 90.58%			
97) IS2_Phenanthrene-d10	11.092	188	373795	4.000	ug/ml	# 0.00
Standard Area 3 = 418394			Recovery = 89.34%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.904	105	2189	0.099	ug/ml	95
29) Acetophenone	6.969	105	3529	0.094	ug/ml#	95
30) m-Toluidine	7.063	106	3550	0.096	ug/ml	90
31) 2-Chloroaniline	7.463	127	3387	0.102	ug/ml	92
55) a-Terpineol	7.963	59	1907	0.096	ug/ml#	74
56) 3-Chloroaniline	7.975	65	1181	0.098	ug/ml	84
57) 2,6-Dichlorophenol	7.998	162	1999	0.095	ug/ml	99
58) 1-chloro-2-nitrobenzene	8.269	111	799	0.085	ug/ml#	1
59) Caprolactam	8.322	55	507	0.674	ug/ml#	43
60) 1,2,4,5-Tetrachloroben...	8.798	216	3572	0.112	ug/ml	97
61) Biphenyl	9.104	154	8023	0.113	ug/ml	98
83) Dichloran	10.786	206	465	0.672	ug/ml#	81
84) Pentachloronitrobenzene	10.933	237	525	0.720	ug/ml	88
98) Diphenamid	12.004	167	3407	0.099	ug/ml#	79

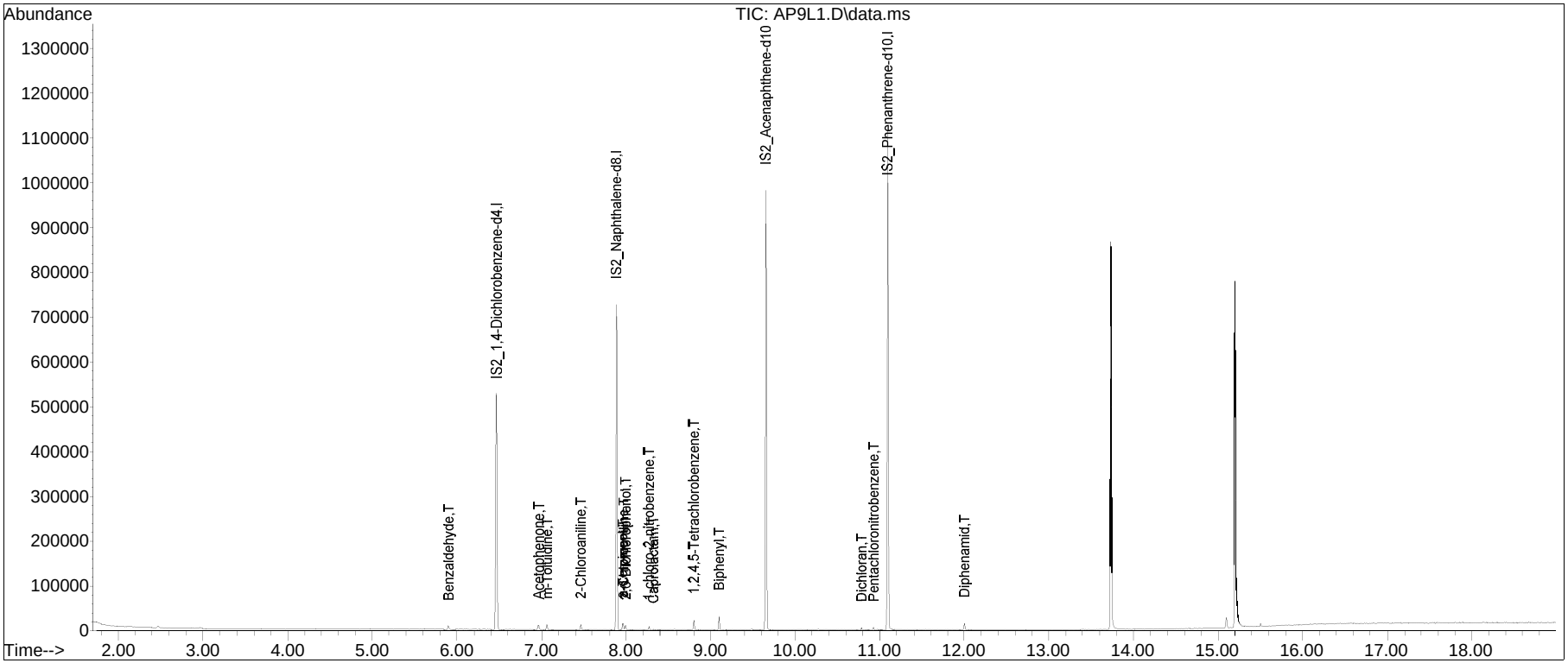
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9L1.D
Acq On : 12 Feb 2024 11:22 pm
Operator : SV107:mrg
Sample : IL9,32,,AP9L0.1 Lot# 10554
Misc : WG1886439
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 18 07:24:50 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9L1.D	Operator	: SV107:mrg
Date Inj'd	: 2/12/2024 11:22 pm	Instrument	: SV107
Sample	: IL9,32,,AP9L0.1 Lot# 10554	Quant Date	: 2/18/2024 7:25 am

There are no manual integrations or false positives in this file.

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240211ical\
Data File : ABNICV.D
Acq On : 12 Feb 2024 11:48 pm
Operator : SV107:mrg
Sample : CQICV1,32,,ABNICV Lot# 10498
Misc : WG1886439
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 18 08:26:58 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	IS1_1,4-Dichlorobenzene-d4		1.000	1.000	0.0	87	0.00
2	t	n-Nitrosodimethylamine		0.824	0.776	5.8	78	0.00
3	t	Pyridine		1.198	1.204	-0.5	77	0.00
4	S	2-Fluorophenol		1.173	1.074	8.4	75	0.00
5	T	Aniline		1.767	1.763	0.2	84	0.00
6	t	2-Chlorophenol		1.288	1.198	7.0	76	0.00
7	S	Phenol-d6		1.487	1.384	6.9	76	0.00
8	T	Phenol		1.621	1.507	7.0	77	0.00
9	T	Bis(2-chloroethyl)ether		1.345	1.229	8.6	80	0.00
10	T	1,3-Dichlorobenzene		1.596	1.497	6.2	81	0.00
11	T	1,4-Dichlorobenzene		1.637	1.545	5.6	83	0.00
12	T	1,2-Dichlorobenzene		1.560	1.468	5.9	82	0.00
13	t	Benzyl alcohol		1.066	0.970	9.0	75	0.00
14	T	Bis(2-chloroisopropyl)ether		1.817	1.611	11.3	75	0.00
15	T	2-Methylphenol		1.135	1.099	3.2	79	0.00
16	T	Hexachloroethane		0.583	0.550	5.7	80	0.00
17	T	n-Nitrosodi-n-propylamine		0.916	0.842	8.1	75	0.00
18	T	3-Methylphenol/4-Methylphen		1.228	1.201	2.2	78	0.00
19	S	Nitrobenzene-d5		1.364	1.235	9.5	73	0.00
20	T	Nitrobenzene		1.397	1.308	6.4	76	0.00
21	T	Isophorone		2.407	2.264	5.9	75	0.00
22	T	2-Nitrophenol		0.574	0.484	15.7	69	0.00
23	T	2,4-Dimethylphenol		0.957	1.141	-19.2	97	0.00
24	T	Bis(2-chloroethoxy)methane		1.624	1.528	5.9	78	0.00
25	T	2,4-Dichlorophenol		1.120	1.091	2.6	76	0.00
26	T	1,2,4-Trichlorobenzene		1.461	1.328	9.1	80	0.00
34	I	IS1_Naphthalene-d8		1.000	1.000	0.0	83	0.00
35	T	Naphthalene		1.122	1.023	8.8	79	0.00
36	T	Benzoic Acid	*	5.000	3.502	30.0#	58	-0.02
37	T	4-Chloroaniline		0.137	0.135	1.5	78	0.00
38	T	Hexachlorobutadiene		0.228	0.218	4.4	83	0.00
39	T	p-Chloro-m-cresol		0.285	0.279	2.1	75	0.00
40	T	2-Methylnaphthalene		0.746	0.721	3.4	82	0.00
41	T	1-Methylnaphthalene		0.255	0.246	3.5	83	0.00
42	T	Hexachlorocyclopentadiene		0.165	0.192	-16.4	96	0.00
43	T	2,4,6-Trichlorophenol		0.225	0.218	3.1	78	0.00
44	T	2,4,5-Trichlorophenol		0.244	0.244	0.0	76	0.00
45	S	2-Fluorobiphenyl		0.920	0.888	3.5	83	0.00

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240211ical\
Data File : ABNICV.D
Acq On : 12 Feb 2024 11:48 pm
Operator : SV107:mrg
Sample : CQICV1,32,,ABNICV Lot# 10498
Misc : WG1886439
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 18 08:26:58 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
46	T	2-Chloronaphthalene		0.749	0.717	4.3	82	0.00
47	T	2-Nitroaniline	*	5.000	3.835	23.3#	67	0.00
48	T	1,4-Dinitrobenzene	*	5.000	3.739	25.2#	66	0.00
49	T	1,3-Dinitrobenzene		0.107	0.096	10.3	70	0.00
50	T	Dimethyl phthalate		0.828	0.812	1.9	78	0.00
51	T	Acenaphthylene		1.127	1.120	0.6	79	0.00
52	T	2,6-Dinitrotoluene	*	5.000	4.333	13.3	72	0.00
53	T	1,2-Dinitrobenzene	*	5.000	4.310	13.8	72	0.00
62	I	IS1_Acenaphthene-d10		1.000	1.000	0.0	81	0.00
63	T	3-Nitroaniline		0.303	0.291	4.0	74	0.00
64	T	Acenaphthene		1.128	1.079	4.3	82	0.00
65	T	2,4-Dinitrophenol	*	5.000	3.621	27.6#	61	0.00
66	T	Dibenzofuran		1.851	1.758	5.0	81	0.00
67	T	2,4-Dinitrotoluene	*	5.000	4.216	15.7	72	0.00
68	T	4-Nitrophenol		0.255	0.220	13.7	70	0.00
69	T	2,3,5,6-Tetrachlorophenol		0.317	0.316	0.3	75	0.00
70	T	2,3,4,6-Tetrachlorophenol		0.321	0.332	-3.4	80	0.00
71	T	Diethyl phthalate		1.302	1.262	3.1	81	0.00
72	T	Fluorene		1.392	1.375	1.2	83	0.00
73	T	4-Chlorophenyl phenyl ether		0.717	0.691	3.6	85	0.00
74	T	4-Nitroaniline		0.305	0.294	3.6	76	0.00
75	T	4,6-Dinitro-o-cresol	*	5.000	3.846	23.1#	70	0.00
76	T	NDPA/DPA		1.116	1.115	0.1	81	0.00
77	T	Azobenzene		1.312	1.338	-2.0	80	0.00
78	S	2,4,6-Tribromophenol		0.149	0.146	2.0	76	0.00
79	T	4-Bromophenyl phenyl ether		0.376	0.364	3.2	81	0.00
80	T	Hexachlorobenzene		0.415	0.390	6.0	82	0.00
81	T	Pentachlorophenol	*	5.000	4.163	16.7	75	0.00
87	I	IS1_Phenanthrene-d10		1.000	1.000	0.0	81	0.00
88	T	Phenanthrene		1.112	1.067	4.0	84	0.00
89	T	Anthracene		1.051	1.052	-0.1	82	0.00
90	T	Carbazole		0.953	0.961	-0.8	78	0.00
91	T	Di-n-butylphthalate		1.014	0.959	5.4	74	0.00
92	T	Fluoranthene		1.196	1.206	-0.8	82	0.00
93	T	Benzidine		0.646	0.579	10.4	69	0.00
94	T	Pyrene		1.294	1.316	-1.7	81	0.00
95	S	4-Terphenyl-d14		0.881	0.867	1.6	81	0.00

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240211ical\
Data File : ABNICV.D
Acq On : 12 Feb 2024 11:48 pm
Operator : SV107:mrg
Sample : CQICV1,32,,ABNICV Lot# 10498
Misc : WG1886439
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 18 08:26:58 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
96	T	Butyl benzyl phthalate	*	5.000	3.851	23.0#	65	0.00
103	I	IS1_Chrysene-d12		1.000	1.000	0.0	77	0.00
104	T	Benzo(a)anthracene		1.348	1.307	3.0	77	0.00
105	T	3,3'-Dichlorobenzidine		0.407	0.398	2.2	69	0.00
106	T	Chrysene		1.357	1.343	1.0	81	0.00
107	T	Bis(2-ethylhexyl)phthalate	*	5.000	4.587	8.3	72	0.00
108	T	Di-n-octylphthalate	*	5.000	4.180	16.4	66	0.00
109	T	Benzo(b)fluoranthene		1.169	1.175	-0.5	81	0.00
110	T	Benzo(k)fluoranthene		1.208	1.262	-4.5	77	0.00
111	T	Benzo(a)pyrene		1.048	1.147	-9.4	80	0.00
112	I	IS1_Perylene-d12		1.000	1.000	0.0	76	0.00
113	T	Indeno(1,2,3-cd)pyrene		0.942	0.952	-1.1	73	-0.01
114	T	Dibenzo(a,h)anthracene		0.987	1.044	-5.8	77	0.00
115	T	Benzo(ghi)perylene		0.991	1.047	-5.7	78	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNICV.D
Acq On : 12 Feb 2024 11:48 pm
Operator : SV107:mrg
Sample : CQICV1,32,,ABNICV Lot# 10498
Misc : WG1886439
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 18 08:26:58 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.469	152	83804	4.000	ug/ml	0.00
Standard Area 1 = 96456			Recovery = 86.88%			
34) IS1_Naphthalene-d8	7.892	136	308223	4.000	ug/ml	0.00
Standard Area 1 = 370815			Recovery = 83.12%			
62) IS1_Acenaphthene-d10	9.651	164	189157	4.000	ug/ml	0.00
Standard Area 1 = 233374			Recovery = 81.05%			
87) IS1_Phenanthrene-d10	11.092	188	373379	4.000	ug/ml	0.00
Standard Area 1 = 460653			Recovery = 81.05%			
103) IS1_Chrysene-d12	13.733	240	344474	4.000	ug/ml	0.00
Standard Area 1 = 446698			Recovery = 77.12%			
112) IS1_Perylene-d12	15.198	264	348871	4.000	ug/ml	0.00
Standard Area 1 = 458865			Recovery = 76.03%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.545	112	112475	4.578	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 91.56%			
7) Phenol-d6	6.081	99	145010	4.654	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 93.08%			
19) Nitrobenzene-d5	7.122	82	129381	4.527	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 181.08%#			
45) 2-Fluorobiphenyl	9.016	172	342212	4.825	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 193.00%#			
78) 2,4,6-Tribromophenol	10.421	330	34410	4.868	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 97.36%			
95) 4-Terphenyl-d14	12.680	244	404418	4.920	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 196.80%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.151	74	81319	4.708	ug/ml#	62
3) Pyridine	2.181	79	126128	5.024	ug/ml#	60
5) Aniline	6.057	93	184684	4.989	ug/ml	99
6) 2-Chlorophenol	6.192	128	125489	4.651	ug/ml	95
8) Phenol	6.098	94	157890	4.649	ug/ml	99
9) Bis(2-chloroethyl)ether	6.192	93	128790	4.569	ug/ml#	83
10) 1,3-Dichlorobenzene	6.386	146	156828	4.689	ug/ml	98
11) 1,4-Dichlorobenzene	6.486	146	161888	4.719	ug/ml	98
12) 1,2-Dichlorobenzene	6.657	146	153825	4.705	ug/ml	97

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNICV.D
Acq On : 12 Feb 2024 11:48 pm
Operator : SV107:mrg
Sample : CQICV1,32,,ABNICV Lot# 10498
Misc : WG1886439
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 18 08:26:58 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
13) Benzyl alcohol	6.669	79	101566	4.548	ug/ml	99
14) Bis(2-chloroisopropyl)...	6.851	45	168753	4.434	ug/ml#	43
15) 2-Methylphenol	6.833	108	115097	4.841	ug/ml	98
16) Hexachloroethane	7.045	117	57627	4.718	ug/ml#	64
17) n-Nitrosodi-n-propylamine	6.992	70	88179	4.597	ug/ml#	89
18) 3-Methylphenol/4-Methy...	7.022	108	125841	4.891	ug/ml	98
20) Nitrobenzene	7.139	77	137016	4.682	ug/ml	95
21) Isophorone	7.422	82	237216	4.703	ug/ml	96
22) 2-Nitrophenol	7.498	139	50741	4.221	ug/ml#	92
23) 2,4-Dimethylphenol	7.592	107	119509	5.962	ug/ml	96
24) Bis(2-chloroethoxy)met...	7.698	93	160116	4.706	ug/ml	100
25) 2,4-Dichlorophenol	7.757	162	114283	4.870	ug/ml	94
26) 1,2,4-Trichlorobenzene	7.839	180	139128	4.544	ug/ml	98
35) Naphthalene	7.910	128	394262	4.559	ug/ml	99
36) Benzoic Acid	7.680	105	57251	3.502	ug/ml	95
37) 4-Chloroaniline	7.992	65	52169	4.926	ug/ml	93
38) Hexachlorobutadiene	8.069	225	83975	4.788	ug/ml	99
39) p-Chloro-m-cresol	8.516	107	107499	4.899	ug/ml	99
40) 2-Methylnaphthalene	8.627	142	277652	4.833	ug/ml	97
41) 1-Methylnaphthalene	8.722	115	94962	4.834	ug/ml	95
42) Hexachlorocyclopentadiene	8.798	237	73821	5.800	ug/ml	99
43) 2,4,6-Trichlorophenol	8.922	196	83986	4.837	ug/ml	99
44) 2,4,5-Trichlorophenol	8.951	196	93940	4.988	ug/ml	99
46) 2-Chloronaphthalene	9.110	162	276175	4.783	ug/ml	96
47) 2-Nitroaniline	9.222	138	62948	3.835	ug/ml	94
48) 1,4-Dinitrobenzene	9.369	168	28916	3.739	ug/ml	88
49) 1,3-Dinitrobenzene	9.433	168	36864	4.462	ug/ml#	1
50) Dimethyl phthalate	9.427	163	313003	4.909	ug/ml#	98
51) Acenaphthylene	9.510	152	431343	4.966	ug/ml	99
52) 2,6-Dinitrotoluene	9.474	165	58389	4.333	ug/ml#	87
53) 1,2-Dinitrobenzene	9.510	168	24812	4.310	ug/ml#	1
63) 3-Nitroaniline	9.622	138	68894	4.813	ug/ml	99
64) Acenaphthene	9.680	154	255018	4.783	ug/ml	89
65) 2,4-Dinitrophenol	9.727	184	22448	3.621	ug/ml	93
66) Dibenzofuran	9.857	168	415695	4.748	ug/ml	96
67) 2,4-Dinitrotoluene	9.863	165	78470	4.216	ug/ml	92
68) 4-Nitrophenol	9.804	65	52047	4.313	ug/ml#	91
69) 2,3,5,6-Tetrachlorophenol	9.939	232	74658	4.986	ug/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNICV.D
Acq On : 12 Feb 2024 11:48 pm
Operator : SV107:mrg
Sample : CQICV1,32,,ABNICV Lot# 10498
Misc : WG1886439
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 18 08:26:58 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ABNical - ABN ical sublist

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
70)	2,3,4,6-Tetrachlorophenol	9.980	232	78406	5.165	ug/ml	97
71)	Diethyl phthalate	10.127	149	298471	4.849	ug/ml	98
72)	Fluorene	10.192	166	325064	4.940	ug/ml	94
73)	4-Chlorophenyl phenyl ...	10.210	204	163419	4.822	ug/ml#	88
74)	4-Nitroaniline	10.216	138	69444	4.815	ug/ml	86
75)	4,6-Dinitro-o-cresol	10.251	198	35301	3.846	ug/ml#	64
76)	NDPA/DPA	10.327	169	263669	4.994	ug/ml	94
77)	Azobenzene	10.363	77	316422	5.099	ug/ml	98
79)	4-Bromophenyl phenyl e...	10.686	248	86163	4.843	ug/ml#	87
80)	Hexachlorobenzene	10.721	284	92143	4.693	ug/ml	87
81)	Pentachlorophenol	10.916	266	48503	4.163	ug/ml	98
88)	Phenanthrene	11.116	178	497949	4.798	ug/ml	99
89)	Anthracene	11.168	178	491040	5.008	ug/ml	98
90)	Carbazole	11.333	167	448423	5.042	ug/ml	98
91)	Di-n-butylphthalate	11.733	149	447597	4.729	ug/ml	99
92)	Fluoranthene	12.268	202	563059	5.043	ug/ml#	93
93)	Benzidine	12.427	184	270382	4.485	ug/ml#	93
94)	Pyrene	12.486	202	614401	5.086	ug/ml	99
96)	Butyl benzyl phthalate	13.215	149	158578	3.851	ug/ml	94
104)	Benzo(a)anthracene	13.727	228	562742	4.846	ug/ml	99
105)	3,3'-Dichlorobenzidine	13.727	252	171195	4.889	ug/ml#	97
106)	Chrysene	13.762	228	578282	4.948	ug/ml	98
107)	Bis(2-ethylhexyl)phtha...	13.862	149	276039	4.587	ug/ml#	93
108)	Di-n-octylphthalate	14.545	149	384818	4.180	ug/ml#	74
109)	Benzo(b)fluoranthene	14.833	252	506070	5.029	ug/ml#	95
110)	Benzo(k)fluoranthene	14.856	252	543521	5.223	ug/ml#	94
111)	Benzo(a)pyrene	15.145	252	493890	5.474	ug/ml#	94
113)	Indeno(1,2,3-cd)pyrene	16.180	276	415184M6	5.055	ug/mL	
114)	Dibenzo(a,h)anthracene	16.209	278	455073	5.284	ug/ml#	92
115)	Benzo(ghi)perylene	16.433	276	456495	5.282	ug/ml#	89

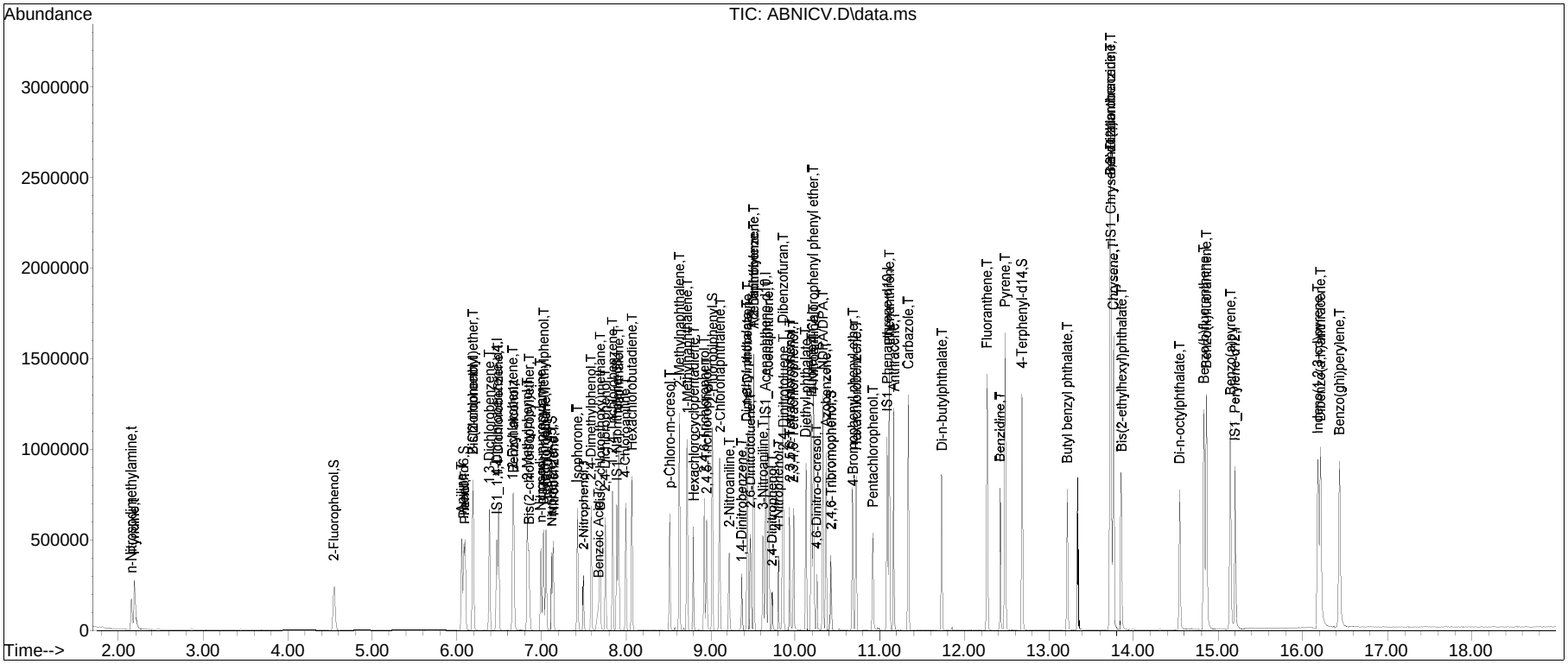
(#) = qualifier out of range (m) = manual integration (+) = signals summed

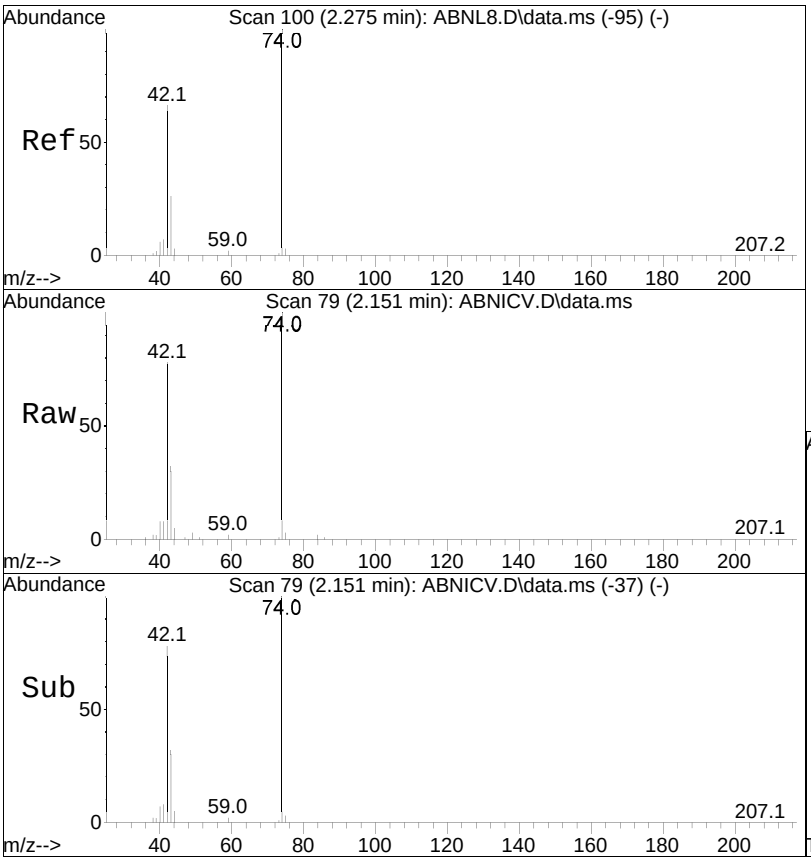
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ABNICV.D
Acq On : 12 Feb 2024 11:48 pm
Operator : SV107:mrg
Sample : CQICV1,32,,ABNICV Lot# 10498
Misc : WG1886439
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 18 08:26:58 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

Sub List : ABNical - ABN ical sublistal\AP9L6.D•

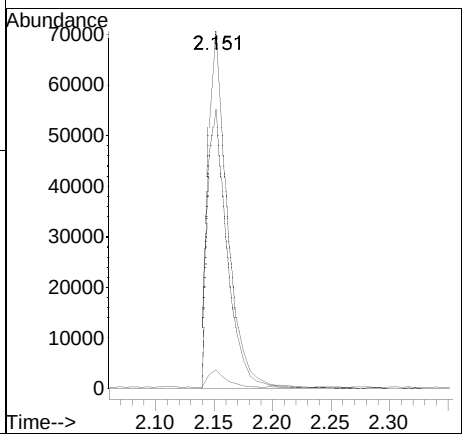


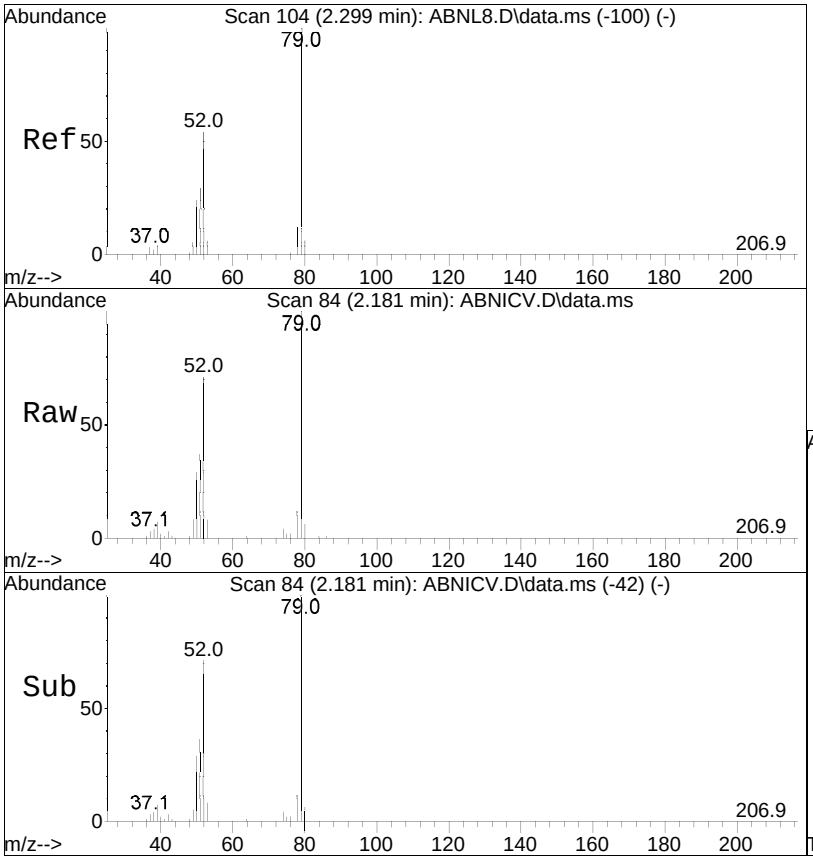


#2
n-Nitrosodimethylamine
Concen: 4.71 ug/ml
RT: 2.151 min Scan# 79
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 74 Resp: 81319

Ion	Ratio	Lower	Upper
74	100		
42	79.7	100.0	150.0#
44	4.5	6.7	10.1#

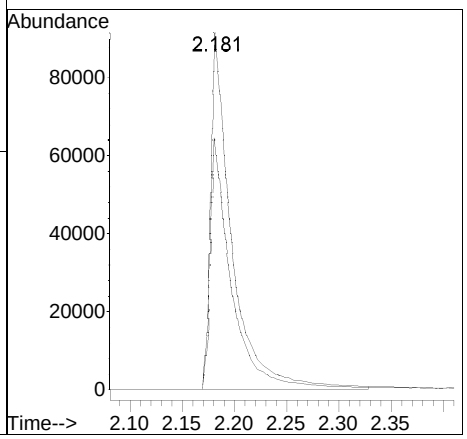


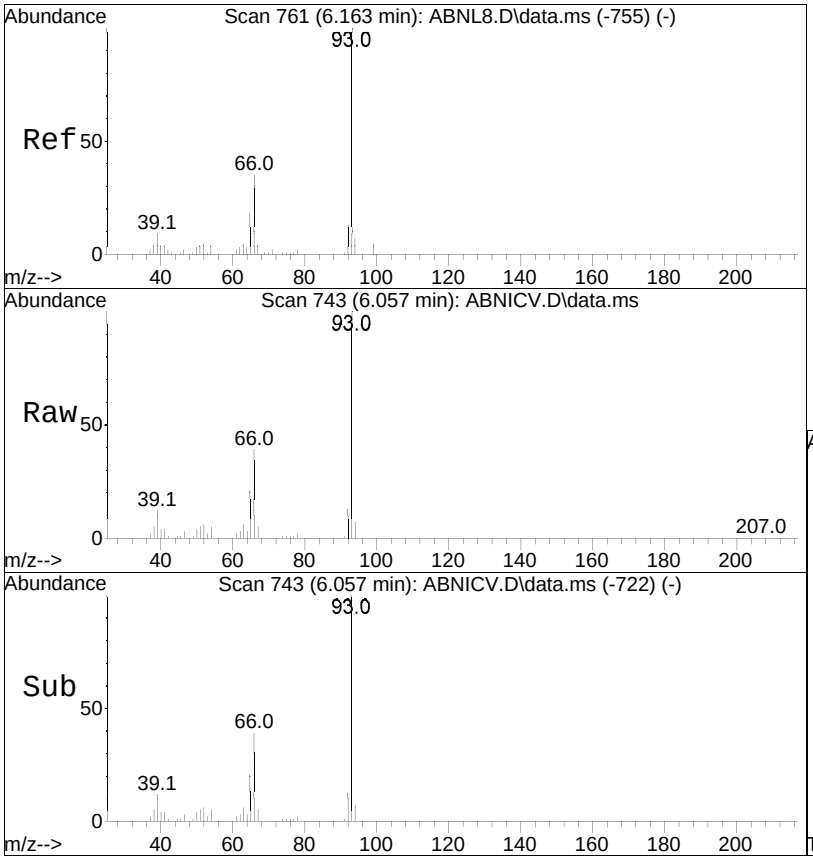


#3
Pyridine
Concen: 5.02 ug/ml
RT: 2.181 min Scan# 84
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 79 Resp: 126128

Ion	Ratio	Lower	Upper
79	100		
52	72.8	93.1	139.7#

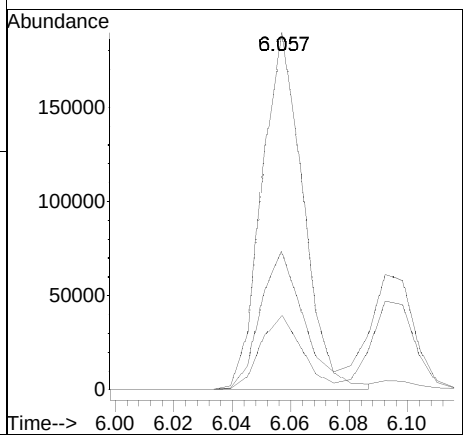


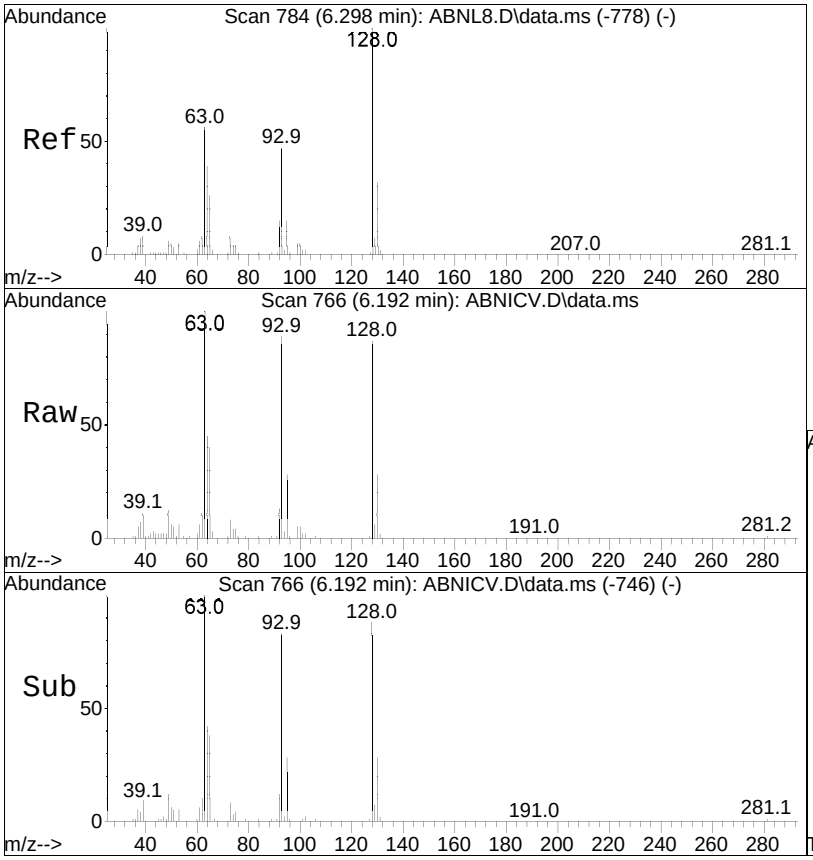


#5
Aniline
Concen: 4.99 ug/ml
RT: 6.057 min Scan# 743
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 93 Resp: 184684

Ion	Ratio	Lower	Upper
93	100		
66	40.6	32.6	49.0
65	21.3	17.6	26.4

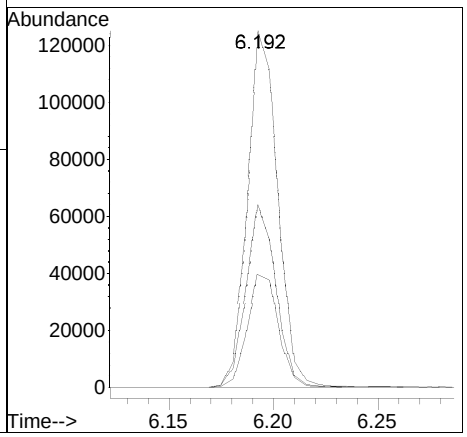


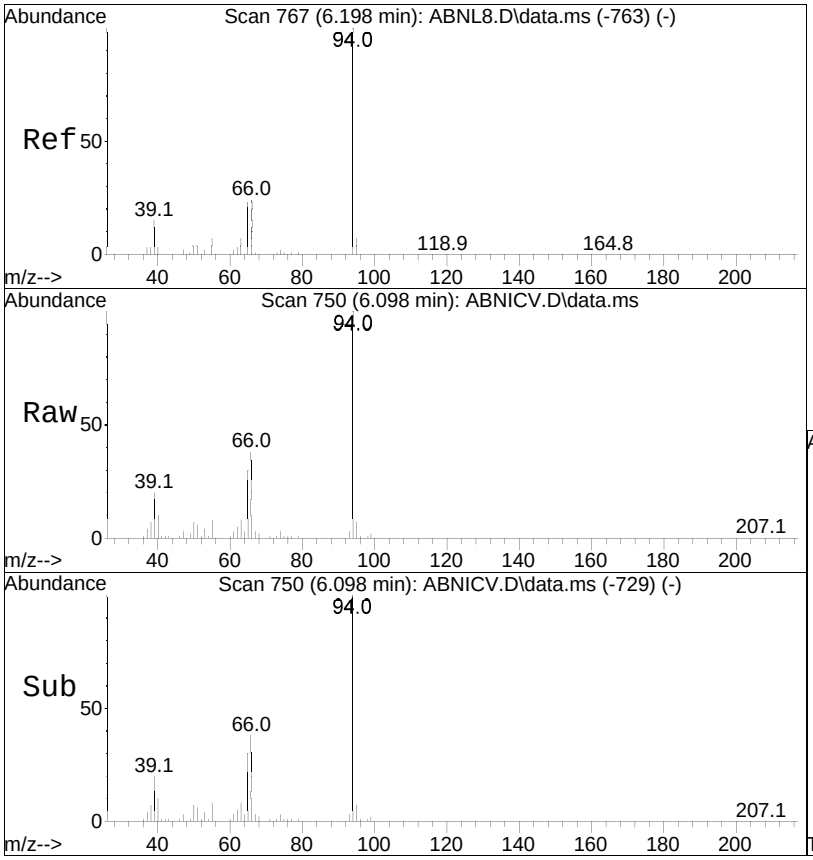


#6
2-Chlorophenol
Concen: 4.65 ug/ml
RT: 6.192 min Scan# 766
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:128 Resp: 125489

Ion	Ratio	Lower	Upper
128	100		
64	51.0	45.1	67.7
130	32.9	26.2	39.4

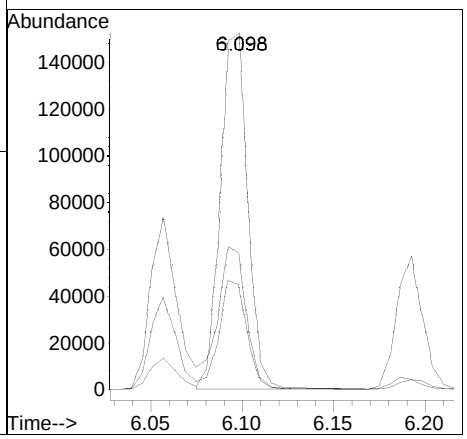


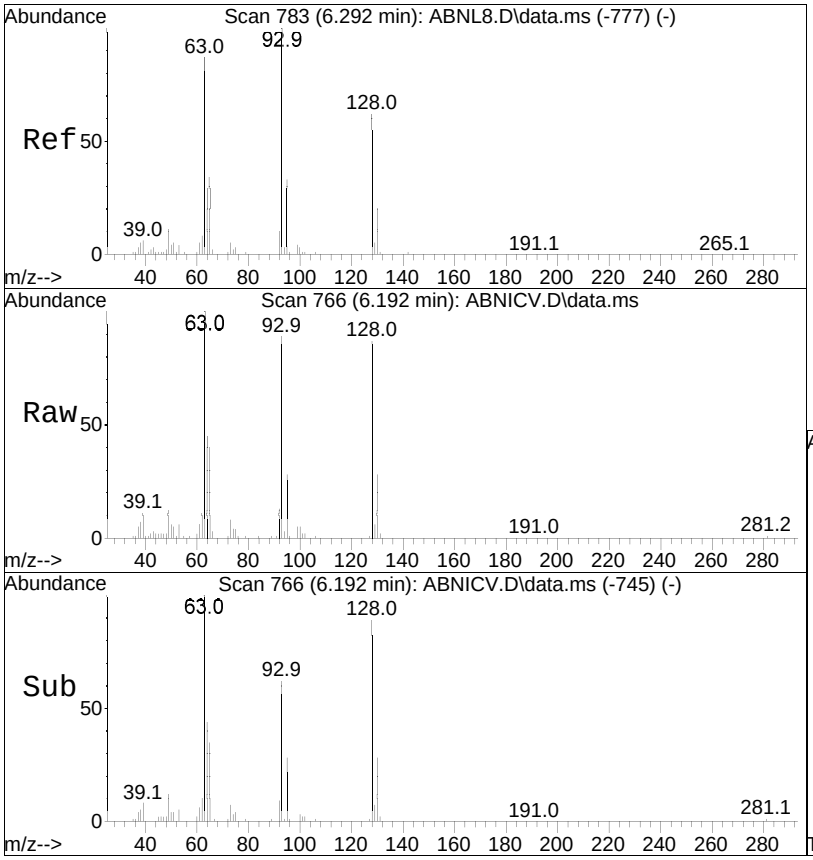


#8
Phenol
Concen: 4.65 ug/ml
RT: 6.098 min Scan# 750
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 94 Resp: 157890

Ion	Ratio	Lower	Upper
94	100		
65	31.6	26.0	39.0
66	42.5	33.8	50.8

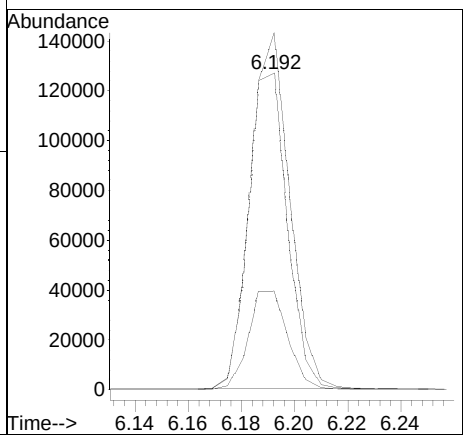


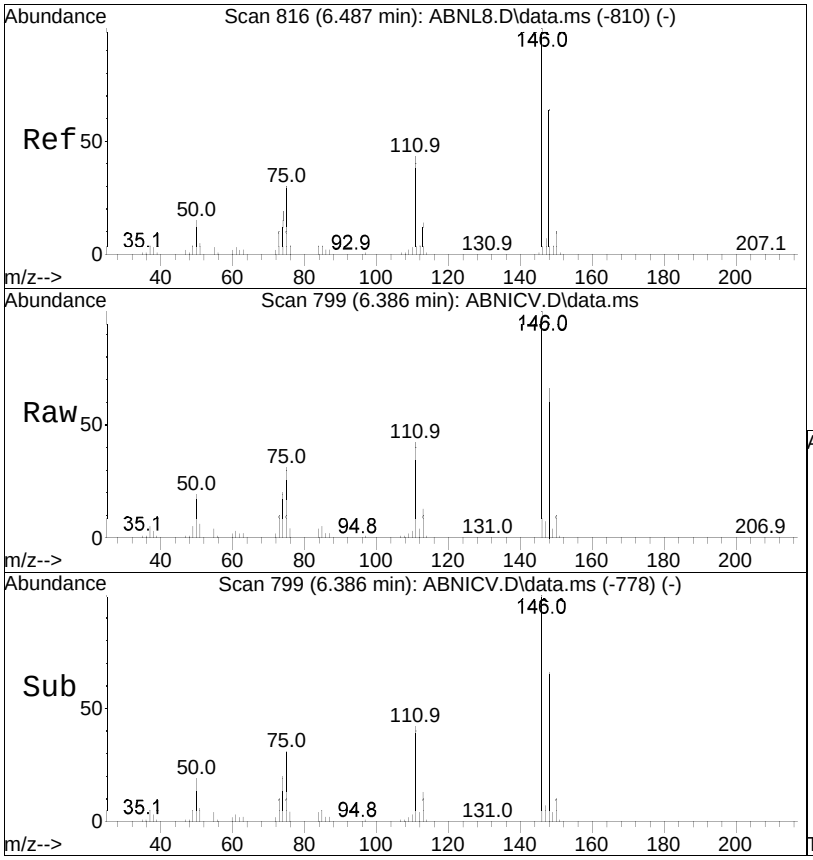


#9
Bis(2-chloroethyl)ether
Concen: 4.57 ug/ml
RT: 6.192 min Scan# 766
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 93 Resp: 128790

Ion	Ratio	Lower	Upper
93	100		
63	114.2	74.6	111.8#
95	31.7	25.9	38.9

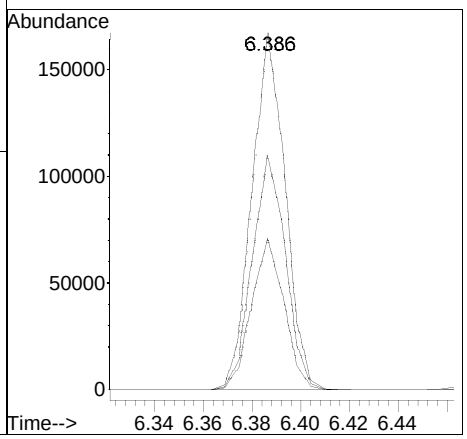


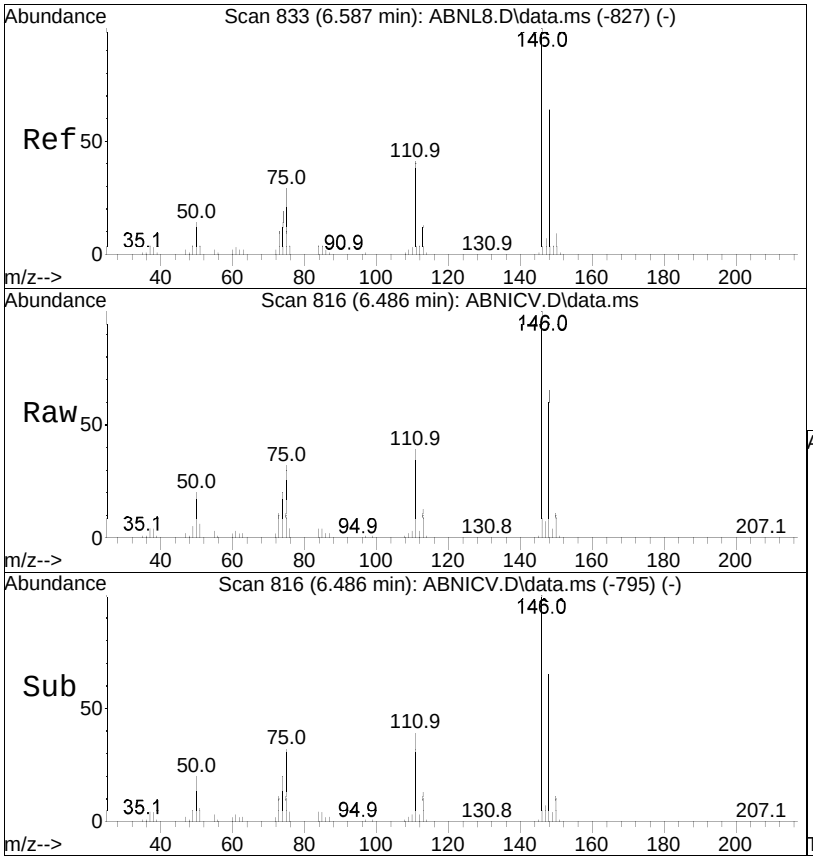


#10
1,3-Dichlorobenzene
Concen: 4.69 ug/ml
RT: 6.386 min Scan# 799
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:146 Resp: 156828

Ion	Ratio	Lower	Upper
146	100		
111	41.7	34.3	51.5
148	65.7	50.8	76.2

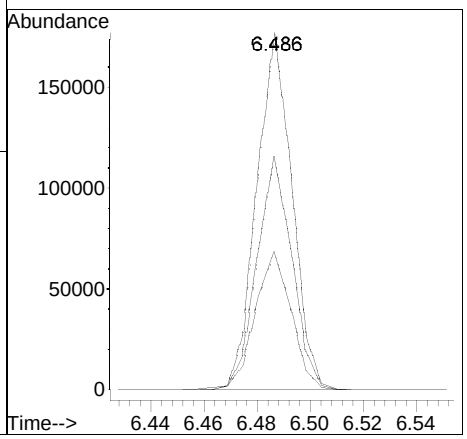


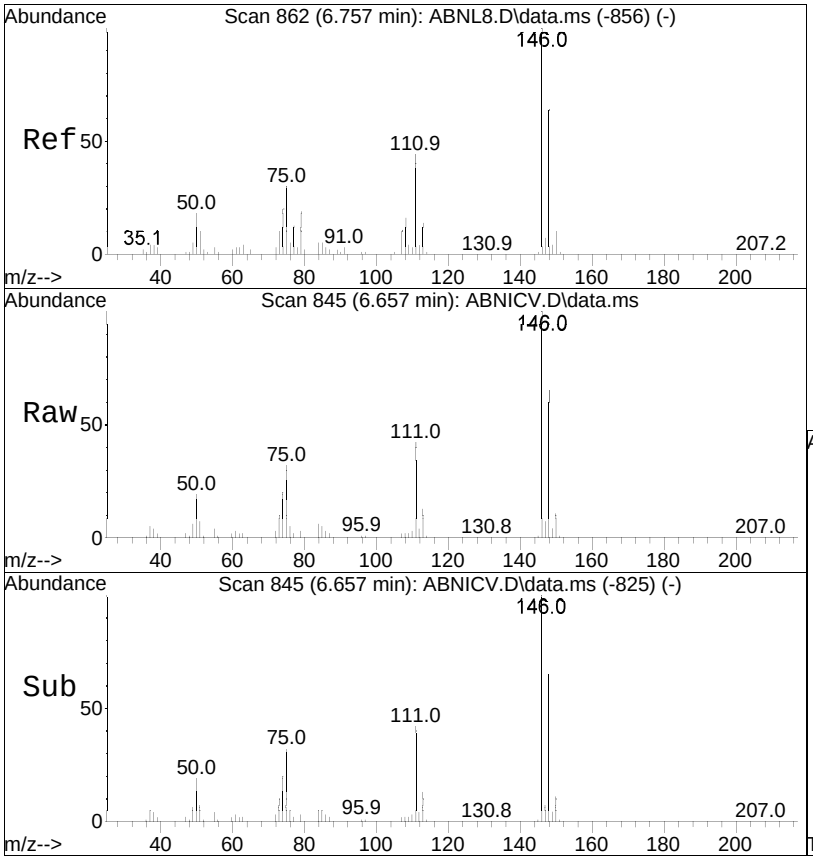


#11
1,4-Dichlorobenzene
Concen: 4.72 ug/ml
RT: 6.486 min Scan# 816
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:146 Resp: 161888

Ion	Ratio	Lower	Upper
146	100		
148	65.2	50.7	76.1
111	40.1	33.4	50.0

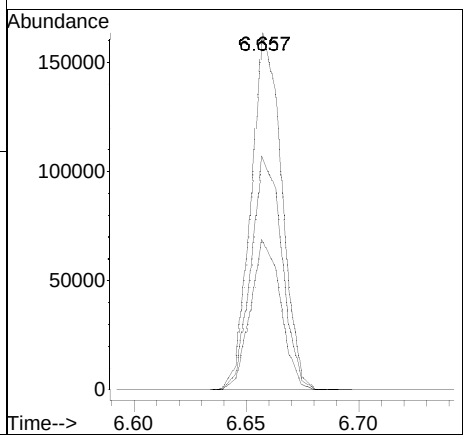


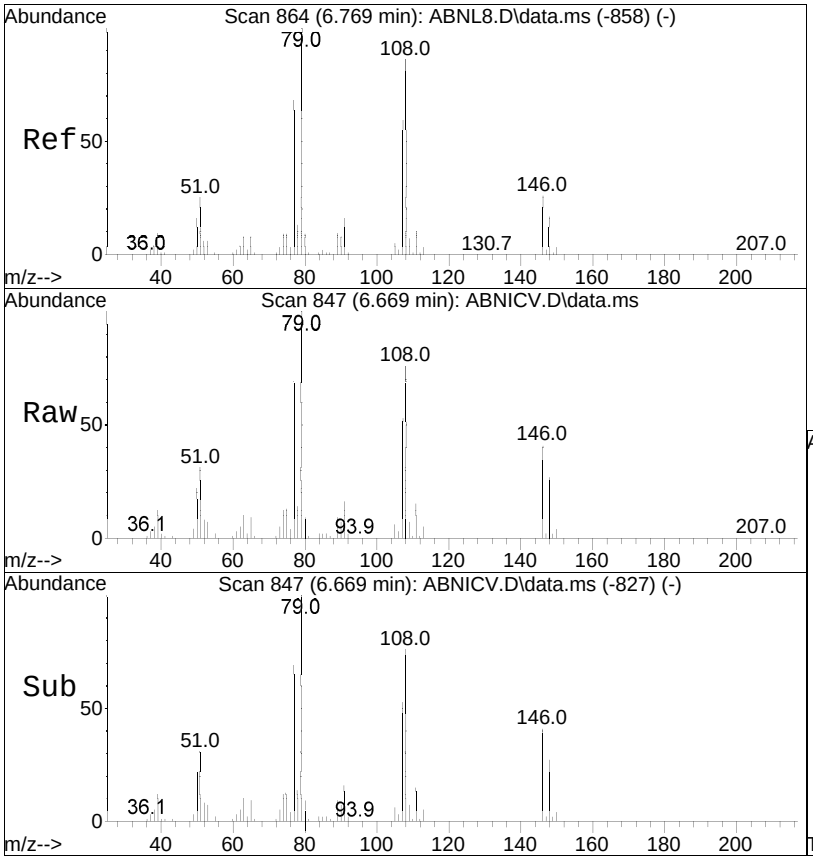


#12
1,2-Dichlorobenzene
Concen: 4.71 ug/ml
RT: 6.657 min Scan# 845
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:146 Resp: 153825

Ion	Ratio	Lower	Upper
146	100		
111	41.5	34.6	52.0
148	65.6	50.2	75.4

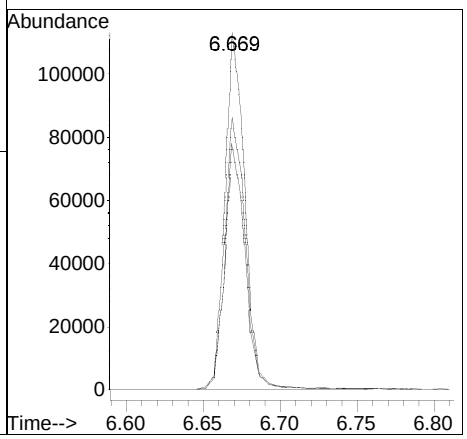


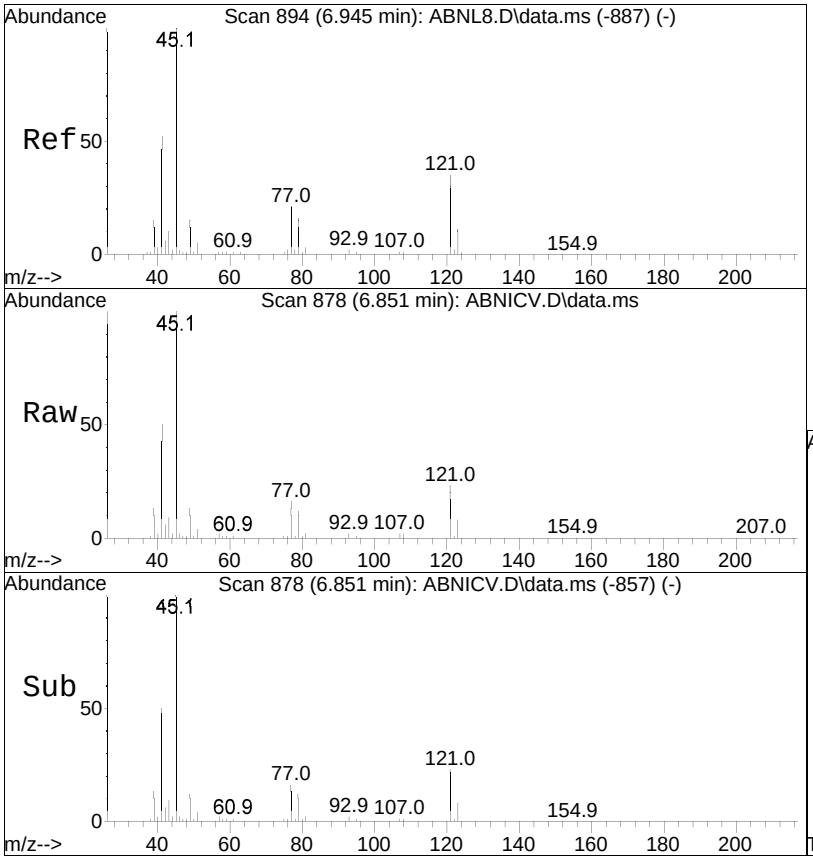


#13
Benzyl alcohol
Concen: 4.55 ug/ml
RT: 6.669 min Scan# 847
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 79 Resp: 101566

Ion	Ratio	Lower	Upper
79	100		
77	69.7	54.9	82.3
108	77.6	63.1	94.7

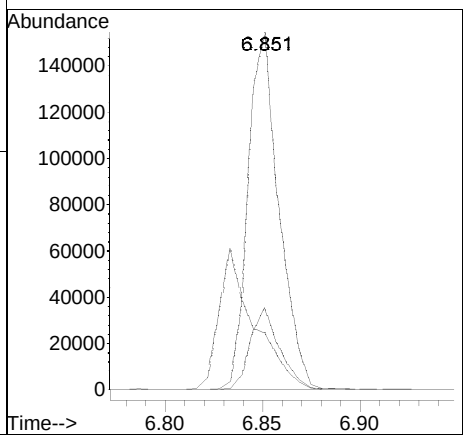


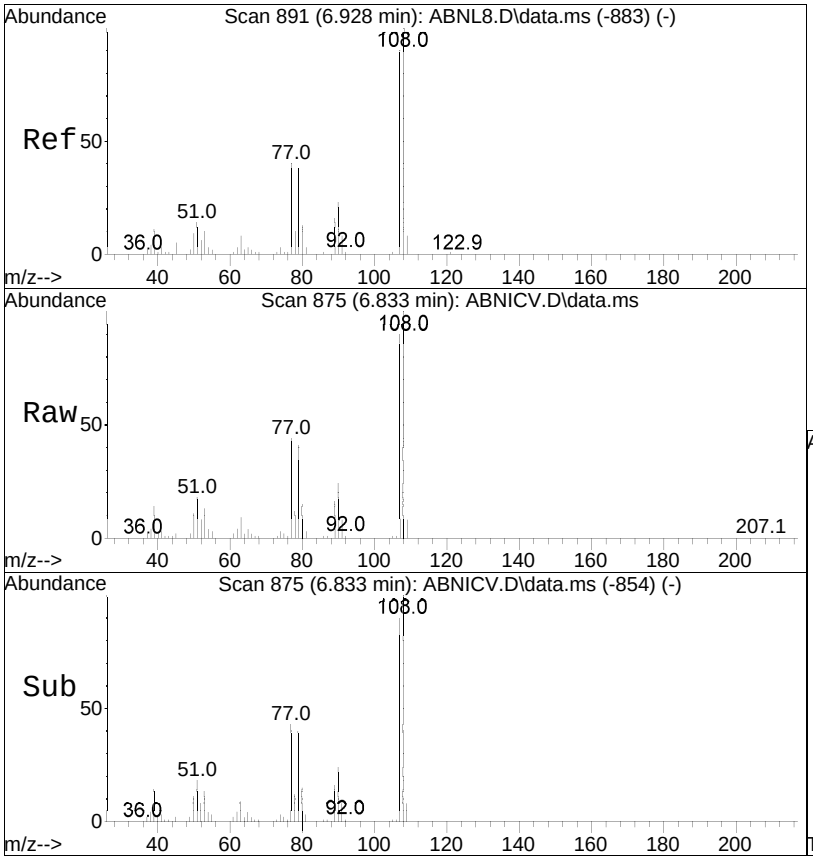


#14
Bis(2-chloroisopropyl)ether
Concen: 4.43 ug/ml
RT: 6.851 min Scan# 878
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 45 Resp: 168753

Ion	Ratio	Lower	Upper
45	100		
121	21.8	9.8	14.6#
77	45.5	6.1	9.1#

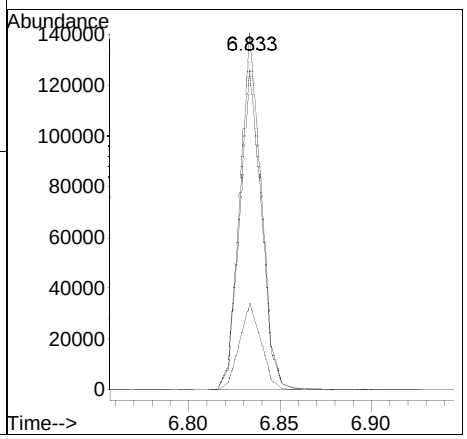


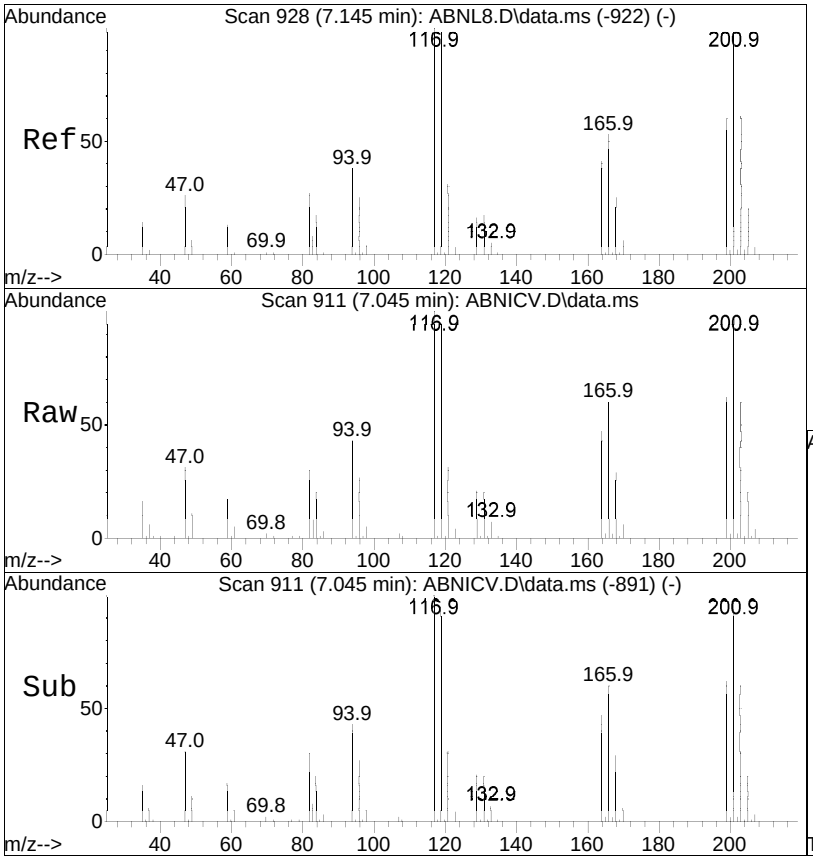


#15
2-Methylphenol
Concen: 4.84 ug/ml
RT: 6.833 min Scan# 875
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:108 Resp: 115097

Ion	Ratio	Lower	Upper
108	100		
107	90.5	70.7	106.1
90	24.4	18.7	28.1

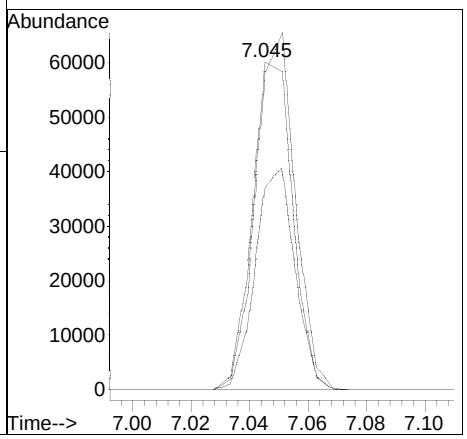


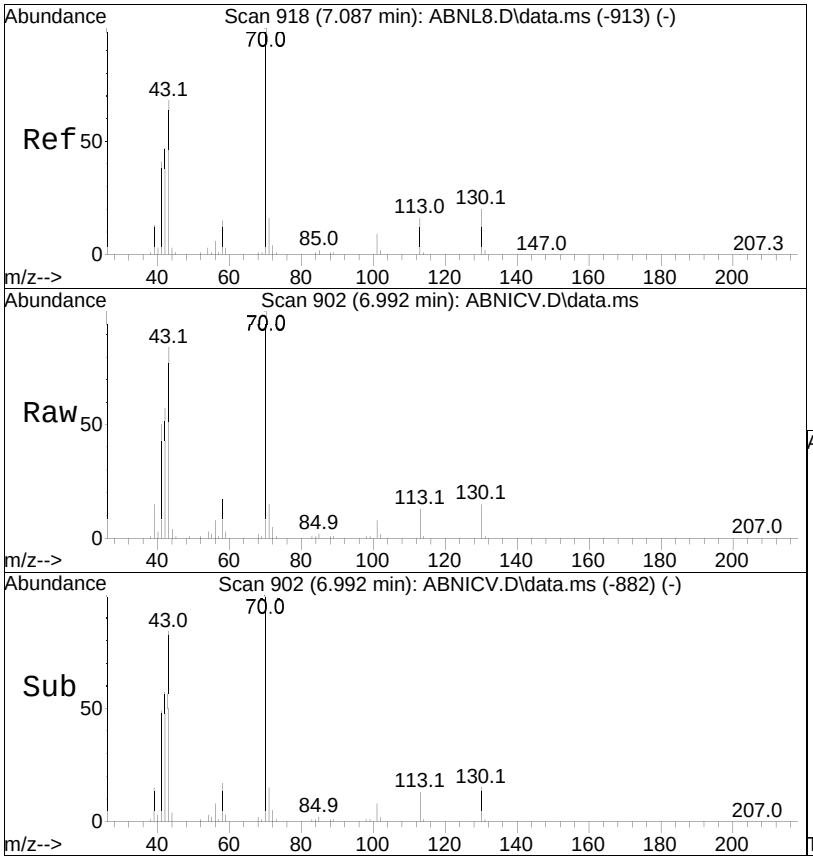


#16
Hexachloroethane
Concen: 4.72 ug/ml
RT: 7.045 min Scan# 911
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:117 Resp: 57627

Ion	Ratio	Lower	Upper
117	100		
201	106.3	58.6	87.8#
199	66.8	36.9	55.3#

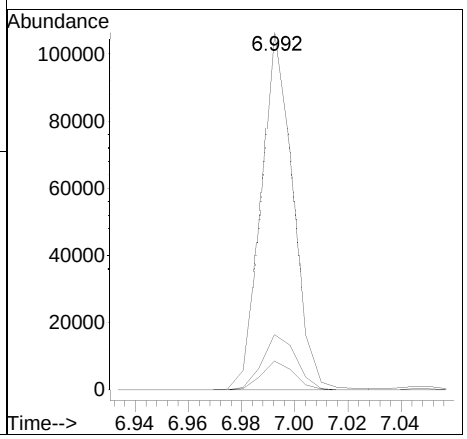


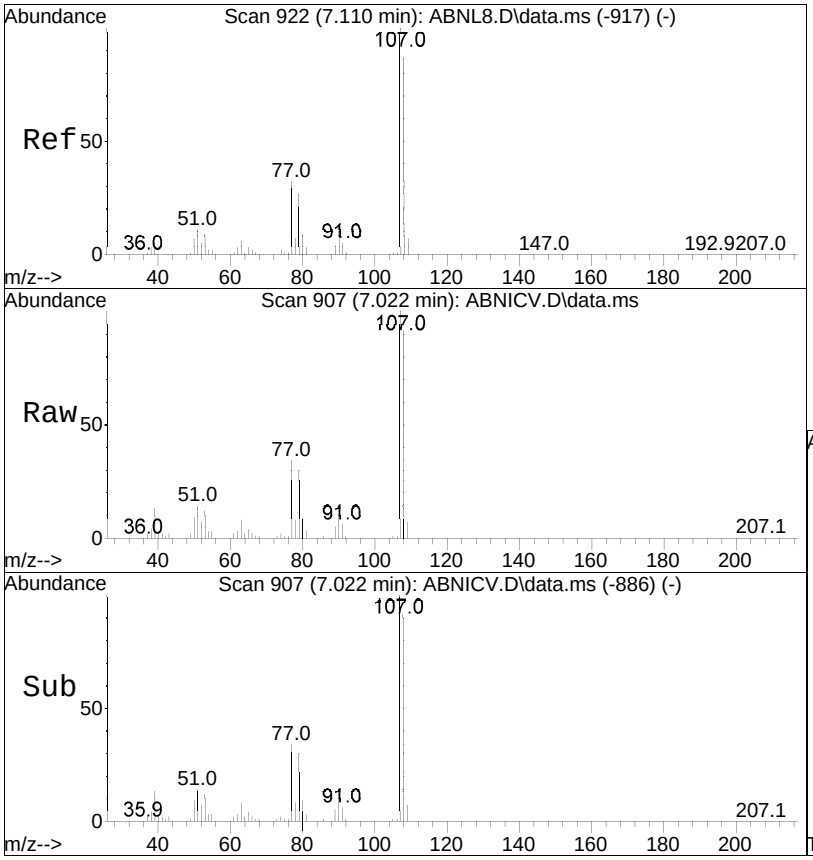


#17
n-Nitrosodi-n-propylamine
Concen: 4.60 ug/ml
RT: 6.992 min Scan# 902
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 70 Resp: 88179

Ion	Ratio	Lower	Upper
70	100		
130	16.3	18.2	27.4#
101	8.2	7.8	11.8

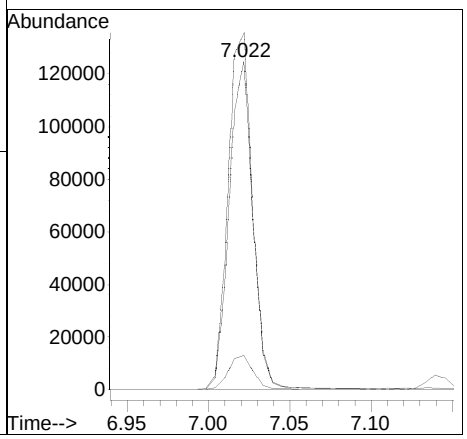


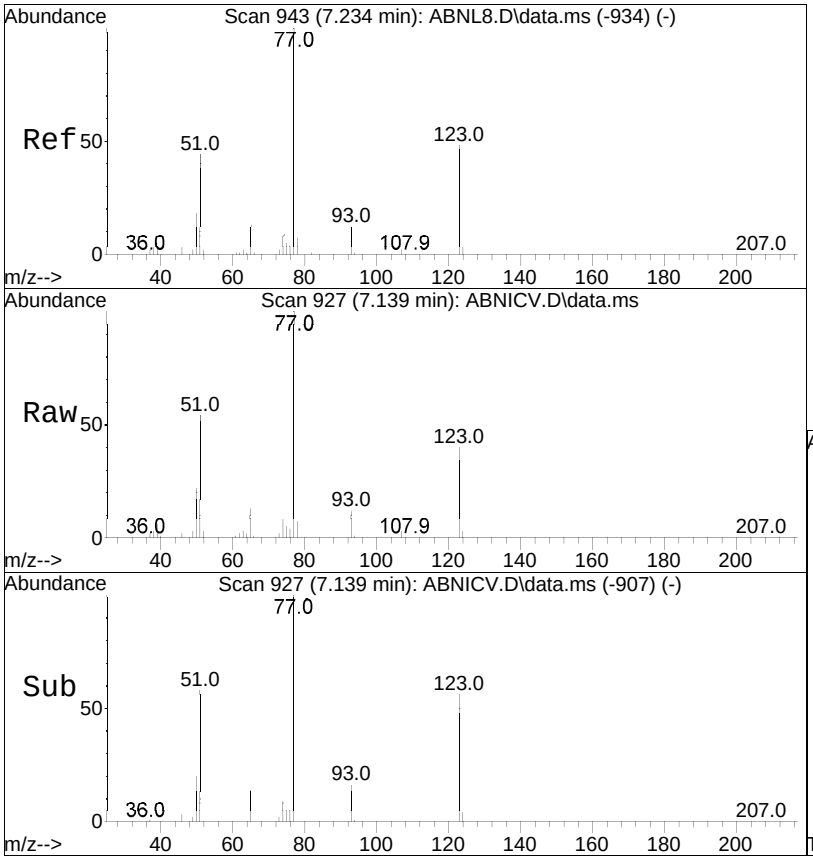


#18
3-Methylphenol/4-Methylphenol
Concen: 4.89 ug/ml
RT: 7.022 min Scan# 907
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:108 Resp: 125841

Ion	Ratio	Lower	Upper
108	100		
107	113.0	88.6	132.8
90	10.8	8.8	13.2

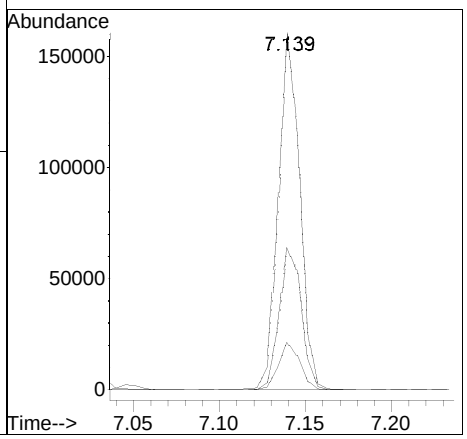


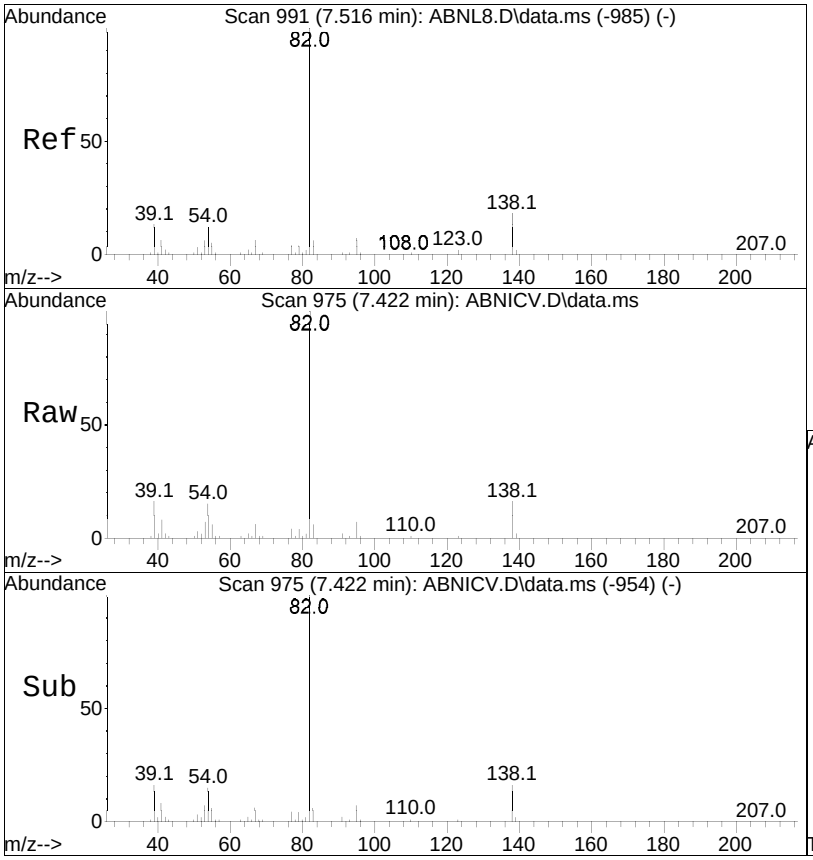


#20
Nitrobenzene
Concen: 4.68 ug/ml
RT: 7.139 min Scan# 927
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 77 Resp: 137016

Ion	Ratio	Lower	Upper
77	100		
123	41.4	36.3	54.5
65	13.6	11.6	17.4

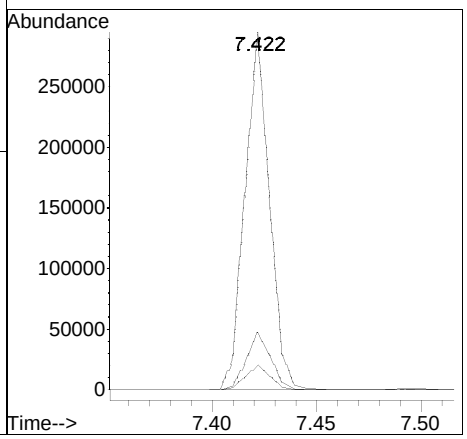


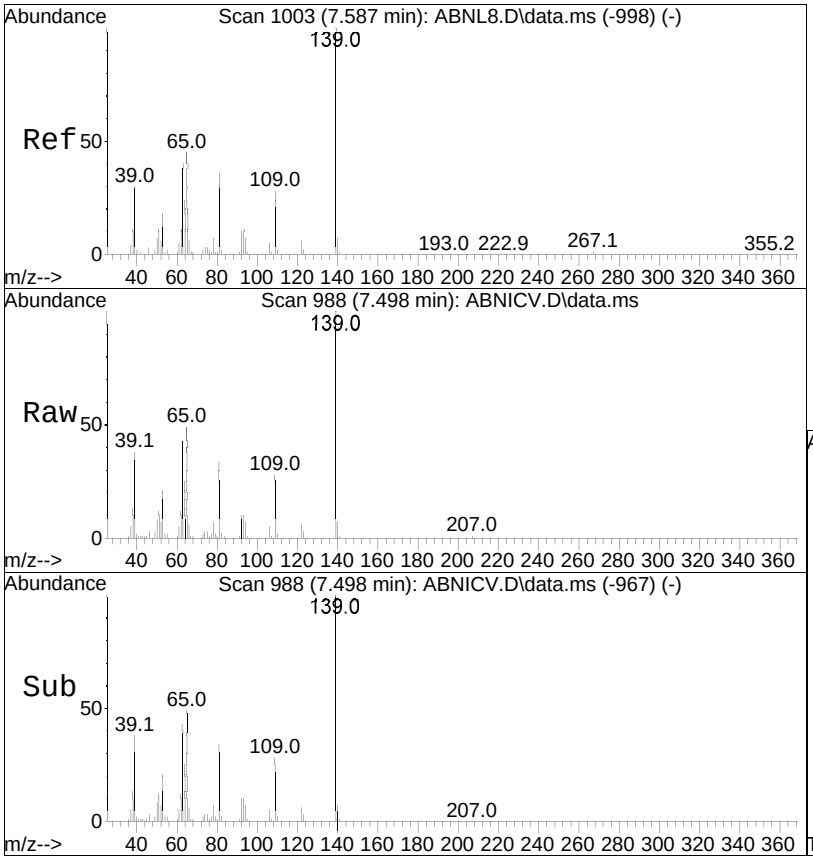


#21
Isophorone
Concen: 4.70 ug/ml
RT: 7.422 min Scan# 975
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 82 Resp: 237216

Ion	Ratio	Lower	Upper
82	100		
138	16.2	14.7	22.1
95	7.0	5.2	7.8

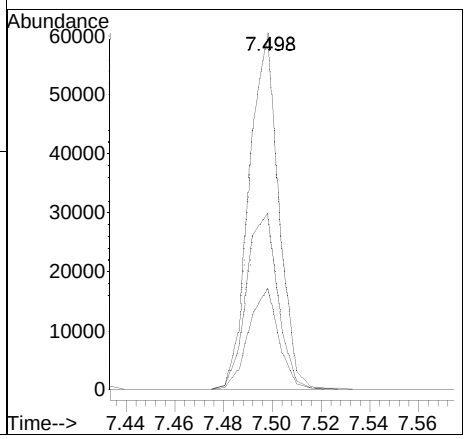


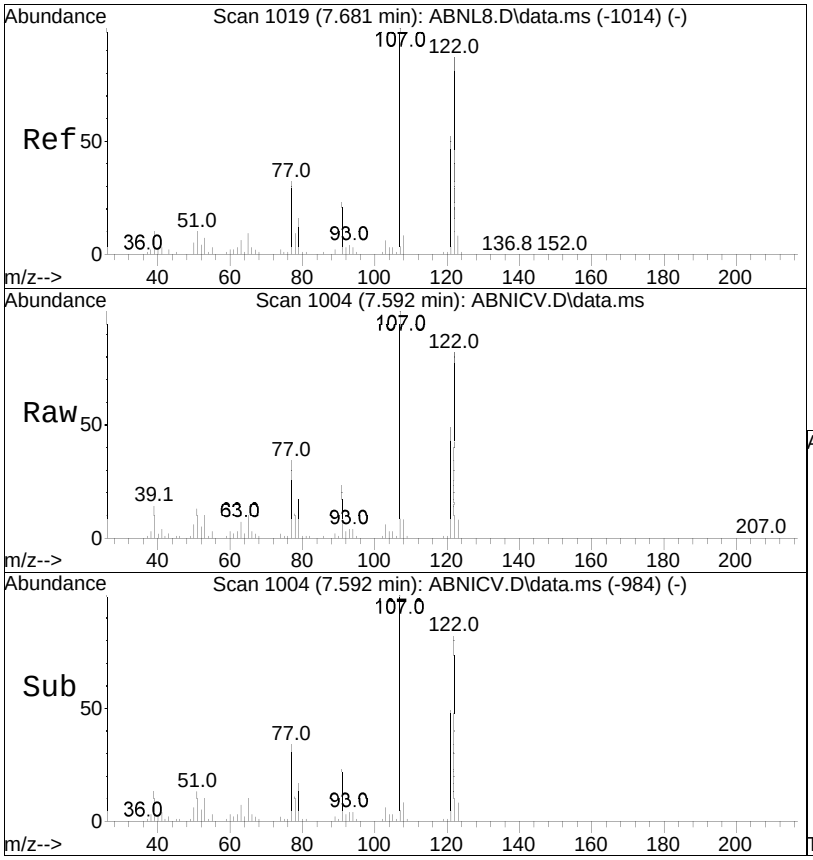


#22
2-Nitrophenol
Concen: 4.22 ug/ml
RT: 7.498 min Scan# 988
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:139 Resp: 50741

Ion	Ratio	Lower	Upper
139	100		
109	29.2	19.4	29.0#
65	52.5	46.1	69.1

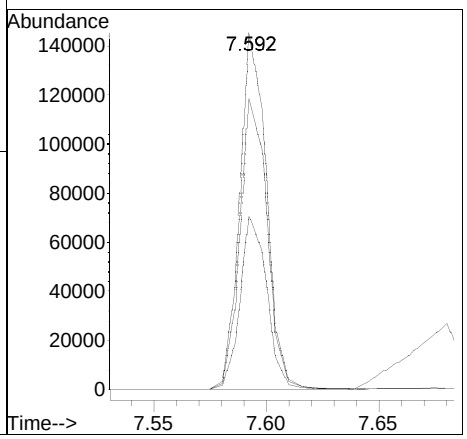


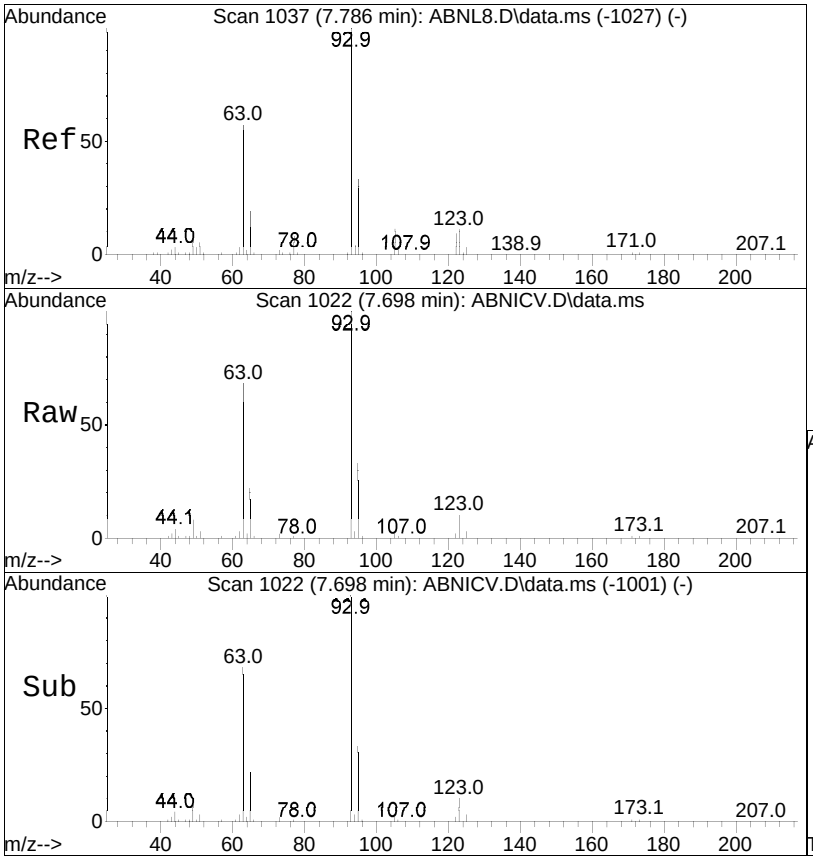


#23
2,4-Dimethylphenol
Concen: 5.96 ug/ml
RT: 7.592 min Scan# 1004
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:107 Resp: 119509

Ion	Ratio	Lower	Upper
107	100		
121	48.9	40.0	60.0
122	83.0	70.2	105.4

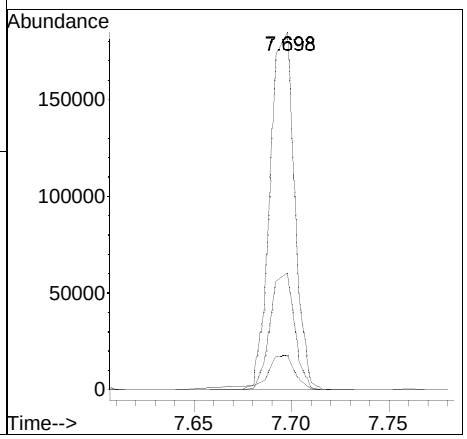


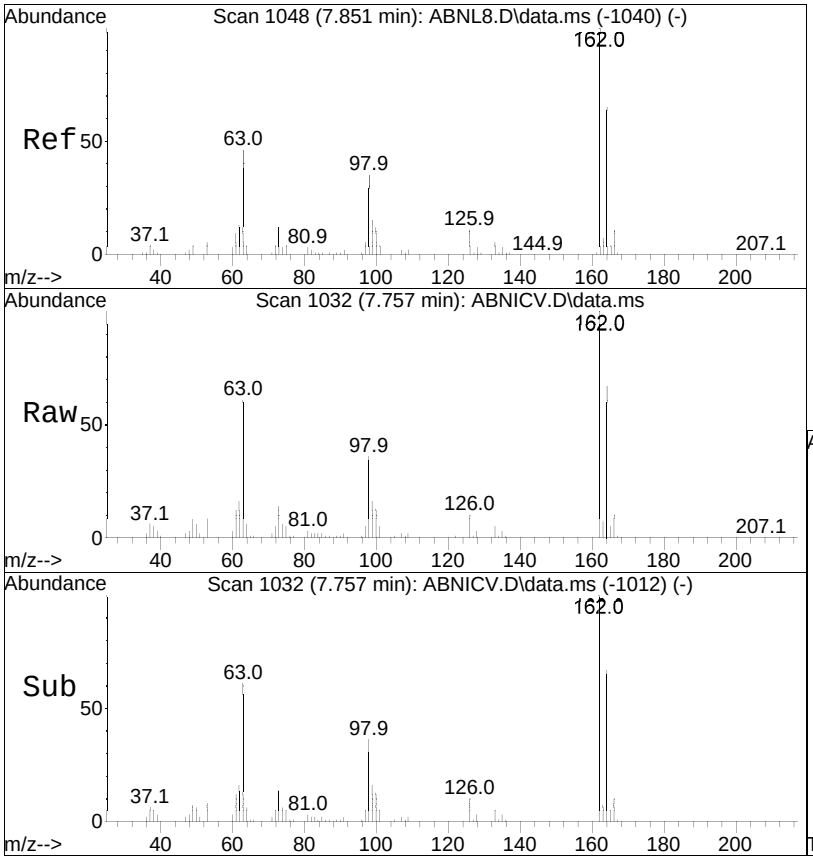


#24
Bis(2-chloroethoxy)methane
Concen: 4.71 ug/ml
RT: 7.698 min Scan# 1022
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 93 Resp: 160116

Ion	Ratio	Lower	Upper
93	100		
95	32.3	25.8	38.8
123	12.0	10.1	15.1

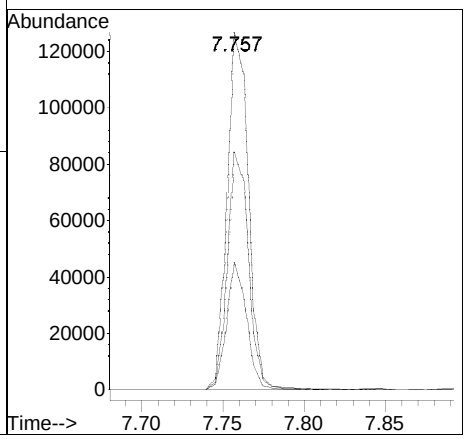


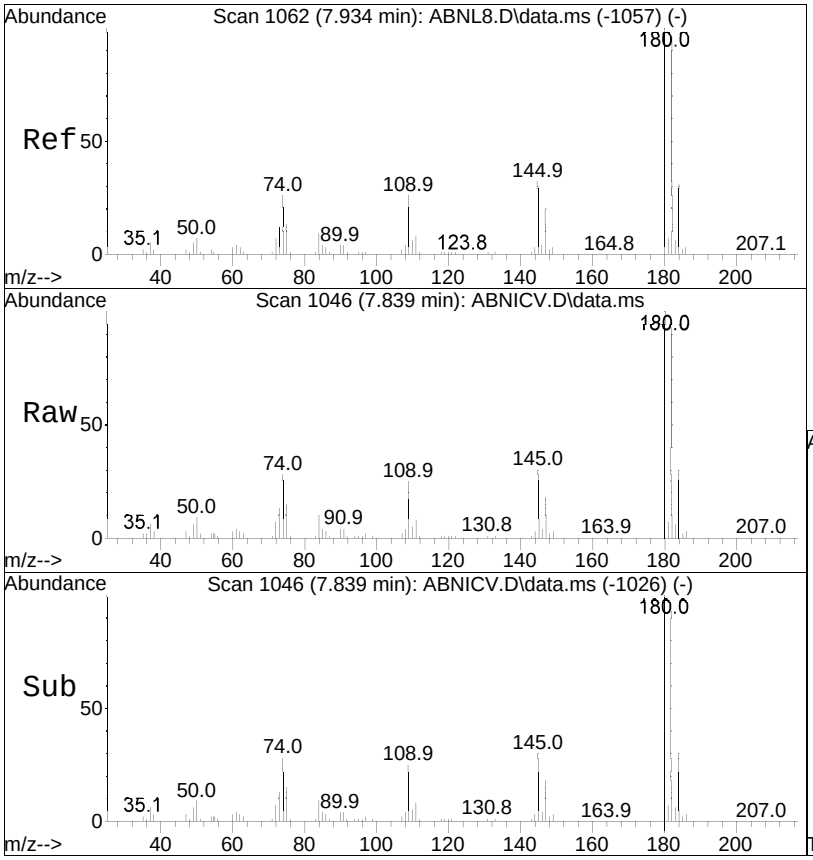


#25
2,4-Dichlorophenol
Concen: 4.87 ug/ml
RT: 7.757 min Scan# 1032
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:162 Resp: 114283

Ion	Ratio	Lower	Upper
162	100		
164	65.8	51.0	76.4
98	33.9	32.2	48.2

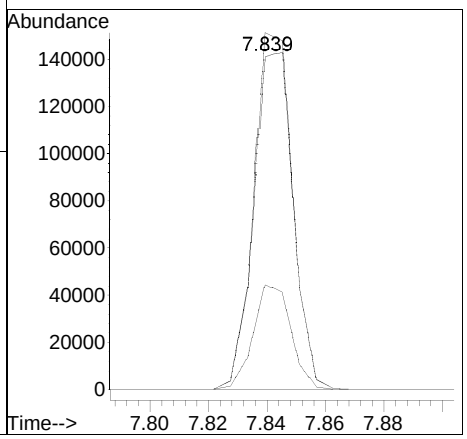


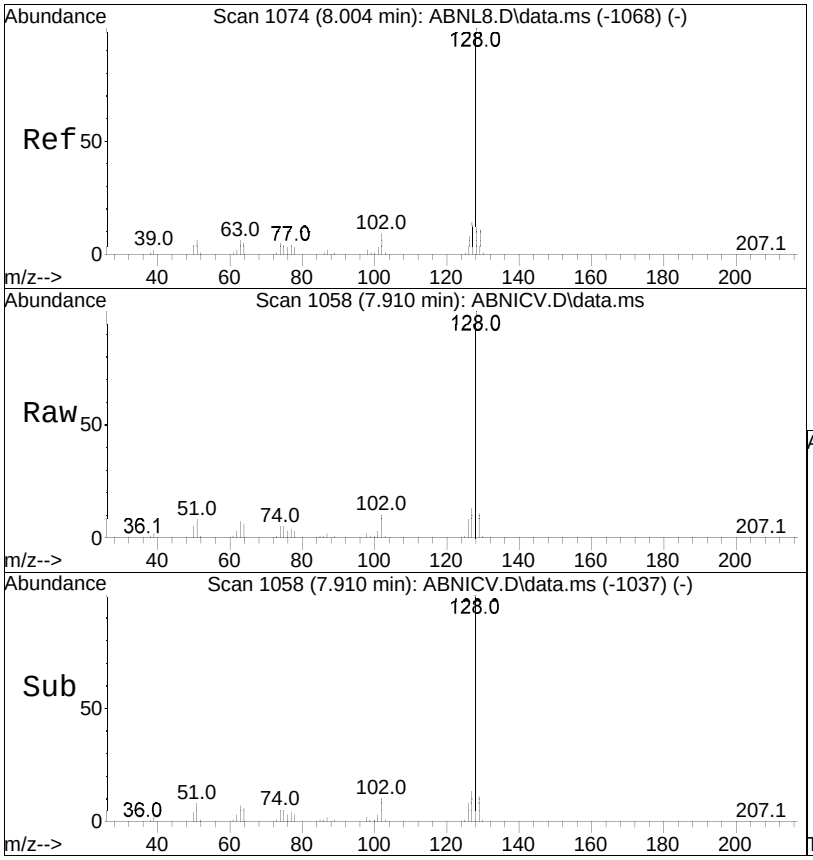


#26
1,2,4-Trichlorobenzene
Concen: 4.54 ug/ml
RT: 7.839 min Scan# 1046
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:180 Resp: 139128

Ion	Ratio	Lower	Upper
180	100		
182	95.7	76.0	114.0
145	28.6	25.7	38.5

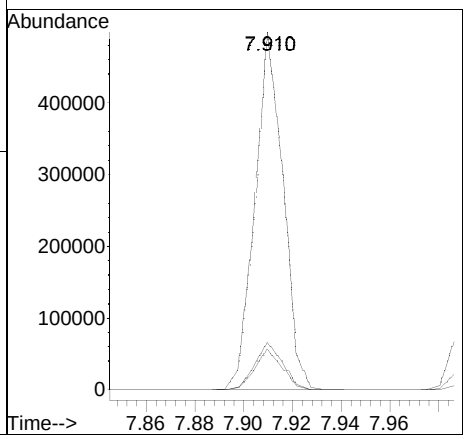


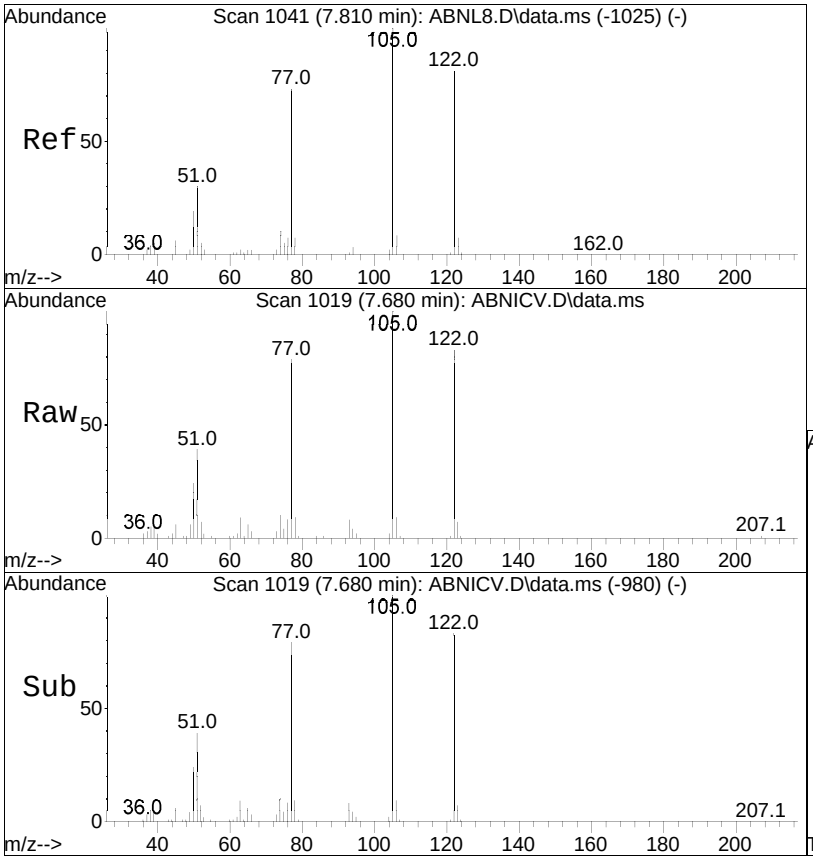


#35
Naphthalene
Concen: 4.56 ug/ml
RT: 7.910 min Scan# 1058
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:128 Resp: 394262

Ion	Ratio	Lower	Upper
128	100		
129	11.2	8.7	13.1
127	13.4	10.3	15.5

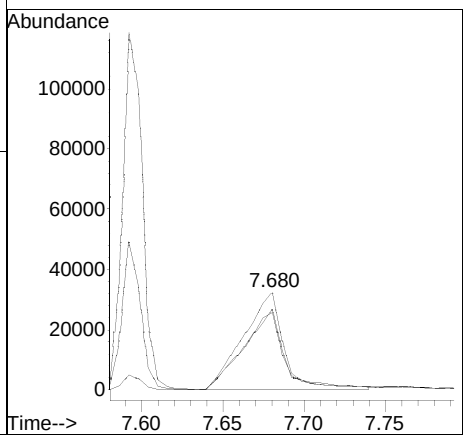


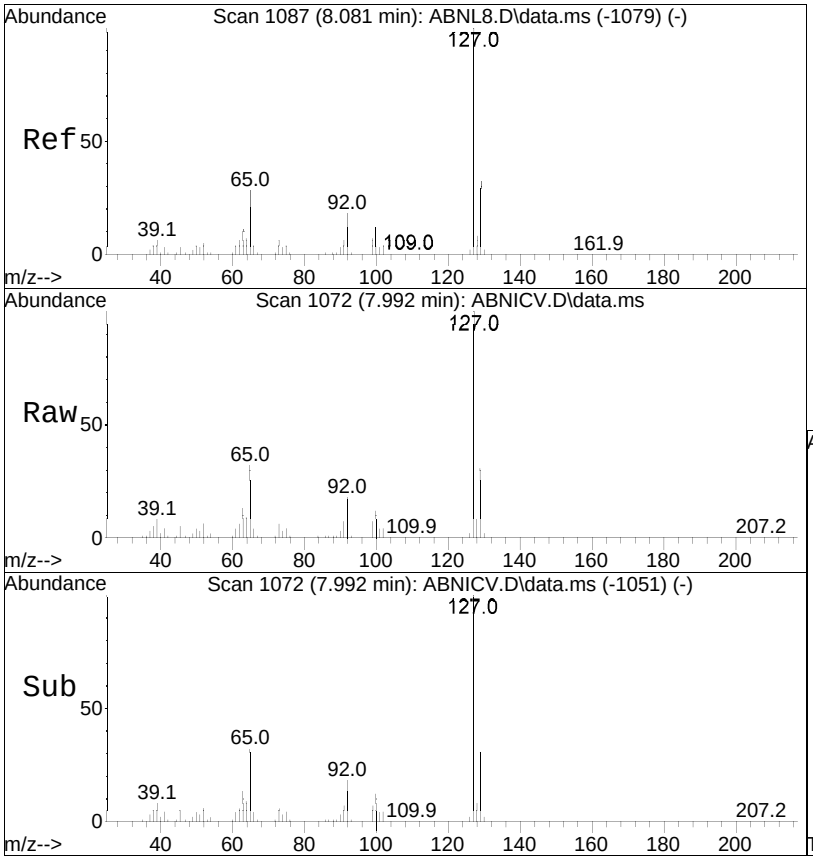


#36
Benzoic Acid
Concen: 3.50 ug/ml
RT: 7.680 min Scan# 1019
Delta R.T. -0.024 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:105 Resp: 57251

Ion	Ratio	Lower	Upper
105	100		
122	79.3	59.9	89.9
77	79.3	60.1	90.1

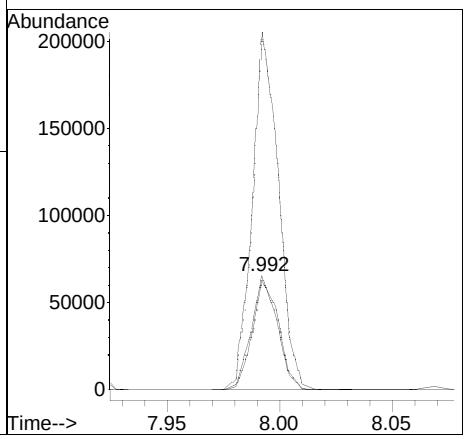


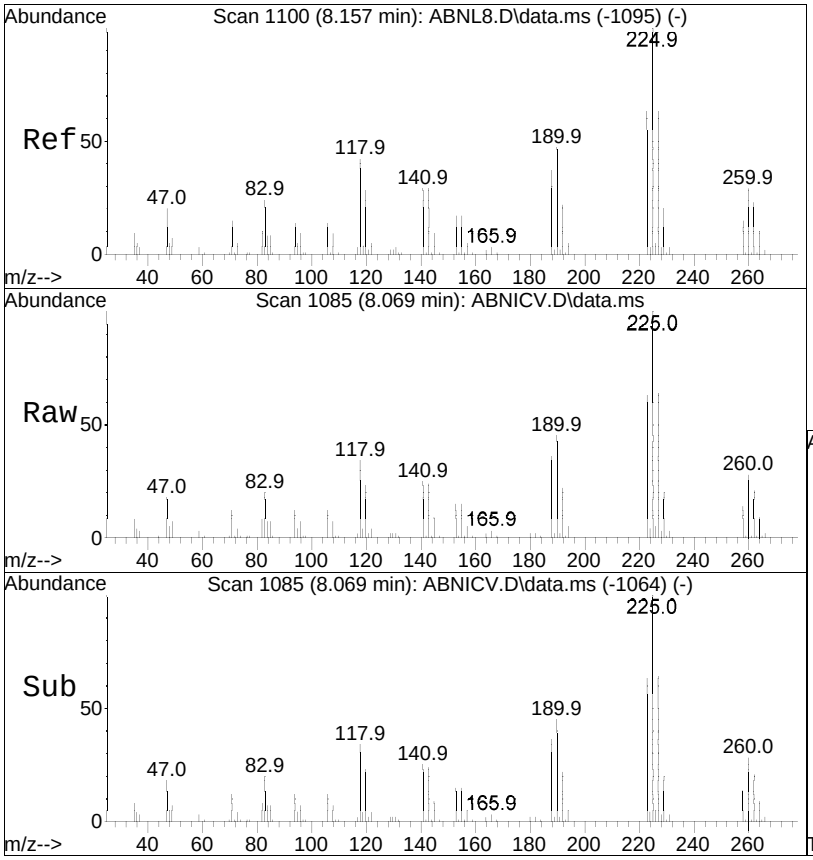


#37
4-Chloroaniline
Concen: 4.93 ug/ml
RT: 7.992 min Scan# 1072
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 65 Resp: 52169

Ion	Ratio	Lower	Upper
65	100		
127	313.8	237.6	356.4
129	98.3	76.3	114.5

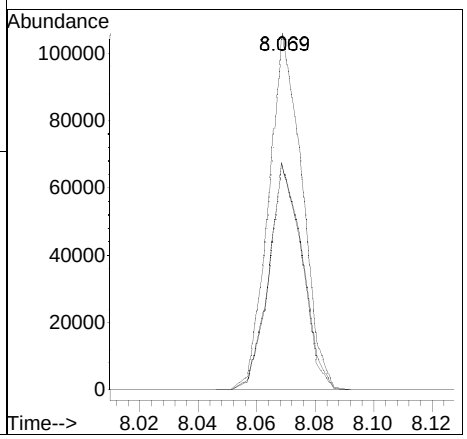


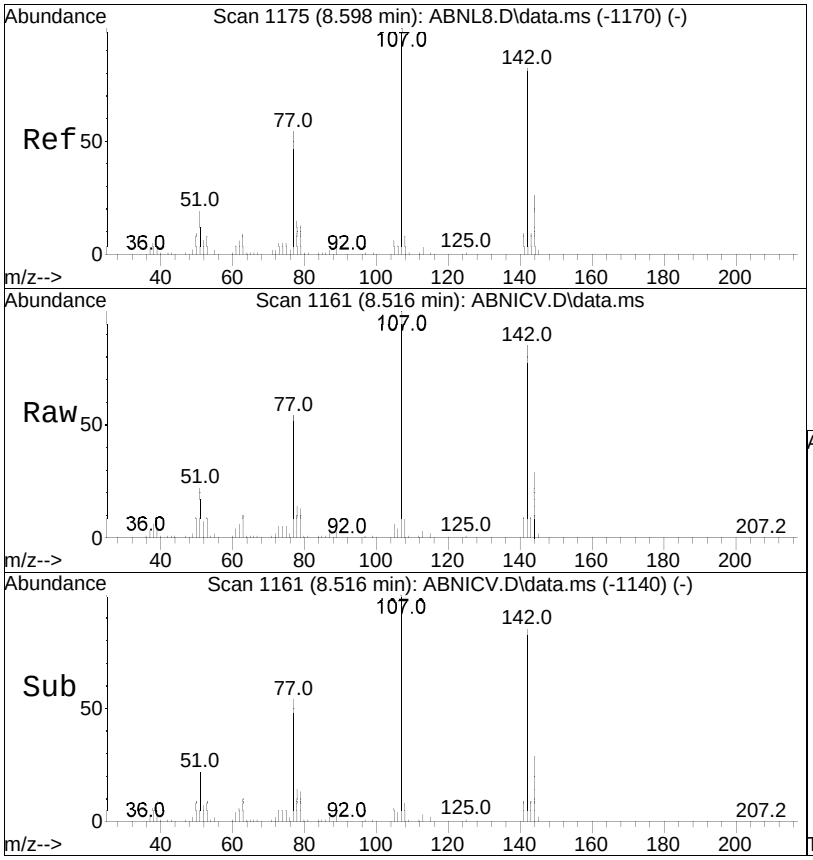


#38
Hexachlorobutadiene
Concen: 4.79 ug/ml
RT: 8.069 min Scan# 1085
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:225 Resp: 83975

Ion	Ratio	Lower	Upper
225	100		
223	62.6	50.3	75.5
227	63.4	52.2	78.2

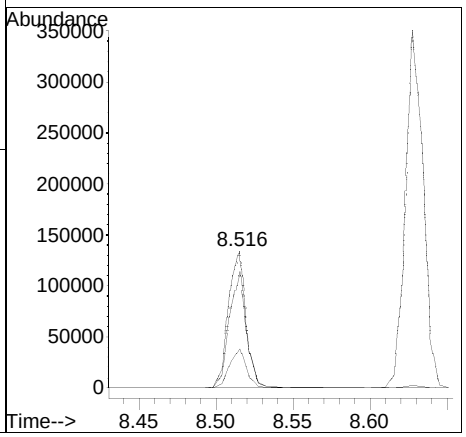


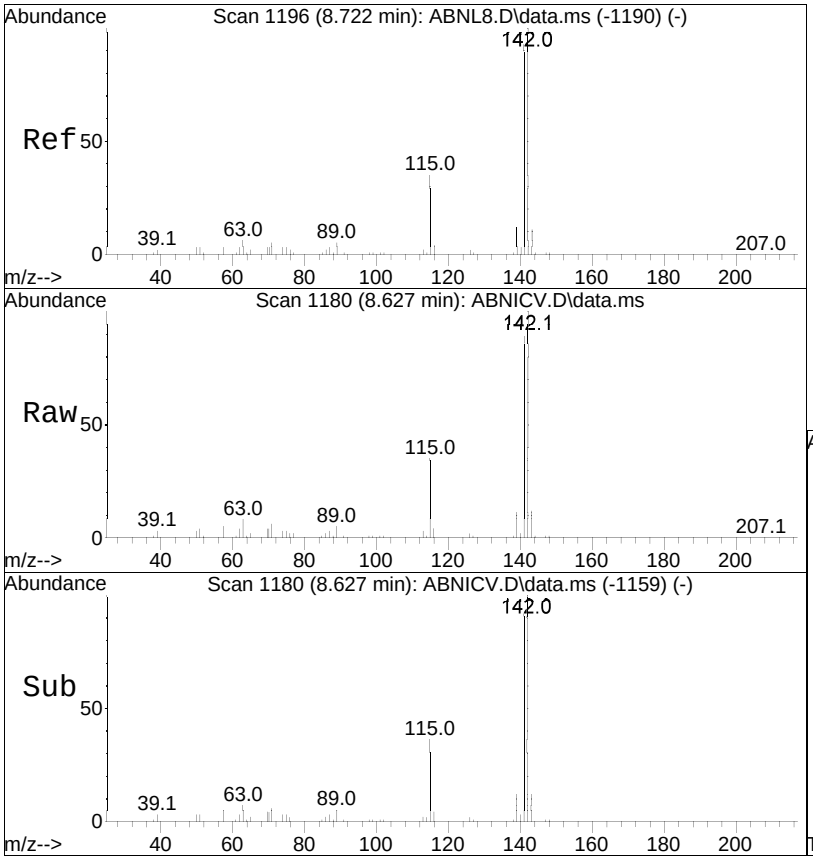


#39
p-Chloro-m-cresol
Concen: 4.90 ug/ml
RT: 8.516 min Scan# 1161
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:107 Resp: 107499

Ion	Ratio	Lower	Upper
107	100		
144	27.0	20.9	31.3
142	81.9	66.1	99.1

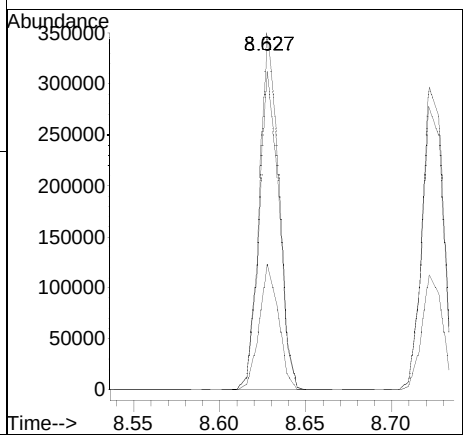


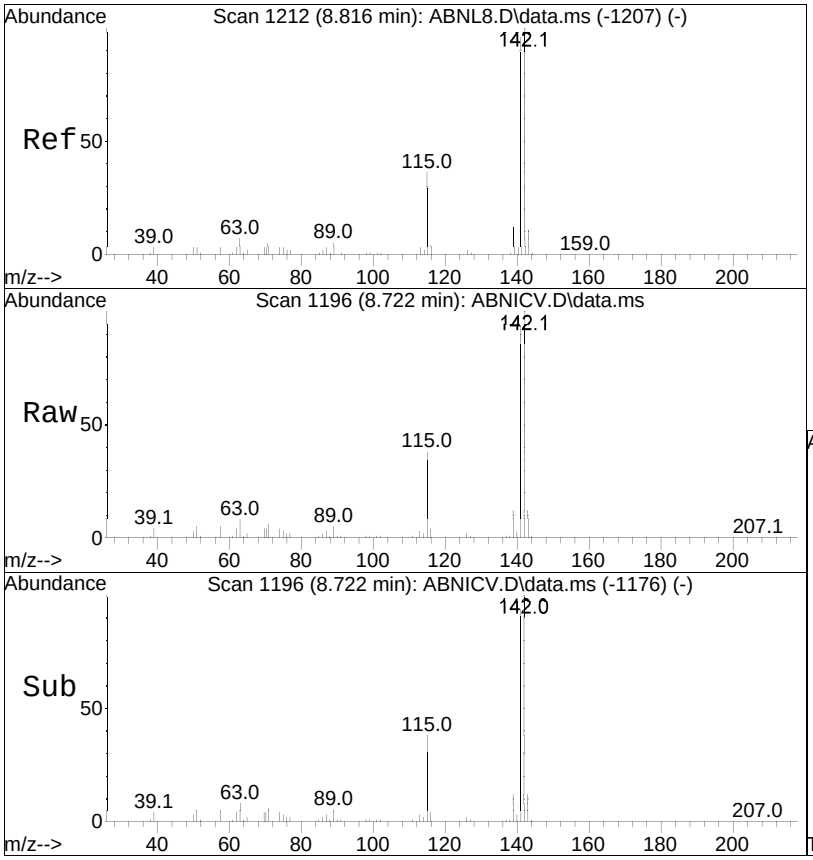


#40
2-Methylnaphthalene
Concen: 4.83 ug/ml
RT: 8.627 min Scan# 1180
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:142 Resp: 277652

Ion	Ratio	Lower	Upper
142	100		
141	90.1	69.6	104.4
115	34.6	26.6	40.0

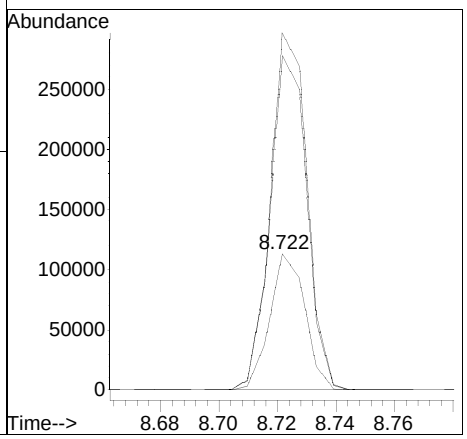


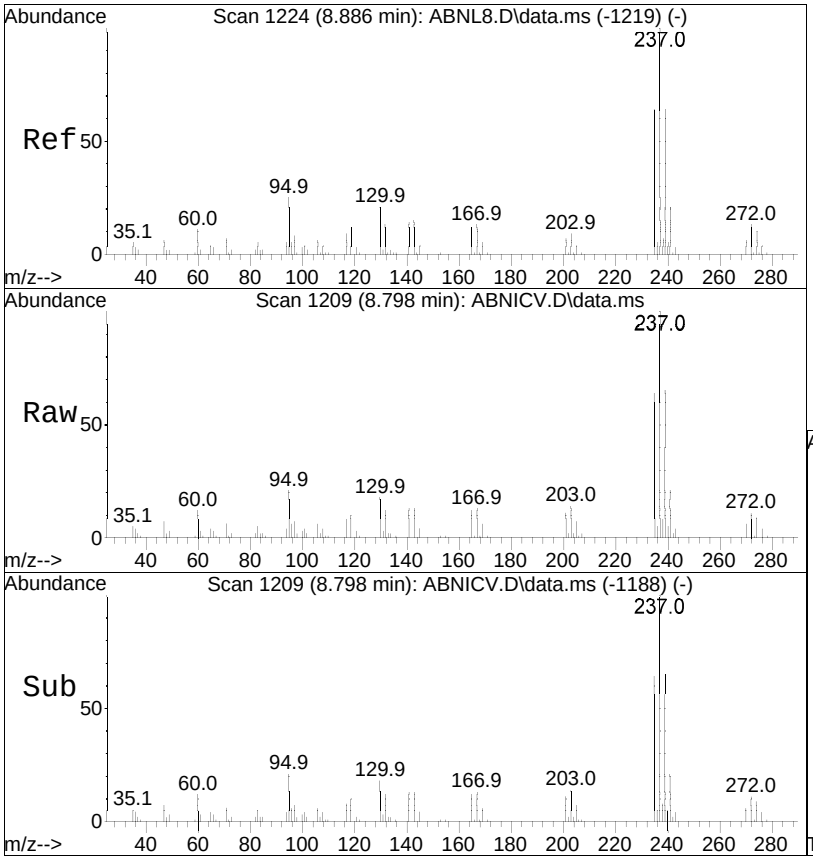


#41
1-Methylnaphthalene
Concen: 4.83 ug/ml
RT: 8.722 min Scan# 1196
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:115 Resp: 94962

Ion	Ratio	Lower	Upper
115	100		
141	254.4	207.8	311.6
142	271.9	226.8	340.2

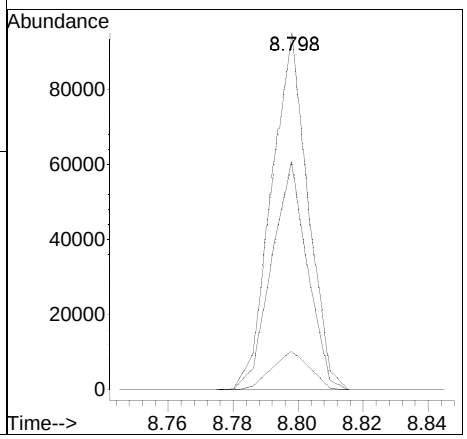


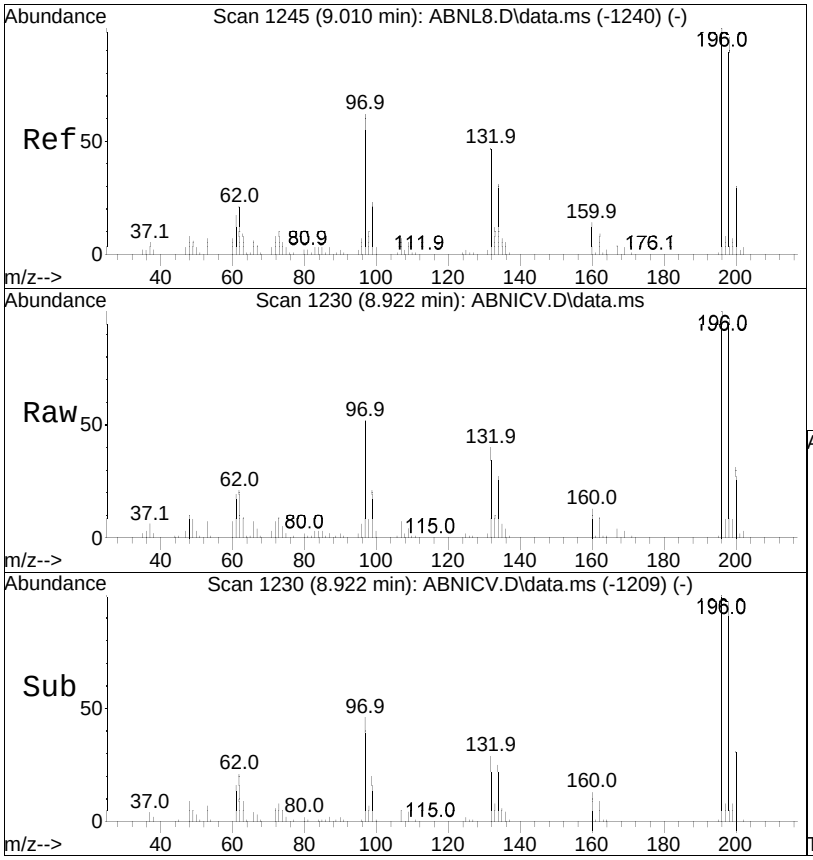


#42
Hexachlorocyclopentadiene
Concen: 5.80 ug/ml
RT: 8.798 min Scan# 1209
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:237 Resp: 73821

Ion	Ratio	Lower	Upper
237	100		
235	63.1	49.7	74.5
272	11.4	9.8	14.6

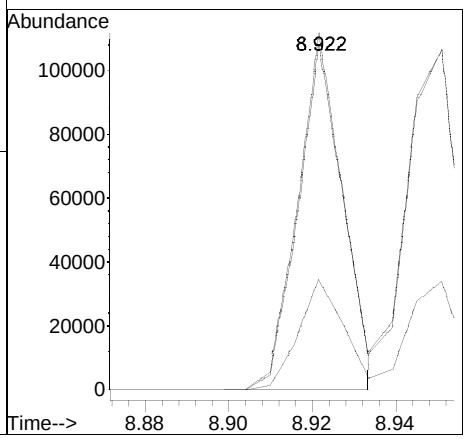


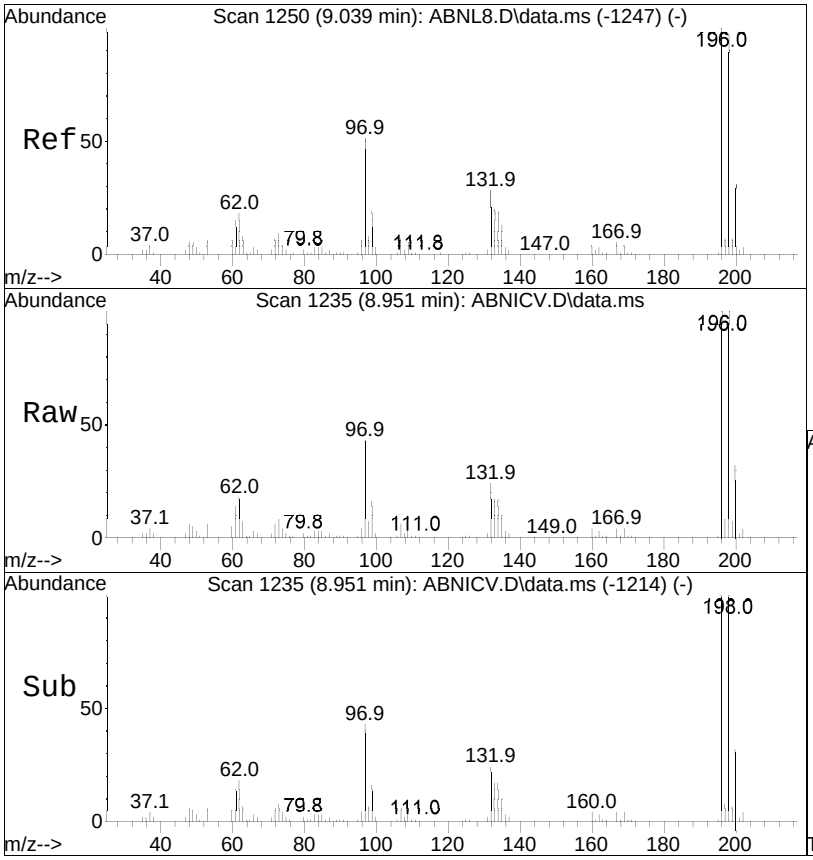


#43
2,4,6-Trichlorophenol
Concen: 4.84 ug/ml
RT: 8.922 min Scan# 1230
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:196 Resp: 83986

Ion	Ratio	Lower	Upper
196	100		
198	96.3	77.5	116.3
200	31.2	23.8	35.6

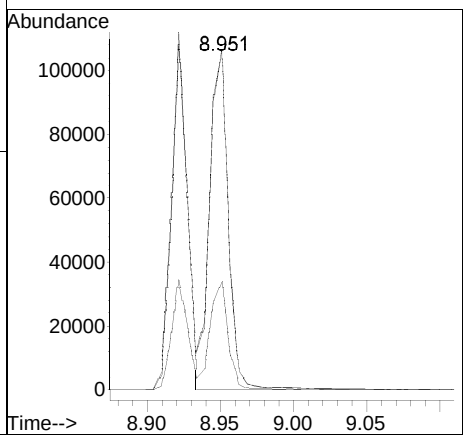


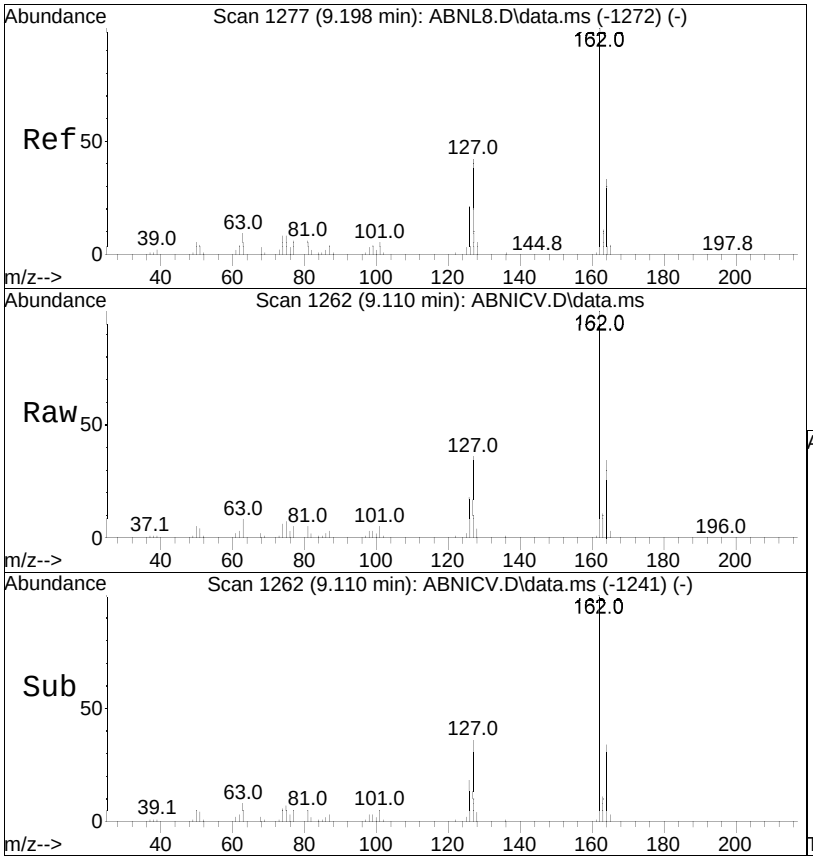


#44
2,4,5-Trichlorophenol
Concen: 4.99 ug/ml
RT: 8.951 min Scan# 1235
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:196 Resp: 93940

Ion	Ratio	Lower	Upper
196	100		
200	31.6	25.4	38.0
198	98.9	78.0	117.0

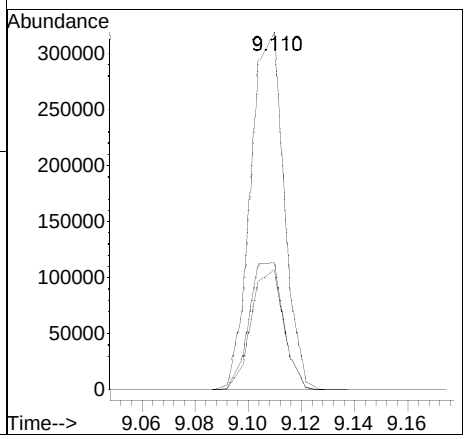


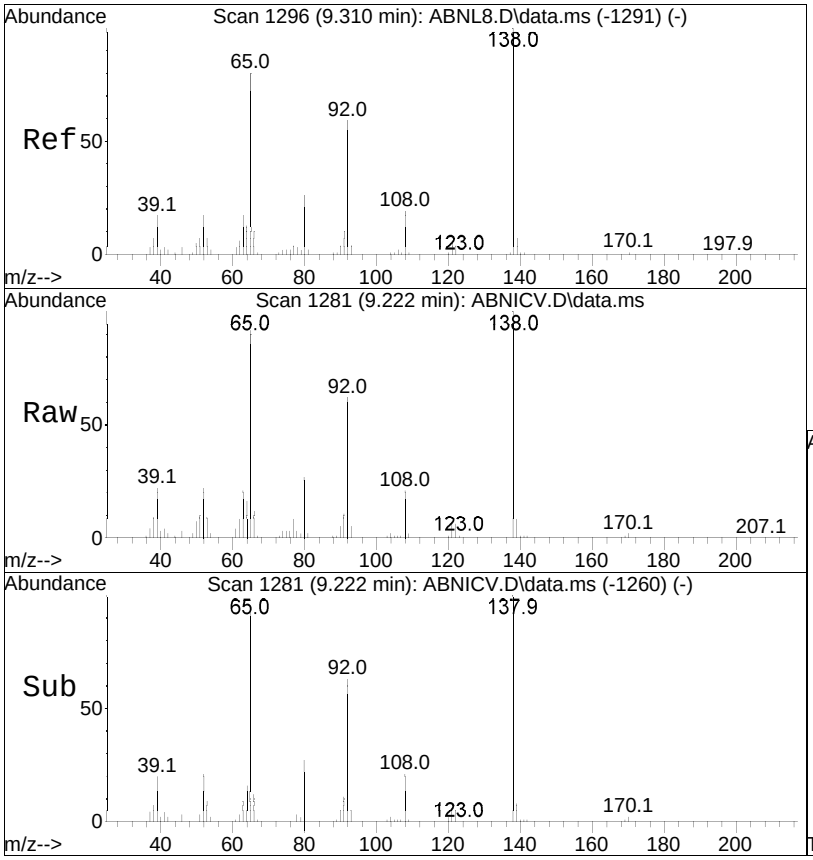


#46
2-Chloronaphthalene
Concen: 4.78 ug/ml
RT: 9.110 min Scan# 1262
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:162 Resp: 276175

Ion	Ratio	Lower	Upper
162	100		
127	36.9	32.2	48.4
164	33.1	25.7	38.5

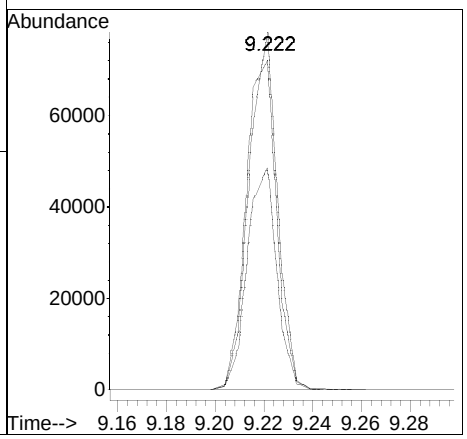


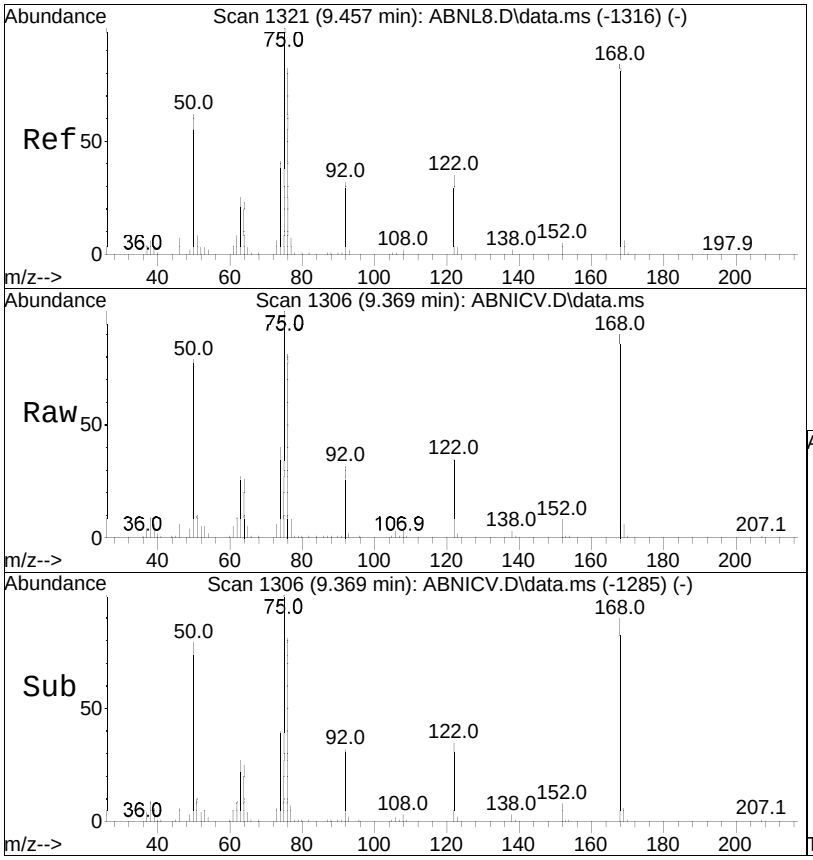


#47
2-Nitroaniline
Concen: 3.83 ug/ml
RT: 9.222 min Scan# 1281
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:138 Resp: 62948

Ion	Ratio	Lower	Upper
138	100		
92	64.6	53.5	80.3
65	99.0	86.3	129.5

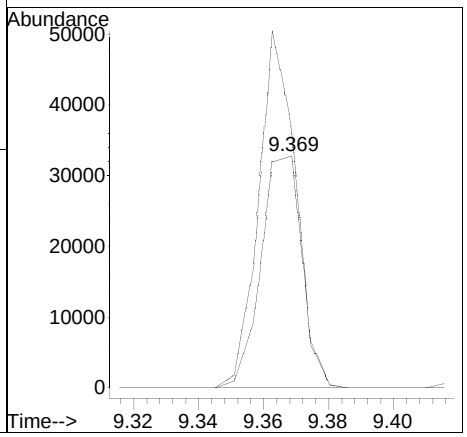


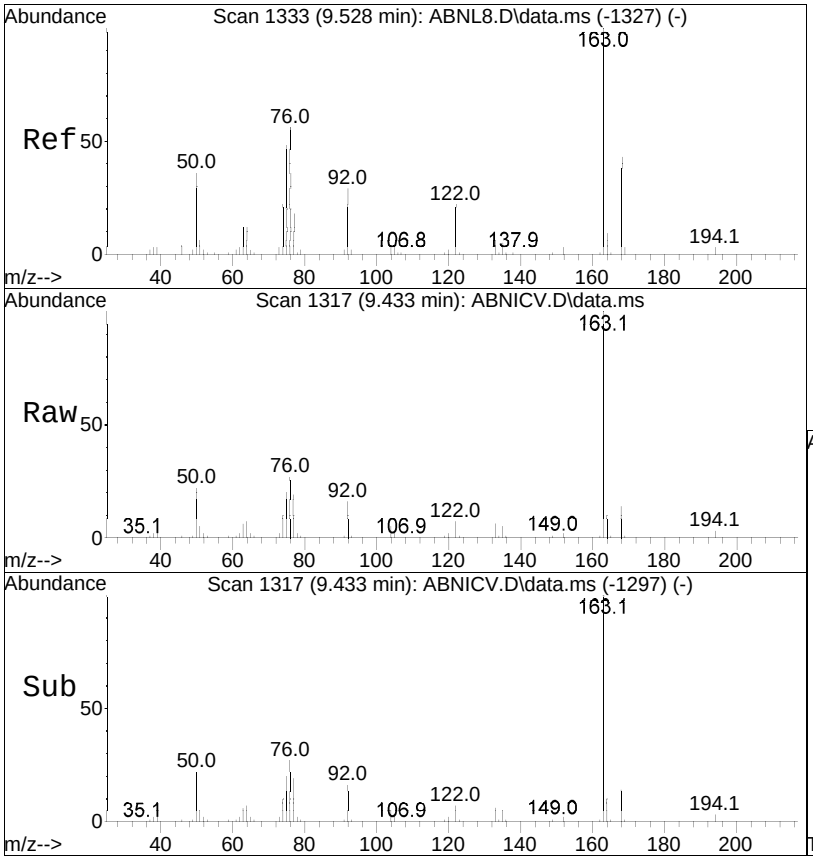


#48
1,4-Dinitrobenzene
Concen: 3.74 ug/ml
RT: 9.369 min Scan# 1306
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:168 Resp: 28916

Ion	Ratio	Lower	Upper
168	100		
75	137.6	121.8	182.8

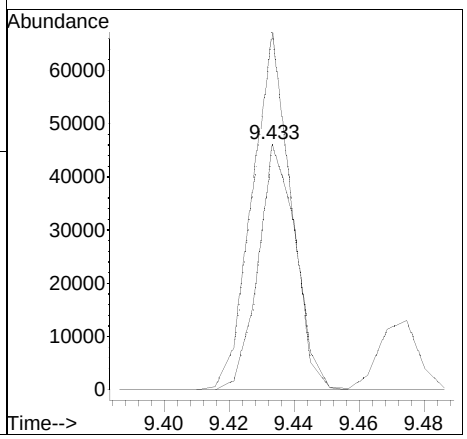


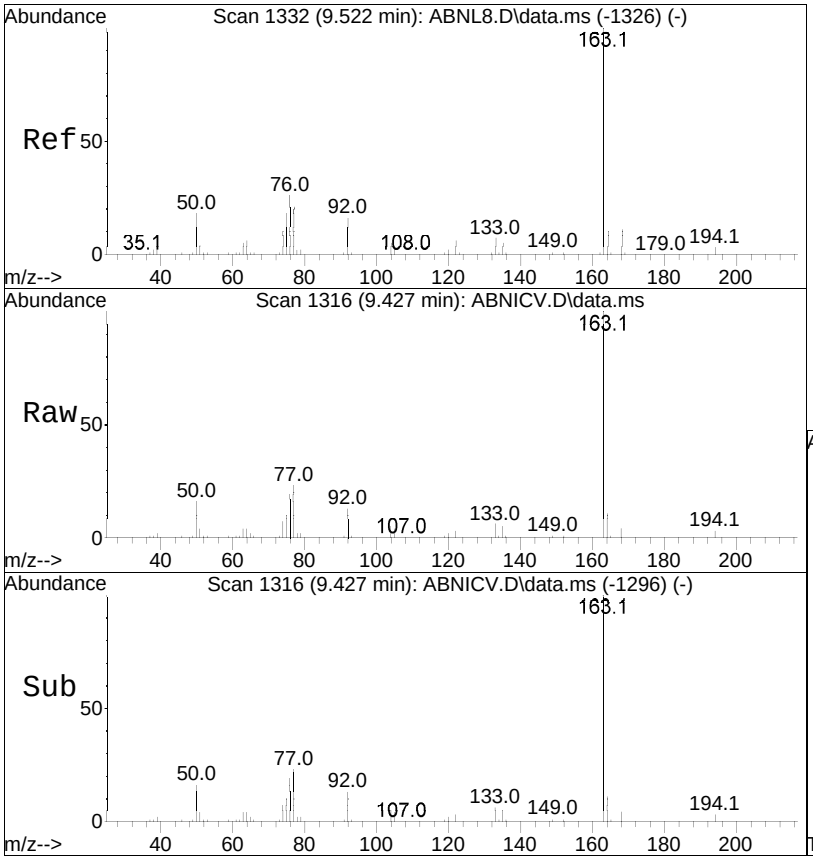


#49
1,3-Dinitrobenzene
Concen: 4.46 ug/ml
RT: 9.433 min Scan# 1317
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:168 Resp: 36864

Ion	Ratio	Lower	Upper
168	100		
75	148.2	22.7	34.1#

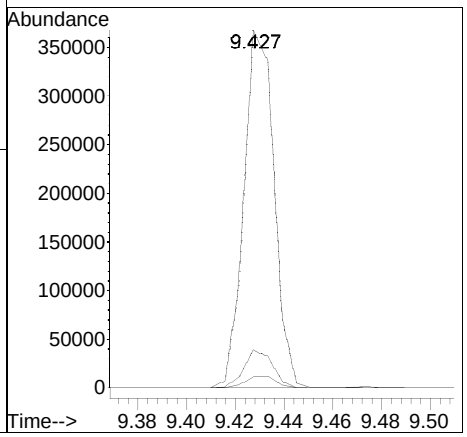


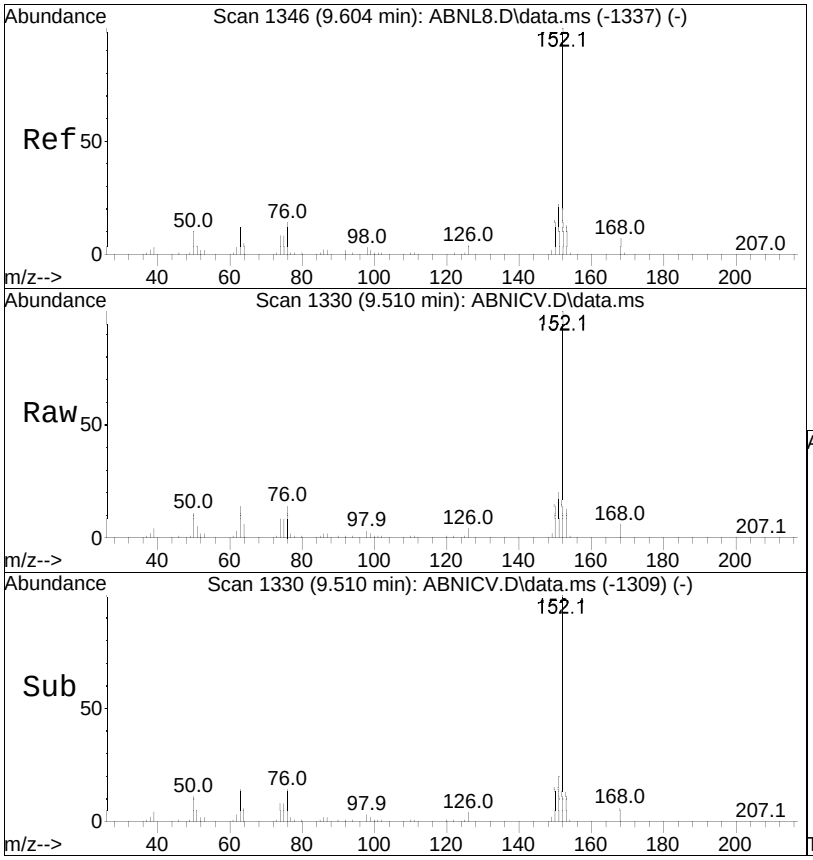


#50
Dimethyl phthalate
Concen: 4.91 ug/ml
RT: 9.427 min Scan# 1316
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:163 Resp: 313003

Ion	Ratio	Lower	Upper
163	100		
194	3.3	3.5	5.3#
164	10.2	7.9	11.9

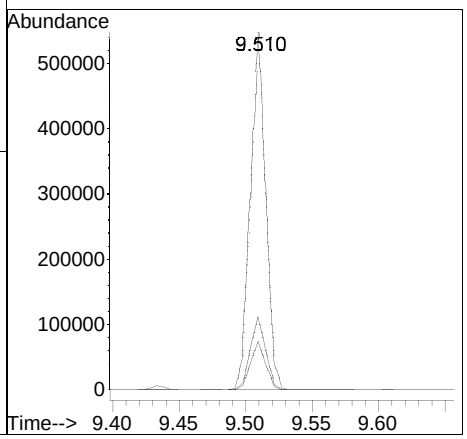


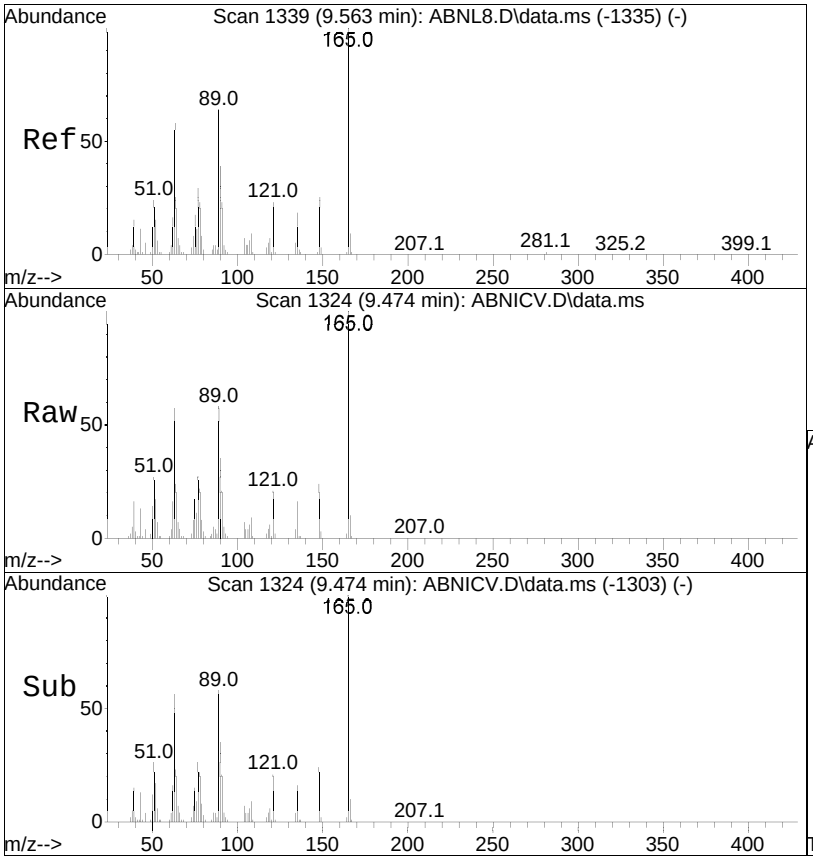


#51
Acenaphthylene
Concen: 4.97 ug/ml
RT: 9.510 min Scan# 1330
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:152 Resp: 431343

Ion	Ratio	Lower	Upper
152	100		
151	20.5	15.8	23.6
153	13.5	10.5	15.7

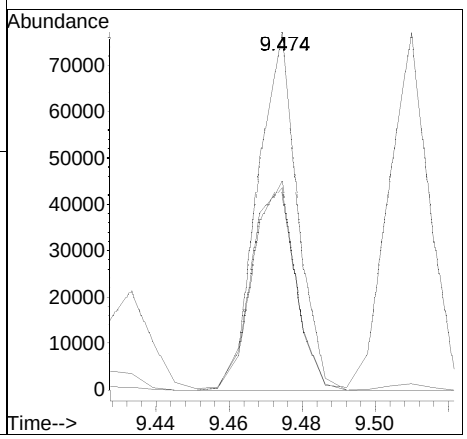


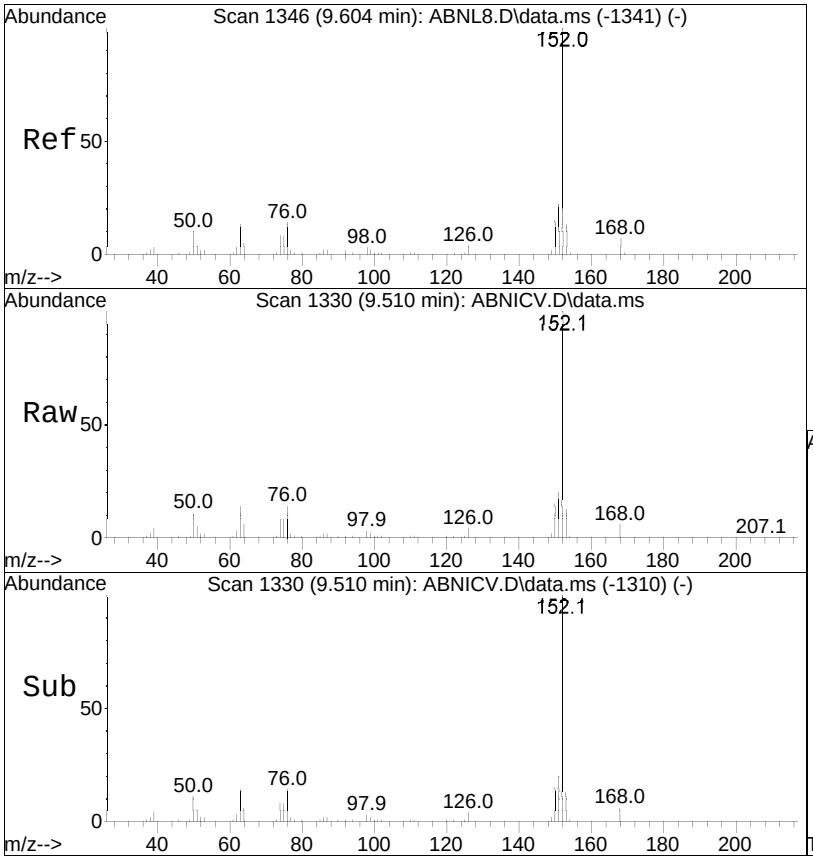


#52
2,6-Dinitrotoluene
Concen: 4.33 ug/ml
RT: 9.474 min Scan# 1324
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:165 Resp: 58389

Ion	Ratio	Lower	Upper
165	100		
89	62.5	54.2	81.2
63	63.4	64.2	96.2#

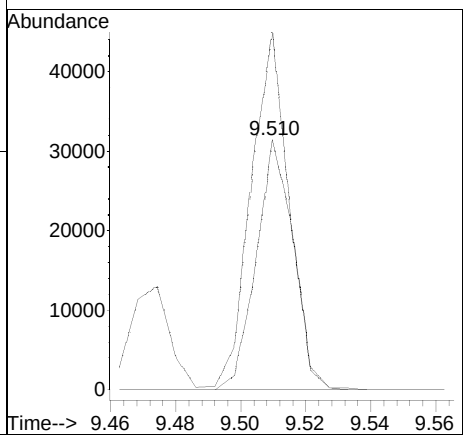


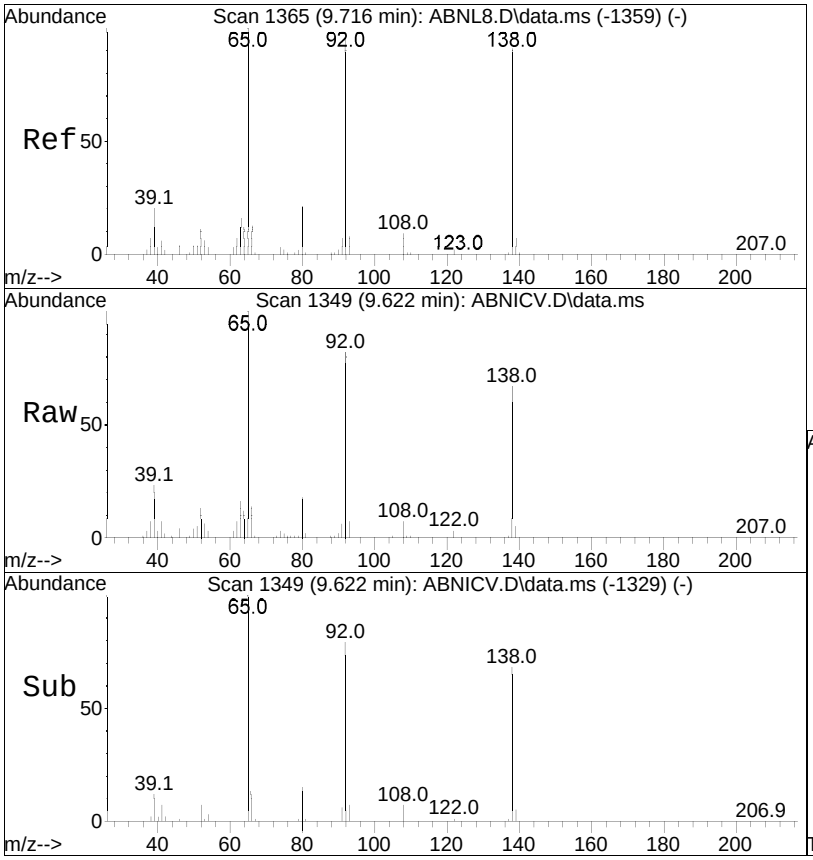


#53
1,2-Dinitrobenzene
Concen: 4.31 ug/ml
RT: 9.510 min Scan# 1330
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:168 Resp: 24812

Ion	Ratio	Lower	Upper
168	100		
75	145.2	30.9	46.3#

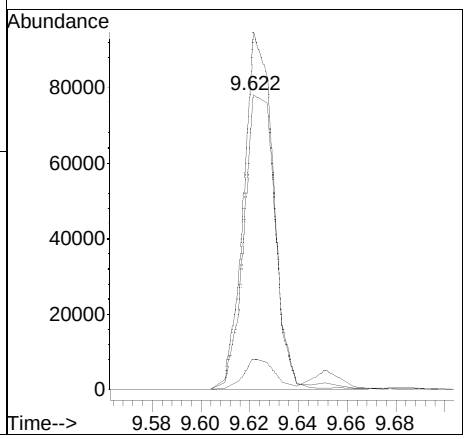


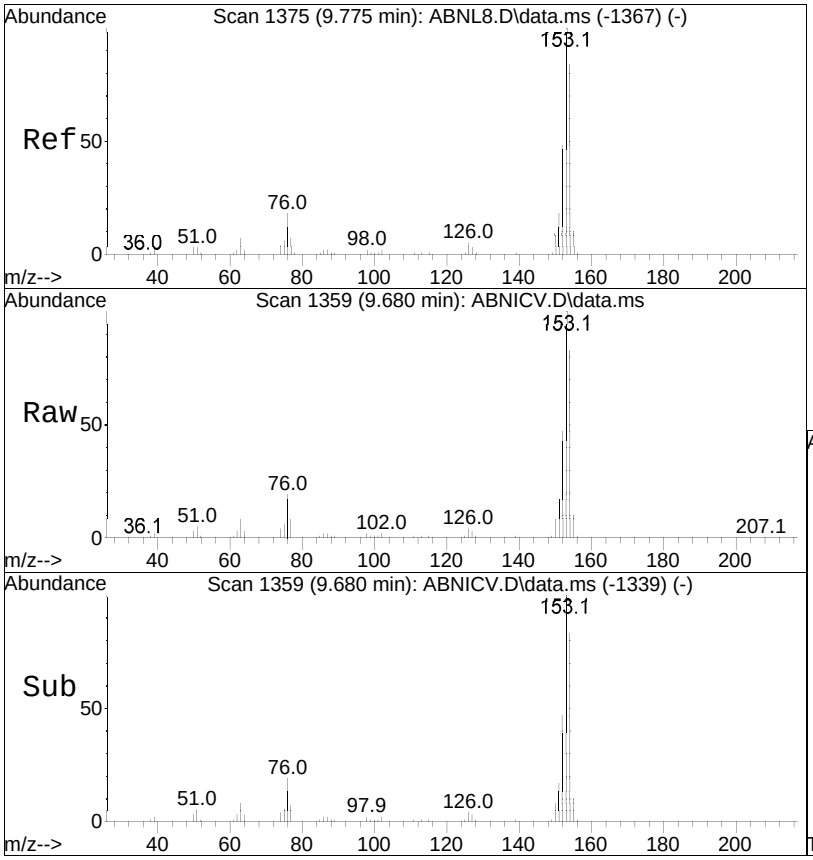


#63
3-Nitroaniline
Concen: 4.81 ug/ml
RT: 9.622 min Scan# 1349
Delta R.T. -0.005 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:138 Resp: 68894

Ion	Ratio	Lower	Upper
138	100		
92	116.5	93.4	140.2
108	10.5	9.5	14.3

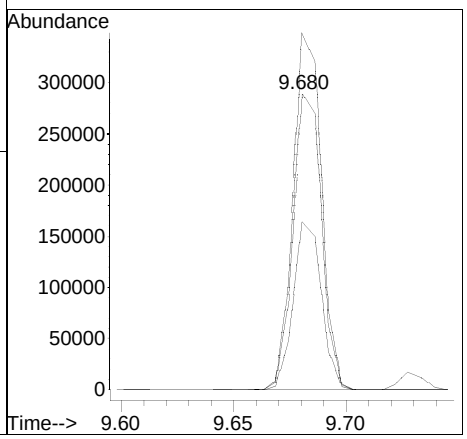


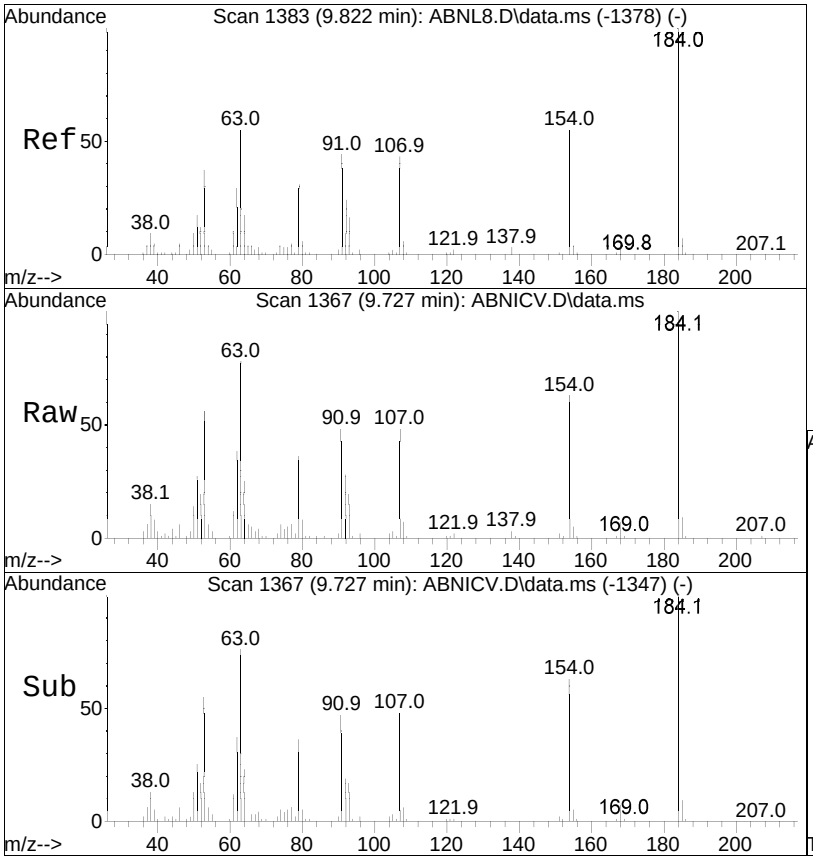


#64
Acenaphthene
Concen: 4.78 ug/ml
RT: 9.680 min Scan# 1359
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:154 Resp: 255018

Ion	Ratio	Lower	Upper
154	100		
153	120.0	85.3	127.9
152	56.5	41.4	62.0

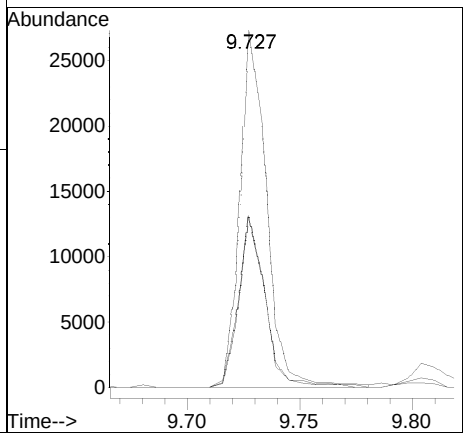


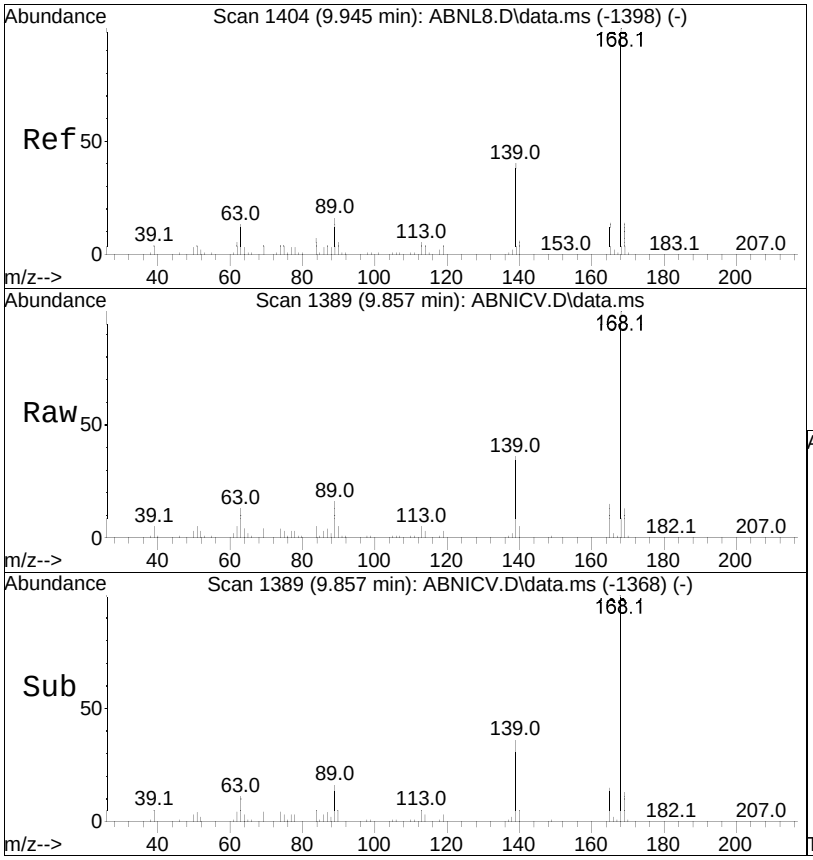


#65
2,4-Dinitrophenol
Concen: 3.62 ug/ml
RT: 9.727 min Scan# 1367
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:184 Resp: 22448

Ion	Ratio	Lower	Upper
184	100		
107	47.0	37.7	56.5
91	49.0	46.3	69.5

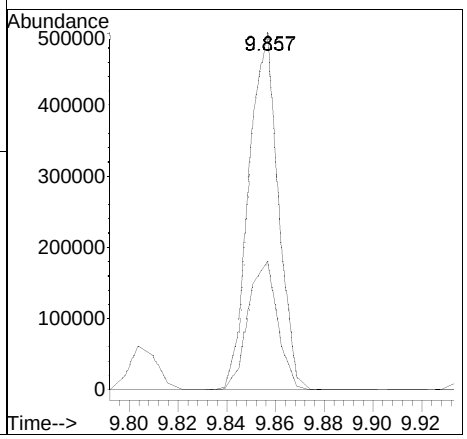


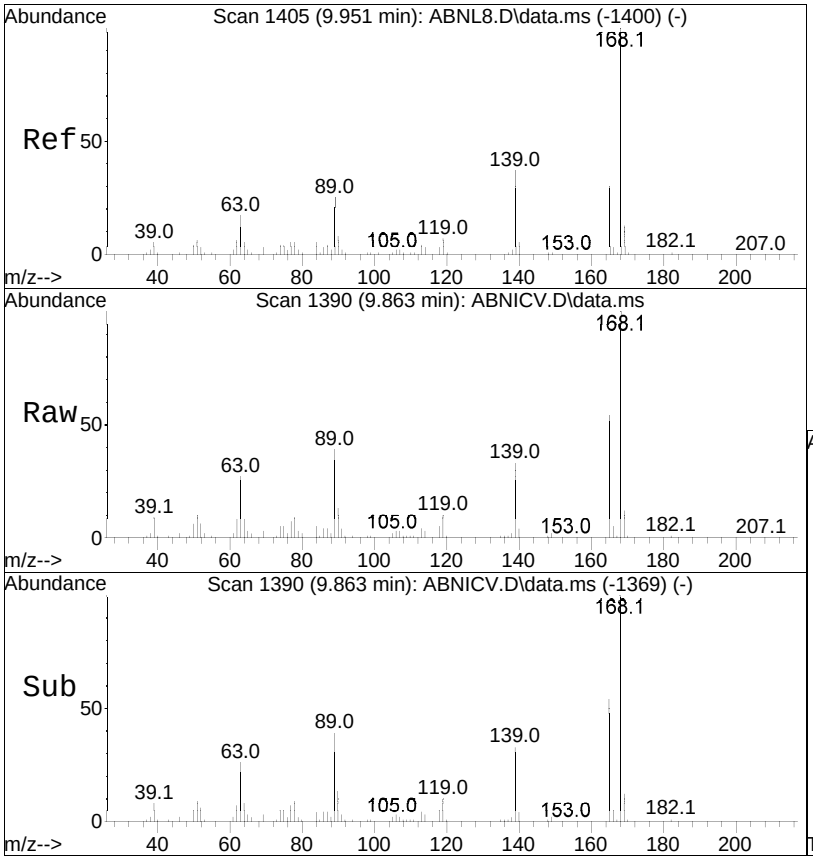


#66
Dibenzofuran
Concen: 4.75 ug/ml
RT: 9.857 min Scan# 1389
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:168 Resp: 415695

Ion	Ratio	Lower	Upper
168	100		
139	36.6	31.4	47.2

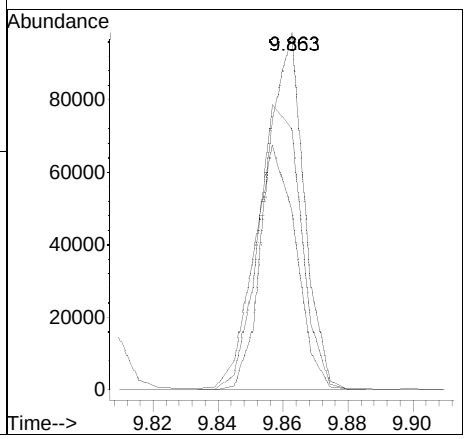


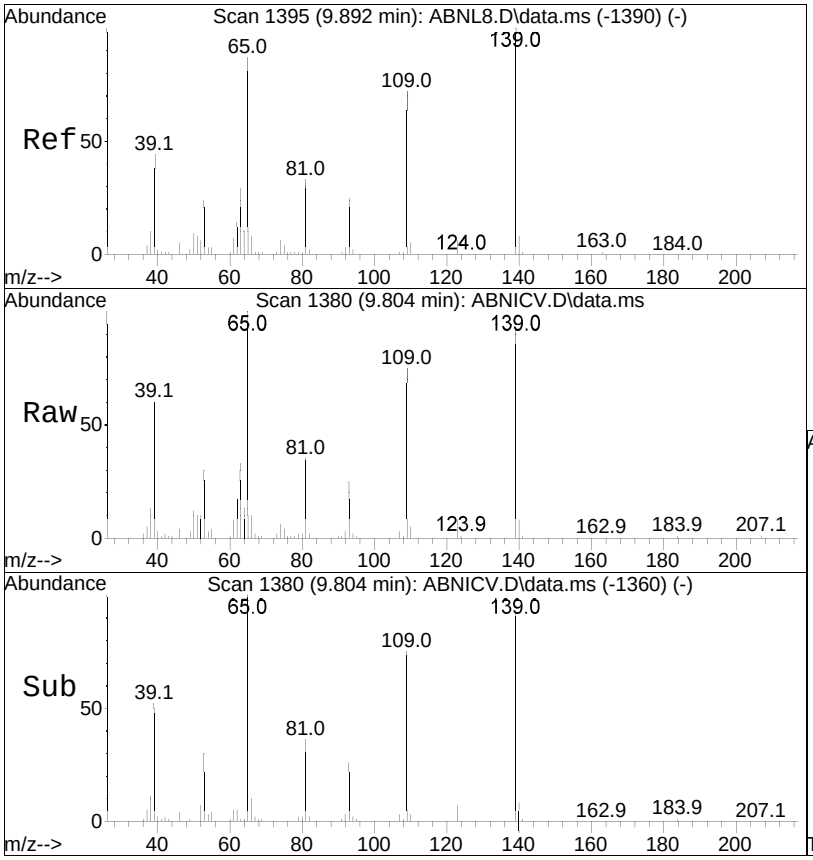


#67
2,4-Dinitrotoluene
Concen: 4.22 ug/ml
RT: 9.863 min Scan# 1390
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:165 Resp: 78470

Ion	Ratio	Lower	Upper
165	100		
89	91.6	72.0	108.0
63	78.3	52.7	79.1

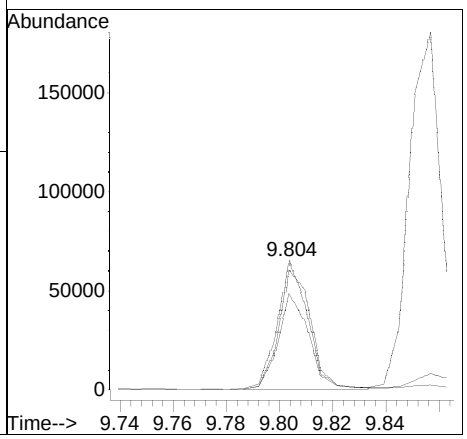


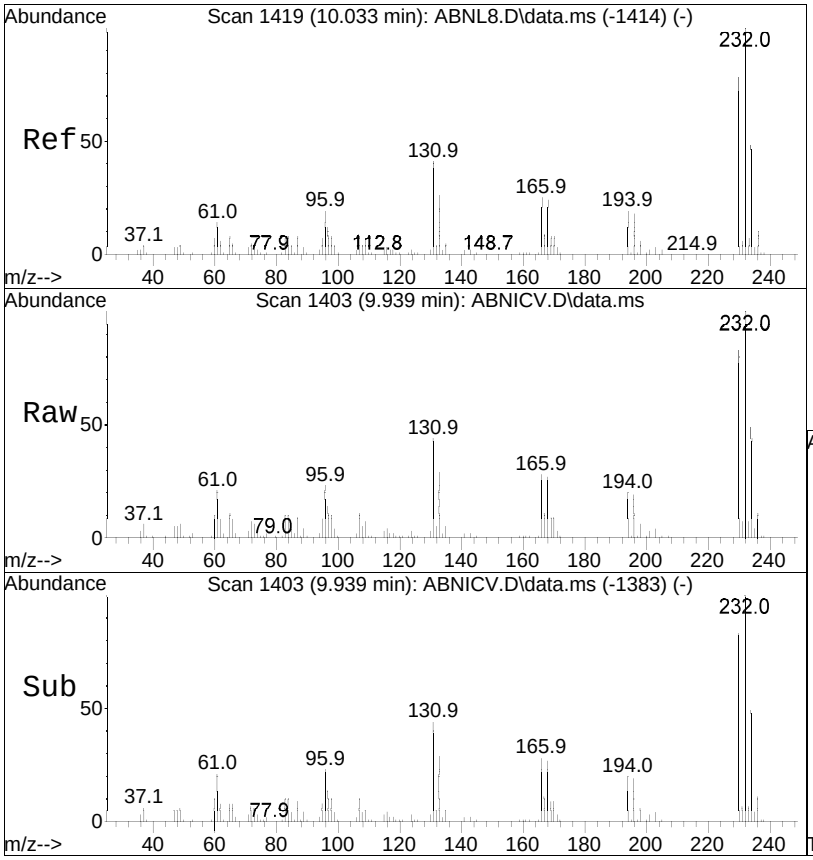


#68
4-Nitrophenol
Concen: 4.31 ug/ml
RT: 9.804 min Scan# 1380
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 65 Resp: 52047

Ion	Ratio	Lower	Upper
65	100		
109	75.2	47.4	71.2#
139	97.9	76.6	115.0

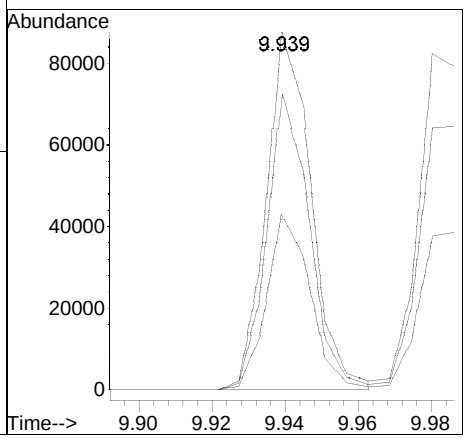


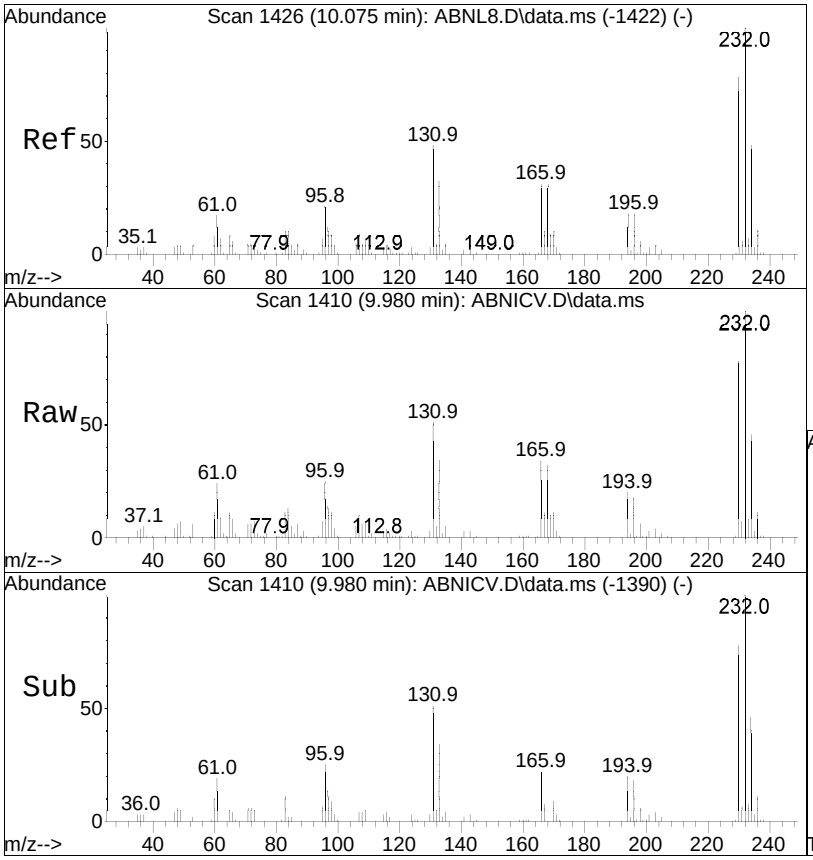


#69
2,3,5,6-Tetrachlorophenol
Concen: 4.99 ug/ml
RT: 9.939 min Scan# 1403
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:232 Resp: 74658

Ion	Ratio	Lower	Upper
232	100		
230	79.2	64.2	96.4
234	47.8	38.1	57.1

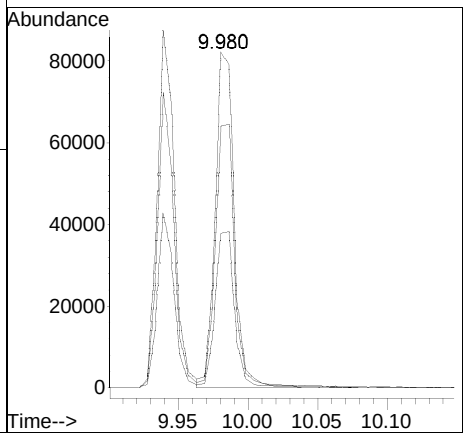


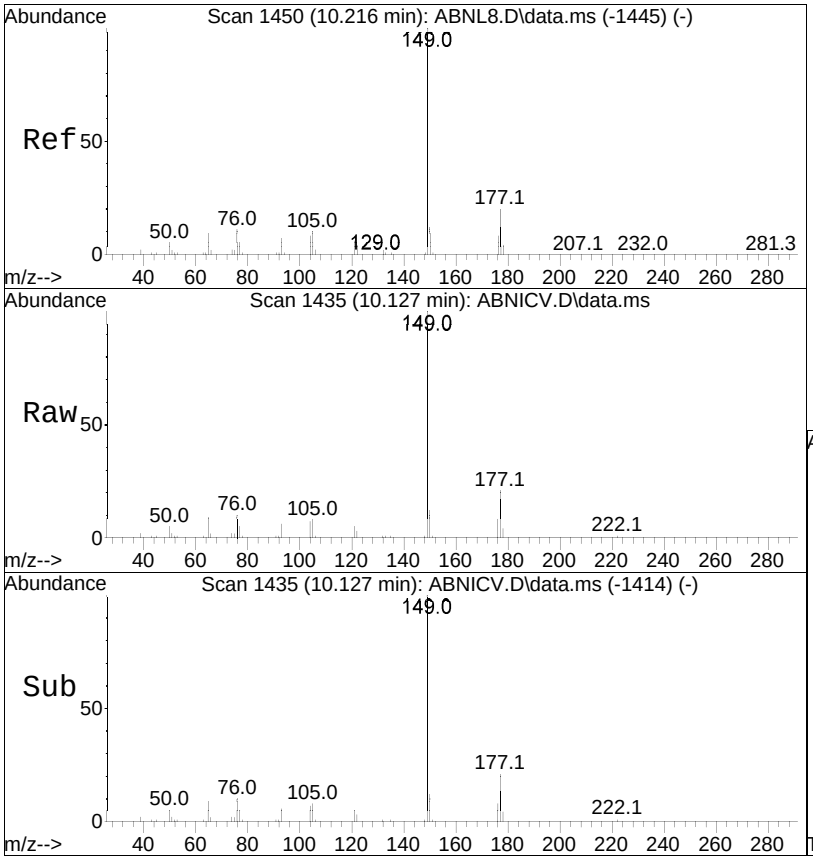


#70
2,3,4,6-Tetrachlorophenol
Concen: 5.16 ug/ml
RT: 9.980 min Scan# 1410
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:232 Resp: 78406

Ion	Ratio	Lower	Upper
232	100		
230	79.5	61.8	92.8
234	48.0	36.2	54.2

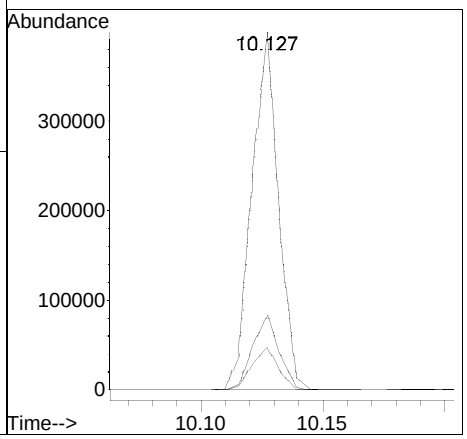


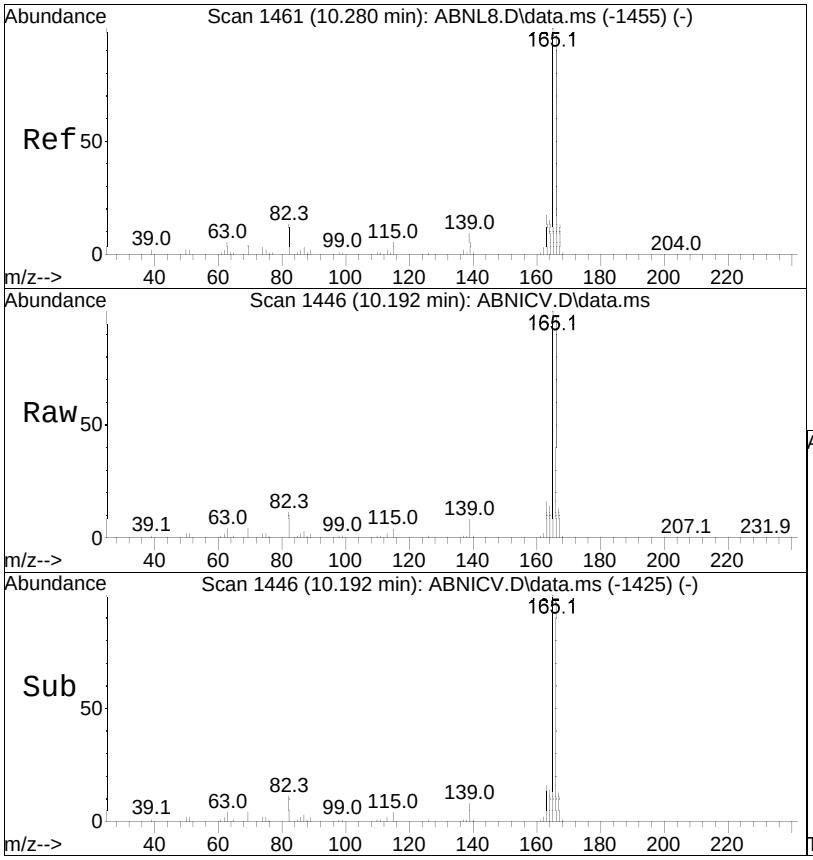


#71
Diethyl phthalate
Concen: 4.85 ug/ml
RT: 10.127 min Scan# 1435
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:149 Resp: 298471

Ion	Ratio	Lower	Upper
149	100		
177	21.1	16.1	24.1
150	12.0	9.4	14.2

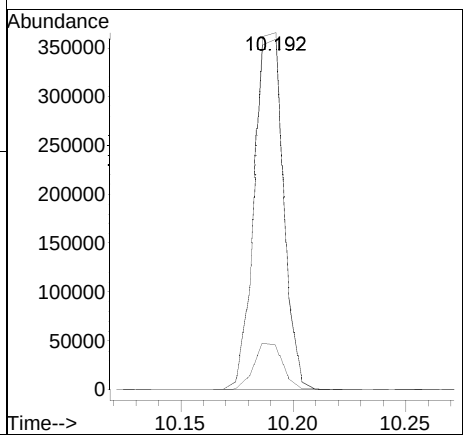


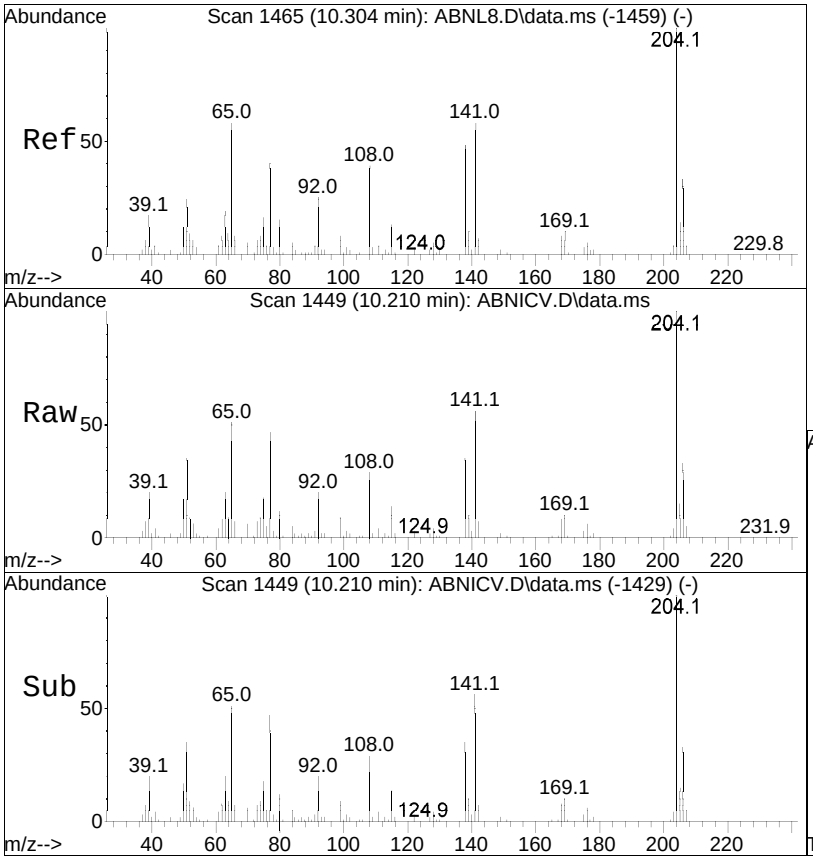


#72
Fluorene
Concen: 4.94 ug/ml
RT: 10.192 min Scan# 1446
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:166 Resp: 325064

Ion	Ratio	Lower	Upper
166	100		
165	101.7	76.2	114.2
167	13.4	10.6	15.8

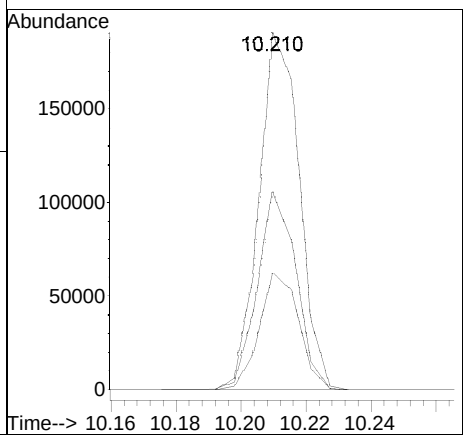


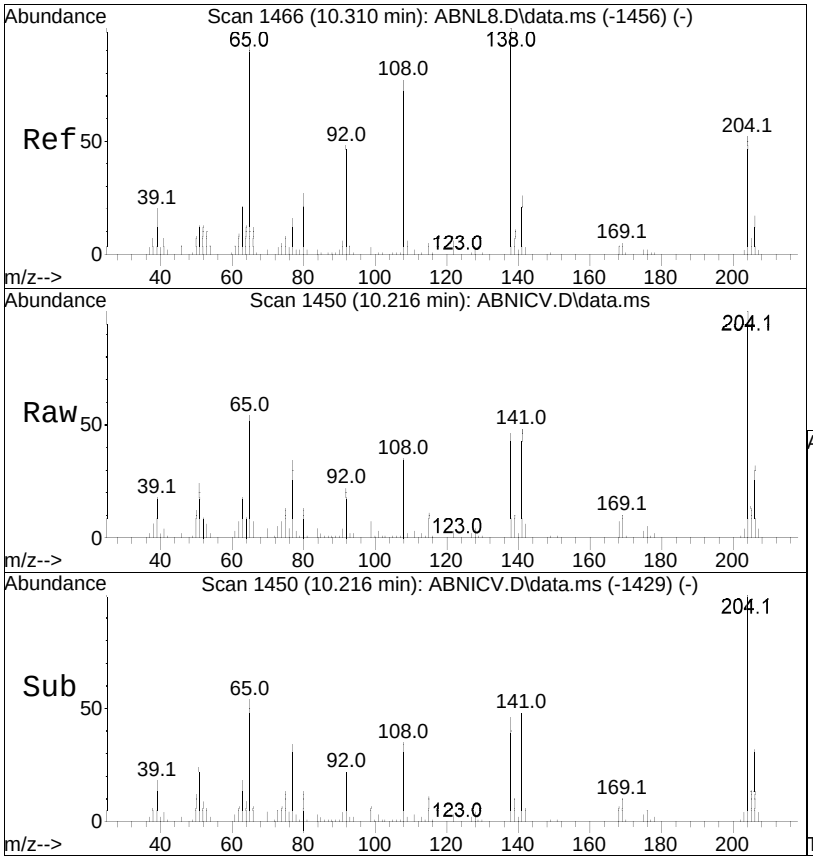


#73
4-Chlorophenyl phenyl ether
Concen: 4.82 ug/ml
RT: 10.210 min Scan# 1449
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:204 Resp: 163419

Ion	Ratio	Lower	Upper
204	100		
206	32.2	25.8	38.6
141	53.4	53.6	80.4#

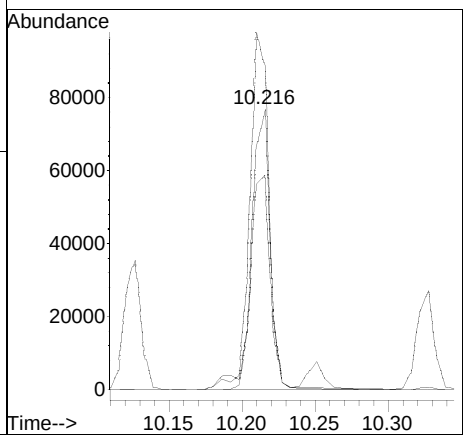


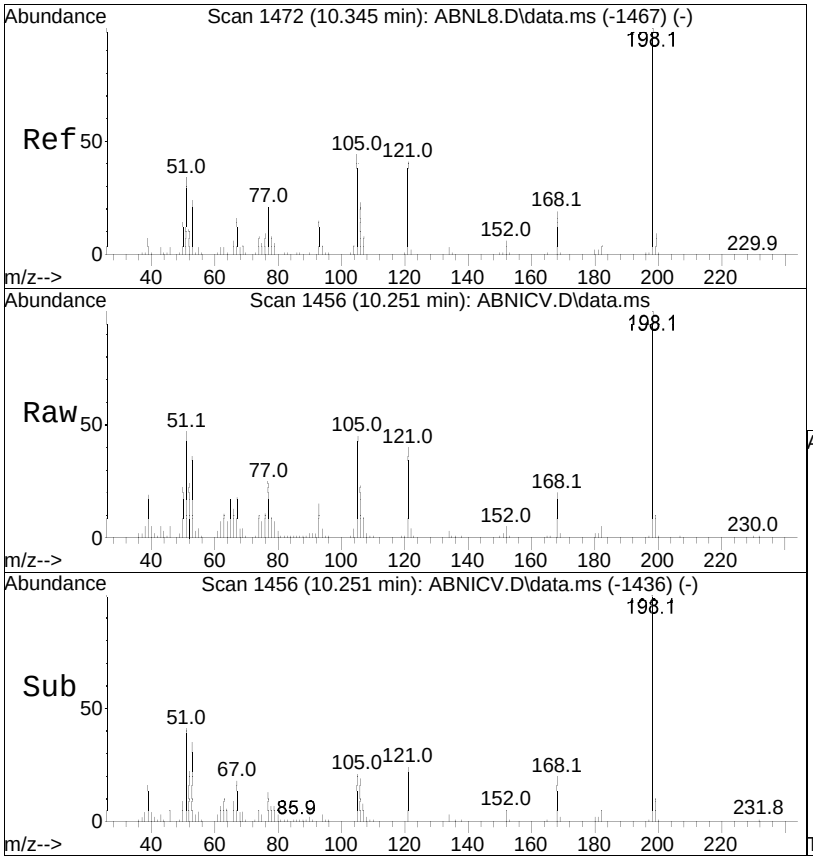


#74
4-Nitroaniline
Concen: 4.82 ug/ml
RT: 10.216 min Scan# 1450
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:138 Resp: 69444

Ion	Ratio	Lower	Upper
138	100		
108	77.0	52.1	78.1
65	127.4	115.0	172.6

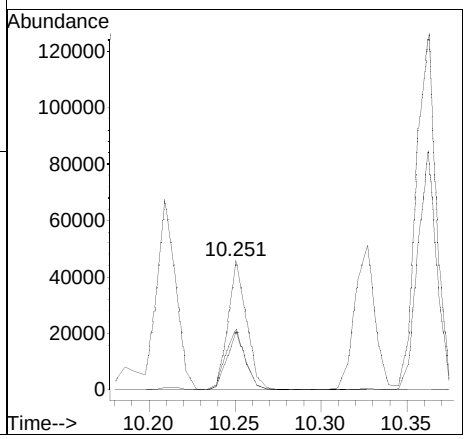


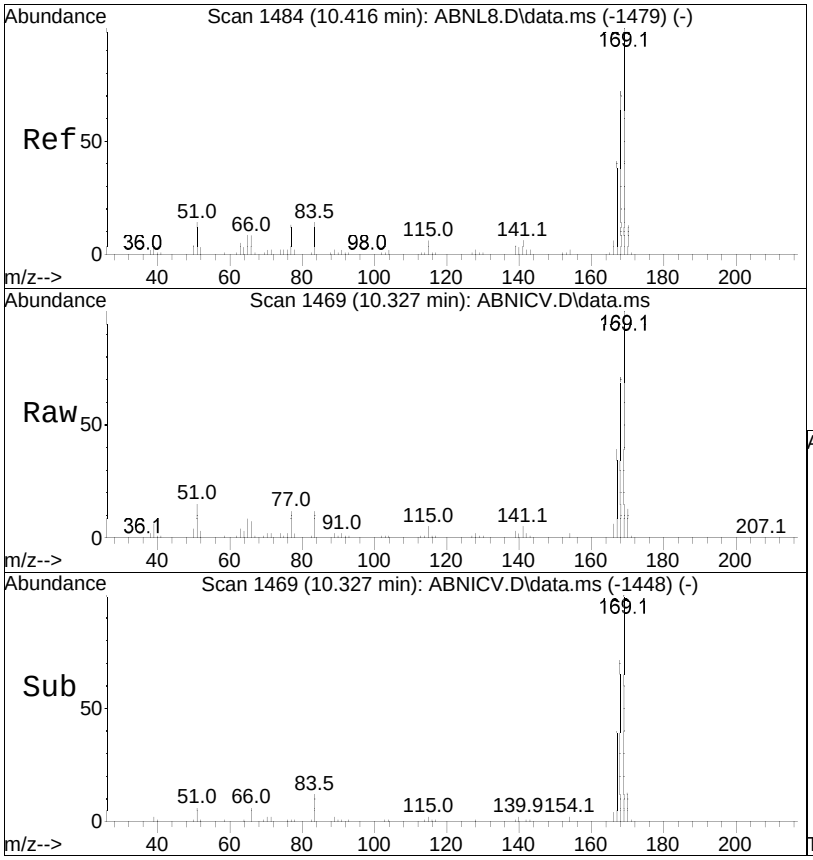


#75
4,6-Dinitro-o-cresol
Concen: 3.85 ug/ml
RT: 10.251 min Scan# 1456
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:198 Resp: 35301

Ion	Ratio	Lower	Upper
198	100		
51	47.6	76.0	114.0#
105	45.8	45.6	68.4

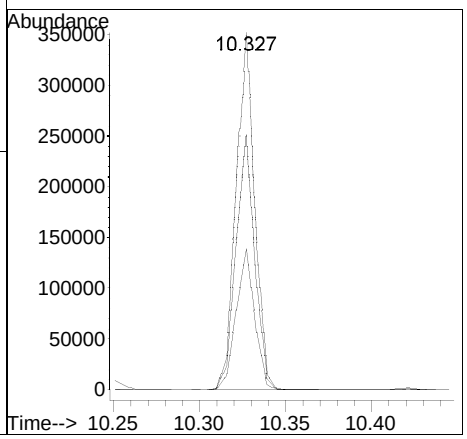


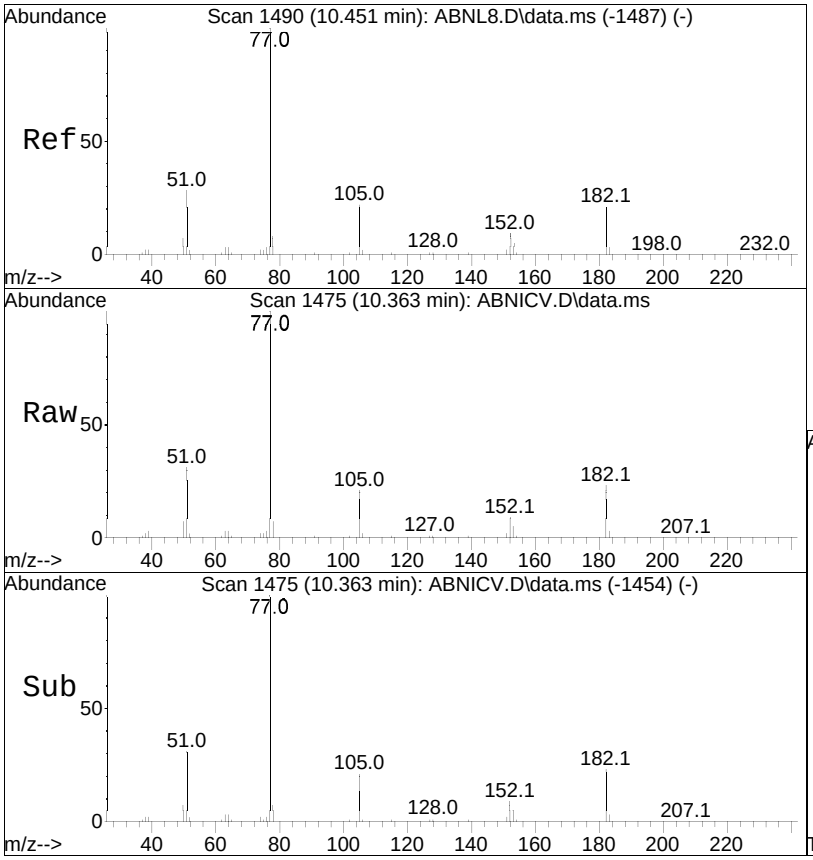


#76
NDPA/DPA
Concen: 4.99 ug/ml
RT: 10.327 min Scan# 1469
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:169 Resp: 263669

Ion	Ratio	Lower	Upper
169	100		
168	71.9	54.0	81.0
167	39.6	28.6	42.8

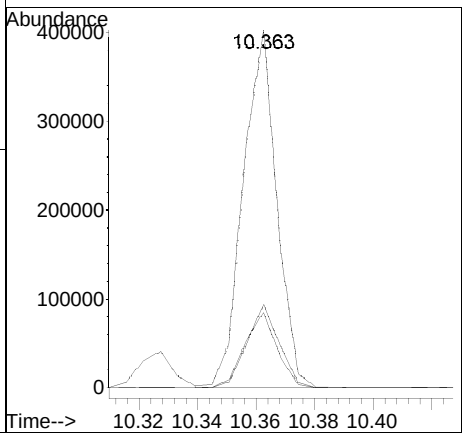


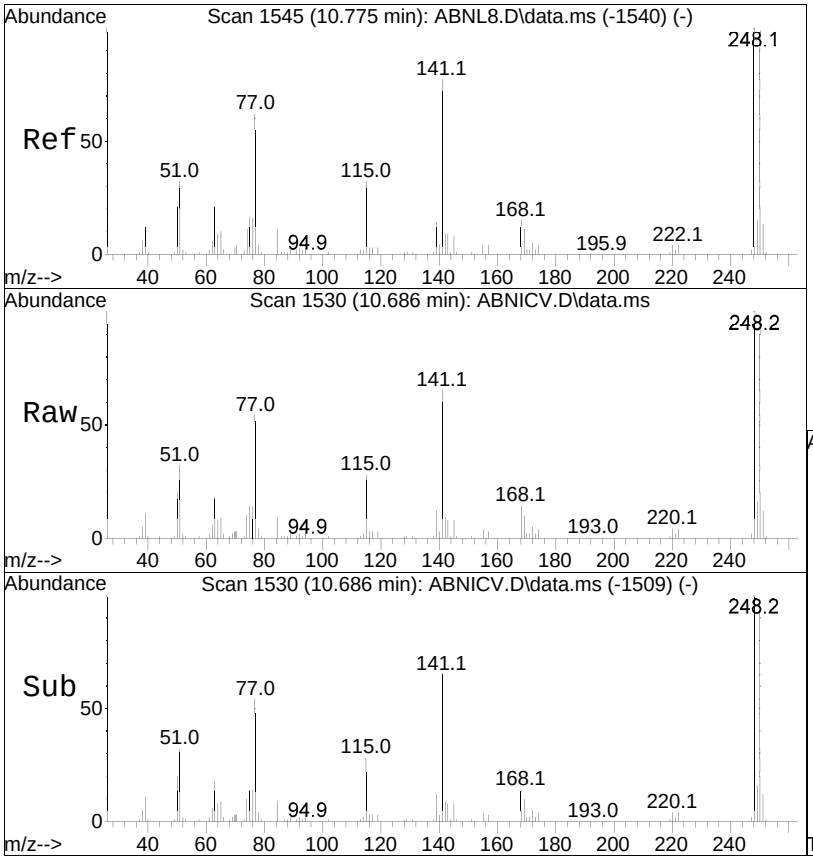


#77
Azobenzene
Concen: 5.10 ug/ml
RT: 10.363 min Scan# 1475
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion: 77 Resp: 316422

Ion	Ratio	Lower	Upper
77	100		
182	22.6	17.4	26.2
105	20.7	15.4	23.2

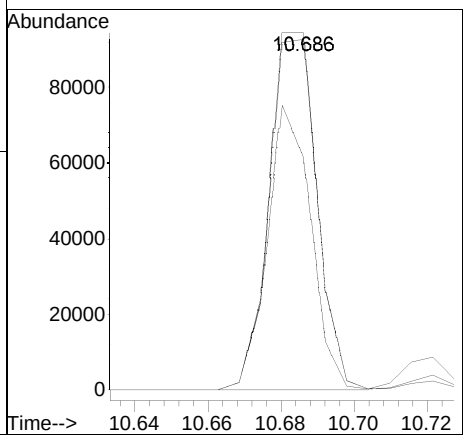


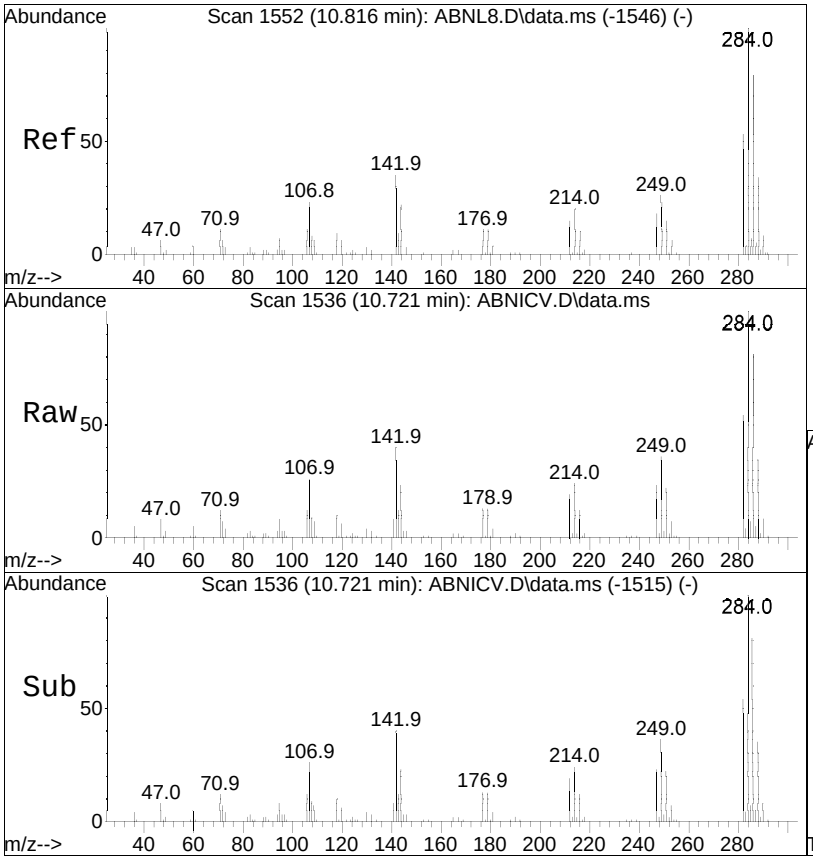


#79
4-Bromophenyl phenyl ether
Concen: 4.84 ug/ml
RT: 10.686 min Scan# 1530
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:248 Resp: 86163

Ion	Ratio	Lower	Upper
248	100		
141	72.1	76.6	114.8#
250	97.7	77.3	115.9

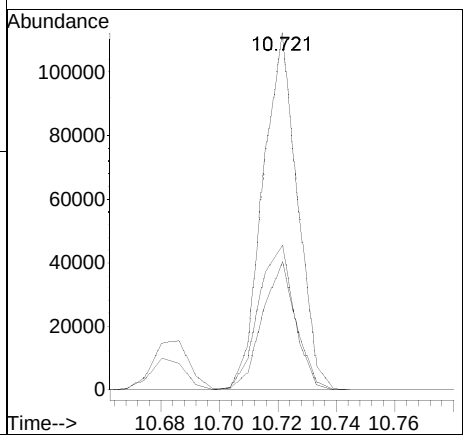


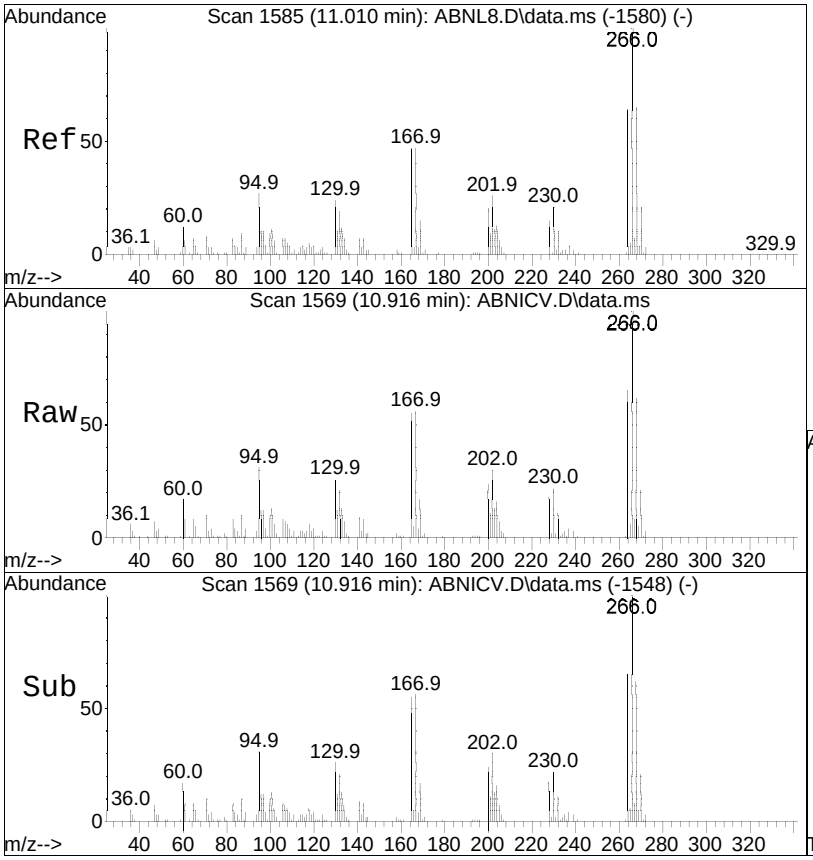


#80
Hexachlorobenzene
Concen: 4.69 ug/ml
RT: 10.721 min Scan# 1536
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:284 Resp: 92143

Ion	Ratio	Lower	Upper
284	100		
142	42.0	41.9	62.9
249	35.3	24.1	36.1

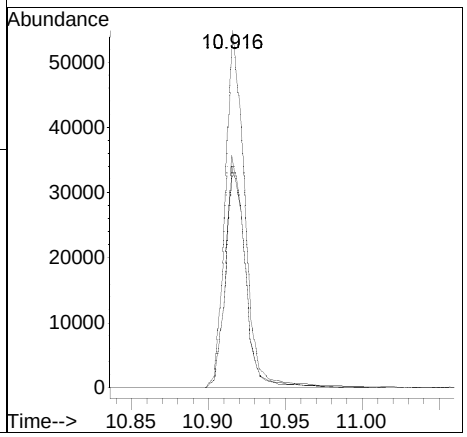


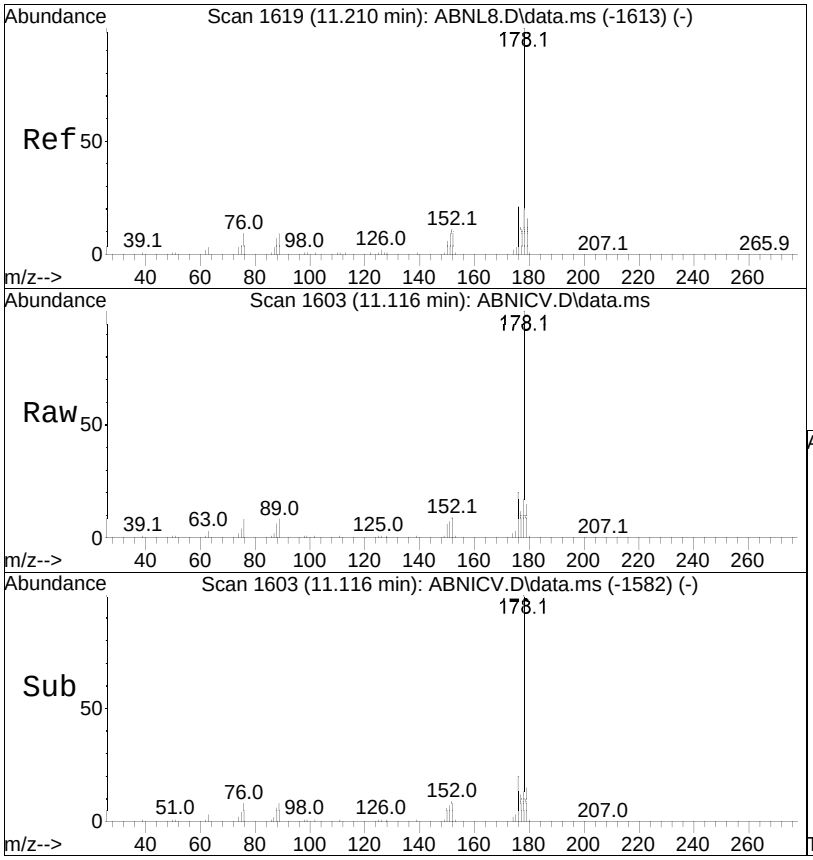


#81
Pentachlorophenol
Concen: 4.16 ug/ml
RT: 10.916 min Scan# 1569
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:266 Resp: 48503

Ion	Ratio	Lower	Upper
266	100		
264	65.0	49.7	74.5
268	64.0	50.5	75.7

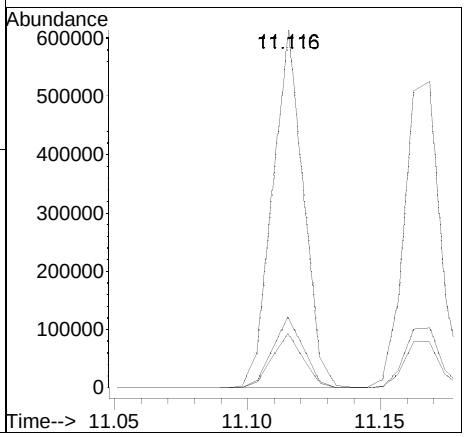


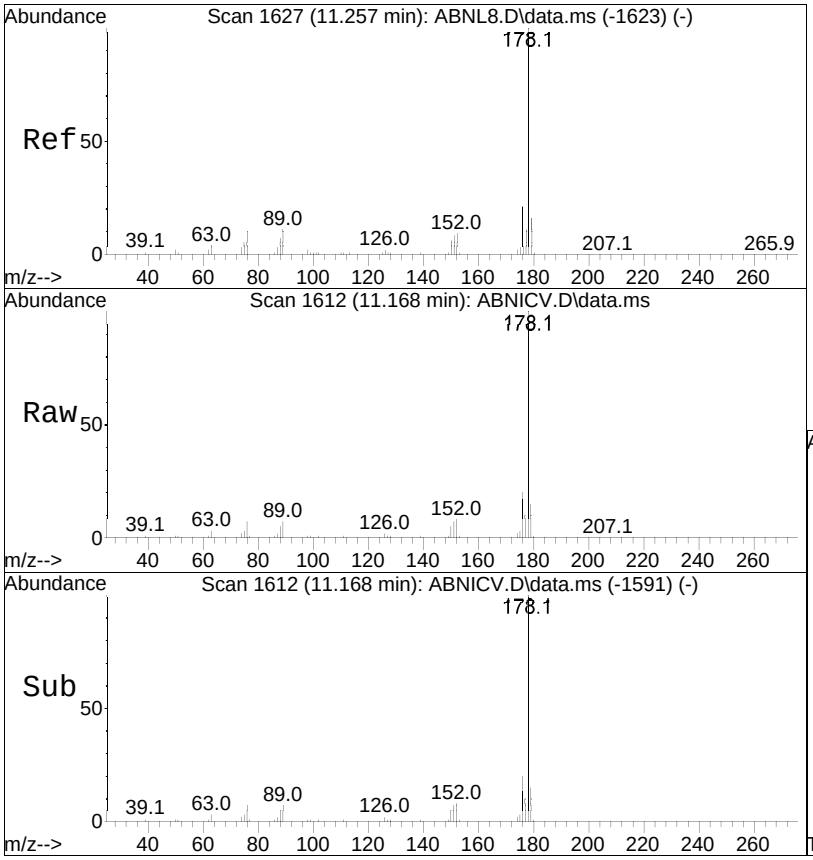


#88
Phenanthrene
Concen: 4.80 ug/ml
RT: 11.116 min Scan# 1603
Delta R.T. -0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:178 Resp: 497949

Ion	Ratio	Lower	Upper
178	100		
179	15.2	12.2	18.2
176	19.8	15.4	23.2

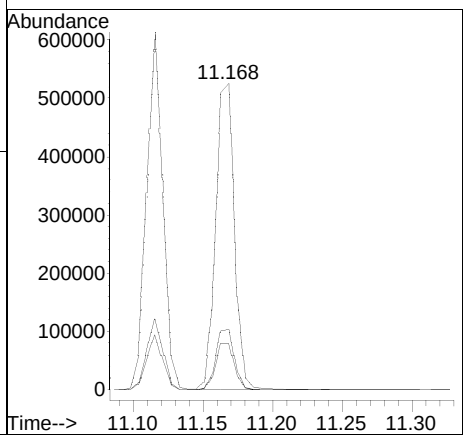


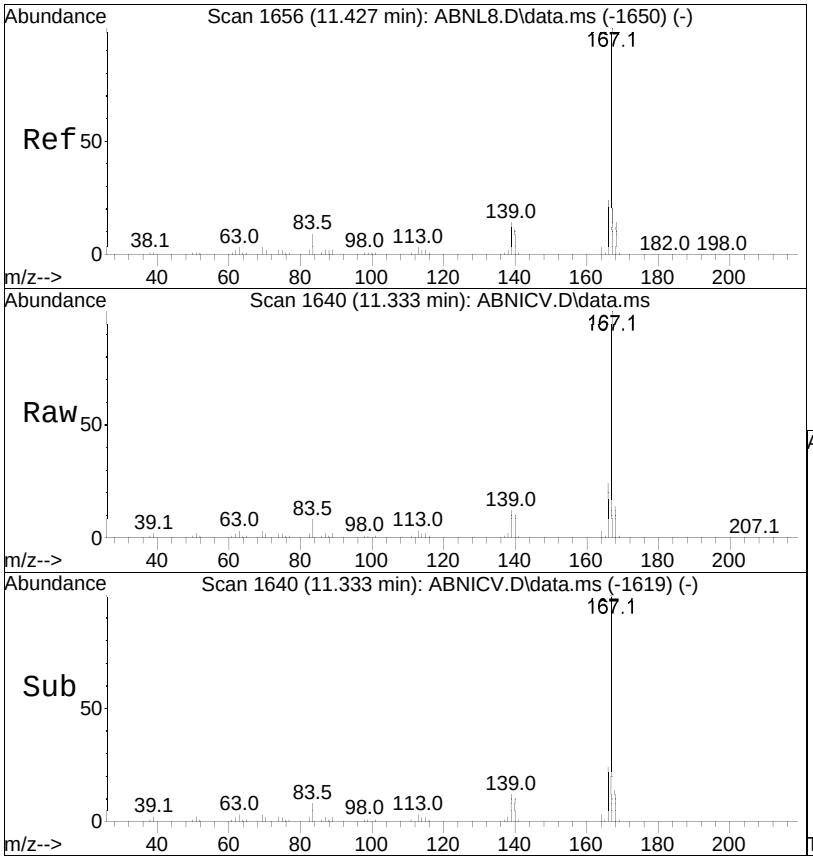


#89
Anthracene
Concen: 5.01 ug/ml
RT: 11.168 min Scan# 1612
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:178 Resp: 491040

Ion	Ratio	Lower	Upper
178	100		
179	15.2	12.0	18.0
176	19.8	14.6	22.0

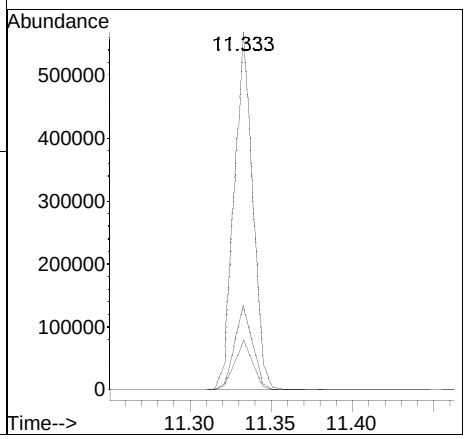


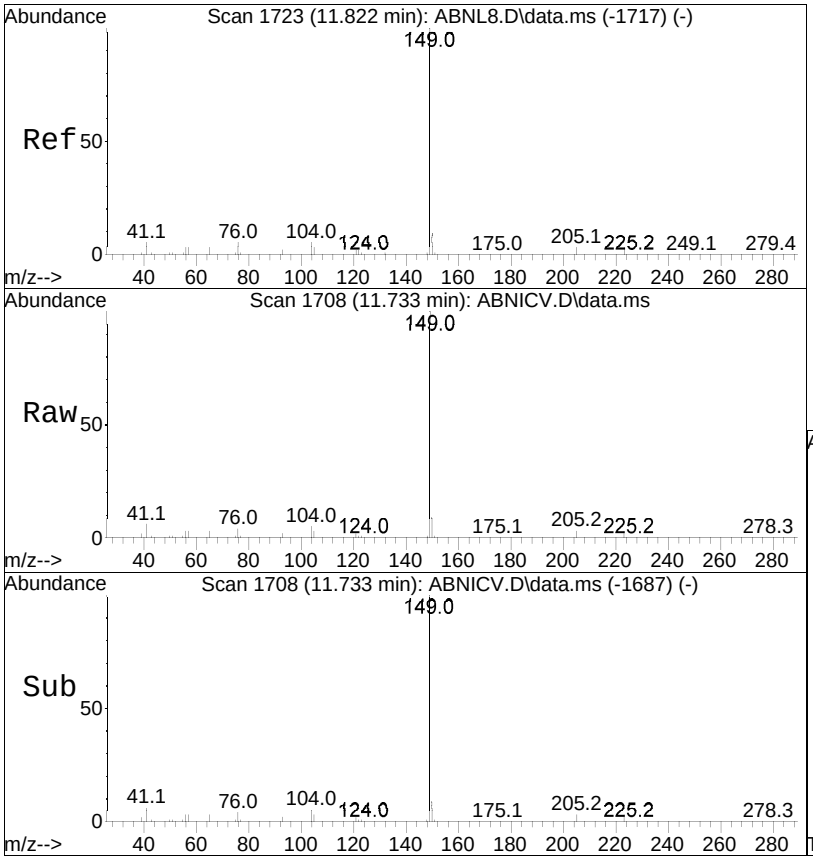


#90
Carbazole
Concen: 5.04 ug/ml
RT: 11.333 min Scan# 1640
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:167 Resp: 448423

Ion	Ratio	Lower	Upper
167	100		
168	13.8	10.6	15.8
166	23.2	17.4	26.0

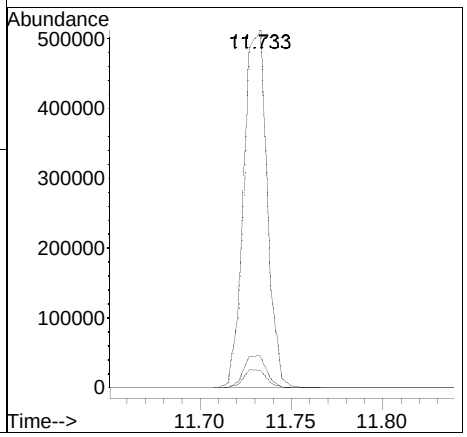


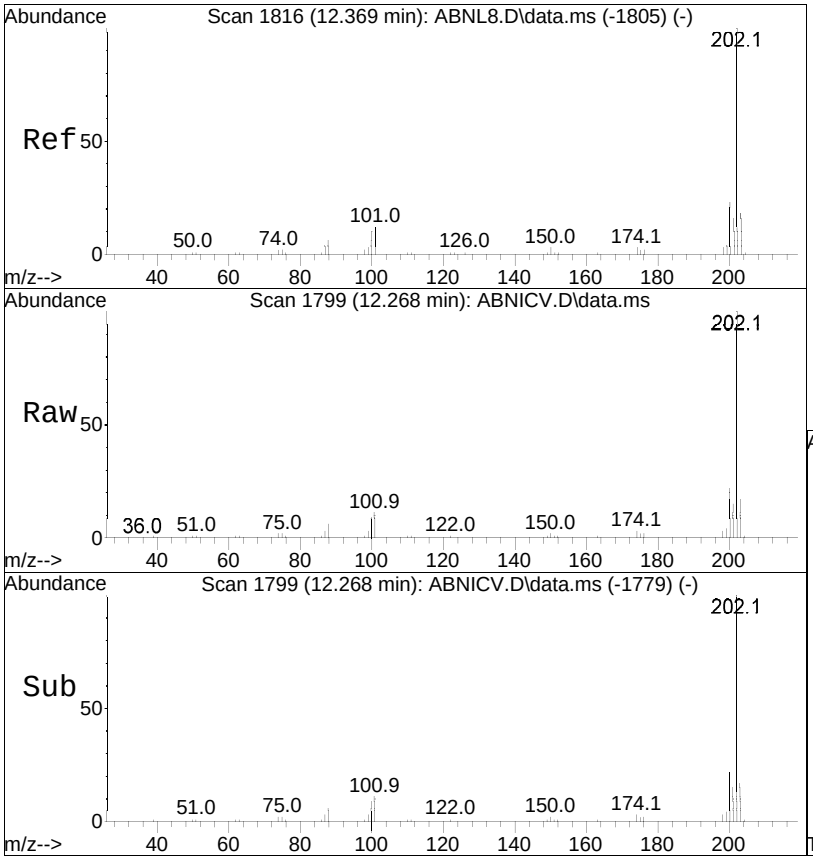


#91
Di-n-butylphthalate
Concen: 4.73 ug/ml
RT: 11.733 min Scan# 1708
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:149 Resp: 447597

Ion	Ratio	Lower	Upper
149	100		
150	9.1	7.0	10.6
104	5.5	4.5	6.7

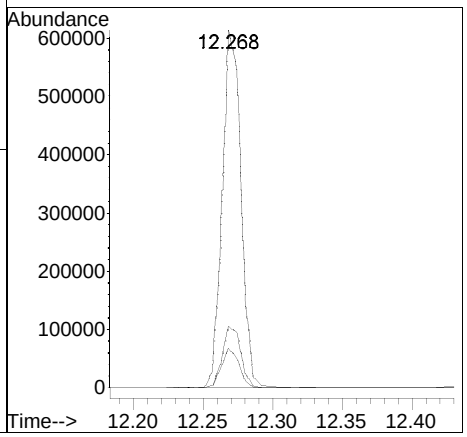


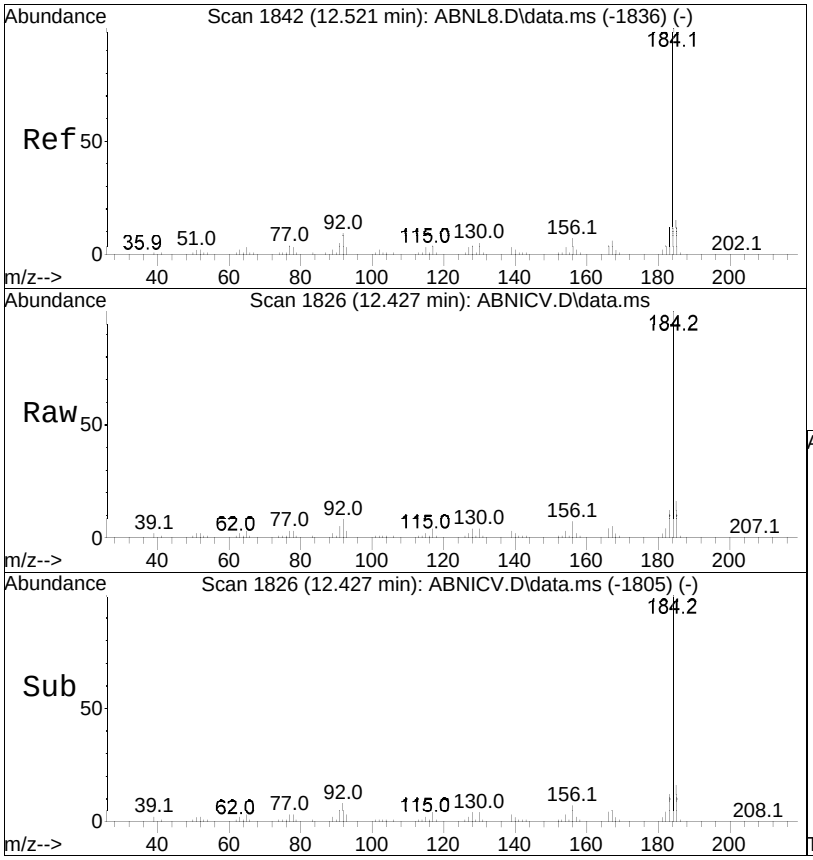


#92
Fluoranthene
Concen: 5.04 ug/ml
RT: 12.268 min Scan# 1799
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:202 Resp: 563059

Ion	Ratio	Lower	Upper
202	100		
101	10.8	13.5	20.3#
203	17.2	13.6	20.4

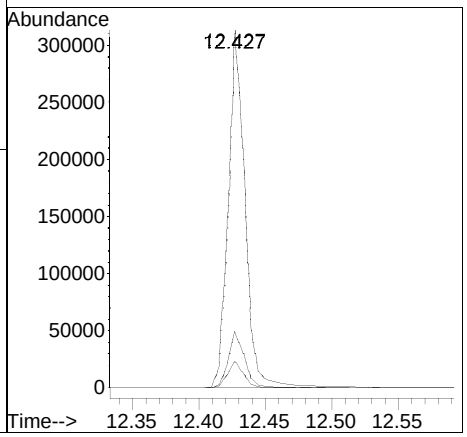


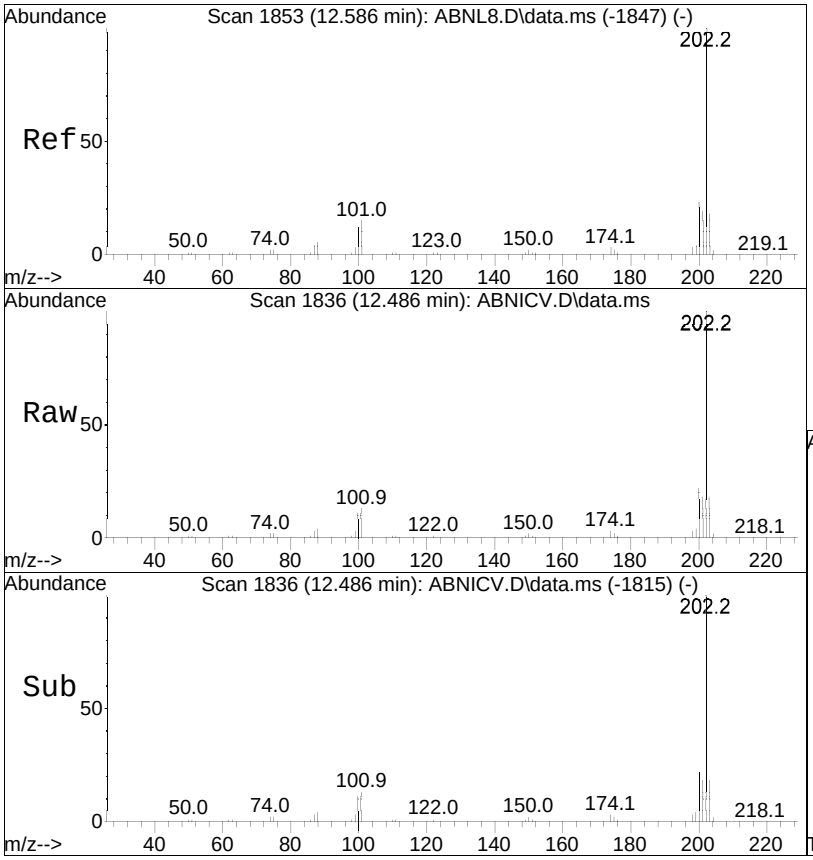


#93
Benzidine
Concen: 4.49 ug/ml
RT: 12.427 min Scan# 1826
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:184 Resp: 270382

Ion	Ratio	Lower	Upper
184	100		
92	7.4	9.1	13.7#
185	15.6	11.1	16.7

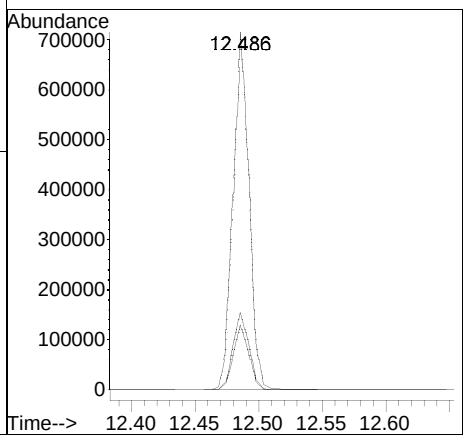


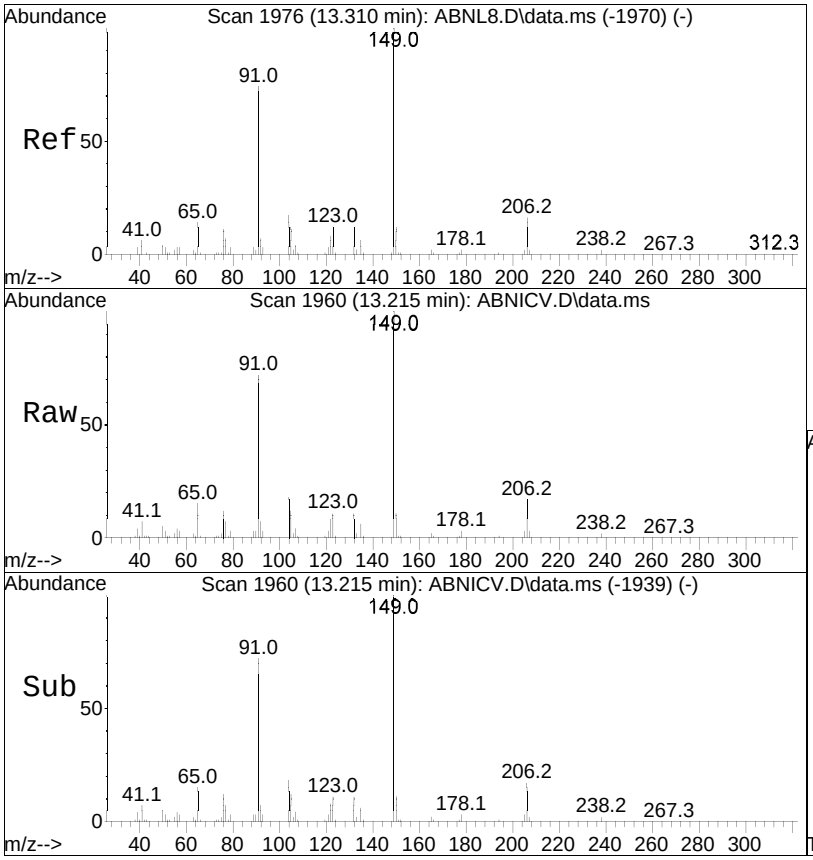


#94
Pyrene
Concen: 5.09 ug/ml
RT: 12.486 min Scan# 1836
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:202 Resp: 614401

Ion	Ratio	Lower	Upper
202	100		
200	21.9	16.7	25.1
203	17.9	14.2	21.4

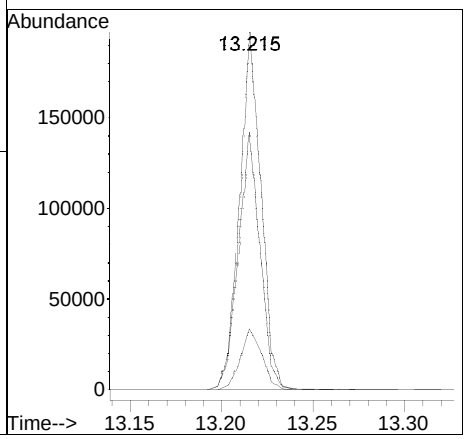


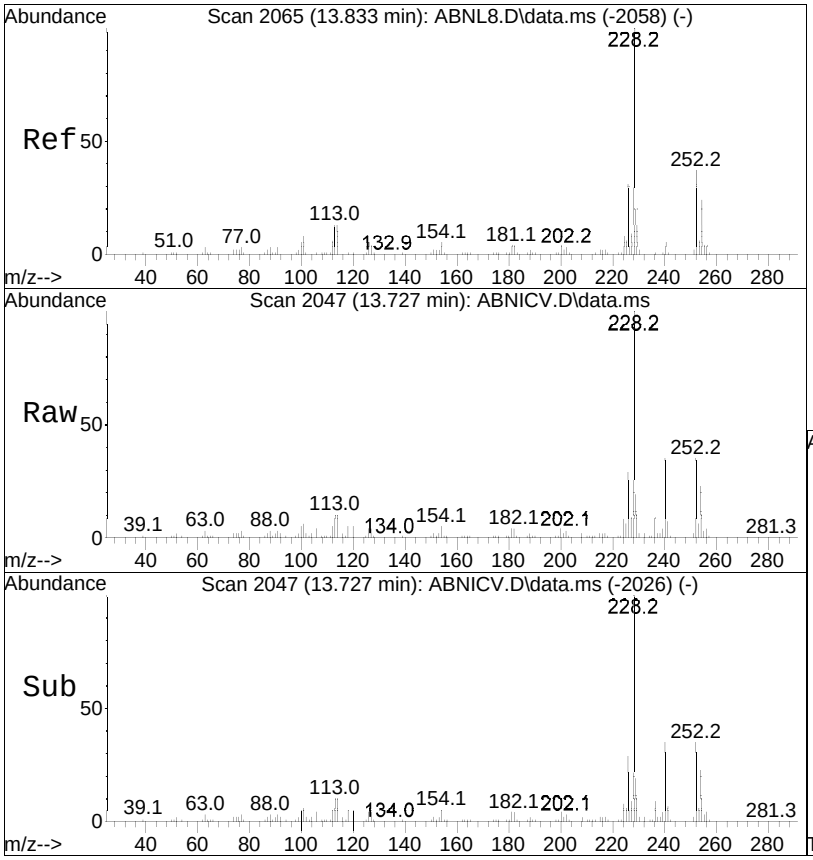


#96
Butyl benzyl phthalate
Concen: 3.85 ug/ml
RT: 13.215 min Scan# 1960
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:149 Resp: 158578

Ion	Ratio	Lower	Upper
149	100		
91	72.9	63.3	94.9
206	17.3	13.9	20.9

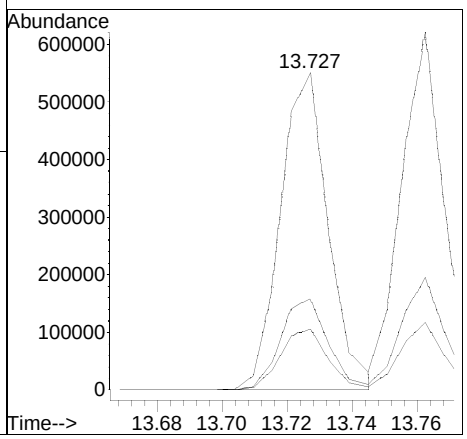


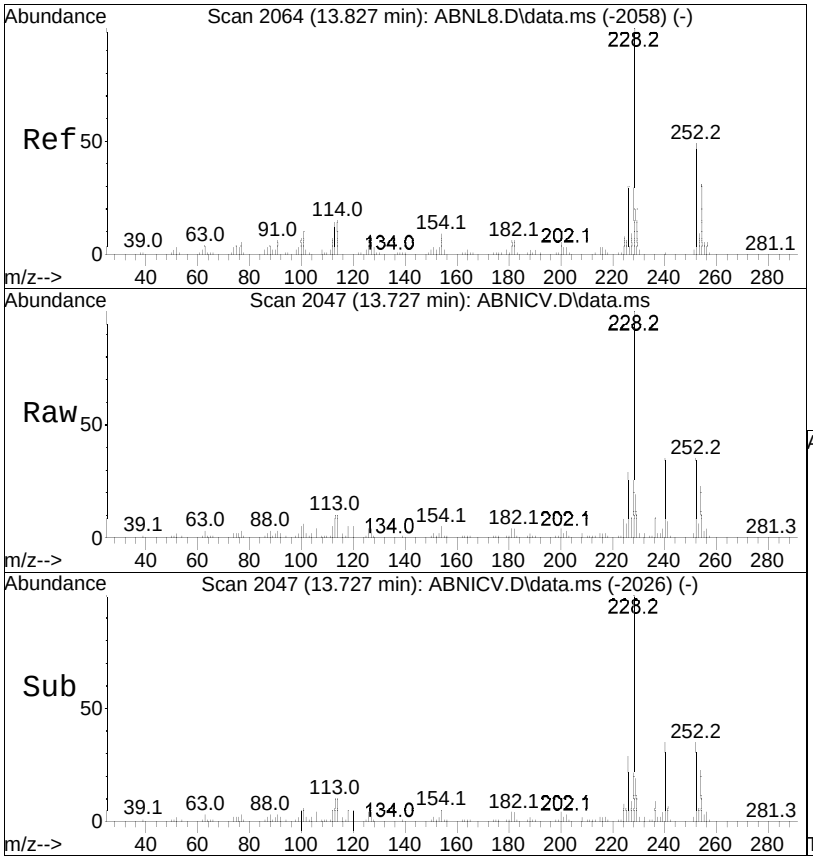


#104
Benzo(a)anthracene
Concen: 4.85 ug/ml
RT: 13.727 min Scan# 2047
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:228 Resp: 562742

Ion	Ratio	Lower	Upper
228	100		
226	28.9	22.2	33.4
229	19.5	15.6	23.4

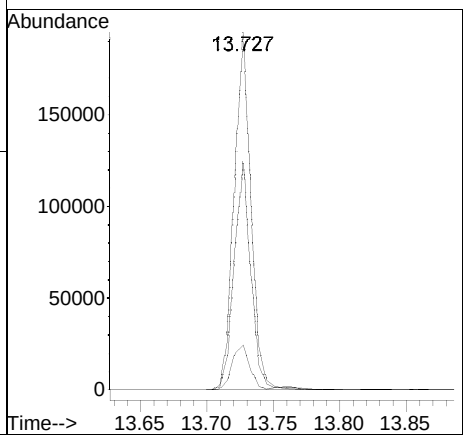


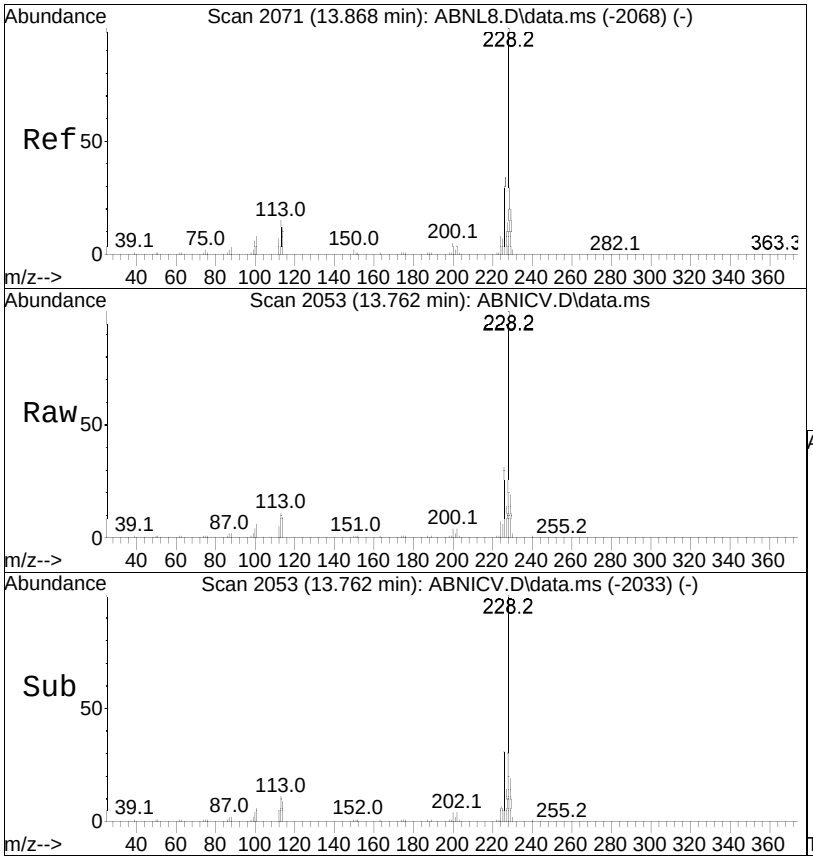


#105
3,3'-Dichlorobenzidine
Concen: 4.89 ug/ml
RT: 13.727 min Scan# 2047
Delta R.T. 0.000 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:252 Resp: 171195

Ion	Ratio	Lower	Upper
252	100		
126	13.5	14.5	21.7#
254	63.6	51.2	76.8

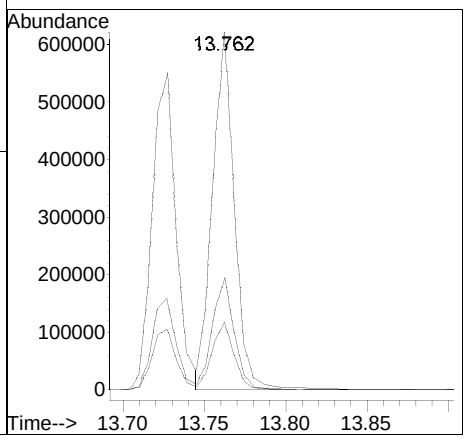


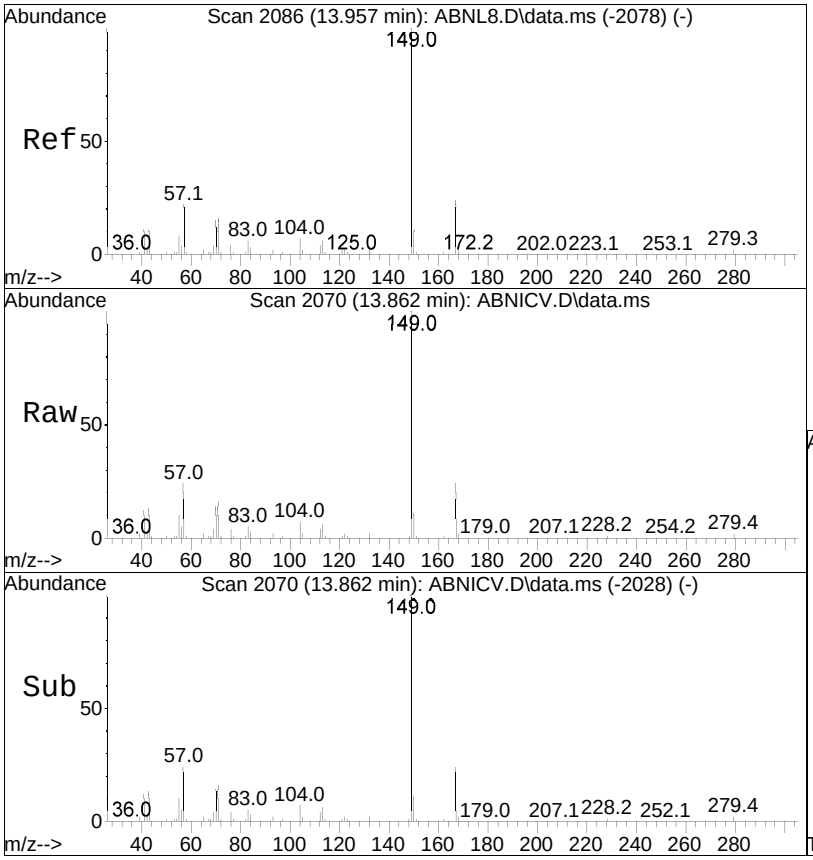


#106
Chrysene
Concen: 4.95 ug/ml
RT: 13.762 min Scan# 2053
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:228 Resp: 578282

Ion	Ratio	Lower	Upper
228	100		
226	31.5	24.0	36.0
229	19.2	15.8	23.8

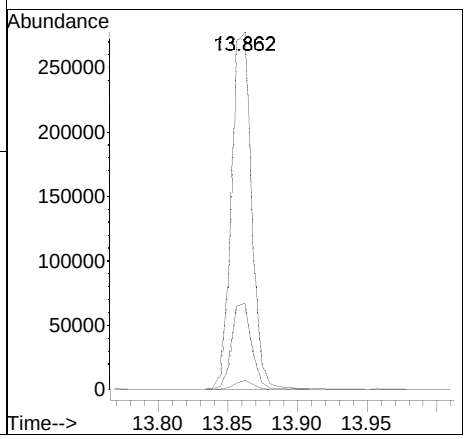


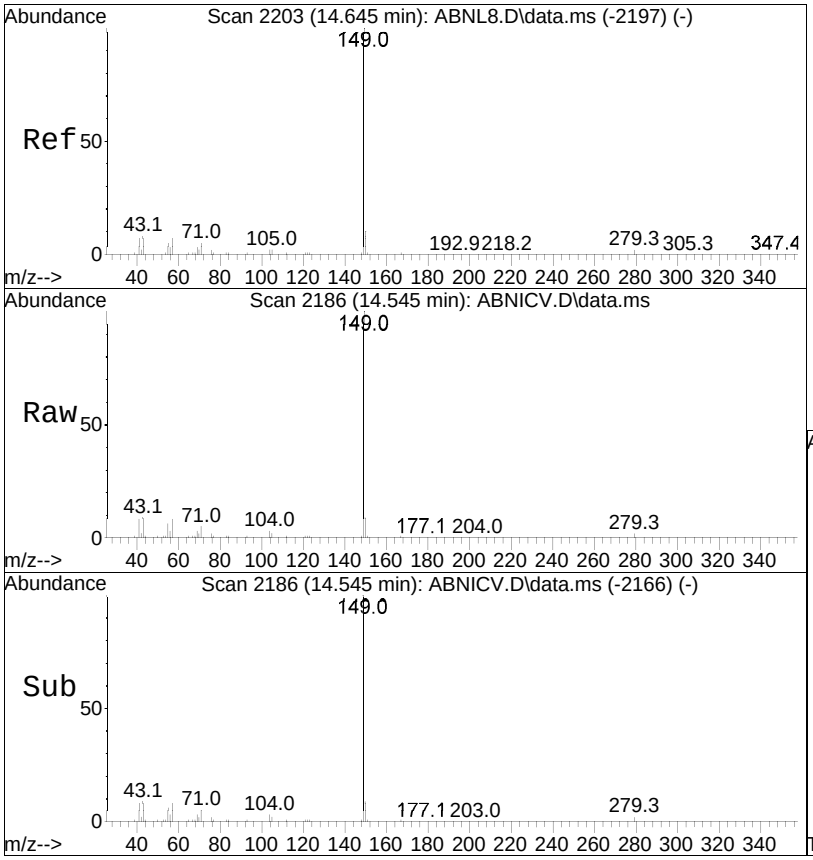


#107
Bis(2-ethylhexyl)phthalate
Concen: 4.59 ug/ml
RT: 13.862 min Scan# 2070
Delta R.T. -0.001 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:149 Resp: 276039

Ion	Ratio	Lower	Upper
149	100		
167	24.0	22.1	33.1
279	2.2	3.0	4.4#

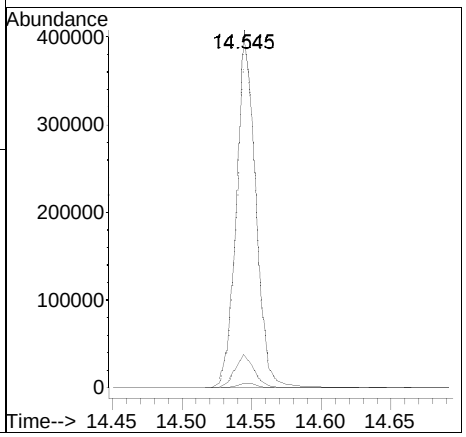


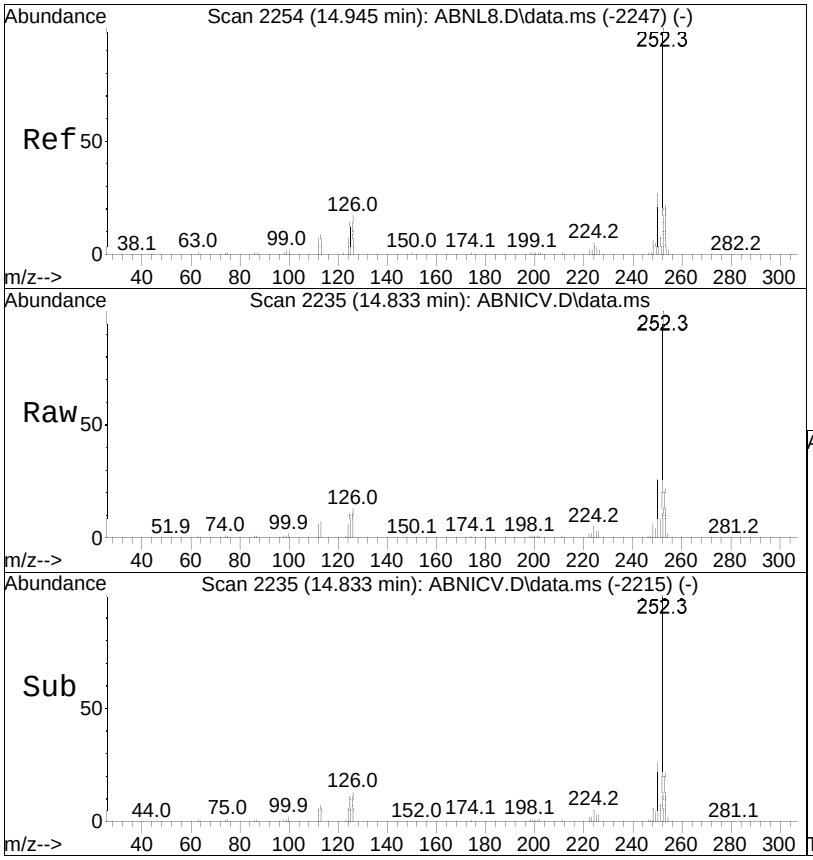


#108
Di-n-octylphthalate
Concen: 4.18 ug/ml
RT: 14.545 min Scan# 2186
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:149 Resp: 384818

Ion	Ratio	Lower	Upper
149	100		
43	9.9	18.8	28.2#
167	1.3	1.3	1.9

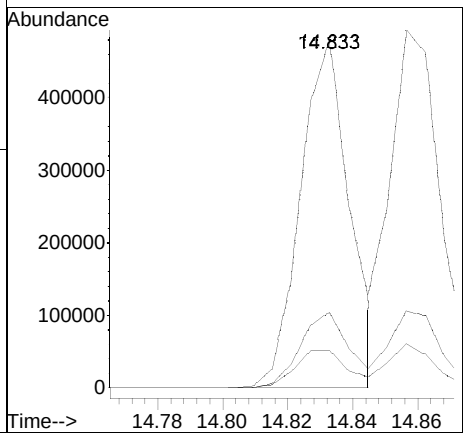


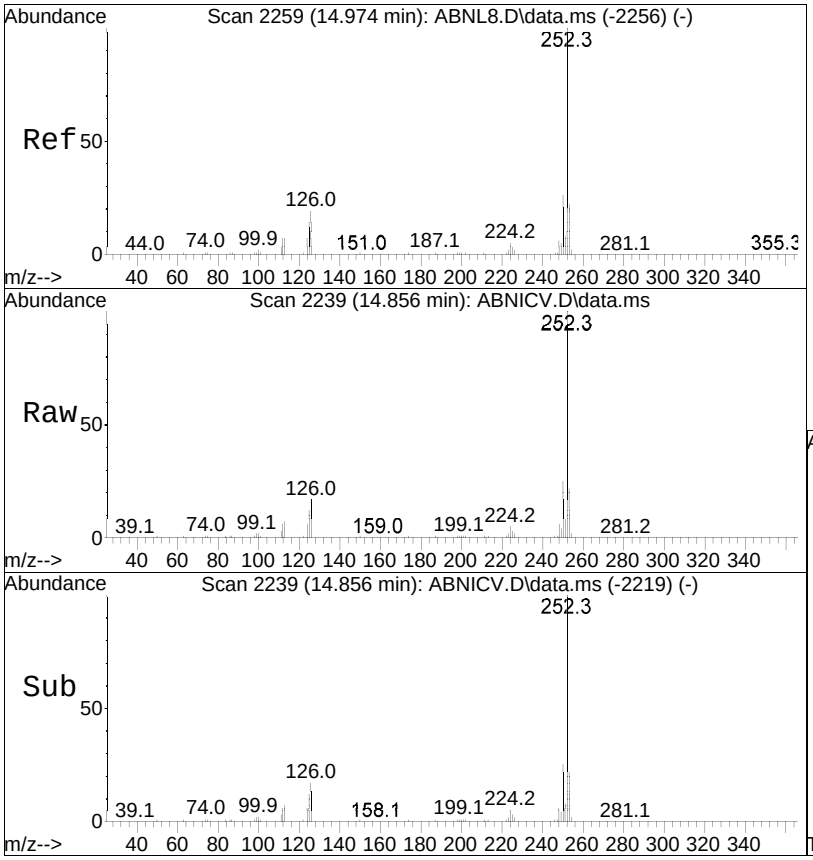


#109
Benzo(b)fluoranthene
Concen: 5.03 ug/ml
RT: 14.833 min Scan# 2235
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:252 Resp: 506070

Ion	Ratio	Lower	Upper
252	100		
125	11.9	13.3	19.9#
253	21.8	17.1	25.7

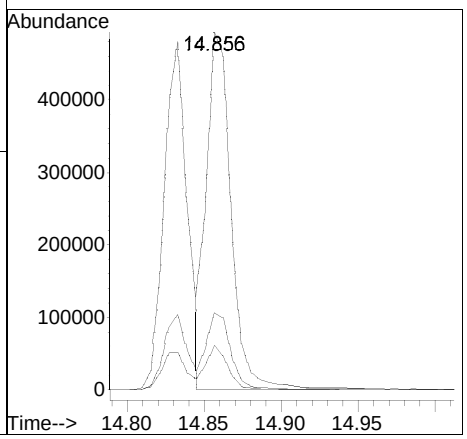


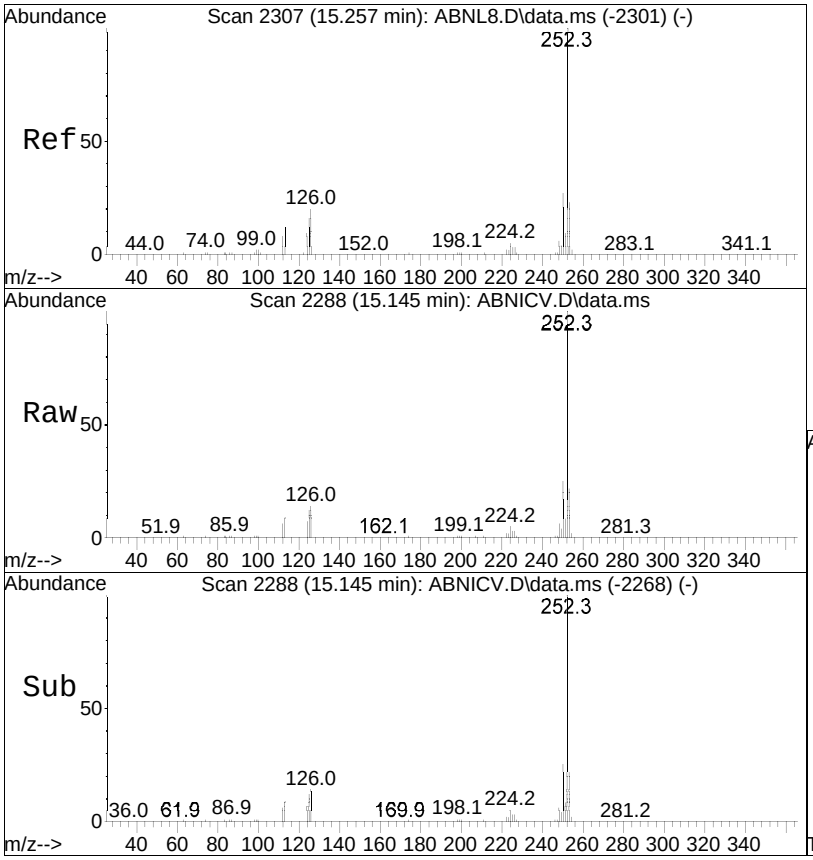


#110
Benzo(k)fluoranthene
Concen: 5.22 ug/ml
RT: 14.856 min Scan# 2239
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:252 Resp: 543521

Ion	Ratio	Lower	Upper
252	100		
125	11.3	13.0	19.6#
253	21.7	16.8	25.2

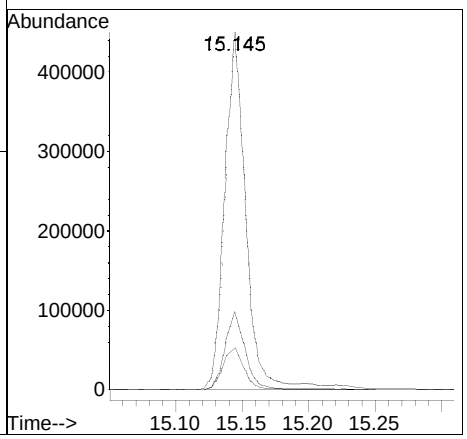


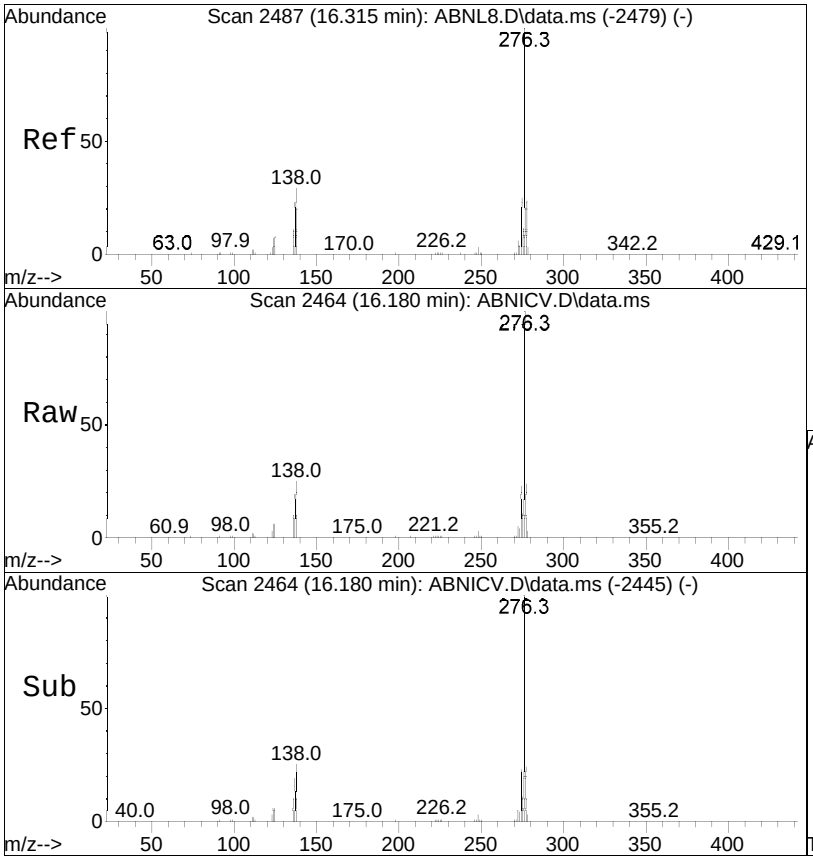


#111
Benzo(a)pyrene
Concen: 5.47 ug/ml
RT: 15.145 min Scan# 2288
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:252 Resp: 493890

Ion	Ratio	Lower	Upper
252	100		
125	12.1	14.2	21.2#
253	21.2	16.9	25.3

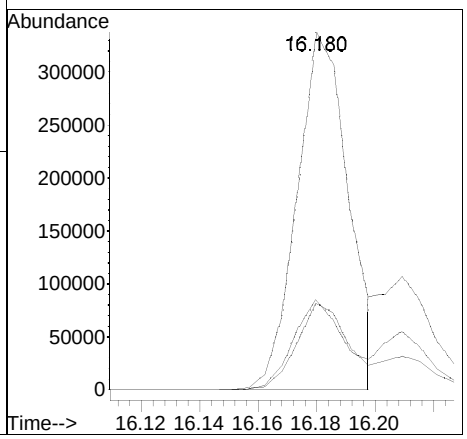


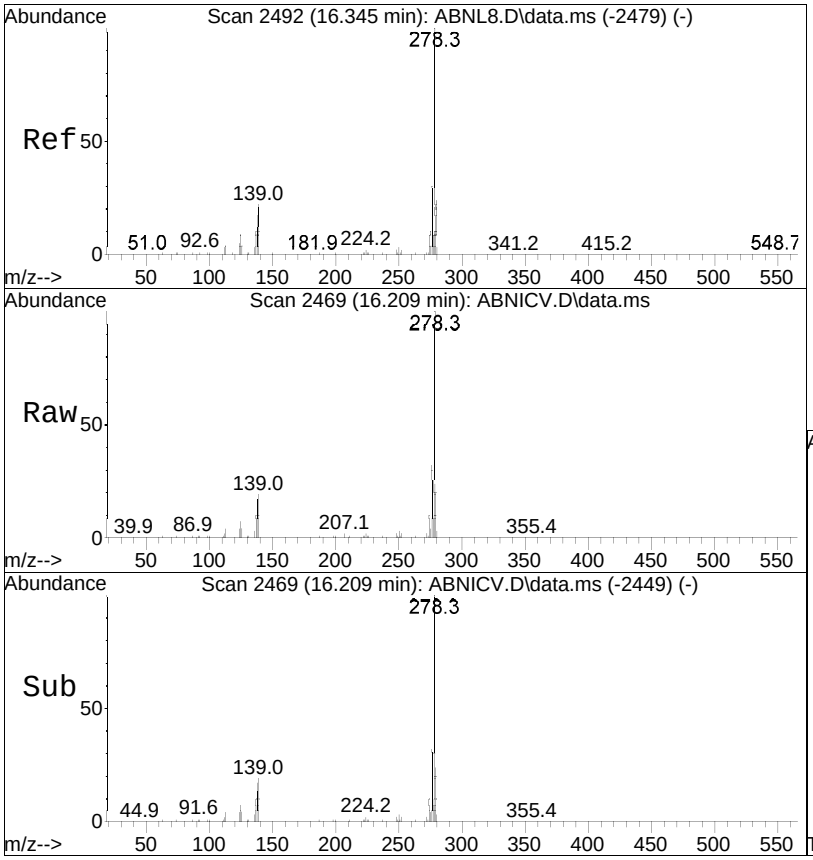


#113
Indeno(1,2,3-cd)pyrene
Concen: 5.06 ug/mL M6
RT: 16.180 min Scan# 2464
Delta R.T. -0.012 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:276 Resp: 415184

Ion	Ratio	Lower	Upper
276	100		
138	25.7	25.1	37.7
277	26.6	18.6	28.0

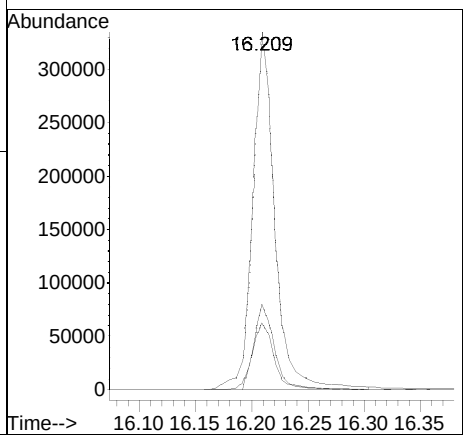


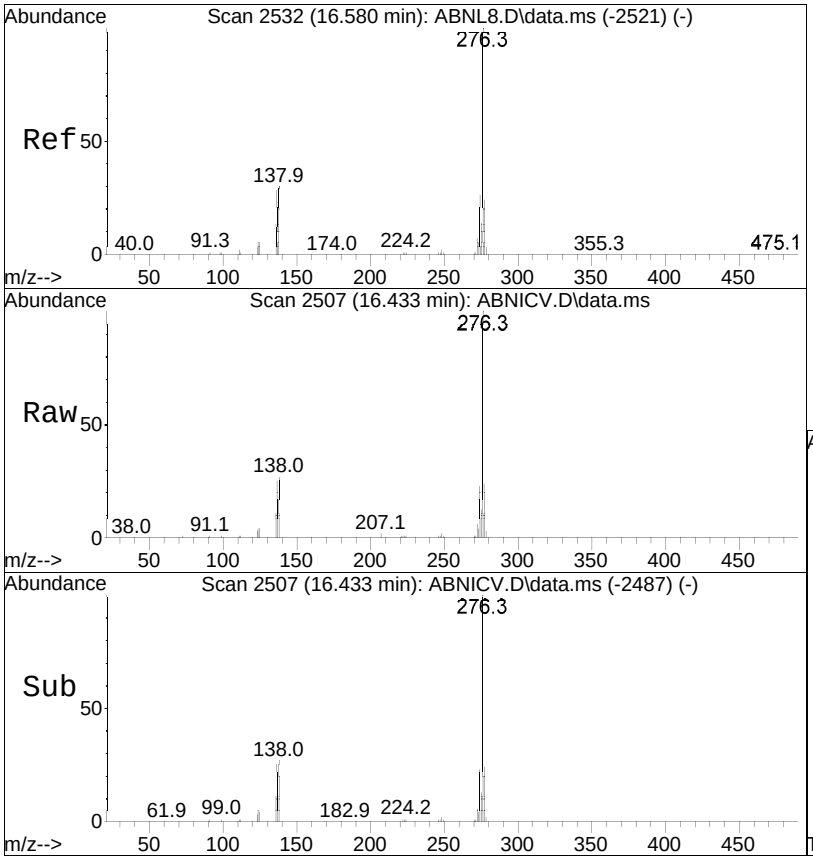


#114
Dibenzo(a,h)anthracene
Concen: 5.28 ug/ml
RT: 16.209 min Scan# 2469
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:278 Resp: 455073

Ion	Ratio	Lower	Upper
278	100		
139	18.5	20.8	31.2#
279	23.3	18.3	27.5

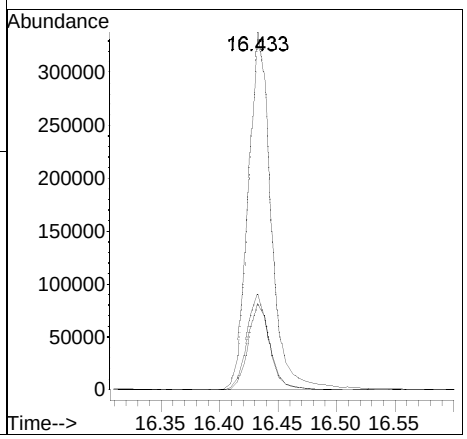




#115
Benzo(ghi)perylene
Concen: 5.28 ug/ml
RT: 16.433 min Scan# 2507
Delta R.T. -0.006 min
Lab File: ABNICV.D
Acq: 12 Feb 2024 11:48 pm

Tgt Ion:276 Resp: 456495

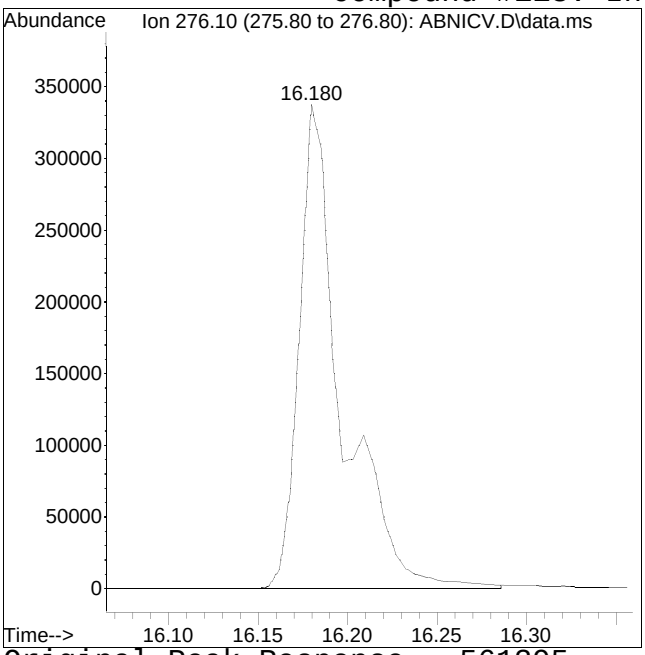
Ion	Ratio	Lower	Upper
276	100		
138	26.4	29.2	43.8#
277	23.9	18.8	28.2



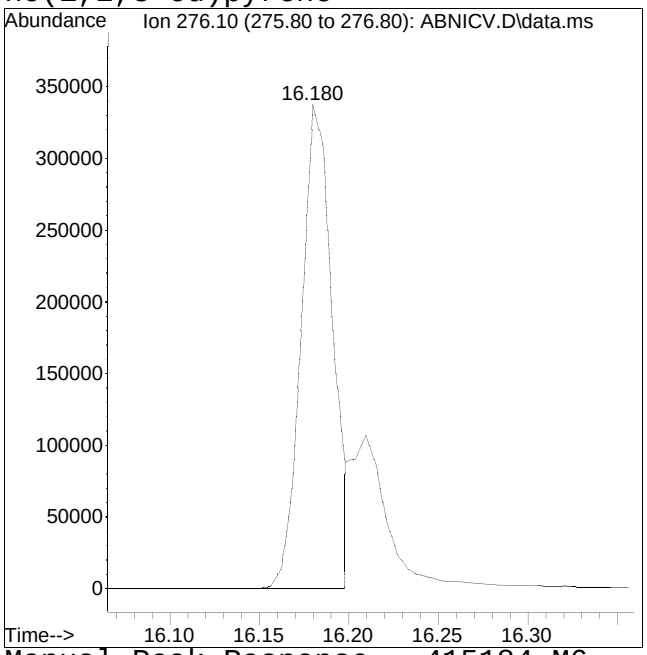
Manual Integration Report

Data Path : I:\8270\SV107\240211ical\ QMethod : FS240211SV107RVT.m
Data File : ABNICV.D Operator : SV107:mrg
Date Inj'd : 2/12/2024 11:48 pm Instrument : SV107
Sample : CQICV1,32,,ABNICV Lot# 104 Quant Date : 2/18/2024 8:27 am

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 561395



Manual Peak Response = 415184 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240211ical\
Data File : AP9ICV.D
Acq On : 13 Feb 2024 12:14 am
Operator : SV107:mrg
Sample : CQICV2,32,,AP9ICV Lot# 10508
Misc : WG1886439
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 18 08:27:27 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:03:28 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
27	I	IS2_1,4-Dichlorobenzene-d4		1.000	1.000	0.0	95	0.00
28	T	Benzaldehyde		0.987	1.072	-8.6	105	0.00
29	T	Acetophenone		1.676	1.851	-10.4	107	0.00
30	T	m-Toluidine		1.662	1.805	-8.6	104	0.00
31	T	2-Chloroaniline		1.489	1.645	-10.5	109	0.00
54	I	IS2_Naphthalene-d8		1.000	1.000	0.0	97	0.00
55	T	a-Terpineol		0.252	0.267	-6.0	103	0.00
56	T	3-Chloroaniline		0.152	0.165	-8.6	106	0.00
57	T	2,6-Dichlorophenol		0.266	0.296	-11.3	106	0.00
58	T	1-chloro-2-nitrobenzene		0.119	0.126	-5.9	104	0.00
59	T	Caprolactam	*	5.000	4.594	8.1	99	-0.01
60	T	1,2,4,5-Tetrachlorobenzene		0.402	0.408	-1.5	104	0.00
61	T	Biphenyl		0.898	0.930	-3.6	105	0.00
82	I	IS2_Acenaphthene-d10		1.000	1.000	0.0	97	0.00
83	T	Dichloran	*	5.000	4.744	5.1	105	0.00
84	T	Pentachloronitrobenzene	*	5.000	4.745	5.1	104	0.00
97	I	IS2_Phenanthrene-d10		1.000	1.000	0.0	94	0.00
98	T	Diphenamid		0.370	0.402	-8.6	101	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9ICV.D
Acq On : 13 Feb 2024 12:14 am
Operator : SV107:mrg
Sample : CQICV2,32,,AP9ICV Lot# 10508
Misc : WG1886439
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 18 05:53:22 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Feb 13 09:47:34 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
27) IS2_1,4-Dichlorobenzen...	6.469	152	88395	4.000	ug/ml	0.00
Standard Area 3 = 93077			Recovery = 94.97%			
54) IS2_Naphthalene-d8	7.886	136	327736	4.000	ug/ml	0.00
Standard Area 3 = 336846			Recovery = 97.30%			
82) IS2_Acenaphthene-d10	9.651	164	191499	4.000	ug/ml	0.00
Standard Area 3 = 198075			Recovery = 96.68%			
97) IS2_Phenanthrene-d10	11.092	188	394115	4.000	ug/ml #	0.00
Standard Area 3 = 418394			Recovery = 94.20%			
System Monitoring Compounds						
Target Compounds						Qvalue
28) Benzaldehyde	5.892	105	118423	5.427	ug/ml	99
29) Acetophenone	6.963	105	204469	5.521	ug/ml#	80
30) m-Toluidine	7.063	106	199391	5.429	ug/ml	95
31) 2-Chloroaniline	7.463	127	181807	5.525	ug/ml	95
55) a-Terpineol	7.963	59	109246	5.296	ug/ml#	76
56) 3-Chloroaniline	7.975	65	67537	5.436	ug/ml	82
57) 2,6-Dichlorophenol	7.998	162	121078	5.558	ug/ml	95
58) 1-chloro-2-nitrobenzene	8.269	111	51733	5.322	ug/ml#	1
59) Caprolactam	8.304	55	51574	4.594	ug/ml#	67
60) 1,2,4,5-Tetrachloroben...	8.798	216	167194	5.082	ug/ml	98
61) Biphenyl	9.104	154	380898	5.176	ug/ml	99
83) Dichloran	10.786	206	28524	4.744	ug/ml#	74
84) Pentachloronitrobenzene	10.933	237	33295	4.745	ug/ml#	84
98) Diphenamid	12.004	167	198213	5.121	ug/ml	84

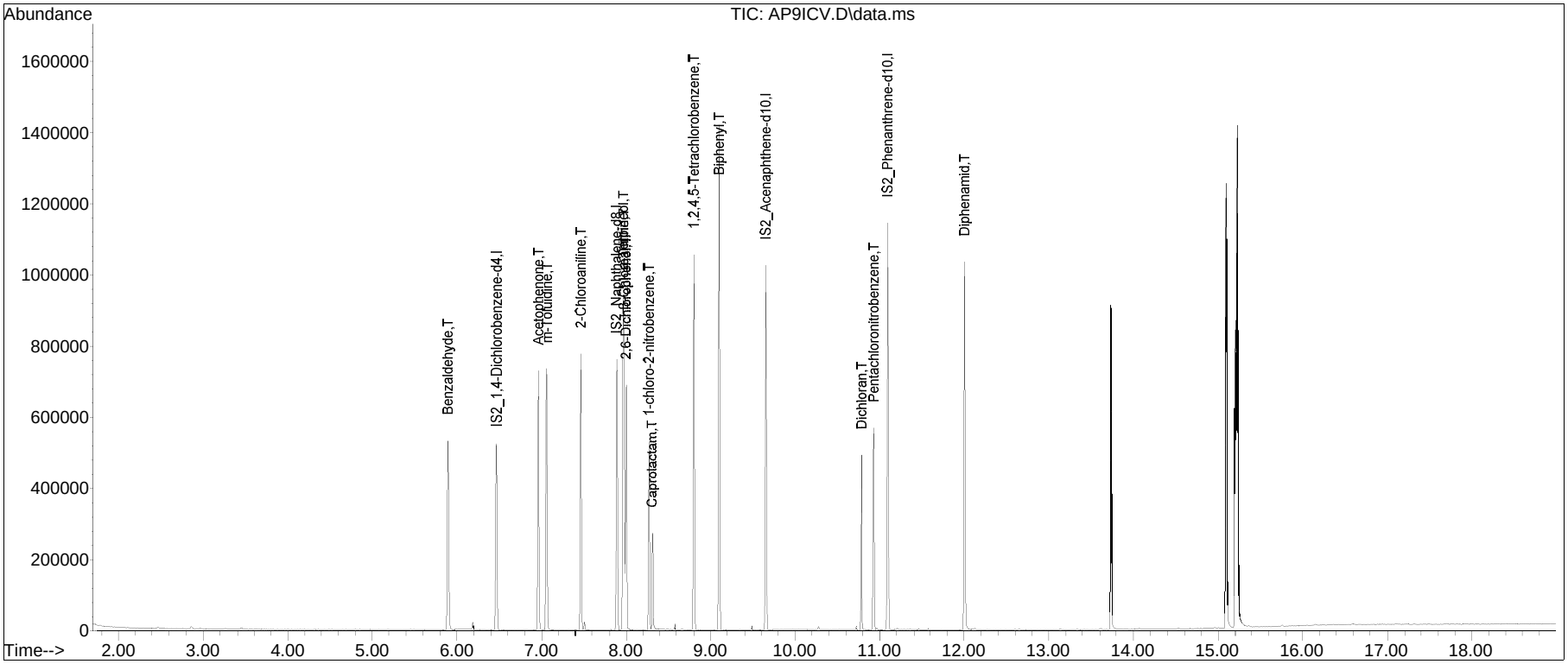
(#) = qualifier out of range (m) = manual integration (+) = signals summed

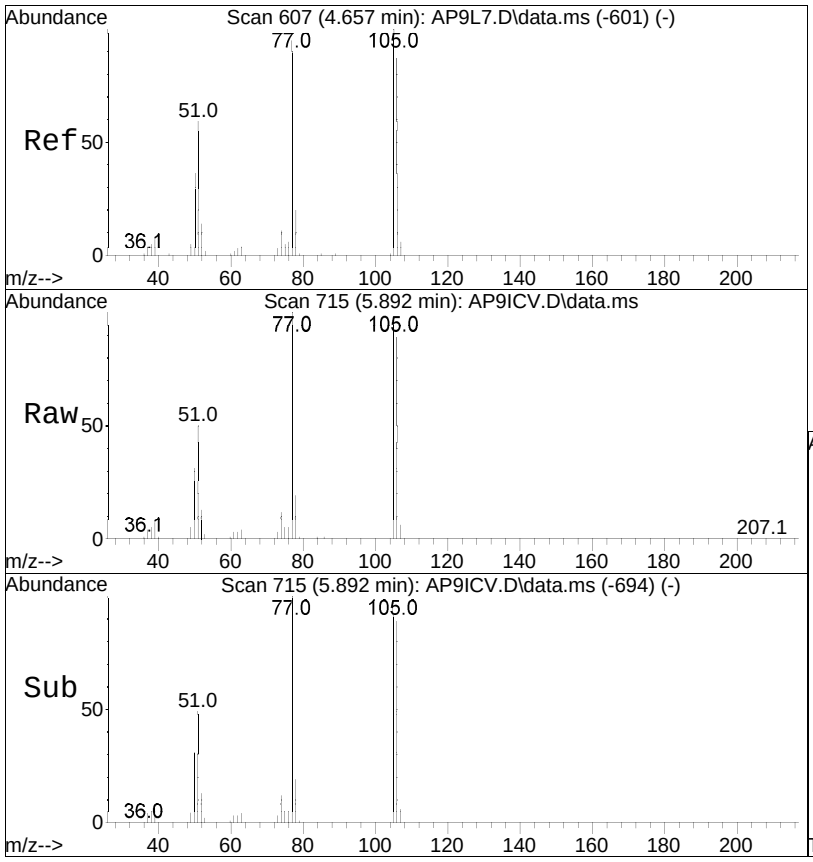
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : AP9ICV.D
Acq On : 13 Feb 2024 12:14 am
Operator : SV107:mrg
Sample : CQICV2,32,,AP9ICV Lot# 10508
Misc : WG1886439
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 18 05:53:22 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Feb 13 09:47:34 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublistal\AP9L6.D•

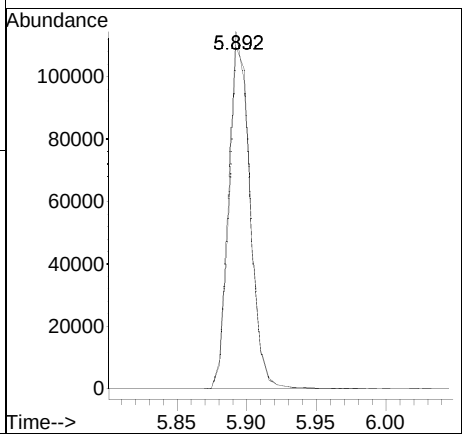


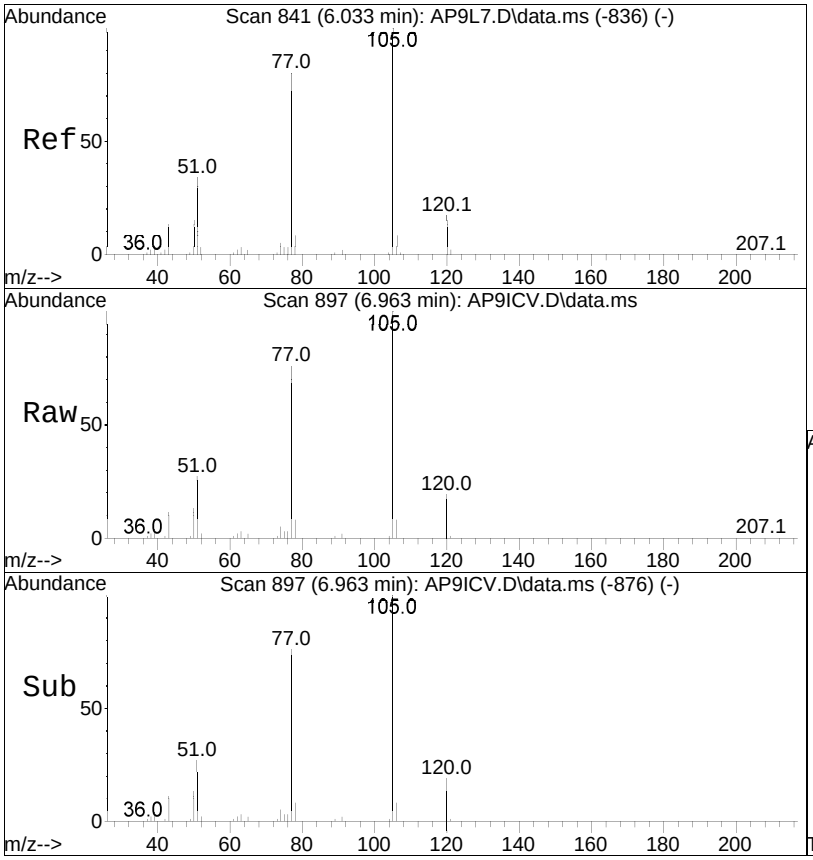


#28
Benzaldehyde
Concen: 5.43 ug/ml
RT: 5.892 min Scan# 715
Delta R.T. -0.001 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:105 Resp: 118423

Ion	Ratio	Lower	Upper
105	100		
77	101.6	82.2	123.4

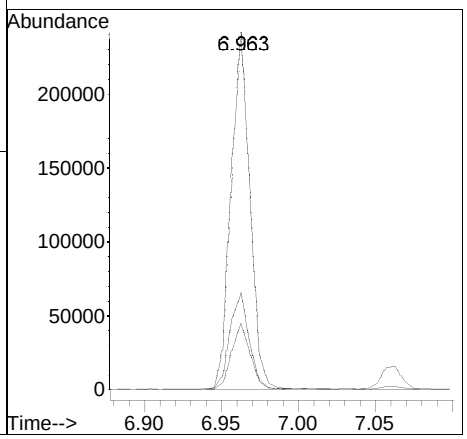


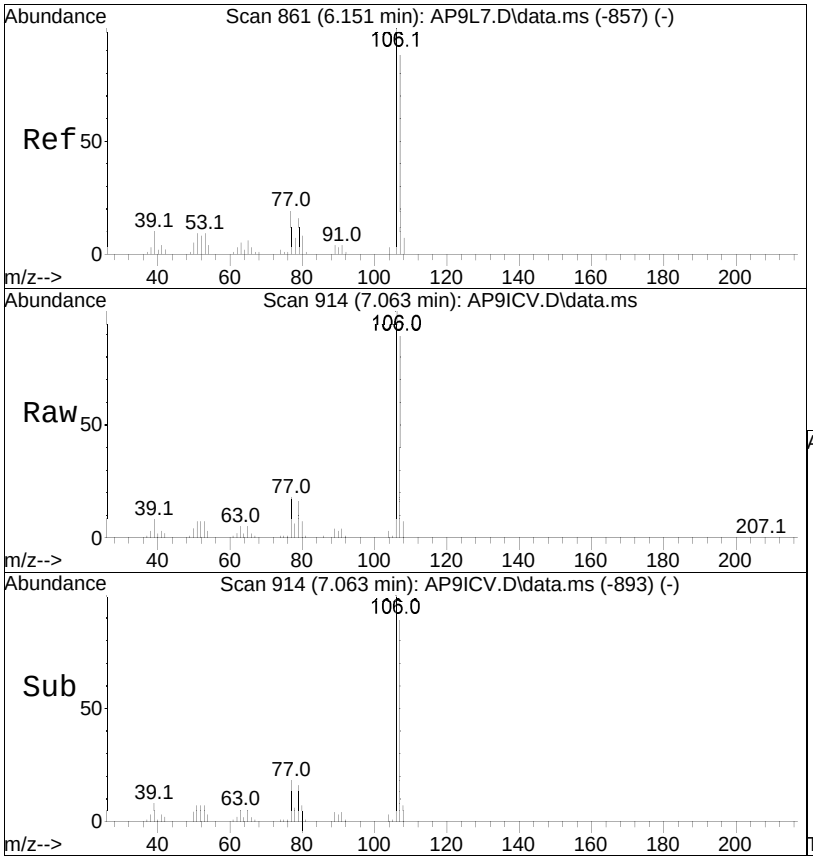


#29
Acetophenone
Concen: 5.52 ug/ml
RT: 6.963 min Scan# 897
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:105 Resp: 204469

Ion	Ratio	Lower	Upper
105	100		
120	18.5	20.5	30.7#
51	28.4	34.9	52.3#

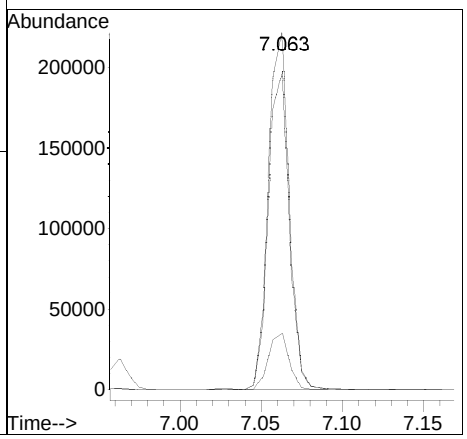


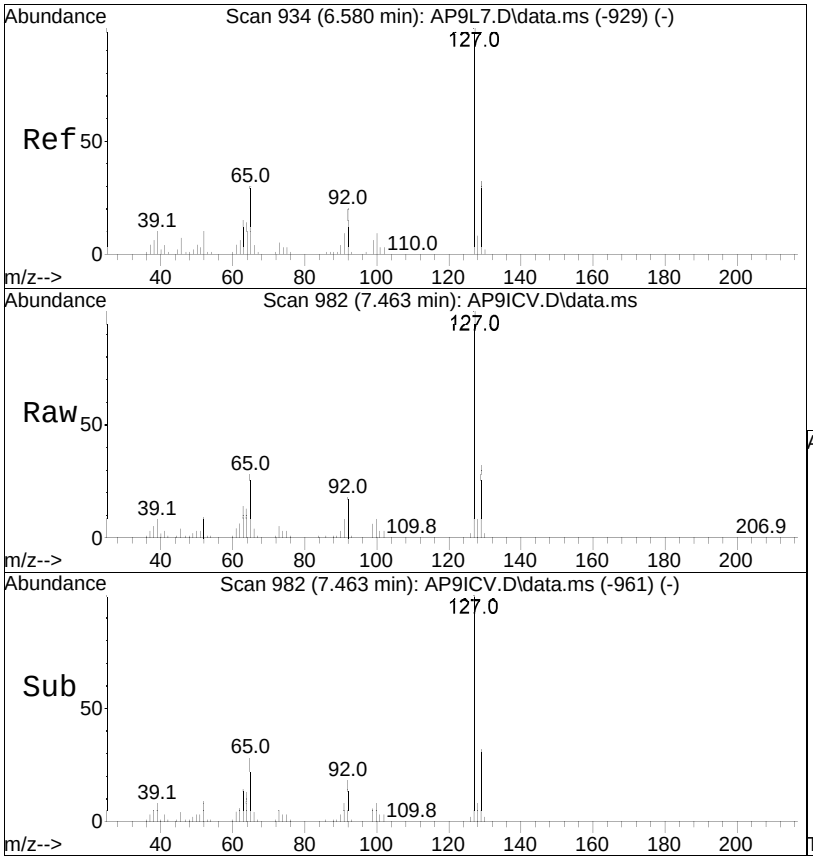


#30
m-Toluidine
Concen: 5.43 ug/ml
RT: 7.063 min Scan# 914
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:106 Resp: 199391

Ion	Ratio	Lower	Upper
106	100		
107	89.3	75.7	113.5
79	15.6	11.8	17.8

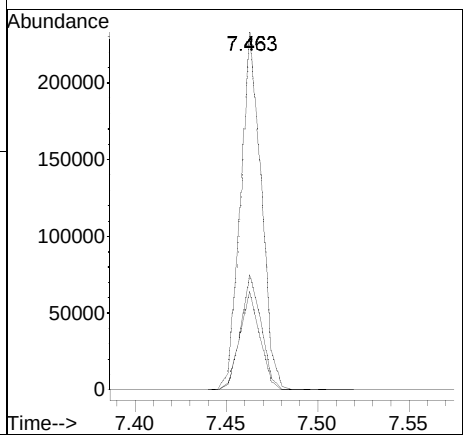


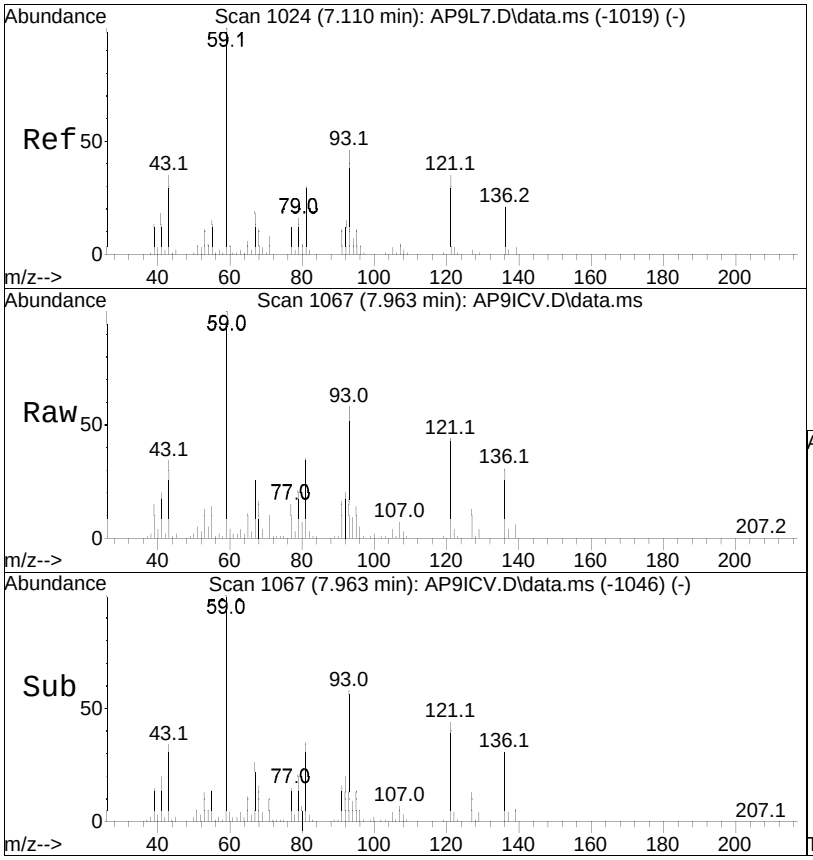


#31
2-Chloroaniline
Concen: 5.53 ug/ml
RT: 7.463 min Scan# 982
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:127 Resp: 181807

Ion	Ratio	Lower	Upper
127	100		
129	32.2	25.9	38.9
65	27.2	26.3	39.5

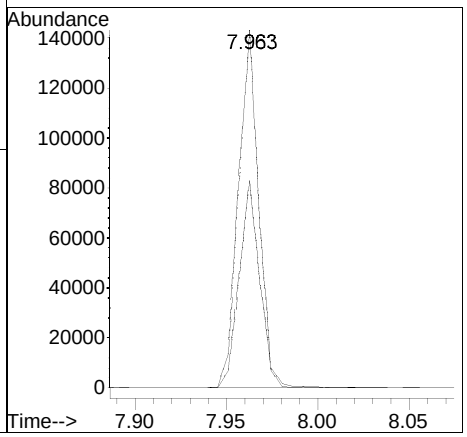


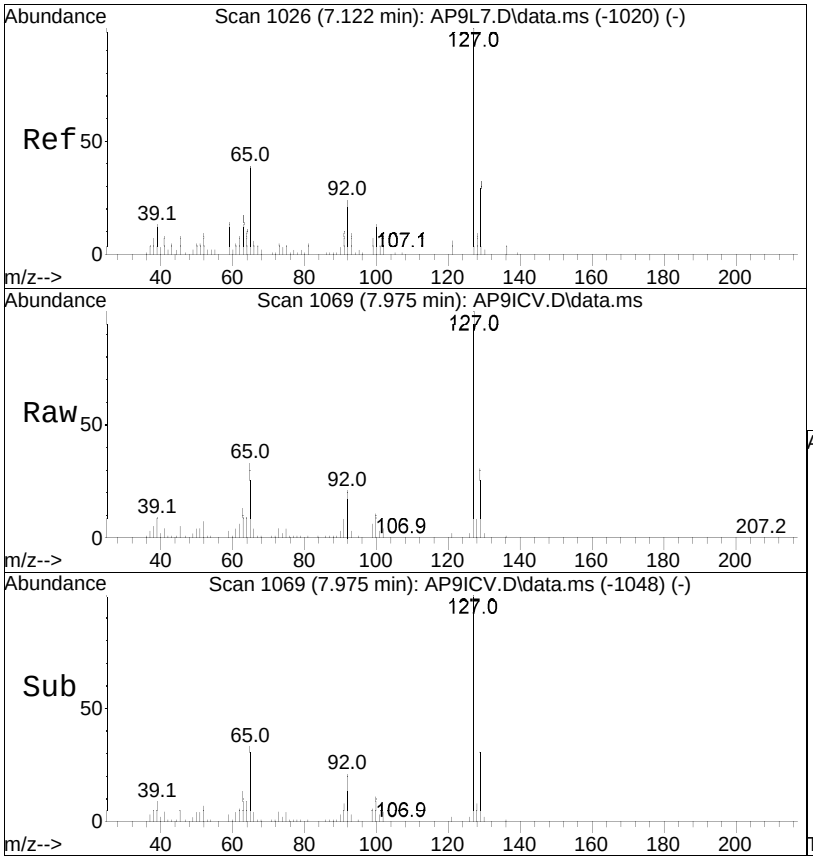


#55
a-Terpineol
Concen: 5.30 ug/ml
RT: 7.963 min Scan# 1067
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion: 59 Resp: 109246

Ion	Ratio	Lower	Upper
59	100		
93	60.4	35.6	53.4#

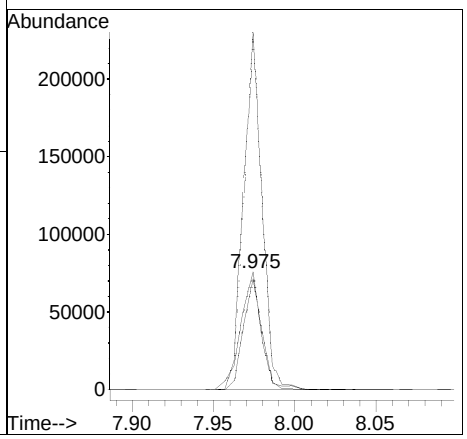


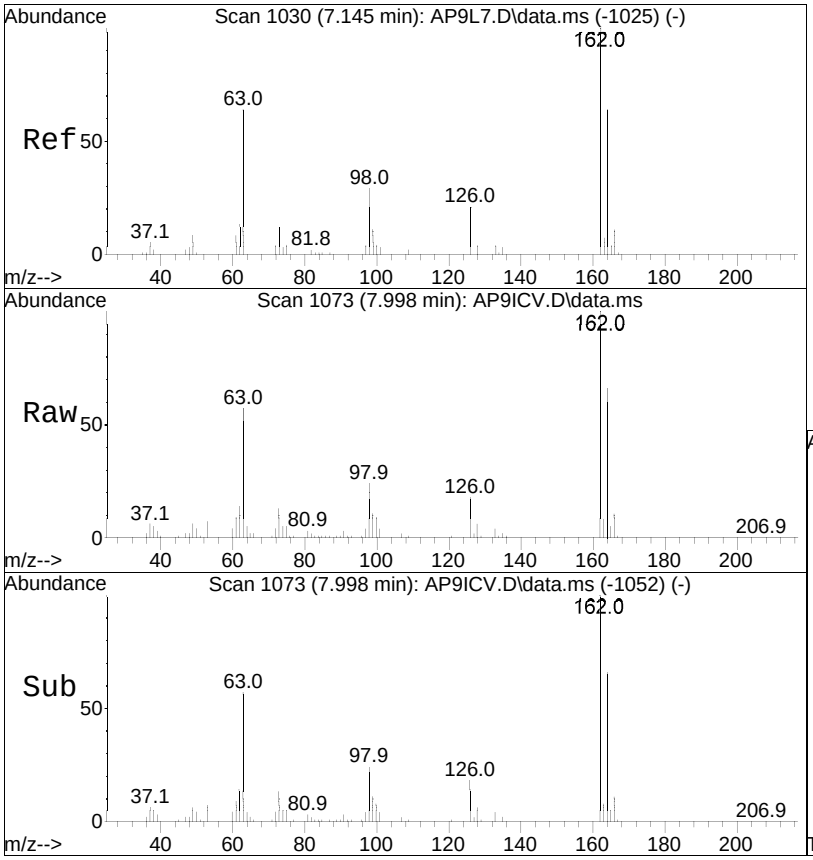


#56
3-Chloroaniline
Concen: 5.44 ug/ml
RT: 7.975 min Scan# 1069
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion: 65 Resp: 67537

Ion	Ratio	Lower	Upper
65	100		
127	266.8	243.2	364.8
129	84.2	78.8	118.2

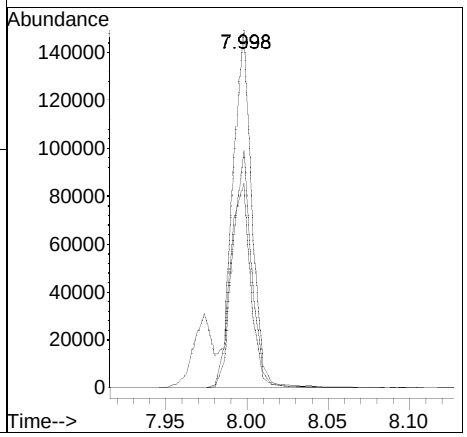


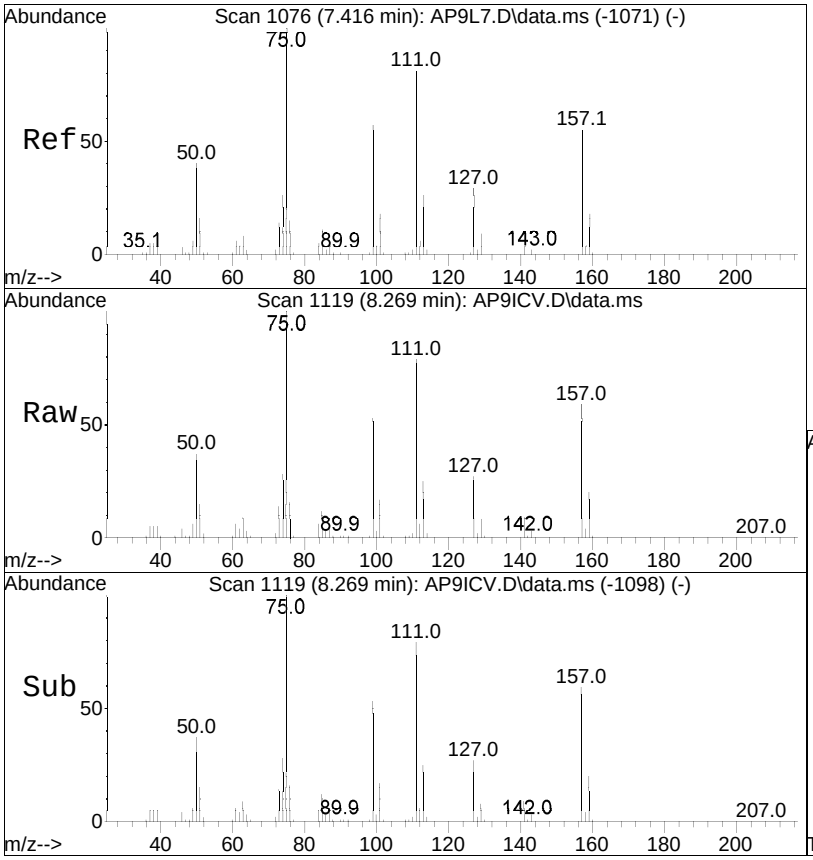


#57
2,6-Dichlorophenol
Concen: 5.56 ug/ml
RT: 7.998 min Scan# 1073
Delta R.T. 0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:162 Resp: 121078

Ion	Ratio	Lower	Upper
162	100		
164	65.1	51.1	76.7
63	82.4	60.8	91.2

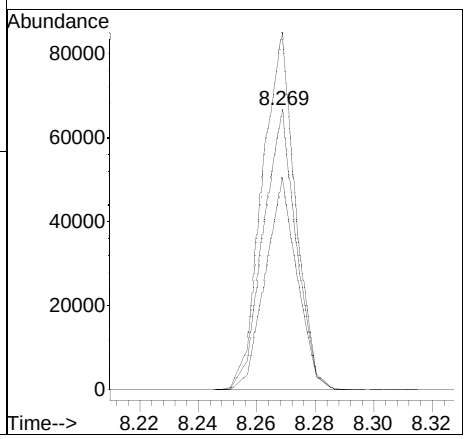


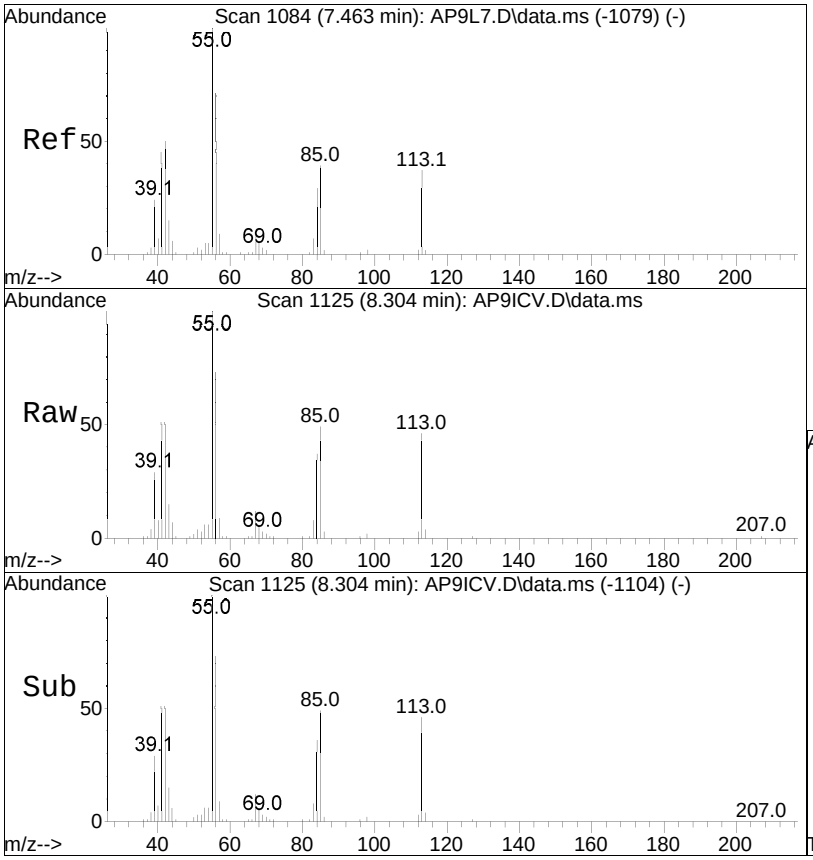


#58
1-chloro-2-nitrobenzene
Concen: 5.32 ug/ml
RT: 8.269 min Scan# 1119
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:111 Resp: 51733

Ion	Ratio	Lower	Upper
111	100		
157	73.6	0.0	0.0#
75	129.1	28.2	42.2#

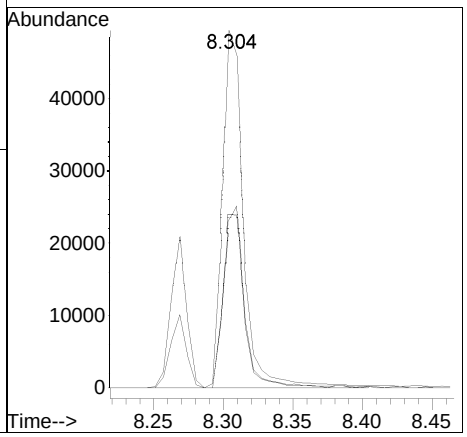


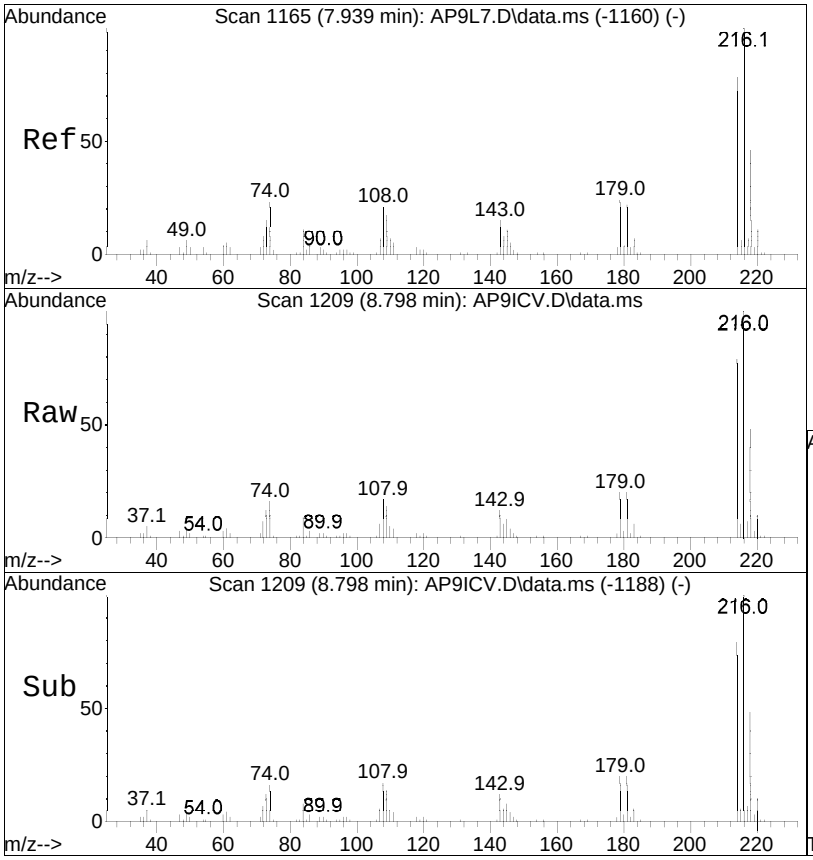


#59
Caprolactam
Concen: 4.59 ug/ml
RT: 8.304 min Scan# 1125
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion: 55 Resp: 51574

Ion	Ratio	Lower	Upper
55	100		
85	49.7	19.8	29.6#
113	50.3	29.6	44.4#

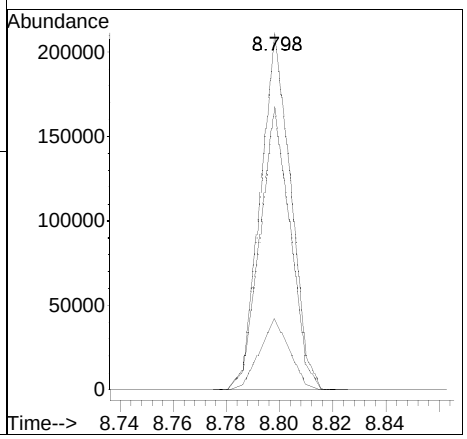


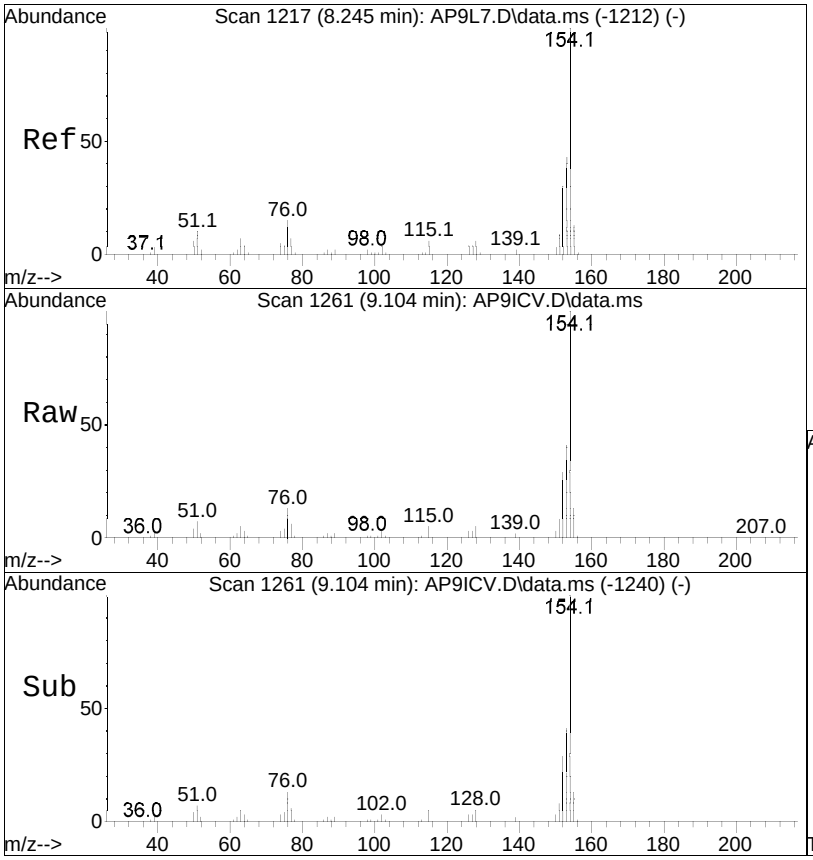


#60
1,2,4,5-Tetrachlorobenzene
Concen: 5.08 ug/ml
RT: 8.798 min Scan# 1209
Delta R.T. 0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:216 Resp: 167194

Ion	Ratio	Lower	Upper
216	100		
214	79.1	63.7	95.5
179	19.8	19.0	28.6

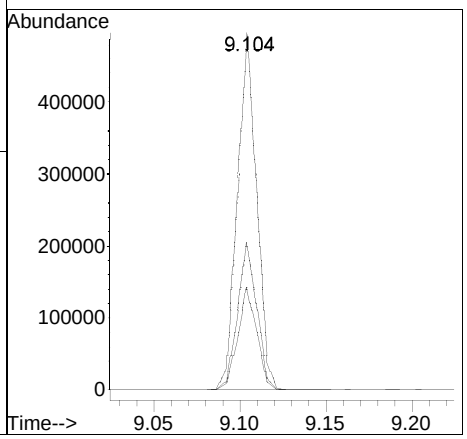


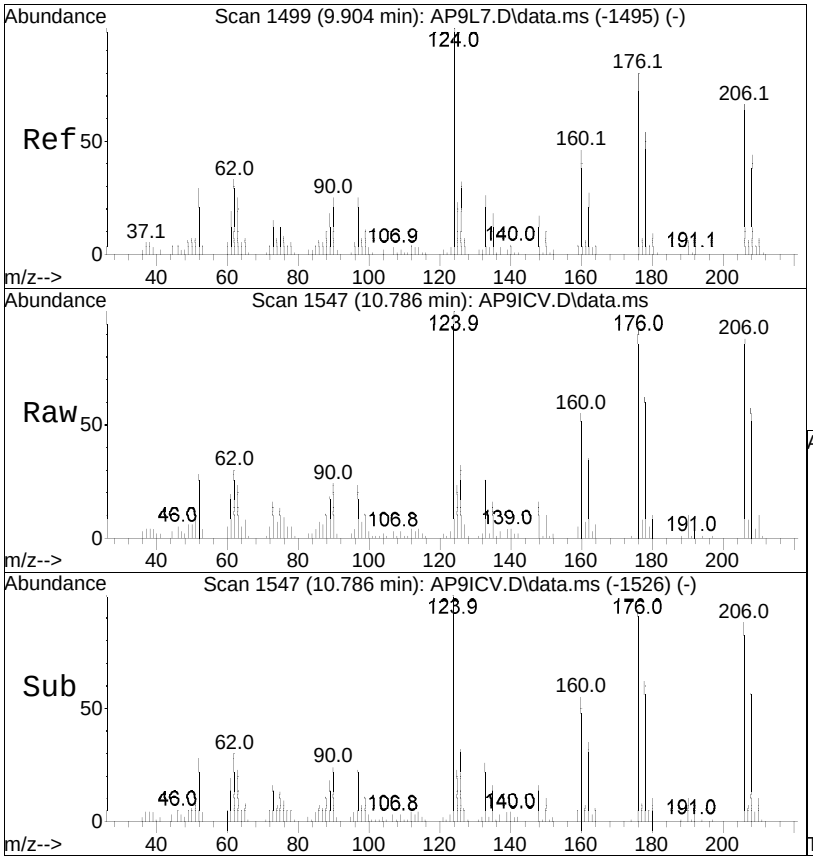


#61
Biphenyl
Concen: 5.18 ug/ml
RT: 9.104 min Scan# 1261
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:154 Resp: 380898

Ion	Ratio	Lower	Upper
154	100		
153	41.4	32.3	48.5
152	28.7	22.5	33.7

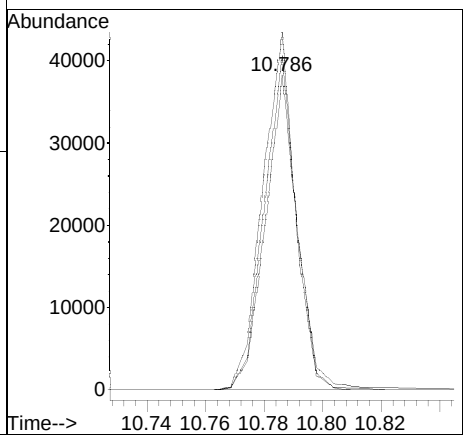


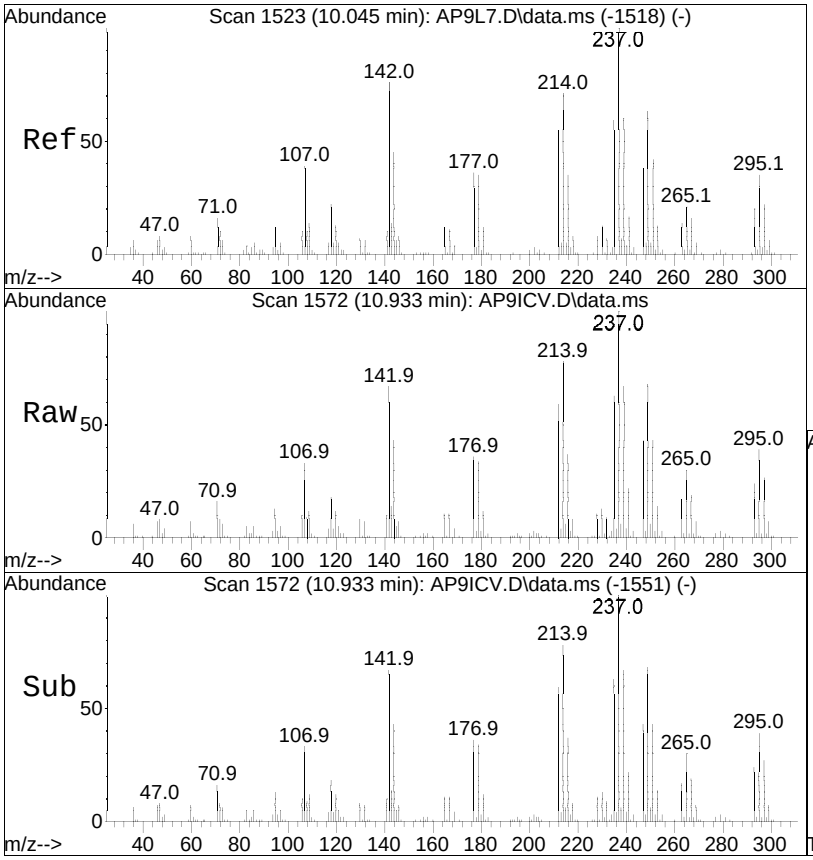


#83
Dichloran
Concen: 4.74 ug/ml
RT: 10.786 min Scan# 1547
Delta R.T. 0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:206 Resp: 28524

Ion	Ratio	Lower	Upper
206	100		
176	112.2	104.6	157.0
124	116.8	130.5	195.7#

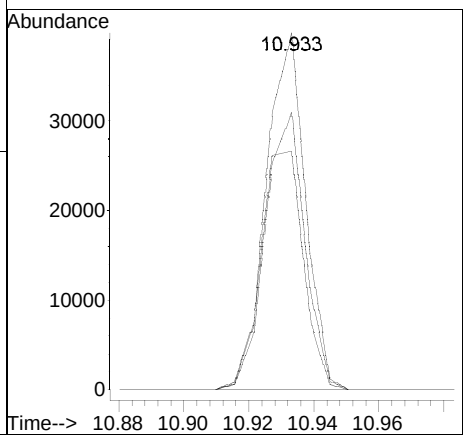


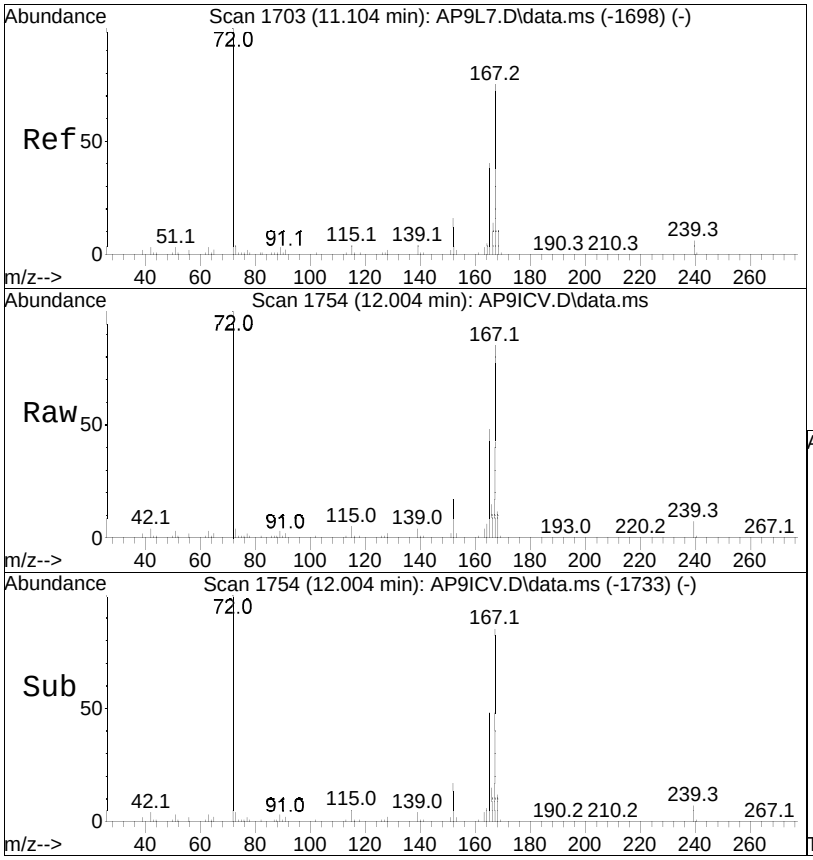


#84
Pentachloronitrobenzene
Concen: 4.74 ug/ml
RT: 10.933 min Scan# 1572
Delta R.T. 0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:237 Resp: 33295

Ion	Ratio	Lower	Upper
237	100		
142	73.3	77.0	115.4#
214	78.8	58.2	87.4

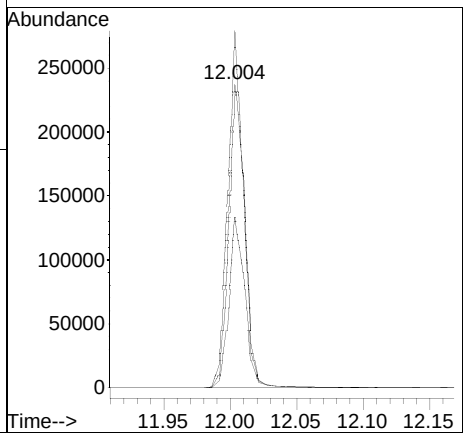




#98
Diphenamid
Concen: 5.12 ug/ml
RT: 12.004 min Scan# 1754
Delta R.T. -0.000 min
Lab File: AP9ICV.D
Acq: 13 Feb 2024 12:14 am

Tgt Ion:167 Resp: 198213

Ion	Ratio	Lower	Upper
167	100		
72	113.4	109.7	164.5
165	56.4	41.8	62.6



Manual Integration Report

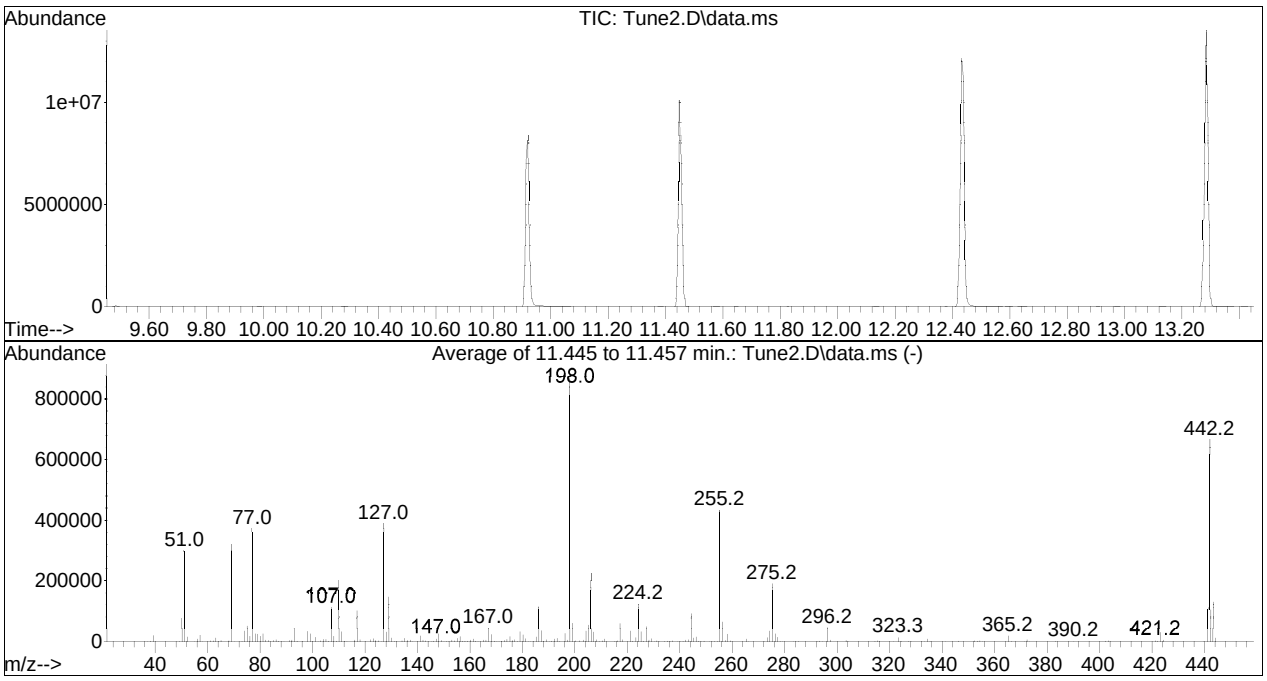
Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: AP9ICV.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 12:14 am	Instrument	: SV107
Sample	: CQICV2,32,,AP9ICV Lot# 105	Quant Date	: 2/18/2024 5:53 am

There are no manual integrations or false positives in this file.

Data Path : I:\8270\SV107\240211ical\
Data File : Tune2.D
Acq On : 13 Feb 2024 12:40 am
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Tue Feb 13 09:47:34 2024



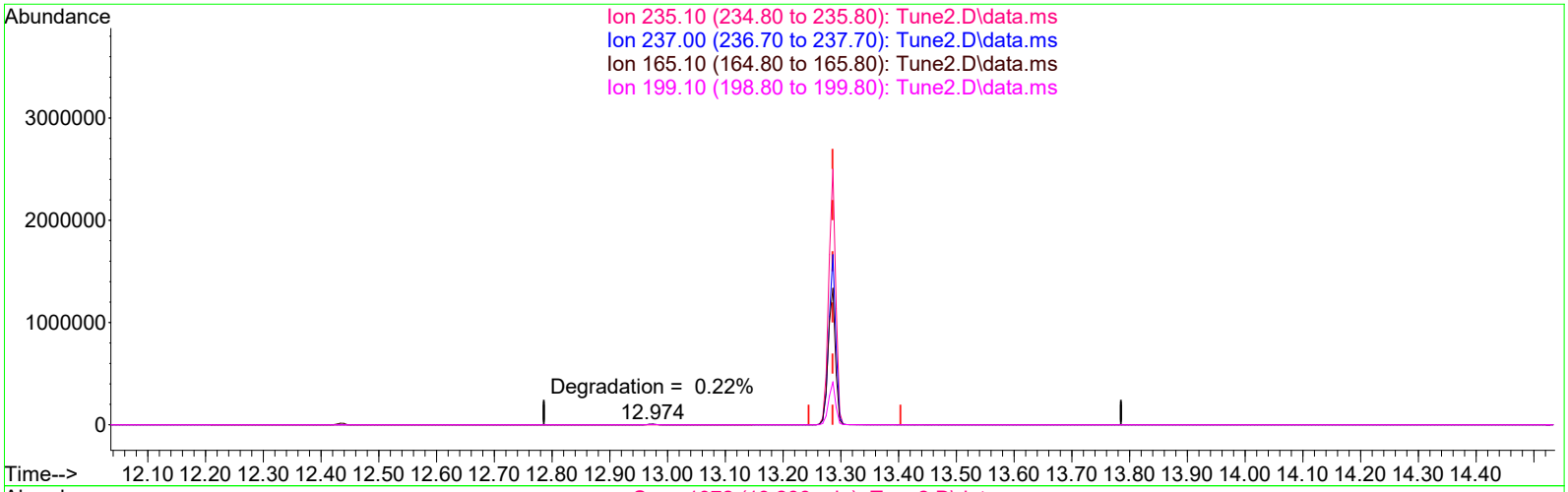
Spectrum Information: Average of 11.445 to 11.457 min.

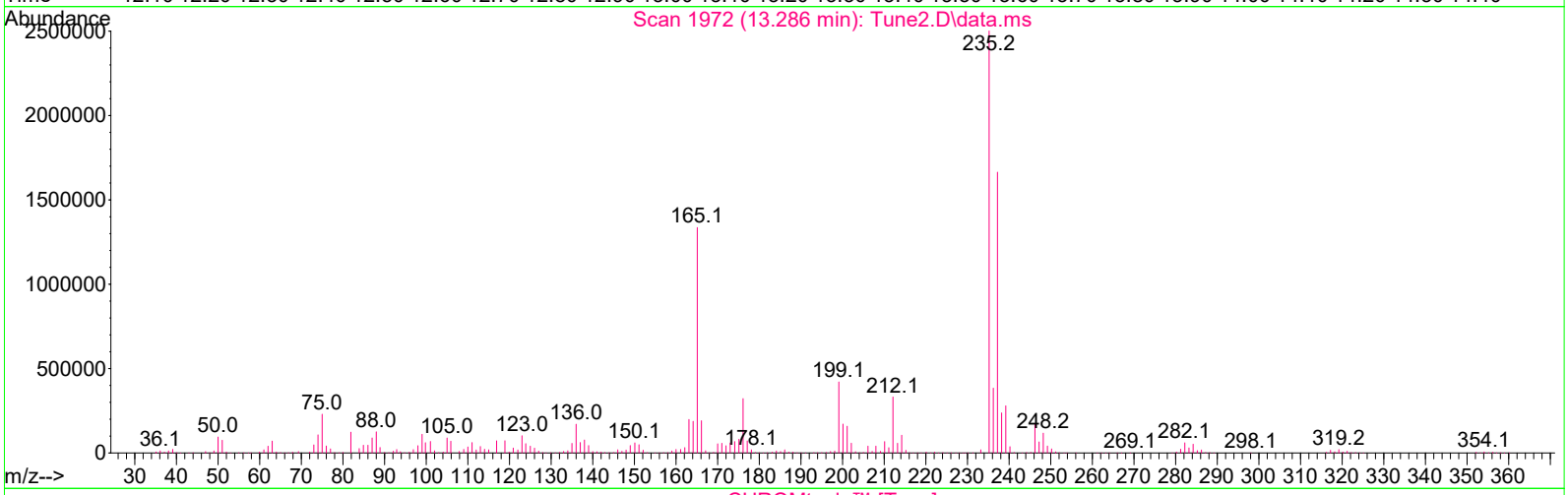
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.3	298795	PASS
68	69	0.00	2	1.5	4848	PASS
69	69	100	100	100.0	318144	PASS
70	69	0.00	2	0.5	1487	PASS
127	198	10	80	44.5	387520	PASS
197	198	0.00	2	0.7	6096	PASS
198	198	100	100	100.0	870421	PASS
199	198	5	9	6.8	59365	PASS
275	198	10	60	21.7	189163	PASS
365	198	1	100	2.1	18504	PASS
441	442	0.01	24	16.6	110413	PASS
442	198	50	100	76.6	666389	PASS
443	442	15	24	19.7	131016	PASS

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240211ical\
Data File : Tune2.D
Acq On : 13 Feb 2024 12:40 am
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Feb 17 19:25:21 2024
Quant Method : I:\8270\SV107\240211ical\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sat Feb 10 10:31:24 2024
Response via : Initial Calibration





CHROMtools™ [Tune]

(6) DDT (T)

13.286min (+ 0.000) 347.12

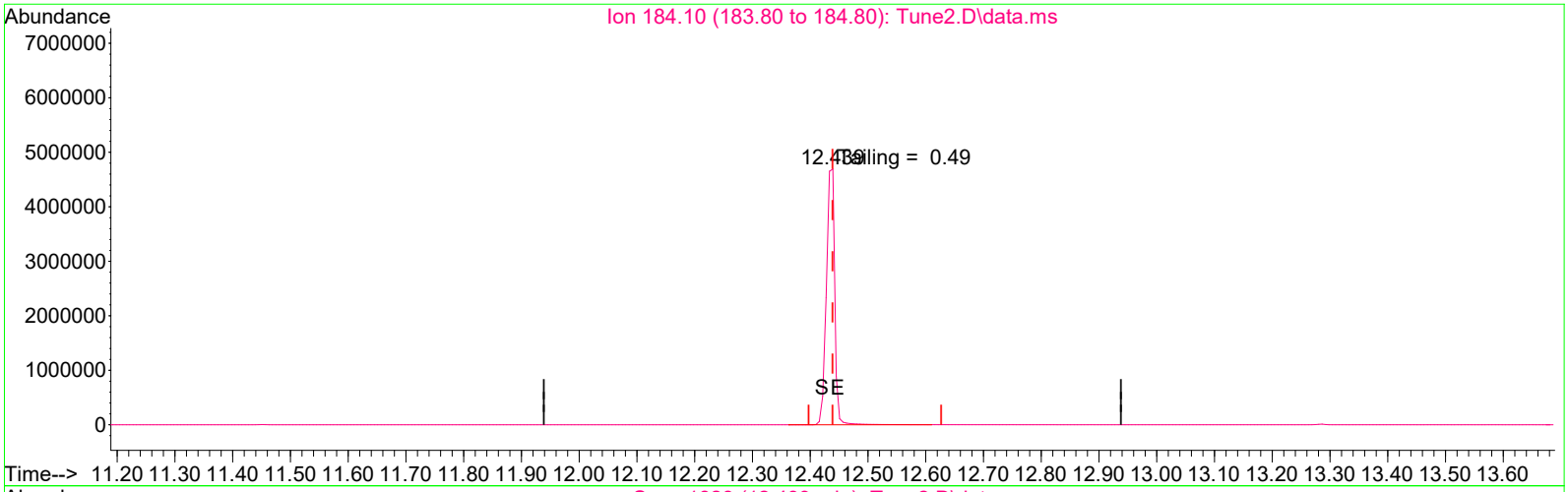
response 2115929

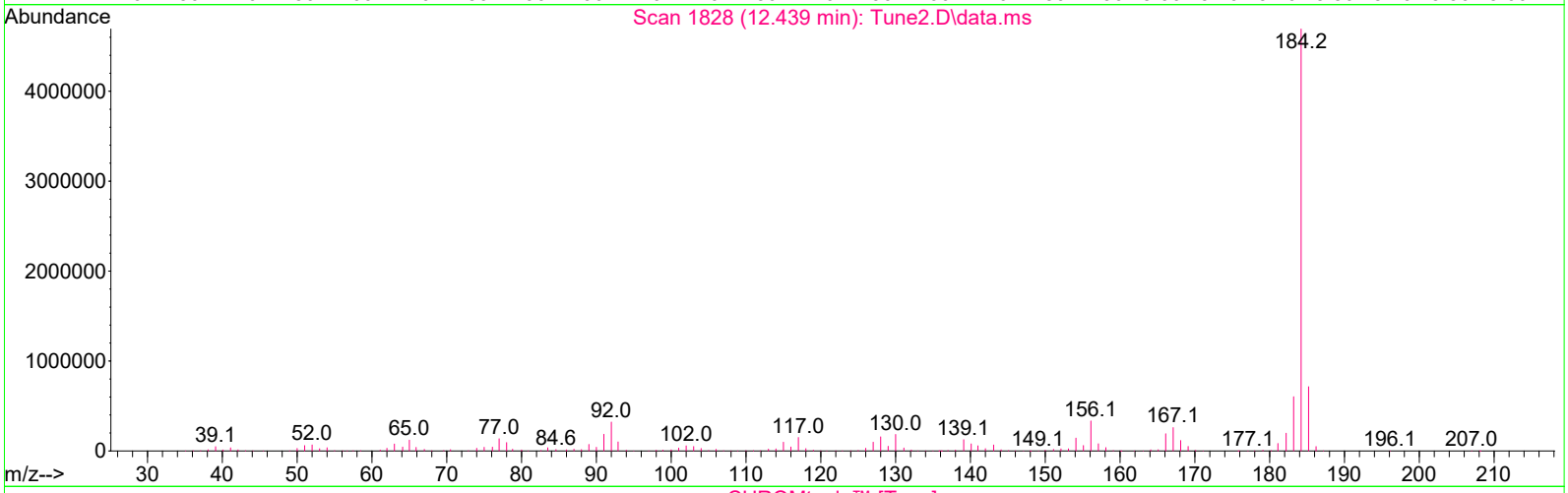
Ion	Exp%	Act%
235.10	100.00	100.00
237.00	63.80	64.92
165.10	51.00	54.46
199.10	15.70	16.57

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240211ical\
Data File : Tune2.D
Acq On : 13 Feb 2024 12:40 am
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Feb 17 19:25:21 2024
Quant Method : I:\8270\SV107\240211ical\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sat Feb 10 10:31:24 2024
Response via : Initial Calibration





CHROMtools™ [Tune]

(3) Benzidine (T)

12.439min (+ 0.000) 468.22

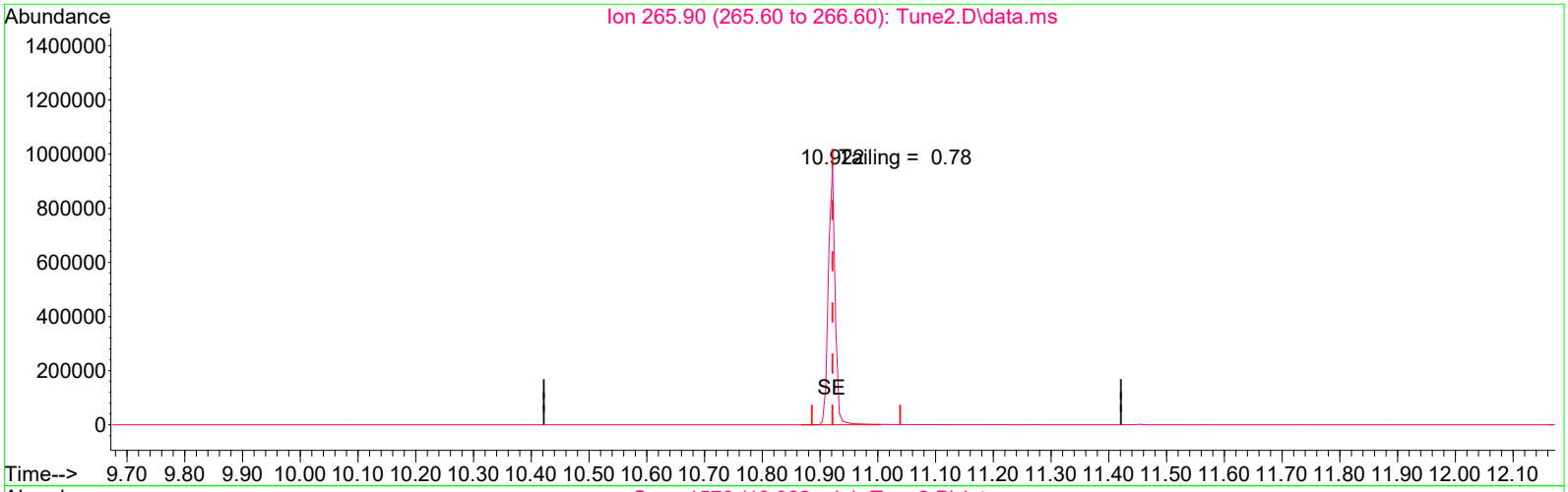
response 4766549

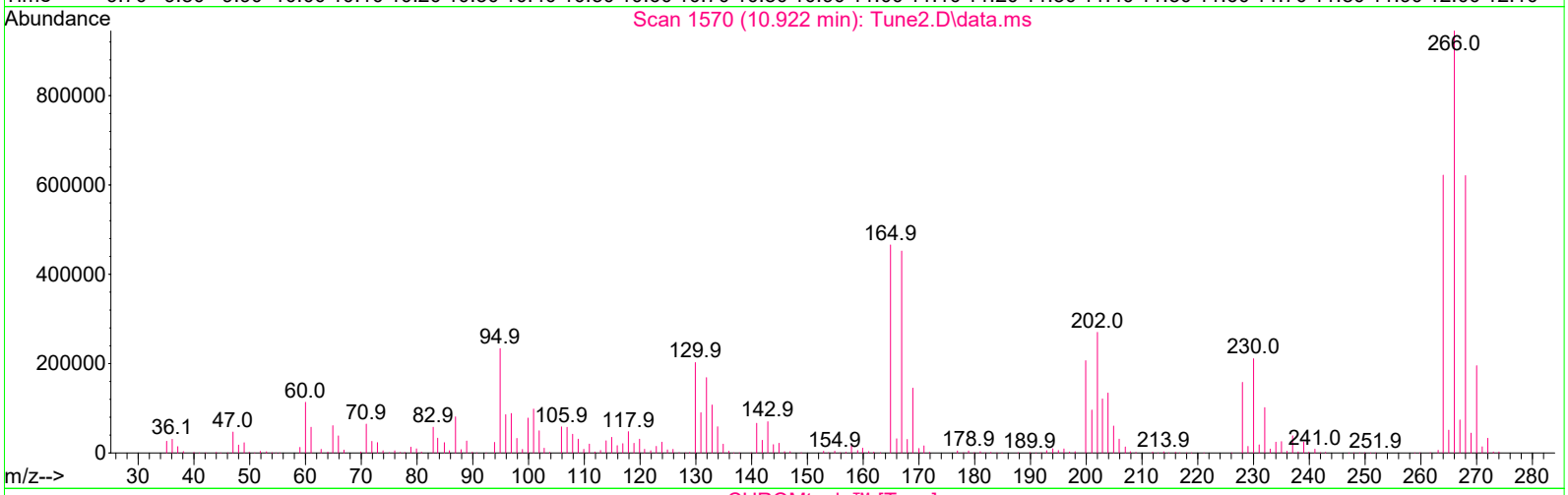
Ion	Exp%	Act%
184.10	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240211ical\
Data File : Tune2.D
Acq On : 13 Feb 2024 12:40 am
Operator : SV107:mrg
Sample : Tune
Misc : WG1886439
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Feb 17 19:25:21 2024
Quant Method : I:\8270\SV107\240211ical\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sat Feb 10 10:31:24 2024
Response via : Initial Calibration





CHROMtools™ [Tune]

(1) Pentachlorophenol (T)

10.922min (-0.000) 372.79

response 782993

Ion	Exp%	Act%
265.90	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL9.D
Acq On : 13 Feb 2024 1:06 am
Operator : SV107:mrg
Sample : IL1,32,,ADPL50 Lot# 10509
Misc : WG1886439
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 18 07:24:22 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	102680	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery =	98.72%		
85) IS3_Acenaphthene-d10	9.651	164	233839	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery =	101.99%		
99) IS3_Phenanthrene-d10	11.092	188	537130	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery =	99.42%		
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	1833067	48.868	ug/ml#	48
86) Atrazine	10.880	200	1212726	49.593	ug/ml	96
100) n-Octadecane	11.080	57	2759855	55.805	ug/ml#	1
101) Parathion	11.892	109	753374	49.554	ug/ml	96
102) 3,3'-Dimethylbenzidine	13.180	212	4956486	49.361	ug/ml	96

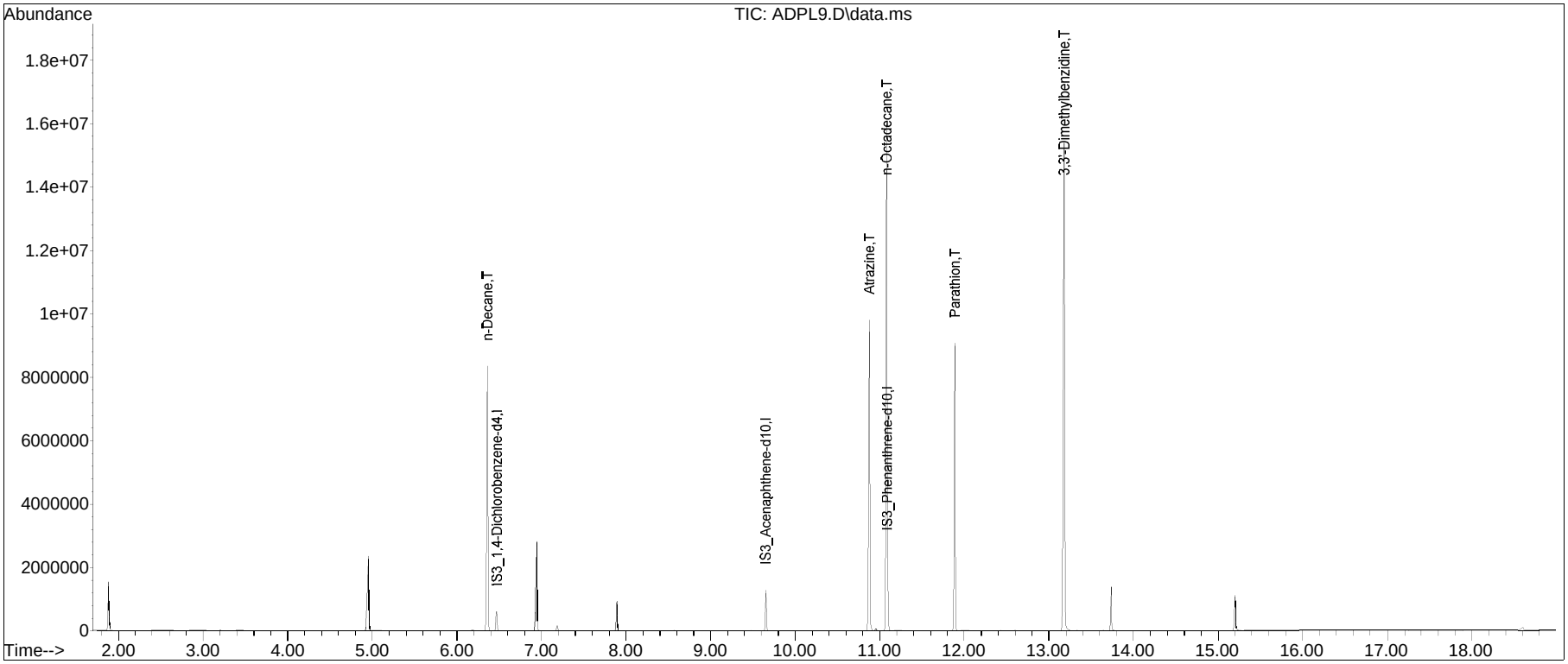
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL9.D
Acq On : 13 Feb 2024 1:06 am
Operator : SV107:mrg
Sample : IL1,32,,ADPL50 Lot# 10509
Misc : WG1886439
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 18 07:24:22 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL9.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 1:06 am	Instrument	: SV107
Sample	: IL1,32,,ADPL50 Lot# 10509	Quant Date	: 2/18/2024 7:24 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL8.D
Acq On : 13 Feb 2024 1:32 am
Operator : SV107:mrg
Sample : IL3,32,,ADPL25 Lot# 10510
Misc : WG1886439
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 18 07:24:07 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	102146	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery =	98.20%		
85) IS3_Acenaphthene-d10	9.651	164	226017	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery =	98.58%		
99) IS3_Phenanthrene-d10	11.092	188	516526	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery =	95.61%		
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	911794	24.435	ug/ml#	47
86) Atrazine	10.875	200	563222	26.007	ug/ml	96
100) n-Octadecane	11.080	57	1381335	29.045	ug/ml#	1
101) Parathion	11.886	109	319990	26.413	ug/ml	96
102) 3,3'-Dimethylbenzidine	13.174	212	2467634	26.656	ug/ml	97

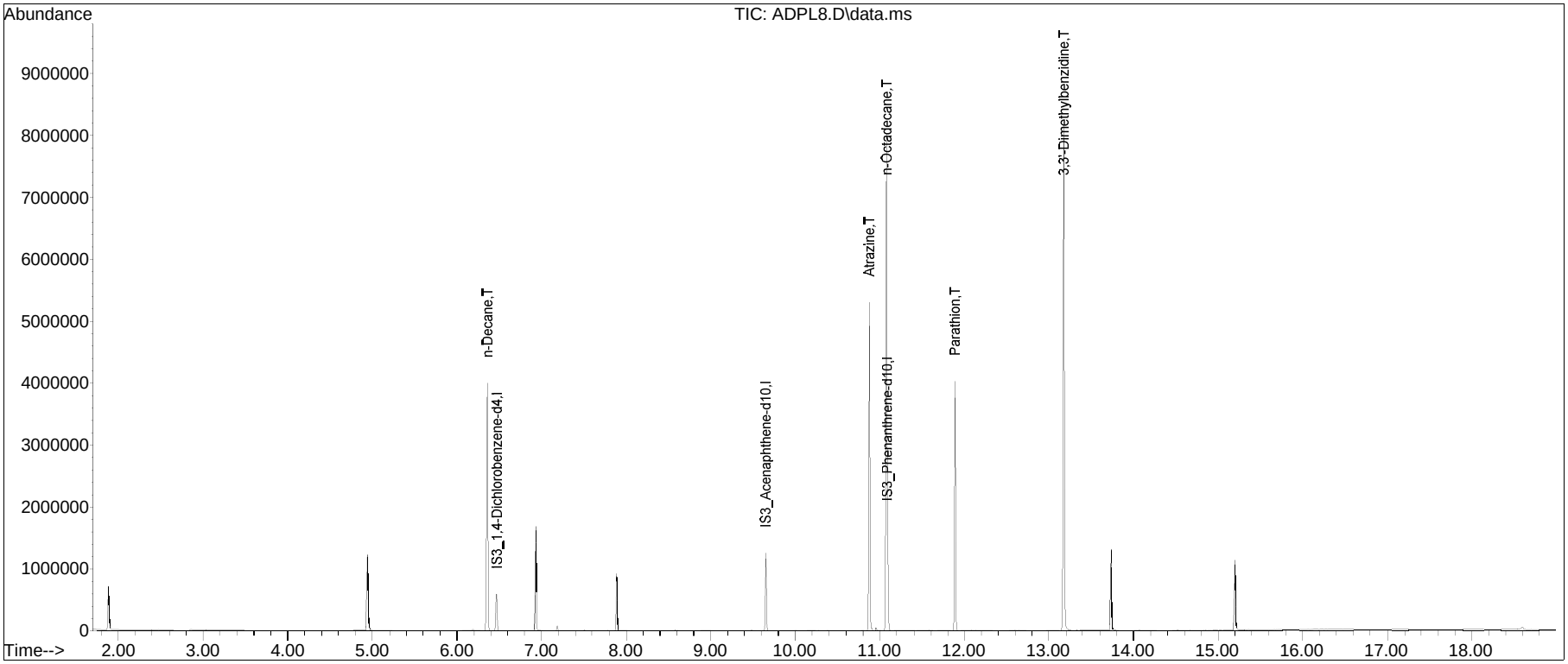
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL8.D
Acq On : 13 Feb 2024 1:32 am
Operator : SV107:mrg
Sample : IL3,32,,ADPL25 Lot# 10510
Misc : WG1886439
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 18 07:24:07 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL8.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 1:32 am	Instrument	: SV107
Sample	: IL3,32,,ADPL25 Lot# 10510	Quant Date	: 2/18/2024 7:24 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL7.D
Acq On : 13 Feb 2024 1:58 am
Operator : SV107:mrg
Sample : IL4,32,,ADPL10 Lot# 10511
Misc : WG1886439
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 18 07:23:53 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.463	152	111092	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery = 106.80%			
85) IS3_Acenaphthene-d10	9.651	164	244597	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery = 106.68%			
99) IS3_Phenanthrene-d10	11.092	188	571984	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery = 105.88%			
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	391790	9.654	ug/ml#	47
86) Atrazine	10.869	200	220002	10.064	ug/ml	96
100) n-Octadecane	11.081	57	588158	11.168	ug/ml#	1
101) Parathion	11.886	109	106278	9.659	ug/ml	96
102) 3,3'-Dimethylbenzidine	13.174	212	925702	9.725	ug/ml	98

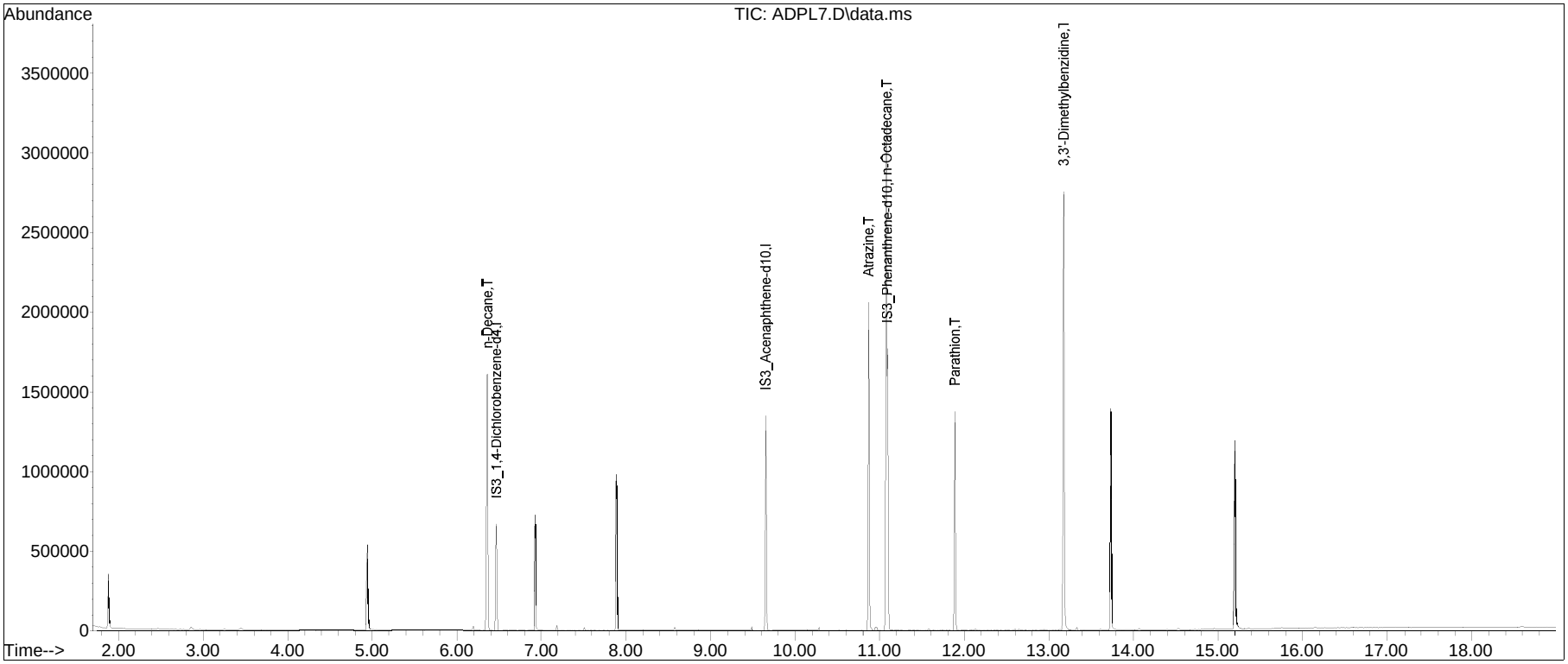
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL7.D
Acq On : 13 Feb 2024 1:58 am
Operator : SV107:mrg
Sample : IL4,32,,ADPL10 Lot# 10511
Misc : WG1886439
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 18 07:23:53 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL7.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 1:58 am	Instrument	: SV107
Sample	: IL4,32,,ADPL10 Lot# 10511	Quant Date	: 2/18/2024 7:24 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL6.D
Acq On : 13 Feb 2024 2:23 am
Operator : SV107:mrg
Sample : IL5,32,,ADPL5 Lot# 10512
Misc : WG1886439
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 18 07:23:39 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	104015	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery = 100.00%			
85) IS3_Acenaphthene-d10	9.651	164	229271	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery = 100.00%			
99) IS3_Phenanthrene-d10	11.092	188	540241	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery = 100.00%			
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	178356	4.694	ug/ml#	46
86) Atrazine	10.869	200	93335	4.722	ug/ml	95
100) n-Octadecane	11.074	57	256377	5.154	ug/ml#	1
101) Parathion	11.886	109	37691	4.254	ug/ml	96
102) 3,3'-Dimethylbenzidine	13.168	212	346523	4.335	ug/ml	98

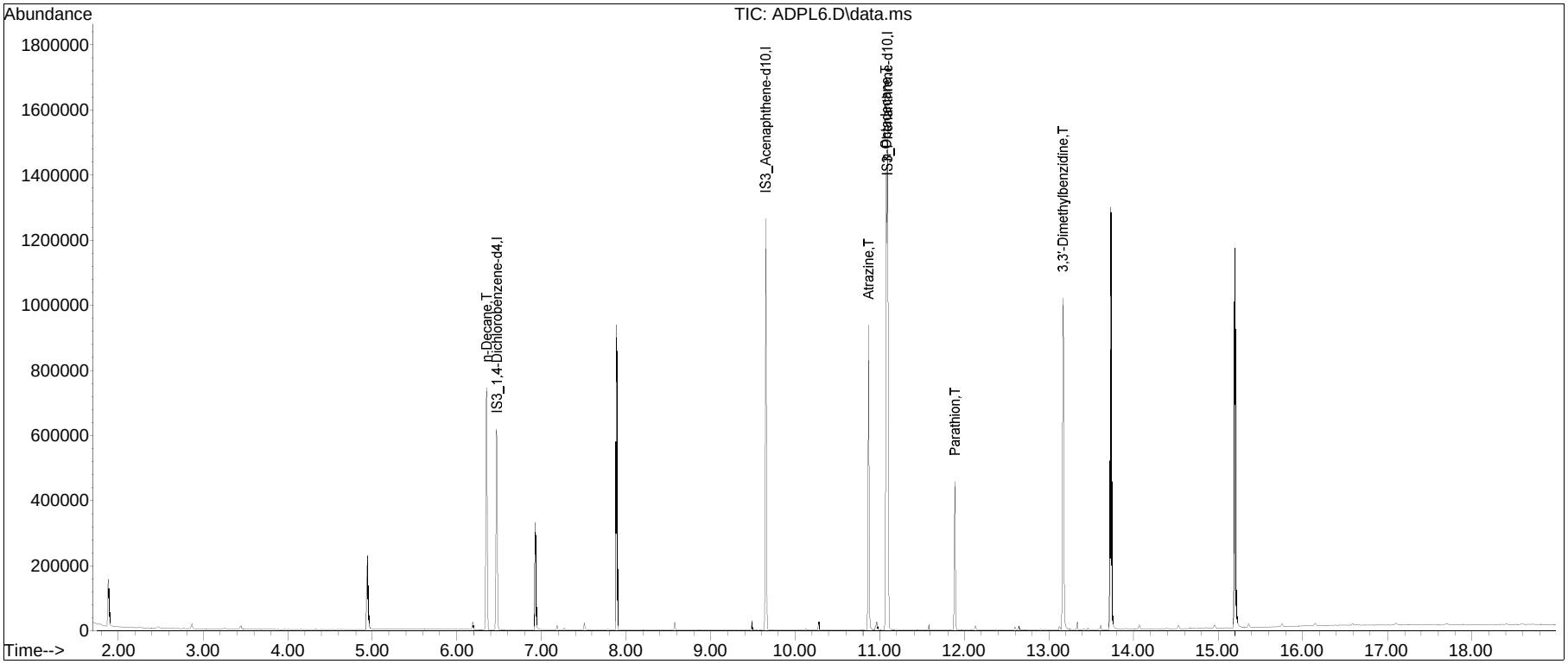
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL6.D
Acq On : 13 Feb 2024 2:23 am
Operator : SV107:mrg
Sample : IL5,32,,ADPL5 Lot# 10512
Misc : WG1886439
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 18 07:23:39 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL6.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 2:23 am	Instrument	: SV107
Sample	: IL5,32,,ADPL5 Lot# 10512	Quant Date	: 2/18/2024 7:23 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL5.D
Acq On : 13 Feb 2024 2:49 am
Operator : SV107:mrg
Sample : IL6,32,,ADPL2.5 Lot# 10513
Misc : WG1886439
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 18 07:23:26 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	101962	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery =	98.03%		
85) IS3_Acenaphthene-d10	9.651	164	222653	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery =	97.11%		
99) IS3_Phenanthrene-d10	11.092	188	493104	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery =	91.27%		
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	88698	2.381	ug/ml#	47
86) Atrazine	10.869	200	39976	2.174	ug/ml	95
100) n-Octadecane	11.080	57	113350	2.497	ug/ml#	1
101) Parathion	11.886	109	14431	2.228	ug/ml#	92
102) 3,3'-Dimethylbenzidine	13.168	212	131806	2.251	ug/ml	99

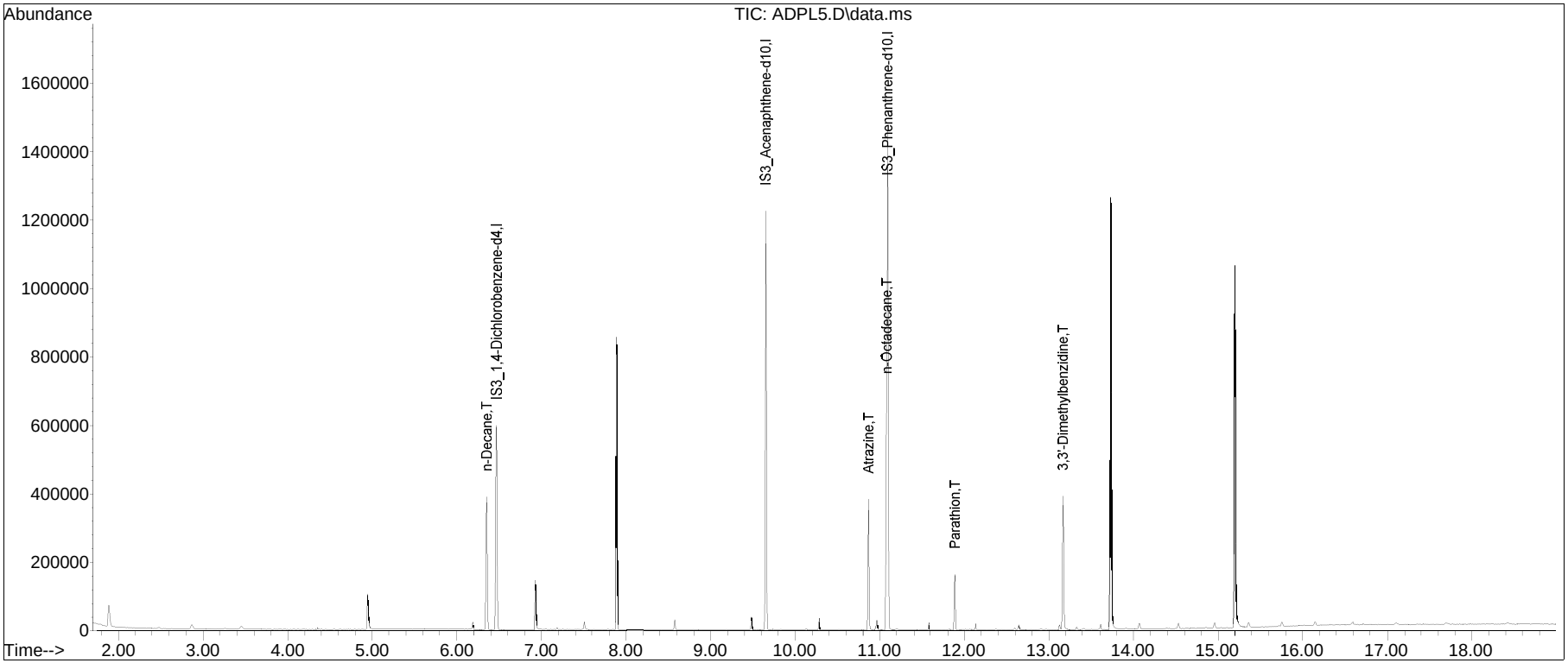
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL5.D
Acq On : 13 Feb 2024 2:49 am
Operator : SV107:mrg
Sample : IL6,32,,ADPL2.5 Lot# 10513
Misc : WG1886439
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Feb 18 07:23:26 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL5.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 2:49 am	Instrument	: SV107
Sample	: IL6,32,,ADPL2.5 Lot# 10513	Quant Date	: 2/18/2024 7:23 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL4.D
Acq On : 13 Feb 2024 3:15 am
Operator : SV107:mrg
Sample : IL7,32,,ADPL1 Lot# 10514
Misc : WG1886439
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 18 07:23:14 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	103235	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery =	99.25%		
85) IS3_Acenaphthene-d10	9.651	164	223587	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery =	97.52%		
99) IS3_Phenanthrene-d10	11.092	188	496662	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery =	91.93%		
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	35435	0.940	ug/ml#	48
86) Atrazine	10.869	200	14356	0.862	ug/ml	92
100) n-Octadecane	11.074	57	42026	0.919	ug/ml#	1
101) Parathion	11.886	109	5067	1.245	ug/ml	94
102) 3,3'-Dimethylbenzidine	13.168	212	40215	1.208	ug/ml	99

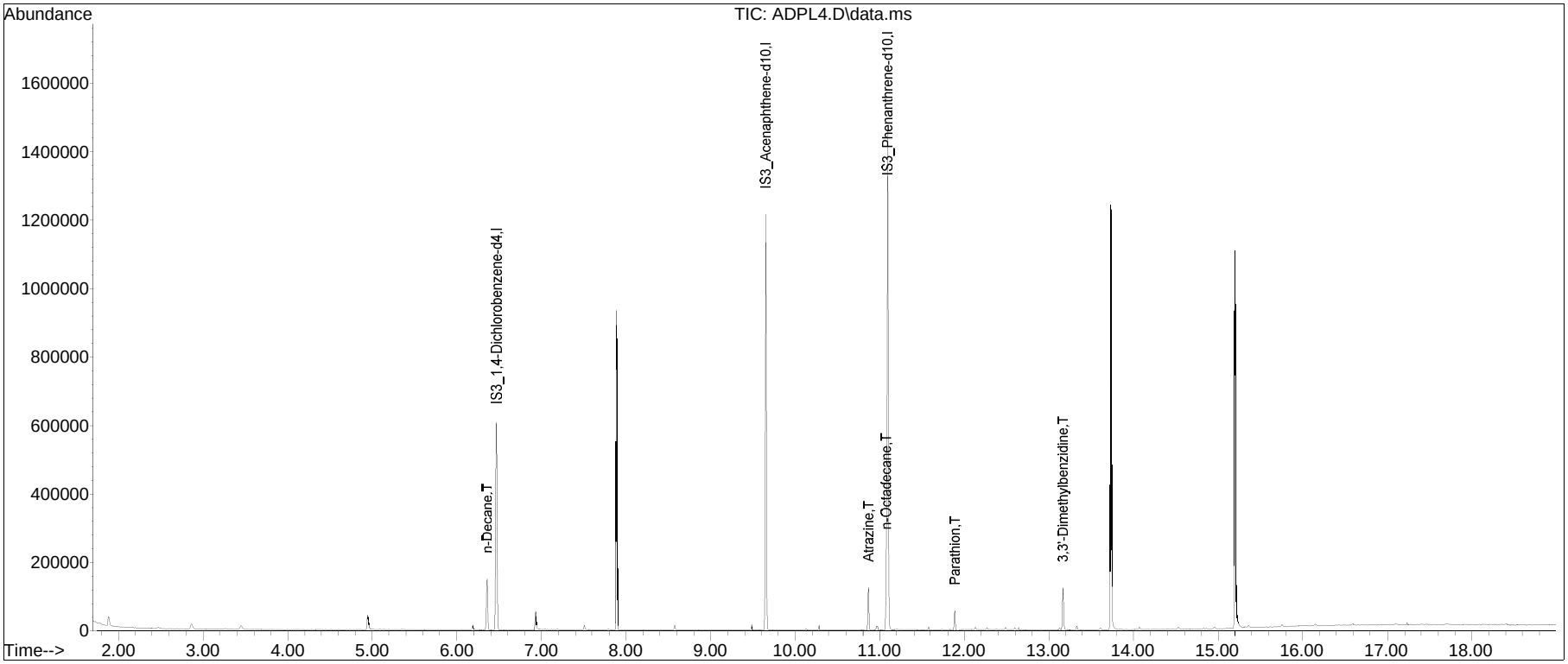
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL4.D
Acq On : 13 Feb 2024 3:15 am
Operator : SV107:mrg
Sample : IL7,32,,ADPL1 Lot# 10514
Misc : WG1886439
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Feb 18 07:23:14 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL4.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 3:15 am	Instrument	: SV107
Sample	: IL7,32,,ADPL1 Lot# 10514	Quant Date	: 2/18/2024 7:23 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL3.D
Acq On : 13 Feb 2024 3:40 am
Operator : SV107:mrg
Sample : IL8,32,,ADPL0.5 Lot# 10515
Misc : WG1886439
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 18 07:23:02 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	103020	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery =	99.04%		
85) IS3_Acenaphthene-d10	9.651	164	219272	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery =	95.64%		
99) IS3_Phenanthrene-d10	11.092	188	486299	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery =	90.02%		
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	19654	0.522	ug/ml#	48
86) Atrazine	10.869	200	6768	0.480	ug/ml	96
100) n-Octadecane	11.074	57	19563	0.437	ug/ml#	1
101) Parathion	11.886	109	2590	0.990	ug/ml#	93
102) 3,3'-Dimethylbenzidine	13.168	212	18222	0.965	ug/ml	99

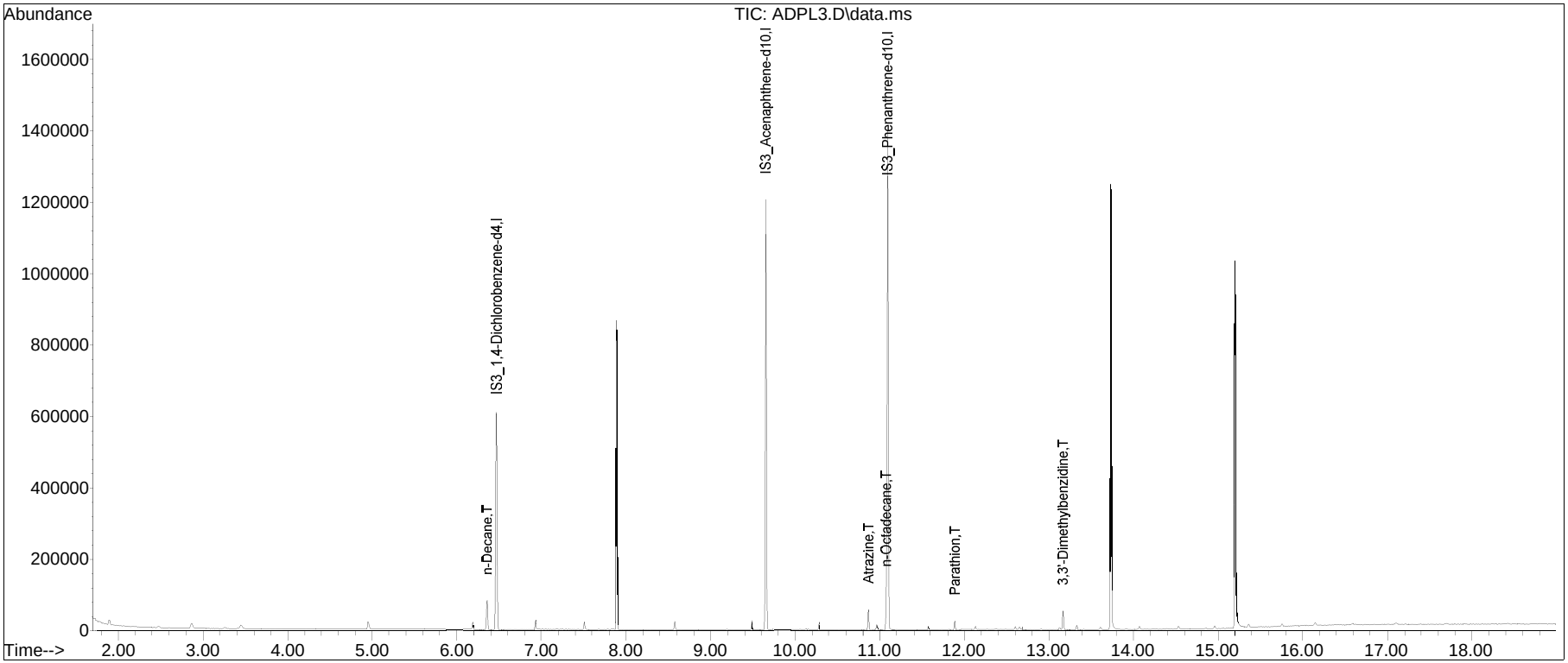
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL3.D
Acq On : 13 Feb 2024 3:40 am
Operator : SV107:mrg
Sample : IL8,32,,ADPL0.5 Lot# 10515
Misc : WG1886439
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Feb 18 07:23:02 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL3.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 3:40 am	Instrument	: SV107
Sample	: IL8,32,,ADPL0.5 Lot# 10515	Quant Date	: 2/18/2024 7:23 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL2.D
Acq On : 13 Feb 2024 4:06 am
Operator : SV107:mrg
Sample : IL9,32,,ADPL0.2 Lot# 10516
Misc : WG1886439
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 18 07:22:49 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	106085	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery = 101.99%			
85) IS3_Acenaphthene-d10	9.651	164	229634	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery = 100.16%			
99) IS3_Phenanthrene-d10	11.092	188	500147	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery = 92.58%			
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.351	57	8011	0.207	ug/ml#	45
86) Atrazine	10.869	200	2783	0.265	ug/ml	97
100) n-Octadecane	11.075	57	8149	0.177	ug/ml#	1
101) Parathion	11.886	109	1067	0.822	ug/ml#	77
102) 3,3'-Dimethylbenzidine	13.169	212	6939	0.832	ug/ml	96

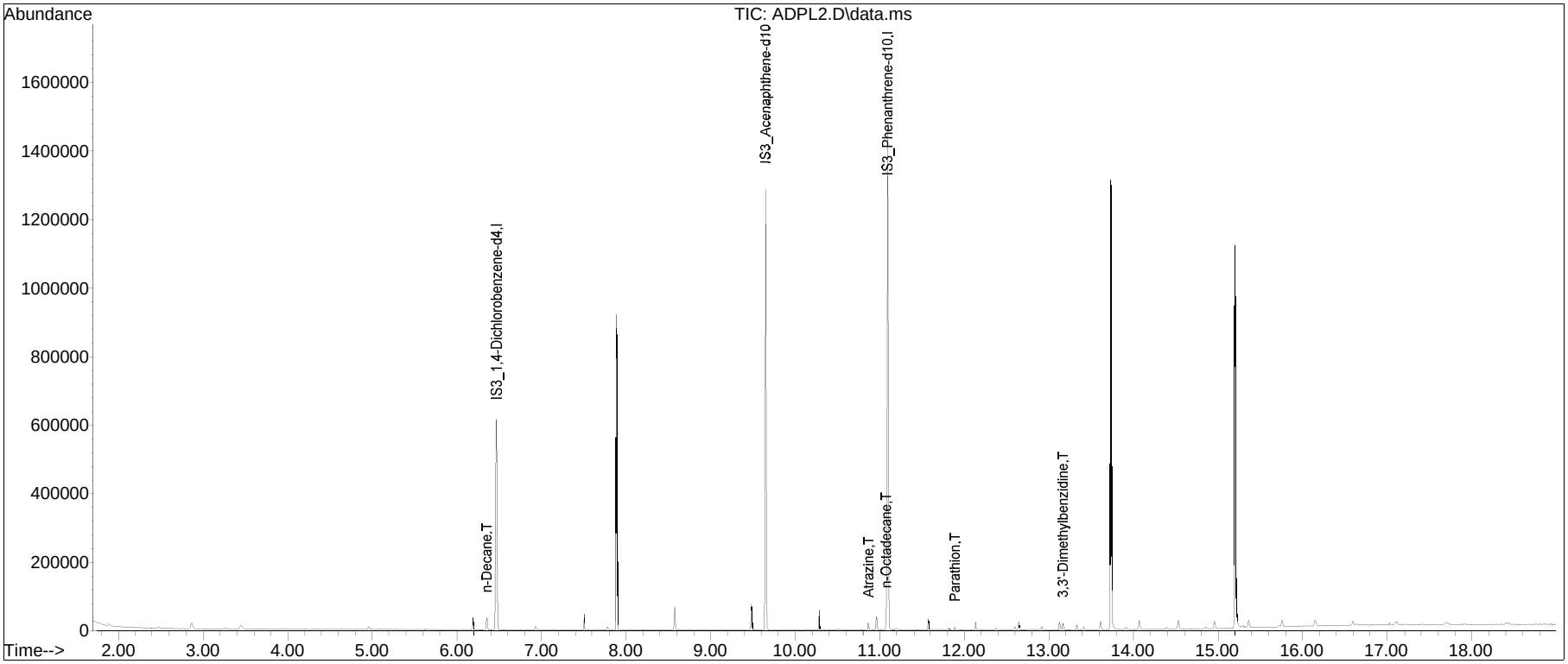
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL2.D
Acq On : 13 Feb 2024 4:06 am
Operator : SV107:mrg
Sample : IL9,32,,ADPL0.2 Lot# 10516
Misc : WG1886439
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Feb 18 07:22:49 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL2.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 4:06 am	Instrument	: SV107
Sample	: IL9,32,,ADPL0.2 Lot# 10516	Quant Date	: 2/18/2024 7:23 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL1.D
Acq On : 13 Feb 2024 4:31 am
Operator : SV107:mrg
Sample : IL10,32,,ADPL0.1 Lot# 10517
Misc : WG1886439
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Feb 18 07:22:36 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ABNL6.D
: 2 - I:\8270\SV107\240211ical\ADPL6.D
: 3 - I:\8270\SV107\240211ical\AP9L6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	100268	4.000	ug/ml	0.00
Standard Area 2 = 104015			Recovery =	96.40%		
85) IS3_Acenaphthene-d10	9.651	164	219250	4.000	ug/ml	0.00
Standard Area 2 = 229271			Recovery =	95.63%		
99) IS3_Phenanthrene-d10	11.092	188	482268	4.000	ug/ml	0.00
Standard Area 2 = 540241			Recovery =	89.27%		
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.351	57	4289	0.117	ug/ml#	47
86) Atrazine	10.869	200	1473	0.203	ug/ml#	90
100) n-Octadecane	11.080	57	3989	0.090	ug/ml#	1
101) Parathion	11.880	109	598	0.775	ug/ml#	63
102) 3,3'-Dimethylbenzidine	13.168	212	3324	0.793	ug/ml	98

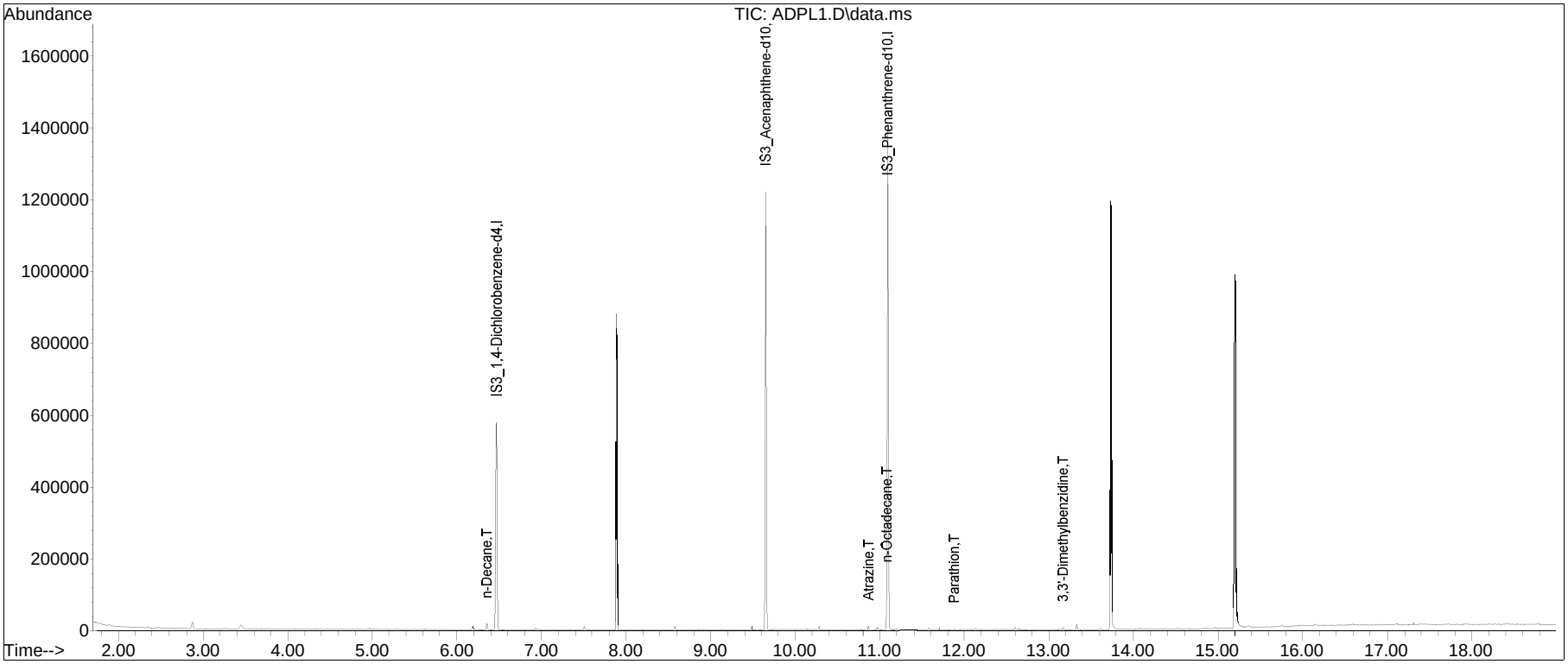
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPL1.D
Acq On : 13 Feb 2024 4:31 am
Operator : SV107:mrg
Sample : IL10,32,,ADPL0.1 Lot# 10517
Misc : WG1886439
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Feb 18 07:22:36 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 07:20:10 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\AP9L6.D•



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPL1.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 4:31 am	Instrument	: SV107
Sample	: IL10,32,,ADPL0.1 Lot# 1051	Quant Date	: 2/18/2024 7:22 am

There are no manual integrations or false positives in this file.

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240211ical\
Data File : ADPICV.D
Acq On : 13 Feb 2024 4:57 am
Operator : SV107:mrg
Sample : CQICV3,32,,ADPICV Lot# 10518
Misc : WG1886439
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Feb 18 09:00:00 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:59:13 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
32	I	IS3_1,4-Dichlorobenzene-d4		1.000	1.000	0.0	91	0.00
33	T	n-Decane		1.461	1.502	-2.8	100	0.00
85	I	IS3_Acenaphthene-d10		1.000	1.000	0.0	89	0.00
86	T	Atrazine	*	5.000	4.765	4.7	85	0.00
99	I	IS3_Phenanthrene-d10		1.000	1.000	0.0	87	0.00
100	T	n-Octadecane		0.368	0.408	-10.9	94	0.00
101	T	Parathion	*	5.000	4.209	15.8	86	0.00
102	T	3,3'-Dimethylbenzidine	*	5.000	4.253	14.9	85	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPICV.D
Acq On : 13 Feb 2024 4:57 am
Operator : SV107:mrg
Sample : CQICV3,32,,ADPICV Lot# 10518
Misc : WG1886439
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Feb 18 09:00:00 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:59:13 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\SV107\240211ical\ADPL6.D
Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.469	152	94525	4.000	ug/ml	0.00
Standard Area 1 = 104015			Recovery =	90.88%		
85) IS3_Acenaphthene-d10	9.651	164	205157	4.000	ug/ml	0.00
Standard Area 1 = 229271			Recovery =	89.48%		
99) IS3_Phenanthrene-d10	11.092	188	471794	4.000	ug/ml	0.00
Standard Area 1 = 540241			Recovery =	87.33%		
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.357	57	177477	5.140	ug/ml#	47
86) Atrazine	10.869	200	79333	4.765	ug/ml	96
100) n-Octadecane	11.074	57	240887	5.545	ug/ml#	1
101) Parathion	11.886	109	32483	4.209	ug/ml	95
102) 3,3'-Dimethylbenzidine	13.174	212	295666	4.253	ug/ml	98

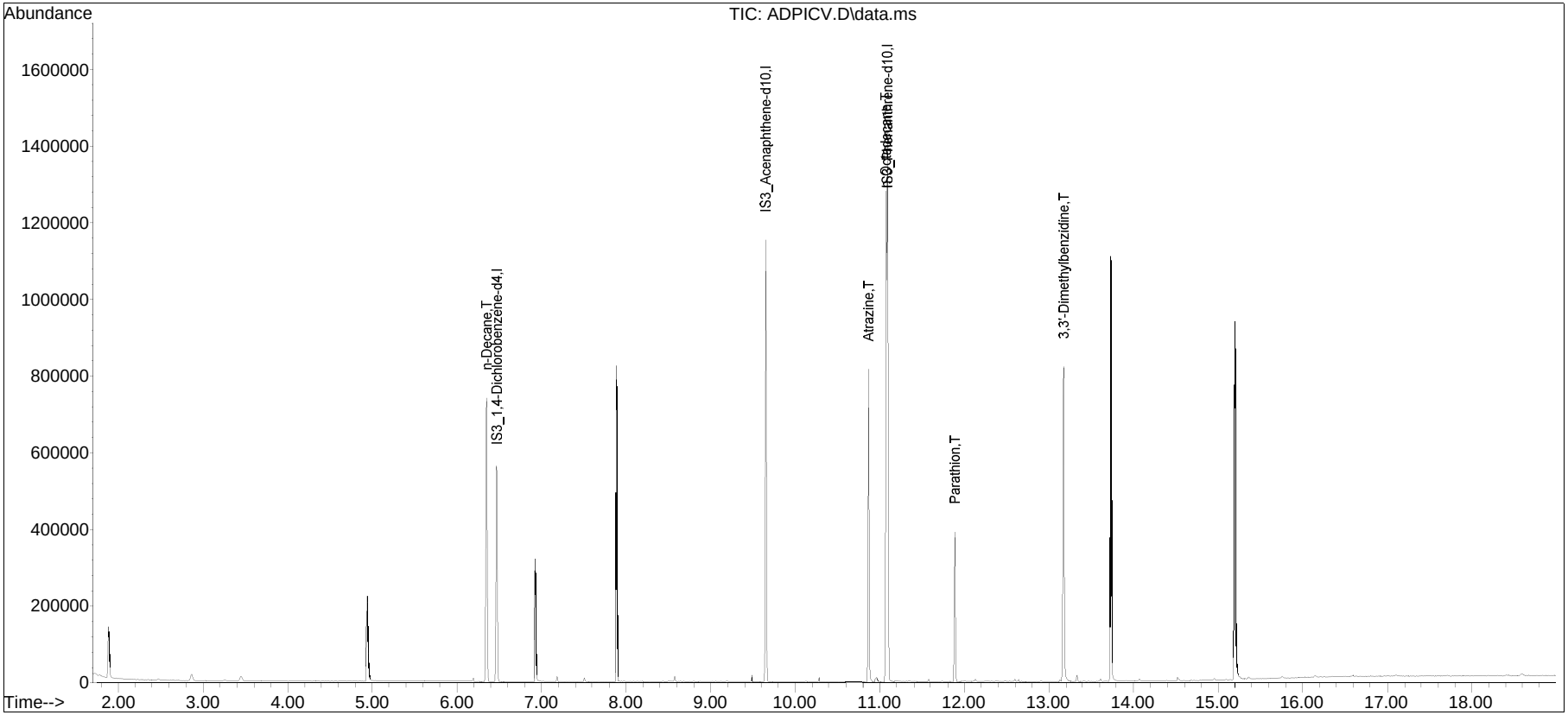
(#) = qualifier out of range (m) = manual integration (+) = signals summed

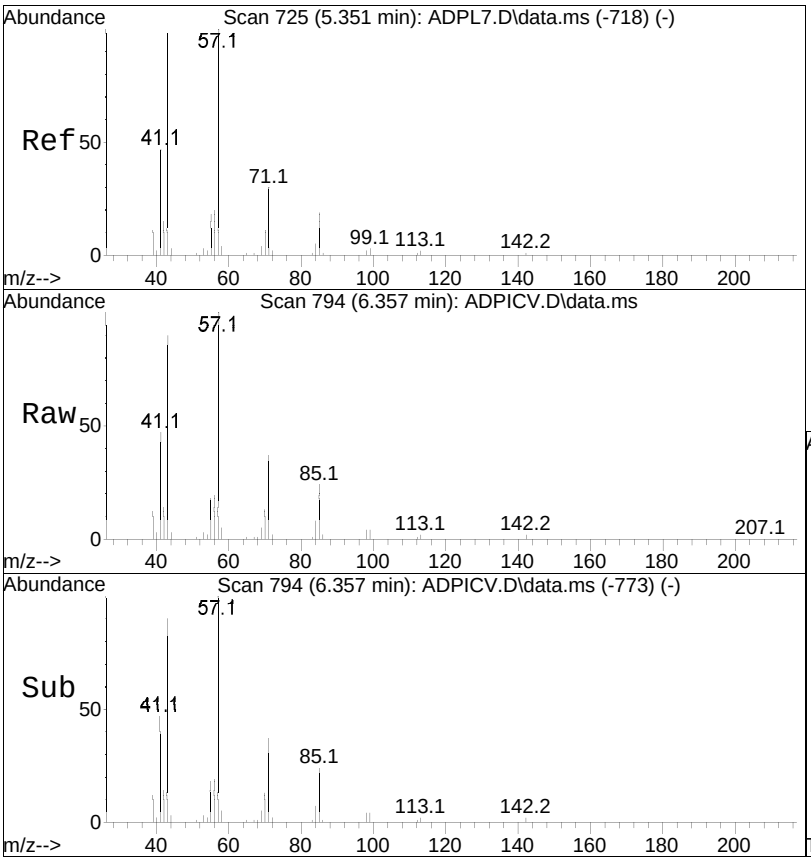
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240211ical\
Data File : ADPICV.D
Acq On : 13 Feb 2024 4:57 am
Operator : SV107:mrg
Sample : CQICV3,32,,ADPICV Lot# 10518
Misc : WG1886439
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Feb 18 09:00:00 2024
Quant Method : I:\8270\SV107\240211ical\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Feb 18 08:59:13 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublistal\ADPL6.D•

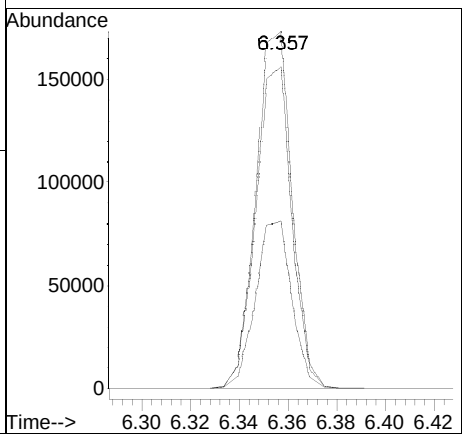


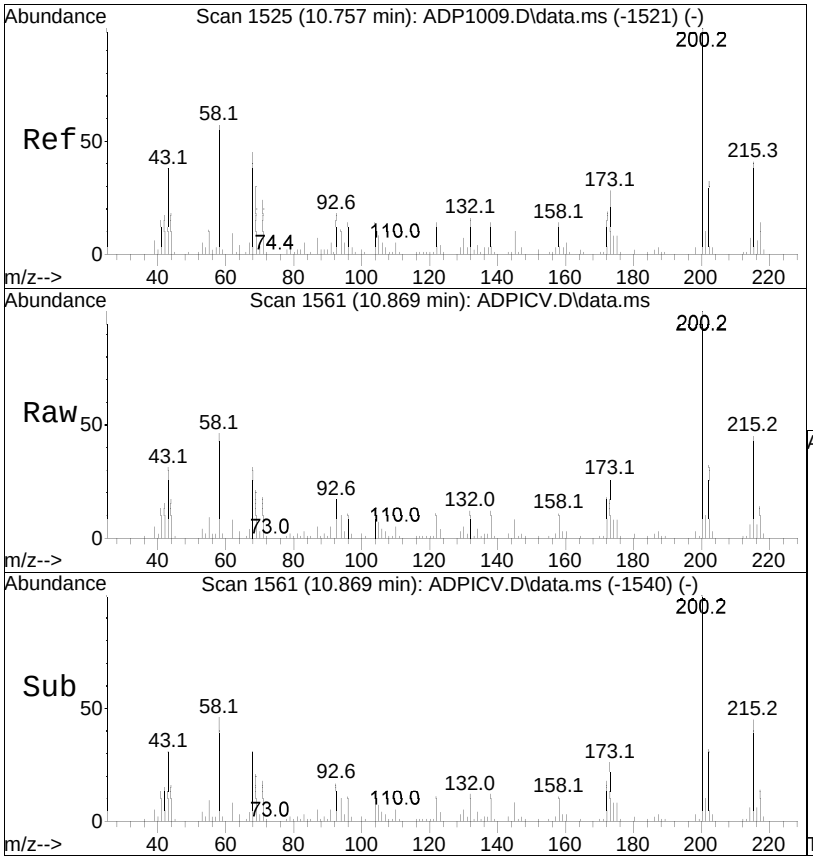


#33
n-Decane
Concen: 5.14 ug/ml
RT: 6.357 min Scan# 794
Delta R.T. 0.000 min
Lab File: ADPICV.D
Acq: 13 Feb 2024 4:57 am

Tgt Ion: 57 Resp: 177477

Ion	Ratio	Lower	Upper
57	100		
43	89.7	0.2	0.2#
41	47.4	0.2	0.2#

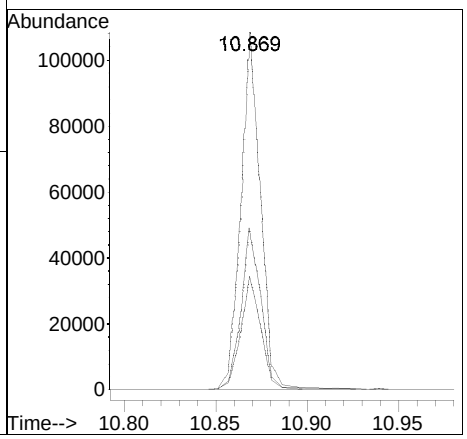


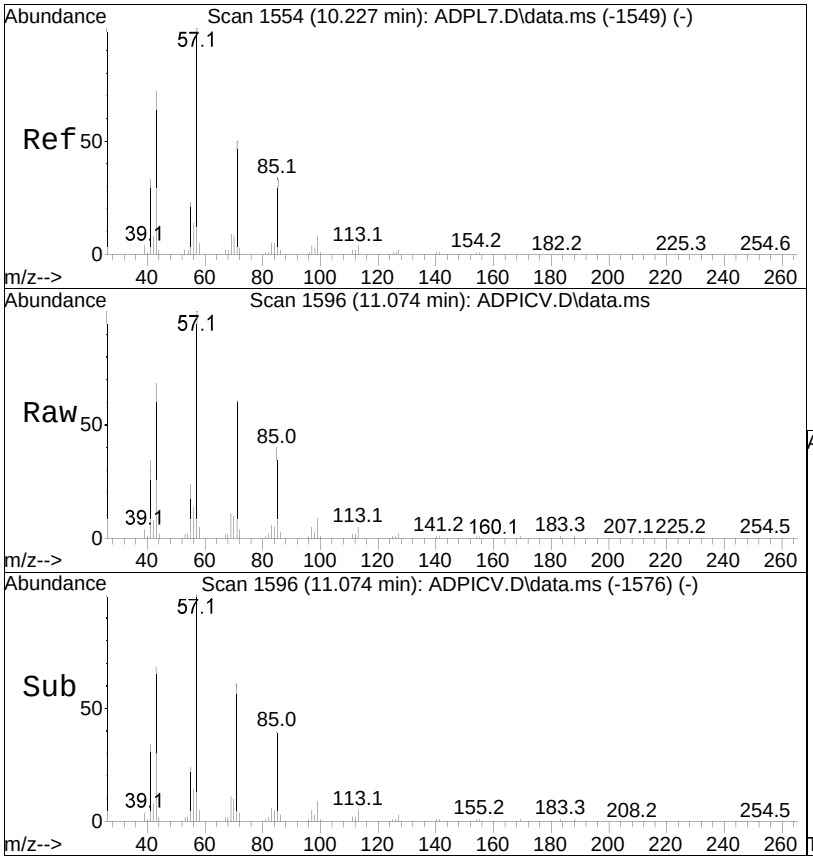


#86
Atrazine
Concen: 4.76 ug/ml
RT: 10.869 min Scan# 1561
Delta R.T. -0.000 min
Lab File: ADPICV.D
Acq: 13 Feb 2024 4:57 am

Tgt Ion:200 Resp: 79333

Ion	Ratio	Lower	Upper
200	100		
202	32.6	25.8	38.6
215	46.2	40.2	60.4

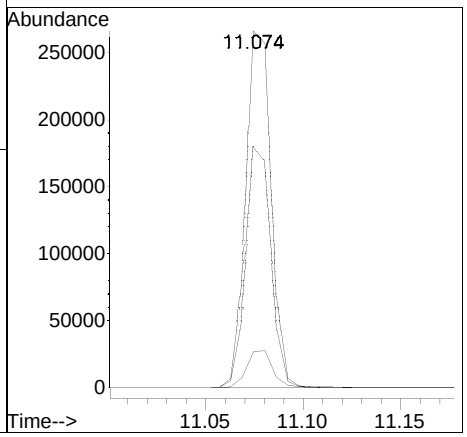


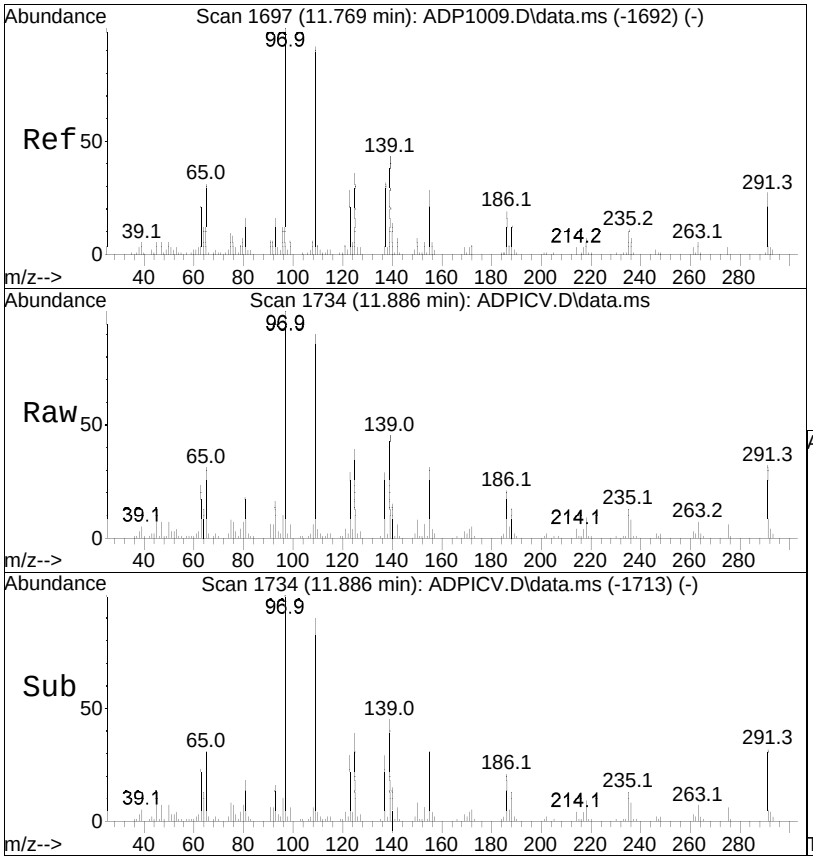


#100
n-Octadecane
Concen: 5.55 ug/ml
RT: 11.074 min Scan# 1596
Delta R.T. -0.006 min
Lab File: ADPICV.D
Acq: 13 Feb 2024 4:57 am

Tgt Ion: 57 Resp: 240887

Ion	Ratio	Lower	Upper
57	100		
43	67.1	9.0	13.6#
70	10.7	0.2	0.2#

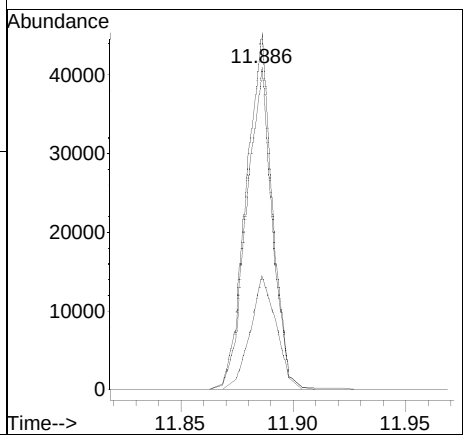


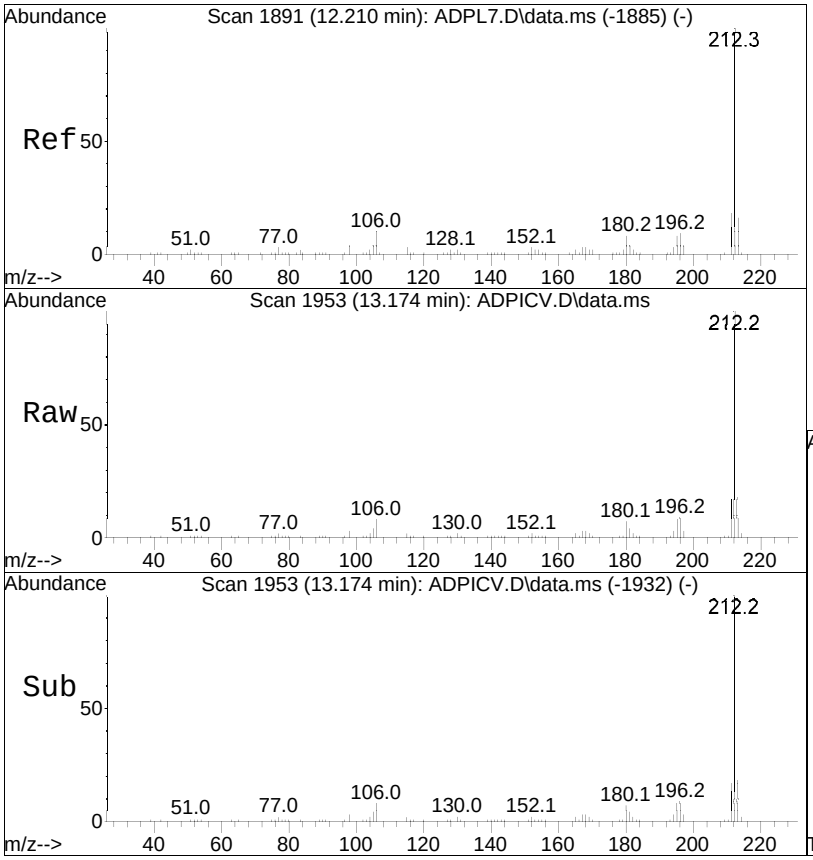


#101
Parathion
Concen: 4.21 ug/ml
RT: 11.886 min Scan# 1734
Delta R.T. 0.000 min
Lab File: ADPICV.D
Acq: 13 Feb 2024 4:57 am

Tgt Ion:109 Resp: 32483

Ion	Ratio	Lower	Upper
109	100		
97	111.2	87.4	131.2
291	35.4	34.2	51.2

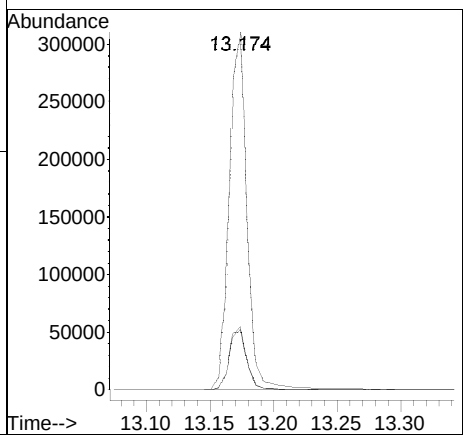




#102
3,3'-Dimethylbenzidine
Concen: 4.25 ug/ml
RT: 13.174 min Scan# 1953
Delta R.T. 0.000 min
Lab File: ADPICV.D
Acq: 13 Feb 2024 4:57 am

Tgt Ion:212 Resp: 295666

Ion	Ratio	Lower	Upper
212	100		
211	16.9	12.9	19.3
213	17.8	13.2	19.8



Manual Integration Report

Data Path	: I:\8270\SV107\240211ical\	QMethod	: FS240211SV107RVT.m
Data File	: ADPICV.D	Operator	: SV107:mrg
Date Inj'd	: 2/13/2024 4:57 am	Instrument	: SV107
Sample	: CQICV3,32,,ADPICV Lot# 105	Quant Date	: 2/18/2024 9:00 am

There are no manual integrations or false positives in this file.

Evaluate Relative Error Report SV107

Method Path : I:\8270\SV107\240211ical\
Method File : FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Sun Feb 18 08:59:13 2024

	COMPOUND	CalFit	Units	TrueMid	MidConc	%RE	TrueLow	LowConc	%RE
36	T Benzoic Acid	Q	ug/ml	5.0	4.710	-5.8	1.00	1.160	16.0
47	T 2-Nitroaniline	L	ug/ml	5.0	4.709	-5.8	0.50	0.596	19.2
48	T 1,4-Dinitrobenzene	L	ug/ml	5.0	4.606	-7.9	0.50	0.623	24.6
52	T 2,6-Dinitrotoluene	L	ug/ml	5.0	4.980	-0.4	0.20	0.243	21.5
53	T 1,2-Dinitrobenzene	L	ug/ml	5.0	4.923	-1.5	0.20	0.239	19.5
59	T Caprolactam	L	ug/ml	5.0	4.520	-9.6	1.00	1.214	21.4
65	T 2,4-Dinitrophenol	L	ug/ml	5.0	4.582	-8.4	1.00	1.216	21.6
67	T 2,4-Dinitrotoluene	L	ug/ml	5.0	4.701	-6.0	0.20	0.249	24.5
75	T 4,6-Dinitro-o-cresol	L	ug/ml	5.0	4.402	-12.0	0.50	0.629	25.8
81	T Pentachlorophenol	L	ug/ml	5.0	4.487	-10.3	0.50	0.582	16.4
83	T Dichloran	Q	ug/ml	5.0	4.429	-11.4	1.00	1.210	21.0
84	T Pentachloronitrobenzene	L	ug/ml	5.0	4.472	-10.6	1.00	1.288	28.8
86	T Atrazine	Q	ug/ml	5.0	4.999	-0.0	0.20	0.239	19.5
96	T Butyl benzyl phthalate	Q	ug/ml	5.0	4.672	-6.6	0.50	0.623	24.6
101	T Parathion	Q	ug/ml	5.0	4.254	-14.9	1.00	1.245	24.5
102	T 3,3'-Dimethylbenzidine	Q	ug/ml	5.0	4.335	-13.3	1.00	1.208	20.8
107	T Bis(2-ethylhexyl)phthalate	Q	ug/ml	5.0	4.921	-1.6	0.20	0.257	28.5
108	T Di-n-octylphthalate	Q	ug/ml	5.0	4.813	-3.7	0.50	0.584	16.8

Calibration Correlation Report

	COMPOUND	CalFit	CoefOfDet	QuadTerm	LinTerm	Constant
36	T Benzoic Acid	Quadratic	0.998336	0.000596	0.257974	-0.0405362
47	T 2-Nitroaniline	Linear	0.998531	0.000000	0.229572	-0.0158577
48	T 1,4-Dinitrobenzene	Linear	0.997721	0.000000	0.110215	-0.00920268
52	T 2,6-Dinitrotoluene	Linear	0.999428	0.000000	0.180159	-0.00571174
53	T 1,2-Dinitrobenzene	Linear	0.999264	0.000000	0.0770752	-0.00254916
59	T Caprolactam	Linear	0.998026	0.000000	0.158955	-0.0251977
65	T 2,4-Dinitrophenol	Linear	0.997705	0.000000	0.163338	-0.0291917
67	T 2,4-Dinitrotoluene	Linear	0.998807	0.000000	0.407062	-0.014247
75	T 4,6-Dinitro-o-cresol	Linear	0.996866	0.000000	0.215384	-0.0204642
81	T Pentachlorophenol	Linear	0.998395	0.000000	0.263476	-0.0177963
83	T Dichloran	Quadratic	0.997930	0.003742	0.138709	-0.0208311
84	T Pentachloronitrobenzene	Linear	0.995684	0.000000	0.16988	-0.0276532
86	T Atrazine	Quadratic	0.999029	0.014124	0.313393	-0.00664315
96	T Butyl benzyl phthalate	Quadratic	0.997884	0.006896	0.480084	-0.0438887
101	T Parathion	Quadratic	0.997001	0.003190	0.074782	-0.0133741
102	T 3,3'-Dimethylbenzidine	Quadratic	0.996303	0.003807	0.711693	-0.134396
107	T Bis(2-ethylhexyl)phthalate	Quadratic	0.998105	0.022859	0.694194	-0.024729
108	T Di-n-octylphthalate	Quadratic	0.997724	0.054378	1.09526	-0.08693

Continuing Calibration

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: SV107	**Calibration Date**	: 04/04/24 11:45		
Lab File ID	: ABN0404A	**Init. Calib. Date(s)**	: 02/12/24	02/13/24	
Sample No	: WG1904833-3	**Init. Calib. Times**	: 15:57	04:31	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS1_1,4-Dichlorobenzene-d4	1	1	-	0	20	145	0
n-Nitrosodimethylamine	0.824	0.808	-	1.9	20	136	0
Pyridine	1.198	1.229	-	-2.6	20	132	0
2-Fluorophenol	1.173	1.208	-	-3	20	141	0
Aniline	1.767	1.629	-	7.8	20	129	0
2-Chlorophenol	1.288	1.312	-	-1.9	20	139	0
Phenol-d6	1.487	1.47	-	1.1	20	134	0
Phenol	1.621	1.586	-	2.2	20	136	0
Bis(2-chloroethyl)ether	1.345	1.214	-	9.7	20	132	0
1,3-Dichlorobenzene	1.596	1.501	-	6	20	136	0
1,4-Dichlorobenzene	1.637	1.515	-	7.5	20	136	0
1,2-Dichlorobenzene	1.56	1.461	-	6.3	20	136	0
Benzyl alcohol	1.066	1.025	-	3.8	20	132	0
Bis(2-chloroisopropyl)ethe	1.817	2.065	-	-13.6	20	162	0
2-Methylphenol	1.135	1.152	-	-1.5	20	138	0
Hexachloroethane	0.583	0.587	-	-0.7	20	143	0
n-Nitrosodi-n-propylamine	0.916	0.887	-	3.2	20	131	0
3-Methylphenol/4-Methylphe	1.228	1.232	-	-0.3	20	134	0
Nitrobenzene-d5	1.364	1.4	-	-2.6	20	138	0
Nitrobenzene	1.397	1.371	-	1.9	20	133	0
Isophorone	2.407	2.431	-	-1	20	134	0
2-Nitrophenol	0.574	0.677	-	-17.9	20	161	0
2,4-Dimethylphenol	0.957	0.94	-	1.8	20	134	0
Bis(2-chloroethoxy)methane	1.624	1.474	-	9.2	20	126	0
2,4-Dichlorophenol	1.12	1.114	-	0.5	20	129	0
1,2,4-Trichlorobenzene	1.461	1.231	-	15.7	20	124	0
IS1_Naphthalene-d8	1	1	-	0	20	143	0
Naphthalene	1.122	0.978	-	12.8	20	129	0
Benzoic Acid	5	4.801	-	4	20	146	0
4-Chloroaniline	0.137	0.129	-	5.8	20	128	0
Hexachlorobutadiene	0.228	0.184	-	19.3	20	121	0
p-Chloro-m-cresol	0.285	0.287	-	-0.7	20	132	0
2-Methylnaphthalene	0.746	0.652	-	12.6	20	127	0
1-Methylnaphthalene	0.255	0.228	-	10.6	20	132	0
Hexachlorocyclopentadiene	0.165	0.16	-	3	20	138	0
2,4,6-Trichlorophenol	0.225	0.218	-	3.1	20	134	0
2,4,5-Trichlorophenol	0.244	0.234	-	4.1	20	125	0
2-Fluorobiphenyl	0.92	0.739	-	19.7	20	118	0
2-Chloronaphthalene	0.749	0.642	-	14.3	20	125	0
2-Nitroaniline	5	4.752	-	5	20	144	0
1,4-Dinitrobenzene	5	4.656	-	6.9	20	144	0
1,3-Dinitrobenzene	0.107	0.11	-	-2.8	20	138	0
Dimethyl phthalate	0.828	0.744	-	10.1	20	123	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: SV107	**Calibration Date**	: 04/04/24 11:45		
Lab File ID	: ABN0404A	**Init. Calib. Date(s)**	: 02/12/24	02/13/24	
Sample No	: WG1904833-3	**Init. Calib. Times**	: 15:57	04:31	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Acenaphthylene	1.127	1.031	-	8.5	20	125	0
2,6-Dinitrotoluene	5	4.481	-	10.4	20	128	0
1,2-Dinitrobenzene	5	4.639	-	7.2	20	134	0
IS1_Acenaphthene-d10	1	1	-	0	20	126	0
3-Nitroaniline	0.303	0.336	-	-10.9	20	132	0
Acenaphthene	1.128	1.046	-	7.3	20	124	0
2,4-Dinitrophenol	5	3.774	-	24.5*	20	100	0
Dibenzofuran	1.851	1.694	-	8.5	20	122	0
2,4-Dinitrotoluene	5	4.884	-	2.3	20	132	0
4-Nitrophenol	0.255	0.303	-	-18.8	20	149	0
2,3,5,6-Tetrachlorophenol	0.317	0.295	-	6.9	20	109	0
2,3,4,6-Tetrachlorophenol	0.321	0.309	-	3.7	20	117	0
Diethyl phthalate	1.302	1.28	-	1.7	20	128	0
Fluorene	1.392	1.285	-	7.7	20	122	0
4-Chlorophenyl phenyl ethe	0.717	0.604	-	15.8	20	115	0
4-Nitroaniline	0.305	0.317	-	-3.9	20	129	0
4,6-Dinitro-o-cresol	5	5.082	-	-1.6	20	148	0
NDPA/DPA	1.116	1.089	-	2.4	20	124	0
Azobenzene	1.312	1.321	-	-0.7	20	123	0
2,4,6-Tribromophenol	0.149	0.135	-	9.4	20	110	0
4-Bromophenyl phenyl ether	0.376	0.315	-	16.2	20	109	0
Hexachlorobenzene	0.415	0.321	-	22.7*	20	105	0
Pentachlorophenol	5	1.898	-	62*	20	49	0
IS1_Phenanthrene-d10	1	1	-	0	20	122	0
Phenanthrene	1.112	1.025	-	7.8	20	121	0
Anthracene	1.051	1.037	-	1.3	20	122	0
Carbazole	0.953	0.984	-	-3.3	20	120	0
Di-n-butylphthalate	1.014	1.103	-	-8.8	20	127	0
Fluoranthene	1.196	1.157	-	3.3	20	118	0
Benzidine	0.646	0.809	-	-25.2*	20	145	0
Pyrene	1.294	1.246	-	3.7	20	115	0
4-Terphenyl-d14	0.881	0.775	-	12	20	108	0
Butyl benzyl phthalate	5	5.635	-	-12.7	20	150	0
IS1_Chrysene-d12	1	1	-	0	20	106	0
Benzo(a)anthracene	1.348	1.445	-	-7.2	20	118	0
3,3'-Dichlorobenzidine	0.407	0.507	-	-24.6*	20	121	0
Chrysene	1.357	1.32	-	2.7	20	109	0
Bis(2-ethylhexyl)phthalate	5	6.052	-	-21*	20	133	0
Di-n-octylphthalate	5	6.815	-	-36.3*	20	157	0
Benzo(b)fluoranthene	1.169	1.391	-	-19	20	133	0
Benzo(k)fluoranthene	1.208	1.244	-	-3	20	105	0
Benzo(a)pyrene	1.048	1.237	-	-18	20	119	0
IS1_Perylene-d12	1	1	-	0	20	114	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience		**Lab Number**	: L2417074	
Project Name	: RANCO SAND & GRAVEL		**Project Number**	: 12123	
Instrument ID	: SV107		**Calibration Date**	: 04/04/24 11:45	
Lab File ID	: ABN0404A		**Init. Calib. Date(s)**	: 02/12/24	02/13/24
Sample No	: WG1904833-3		**Init. Calib. Times**	: 15:57	04:31
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Indeno(1,2,3-cd)pyrene	0.942	1.154	-	-22.5*	20	134	0
Dibenzo(a,h)anthracene	0.987	1.048	-	-6.2	20	116	0
Benzo(ghi)perylene	0.991	1.042	-	-5.1	20	117	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: SV107	**Calibration Date**	: 04/04/24 12:10		
Lab File ID	: AP90404	**Init. Calib. Date(s)**	: 02/12/24	02/13/24	
Sample No	: WG1904833-4	**Init. Calib. Times**	: 15:57	04:31	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS2_1,4-Dichlorobenzene-d4	1	1	-	0	20	182	0
Benzaldehyde	0.987	0.986	-	0.1	20	186	0
Acetophenone	1.676	1.633	-	2.6	20	181	0
m-Toluidine	1.662	1.632	-	1.8	20	181	0
2-Chloroaniline	1.489	1.503	-	-0.9	20	191	0
IS2_Naphthalene-d8	1	1	-	0	20	186	0
a-Terpineol	0.252	0.291	-	-15.5	20	216	0
3-Chloroaniline	0.152	0.142	-	6.6	20	175	0
2,6-Dichlorophenol	0.266	0.278	-	-4.5	20	190	0
1-chloro-2-nitrobenzene	0.119	0.132	-	-10.9	20	209	0
Caprolactam	5	5.499	-	-10	20	233	0
1,2,4,5-Tetrachlorobenzene	0.402	0.331	-	17.7	20	161	0
Biphenyl	0.898	0.764	-	14.9	20	165	0
IS2_Acenaphthene-d10	1	1	-	0	20	170	0
Dichloran	5	5.931	-	-18.6	20	239	0
Pentachloronitrobenzene	5	4.969	-	0.6	20	192	0
IS2_Phenanthrene-d10	1	1	-	0	20	151	0
Diphenamid	0.37	0.424	-	-14.6	20	172	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience		**Lab Number**	: L2417074	
Project Name	: RANCO SAND & GRAVEL		**Project Number**	: 12123	
Instrument ID	: SV107		**Calibration Date**	: 04/04/24 12:36	
Lab File ID	: ADP0404		**Init. Calib. Date(s)**	: 02/12/24	02/13/24
Sample No	: WG1904833-5		**Init. Calib. Times**	: 15:57	04:31
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS3_1,4-Dichlorobenzene-d4	1	1	-	0	20	149	0
n-Decane	1.461	1.373	-	6	20	150	0
IS3_Acenaphthene-d10	1	1	-	0	20	139	0
Atrazine	5	4.672	-	6.6	20	130	0
IS3_Phenanthrene-d10	1	1	-	0	20	111	0
n-Octadecane	0.368	0.377	-	-2.4	20	110	0
Parathion	5	6.144	-	-22.9*	20	173	0
3,3'-Dimethylbenzidine	5	5.488	-	-9.8	20	147	0

*** Value outside of QC limits.**

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240404lvi\
Data File : ABN0404a.D
Acq On : 4 Apr 2024 11:45 am
Operator : SV107:ljg
Sample : WG1904833-3,32,,ABN 10360 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 142 Sample Multiplier: 1

Quant Time: Apr 04 16:54:06 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:21:26 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	IS1_1,4-Dichlorobenzene-d4		1.000	1.000	0.0	145	0.00
2	t	n-Nitrosodimethylamine		0.824	0.808	1.9	136	0.00
3	t	Pyridine		1.198	1.229	-2.6	132	0.00
4	S	2-Fluorophenol		1.173	1.208	-3.0	141	0.00
5	T	Aniline		1.767	1.629	7.8	129	0.00
6	t	2-Chlorophenol		1.288	1.312	-1.9	139	0.00
7	S	Phenol-d6		1.487	1.470	1.1	134	0.00
8	T	Phenol		1.621	1.586	2.2	136	0.00
9	T	Bis(2-chloroethyl)ether		1.345	1.214	9.7	132	0.00
10	T	1,3-Dichlorobenzene		1.596	1.501	6.0	136	0.00
11	T	1,4-Dichlorobenzene		1.637	1.515	7.5	136	0.00
12	T	1,2-Dichlorobenzene		1.560	1.461	6.3	136	0.00
13	t	Benzyl alcohol		1.066	1.025	3.8	132	0.00
14	T	Bis(2-chloroisopropyl)ether		1.817	2.065	-13.6	162	0.00
15	T	2-Methylphenol		1.135	1.152	-1.5	138	0.00
16	T	Hexachloroethane		0.583	0.587	-0.7	143	0.00
17	T	n-Nitrosodi-n-propylamine		0.916	0.887	3.2	131	0.00
18	T	3-Methylphenol/4-Methylphen		1.228	1.232	-0.3	134	0.00
19	S	Nitrobenzene-d5		1.364	1.400	-2.6	138	0.00
20	T	Nitrobenzene		1.397	1.371	1.9	133	0.00
21	T	Isophorone		2.407	2.431	-1.0	134	0.00
22	T	2-Nitrophenol		0.574	0.677	-17.9	161	0.00
23	T	2,4-Dimethylphenol		0.957	0.940	1.8	134	0.00
24	T	Bis(2-chloroethoxy)methane		1.624	1.474	9.2	126	0.00
25	T	2,4-Dichlorophenol		1.120	1.114	0.5	129	0.00
26	T	1,2,4-Trichlorobenzene		1.461	1.231	15.7	124	0.00
34	I	IS1_Naphthalene-d8		1.000	1.000	0.0	143	0.00
35	T	Naphthalene		1.122	0.978	12.8	129	0.00
36	T	Benzoic Acid	*	5.000	4.801	4.0	146	0.00
37	T	4-Chloroaniline		0.137	0.129	5.8	128	0.00
38	T	Hexachlorobutadiene		0.228	0.184	19.3	121	0.00
39	T	p-Chloro-m-cresol		0.285	0.287	-0.7	132	0.00
40	T	2-Methylnaphthalene		0.746	0.652	12.6	127	0.00
41	T	1-Methylnaphthalene		0.255	0.228	10.6	132	0.00
42	T	Hexachlorocyclopentadiene		0.165	0.160	3.0	138	0.00
43	T	2,4,6-Trichlorophenol		0.225	0.218	3.1	134	0.00
44	T	2,4,5-Trichlorophenol		0.244	0.234	4.1	125	0.00
45	S	2-Fluorobiphenyl		0.920	0.739	19.7	118	0.00

Data Path : I:\8270\SV107\240404lvi\
Data File : ABN0404a.D
Acq On : 4 Apr 2024 11:45 am
Operator : SV107:ljg
Sample : WG1904833-3,32,,ABN 10360 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 142 Sample Multiplier: 1

Quant Time: Apr 04 16:54:06 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:21:26 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
46	T	2-Chloronaphthalene		0.749	0.642	14.3	125	0.00
47	T	2-Nitroaniline	*	5.000	4.752	5.0	144	0.00
48	T	1,4-Dinitrobenzene	*	5.000	4.656	6.9	144	0.00
49	T	1,3-Dinitrobenzene		0.107	0.110	-2.8	138	0.00
50	T	Dimethyl phthalate		0.828	0.744	10.1	123	0.00
51	T	Acenaphthylene		1.127	1.031	8.5	125	0.00
52	T	2,6-Dinitrotoluene	*	5.000	4.481	10.4	128	0.00
53	T	1,2-Dinitrobenzene	*	5.000	4.639	7.2	134	0.00
62	I	IS1_Acenaphthene-d10		1.000	1.000	0.0	126	0.00
63	T	3-Nitroaniline		0.303	0.336	-10.9	132	0.00
64	T	Acenaphthene		1.128	1.046	7.3	124	0.00
65	T	2,4-Dinitrophenol	*	5.000	3.774	24.5#	100	0.00
66	T	Dibenzofuran		1.851	1.694	8.5	122	0.00
67	T	2,4-Dinitrotoluene	*	5.000	4.884	2.3	132	0.00
68	T	4-Nitrophenol		0.255	0.303	-18.8	149	0.00
69	T	2,3,5,6-Tetrachlorophenol		0.317	0.295	6.9	109	0.00
70	T	2,3,4,6-Tetrachlorophenol		0.321	0.309	3.7	117	0.00
71	T	Diethyl phthalate		1.302	1.280	1.7	128	0.00
72	T	Fluorene		1.392	1.285	7.7	122	0.00
73	T	4-Chlorophenyl phenyl ether		0.717	0.604	15.8	115	0.00
74	T	4-Nitroaniline		0.305	0.317	-3.9	129	0.00
75	T	4,6-Dinitro-o-cresol	*	5.000	5.082	-1.6	148	0.00
76	T	NDPA/DPA		1.116	1.089	2.4	124	0.00
77	T	Azobenzene		1.312	1.321	-0.7	123	0.00
78	S	2,4,6-Tribromophenol		0.149	0.135	9.4	110	0.00
79	T	4-Bromophenyl phenyl ether		0.376	0.315	16.2	109	0.00
80	T	Hexachlorobenzene		0.415	0.321	22.7#	105	0.00
81	T	Pentachlorophenol	*	5.000	1.898	62.0#	49	0.00
87	I	IS1_Phenanthrene-d10		1.000	1.000	0.0	122	0.00
88	T	Phenanthrene		1.112	1.025	7.8	121	0.00
89	T	Anthracene		1.051	1.037	1.3	122	0.00
90	T	Carbazole		0.953	0.984	-3.3	120	0.00
91	T	Di-n-butylphthalate		1.014	1.103	-8.8	127	0.00
92	T	Fluoranthene		1.196	1.157	3.3	118	0.00
93	T	Benzidine		0.646	0.809	-25.2#	145	0.00
94	T	Pyrene		1.294	1.246	3.7	115	0.00
95	S	4-Terphenyl-d14		0.881	0.775	12.0	108	0.00

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240404lvi\
Data File : ABN0404a.D
Acq On : 4 Apr 2024 11:45 am
Operator : SV107:ljg
Sample : WG1904833-3,32,,ABN 10360 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 142 Sample Multiplier: 1

Quant Time: Apr 04 16:54:06 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:21:26 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
96	T	Butyl benzyl phthalate	*	5.000	5.635	-12.7	150	0.00
103	I	IS1_Chrysene-d12		1.000	1.000	0.0	106	0.00
104	T	Benzo(a)anthracene		1.348	1.445	-7.2	118	0.00
105	T	3,3'-Dichlorobenzidine		0.407	0.507	-24.6#	121	0.00
106	T	Chrysene		1.357	1.320	2.7	109	0.00
107	T	Bis(2-ethylhexyl)phthalate	*	5.000	6.052	-21.0#	133	0.00
108	T	Di-n-octylphthalate	*	5.000	6.815	-36.3#	157	0.00
109	T	Benzo(b)fluoranthene		1.169	1.391	-19.0	133	0.00
110	T	Benzo(k)fluoranthene		1.208	1.244	-3.0	105	0.00
111	T	Benzo(a)pyrene		1.048	1.237	-18.0	119	0.00
112	I	IS1_Perylene-d12		1.000	1.000	0.0	114	0.00
113	T	Indeno(1,2,3-cd)pyrene		0.942	1.154	-22.5#	134	0.00
114	T	Dibenzo(a,h)anthracene		0.987	1.048	-6.2	116	0.00
115	T	Benzo(ghi)perylene		0.991	1.042	-5.1	117	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : ABN0404a.D
Acq On : 4 Apr 2024 11:45 am
Operator : SV107:ljg
Sample : WG1904833-3,32,,ABN 10360 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 142 Sample Multiplier: 1

Quant Time: Apr 04 16:54:06 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:21:26 2024
Response via : Initial Calibration

Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	139992	4.000	ug/ml	0.00
34) IS1_Naphthalene-d8	7.922	136	528956	4.000	ug/ml	0.00
62) IS1_Acenaphthene-d10	9.675	164	295101	4.000	ug/ml	0.00
87) IS1_Phenanthrene-d10	11.110	188	561413	4.000	ug/ml	0.00
103) IS1_Chrysene-d12	13.745	240	474982	4.000	ug/ml	0.00
112) IS1_Perylene-d12	15.204	264	523541	4.000	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.681	112	211423	5.151	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 103.02%			
7) Phenol-d6	6.169	99	257241	4.943	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 98.86%			
19) Nitrobenzene-d5	7.151	82	244961	5.131	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 205.24%#			
45) 2-Fluorobiphenyl	9.039	172	488692	4.015	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 160.60%#			
78) 2,4,6-Tribromophenol	10.445	330	49756	4.512	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 90.24%			
95) 4-Terphenyl-d14	12.686	244	544059	4.402	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 176.08%#			
Target Compounds						Qvalue
2) n-Nitrosodimethylamine	2.199	74	141435	4.902	ug/ml#	77
3) Pyridine	2.240	79	215011	5.127	ug/ml#	68
5) Aniline	6.104	93	285025	4.609	ug/ml	98
6) 2-Chlorophenol	6.257	128	229568	5.093	ug/ml	95
8) Phenol	6.181	94	277516	4.891	ug/ml	98
9) Bis(2-chloroethyl)ether	6.228	93	212438	4.512	ug/ml	97
10) 1,3-Dichlorobenzene	6.428	146	262635	4.701	ug/ml	98
11) 1,4-Dichlorobenzene	6.528	146	265171	4.628	ug/ml	99
12) 1,2-Dichlorobenzene	6.704	146	255670	4.682	ug/ml	98
13) Benzyl alcohol	6.716	79	179283	4.806	ug/ml	98
14) Bis(2-chloroisopropyl)...	6.881	45	361335	5.683	ug/ml#	61
15) 2-Methylphenol	6.892	108	201598M3	5.076	ug/ml	
16) Hexachloroethane	7.087	117	102725	5.034	ug/ml#	77
17) n-Nitrosodi-n-propylamine	7.028	70	155224	4.844	ug/ml	94
18) 3-Methylphenol/4-Methy...	7.081	108	215623	5.017	ug/ml	99
20) Nitrobenzene	7.175	77	239975	4.909	ug/ml	99
21) Isophorone	7.451	82	425363	5.049	ug/ml	96
22) 2-Nitrophenol	7.534	139	118477	5.900	ug/ml	93

Data Path : I:\8270\SV107\240404lvi\
Data File : ABN0404a.D
Acq On : 4 Apr 2024 11:45 am
Operator : SV107:ljg
Sample : WG1904833-3,32,,ABN 10360 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 142 Sample Multiplier: 1

Quant Time: Apr 04 16:54:06 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:21:26 2024
Response via : Initial Calibration

Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
23) 2,4-Dimethylphenol	7.639	107	164565	4.915	ug/ml	99
24) Bis(2-chloroethoxy)met...	7.722	93	257975	4.539	ug/ml	99
25) 2,4-Dichlorophenol	7.804	162	194890	4.972	ug/ml	97
26) 1,2,4-Trichlorobenzene	7.875	180	215423	4.212	ug/ml	99
35) Naphthalene	7.939	128	646397	4.356	ug/ml	98
36) Benzoic Acid	7.739	105	142804	4.801	ug/ml	95
37) 4-Chloroaniline	8.028	65	85292	4.693	ug/ml	93
38) Hexachlorobutadiene	8.110	225	121837	4.048	ug/ml	98
39) p-Chloro-m-cresol	8.557	107	189917	5.043	ug/ml	99
40) 2-Methylnaphthalene	8.657	142	430924	4.371	ug/ml	95
41) 1-Methylnaphthalene	8.751	115	151014	4.480	ug/ml	92
42) Hexachlorocyclopentadiene	8.834	237	105793	4.843	ug/ml	99
43) 2,4,6-Trichlorophenol	8.957	196	144438	4.848	ug/ml	99
44) 2,4,5-Trichlorophenol	8.992	196	154393	4.777	ug/ml	100
46) 2-Chloronaphthalene	9.133	162	424332	4.282	ug/ml	98
47) 2-Nitroaniline	9.251	138	135870	4.752	ug/ml	92
48) 1,4-Dinitrobenzene	9.381	168	62995	4.656	ug/ml	87
49) 1,3-Dinitrobenzene	9.457	168	73023	5.150	ug/ml#	1
50) Dimethyl phthalate	9.451	163	491788	4.494	ug/ml#	98
51) Acenaphthylene	9.533	152	681552	4.573	ug/ml	98
52) 2,6-Dinitrotoluene	9.492	165	103737	4.481	ug/ml	88
53) 1,2-Dinitrobenzene	9.533	168	45933	4.639	ug/ml#	1
63) 3-Nitroaniline	9.651	138	123835	5.546	ug/ml#	97
64) Acenaphthene	9.710	154	385700	4.637	ug/ml	90
65) 2,4-Dinitrophenol	9.751	184	36868	3.774	ug/ml	93
66) Dibenzofuran	9.881	168	624850	4.575	ug/ml	98
67) 2,4-Dinitrotoluene	9.881	165	142478	4.884	ug/ml#	81
68) 4-Nitrophenol	9.857	65	111787	5.938	ug/ml	89
69) 2,3,5,6-Tetrachlorophenol	9.975	232	108818	4.658	ug/ml	99
70) 2,3,4,6-Tetrachlorophenol	10.016	232	113949	4.811	ug/ml	97
71) Diethyl phthalate	10.139	149	472249	4.918	ug/ml	99
72) Fluorene	10.210	166	473897	4.616	ug/ml	93
73) 4-Chlorophenyl phenyl ...	10.228	204	222852	4.215	ug/ml	92
74) 4-Nitroaniline	10.239	138	116993	5.200	ug/ml#	87
75) 4,6-Dinitro-o-cresol	10.275	198	74721	5.082	ug/ml#	67
76) NDPA/DPA	10.345	169	401879	4.879	ug/ml	94
77) Azobenzene	10.375	77	487422	5.035	ug/ml	99
79) 4-Bromophenyl phenyl e...	10.698	248	116102	4.183	ug/ml	93
80) Hexachlorobenzene	10.751	284	118409	3.865	ug/ml	95
81) Pentachlorophenol	10.945	266	31639	1.898	ug/ml	94
88) Phenanthrene	11.133	178	719527	4.611	ug/ml	98

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : ABN0404a.D
Acq On : 4 Apr 2024 11:45 am
Operator : SV107:ljg
Sample : WG1904833-3,32,,ABN 10360 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 142 Sample Multiplier: 1

Quant Time: Apr 04 16:54:06 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:21:26 2024
Response via : Initial Calibration

Sub List : ABNical - ABN ical sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
89) Anthracene	11.180	178	728057	4.938	ug/ml	98
90) Carbazole	11.351	167	690508	5.163	ug/ml	97
91) Di-n-butylphthalate	11.733	149	773784	5.437	ug/ml	99
92) Fluoranthene	12.286	202	812208	4.838	ug/ml#	93
93) Benzidine	12.433	184	567836	6.265	ug/ml#	95
94) Pyrene	12.504	202	874487	4.814	ug/ml	98
96) Butyl benzyl phthalate	13.210	149	362741	5.635	ug/ml	93
104) Benzo(a)anthracene	13.733	228	857774	5.357	ug/ml	97
105) 3,3'-Dichlorobenzidine	13.733	252	300763	6.229	ug/ml	98
106) Chrysene	13.769	228	783803	4.864	ug/ml	96
107) Bis(2-ethylhexyl)phtha...	13.839	149	512033	6.052	ug/ml#	92
108) Di-n-octylphthalate	14.515	149	919980	6.815	ug/ml#	76
109) Benzo(b)fluoranthene	14.839	252	825621	5.950	ug/ml#	95
110) Benzo(k)fluoranthene	14.863	252	738305	5.145	ug/ml#	94
111) Benzo(a)pyrene	15.151	252	734305	5.902	ug/ml#	94
113) Indeno(1,2,3-cd)pyrene	16.180	276	755441M6	6.129	ug/mL	
114) Dibenzo(a,h)anthracene	16.204	278	685950	5.308	ug/ml	95
115) Benzo(ghi)perylene	16.433	276	681779	5.257	ug/ml	93

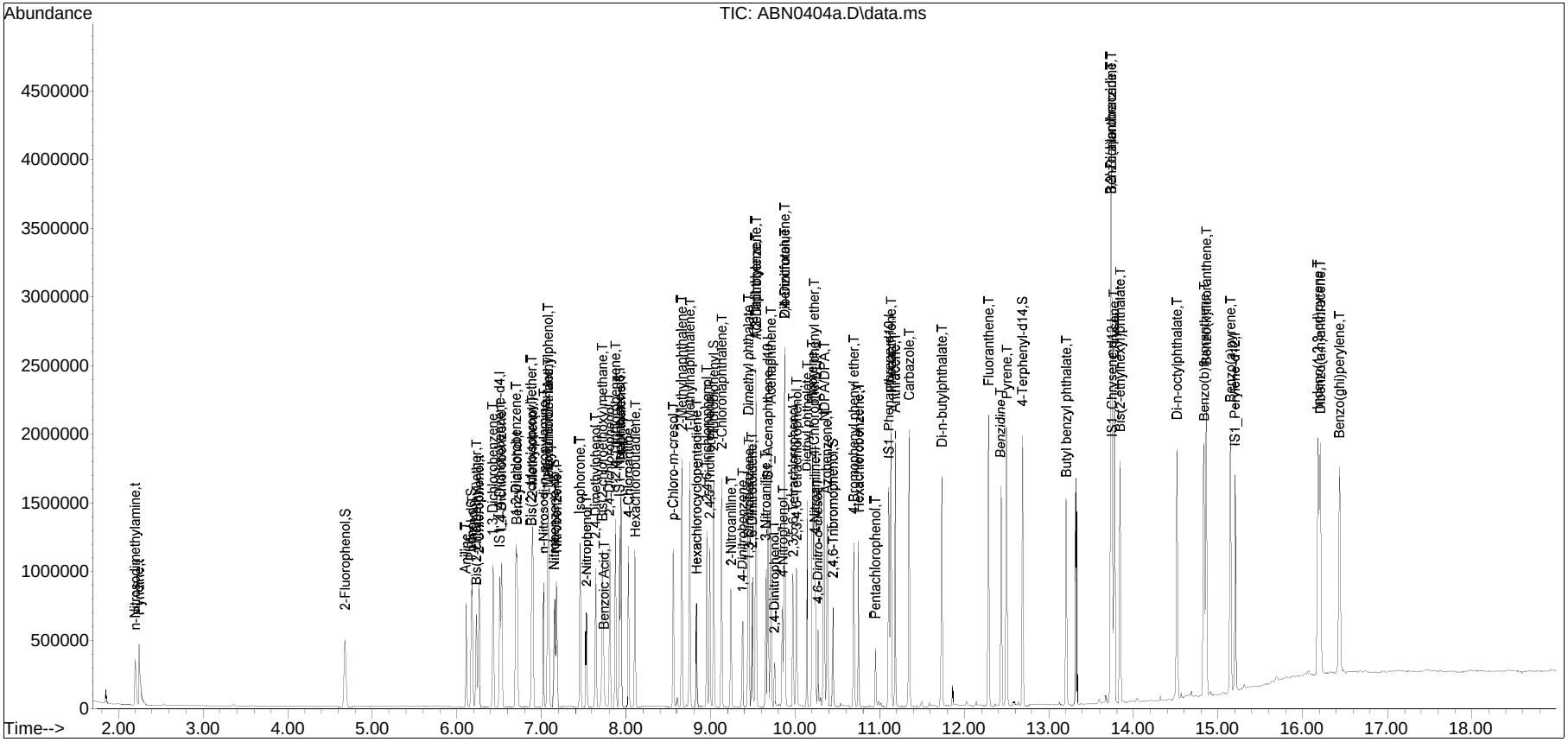
(#) = qualifier out of range (m) = manual integration (+) = signals summed

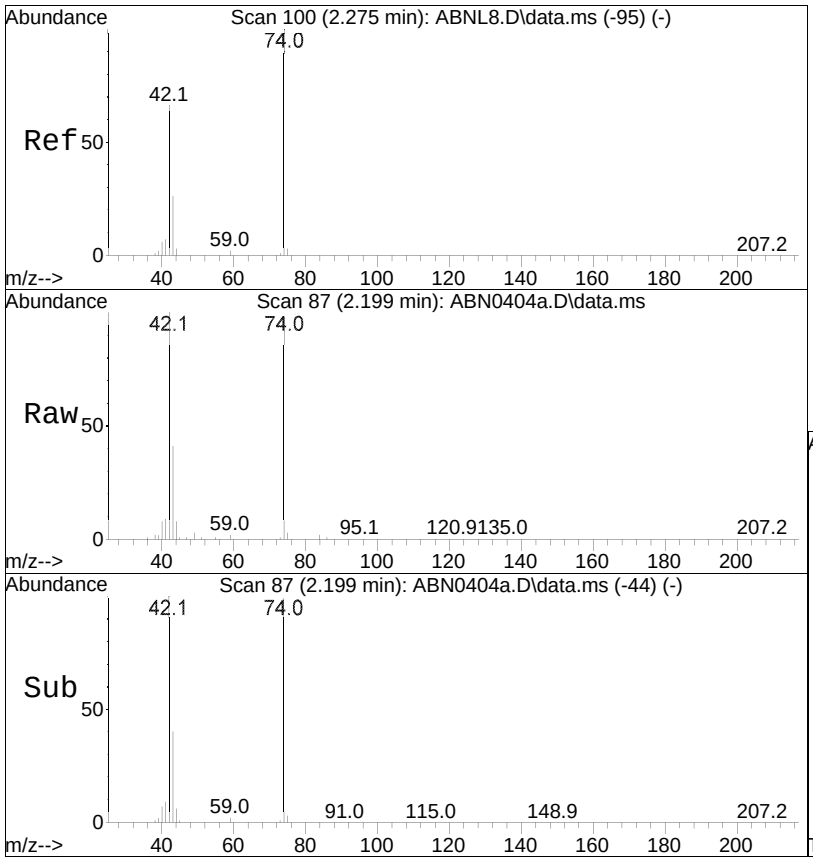
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : ABN0404a.D
Acq On : 4 Apr 2024 11:45 am
Operator : SV107:ljg
Sample : WG1904833-3,32,,ABN 10360 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 142 Sample Multiplier: 1

Quant Time: Apr 04 16:54:06 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:21:26 2024
Response via : Initial Calibration

Sub List : ABNical - ABN ical sublist

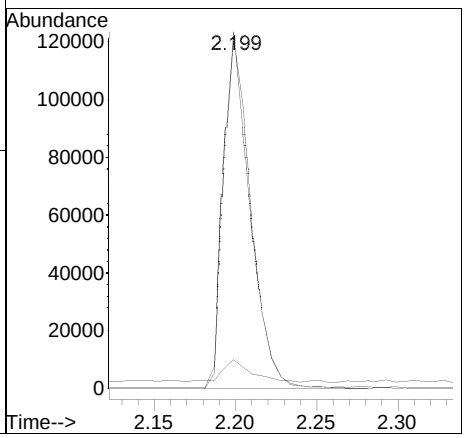


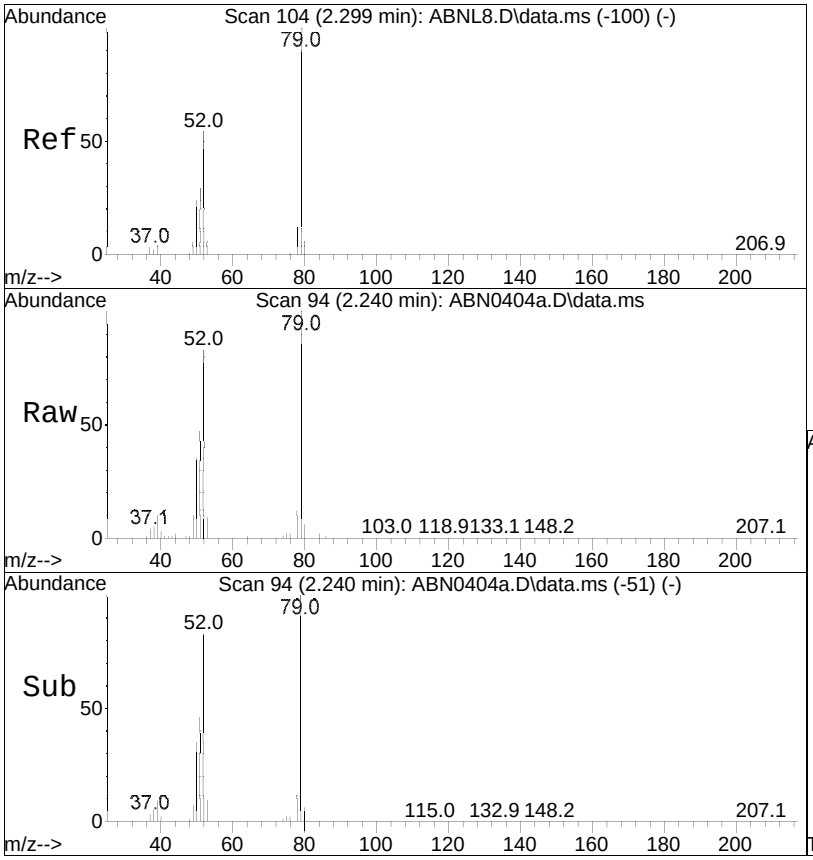


#2
n-Nitrosodimethylamine
Concen: 4.90 ug/ml
RT: 2.199 min Scan# 87
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 74 Resp: 141435

Ion	Ratio	Lower	Upper
74	100		
42	97.6	100.0	150.0#
44	6.7	6.7	10.1#

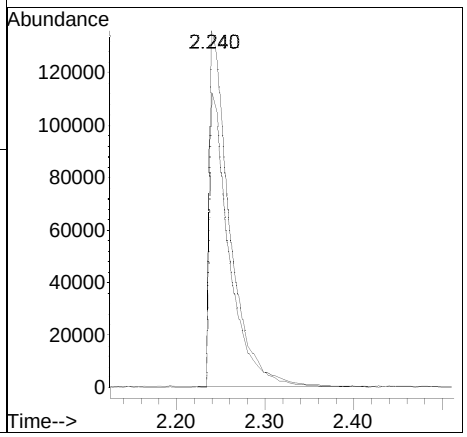


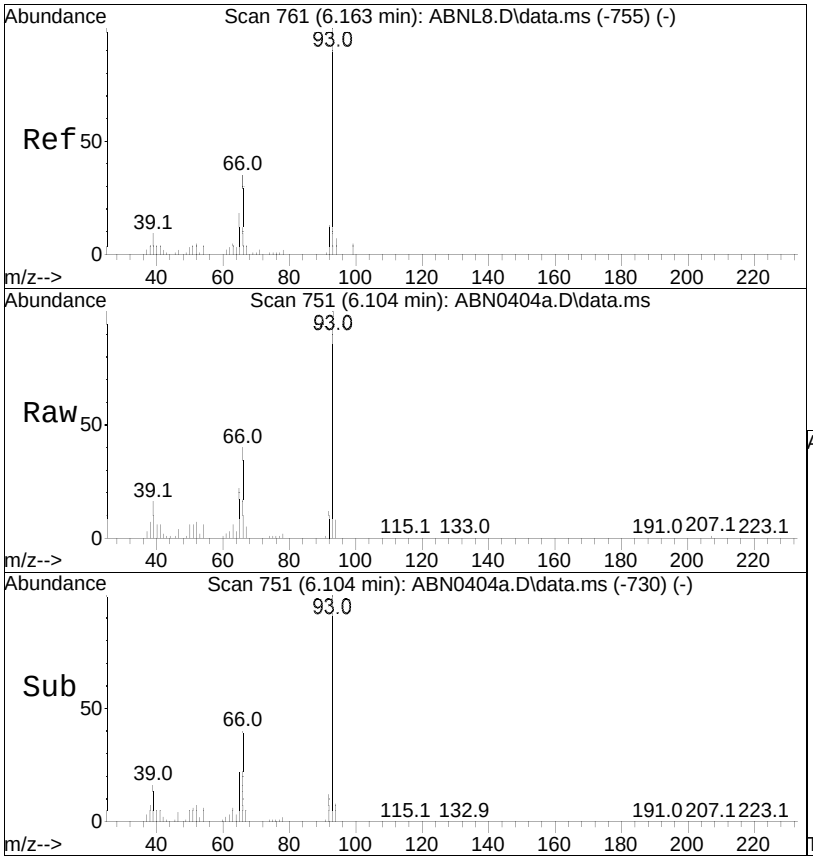


#3
Pyridine
Concen: 5.13 ug/ml
RT: 2.240 min Scan# 94
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 79 Resp: 215011

Ion	Ratio	Lower	Upper
79	100		
52	81.7	93.1	139.7#

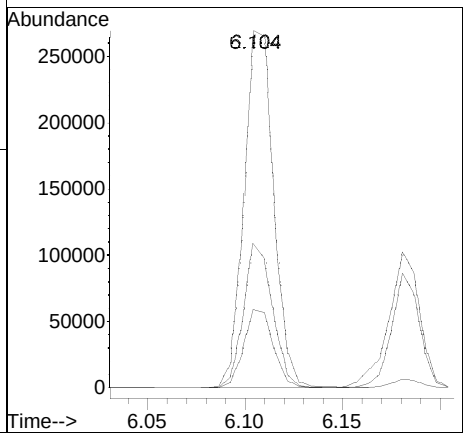


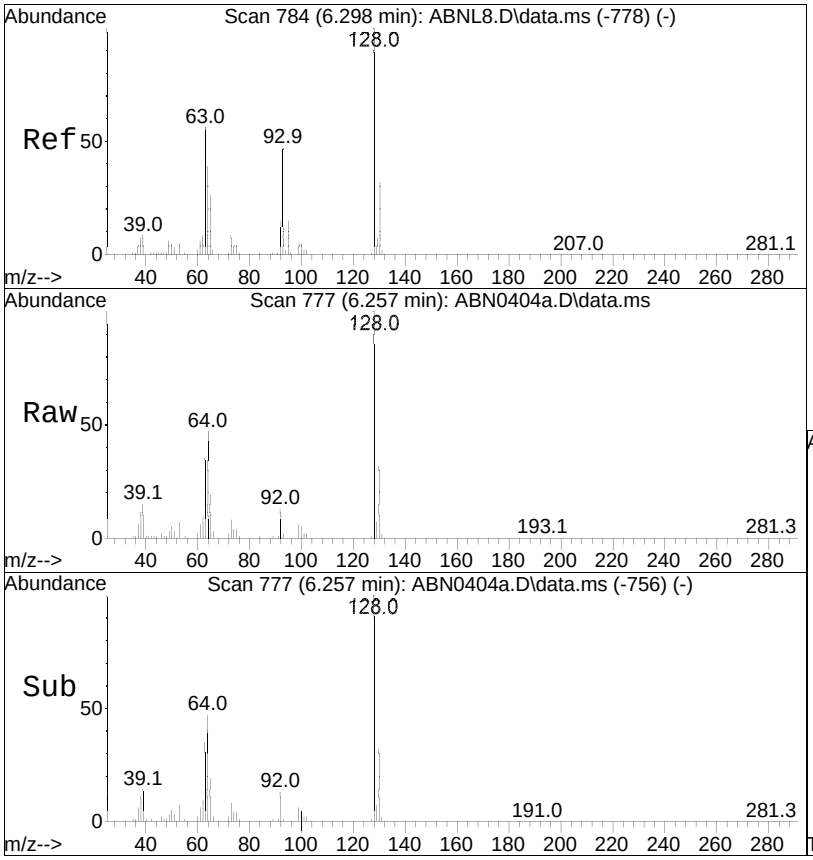


#5
Aniline
Concen: 4.61 ug/ml
RT: 6.104 min Scan# 751
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 93 Resp: 285025

Ion	Ratio	Lower	Upper
93	100		
66	39.5	32.6	49.0
65	21.8	17.6	26.4

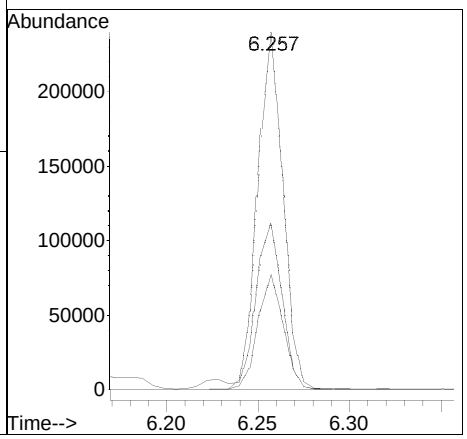


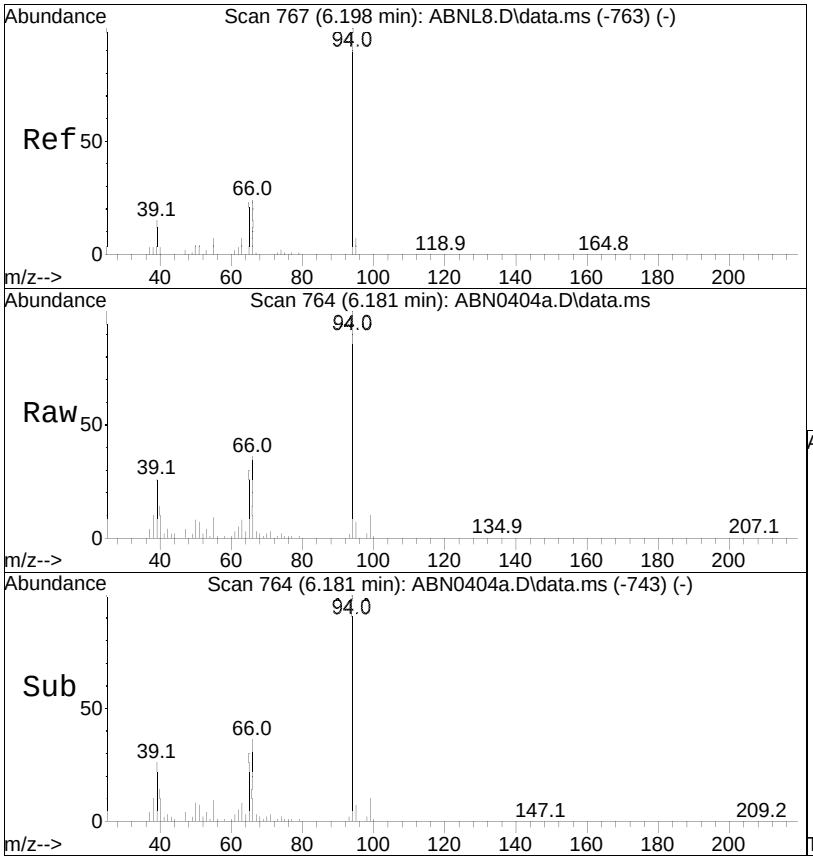


#6
2-Chlorophenol
Concen: 5.09 ug/ml
RT: 6.257 min Scan# 777
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:128 Resp: 229568

Ion	Ratio	Lower	Upper
128	100		
64	50.7	45.1	67.7
130	32.7	26.2	39.4

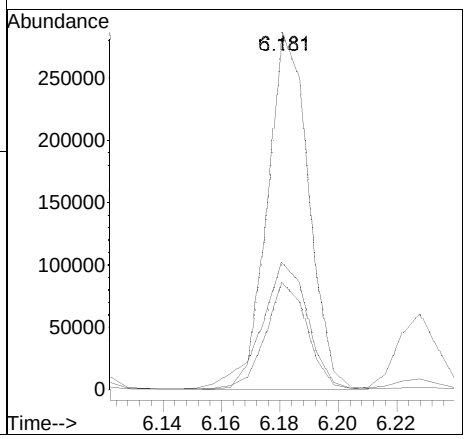


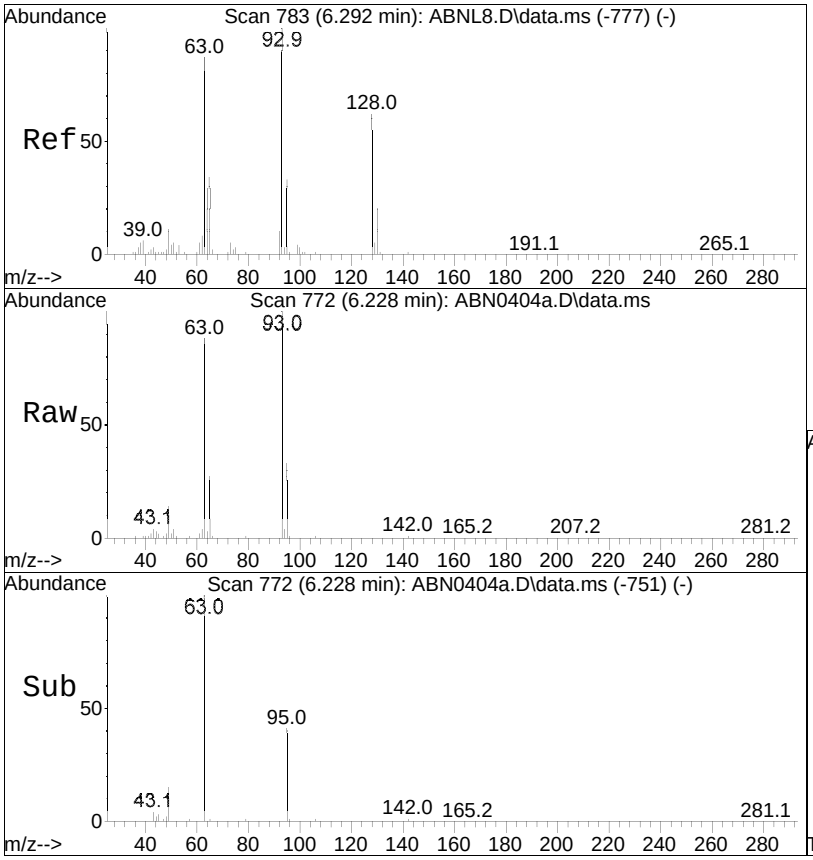


#8
Phenol
Concen: 4.89 ug/ml
RT: 6.181 min Scan# 764
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 94 Resp: 277516

Ion	Ratio	Lower	Upper
94	100		
65	30.7	26.0	39.0
66	41.0	33.8	50.8

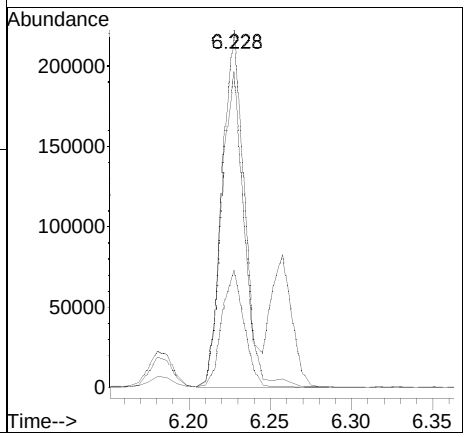


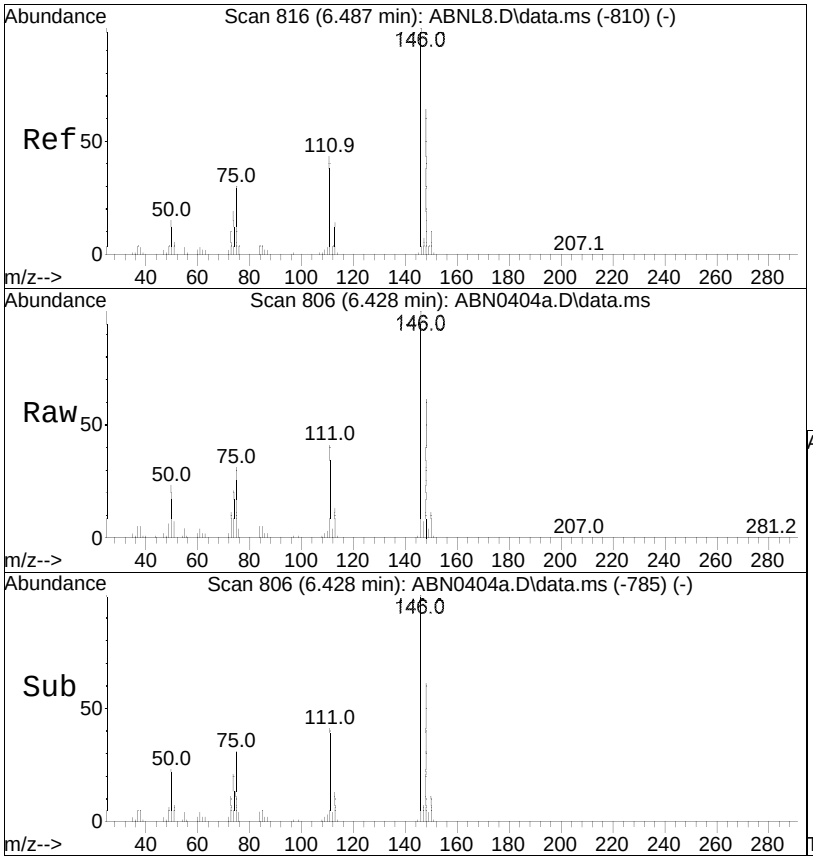


#9
Bis(2-chloroethyl)ether
Concen: 4.51 ug/ml
RT: 6.228 min Scan# 772
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 93 Resp: 212438

Ion	Ratio	Lower	Upper
93	100		
63	89.7	74.6	111.8
95	32.8	25.9	38.9

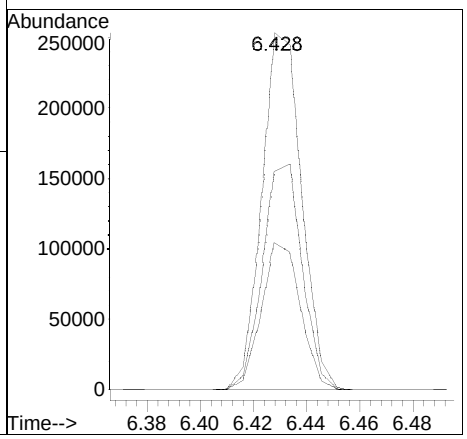


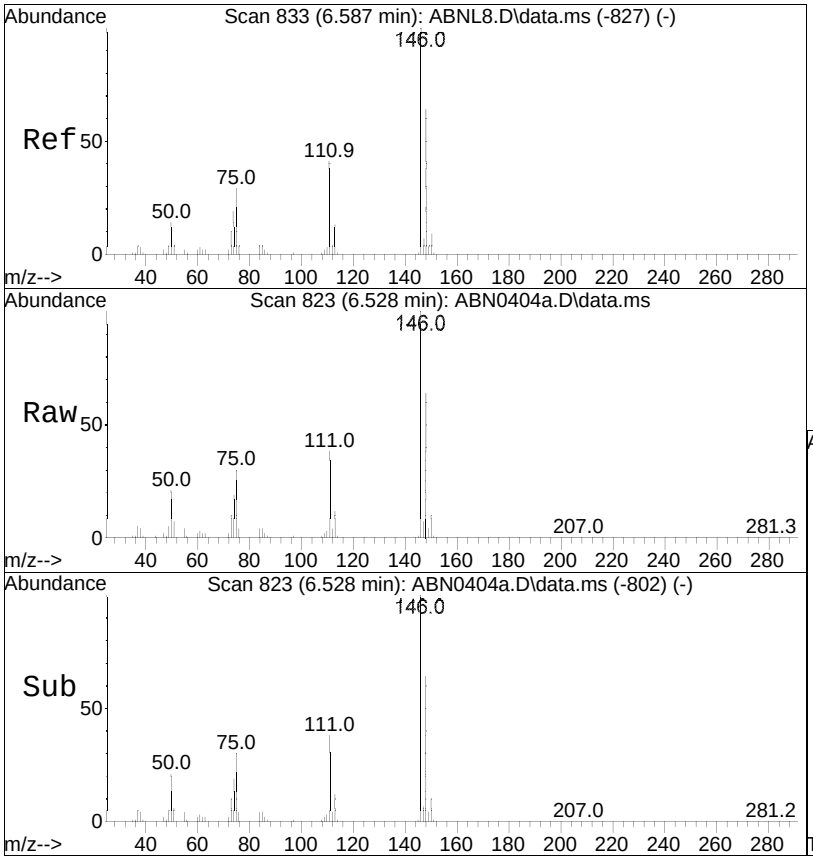


#10
1,3-Dichlorobenzene
Concen: 4.70 ug/ml
RT: 6.428 min Scan# 806
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:146 Resp: 262635

Ion	Ratio	Lower	Upper
146	100		
111	40.8	34.3	51.5
148	63.0	50.8	76.2

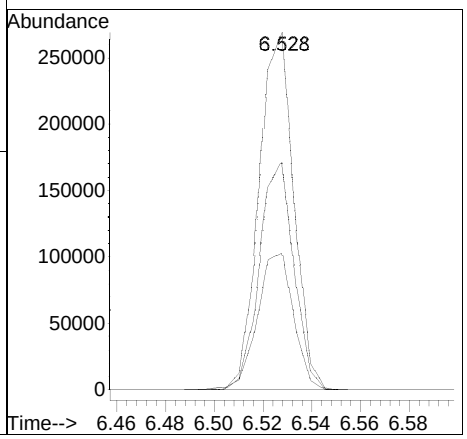


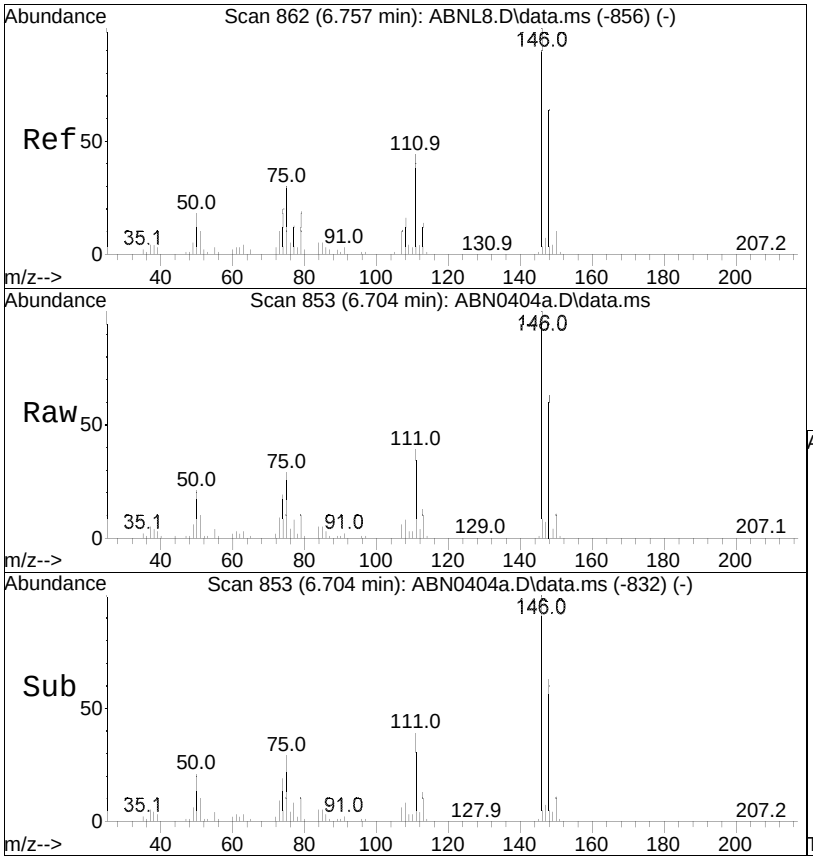


#11
1,4-Dichlorobenzene
Concen: 4.63 ug/ml
RT: 6.528 min Scan# 823
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:146 Resp: 265171

Ion	Ratio	Lower	Upper
146	100		
148	63.4	50.7	76.1
111	40.2	33.4	50.0

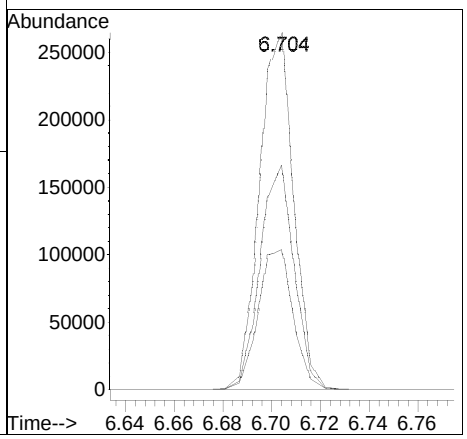


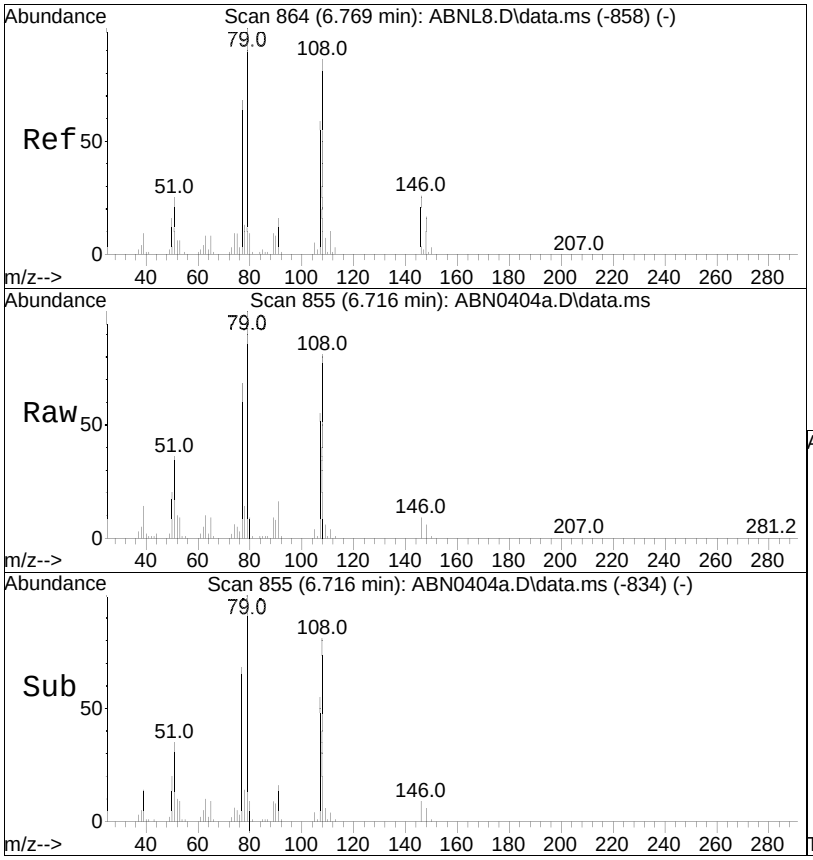


#12
1,2-Dichlorobenzene
Concen: 4.68 ug/ml
RT: 6.704 min Scan# 853
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:146 Resp: 255670

Ion	Ratio	Lower	Upper
146	100		
111	40.6	34.6	52.0
148	62.7	50.2	75.4

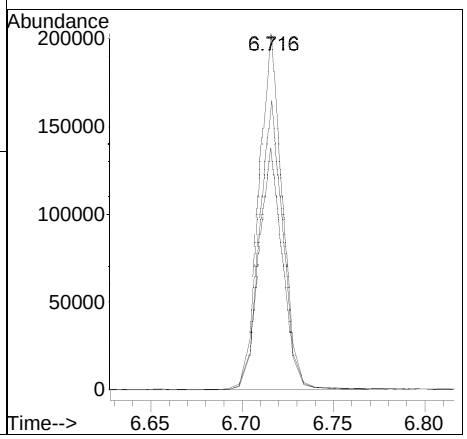


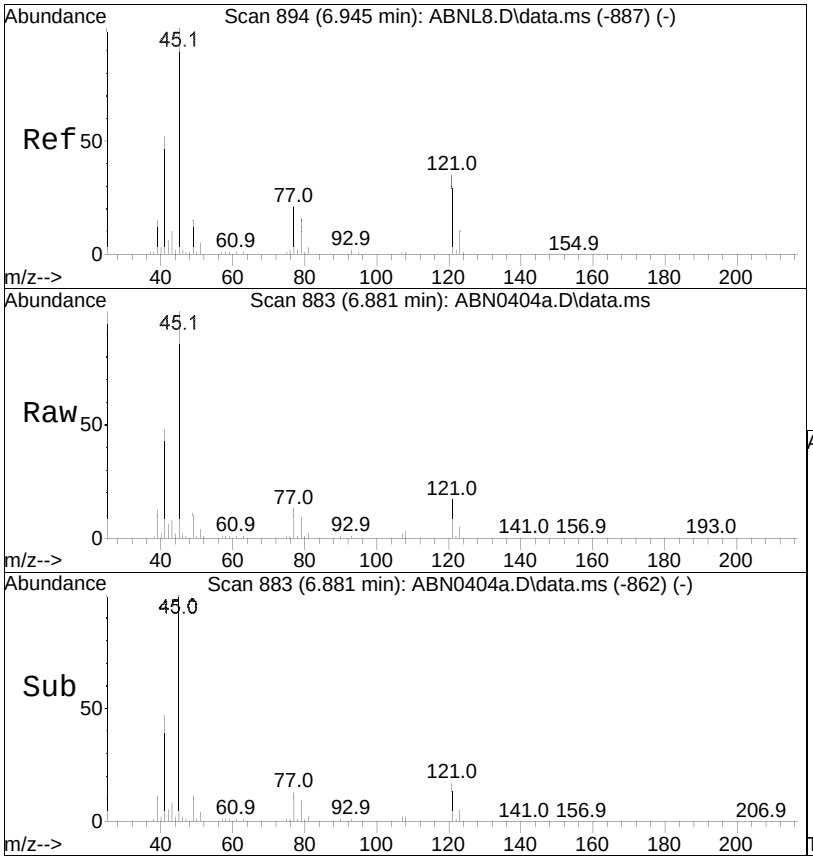


#13
Benzyl alcohol
Concen: 4.81 ug/ml
RT: 6.716 min Scan# 855
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 79 Resp: 179283

Ion	Ratio	Lower	Upper
79	100		
77	69.0	54.9	82.3
108	81.7	63.1	94.7

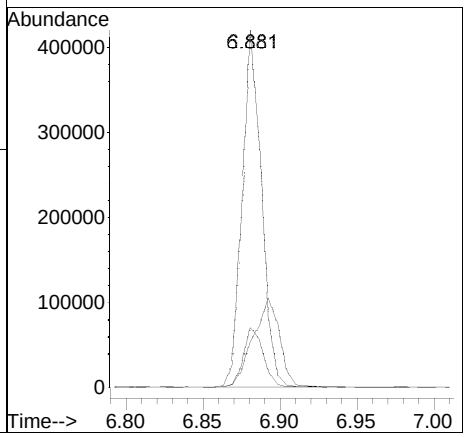


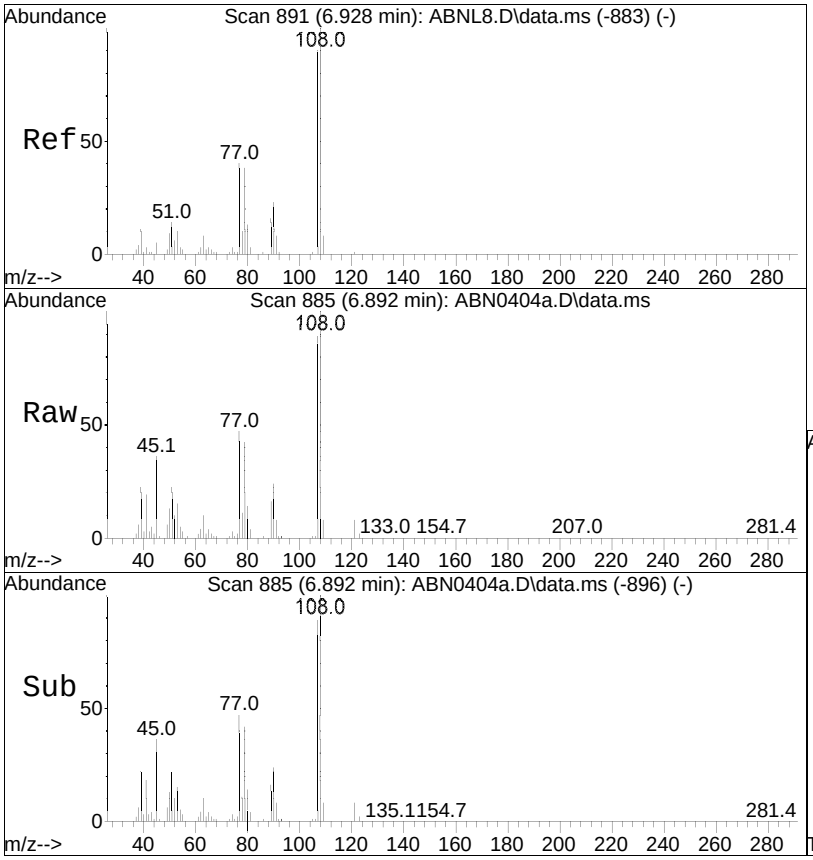


#14
Bis(2-chloroisopropyl)ether
Concen: 5.68 ug/ml
RT: 6.881 min Scan# 883
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 45 Resp: 361335

Ion	Ratio	Lower	Upper
45	100		
121	17.8	9.8	14.6#
77	34.7	6.1	9.1#

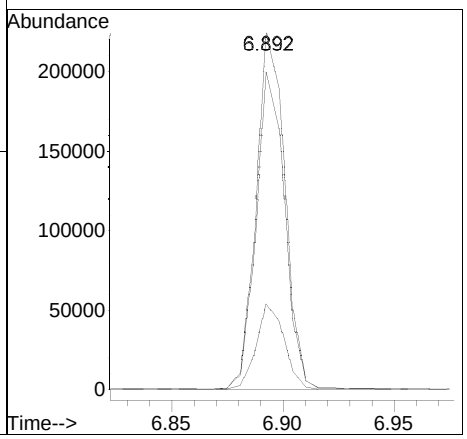


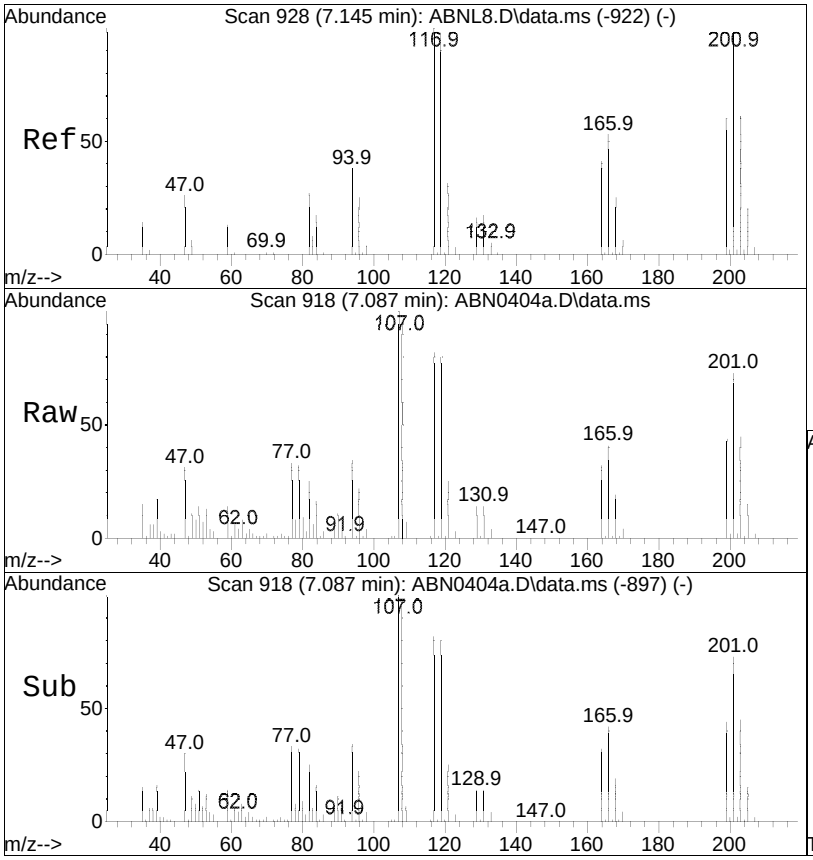


#15
2-Methylphenol
Concen: 5.08 ug/ml M3
RT: 6.892 min Scan# 885
Delta R.T. -0.188 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:108 Resp: 201598

Ion	Ratio	Lower	Upper
108	100		
107	119.2	70.7	106.1#
90	11.3	18.7	28.1#

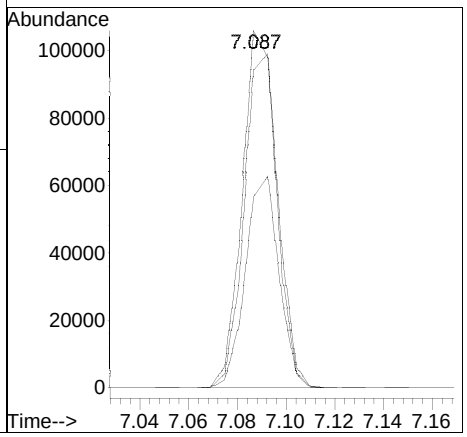


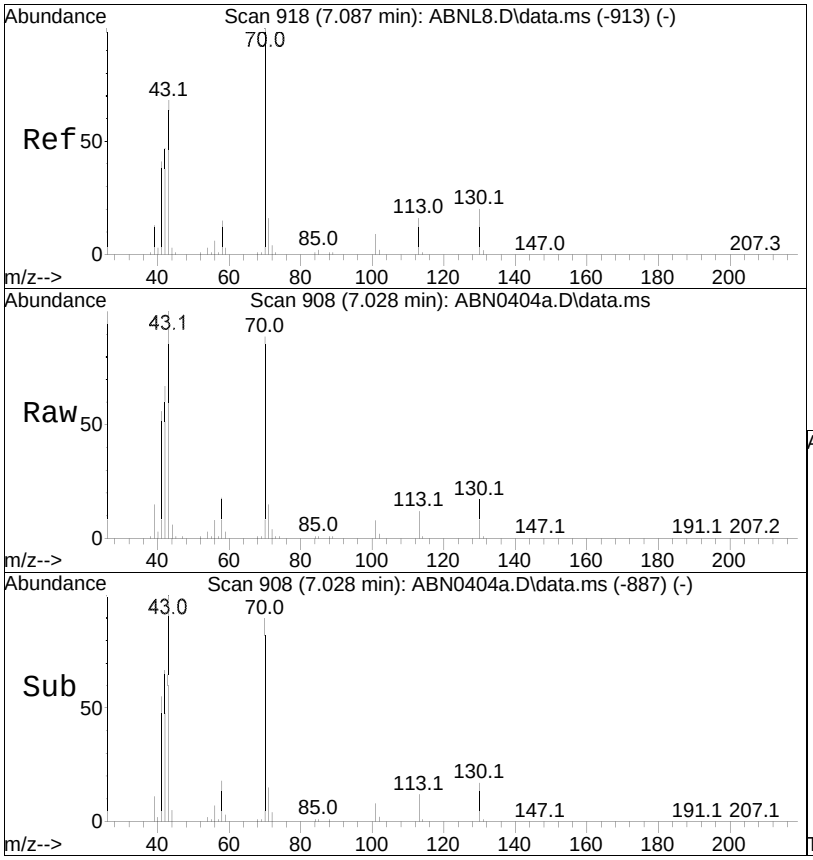


#16
Hexachloroethane
Concen: 5.03 ug/ml
RT: 7.087 min Scan# 918
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:117 Resp: 102725

Ion	Ratio	Lower	Upper
117	100		
201	94.5	58.6	87.8#
199	58.6	36.9	55.3#

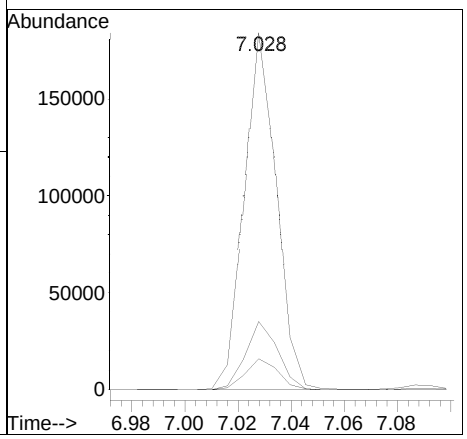


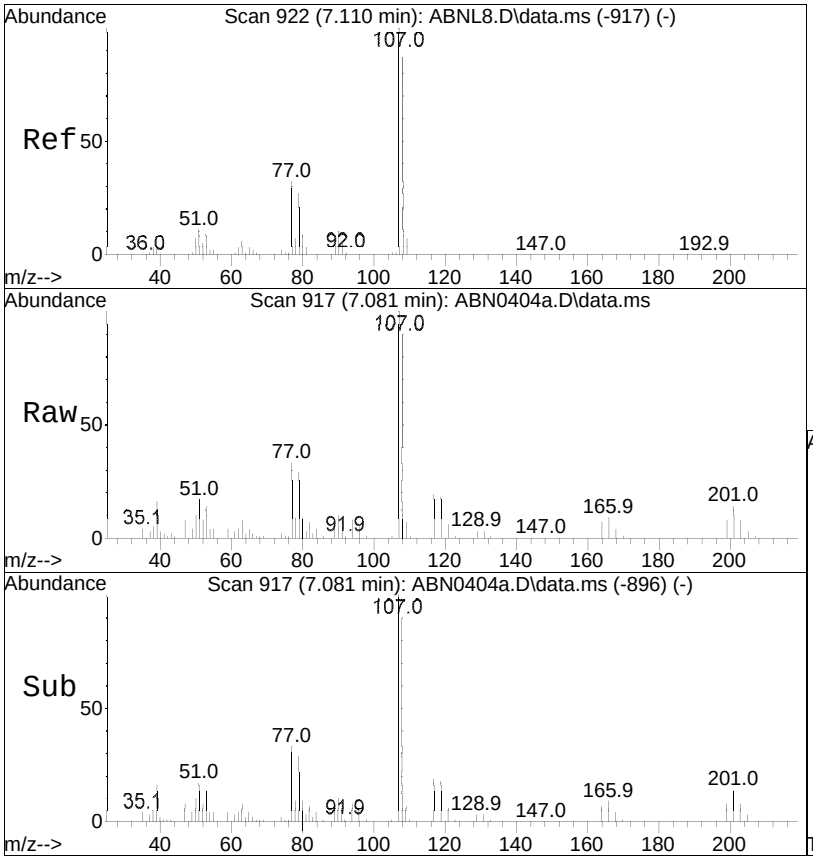


#17
n-Nitrosodi-n-propylamine
Concen: 4.84 ug/ml
RT: 7.028 min Scan# 908
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 70 Resp: 155224

Ion	Ratio	Lower	Upper
70	100		
130	19.0	18.2	27.4
101	8.8	7.8	11.8

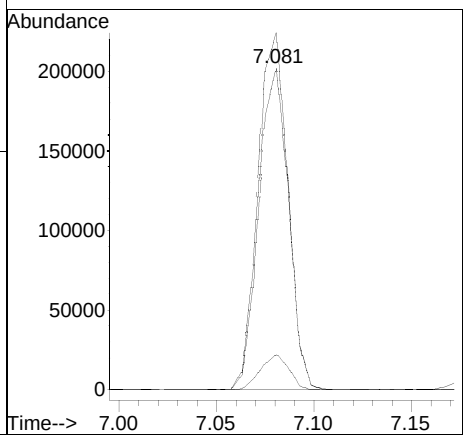


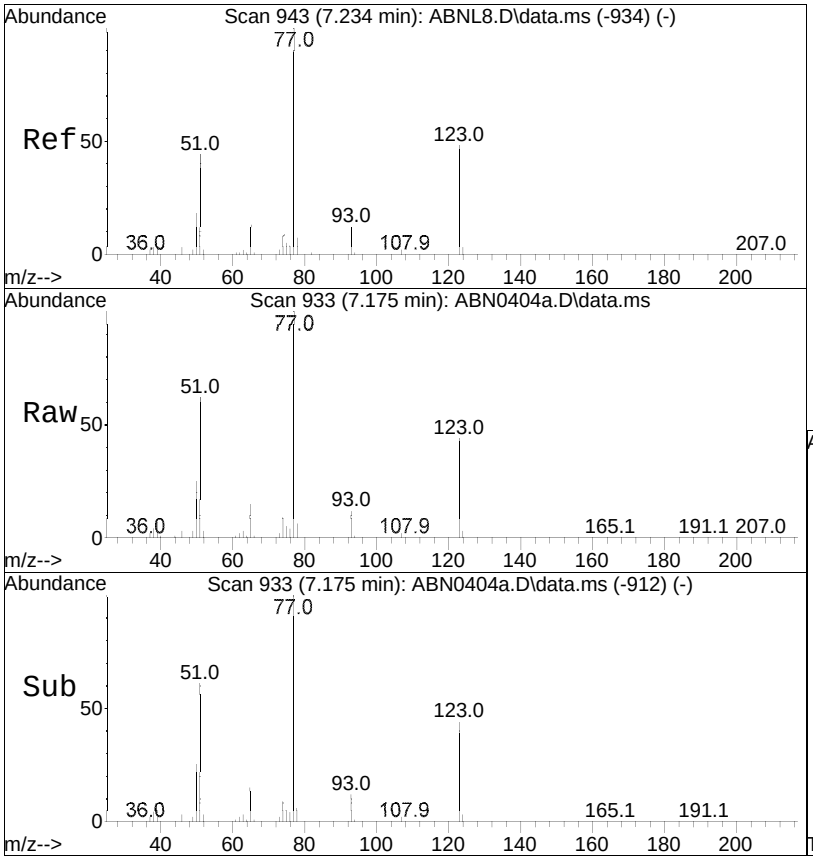


#18
3-Methylphenol/4-Methylphenol
Concen: 5.02 ug/ml
RT: 7.081 min Scan# 917
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:108 Resp: 215623

Ion	Ratio	Lower	Upper
108	100		
107	111.5	88.6	132.8
90	10.5	8.8	13.2

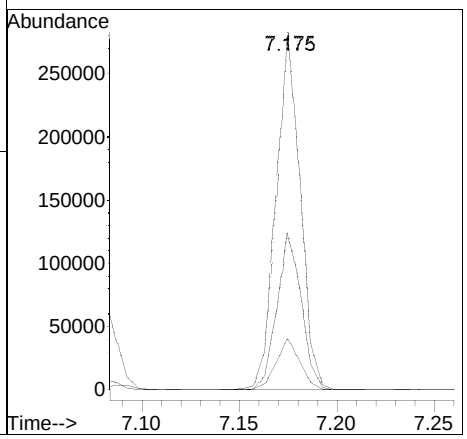


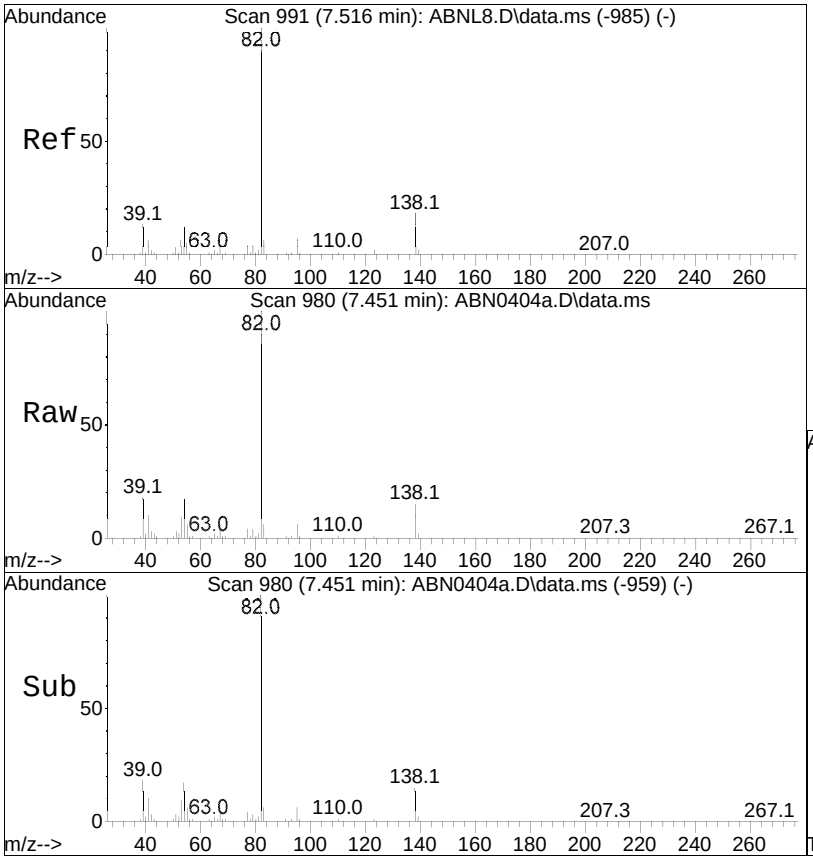


#20
Nitrobenzene
Concen: 4.91 ug/ml
RT: 7.175 min Scan# 933
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 77 Resp: 239975

Ion	Ratio	Lower	Upper
77	100		
123	44.5	36.3	54.5
65	14.4	11.6	17.4

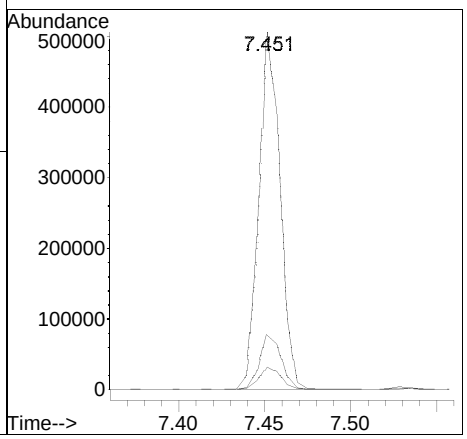


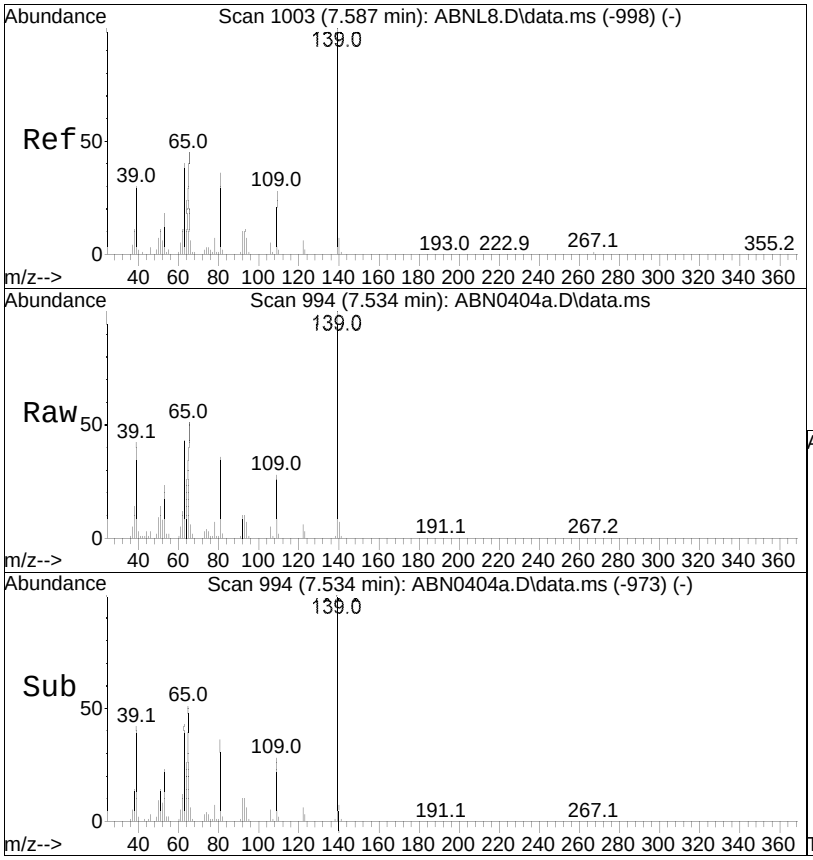


#21
Isophorone
Concen: 5.05 ug/ml
RT: 7.451 min Scan# 980
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 82 Resp: 425363

Ion	Ratio	Lower	Upper
82	100		
138	15.9	14.7	22.1
95	6.6	5.2	7.8

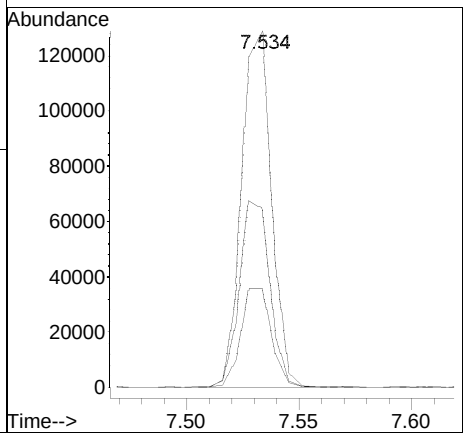


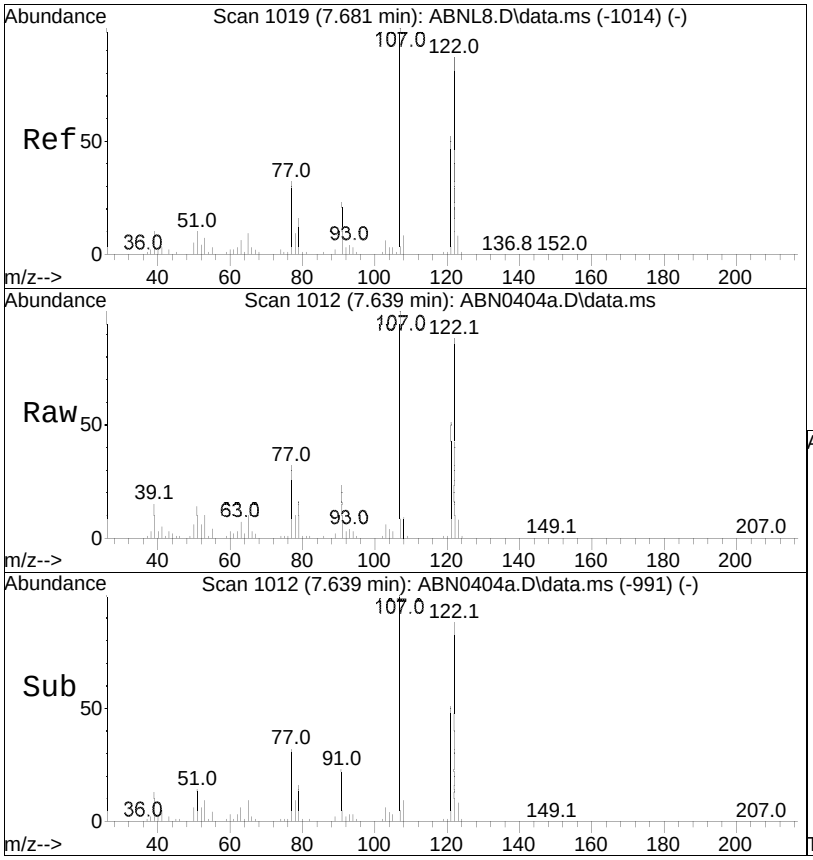


#22
2-Nitrophenol
Concen: 5.90 ug/ml
RT: 7.534 min Scan# 994
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:139 Resp: 118477

Ion	Ratio	Lower	Upper
139	100		
109	28.9	19.4	29.0
65	53.7	46.1	69.1

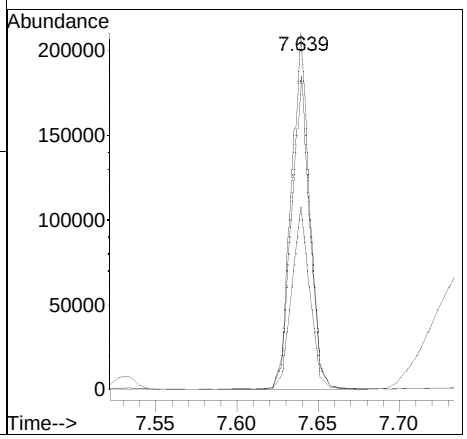


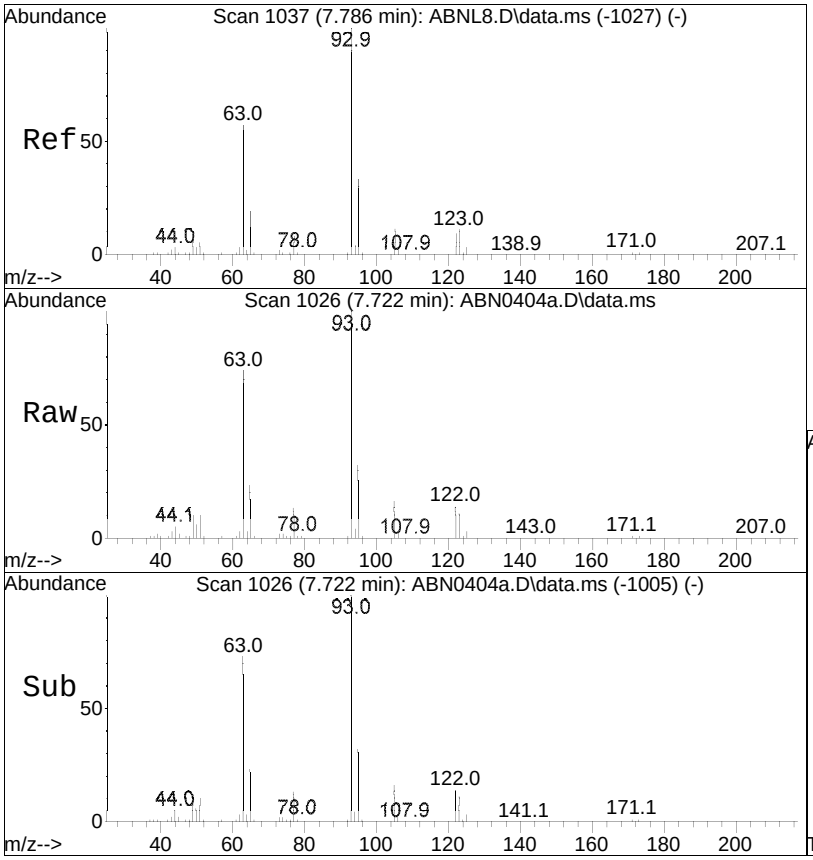


#23
2,4-Dimethylphenol
Concen: 4.91 ug/ml
RT: 7.639 min Scan# 1012
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:107 Resp: 164565

Ion	Ratio	Lower	Upper
107	100		
121	51.1	40.0	60.0
122	87.5	70.2	105.4

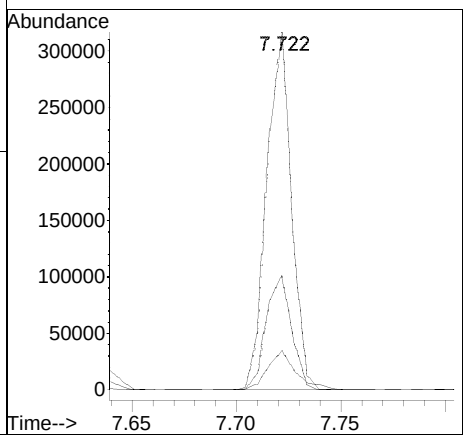


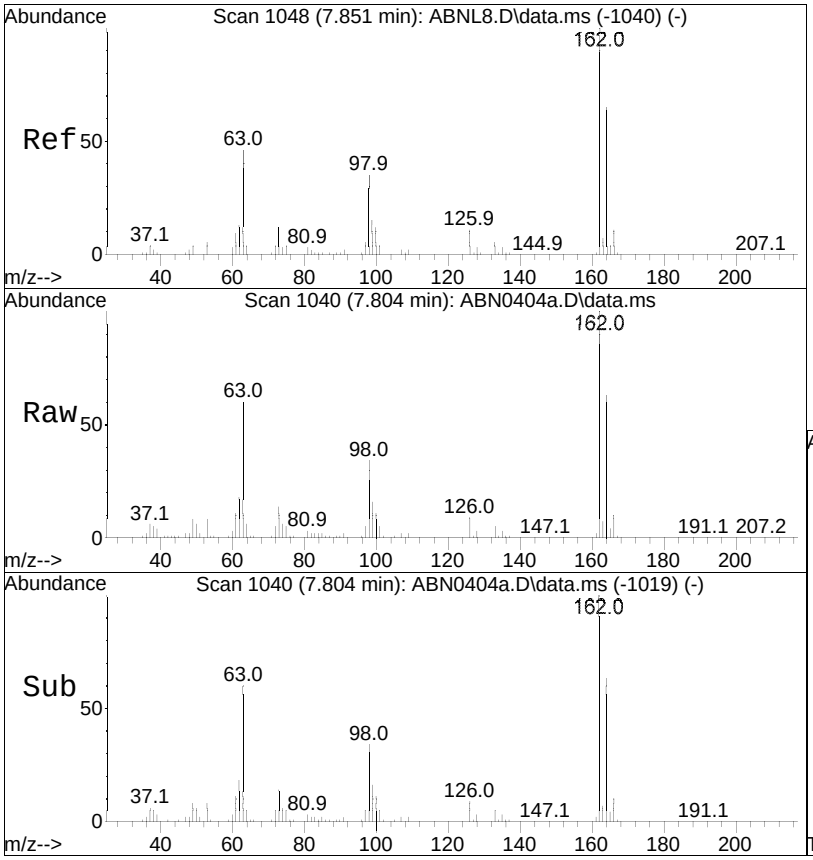


#24
Bis(2-chloroethoxy)methane
Concen: 4.54 ug/ml
RT: 7.722 min Scan# 1026
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 93 Resp: 257975

Ion	Ratio	Lower	Upper
93	100		
95	33.0	25.8	38.8
123	12.9	10.1	15.1

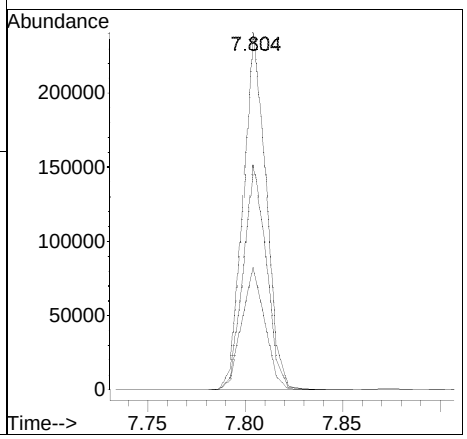


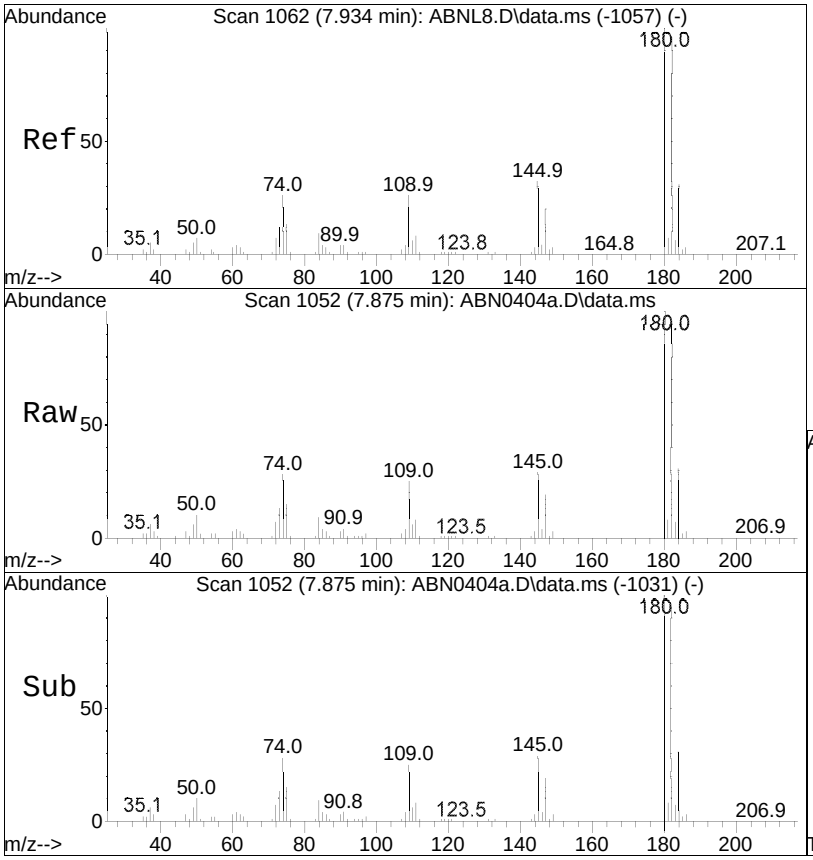


#25
2,4-Dichlorophenol
Concen: 4.97 ug/ml
RT: 7.804 min Scan# 1040
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:162 Resp: 194890

Ion	Ratio	Lower	Upper
162	100		
164	63.6	51.0	76.4
98	34.9	32.2	48.2

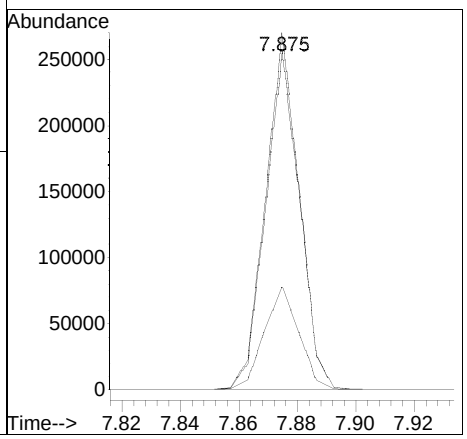


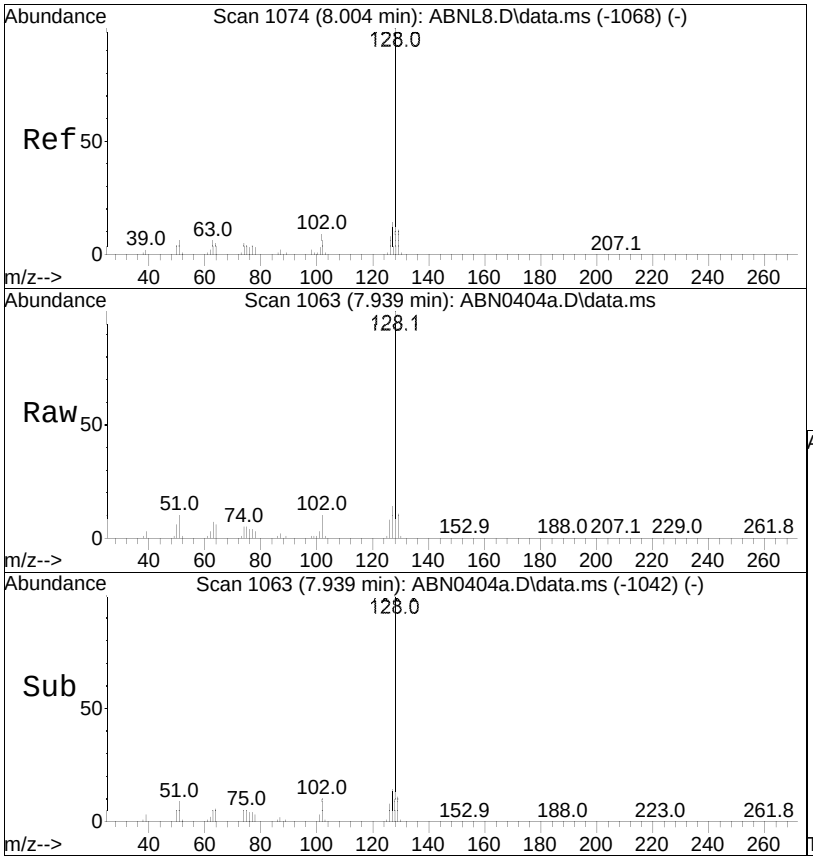


#26
1,2,4-Trichlorobenzene
Concen: 4.21 ug/ml
RT: 7.875 min Scan# 1052
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:180 Resp: 215423

Ion	Ratio	Lower	Upper
180	100		
182	95.4	76.0	114.0
145	29.6	25.7	38.5

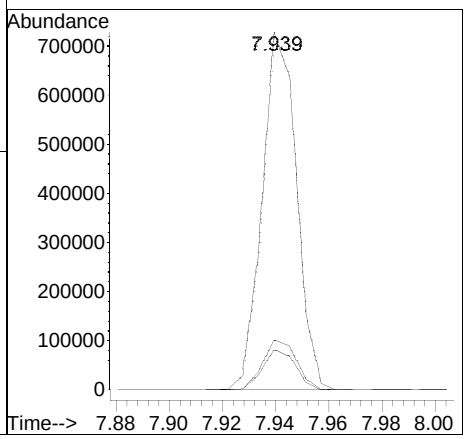


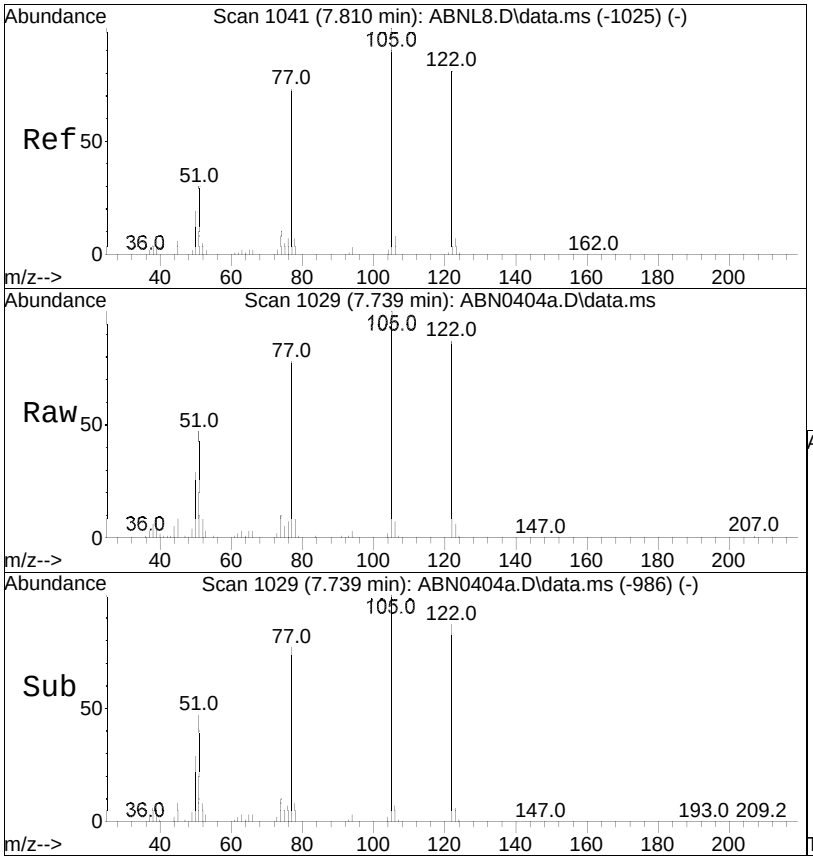


#35
Naphthalene
Concen: 4.36 ug/ml
RT: 7.939 min Scan# 1063
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:128 Resp: 646397

Ion	Ratio	Lower	Upper
128	100		
129	11.1	8.7	13.1
127	13.9	10.3	15.5

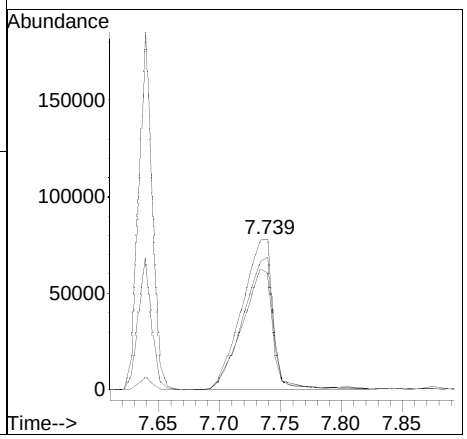


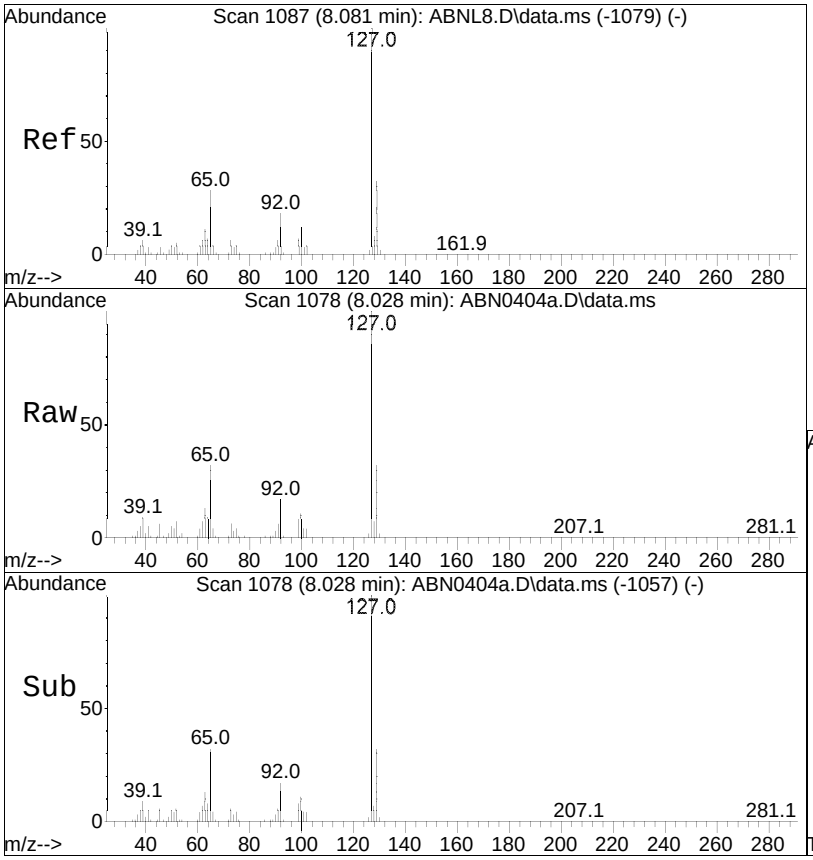


#36
Benzoic Acid
Concen: 4.80 ug/ml
RT: 7.739 min Scan# 1029
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:105 Resp: 142804

Ion	Ratio	Lower	Upper
105	100		
122	81.9	59.9	89.9
77	76.4	60.1	90.1

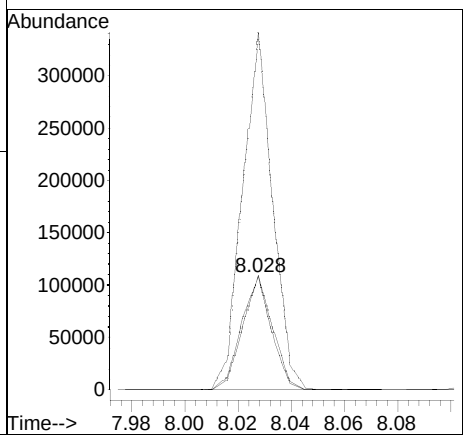


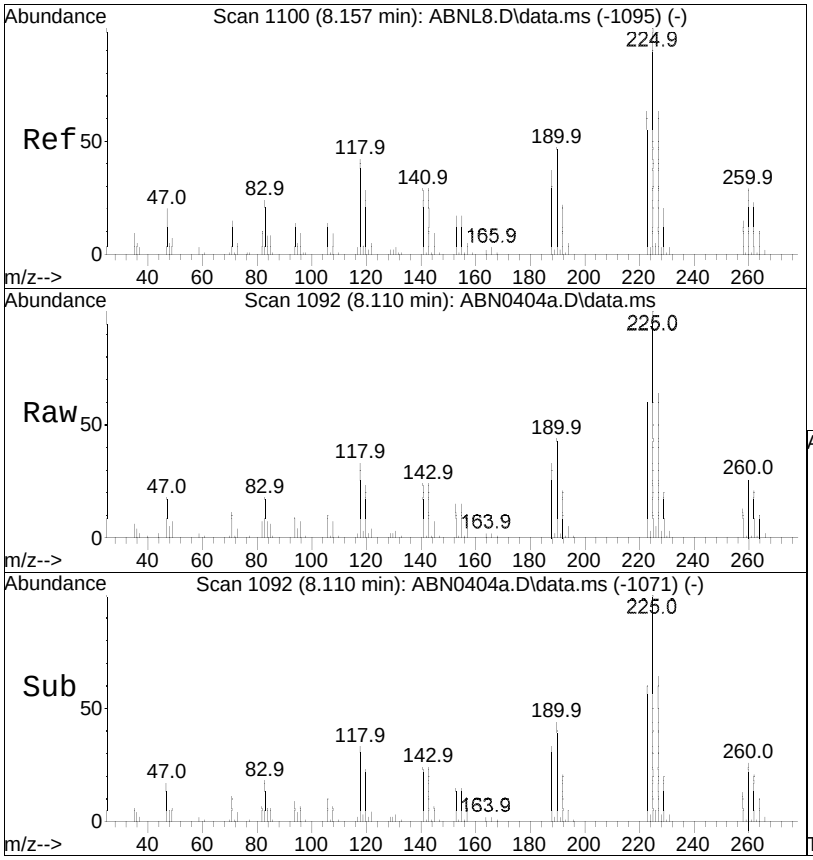


#37
4-Chloroaniline
Concen: 4.69 ug/ml
RT: 8.028 min Scan# 1078
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 65 Resp: 85292

Ion	Ratio	Lower	Upper
65	100		
127	313.0	237.6	356.4
129	100.3	76.3	114.5

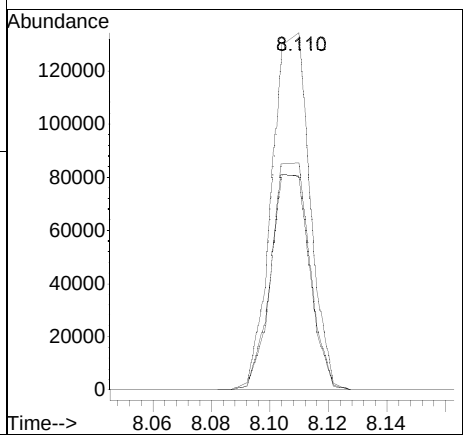


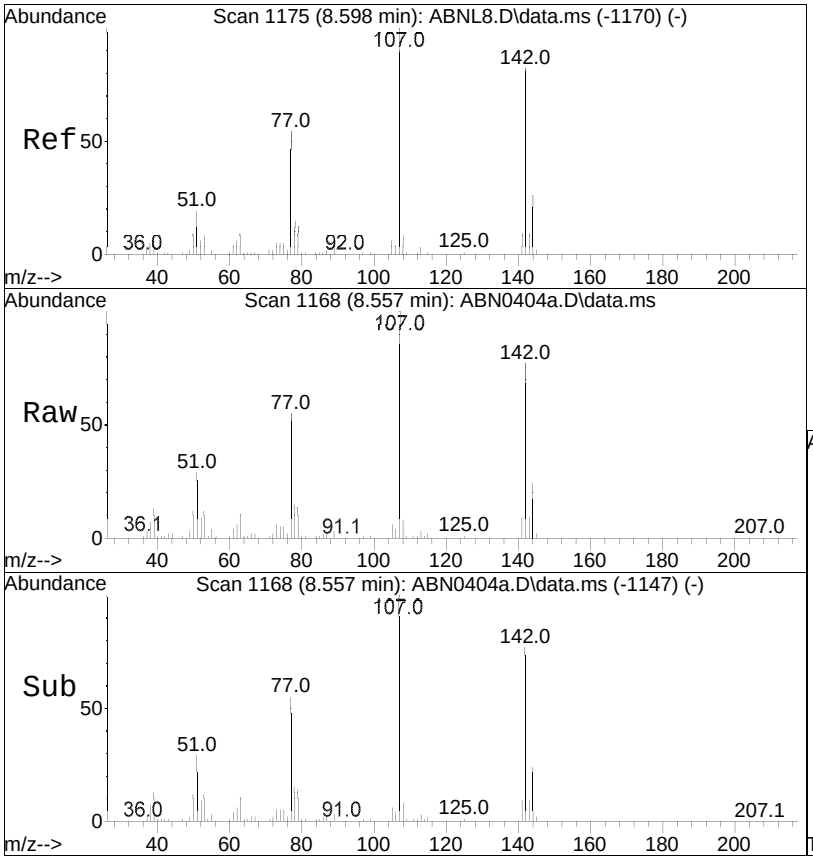


#38
Hexachlorobutadiene
Concen: 4.05 ug/ml
RT: 8.110 min Scan# 1092
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:225 Resp: 121837

Ion	Ratio	Lower	Upper
225	100		
223	61.4	50.3	75.5
227	64.0	52.2	78.2

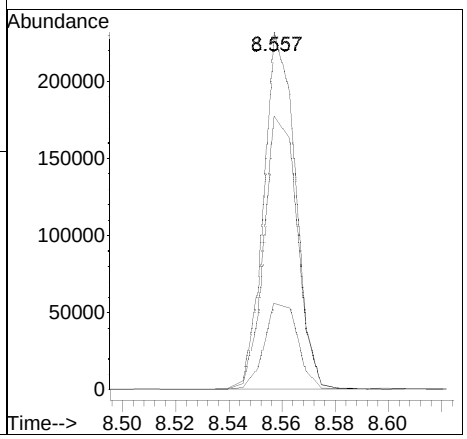


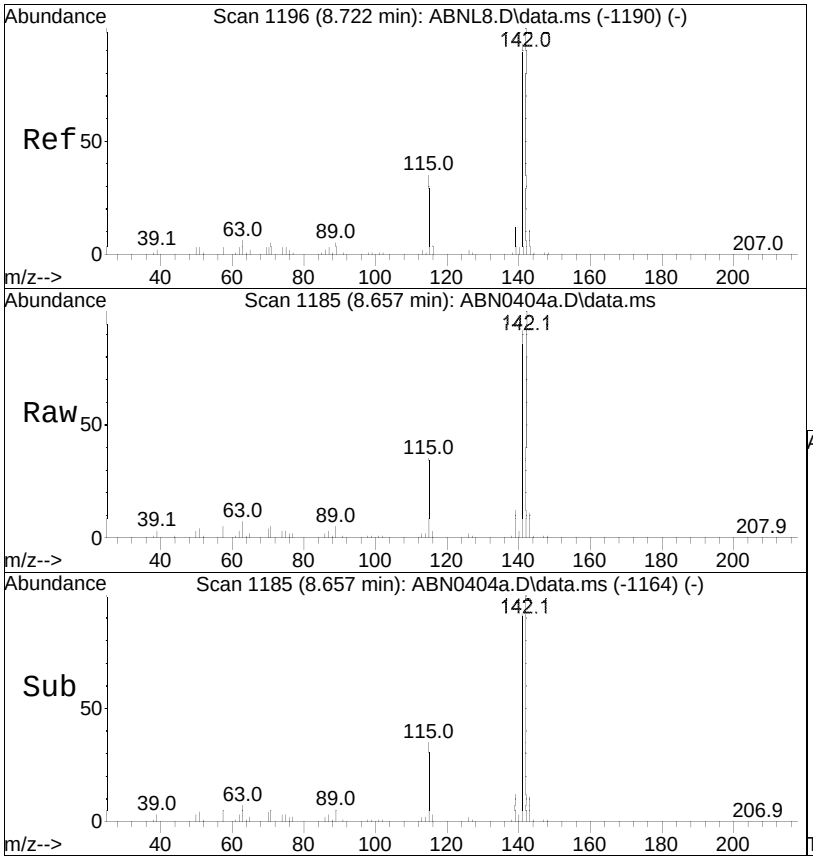


#39
p-Chloro-m-cresol
Concen: 5.04 ug/ml
RT: 8.557 min Scan# 1168
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:107 Resp: 189917

Ion	Ratio	Lower	Upper
107	100		
144	25.9	20.9	31.3
142	81.1	66.1	99.1

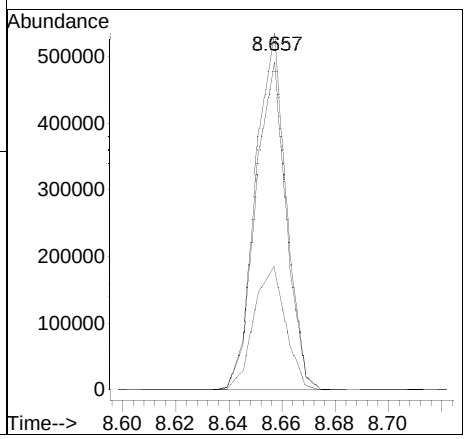


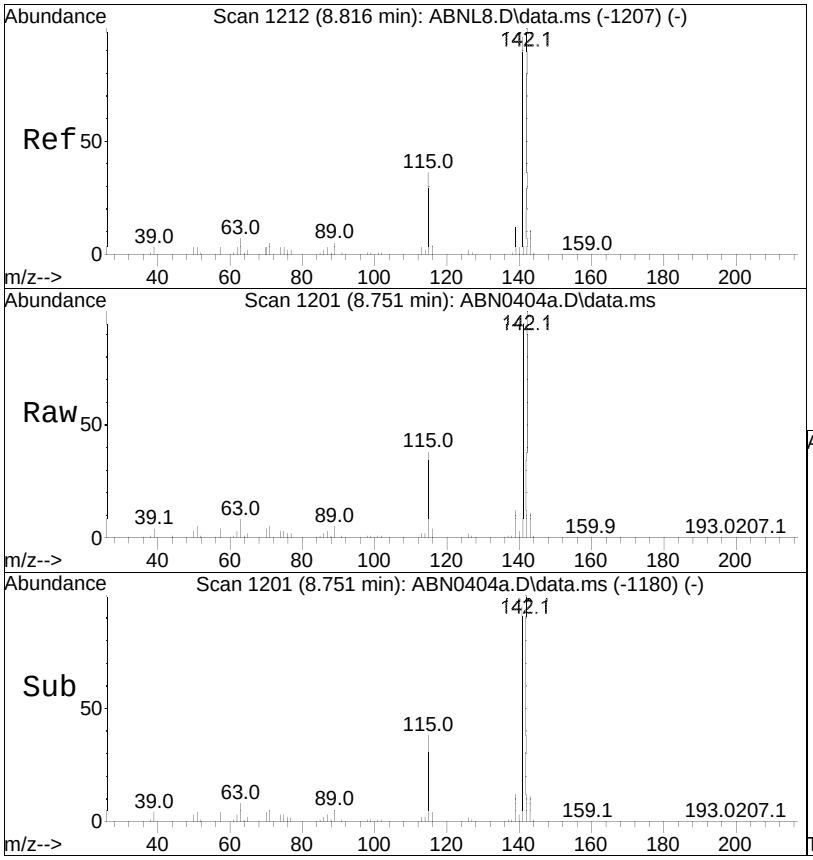


#40
2-Methylnaphthalene
Concen: 4.37 ug/ml
RT: 8.657 min Scan# 1185
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:142 Resp: 430924

Ion	Ratio	Lower	Upper
142	100		
141	91.5	69.6	104.4
115	35.9	26.6	40.0

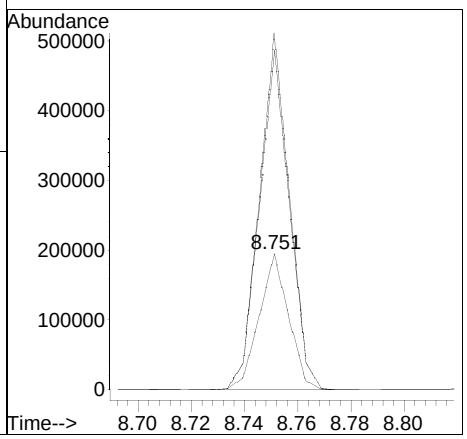


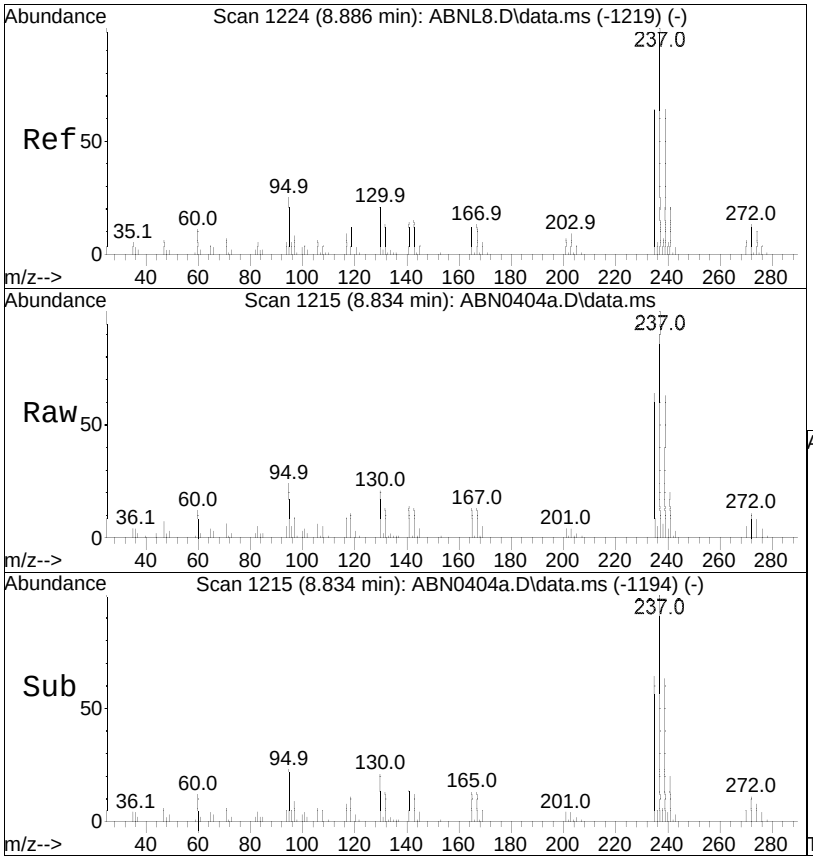


#41
1-Methylnaphthalene
Concen: 4.48 ug/ml
RT: 8.751 min Scan# 1201
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:115 Resp: 151014

Ion	Ratio	Lower	Upper
115	100		
141	252.0	207.8	311.6
142	263.6	226.8	340.2

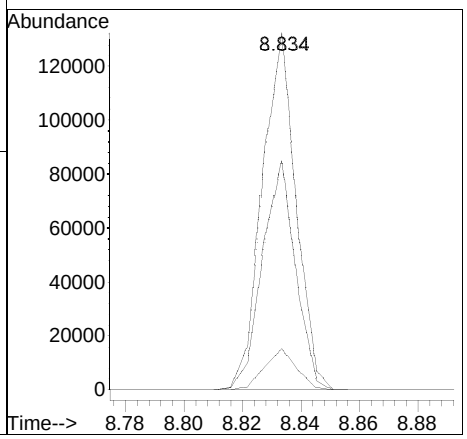


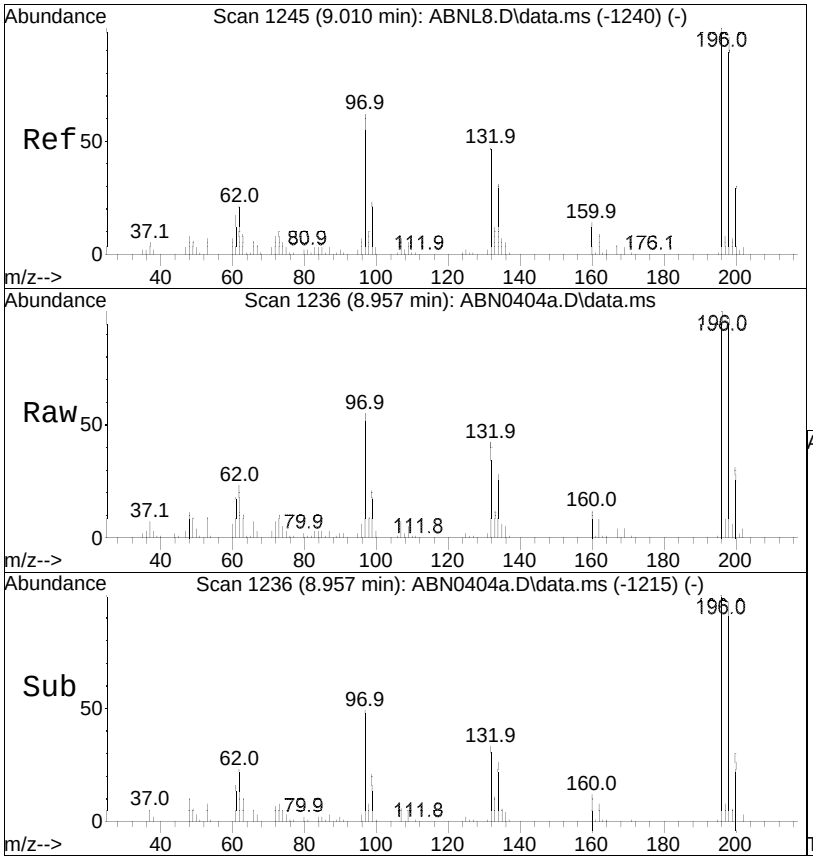


#42
Hexachlorocyclopentadiene
Concen: 4.84 ug/ml
RT: 8.834 min Scan# 1215
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:237 Resp: 105793

Ion	Ratio	Lower	Upper
237	100		
235	63.0	49.7	74.5
272	11.0	9.8	14.6

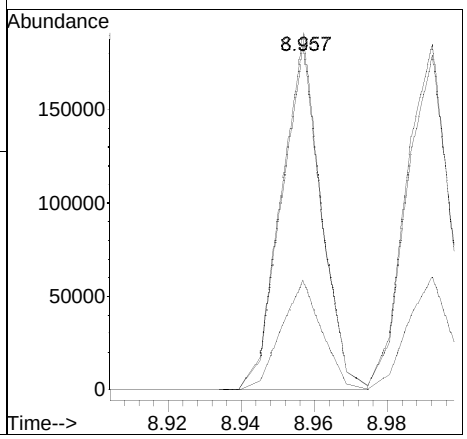


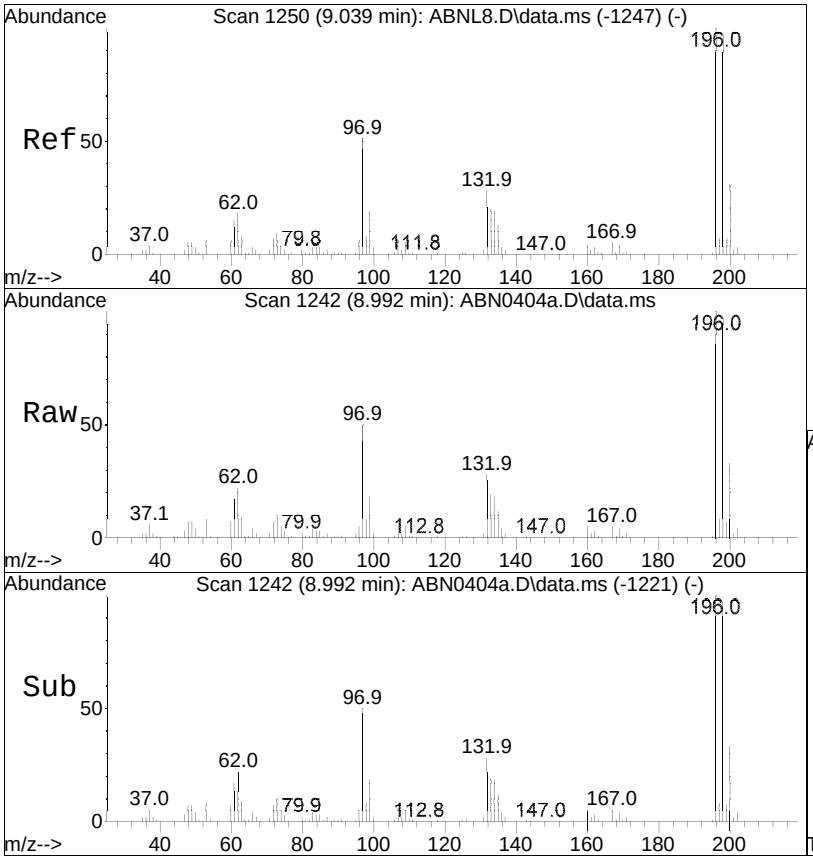


#43
2,4,6-Trichlorophenol
Concen: 4.85 ug/ml
RT: 8.957 min Scan# 1236
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:196 Resp: 144438

Ion	Ratio	Lower	Upper
196	100		
198	96.8	77.5	116.3
200	31.4	23.8	35.6

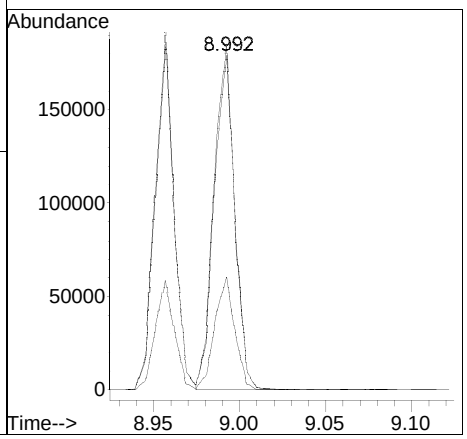


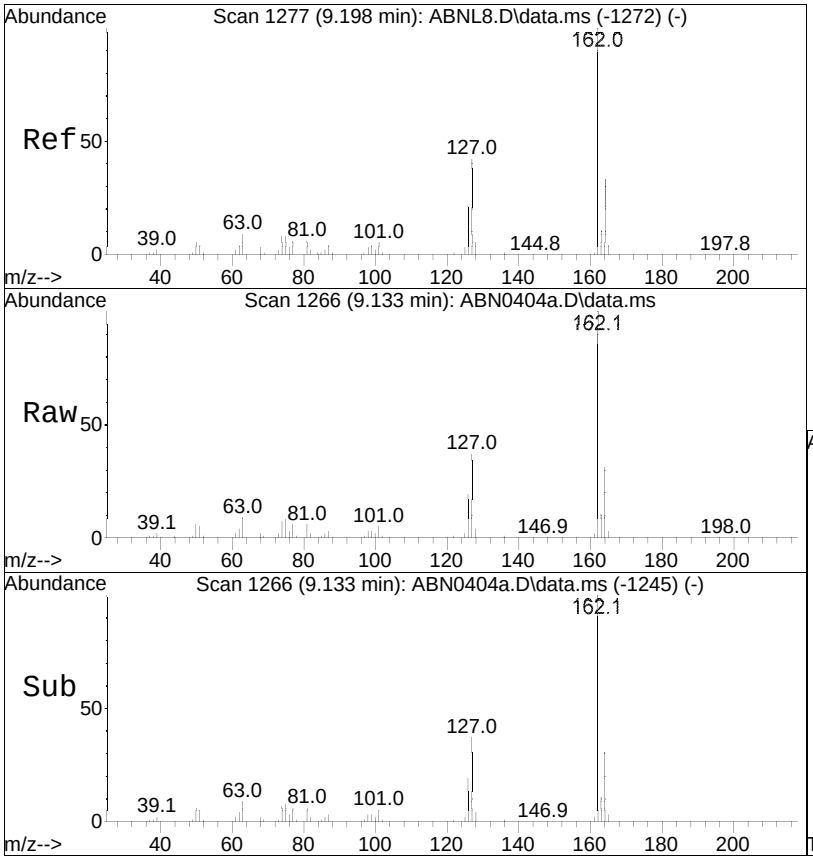


#44
2,4,5-Trichlorophenol
Concen: 4.78 ug/ml
RT: 8.992 min Scan# 1242
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:196 Resp: 154393

Ion	Ratio	Lower	Upper
196	100		
200	31.7	25.4	38.0
198	97.0	78.0	117.0

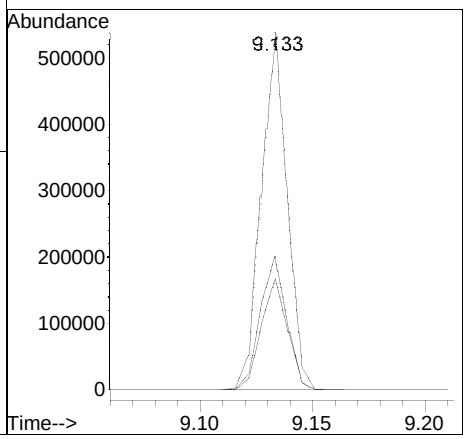


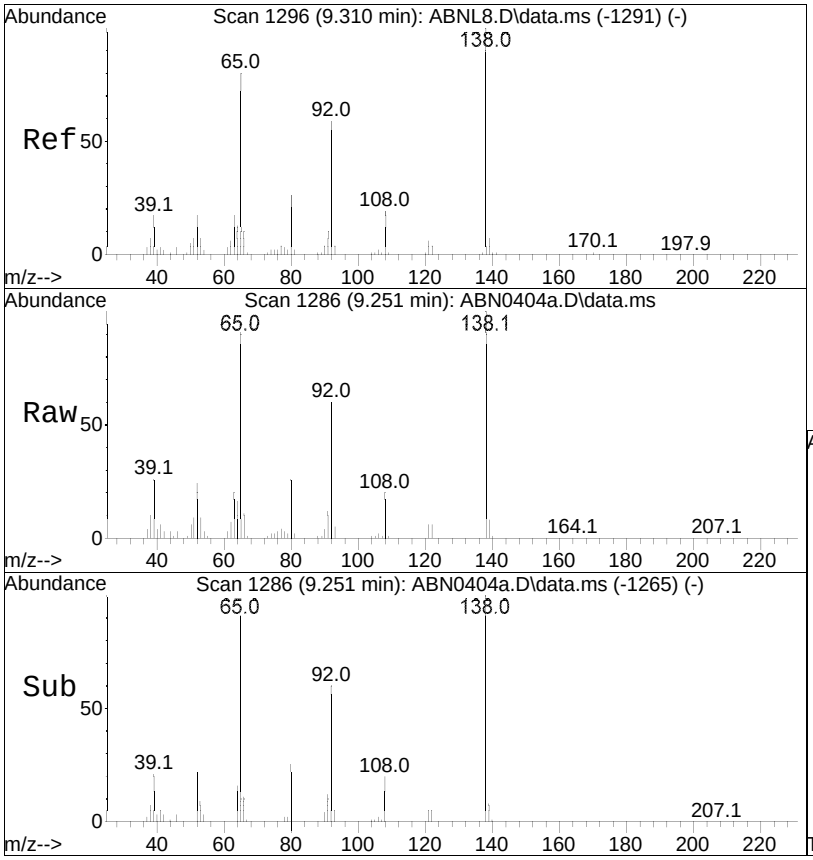


#46
2-Chloronaphthalene
Concen: 4.28 ug/ml
RT: 9.133 min Scan# 1266
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:162 Resp: 424332

Ion	Ratio	Lower	Upper
162	100		
127	38.4	32.2	48.4
164	32.1	25.7	38.5

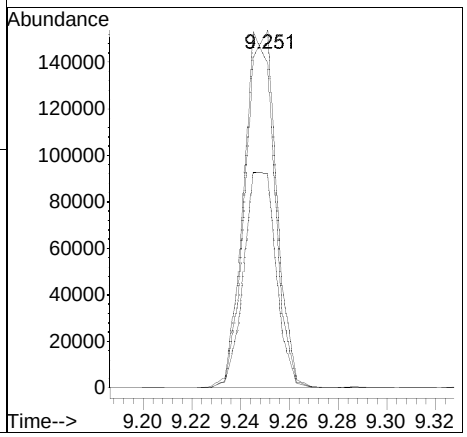


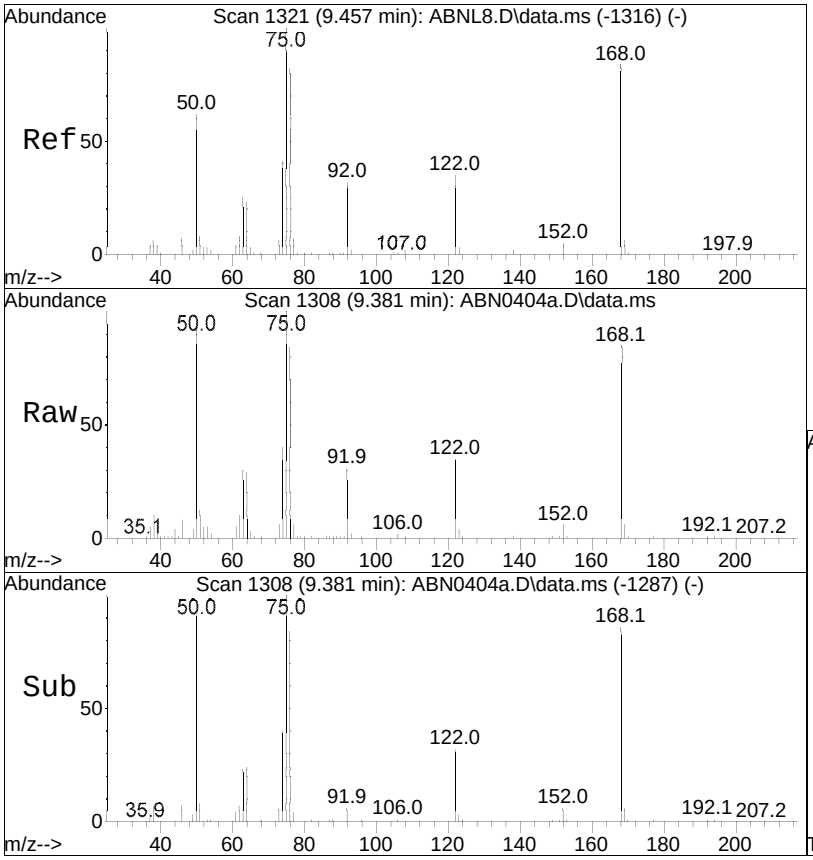


#47
2-Nitroaniline
Concen: 4.75 ug/ml
RT: 9.251 min Scan# 1286
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:138 Resp: 135870

Ion	Ratio	Lower	Upper
138	100		
92	62.4	53.5	80.3
65	98.6	86.3	129.5

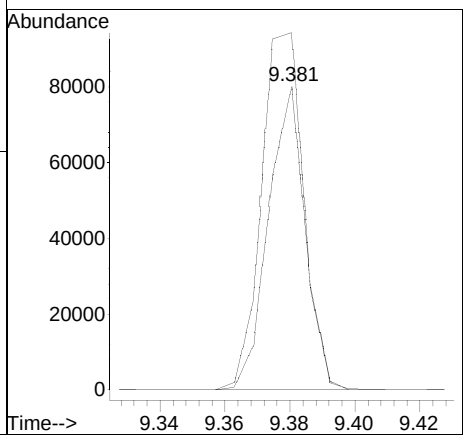


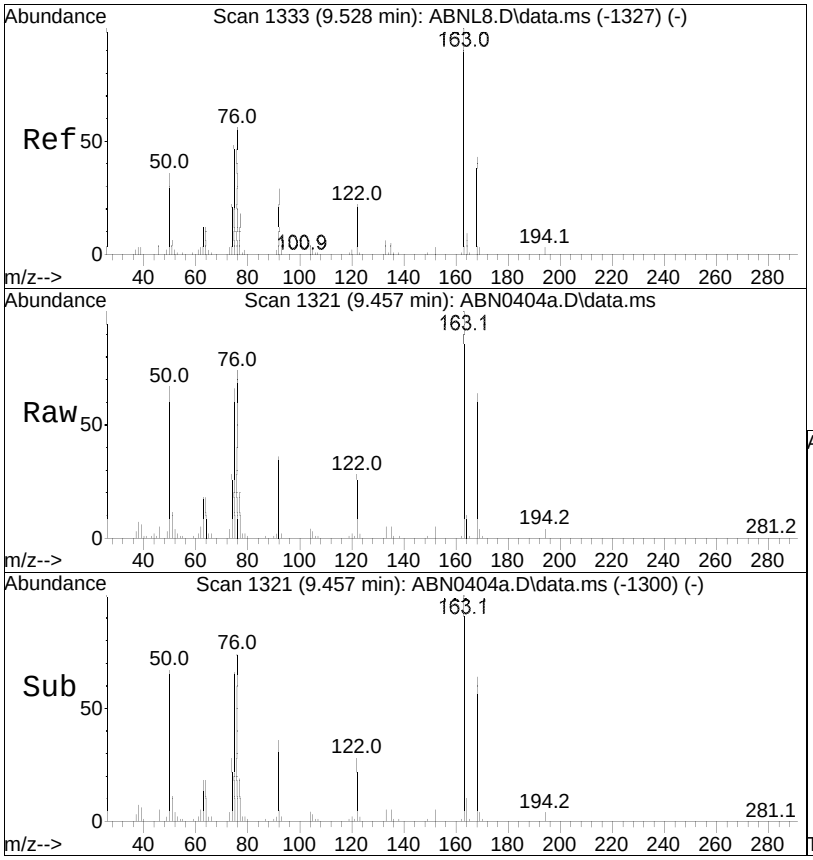


#48
1,4-Dinitrobenzene
Concen: 4.66 ug/ml
RT: 9.381 min Scan# 1308
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:168 Resp: 62995

Ion	Ratio	Lower	Upper
168	100		
75	135.1	121.8	182.8

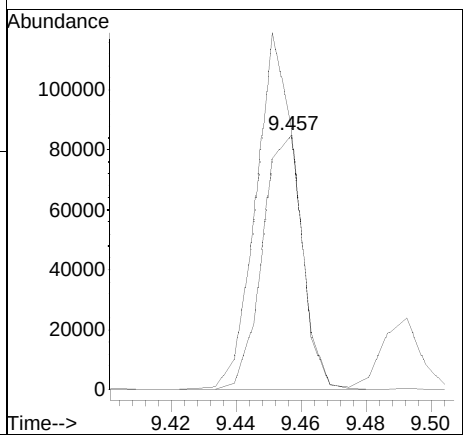


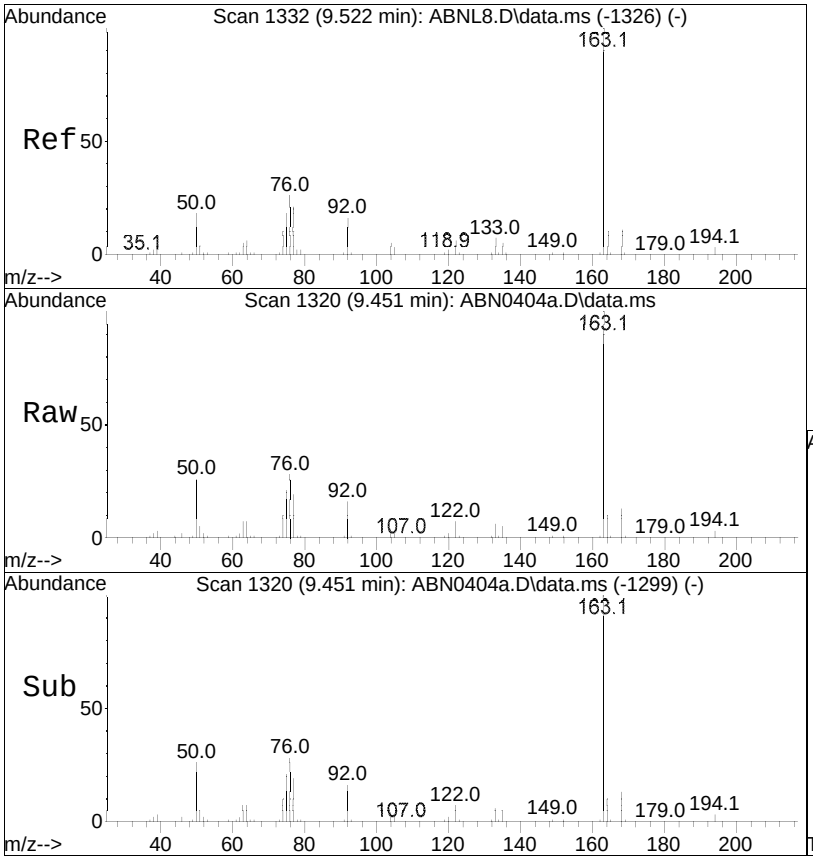


#49
1,3-Dinitrobenzene
Concen: 5.15 ug/ml
RT: 9.457 min Scan# 1321
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:168 Resp: 73023

Ion	Ratio	Lower	Upper
168	100		
75	140.4	22.7	34.1#

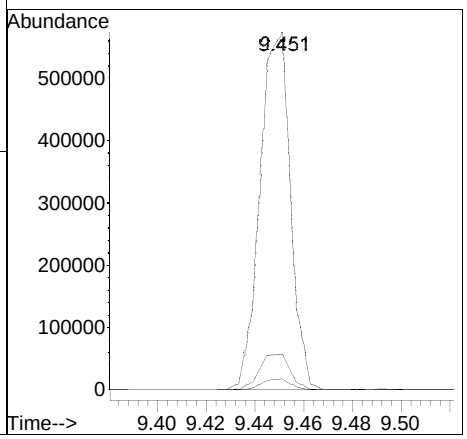


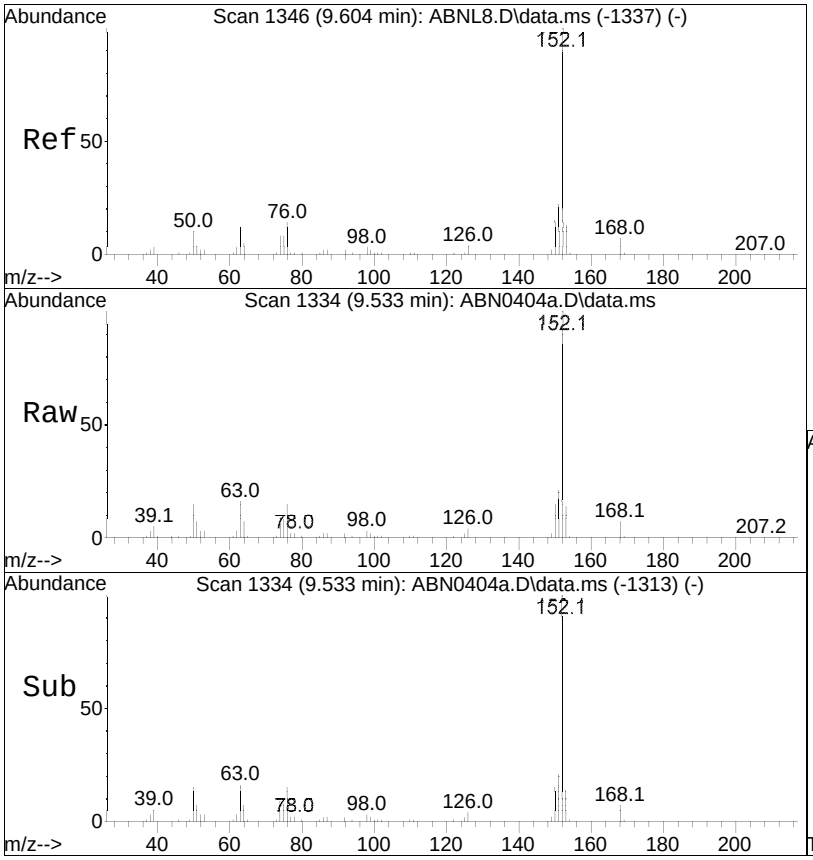


#50
Dimethyl phthalate
Concen: 4.49 ug/ml
RT: 9.451 min Scan# 1320
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:163 Resp: 491788

Ion	Ratio	Lower	Upper
163	100		
194	3.0	3.5	5.3#
164	10.3	7.9	11.9

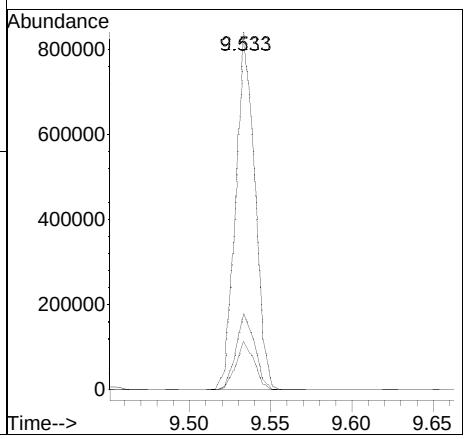


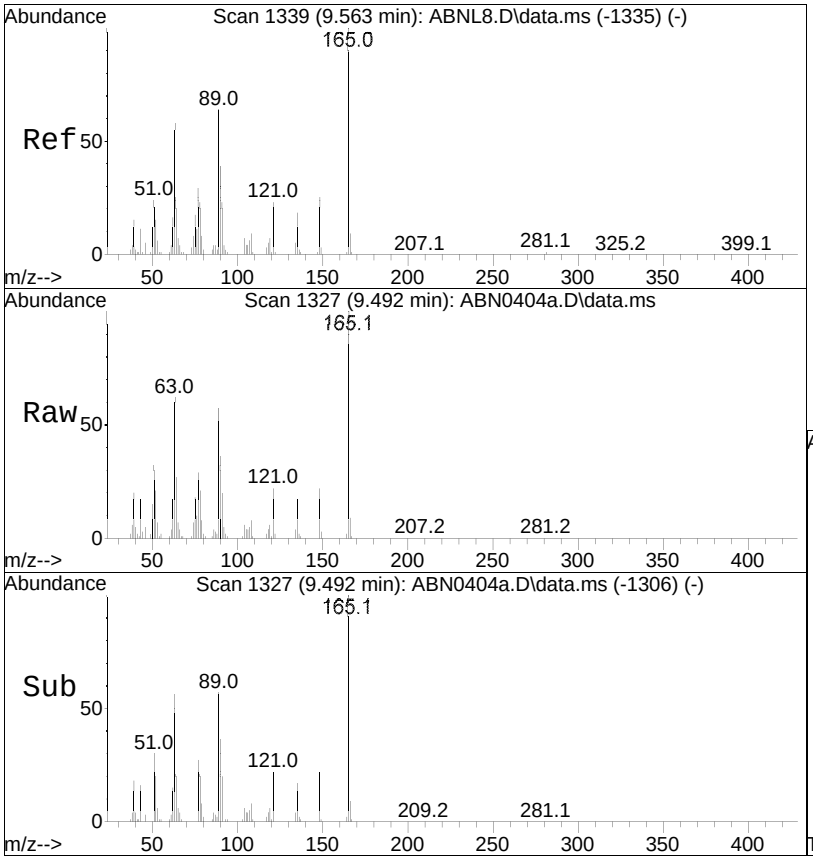


#51
Acenaphthylene
Concen: 4.57 ug/ml
RT: 9.533 min Scan# 1334
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:152 Resp: 681552

Ion	Ratio	Lower	Upper
152	100		
151	21.1	15.8	23.6
153	13.4	10.5	15.7

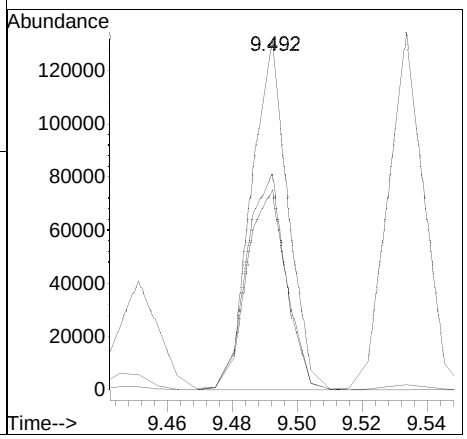


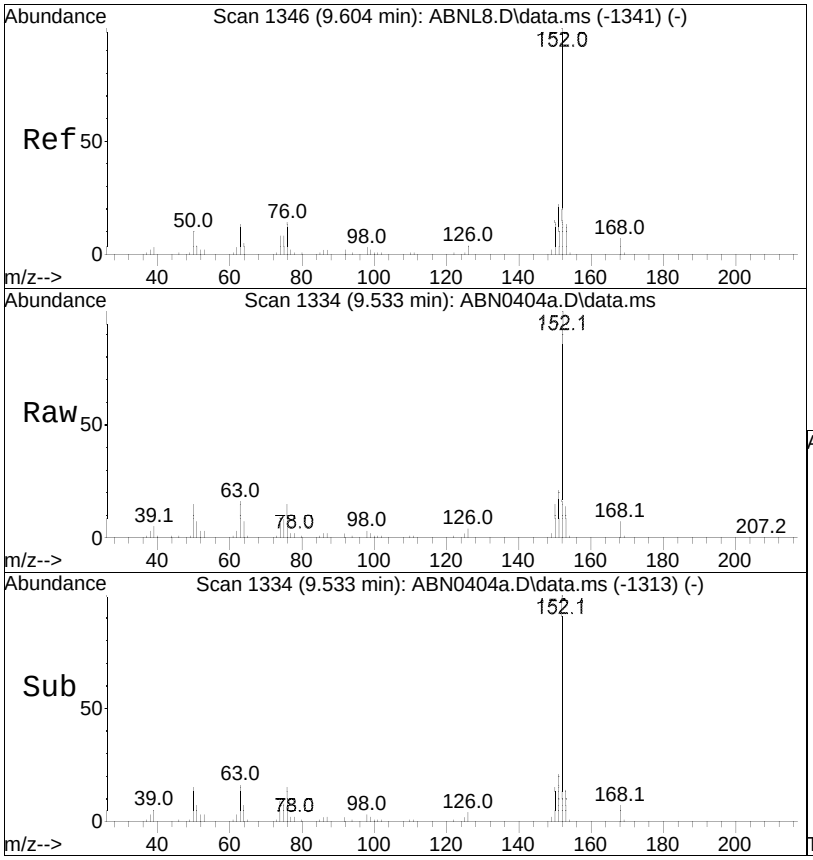


#52
2,6-Dinitrotoluene
Concen: 4.48 ug/ml
RT: 9.492 min Scan# 1327
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:165 Resp: 103737

Ion	Ratio	Lower	Upper
165	100		
89	61.8	54.2	81.2
63	65.3	64.2	96.2

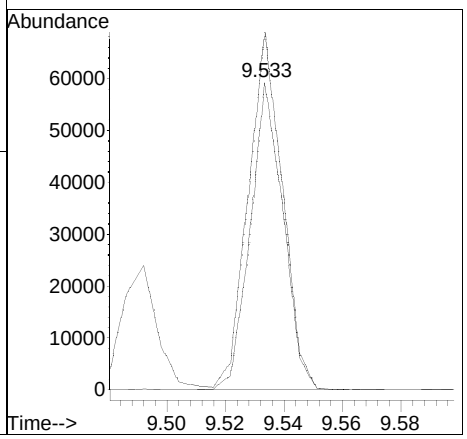


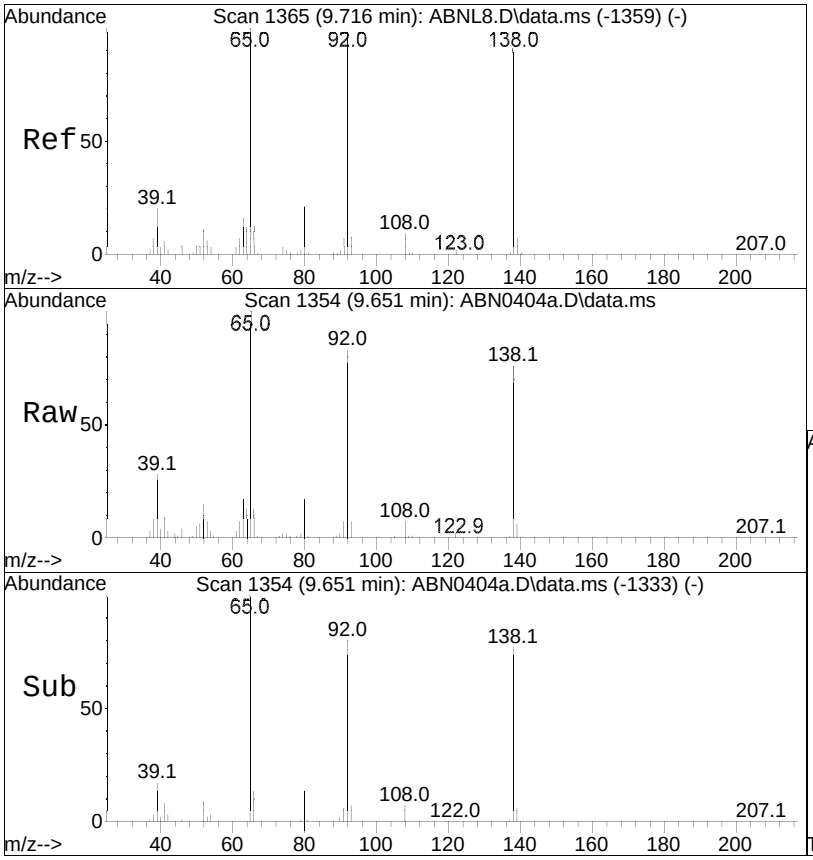


#53
1,2-Dinitrobenzene
Concen: 4.64 ug/ml
RT: 9.533 min Scan# 1334
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:168 Resp: 45933

Ion	Ratio	Lower	Upper
168	100		
75	121.3	30.9	46.3#

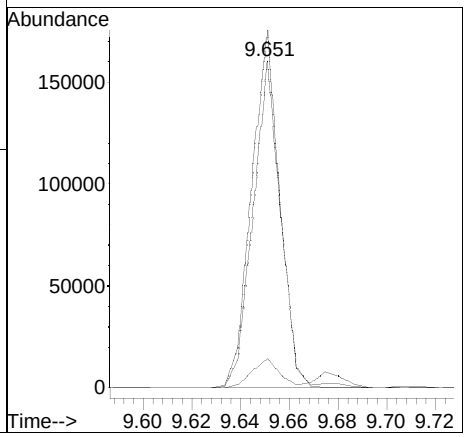


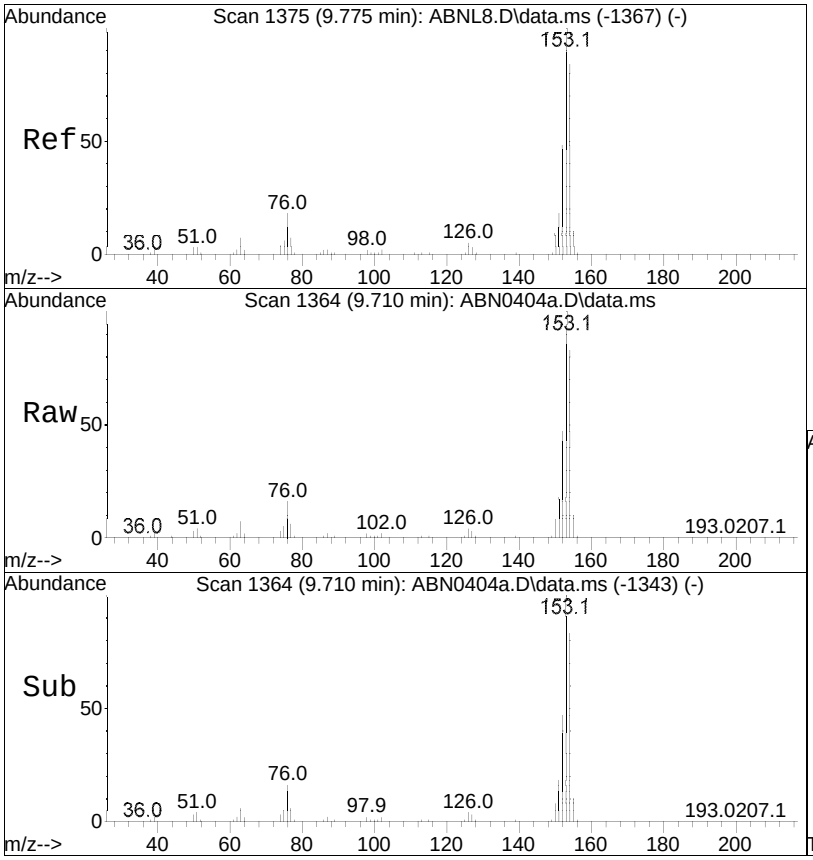


#63
3-Nitroaniline
Concen: 5.55 ug/ml
RT: 9.651 min Scan# 1354
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:138 Resp: 123835

Ion	Ratio	Lower	Upper
138	100		
92	113.6	93.4	140.2
108	9.2	9.5	14.3#

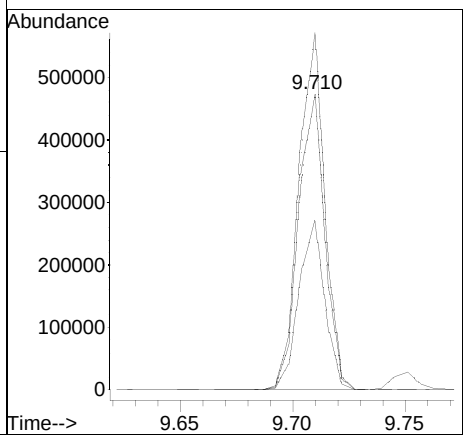


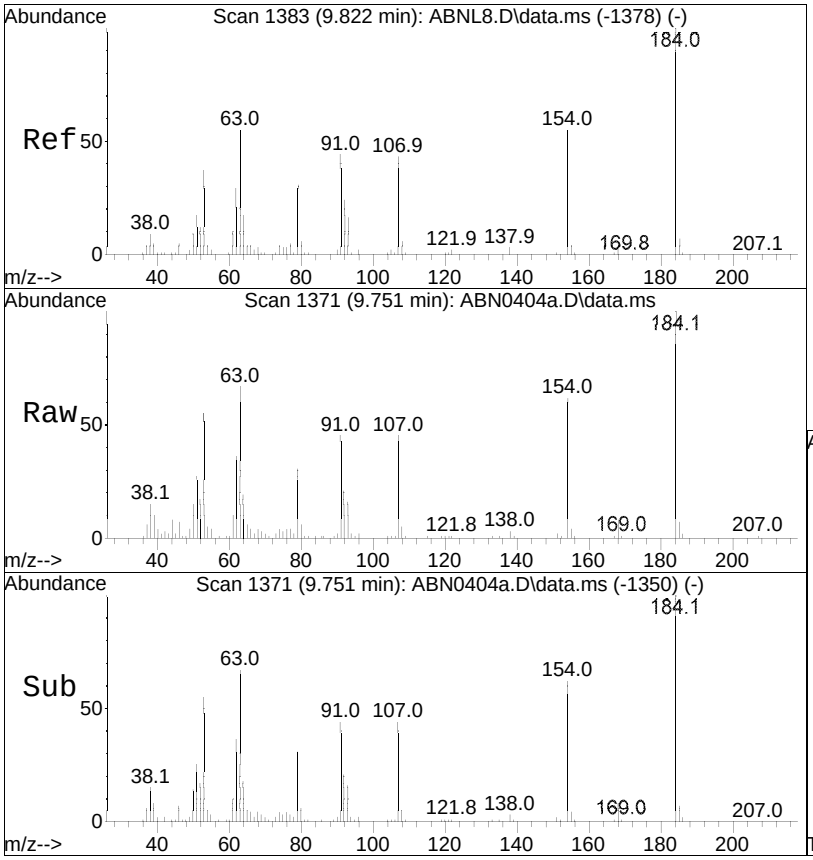


#64
Acenaphthene
Concen: 4.64 ug/ml
RT: 9.710 min Scan# 1364
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:154 Resp: 385700

Ion	Ratio	Lower	Upper
154	100		
153	119.0	85.3	127.9
152	56.5	41.4	62.0

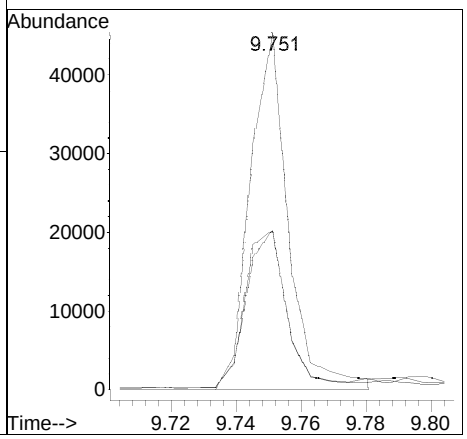


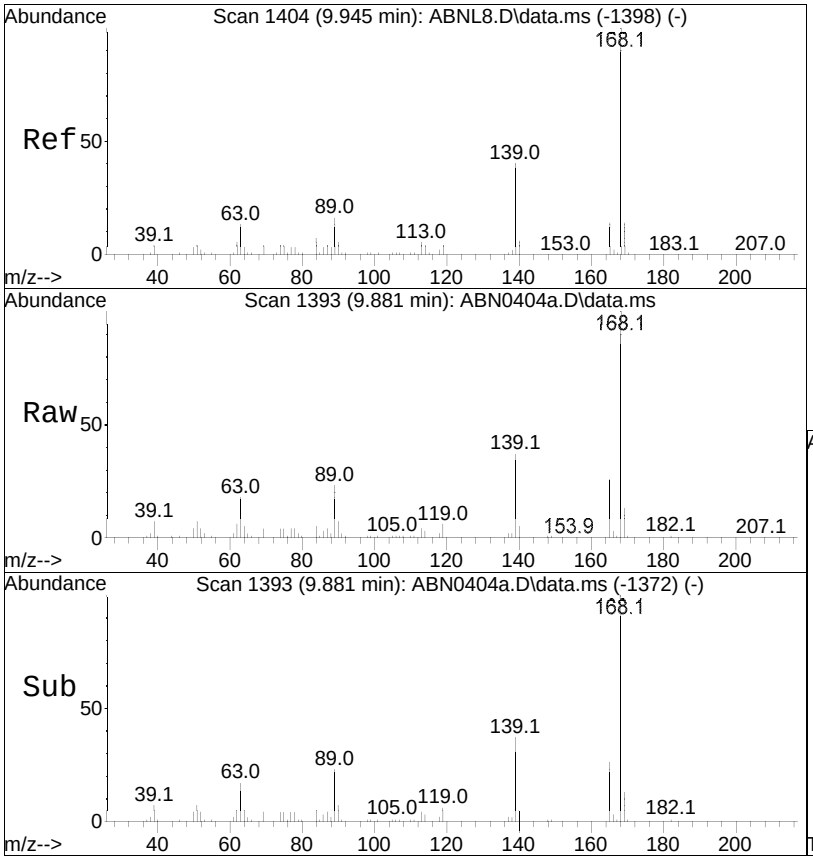


#65
2,4-Dinitrophenol
Concen: 3.77 ug/ml
RT: 9.751 min Scan# 1371
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:184 Resp: 36868

Ion	Ratio	Lower	Upper
184	100		
107	46.8	37.7	56.5
91	48.7	46.3	69.5

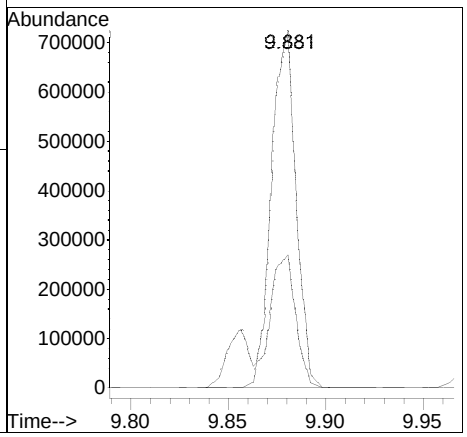


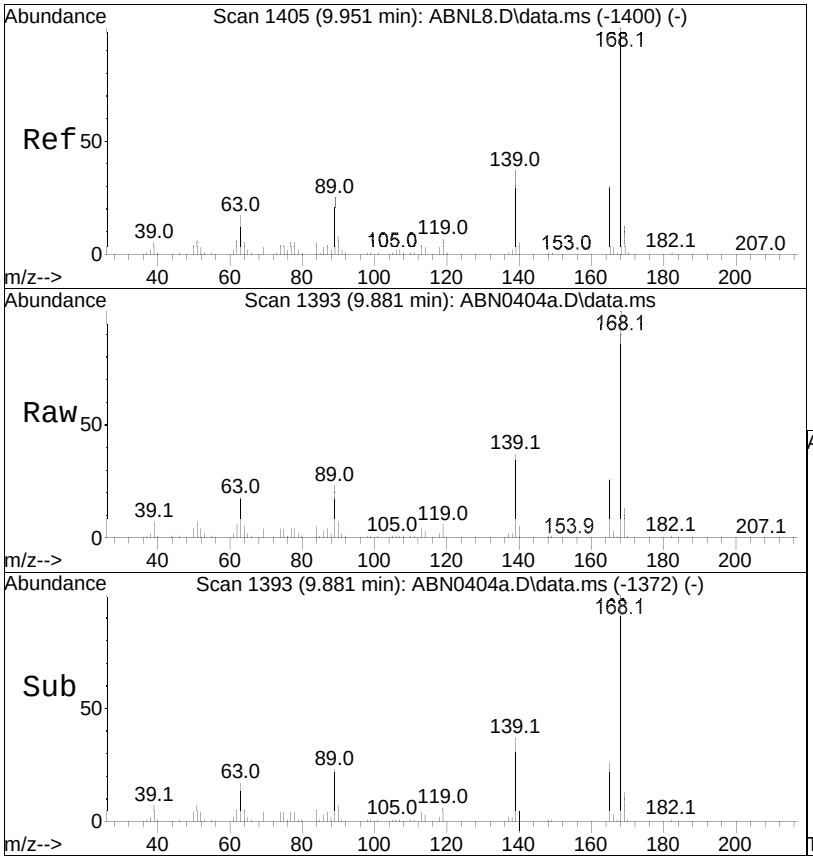


#66
Dibenzofuran
Concen: 4.58 ug/ml
RT: 9.881 min Scan# 1393
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:168 Resp: 624850

Ion	Ratio	Lower	Upper
168	100		
139	38.4	31.4	47.2

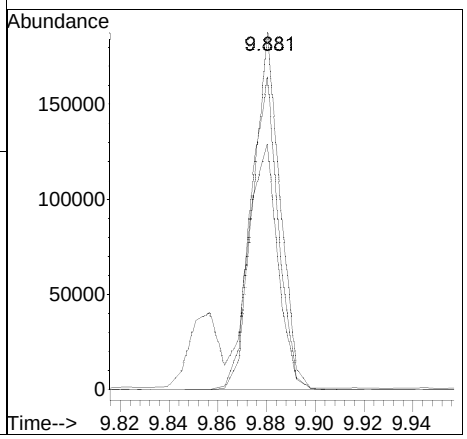


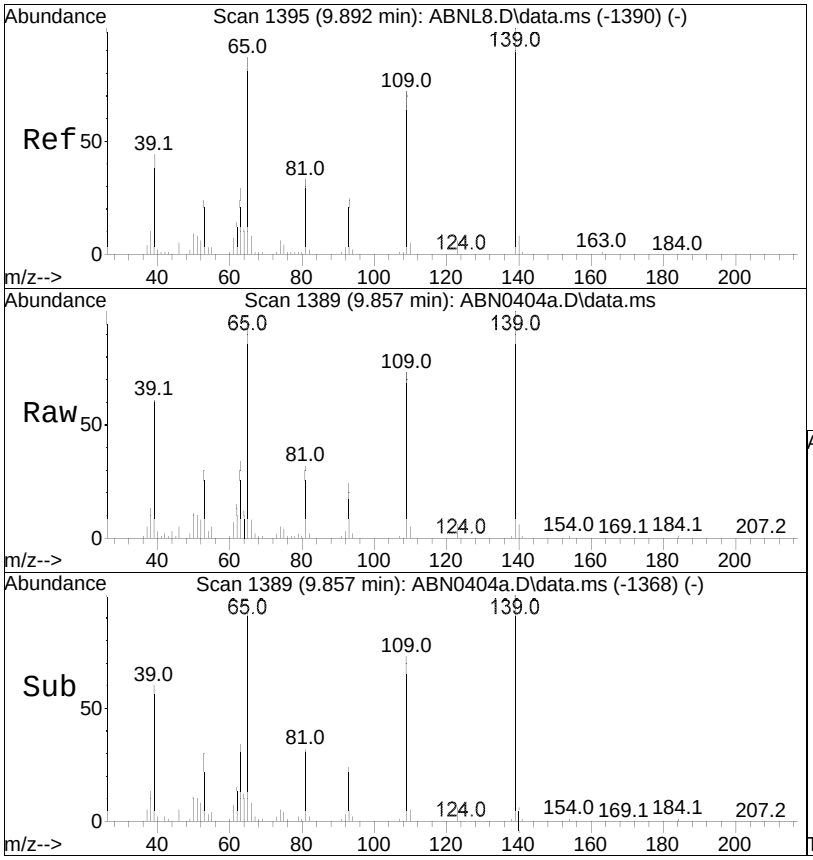


#67
2,4-Dinitrotoluene
Concen: 4.88 ug/ml
RT: 9.881 min Scan# 1393
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:165 Resp: 142478

Ion	Ratio	Lower	Upper
165	100		
89	91.5	72.0	108.0
63	99.4	52.7	79.1#

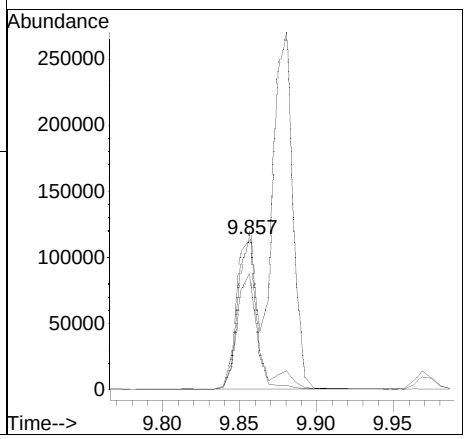


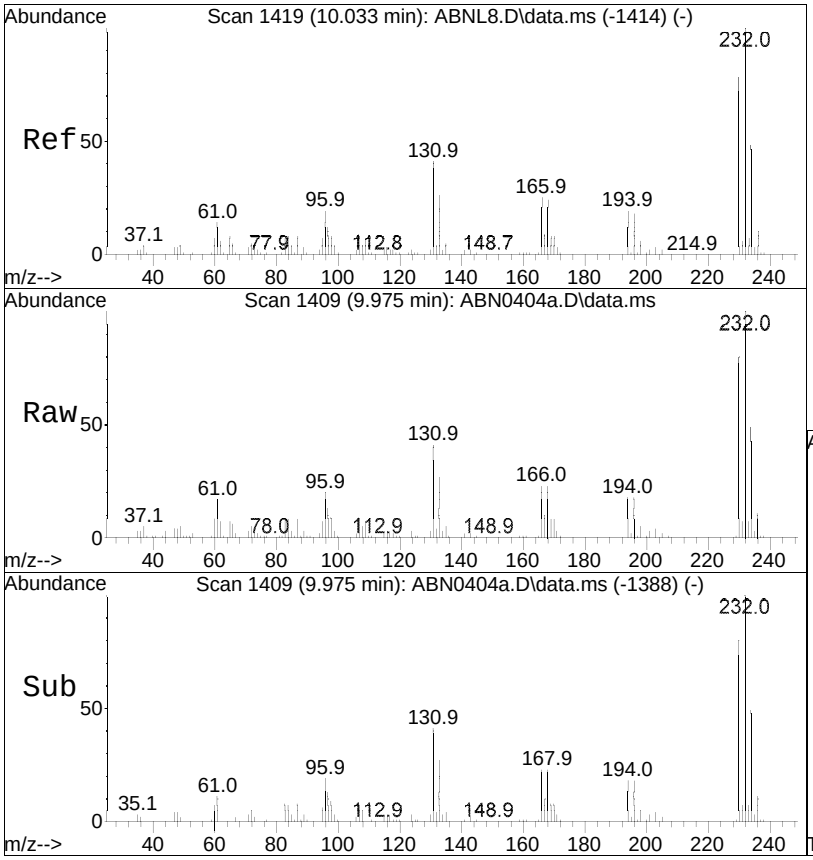


#68
4-Nitrophenol
Concen: 5.94 ug/ml
RT: 9.857 min Scan# 1389
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 65 Resp: 111787

Ion	Ratio	Lower	Upper
65	100		
109	70.1	47.4	71.2
139	87.0	76.6	115.0

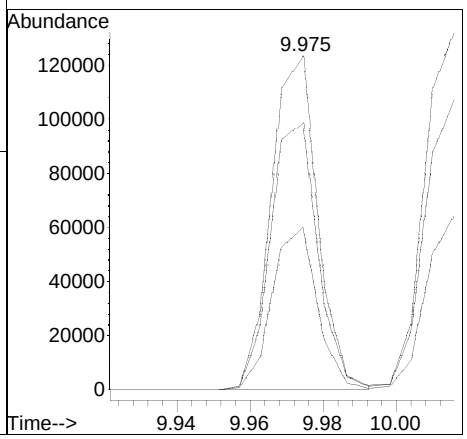


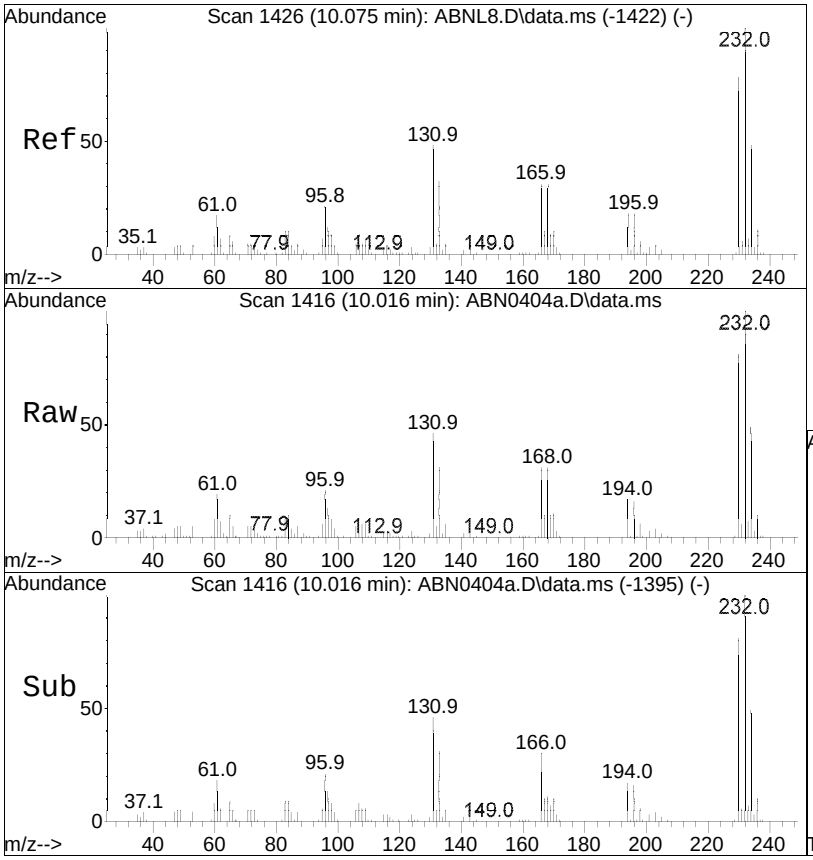


#69
2,3,5,6-Tetrachlorophenol
Concen: 4.66 ug/ml
RT: 9.975 min Scan# 1409
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:232 Resp: 108818

Ion	Ratio	Lower	Upper
232	100		
230	81.7	64.2	96.4
234	47.6	38.1	57.1

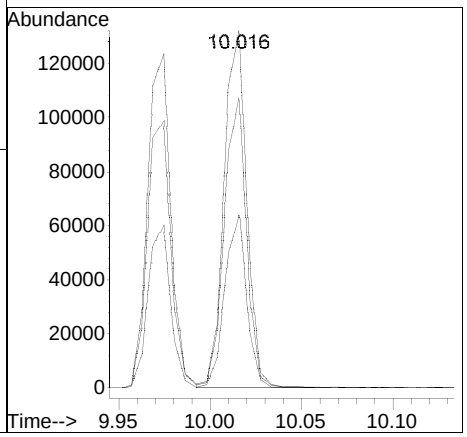


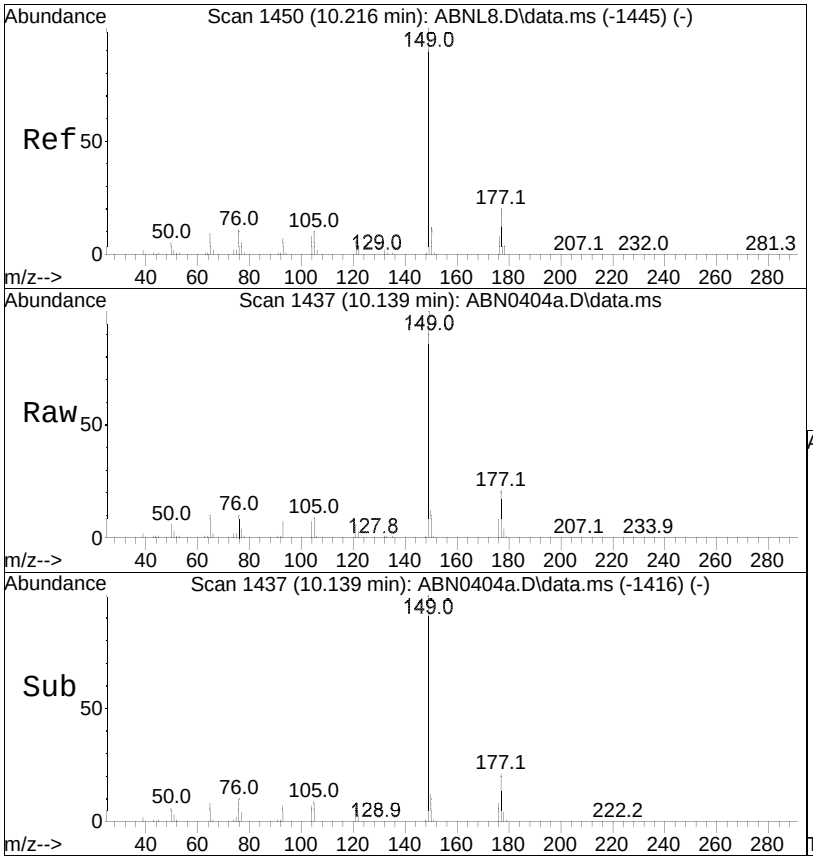


#70
2,3,4,6-Tetrachlorophenol
Concen: 4.81 ug/ml
RT: 10.016 min Scan# 1416
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:232 Resp: 113949

Ion	Ratio	Lower	Upper
232	100		
230	80.0	61.8	92.8
234	47.3	36.2	54.2

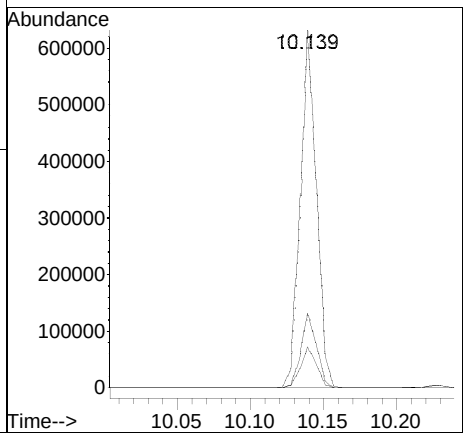


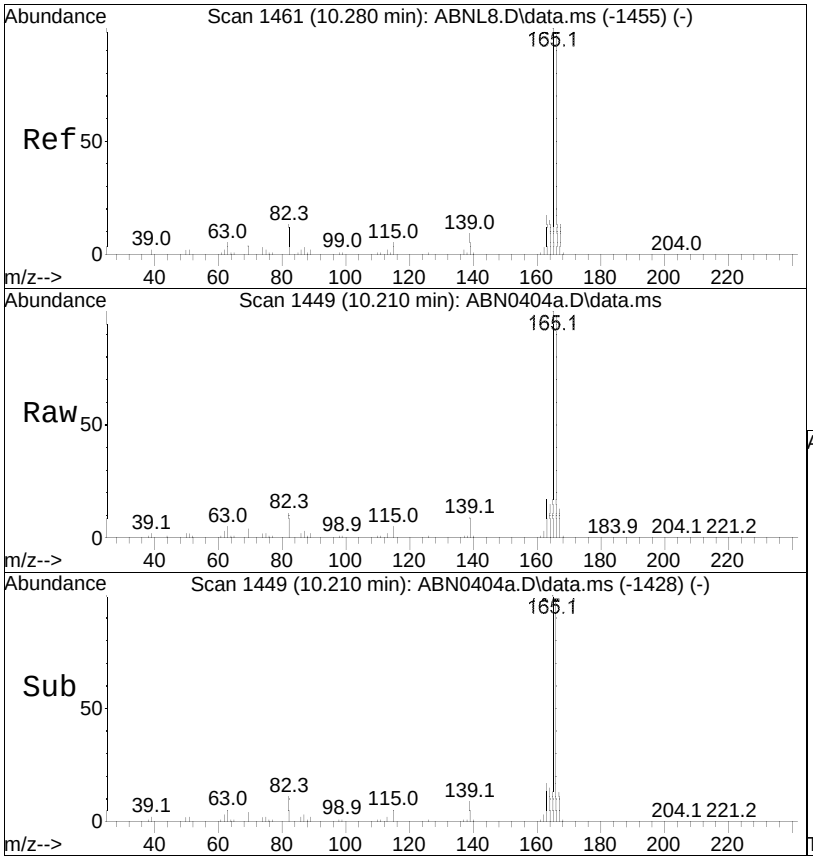


#71
Diethyl phthalate
Concen: 4.92 ug/ml
RT: 10.139 min Scan# 1437
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:149 Resp: 472249

Ion	Ratio	Lower	Upper
149	100		
177	20.6	16.1	24.1
150	11.7	9.4	14.2

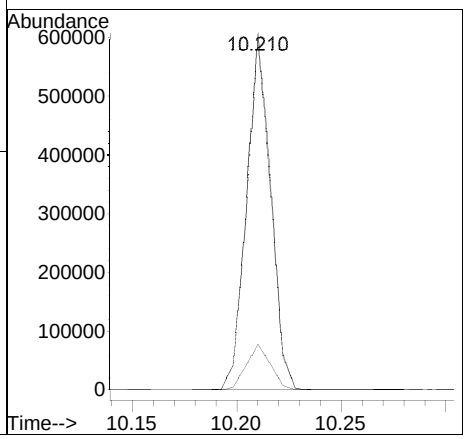


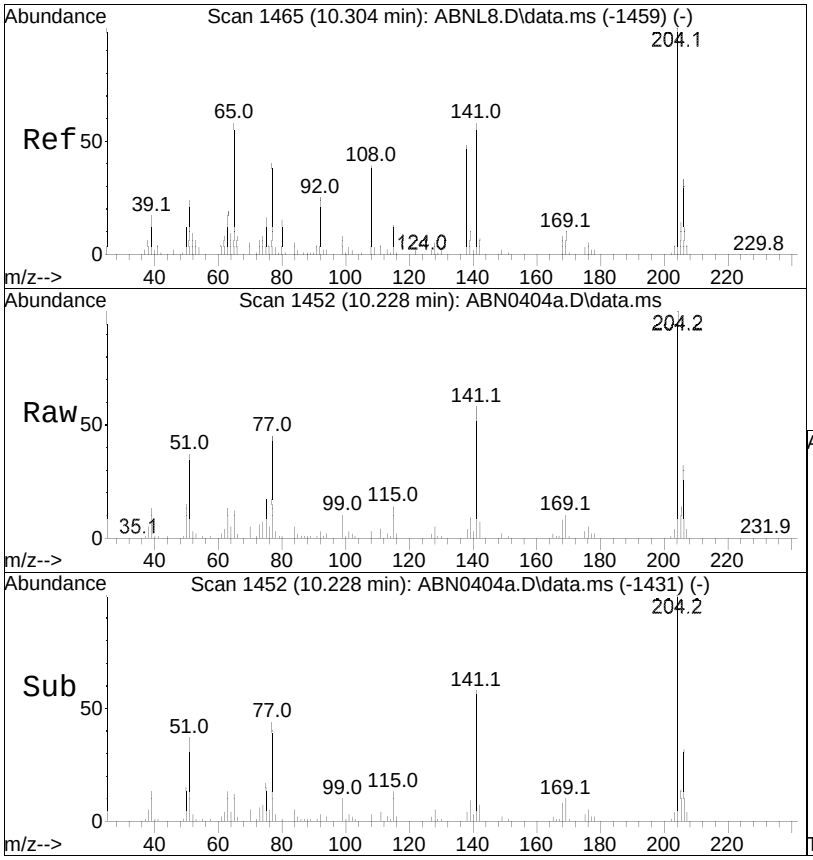


#72
Fluorene
Concen: 4.62 ug/ml
RT: 10.210 min Scan# 1449
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:166 Resp: 473897

Ion	Ratio	Lower	Upper
166	100		
165	103.4	76.2	114.2
167	13.4	10.6	15.8

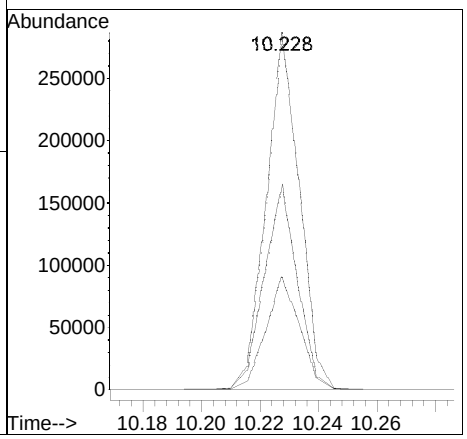


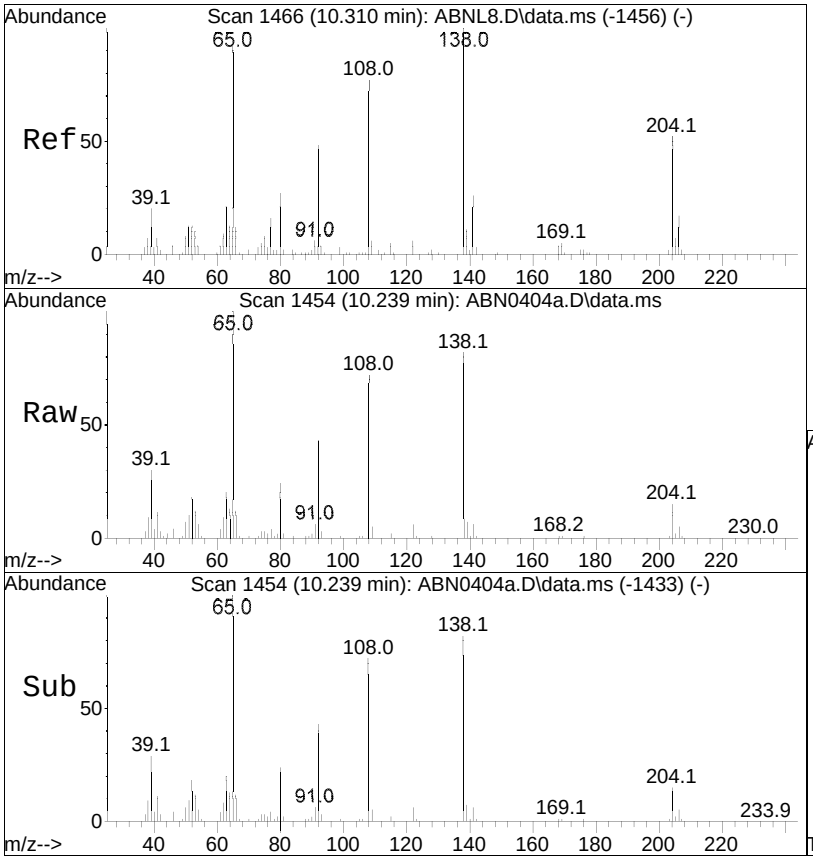


#73
4-Chlorophenyl phenyl ether
Concen: 4.21 ug/ml
RT: 10.228 min Scan# 1452
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:204 Resp: 222852

Ion	Ratio	Lower	Upper
204	100		
206	32.4	25.8	38.6
141	57.8	53.6	80.4

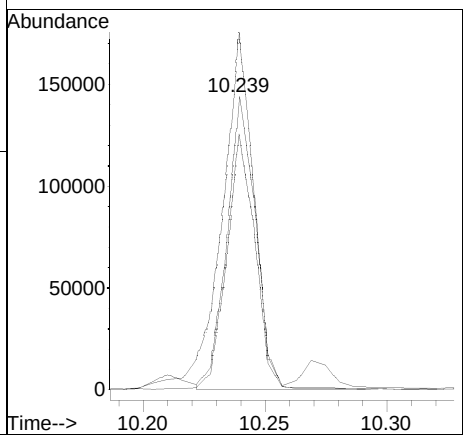


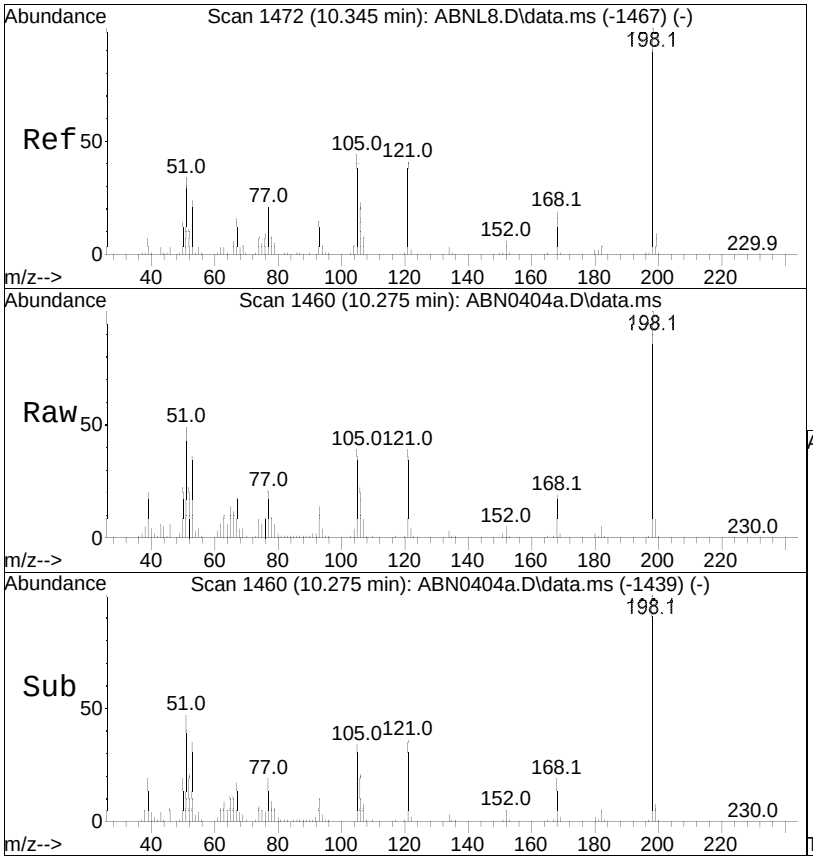


#74
4-Nitroaniline
Concen: 5.20 ug/ml
RT: 10.239 min Scan# 1454
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:138 Resp: 116993

Ion	Ratio	Lower	Upper
138	100		
108	86.0	52.1	78.1#
65	135.6	115.0	172.6

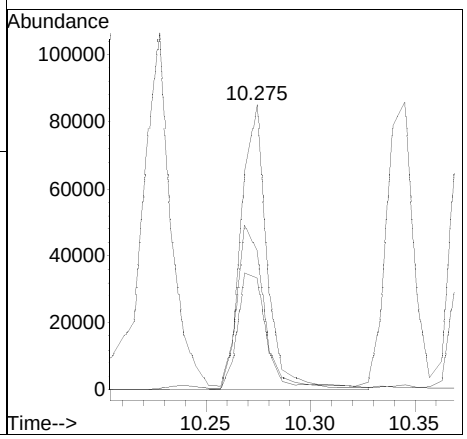


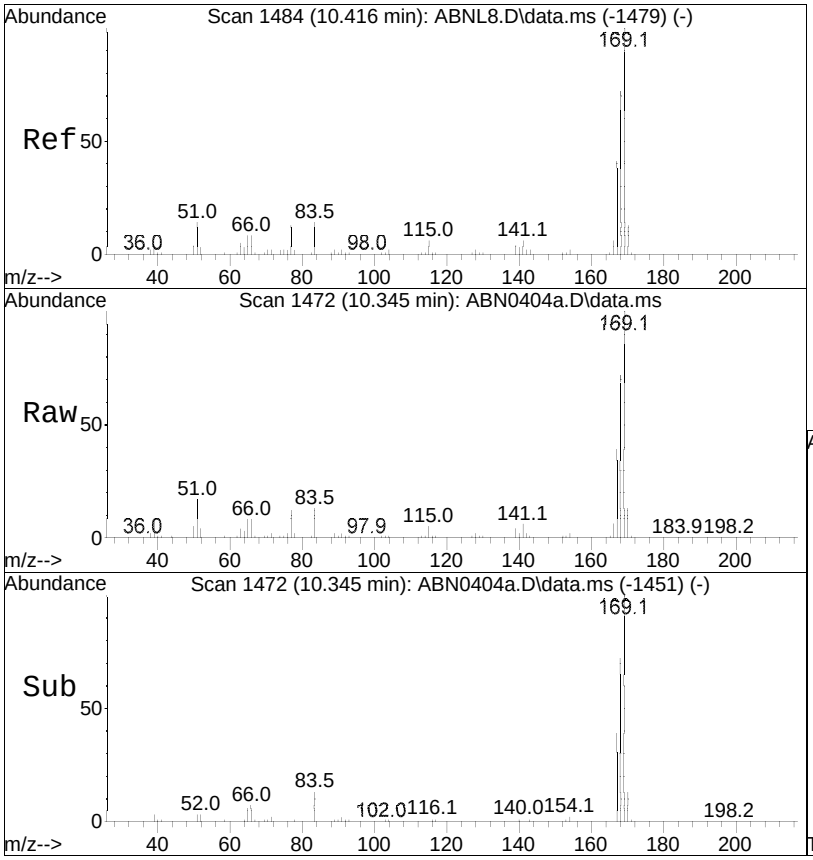


#75
4,6-Dinitro-o-cresol
Concen: 5.08 ug/ml
RT: 10.275 min Scan# 1460
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:198 Resp: 74721

Ion	Ratio	Lower	Upper
198	100		
51	54.6	76.0	114.0#
105	43.5	45.6	68.4#

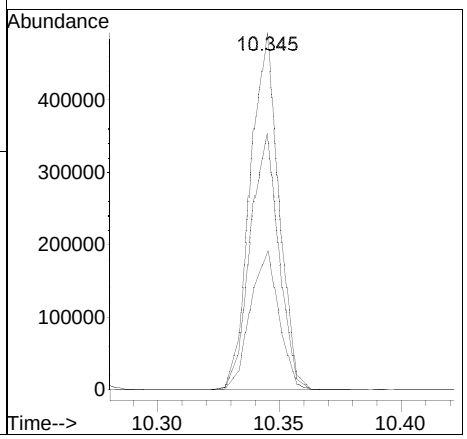


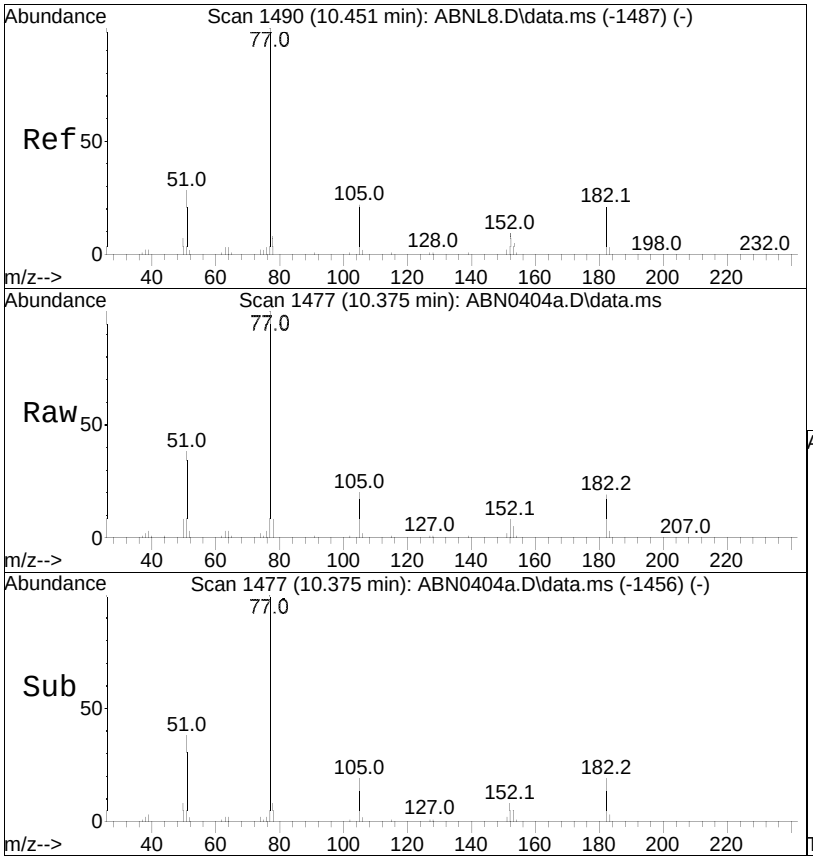


#76
NDPA/DPA
Concen: 4.88 ug/ml
RT: 10.345 min Scan# 1472
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:169 Resp: 401879

Ion	Ratio	Lower	Upper
169	100		
168	72.1	54.0	81.0
167	39.4	28.6	42.8

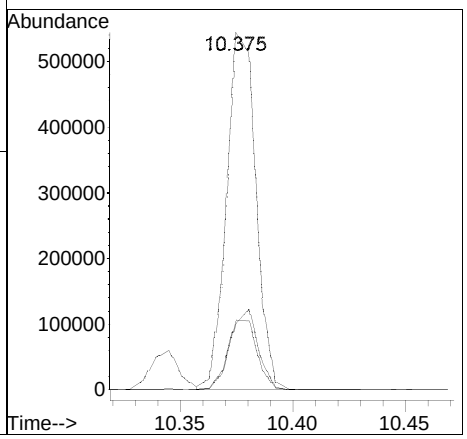


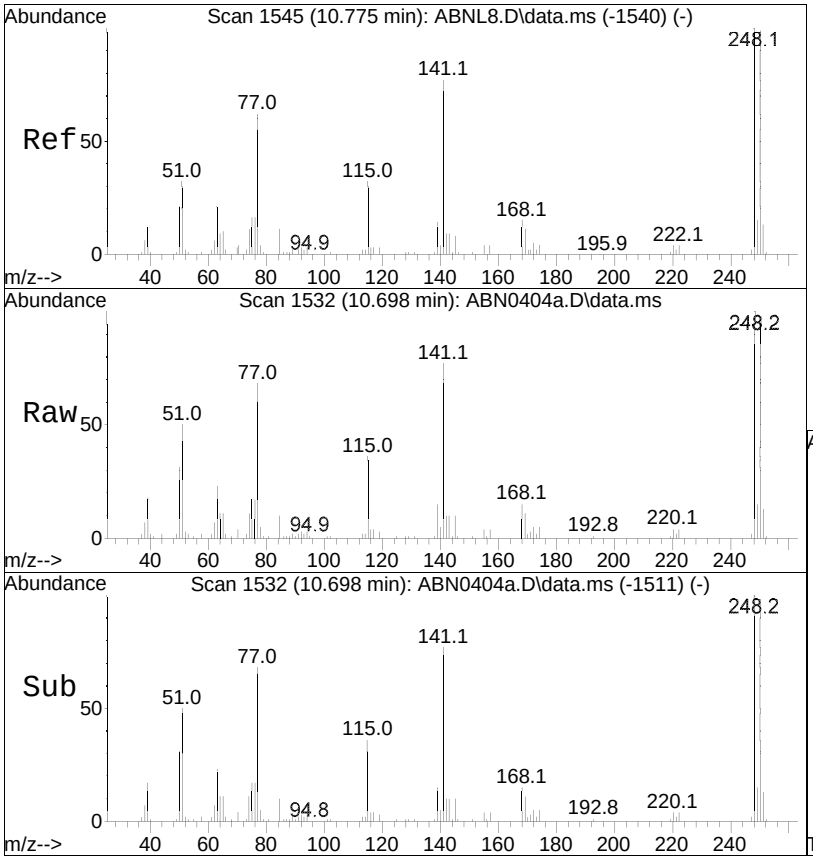


#77
Azobenzene
Concen: 5.04 ug/ml
RT: 10.375 min Scan# 1477
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion: 77 Resp: 487422

Ion	Ratio	Lower	Upper
77	100		
182	21.7	17.4	26.2
105	19.9	15.4	23.2

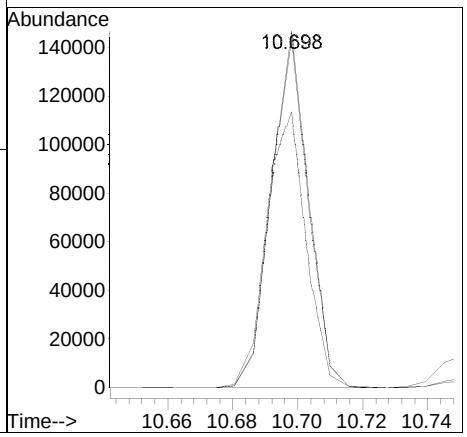


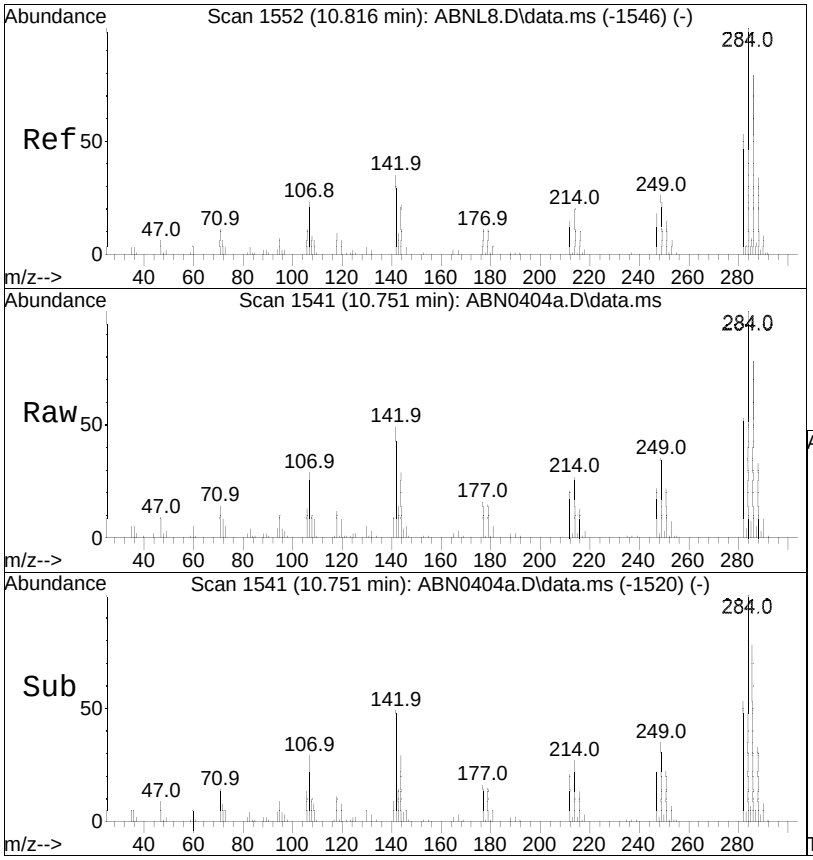


#79
4-Bromophenyl phenyl ether
Concen: 4.18 ug/ml
RT: 10.698 min Scan# 1532
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:248 Resp: 116102

Ion	Ratio	Lower	Upper
248	100		
141	82.8	76.6	114.8
250	97.4	77.3	115.9

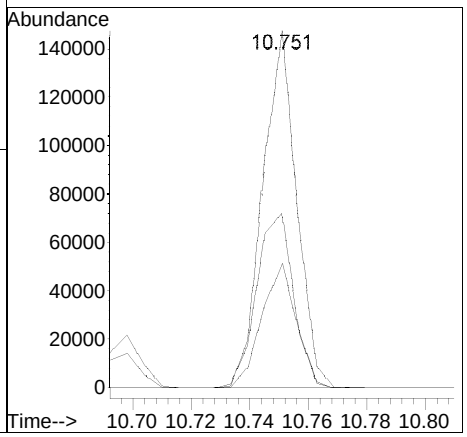


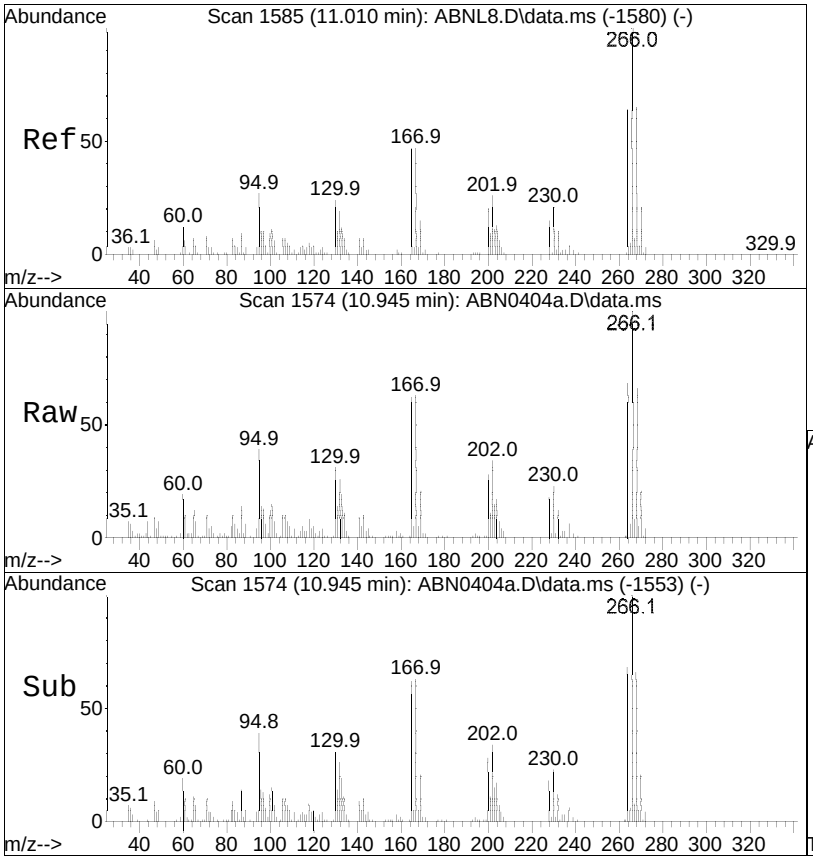


#80
Hexachlorobenzene
Concen: 3.87 ug/ml
RT: 10.751 min Scan# 1541
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:284 Resp: 118409

Ion	Ratio	Lower	Upper
284	100		
142	53.7	41.9	62.9
249	35.8	24.1	36.1

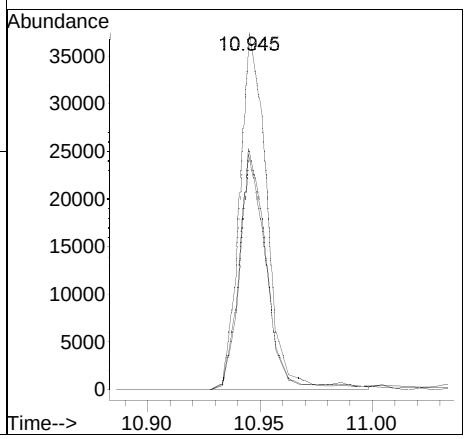


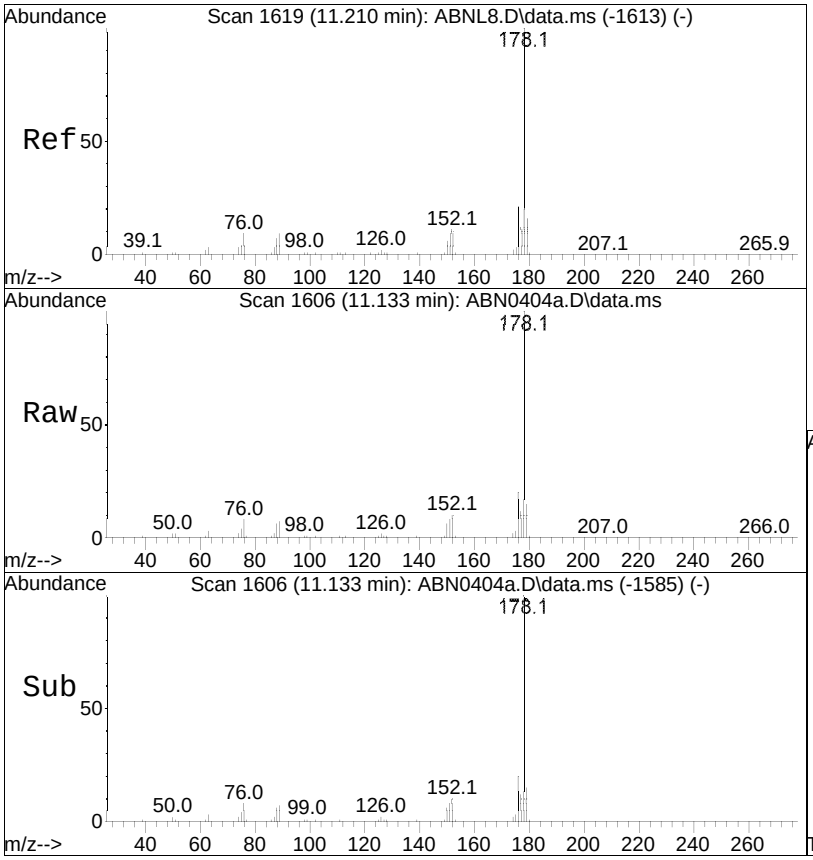


#81
Pentachlorophenol
Concen: 1.90 ug/ml
RT: 10.945 min Scan# 1574
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:266 Resp: 31639

Ion	Ratio	Lower	Upper
266	100		
264	68.2	49.7	74.5
268	65.8	50.5	75.7

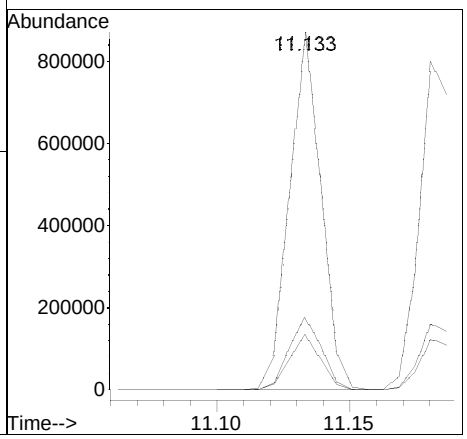


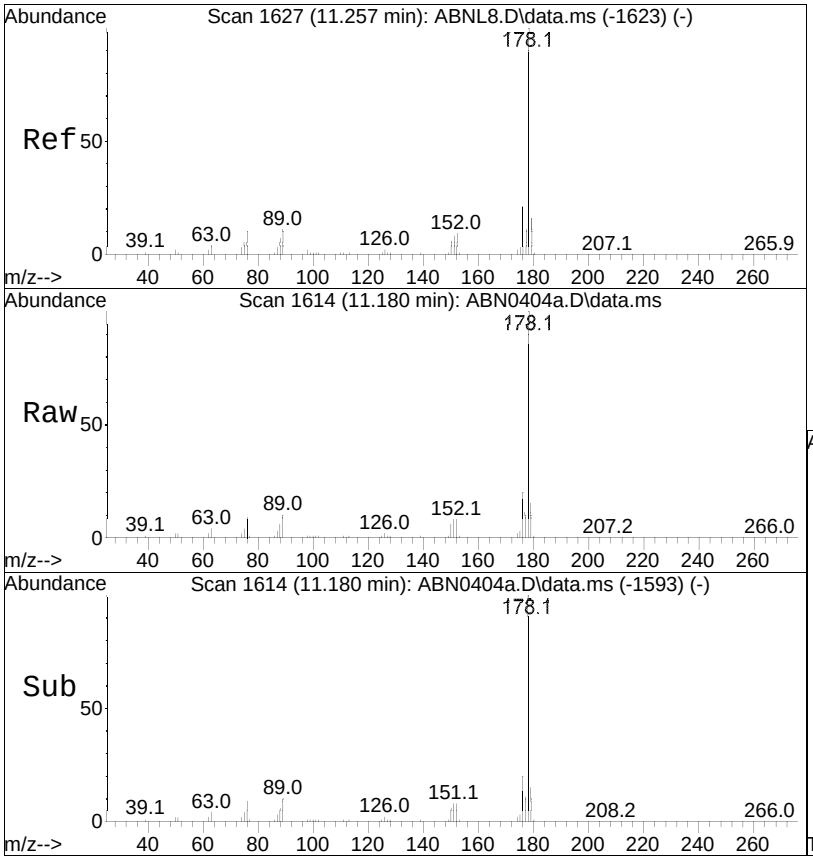


#88
Phenanthrene
Concen: 4.61 ug/ml
RT: 11.133 min Scan# 1606
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:178 Resp: 719527

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.2	18.2
176	20.8	15.4	23.2

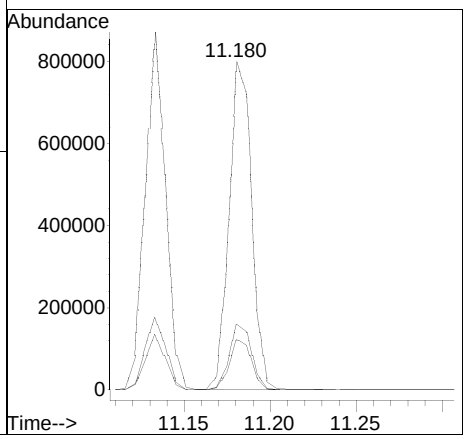


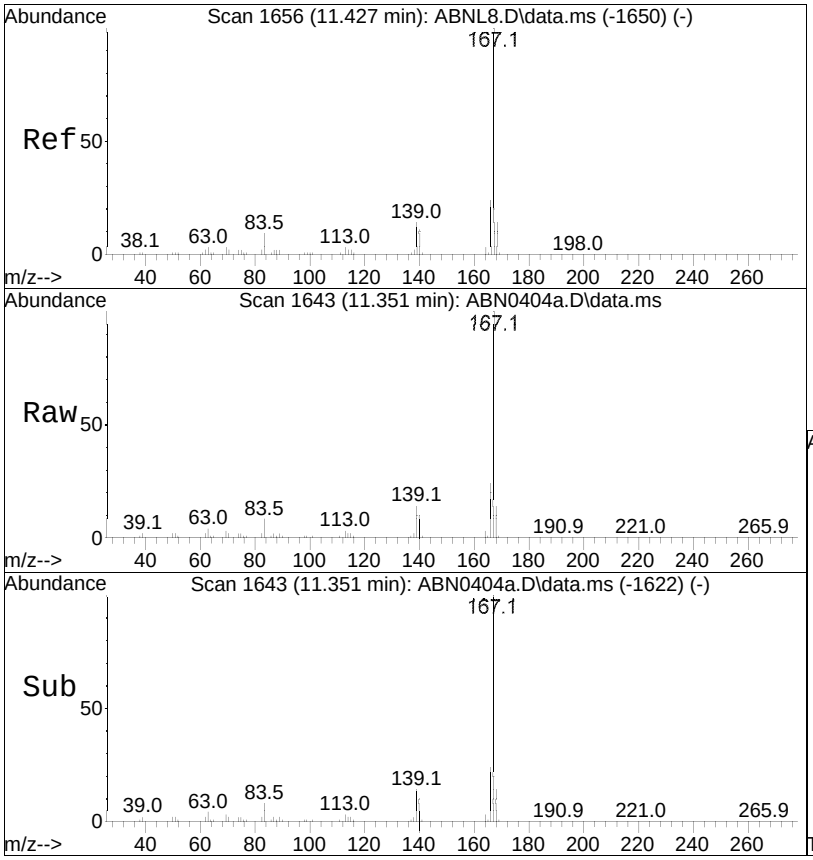


#89
Anthracene
Concen: 4.94 ug/ml
RT: 11.180 min Scan# 1614
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:178 Resp: 728057

Ion	Ratio	Lower	Upper
178	100		
179	15.1	12.0	18.0
176	20.0	14.6	22.0

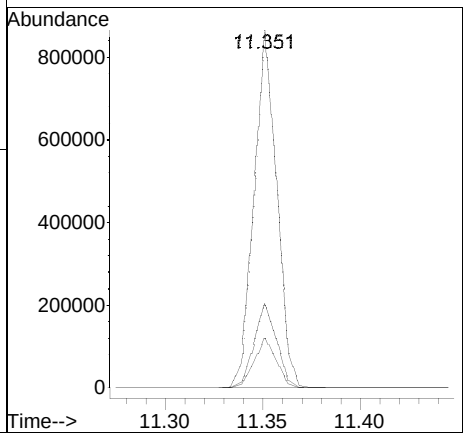


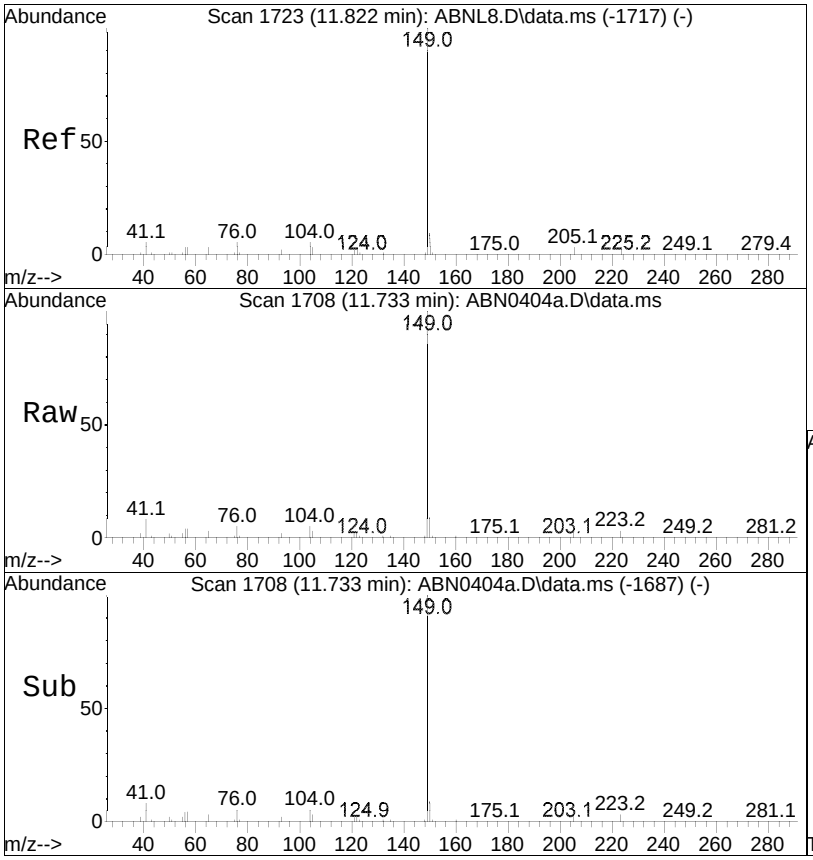


#90
Carbazole
Concen: 5.16 ug/ml
RT: 11.351 min Scan# 1643
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:167 Resp: 690508

Ion	Ratio	Lower	Upper
167	100		
168	13.8	10.6	15.8
166	23.6	17.4	26.0

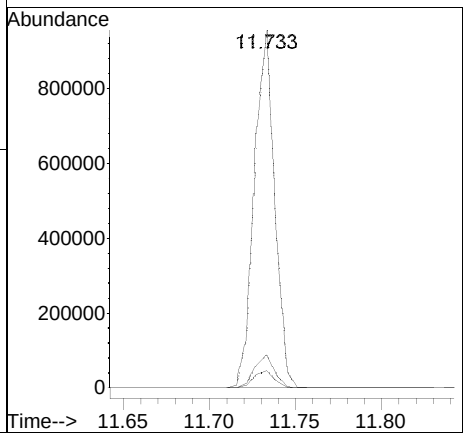


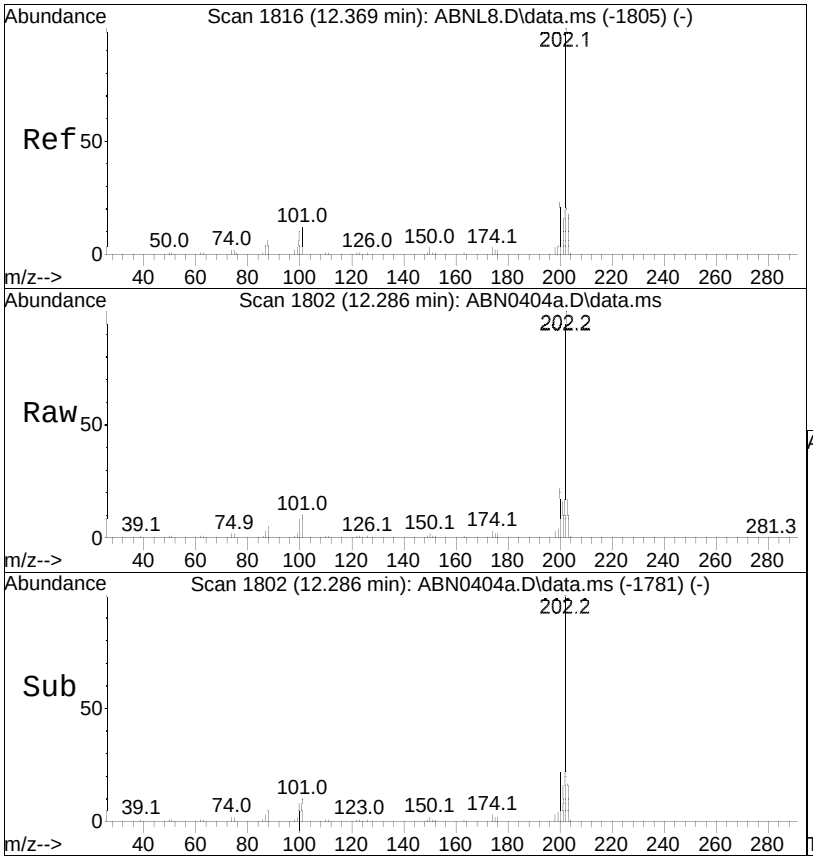


#91
Di-n-butylphthalate
Concen: 5.44 ug/ml
RT: 11.733 min Scan# 1708
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:149 Resp: 773784

Ion	Ratio	Lower	Upper
149	100		
150	9.0	7.0	10.6
104	5.0	4.5	6.7

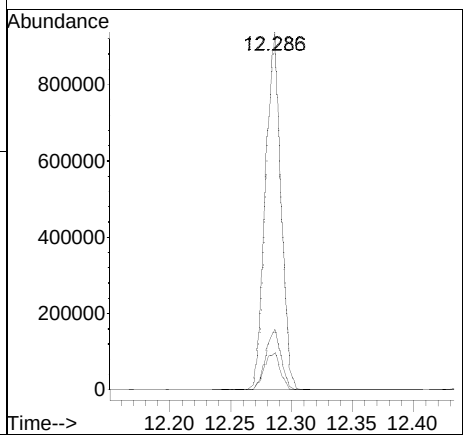


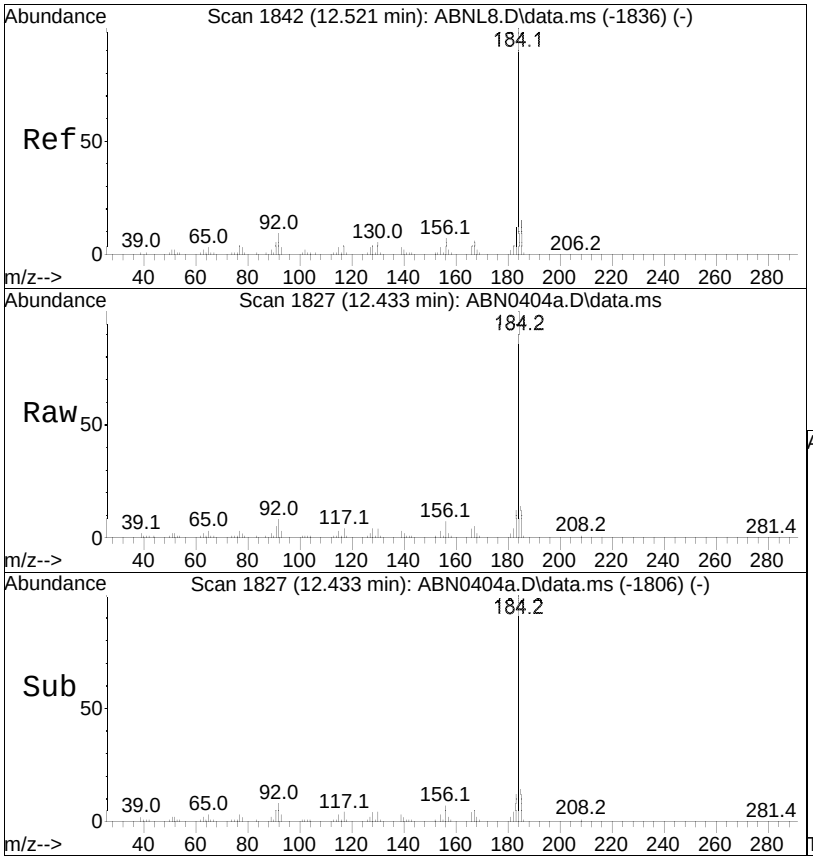


#92
Fluoranthene
Concen: 4.84 ug/ml
RT: 12.286 min Scan# 1802
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:202 Resp: 812208

Ion	Ratio	Lower	Upper
202	100		
101	11.2	13.5	20.3#
203	17.0	13.6	20.4

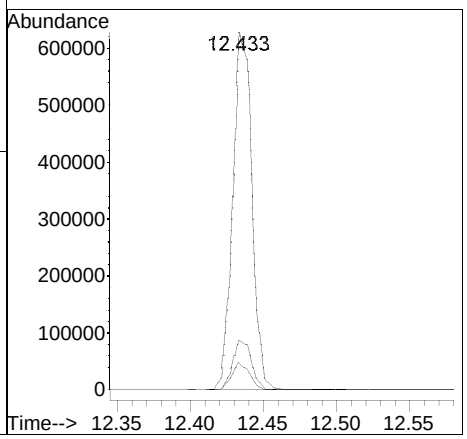


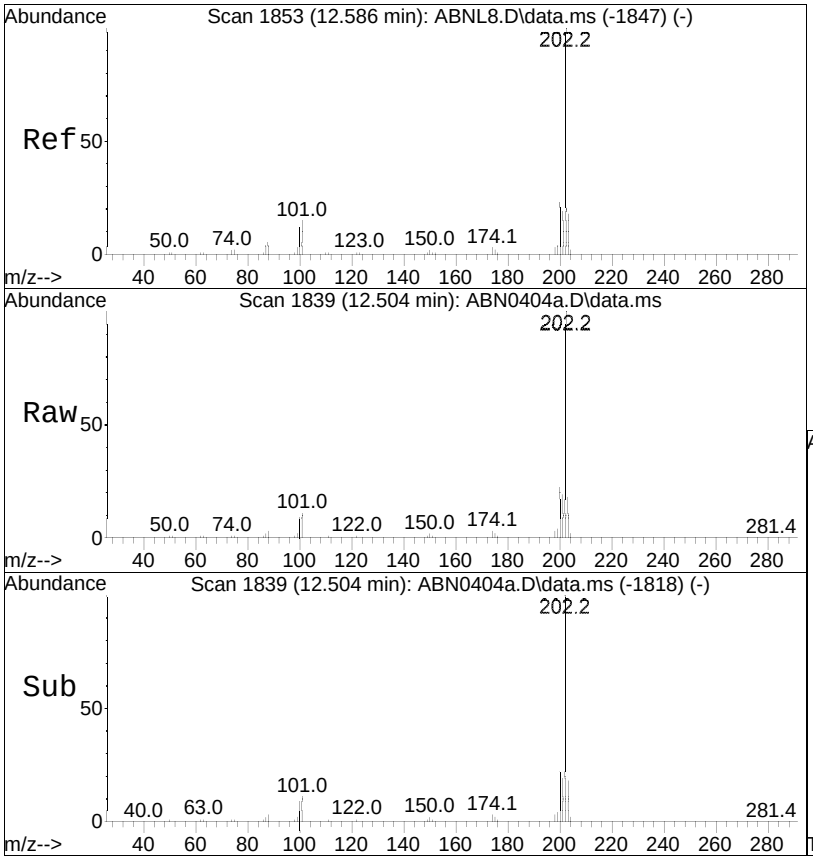


#93
Benzidine
Concen: 6.26 ug/ml
RT: 12.433 min Scan# 1827
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:184 Resp: 567836

Ion	Ratio	Lower	Upper
184	100		
92	7.4	9.1	13.7#
185	13.9	11.1	16.7

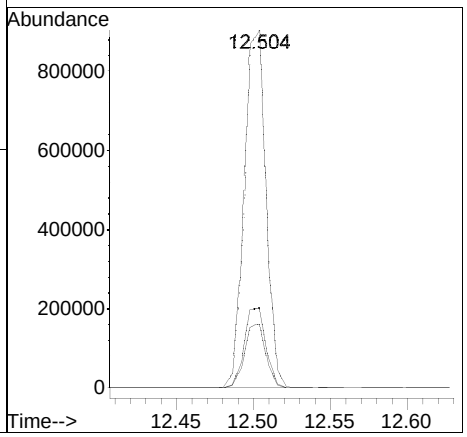


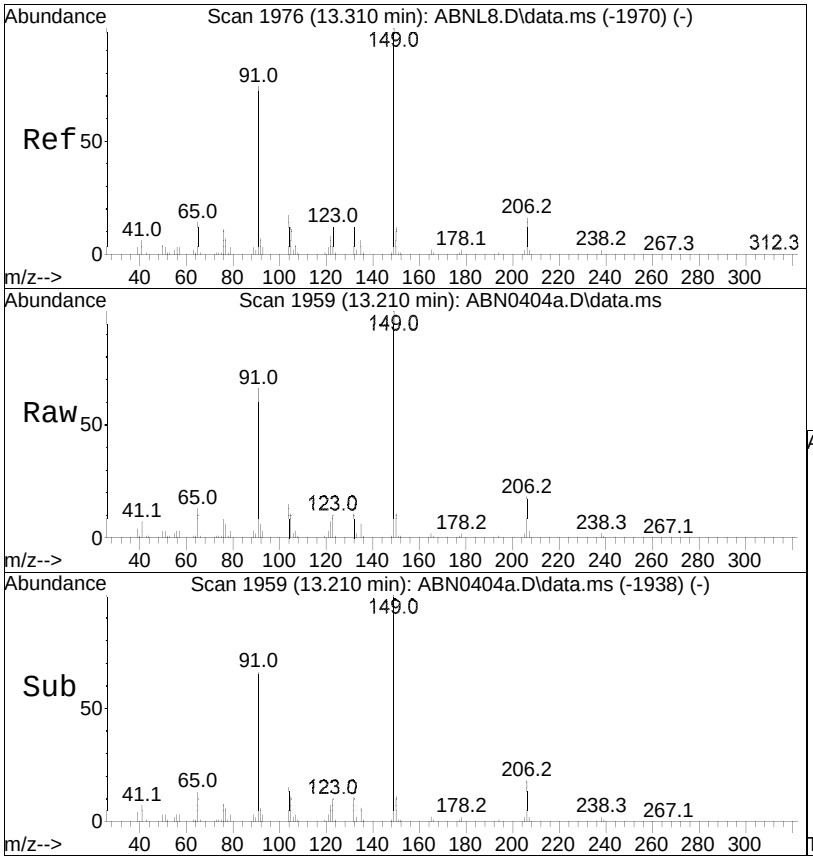


#94
Pyrene
Concen: 4.81 ug/ml
RT: 12.504 min Scan# 1839
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:202 Resp: 874487

Ion	Ratio	Lower	Upper
202	100		
200	22.5	16.7	25.1
203	17.6	14.2	21.4

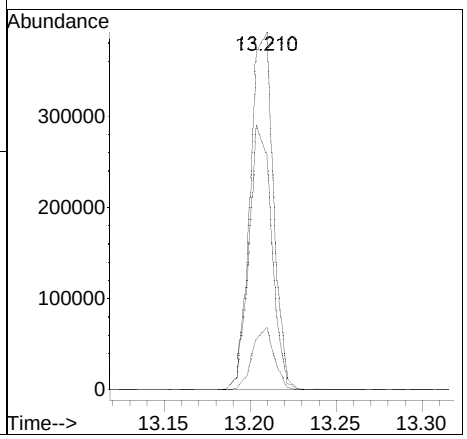


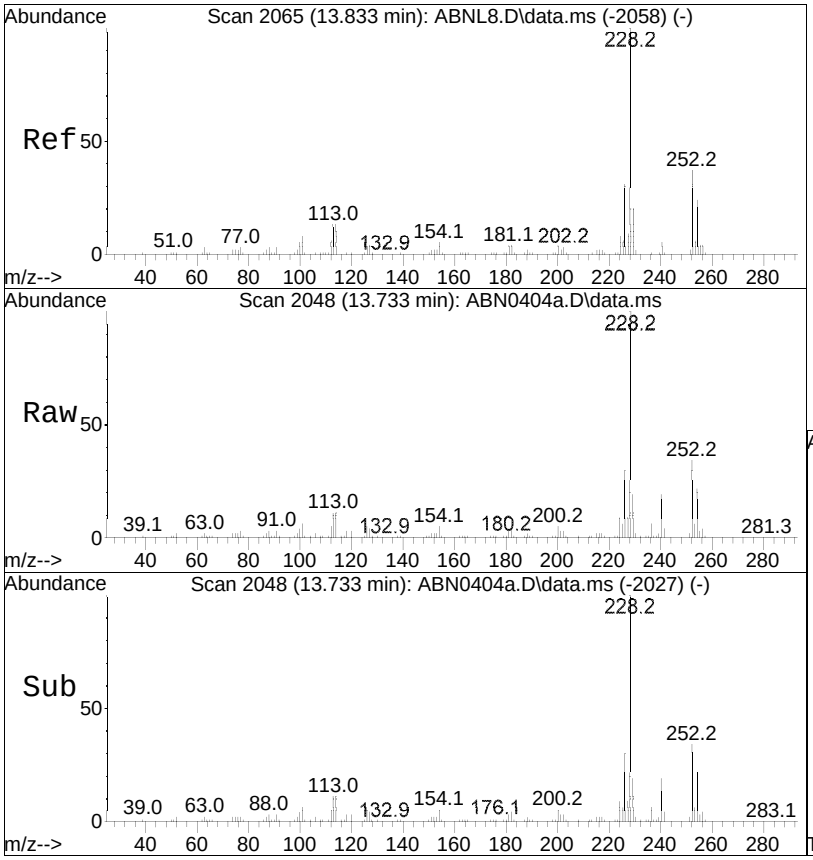


#96
Butyl benzyl phthalate
Concen: 5.64 ug/ml
RT: 13.210 min Scan# 1959
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:149 Resp: 362741

Ion	Ratio	Lower	Upper
149	100		
91	72.4	63.3	94.9
206	16.6	13.9	20.9

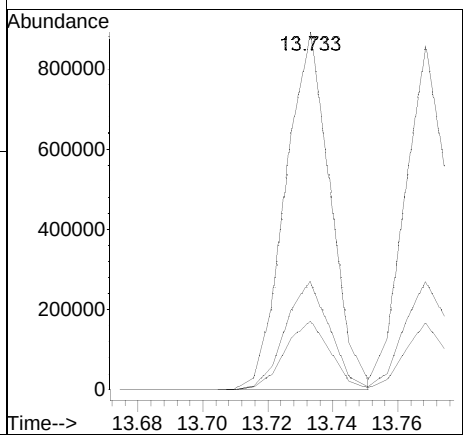


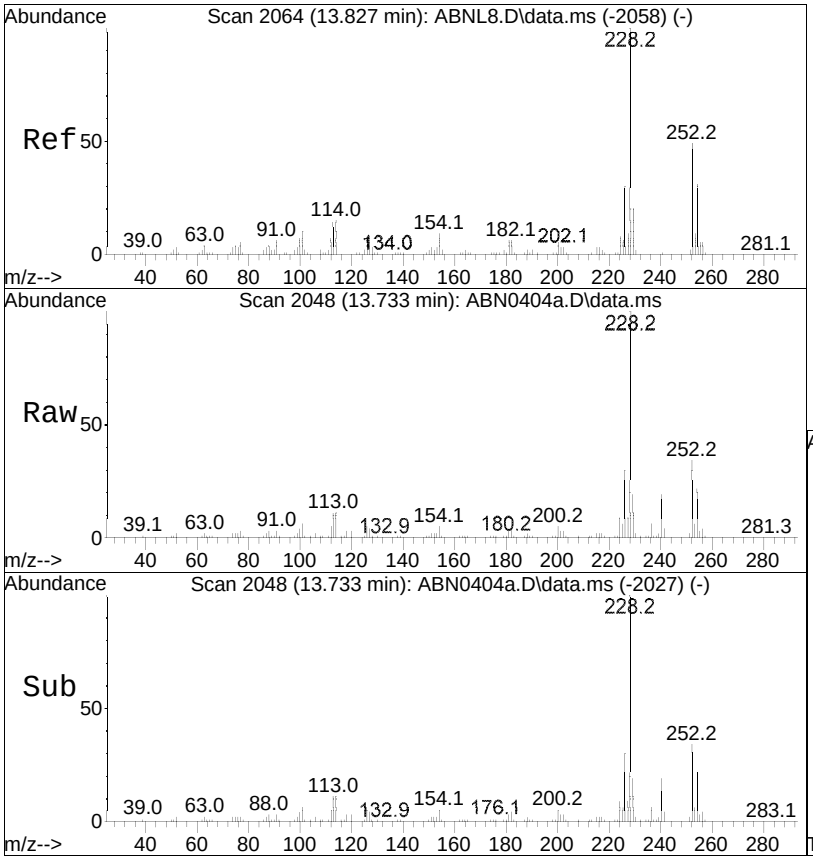


#104
Benzo(a)anthracene
Concen: 5.36 ug/ml
RT: 13.733 min Scan# 2048
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:228 Resp: 857774

Ion	Ratio	Lower	Upper
228	100		
226	30.2	22.2	33.4
229	19.4	15.6	23.4

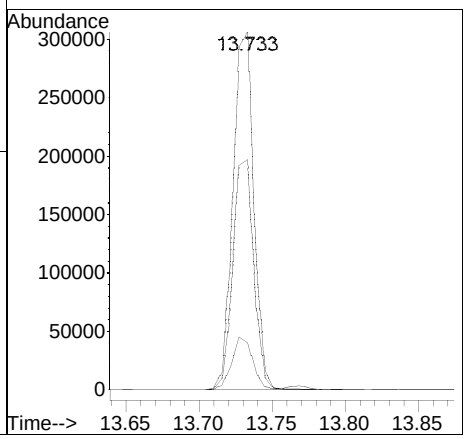


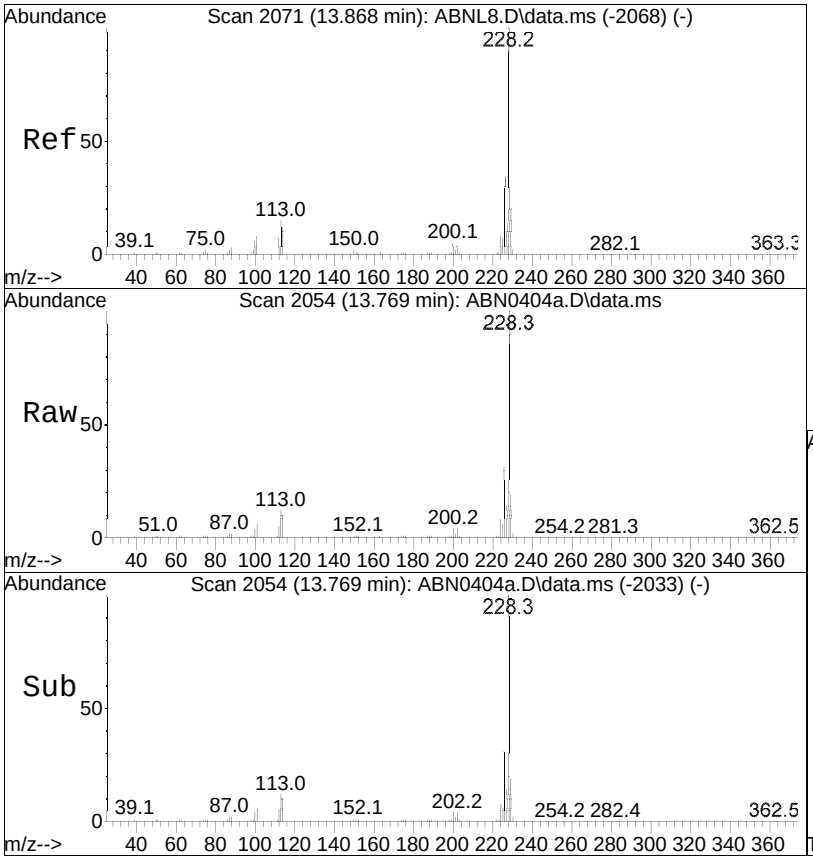


#105
3,3'-Dichlorobenzidine
Concen: 6.23 ug/ml
RT: 13.733 min Scan# 2048
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:252 Resp: 300763

Ion	Ratio	Lower	Upper
252	100		
126	14.9	14.5	21.7
254	64.5	51.2	76.8

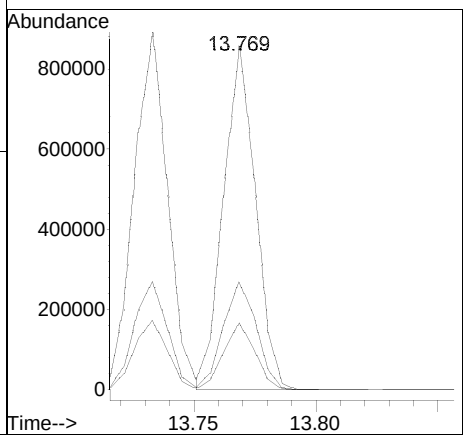


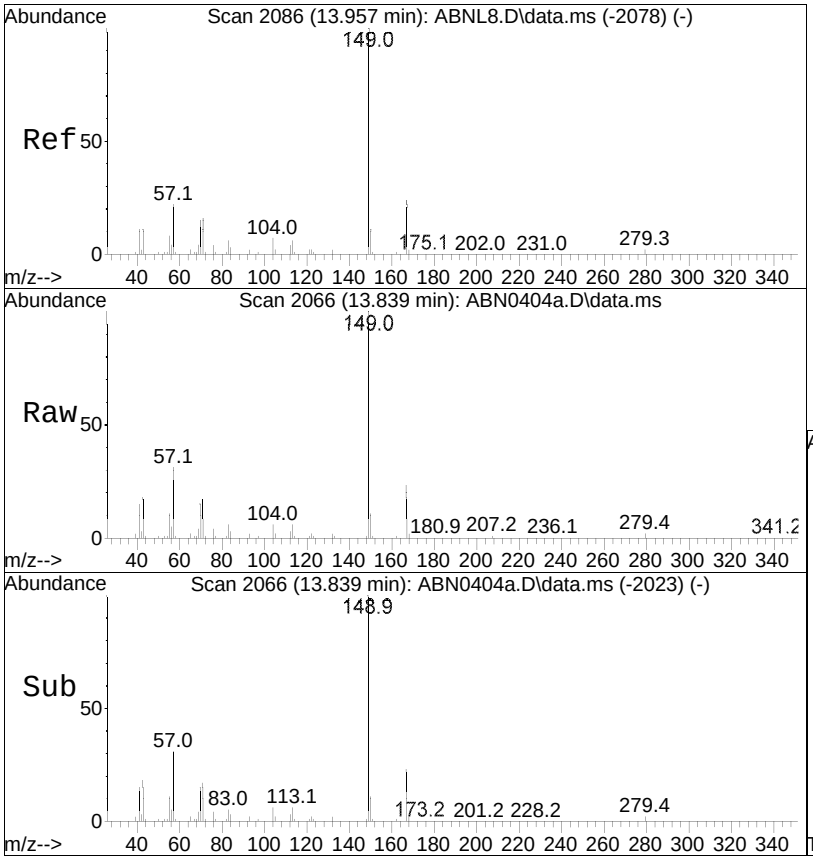


#106
Chrysene
Concen: 4.86 ug/ml
RT: 13.769 min Scan# 2054
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:228 Resp: 783803

Ion	Ratio	Lower	Upper
228	100		
226	32.8	24.0	36.0
229	19.2	15.8	23.8

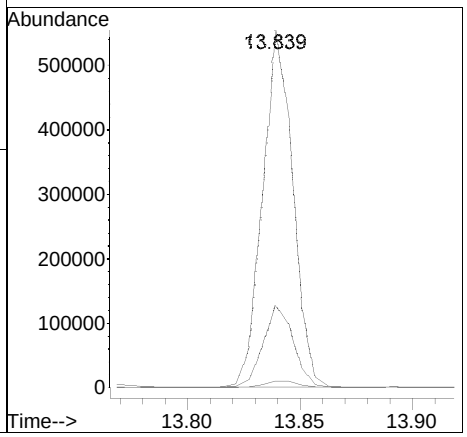


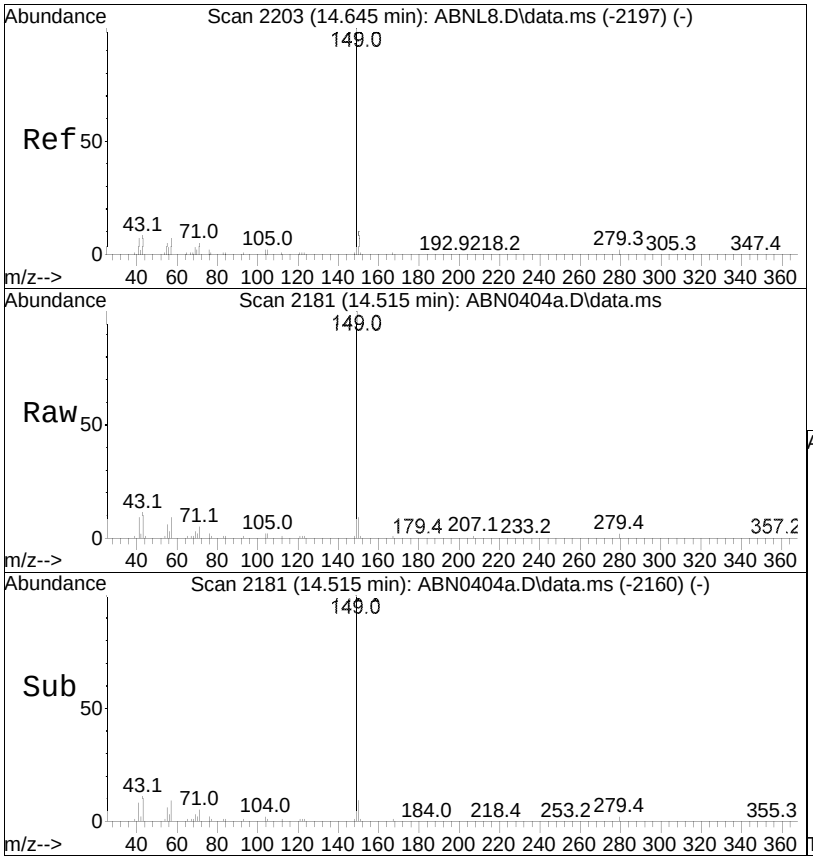


#107
Bis(2-ethylhexyl)phthalate
Concen: 6.05 ug/ml
RT: 13.839 min Scan# 2066
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:149 Resp: 512033

Ion	Ratio	Lower	Upper
149	100		
167	23.2	22.1	33.1
279	1.9	3.0	4.4#

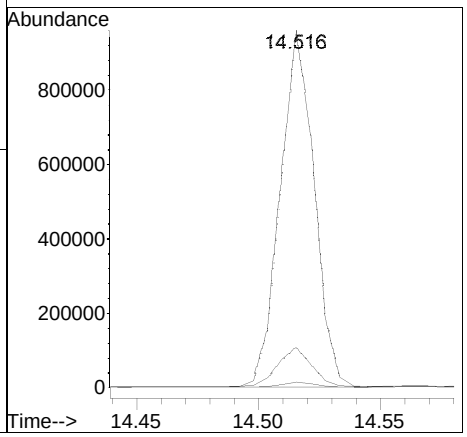


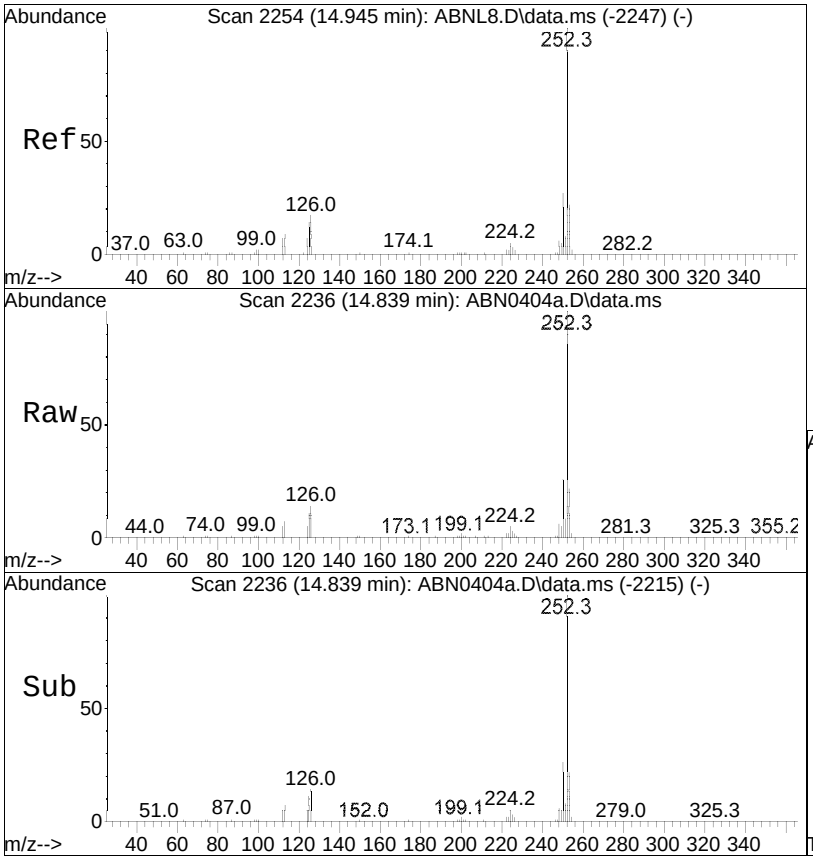


#108
Di-n-octylphthalate
Concen: 6.81 ug/ml
RT: 14.515 min Scan# 2181
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:149 Resp: 919980

Ion	Ratio	Lower	Upper
149	100		
43	11.2	18.8	28.2#
167	1.4	1.3	1.9

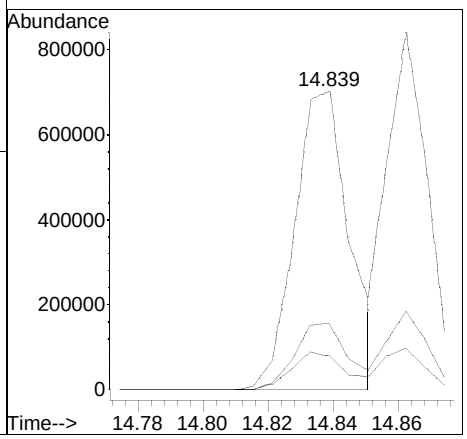


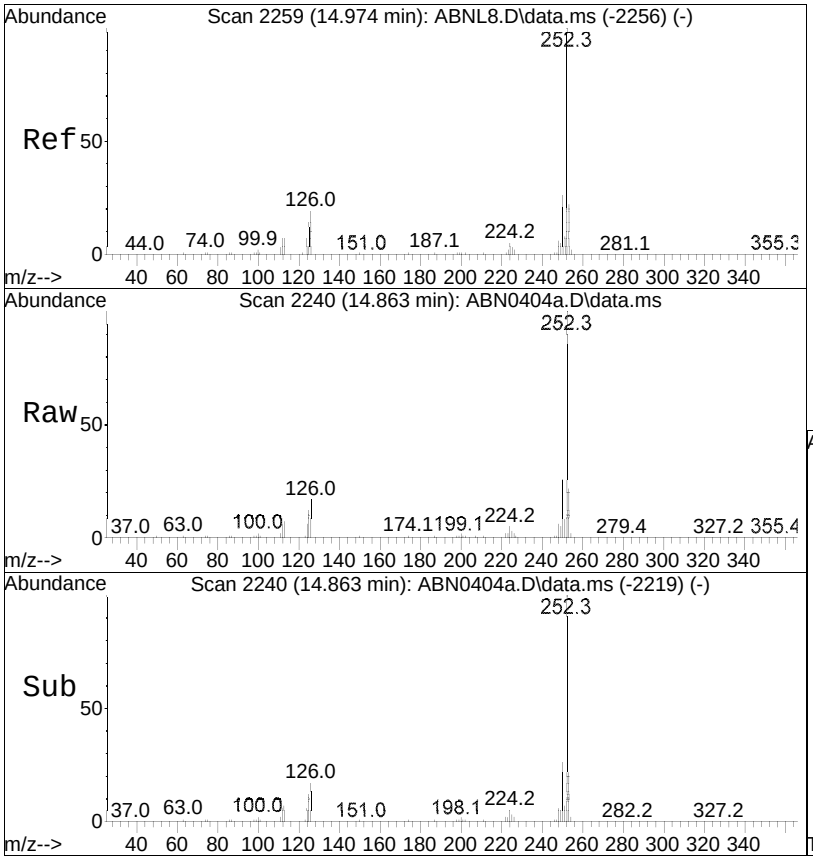


#109
Benzo(b)fluoranthene
Concen: 5.95 ug/ml
RT: 14.839 min Scan# 2236
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:252 Resp: 825621

Ion	Ratio	Lower	Upper
252	100		
125	12.7	13.3	19.9#
253	22.0	17.1	25.7

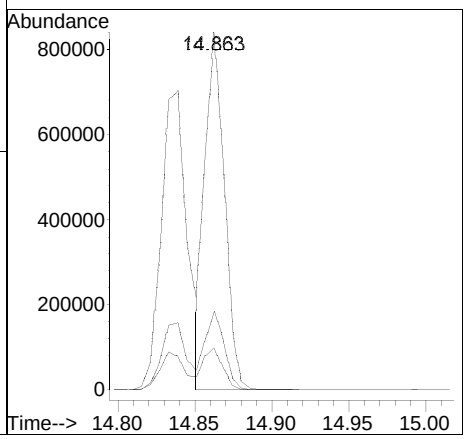


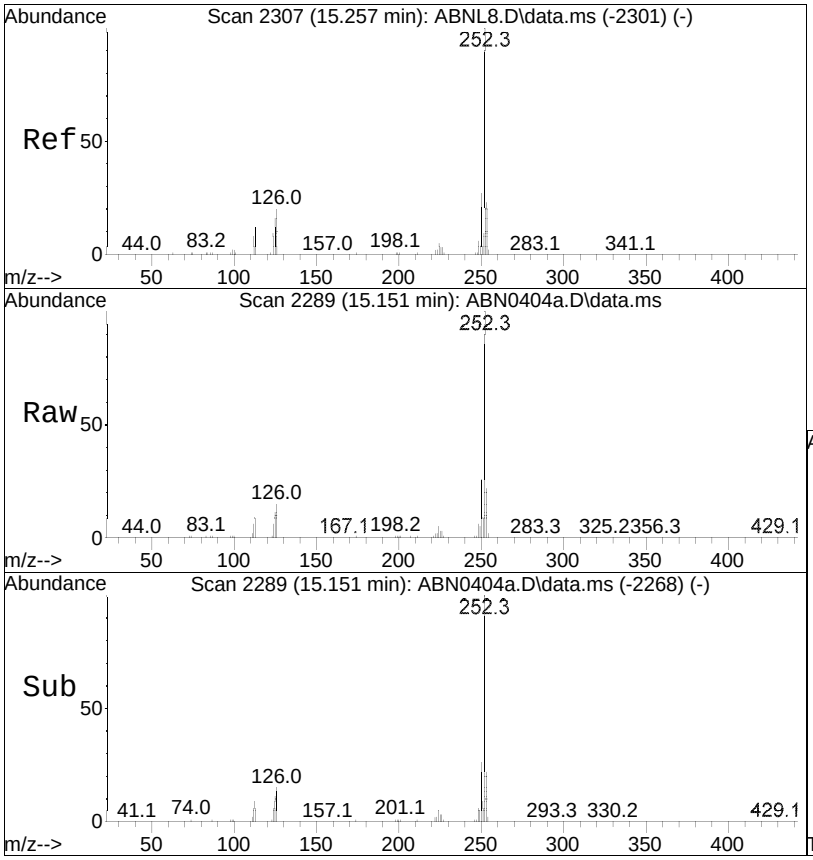


#110
Benzo(k)fluoranthene
Concen: 5.15 ug/ml
RT: 14.863 min Scan# 2240
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:252 Resp: 738305

Ion	Ratio	Lower	Upper
252	100		
125	11.6	13.0	19.6#
253	21.6	16.8	25.2

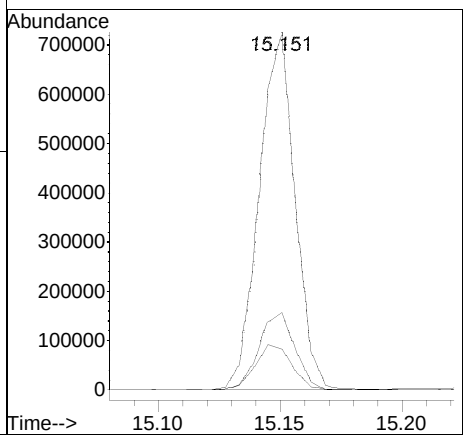


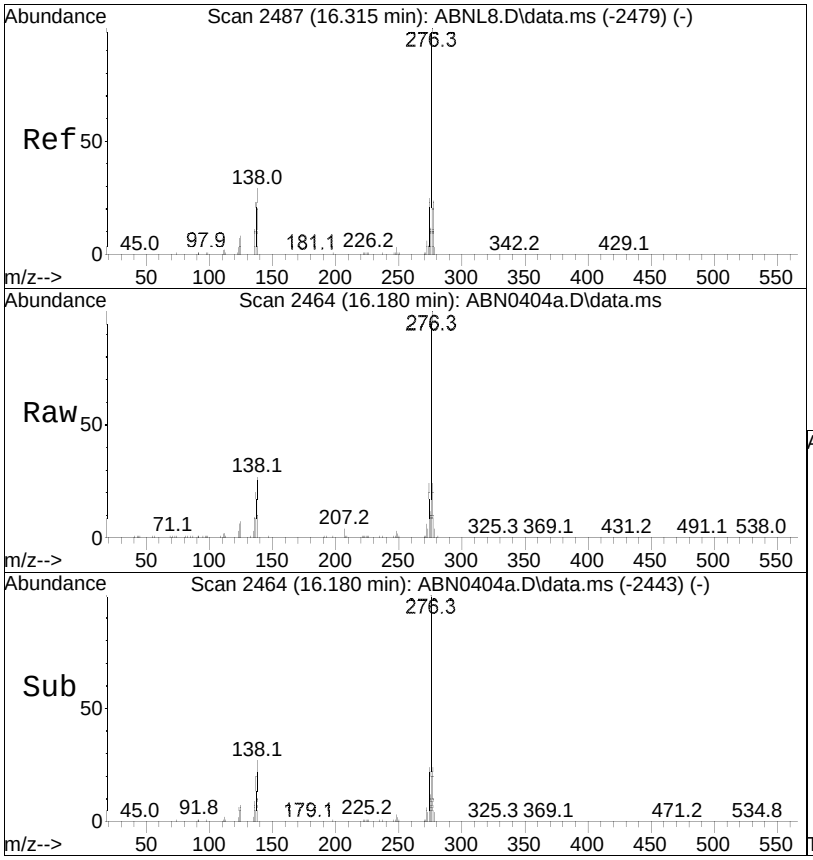


#111
Benzo(a)pyrene
Concen: 5.90 ug/ml
RT: 15.151 min Scan# 2289
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:252 Resp: 734305

Ion	Ratio	Lower	Upper
252	100		
125	13.1	14.2	21.2#
253	22.1	16.9	25.3

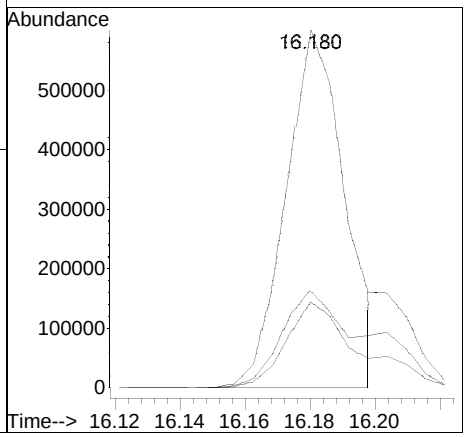


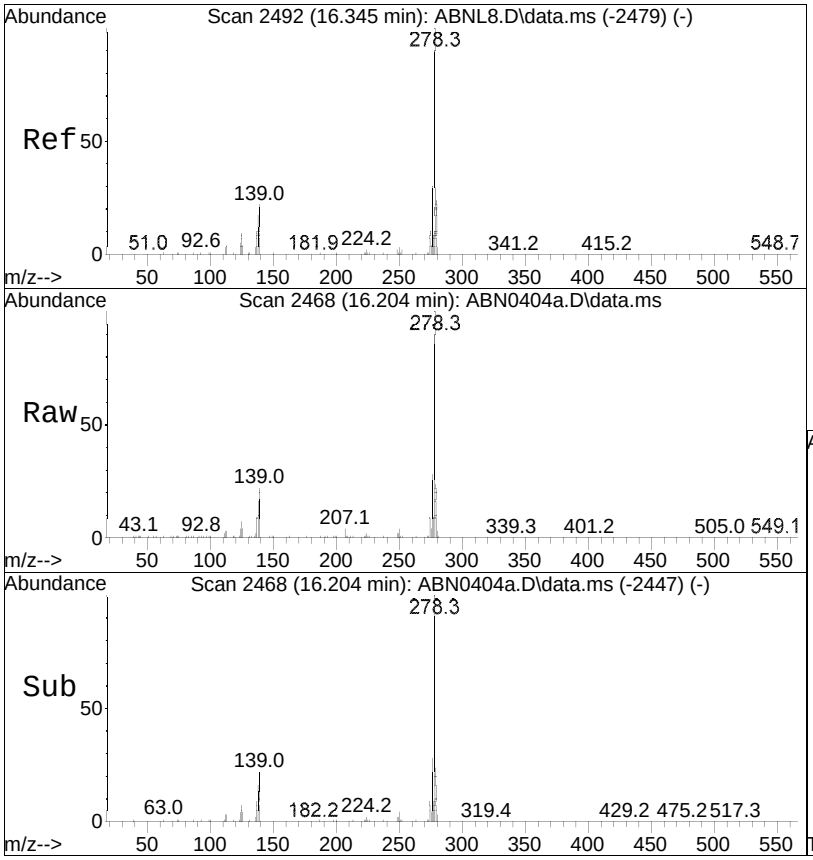


#113
Indeno(1,2,3-cd)pyrene
Concen: 6.13 ug/mL M6
RT: 16.180 min Scan# 2464
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:276 Resp: 755441

Ion	Ratio	Lower	Upper
276	100		
138	39.8	25.1	37.7#
277	30.0	18.6	28.0#

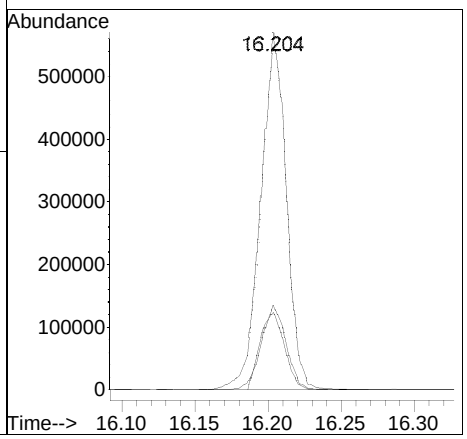


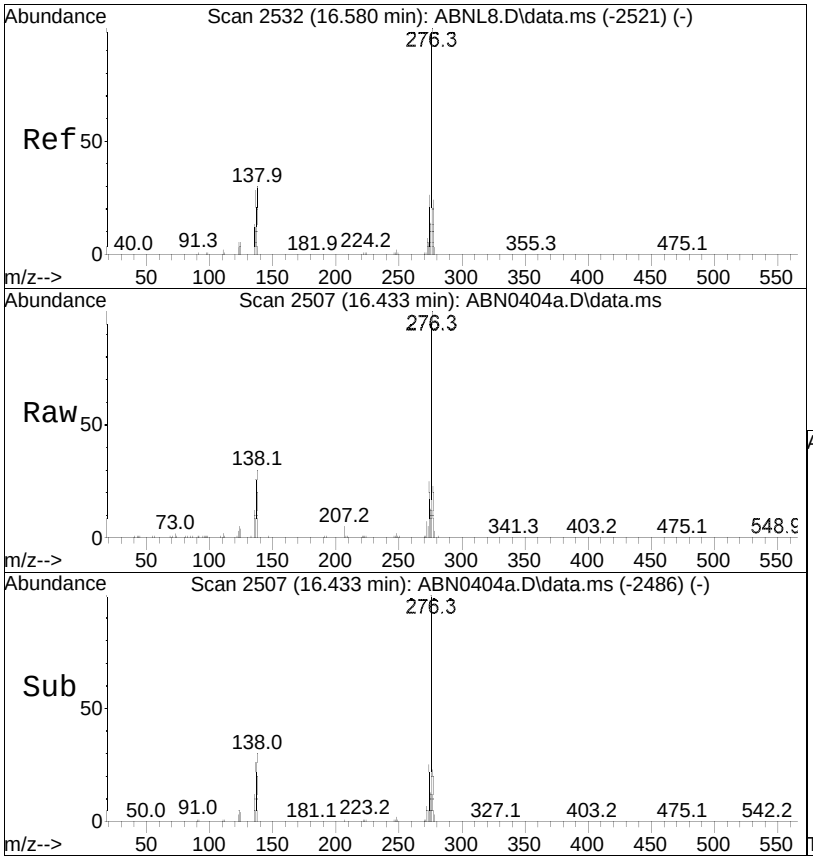


#114
Dibenzo(a,h)anthracene
Concen: 5.31 ug/ml
RT: 16.204 min Scan# 2468
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:278 Resp: 685950

Ion	Ratio	Lower	Upper
278	100		
139	21.4	20.8	31.2
279	23.5	18.3	27.5

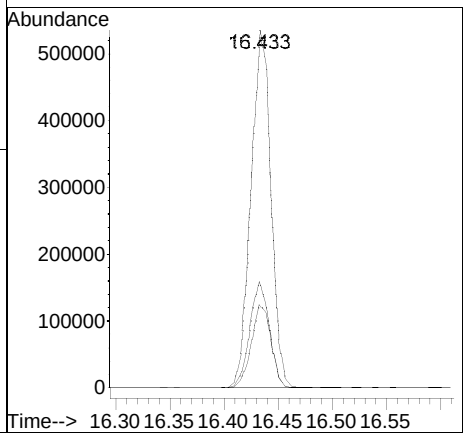




#115
Benzo(ghi)perylene
Concen: 5.26 ug/ml
RT: 16.433 min Scan# 2507
Delta R.T. 0.000 min
Lab File: ABN0404a.D
Acq: 4 Apr 2024 11:45 am

Tgt Ion:276 Resp: 681779

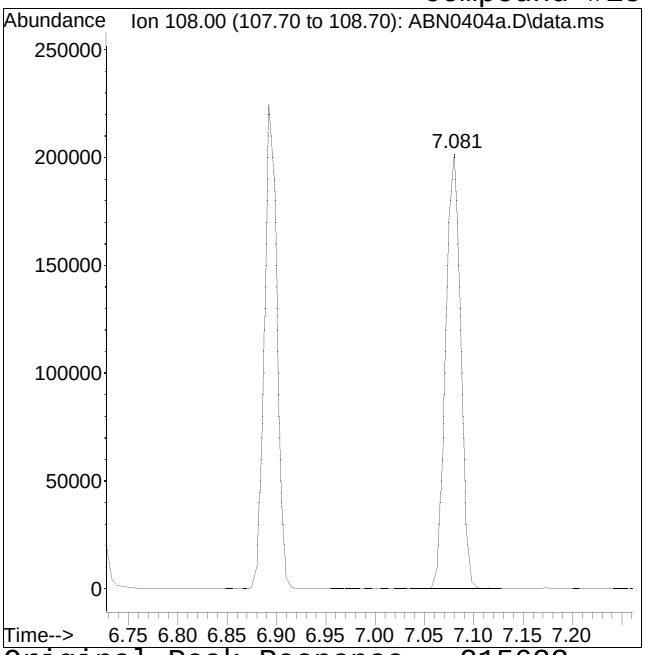
Ion	Ratio	Lower	Upper
276	100		
138	29.5	29.2	43.8
277	23.2	18.8	28.2

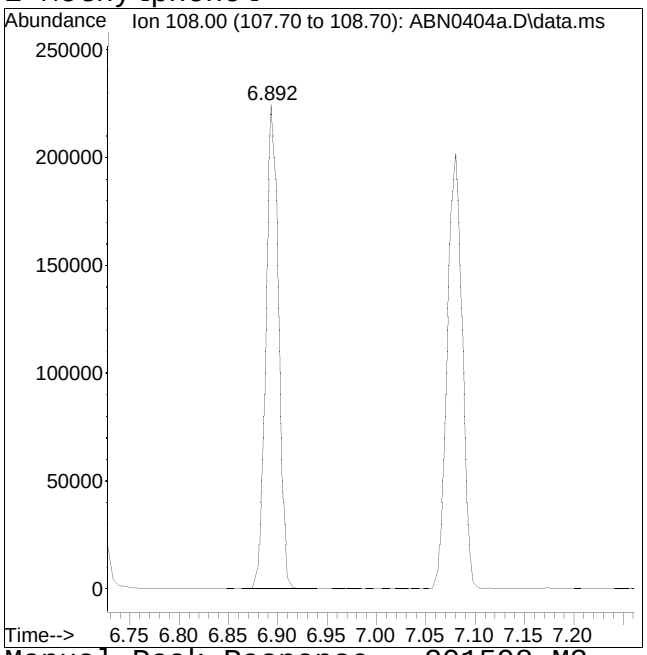


Manual Integration Report

Data Path : I:\8270\SV107\240404lvi\ QMethod : FS240211SV107RVT.m
Data File : ABN0404a.D Operator : SV107:ljg
Date Inj'd : 4/4/2024 11:45 am Instrument : SV107
Sample : WG1904833-3,32,,ABN 10360 Quant Date : 4/4/2024 12:21 pm

Compound #15: 2-Methylphenol





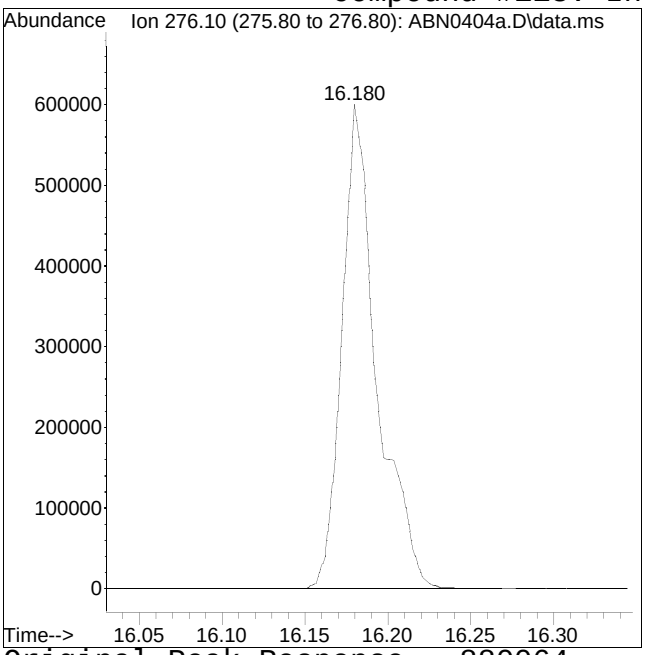
Original Peak Response = 215623 Manual Peak Response = 201598 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

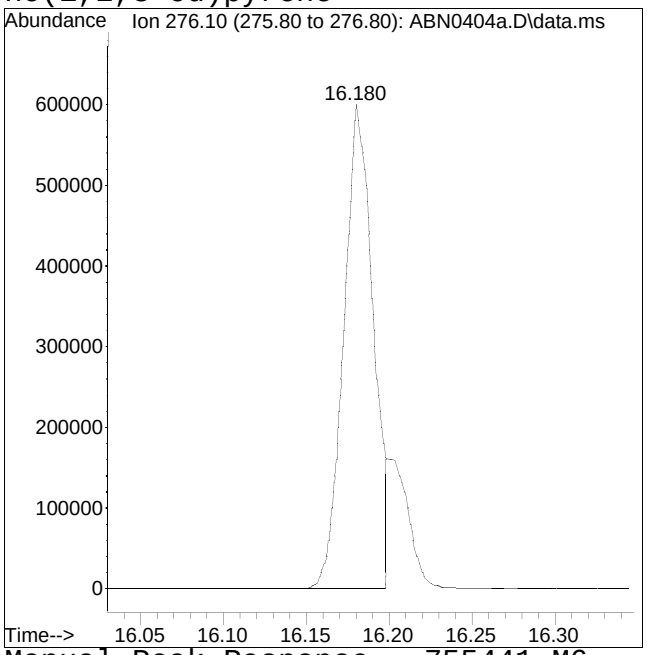
Manual Integration Report

Data Path : I:\8270\SV107\240404lvi\ QMethod : FS240211SV107RVT.m
Data File : ABN0404a.D Operator : SV107:ljg
Date Inj'd : 4/4/2024 11:45 am Instrument : SV107
Sample : WG1904833-3,32,,ABN 10360 Quant Date : 4/4/2024 12:21 pm

Compound #113: Indeno(1,2,3-cd)pyrene



Original Peak Response = 880064



Manual Peak Response = 755441 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240404lvi\
Data File : AP90404.D
Acq On : 4 Apr 2024 12:10 pm
Operator : SV107:ljg
Sample : WG1904833-4,32,,AP9 10340 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 143 Sample Multiplier: 1

Quant Time: Apr 04 12:39:43 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:39:34 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
27	I	IS2_1,4-Dichlorobenzene-d4		1.000	1.000	0.0	182	0.00
28	T	Benzaldehyde		0.987	0.986	0.1	186	0.00
29	T	Acetophenone		1.676	1.633	2.6	181	0.00
30	T	m-Toluidine		1.662	1.632	1.8	181	0.00
31	T	2-Chloroaniline		1.489	1.503	-0.9	191	0.00
54	I	IS2_Naphthalene-d8		1.000	1.000	0.0	186	0.00
55	T	a-Terpineol		0.252	0.291	-15.5	216#	0.00
56	T	3-Chloroaniline		0.152	0.142	6.6	175	0.00
57	T	2,6-Dichlorophenol		0.266	0.278	-4.5	190	0.00
58	T	1-chloro-2-nitrobenzene		0.119	0.132	-10.9	209#	0.00
59	T	Caprolactam	*	5.000	5.499	-10.0	233	0.00
60	T	1,2,4,5-Tetrachlorobenzene		0.402	0.331	17.7	161	0.00
61	T	Biphenyl		0.898	0.764	14.9	165	0.00
82	I	IS2_Acenaphthene-d10		1.000	1.000	0.0	170	0.00
83	T	Dichloran	*	5.000	5.931	-18.6	239	0.00
84	T	Pentachloronitrobenzene	*	5.000	4.969	0.6	192	0.00
97	I	IS2_Phenanthrene-d10		1.000	1.000	0.0	151	0.00
98	T	Diphenamid		0.370	0.424	-14.6	172	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : AP90404.D
Acq On : 4 Apr 2024 12:10 pm
Operator : SV107:ljg
Sample : WG1904833-4,32,,AP9 10340 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 143 Sample Multiplier: 1

Quant Time: Apr 04 12:39:43 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:39:34 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublist

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
27) IS2_1,4-Dichlorobenzen...	6.504	152	169725	4.000	ug/ml		0.00
54) IS2_Naphthalene-d8	7.922	136	626345	4.000	ug/ml		0.00
82) IS2_Acenaphthene-d10	9.675	164	336550	4.000	ug/ml		0.00
97) IS2_Phenanthrene-d10	11.110	188	633843	4.000	ug/ml	#	0.00
System Monitoring Compounds							
Target Compounds							Qvalue
28) Benzaldehyde	5.939	105	209267	4.995	ug/ml		97
29) Acetophenone	6.998	105	346411	4.872	ug/ml	#	86
30) m-Toluidine	7.098	106	346143	4.909	ug/ml		96
31) 2-Chloroaniline	7.498	127	318864	5.047	ug/ml	#	93
55) a-Terpineol	7.992	59	227810	5.778	ug/ml		93
56) 3-Chloroaniline	8.010	65	111478	4.695	ug/ml		89
57) 2,6-Dichlorophenol	8.033	162	218006	5.237	ug/ml		91
58) 1-chloro-2-nitrobenzene	8.298	111	103573	5.575	ug/ml	#	1
59) Caprolactam	8.339	55	121078	5.499	ug/ml	#	75
60) 1,2,4,5-Tetrachloroben...	8.828	216	259311	4.124	ug/ml		97
61) Biphenyl	9.128	154	598388	4.255	ug/ml		98
83) Dichloran	10.810	206	64975	5.931	ug/ml	#	75
84) Pentachloronitrobenzene	10.957	237	61720	4.969	ug/ml	#	85
98) Diphenamid	12.010	167	335867	5.735	ug/ml		87

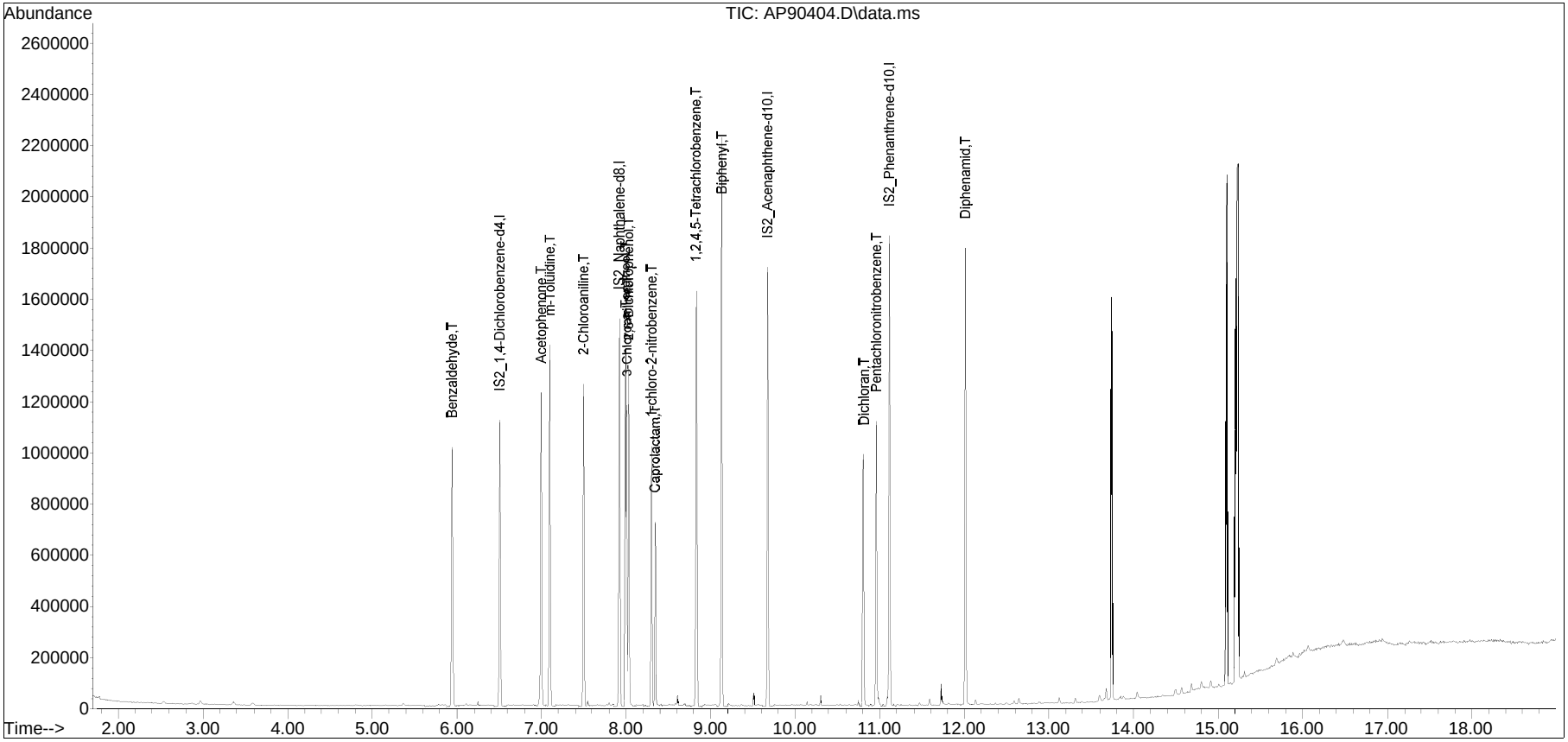
(#) = qualifier out of range (m) = manual integration (+) = signals summed

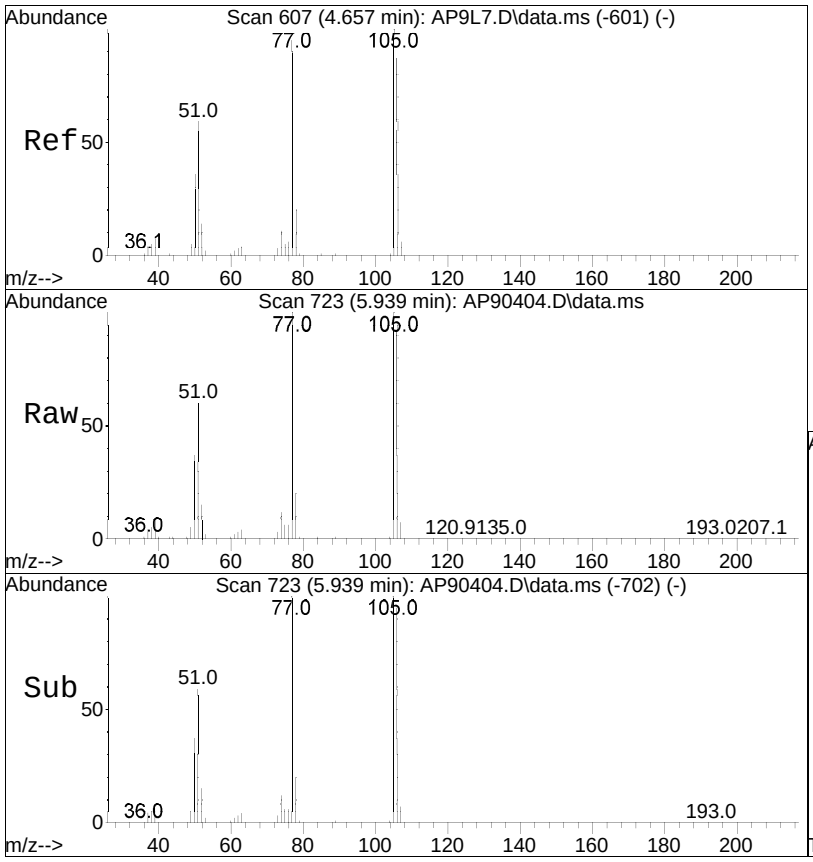
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : AP90404.D
Acq On : 4 Apr 2024 12:10 pm
Operator : SV107:ljg
Sample : WG1904833-4,32,,AP9 10340 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 143 Sample Multiplier: 1

Quant Time: Apr 04 12:39:43 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 12:39:34 2024
Response via : Initial Calibration

Sub List : AP9ical - AP9 ical sublist

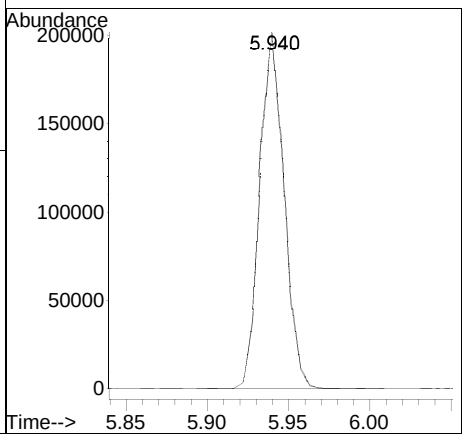


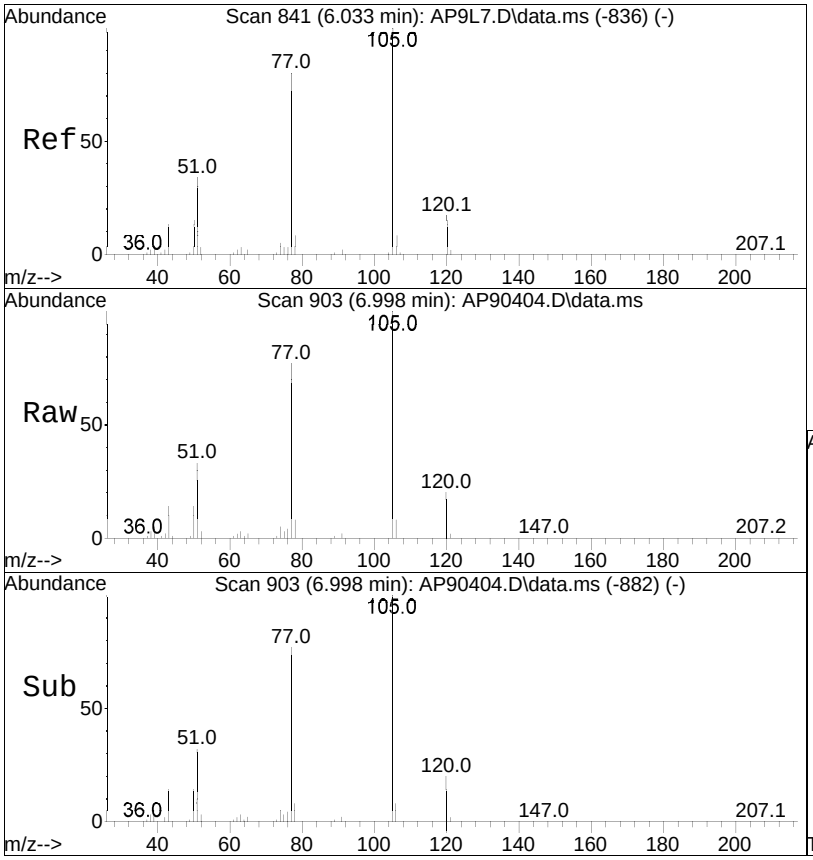


#28
Benzaldehyde
Concen: 4.99 ug/ml
RT: 5.939 min Scan# 723
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:105 Resp: 209267

Ion	Ratio	Lower	Upper
105	100		
77	99.7	82.2	123.4

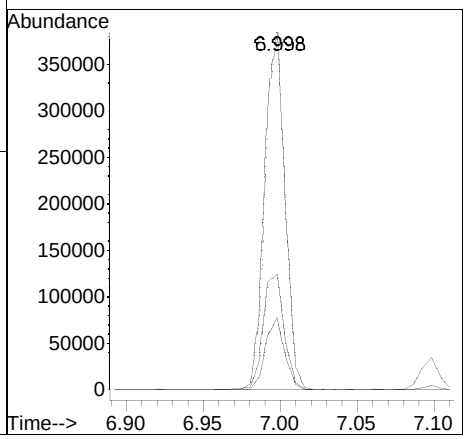


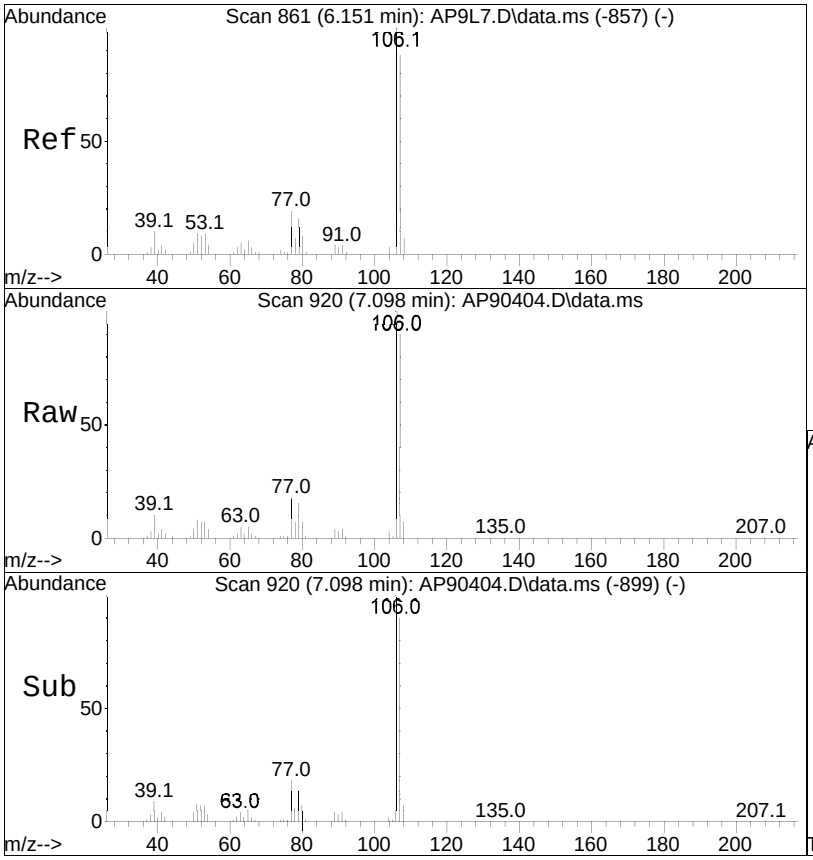


#29
Acetophenone
Concen: 4.87 ug/ml
RT: 6.998 min Scan# 903
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:105 Resp: 346411

Ion	Ratio	Lower	Upper
105	100		
120	19.3	20.5	30.7#
51	33.8	34.9	52.3#

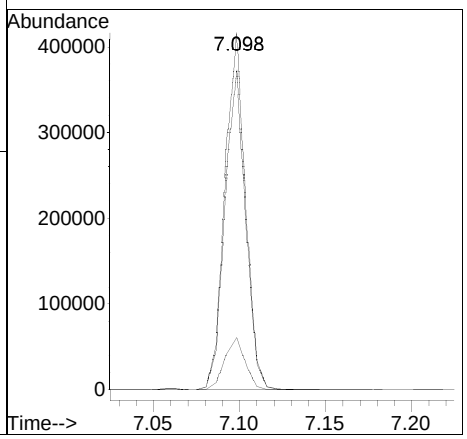


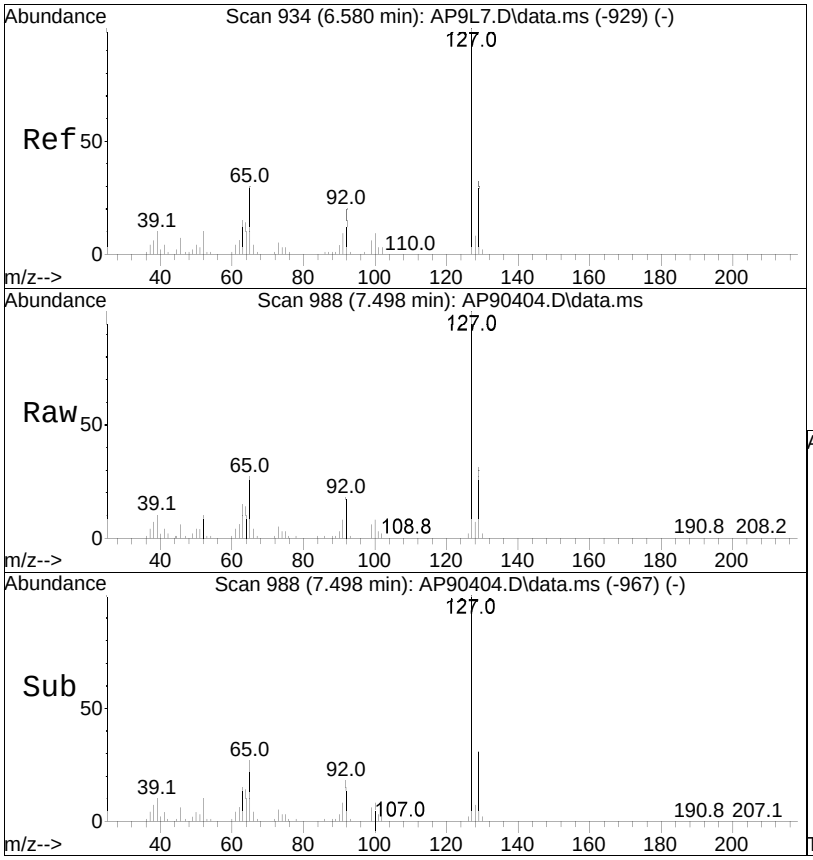


#30
m-Toluidine
Concen: 4.91 ug/ml
RT: 7.098 min Scan# 920
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:106 Resp: 346143

Ion	Ratio	Lower	Upper
106	100		
107	89.9	75.7	113.5
79	14.8	11.8	17.8

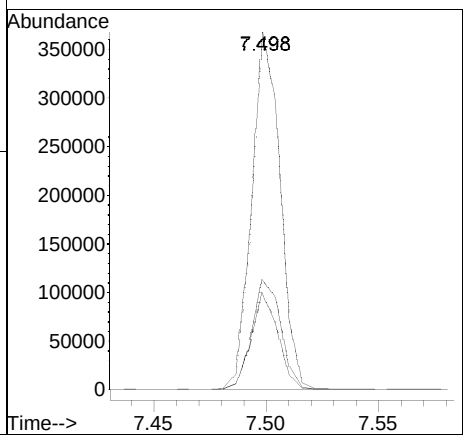


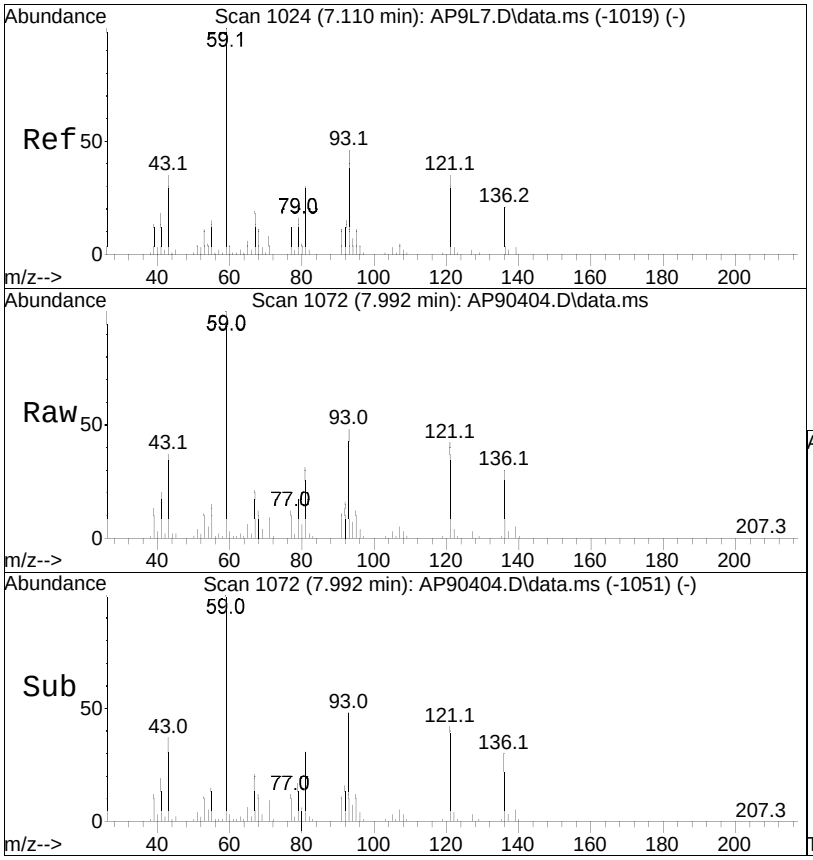


#31
2-Chloroaniline
Concen: 5.05 ug/ml
RT: 7.498 min Scan# 988
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:127 Resp: 318864

Ion	Ratio	Lower	Upper
127	100		
129	31.5	25.9	38.9
65	25.9	26.3	39.5#

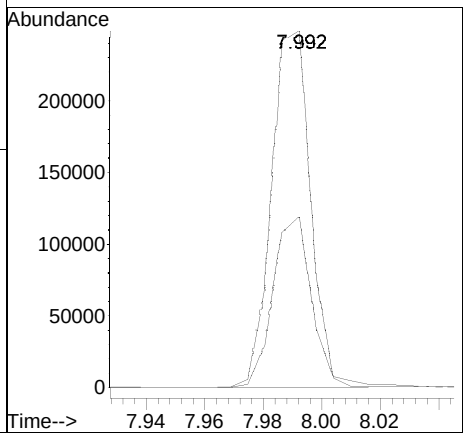


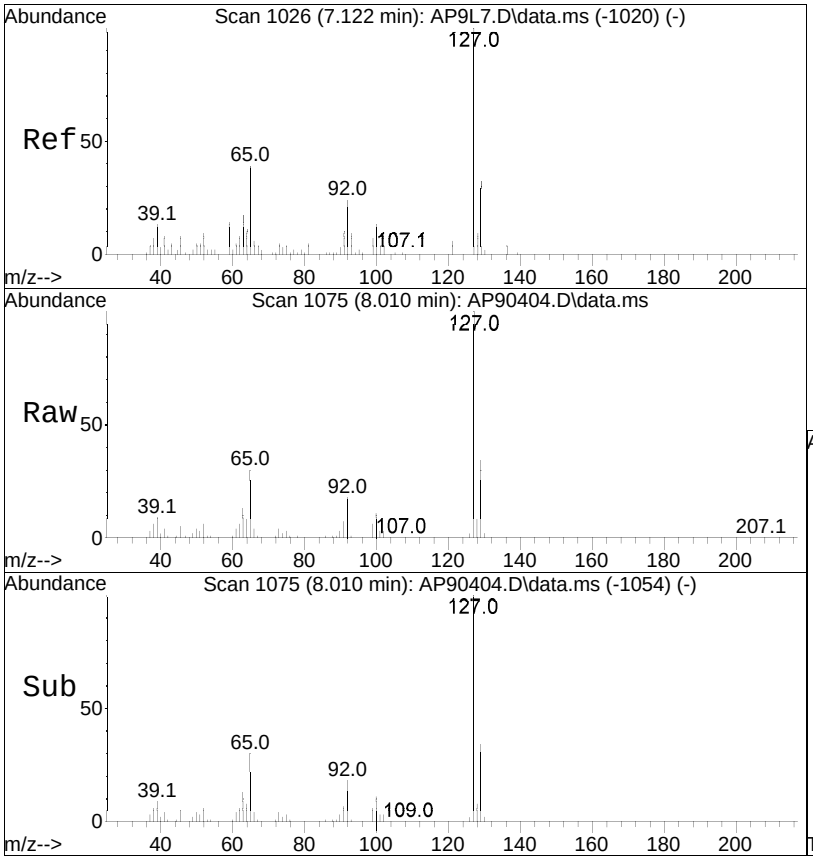


#55
a-Terpineol
Concen: 5.78 ug/ml
RT: 7.992 min Scan# 1072
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion: 59 Resp: 227810

Ion	Ratio	Lower	Upper
59	100		
93	49.1	35.6	53.4

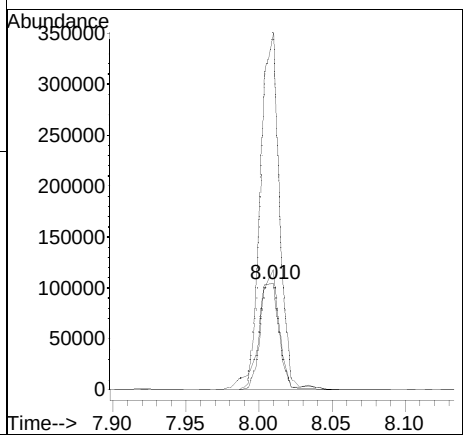


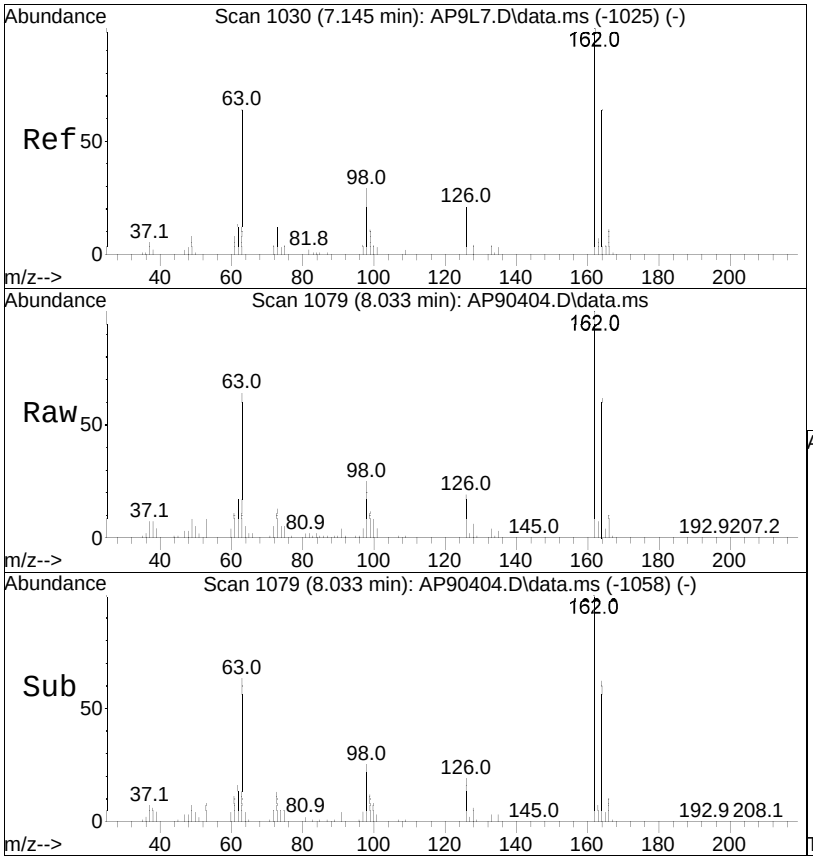


#56
3-Chloroaniline
Concen: 4.69 ug/ml
RT: 8.010 min Scan# 1075
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion: 65 Resp: 111478

Ion	Ratio	Lower	Upper
65	100		
127	279.2	243.2	364.8
129	90.3	78.8	118.2

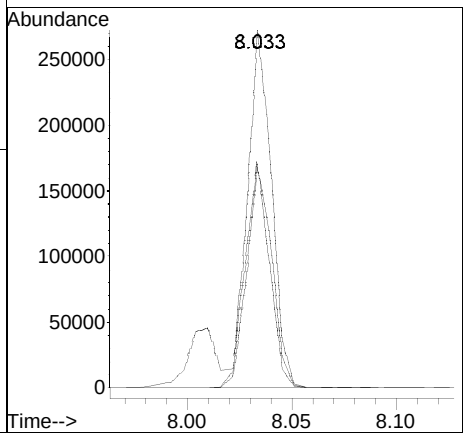


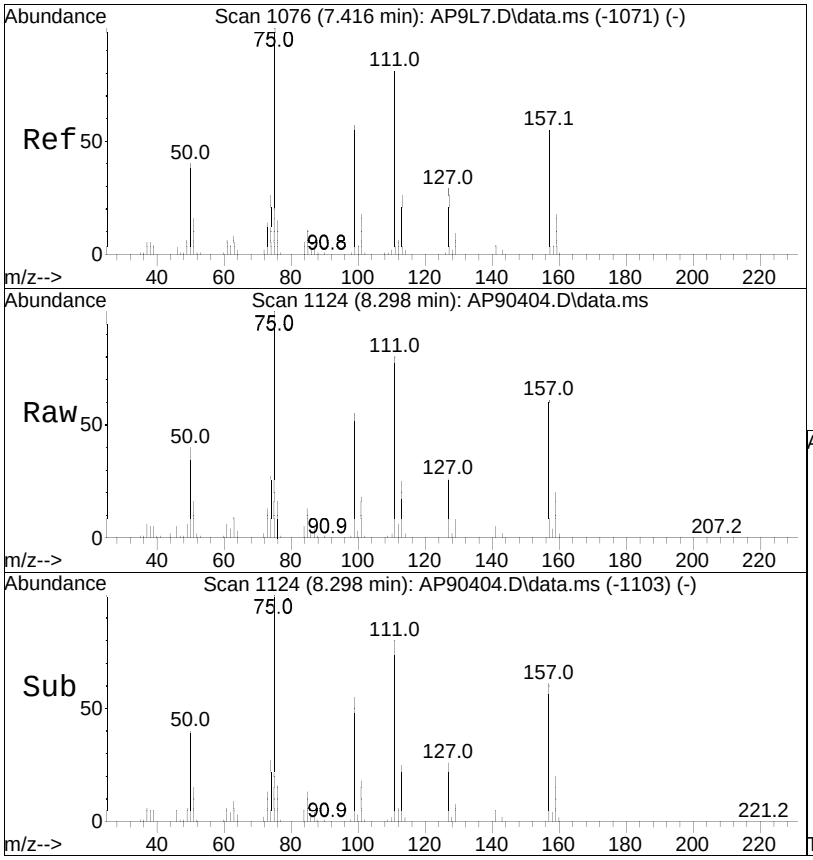


#57
2,6-Dichlorophenol
Concen: 5.24 ug/ml
RT: 8.033 min Scan# 1079
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:162 Resp: 218006

Ion	Ratio	Lower	Upper
162	100		
164	63.8	51.1	76.7
63	62.6	60.8	91.2

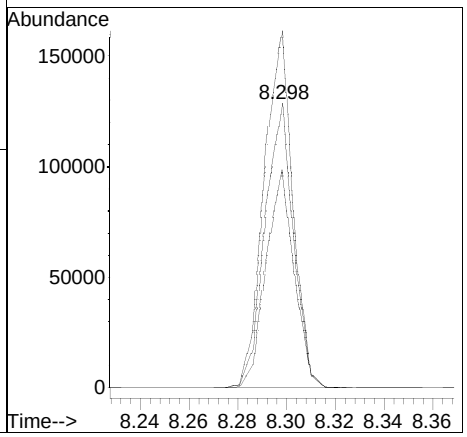


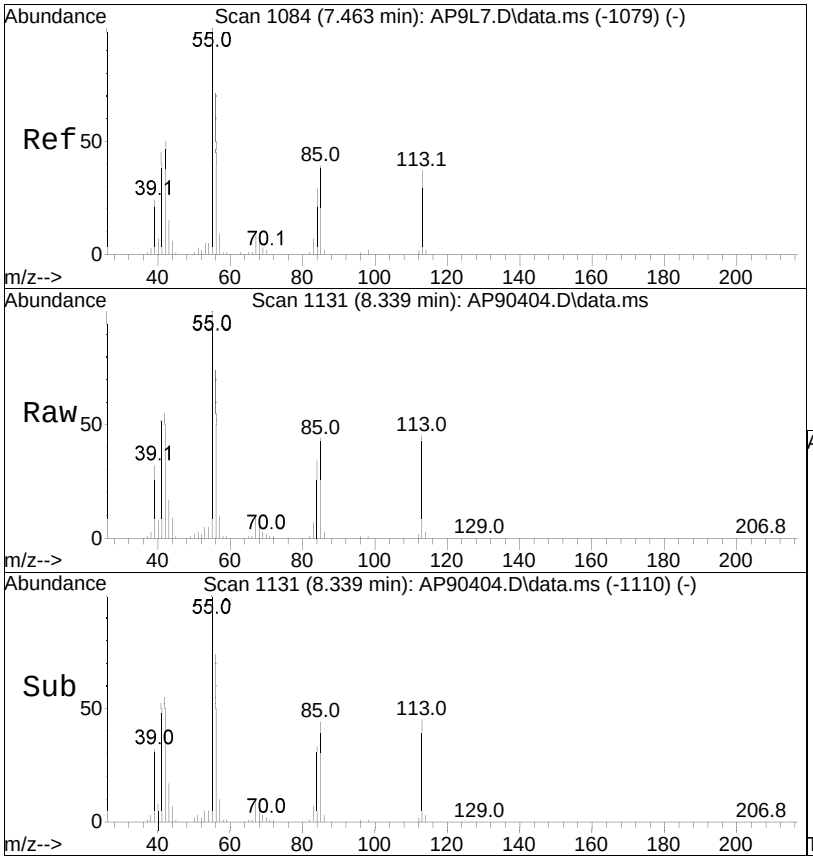


#58
1-chloro-2-nitrobenzene
Concen: 5.57 ug/ml
RT: 8.298 min Scan# 1124
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:111 Resp: 103573

Ion	Ratio	Lower	Upper
111	100		
157	75.8	0.0	0.0#
75	126.4	28.2	42.2#

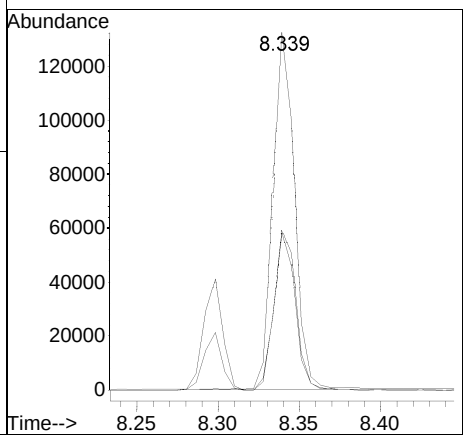


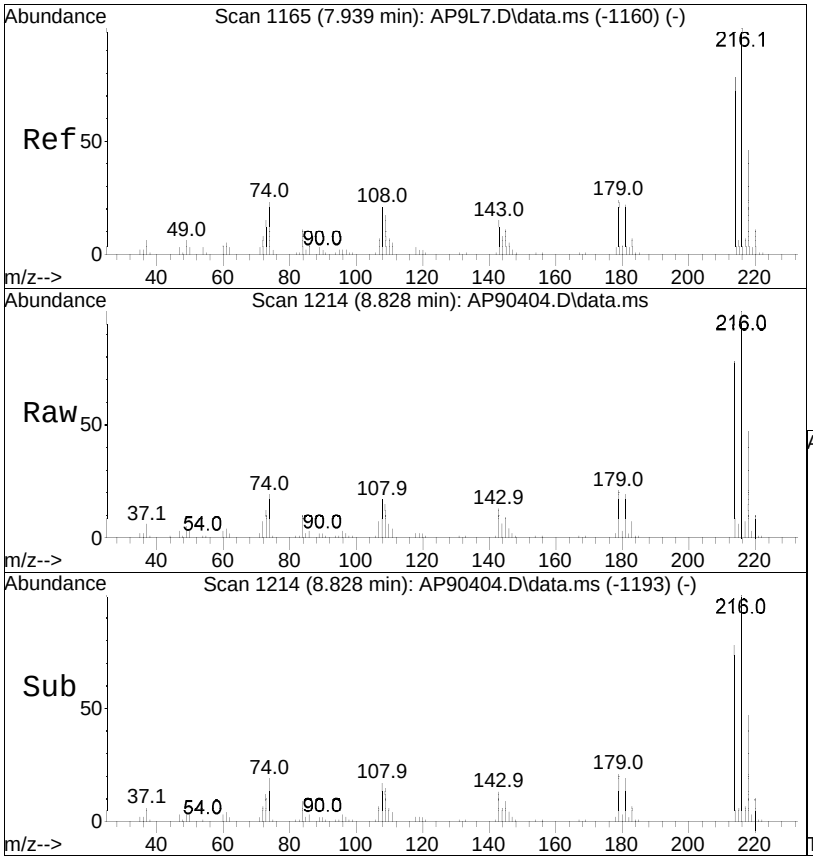


#59
Caprolactam
Concen: 5.50 ug/ml
RT: 8.339 min Scan# 1131
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion: 55 Resp: 121078

Ion	Ratio	Lower	Upper
55	100		
85	44.2	19.8	29.6#
113	46.1	29.6	44.4#

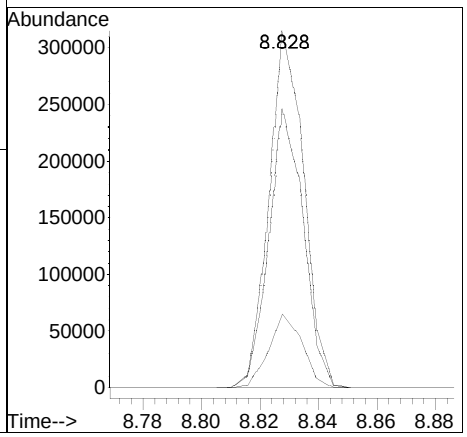


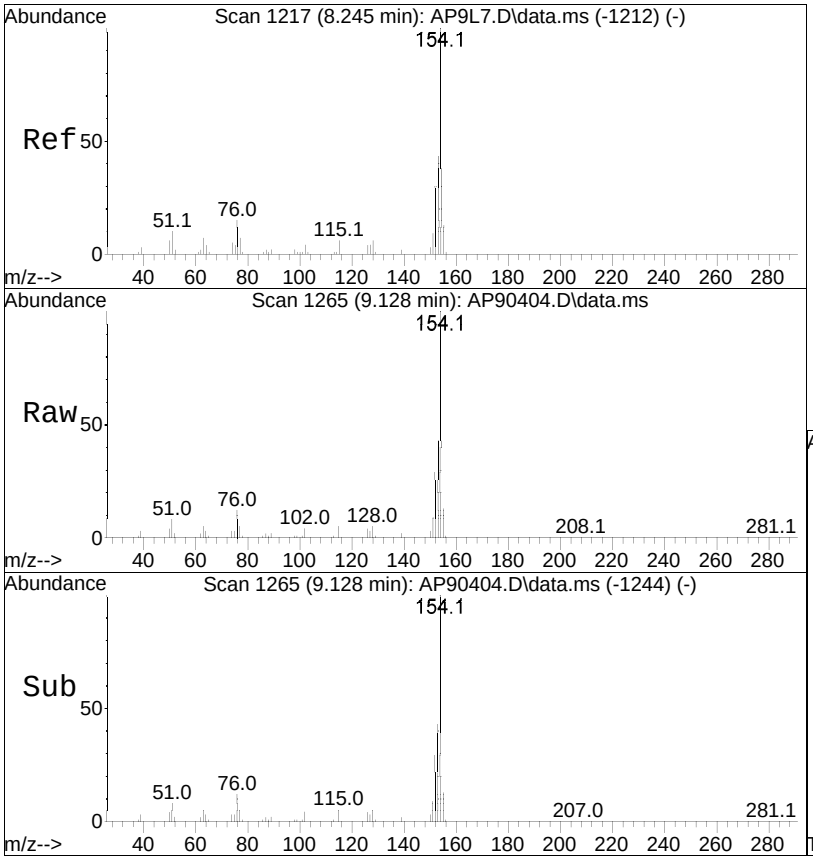


#60
1,2,4,5-Tetrachlorobenzene
Concen: 4.12 ug/ml
RT: 8.828 min Scan# 1214
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:216 Resp: 259311

Ion	Ratio	Lower	Upper
216	100		
214	77.7	63.7	95.5
179	20.1	19.0	28.6

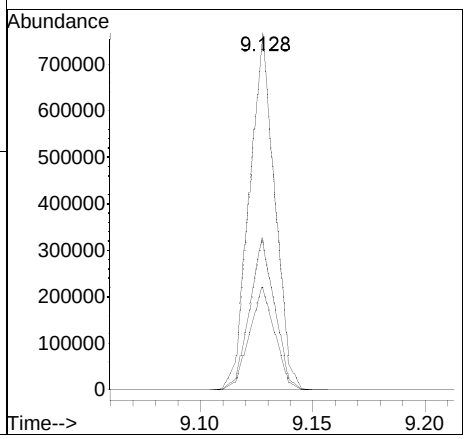


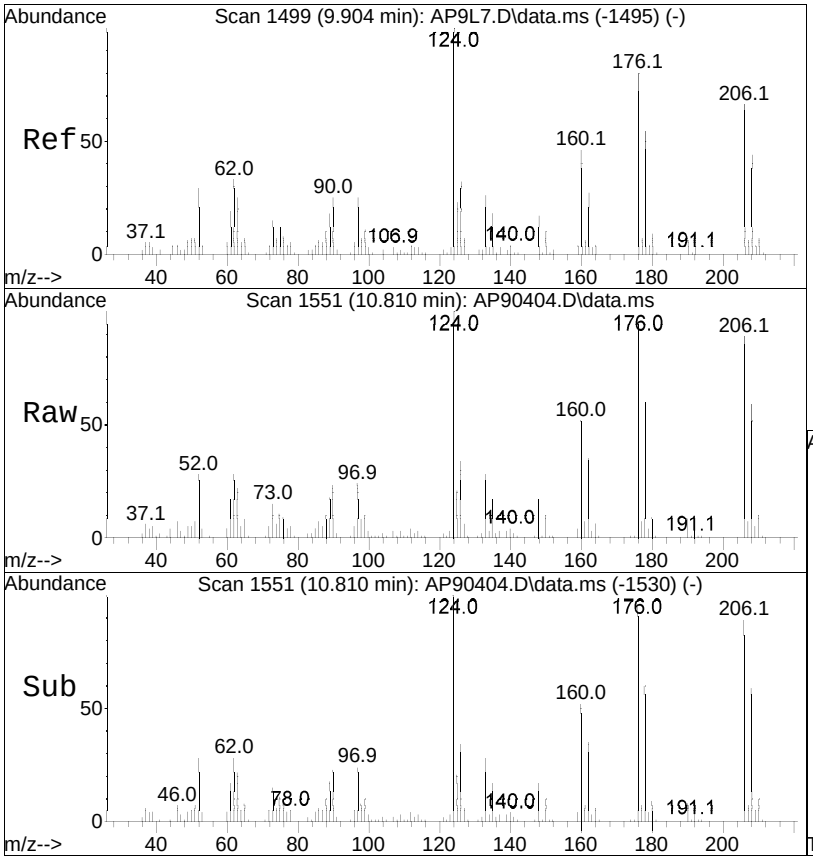


#61
Biphenyl
Concen: 4.25 ug/ml
RT: 9.128 min Scan# 1265
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:154 Resp: 598388

Ion	Ratio	Lower	Upper
154	100		
153	42.1	32.3	48.5
152	29.1	22.5	33.7

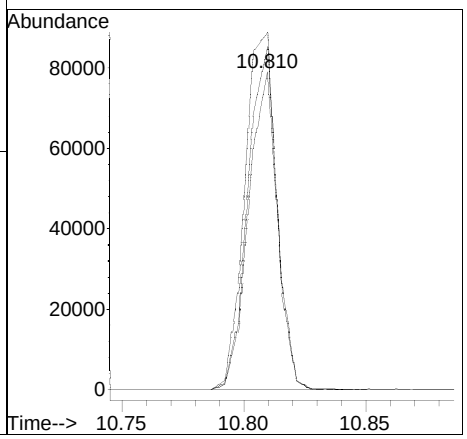


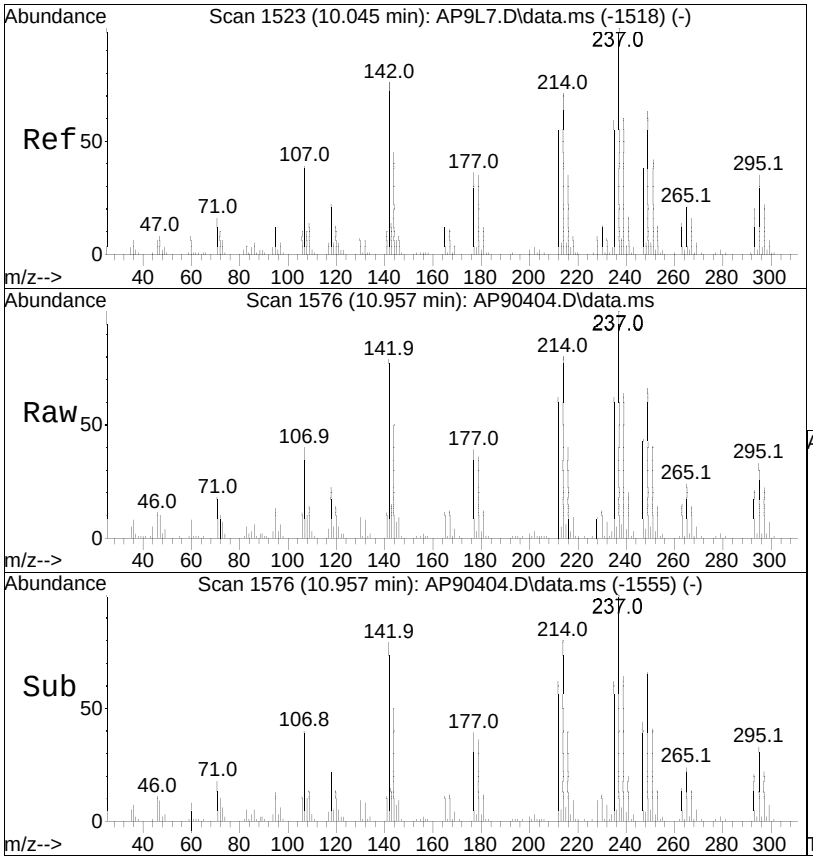


#83
Dichloran
Concen: 5.93 ug/ml
RT: 10.810 min Scan# 1551
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:206 Resp: 64975

Ion	Ratio	Lower	Upper
206	100		
176	109.7	104.6	157.0
124	123.1	130.5	195.7#

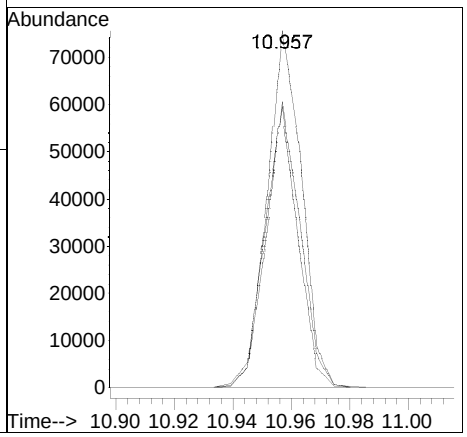


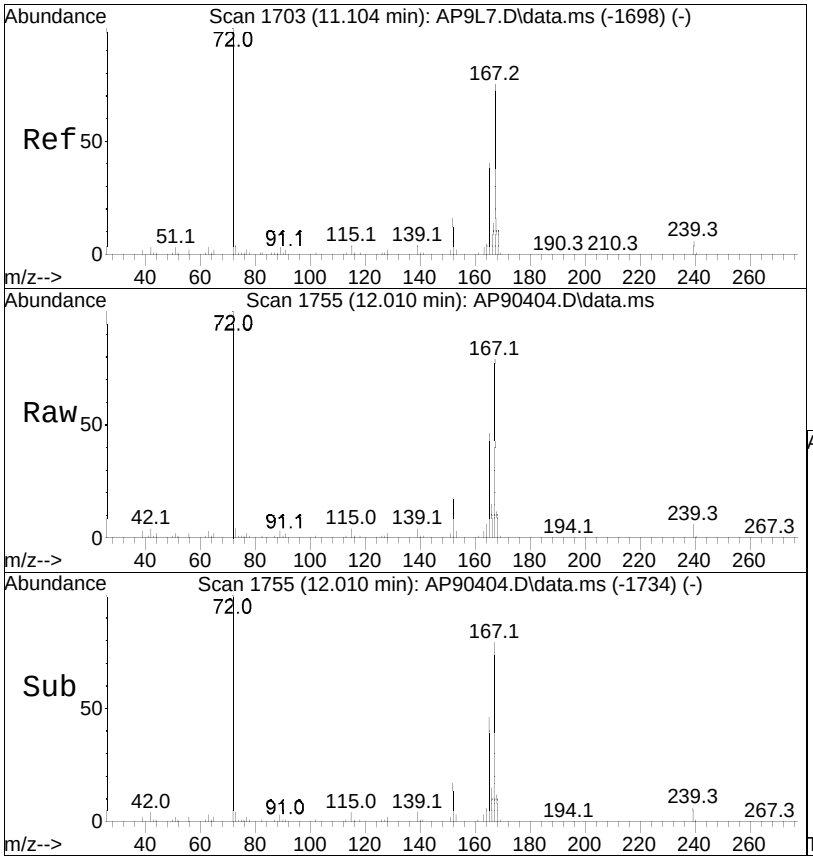


#84
Pentachloronitrobenzene
Concen: 4.97 ug/ml
RT: 10.957 min Scan# 1576
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:237 Resp: 61720

Ion	Ratio	Lower	Upper
237	100		
142	75.9	77.0	115.4#
214	78.8	58.2	87.4

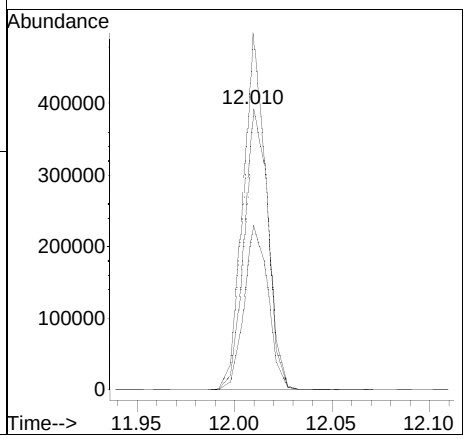




#98
Diphenamid
Concen: 5.73 ug/ml
RT: 12.010 min Scan# 1755
Delta R.T. 0.000 min
Lab File: AP90404.D
Acq: 4 Apr 2024 12:10 pm

Tgt Ion:167 Resp: 335867

Ion	Ratio	Lower	Upper
167	100		
72	120.1	109.7	164.5
165	58.5	41.8	62.6



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: AP90404.D	Operator	: SV107:ljg
Date Inj'd	: 4/4/2024 12:10 pm	Instrument	: SV107
Sample	: WG1904833-4,32,,AP9 10340	Quant Date	: 4/4/2024 12:39 pm

There are no manual integrations or false positives in this file.

Evaluate Continuing Calibration Report

Data Path : I:\8270\SV107\240404lvi\
Data File : ADP0404.D
Acq On : 4 Apr 2024 12:36 pm
Operator : SV107:ljg
Sample : WG1904833-5,32,,ADP 10309 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 144 Sample Multiplier: 1

Quant Time: Apr 04 13:05:40 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 13:05:31 2024
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
32	I	IS3_1,4-Dichlorobenzene-d4		1.000	1.000	0.0	149	0.00
33	T	n-Decane		1.461	1.373	6.0	150	0.00
85	I	IS3_Acenaphthene-d10		1.000	1.000	0.0	139	0.00
86	T	Atrazine	*	5.000	4.672	6.6	130	0.00
99	I	IS3_Phenanthrene-d10		1.000	1.000	0.0	111	0.00
100	T	n-Octadecane		0.368	0.377	-2.4	110	0.00
101	T	Parathion	*	5.000	6.144	-22.9#	173	0.00
102	T	3,3'-Dimethylbenzidine	*	5.000	5.488	-9.8	147	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : ADP0404.D
Acq On : 4 Apr 2024 12:36 pm
Operator : SV107:ljg
Sample : WG1904833-5,32,,ADP 10309 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 144 Sample Multiplier: 1

Quant Time: Apr 04 13:05:40 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 13:05:31 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublist

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
32) IS3_1,4-Dichlorobenzen...	6.504	152	155385	4.000	ug/ml	0.00
85) IS3_Acenaphthene-d10	9.674	164	319594	4.000	ug/ml	0.00
99) IS3_Phenanthrene-d10	11.110	188	598205	4.000	ug/ml	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
33) n-Decane	6.398	57	266760	4.699	ug/ml#	43
86) Atrazine	10.880	200	121012	4.672	ug/ml	94
100) n-Octadecane	11.080	57	282059	5.121	ug/ml#	1
101) Parathion	11.892	109	65323	6.144	ug/ml#	90
102) 3,3'-Dimethylbenzidine	13.174	212	507955	5.488	ug/ml	99

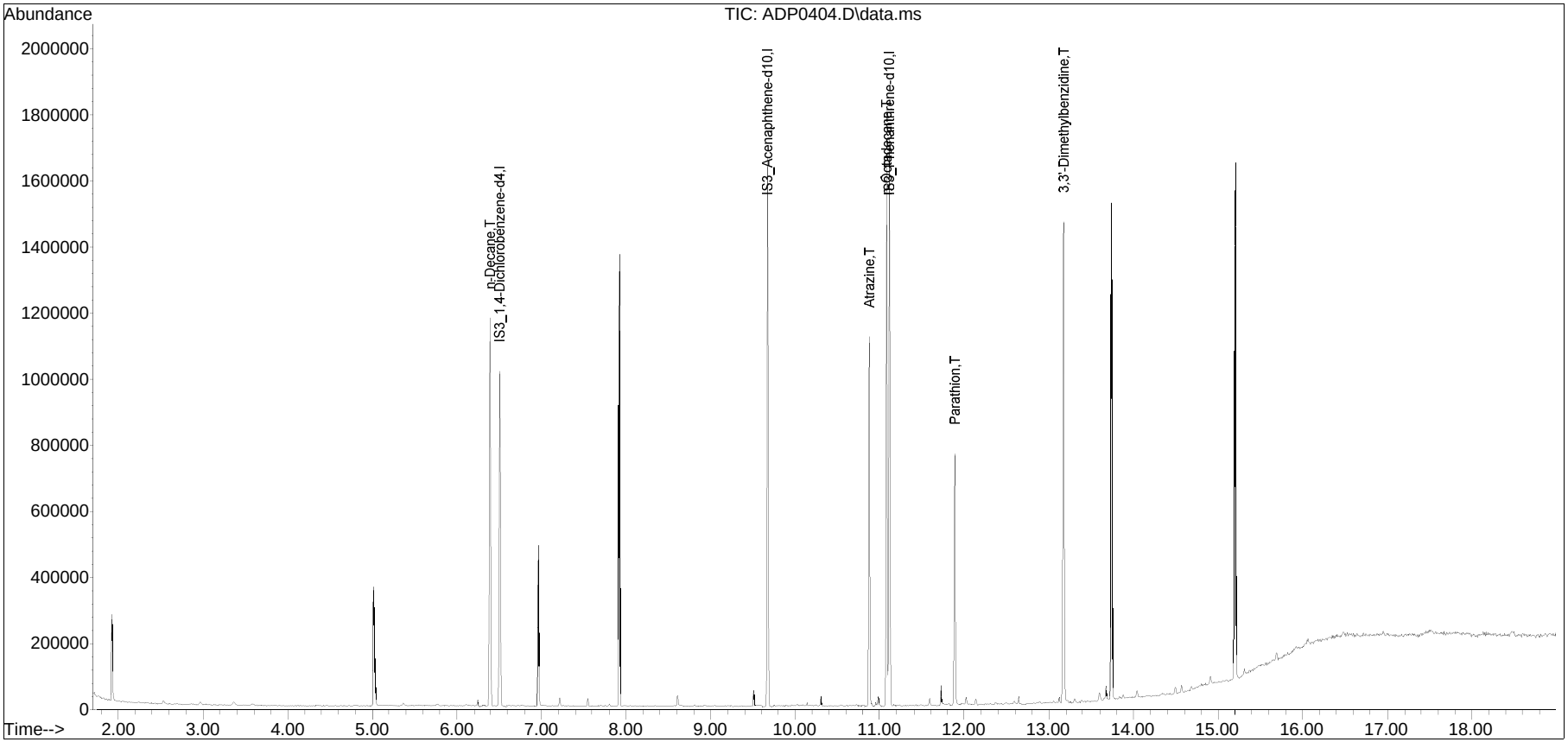
(#) = qualifier out of range (m) = manual integration (+) = signals summed

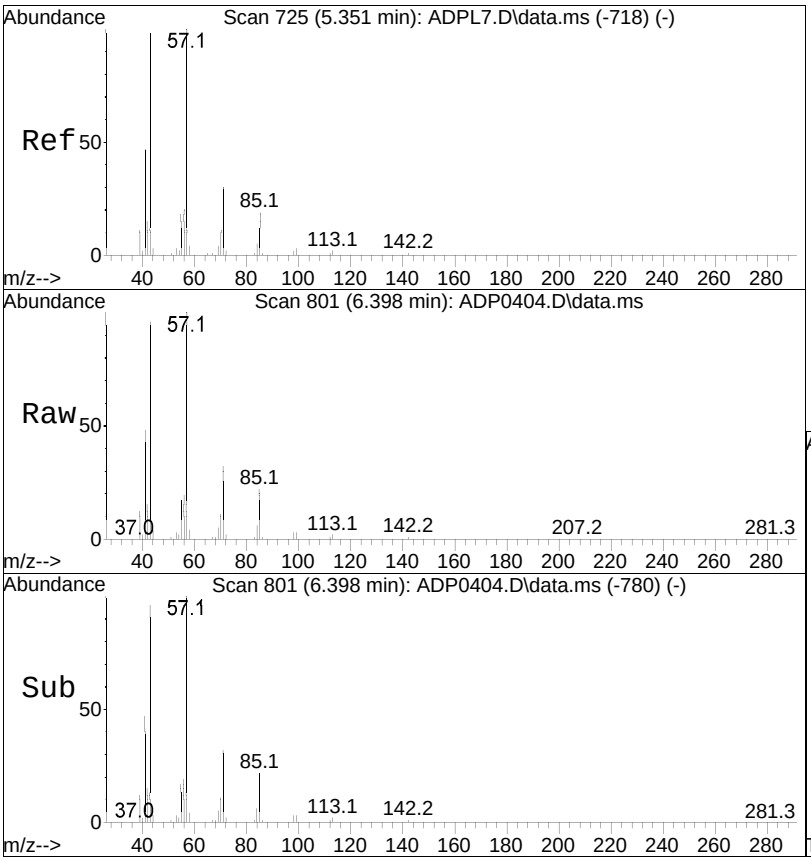
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : ADP0404.D
Acq On : 4 Apr 2024 12:36 pm
Operator : SV107:ljg
Sample : WG1904833-5,32,,ADP 10309 gmr0327A
Misc : WG1904833,,ical20861
ALS Vial : 144 Sample Multiplier: 1

Quant Time: Apr 04 13:05:40 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 13:05:31 2024
Response via : Initial Calibration

Sub List : ADPical_REV2 - ADP sublist

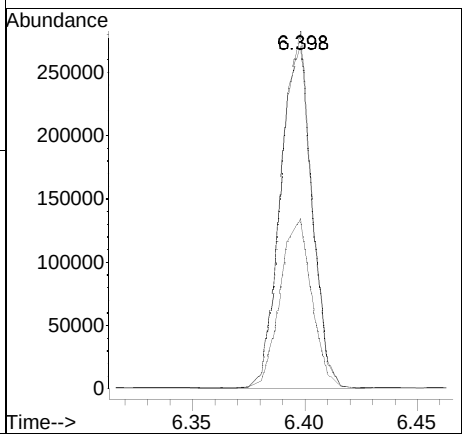


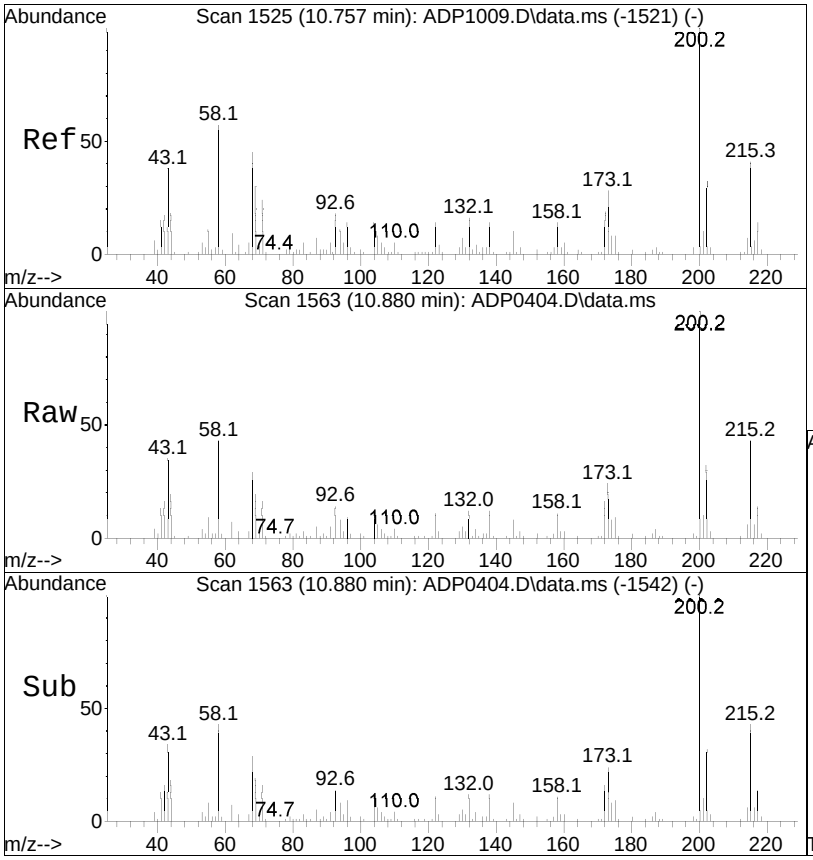


#33
n-Decane
Concen: 4.70 ug/ml
RT: 6.398 min Scan# 801
Delta R.T. 0.000 min
Lab File: ADP0404.D
Acq: 4 Apr 2024 12:36 pm

Tgt Ion: 57 Resp: 266760

Ion	Ratio	Lower	Upper
57	100		
43	98.4	0.2	0.2#
41	48.8	0.2	0.2#

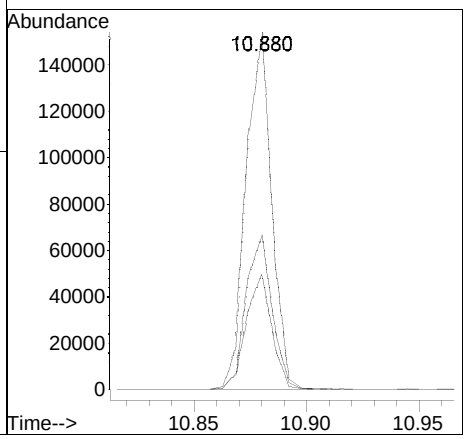


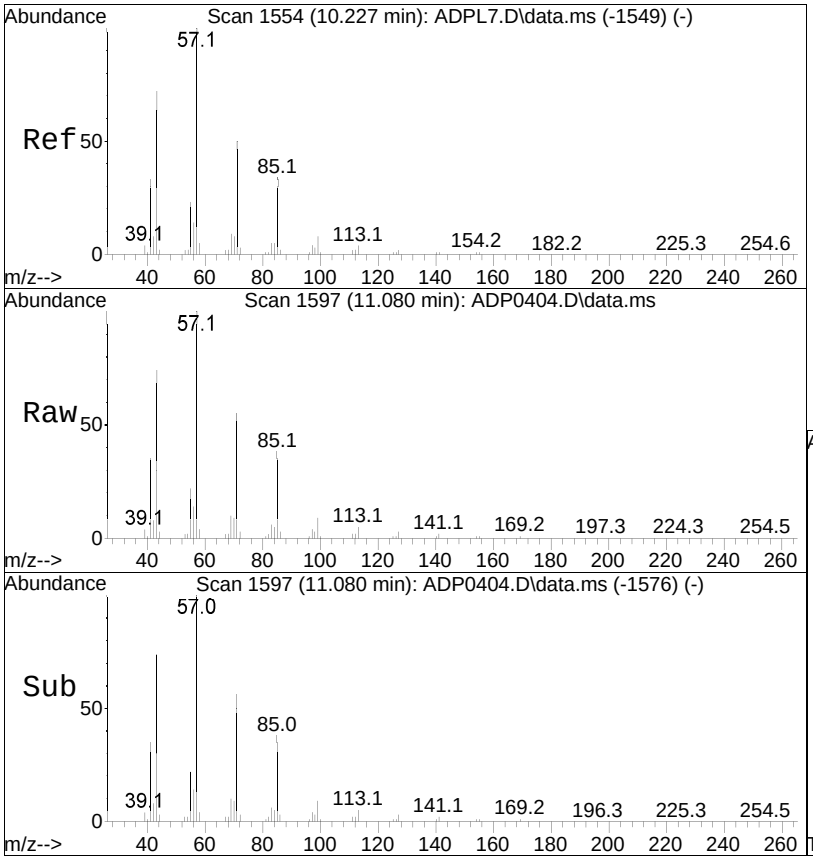


#86
Atrazine
Concen: 4.67 ug/ml
RT: 10.880 min Scan# 1563
Delta R.T. 0.000 min
Lab File: ADP0404.D
Acq: 4 Apr 2024 12:36 pm

Tgt Ion:200 Resp: 121012

Ion	Ratio	Lower	Upper
200	100		
202	32.4	25.8	38.6
215	44.1	40.2	60.4

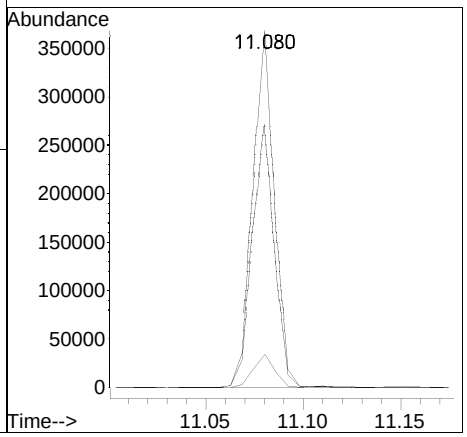


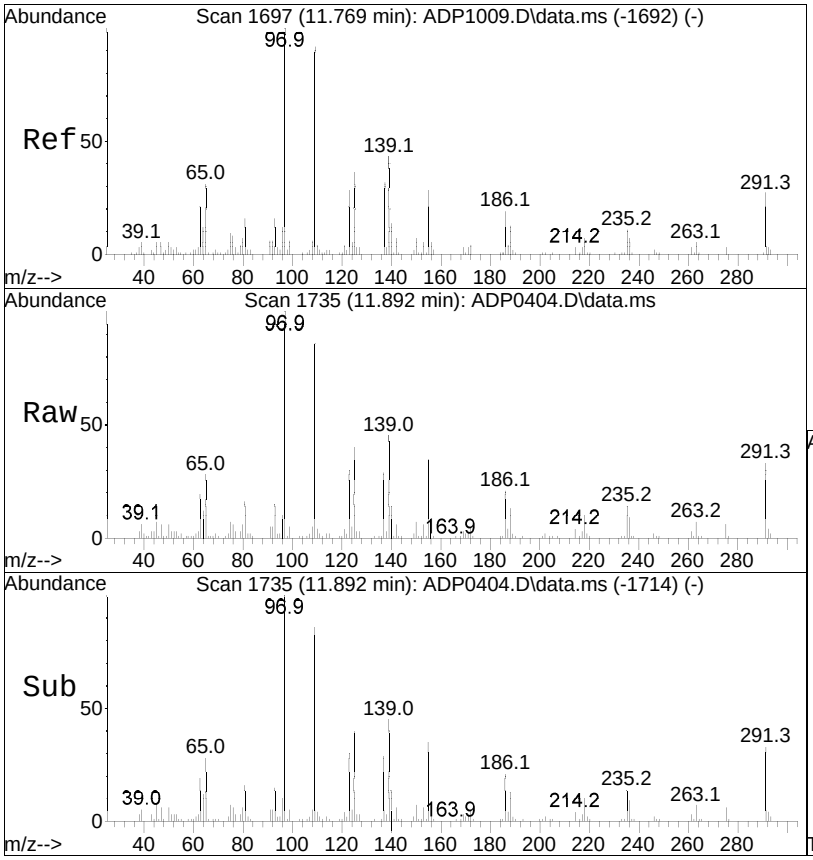


#100
n-Octadecane
Concen: 5.12 ug/ml
RT: 11.080 min Scan# 1597
Delta R.T. 0.000 min
Lab File: ADP0404.D
Acq: 4 Apr 2024 12:36 pm

Tgt Ion: 57 Resp: 282059

Ion	Ratio	Lower	Upper
57	100		
43	75.1	9.0	13.6#
70	9.3	0.2	0.2#

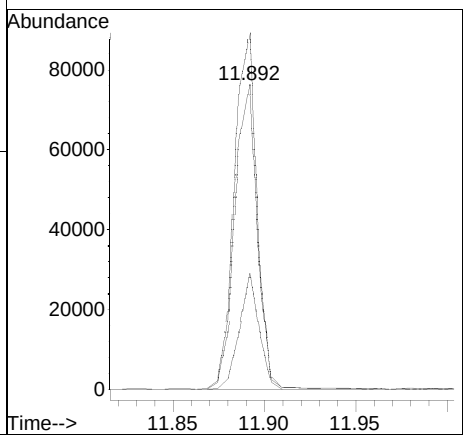


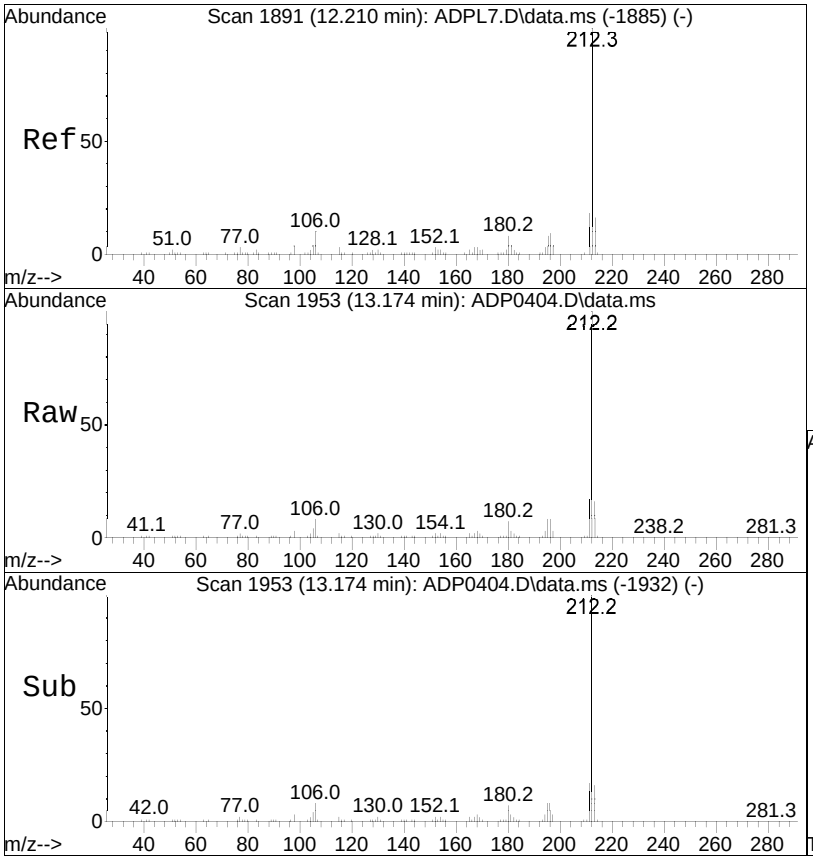


#101
Parathion
Concen: 6.14 ug/ml
RT: 11.892 min Scan# 1735
Delta R.T. 0.000 min
Lab File: ADP0404.D
Acq: 4 Apr 2024 12:36 pm

Tgt Ion:109 Resp: 65323

Ion	Ratio	Lower	Upper
109	100		
97	117.2	87.4	131.2
291	33.2	34.2	51.2#

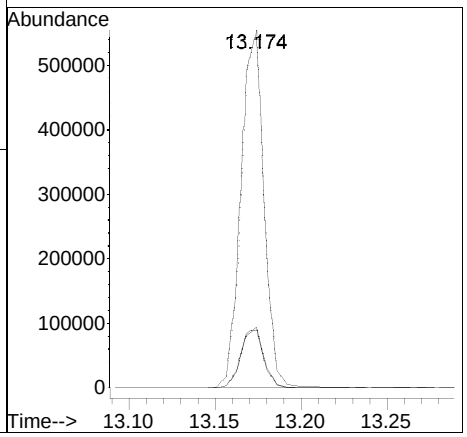




#102
3,3'-Dimethylbenzidine
Concen: 5.49 ug/ml
RT: 13.174 min Scan# 1953
Delta R.T. 0.000 min
Lab File: ADP0404.D
Acq: 4 Apr 2024 12:36 pm

Tgt Ion:212 Resp: 507955

Ion	Ratio	Lower	Upper
212	100		
211	17.2	12.9	19.3
213	16.3	13.2	19.8



Manual Integration Report

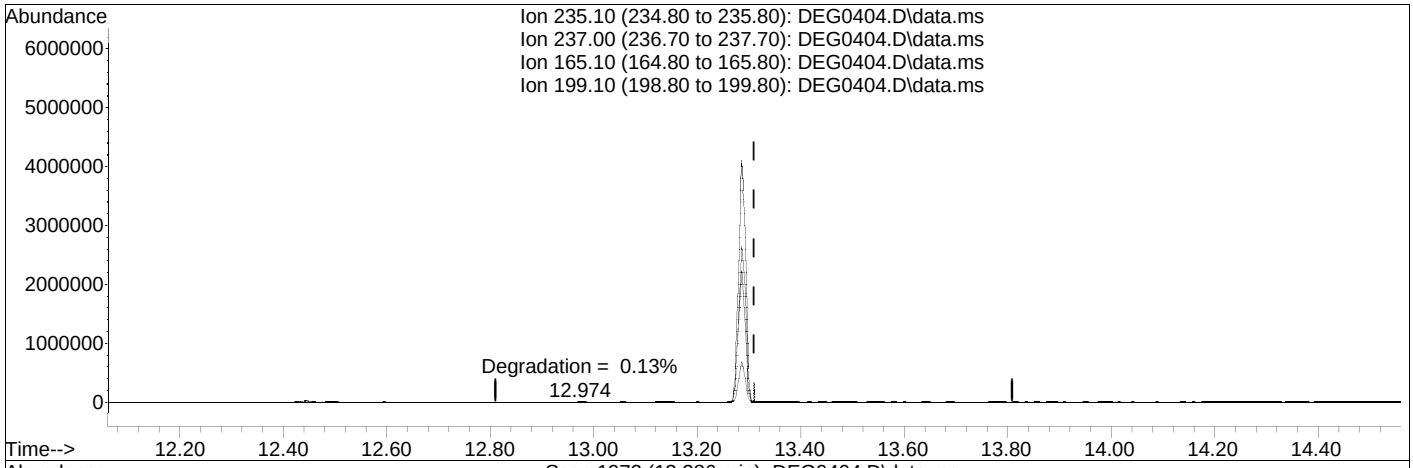
Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: ADP0404.D	Operator	: SV107:ljg
Date Inj'd	: 4/4/2024 12:36 pm	Instrument	: SV107
Sample	: WG1904833-5,32,,ADP 10309	Quant Date	: 4/4/2024 1:05 pm

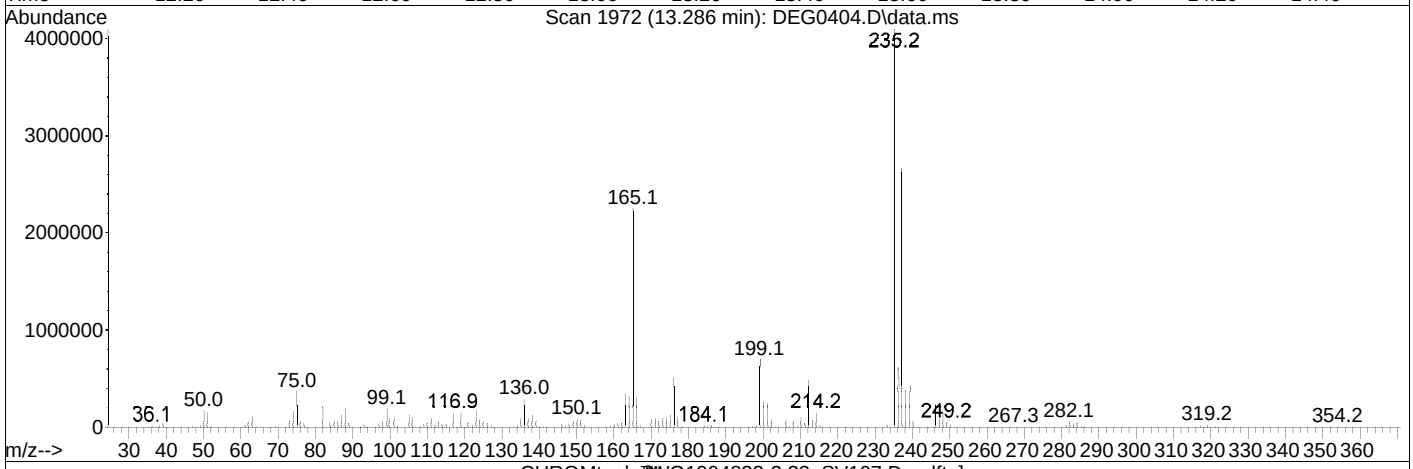
There are no manual integrations or false positives in this file.

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240404lvi\
Data File : DEG0404.D
Acq On : 4 Apr 2024 10:52 am
Operator : SV107:gmr
Sample : WG1904833-2,32,,SV107 Degdftp
Misc : WG1904833,,ical20861
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Apr 04 11:23:20 2024
Quant Method : I:\8270\SV107\240404lvi\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 21:53:18 2024
Response via : Initial Calibration





CHROMtools [WG1904833-2,32,,SV107 Degdftp]

(6) DDT (T)

13.286min (-0.024) 584.37

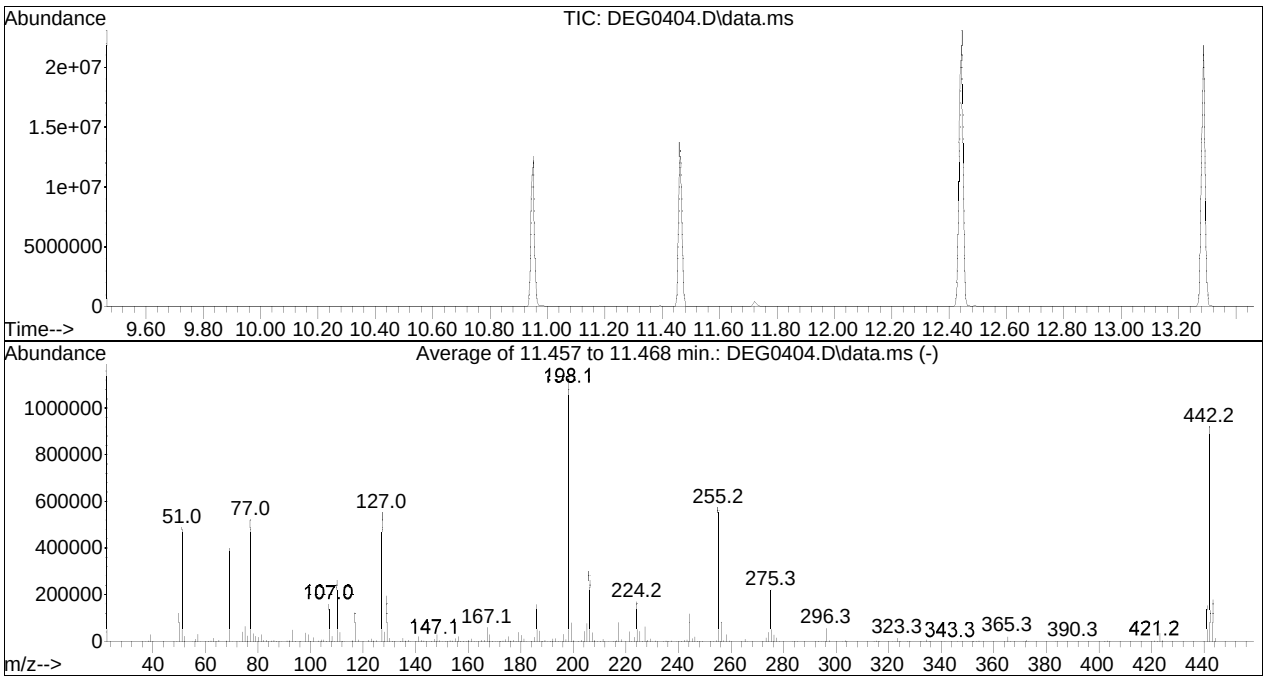
response 3562170

Ion	Exp%	Act%
235.10	100.00	100.00
237.00	64.50	64.40
165.10	51.50	53.19
199.10	15.90	16.36

Data Path : I:\8270\SV107\240404lvi\
Data File : DEG0404.D
Acq On : 4 Apr 2024 10:52 am
Operator : SV107:gmr
Sample : WG1904833-1,32,,SV107 Degdftp
Misc : WG1904833,,ical20861
ALS Vial : 141 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Thu Apr 04 12:21:24 2024



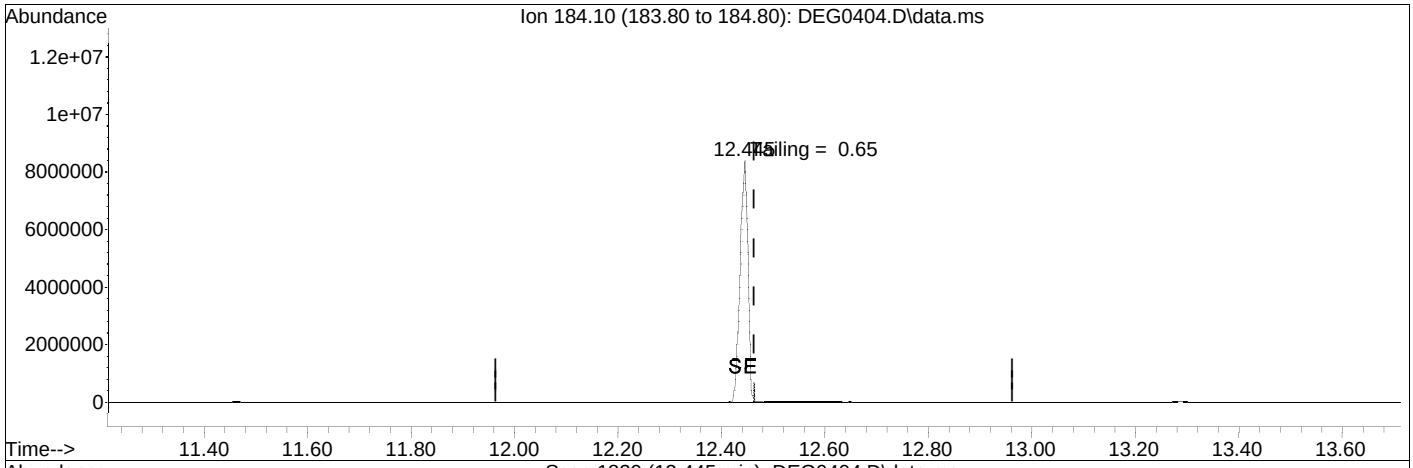
Spectrum Information: Average of 11.457 to 11.468 min.

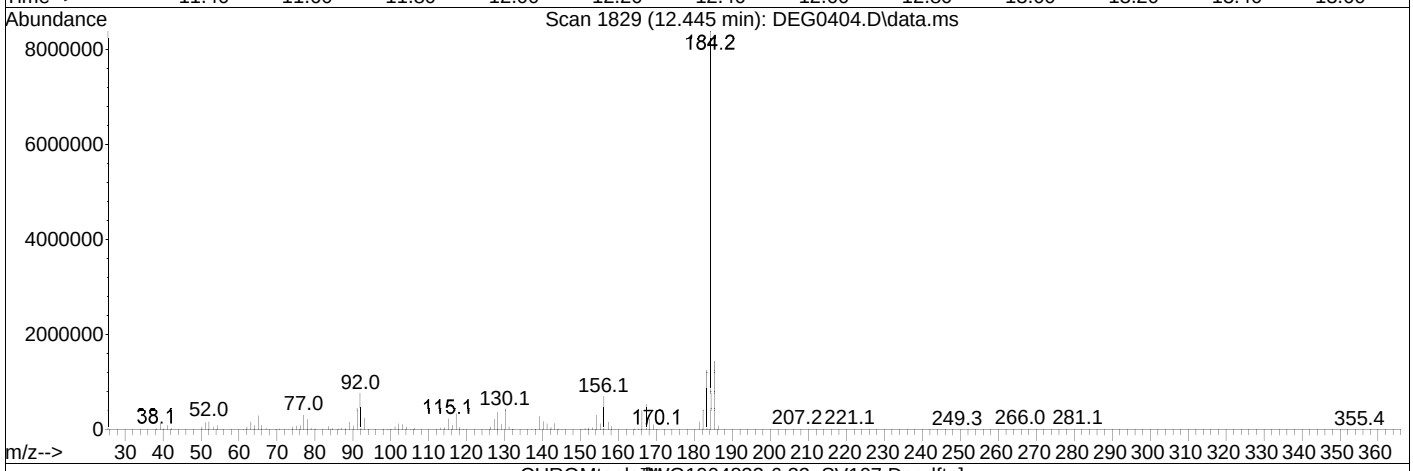
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	43.1	487416	PASS
68	69	0.00	2	1.5	5984	PASS
69	69	100	100	100.0	399296	PASS
70	69	0.00	2	0.6	2246	PASS
127	198	10	80	48.7	550635	PASS
197	198	0.00	2	0.9	10690	PASS
198	198	100	100	100.0	1130496	PASS
199	198	5	9	6.8	76979	PASS
275	198	10	60	19.5	220293	PASS
365	198	1	100	1.9	21882	PASS
441	442	0.01	24	16.6	153312	PASS
442	198	50	100	81.6	921920	PASS
443	442	15	24	19.3	177539	PASS

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240404lvi\
Data File : DEG0404.D
Acq On : 4 Apr 2024 10:52 am
Operator : SV107:gmr
Sample : WG1904833-6,32,,SV107 Degdftp
Misc : WG1904833,,ical20861
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Apr 04 11:23:20 2024
Quant Method : I:\8270\SV107\240404lvi\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 21:53:18 2024
Response via : Initial Calibration





CHROMtools [WG1904833-6,32,,SV107 Degdftp]

(3) Benzidine (T)

12.445min (-0.018) 802.06

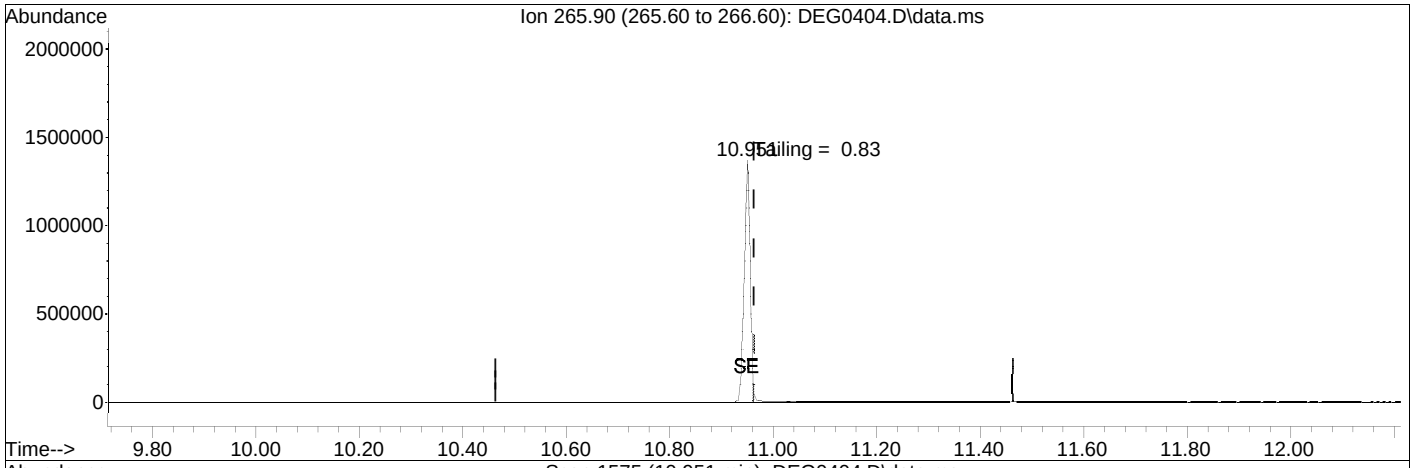
response 8165021

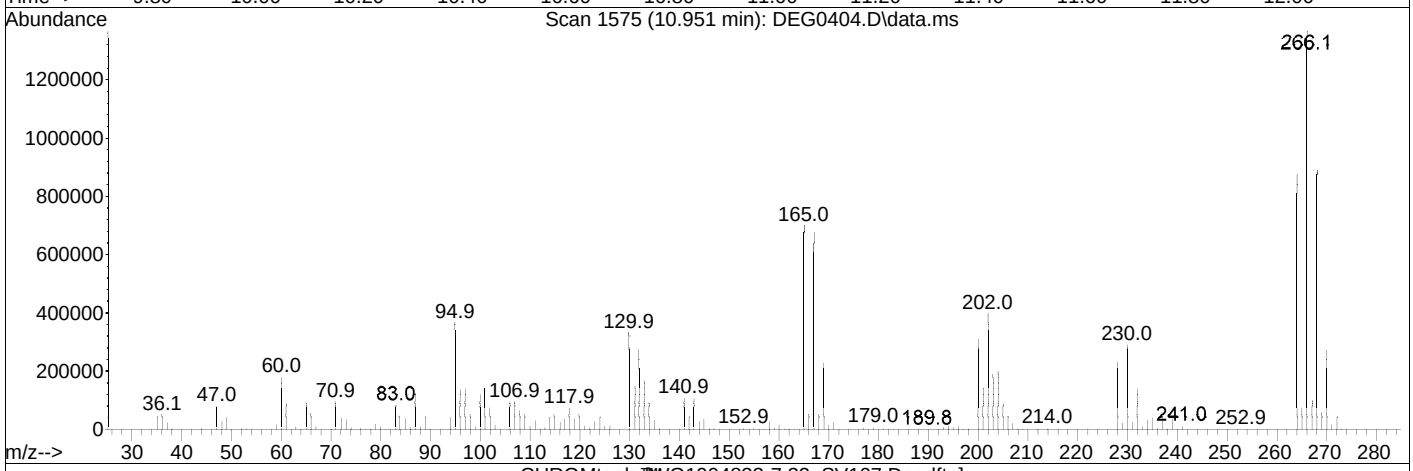
Ion	Exp%	Act%
184.10	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\8270\SV107\240404lvi\
Data File : DEG0404.D
Acq On : 4 Apr 2024 10:52 am
Operator : SV107:gmr
Sample : WG1904833-7,32,,SV107 Degdftp
Misc : WG1904833,,ical20861
ALS Vial : 141 Sample Multiplier: 1

Quant Time: Apr 04 11:23:20 2024
Quant Method : I:\8270\SV107\240404lvi\DftppSV107.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 21:53:18 2024
Response via : Initial Calibration





CHROMtools [WG1904833-7,32,,SV107 Degdftp]

(1) Pentachlorophenol (T)

10.951min (-0.012) 498.57

response 1047169

Ion	Exp%	Act%
265.90	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Semivolatiles Raw QC Data

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 15:02:24 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 14:26:56 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	151881	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 108.49%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	151881	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 89.49%			
32) IS3_1,4-Dichlorobenzen...	6.504	152	151881	4.000	ug/ml	0.00
Standard Area 2 = 155385			Recovery = 97.74%			
34) IS1_Naphthalene-d8	7.922	136	586503	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 110.88%			
54) IS2_Naphthalene-d8	7.922	136	586503	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 93.64%			
62) IS1_Acenaphthene-d10	9.675	164	331438	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 112.31%			
82) IS2_Acenaphthene-d10	9.675	164	331438	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 98.48%			
85) IS3_Acenaphthene-d10	9.675	164	331438	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 103.71%			
87) IS1_Phenanthrene-d10	11.110	188	609551	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 108.57%			
99) IS3_Phenanthrene-d10	11.110	188	609551	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 101.90%			
103) IS1_Chrysene-d12	13.739	240	467281	4.000	ug/ml	0.00
Standard Area 1 = 474982			Recovery = 98.38%			
112) IS1_Perylene-d12	15.204	264	488083	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 93.23%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.687	112	124365	2.793	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 55.86%			
7) Phenol-d6	6.169	99	125325	2.220	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 44.40%			
19) Nitrobenzene-d5	7.157	82	92569	1.787	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 71.48%			
45) 2-Fluorobiphenyl	9.033	172	207019	1.534	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 61.36%			
78) 2,4,6-Tribromophenol	10.445	330	36127	2.917	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 58.34%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 15:02:24 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 14:26:56 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) 4-Terphenyl-d14	12.686	244	228633	1.704	ug/ml	0.00

Spiked Amount 2.500 Range 30 - 130 Recovery = 68.16%

Target Compounds				Qvalue
6) 2-Chlorophenol	0.000	0	N.D.	
8) Phenol	0.000	0	N.D.	
9) Bis(2-chloroethyl)ether	0.000	0	N.D.	
14) Bis(2-chloroisopropyl)...	0.000	0	N.D.	d
15) 2-Methylphenol	0.000	0	N.D.	
17) n-Nitrosodi-n-propylamine	0.000	0	N.D.	
18) 3-Methylphenol/4-Methy...	0.000	0	N.D.	
20) Nitrobenzene	0.000	0	N.D.	d
21) Isophorone	0.000	0	N.D.	
22) 2-Nitrophenol	0.000	0	N.D.	
23) 2,4-Dimethylphenol	0.000	0	N.D.	
24) Bis(2-chloroethoxy)met...	0.000	0	N.D.	
25) 2,4-Dichlorophenol	0.000	0	N.D.	
28) Benzaldehyde	0.000	0	N.D.	d
29) Acetophenone	0.000	0	N.D.	
37) 4-Chloroaniline	0.000	0	N.D.	
39) p-Chloro-m-cresol	0.000	0	N.D.	
42) Hexachlorocyclopentadiene	0.000	0	N.D.	
43) 2,4,6-Trichlorophenol	0.000	0	N.D.	
44) 2,4,5-Trichlorophenol	0.000	0	N.D.	
47) 2-Nitroaniline	0.000	0	N.D.	
50) Dimethyl phthalate	0.000	0	N.D.	
52) 2,6-Dinitrotoluene	0.000	0	N.D.	
59) Caprolactam	0.000	0	N.D.	d
60) 1,2,4,5-Tetrachloroben...	0.000	0	N.D.	
61) Biphenyl	0.000	0	N.D.	
63) 3-Nitroaniline	0.000	0	N.D.	
65) 2,4-Dinitrophenol	0.000	0	N.D.	
66) Dibenzofuran	0.000	0	N.D.	d
67) 2,4-Dinitrotoluene	0.000	0	N.D.	
68) 4-Nitrophenol	0.000	0	N.D.	
70) 2,3,4,6-Tetrachlorophenol	0.000	0	N.D.	
71) Diethyl phthalate	0.000	0	N.D.	d

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 15:02:24 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 14:26:56 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
73)	4-Chlorophenyl phenyl ...	0.000		0	N.D.		
74)	4-Nitroaniline	0.000		0	N.D.		
75)	4,6-Dinitro-o-cresol	0.000		0	N.D.		
76)	NDPA/DPA	0.000		0	N.D.		
79)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
86)	Atrazine	0.000		0	N.D.		
90)	Carbazole	0.000		0	N.D.		
91)	Di-n-butylphthalate	0.000		0	N.D.	d	
96)	Butyl benzyl phthalate	0.000		0	N.D.	d	
105)	3,3'-Dichlorobenzidine	0.000		0	N.D.		
107)	Bis(2-ethylhexyl)phtha...	0.000		0	N.D.	d	
108)	Di-n-octylphthalate	0.000		0	N.D.	d	

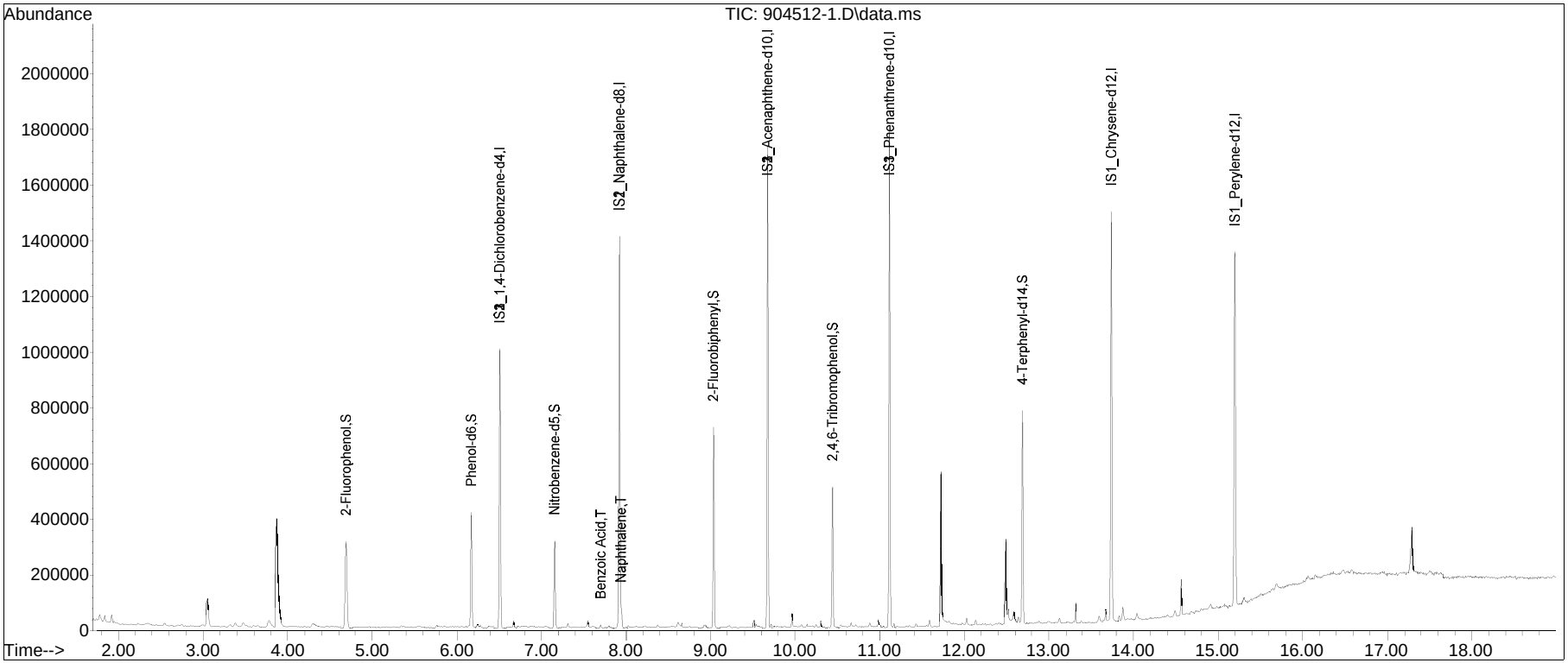
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 15:02:24 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 14:26:56 2024
Response via : Initial Calibration

Sub List : 8270TCL_REV2 - TCL/CT/MAlvi\AP90404.D••



Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 904512-1.D	Operator	: SV107:ljg
Date Inj'd	: 4/4/2024 1:02 pm	Instrument	: SV107
Sample	: WG1904510-1,32,,gmr	Quant Date	: 4/4/2024 2:27 pm

There are no manual integrations or false positives in this file.

LSC Area Percent Report

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 400 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270

Signal : TIC: 904512-1.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.781	13	16	22	rVB3	24679	34535	2.30%	0.234%
2	1.840	22	26	34	rVV4	25500	33722	2.25%	0.229%
3	1.922	36	40	43	rVV	29666	30410	2.03%	0.206%
4	1.946	43	44	48	rVB4	8503	8289	0.55%	0.056%
5	2.228	88	92	98	rBV5	7365	12922	0.86%	0.088%
6	2.340	105	111	117	rVB8	5249	13490	0.90%	0.092%
7	2.546	144	146	156	rVB2	10031	17175	1.14%	0.117%
8	2.704	170	173	176	rVV5	3948	5285	0.35%	0.036%
9	2.751	178	181	186	rVB4	5985	8431	0.56%	0.057%
10	2.998	211	223	226	rBV9	7619	17428	1.16%	0.118%
11	3.051	226	232	241	rVB	99643	156232	10.41%	1.061%
12	3.234	261	263	270	rVB7	3397	6454	0.43%	0.044%
13	3.322	272	278	281	rBV4	8983	15578	1.04%	0.106%
14	3.375	281	287	296	rVB3	12779	27458	1.83%	0.186%
15	3.469	298	303	314	rVB4	14411	33973	2.26%	0.231%
16	3.593	320	324	327	rBV5	5704	9574	0.64%	0.065%
17	3.634	327	331	338	rVV5	5369	11892	0.79%	0.081%
18	3.781	347	356	365	rBV2	24537	64147	4.27%	0.435%
19	3.863	365	370	391	rVB	390899	812142	54.12%	5.513%
20	4.298	437	444	460	rVV7	11501	51086	3.40%	0.347%
21	4.469	467	473	476	rBV8	4190	8134	0.54%	0.055%
22	4.504	476	479	486	rVV7	2777	5175	0.34%	0.035%
23	4.687	504	510	520	rVB	311684	456143	30.39%	3.096%
24	4.957	549	556	561	rBV5	3302	7336	0.49%	0.050%
25	5.134	580	586	590	rBV8	3323	6822	0.45%	0.046%
26	5.175	590	593	601	rVB7	3394	5698	0.38%	0.039%
27	5.345	619	622	624	rBV3	7337	9084	0.61%	0.062%
28	5.763	687	693	696	rBV3	9565	14844	0.99%	0.101%

LSC Area Percent Report

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 400 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270

29	5.851	705	708	713	rVB7	3223	6158	0.41%	0.042%
30	6.110	747	752	754	rBV6	4670	5088	0.34%	0.035%
31	6.169	754	762	769	rBV	413936	394705	26.30%	2.679%
32	6.245	769	775	777	rBV	11172	12599	0.84%	0.086%
33	6.504	813	819	825	rVB	1002924	950459	63.33%	6.452%
34	6.669	842	847	854	rVB	23393	26473	1.76%	0.180%
35	6.728	854	857	860	rBV5	5196	6849	0.46%	0.046%
36	6.792	867	868	878	rVB7	4188	7737	0.52%	0.053%
37	6.916	887	889	895	rVB7	3717	5203	0.35%	0.035%
38	7.157	925	930	938	rVB	312616	286698	19.10%	1.946%
39	7.316	953	957	964	rVB6	14781	15851	1.06%	0.108%
40	7.545	990	996	1002	rVB3	23978	29671	1.98%	0.201%
41	7.704	1018	1023	1030	rVB2	12445	13417	0.89%	0.091%
42	7.804	1036	1040	1047	rVB5	6610	9455	0.63%	0.064%
43	7.922	1049	1060	1067	rBV	1406505	1296173	86.37%	8.799%
44	7.986	1067	1071	1077	rVB9	3958	8758	0.58%	0.059%
45	8.033	1077	1079	1082	rBV3	5999	6079	0.41%	0.041%
46	8.122	1089	1094	1098	rBV7	4465	7025	0.47%	0.048%
47	8.233	1105	1113	1118	rVB8	5382	10381	0.69%	0.070%
48	8.375	1131	1137	1142	rBV6	9073	12150	0.81%	0.082%
49	8.610	1171	1177	1182	rBV4	16569	25764	1.72%	0.175%
50	8.657	1182	1185	1193	rVB5	15134	19267	1.28%	0.131%
51	8.922	1221	1230	1232	rBV5	10066	13514	0.90%	0.092%
52	9.033	1241	1249	1255	rBV	719709	623707	41.56%	4.234%
53	9.227	1275	1282	1287	rVB7	8448	16641	1.11%	0.113%
54	9.510	1325	1330	1333	rBV	26023	24909	1.66%	0.169%
55	9.539	1333	1335	1337	rBV3	8590	5733	0.38%	0.039%
56	9.675	1351	1358	1363	rBV	1730891	1440122	95.96%	9.776%
57	9.716	1363	1365	1368	rVB	14829	13085	0.87%	0.089%
58	9.751	1368	1371	1377	rBV6	5227	8136	0.54%	0.055%
59	9.874	1389	1392	1398	rBV8	3264	6179	0.41%	0.042%
60	9.963	1402	1407	1413	rBV	50146	44266	2.95%	0.300%

LSC Area Percent Report

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 400 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270

61	10.074	1423	1426	1431	rVB5	9866	12147	0.81%	0.082%
62	10.139	1433	1437	1443	rBV7	11749	17508	1.17%	0.119%
63	10.210	1446	1449	1452	rVB4	4581	5809	0.39%	0.039%
64	10.245	1452	1455	1460	rVB5	10427	10939	0.73%	0.074%
65	10.298	1460	1464	1469	rVB	23656	25316	1.69%	0.172%
66	10.445	1483	1489	1496	rBV	507498	450146	30.00%	3.056%
67	10.539	1501	1505	1510	rBV7	6293	9091	0.61%	0.062%
68	10.663	1519	1526	1531	rBV	14699	23333	1.55%	0.158%
69	10.716	1531	1535	1538	rVV4	8064	9450	0.63%	0.064%
70	10.886	1560	1564	1569	rVV7	13740	17007	1.13%	0.115%
71	10.980	1577	1580	1588	rVB2	25909	32101	2.14%	0.218%
72	11.051	1588	1592	1595	rBV6	4332	5827	0.39%	0.040%
73	11.110	1595	1602	1608	rVV	1803804	1500728	100.00%	10.187%
74	11.169	1608	1612	1616	rVV5	13418	17905	1.19%	0.122%
75	11.345	1640	1642	1646	rVB3	5775	5153	0.34%	0.035%
76	11.416	1650	1654	1661	rBV7	11648	18115	1.21%	0.123%
77	11.586	1680	1683	1688	rVB	24102	23643	1.58%	0.160%
78	11.721	1698	1706	1719	rBV2	554997	579519	38.62%	3.934%
79	11.968	1746	1748	1753	rBV6	7406	10477	0.70%	0.071%
80	12.021	1753	1757	1763	rVB2	25716	26267	1.75%	0.178%
81	12.133	1769	1776	1780	rBV2	18652	24162	1.61%	0.164%
82	12.380	1813	1818	1820	rBV5	6818	9824	0.65%	0.067%
83	12.410	1820	1823	1825	rBV4	6005	6360	0.42%	0.043%
84	12.486	1829	1836	1840	rBV	306409	322244	21.47%	2.187%
85	12.586	1850	1853	1857	rVB2	38502	43149	2.88%	0.293%
86	12.639	1859	1862	1865	rVV2	22875	25843	1.72%	0.175%
87	12.686	1865	1870	1877	rVB	763790	695700	46.36%	4.723%
88	12.992	1919	1922	1929	rBV9	7424	16238	1.08%	0.110%
89	13.121	1940	1944	1948	rVB2	17598	21798	1.45%	0.148%
90	13.315	1973	1977	1983	rVB2	70150	80552	5.37%	0.547%
91	13.592	2020	2024	2031	rBV5	22347	37280	2.48%	0.253%

LSC Area Percent Report

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 400 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Title : Semivolatiles by GC/MS by modified 8270

92	13.668	2031	2037	2041	rBV2	46902	60715	4.05%	0.412%
93	13.739	2043	2049	2061	rVB	1471927	1422684	94.80%	9.657%
94	13.839	2062	2066	2069	rBV	18092	18664	1.24%	0.127%
95	13.880	2069	2073	2079	rBV	47257	50292	3.35%	0.341%
96	14.051	2098	2102	2107	rBV4	21631	27875	1.86%	0.189%
97	14.486	2173	2176	2180	rVB5	19542	21534	1.43%	0.146%
98	14.562	2185	2189	2193	rBV	129222	129171	8.61%	0.877%
99	15.204	2292	2298	2305	rBV	1272197	1429049	95.22%	9.701%
100	17.286	2647	2652	2658	rVB2	157648	252148	16.80%	1.712%

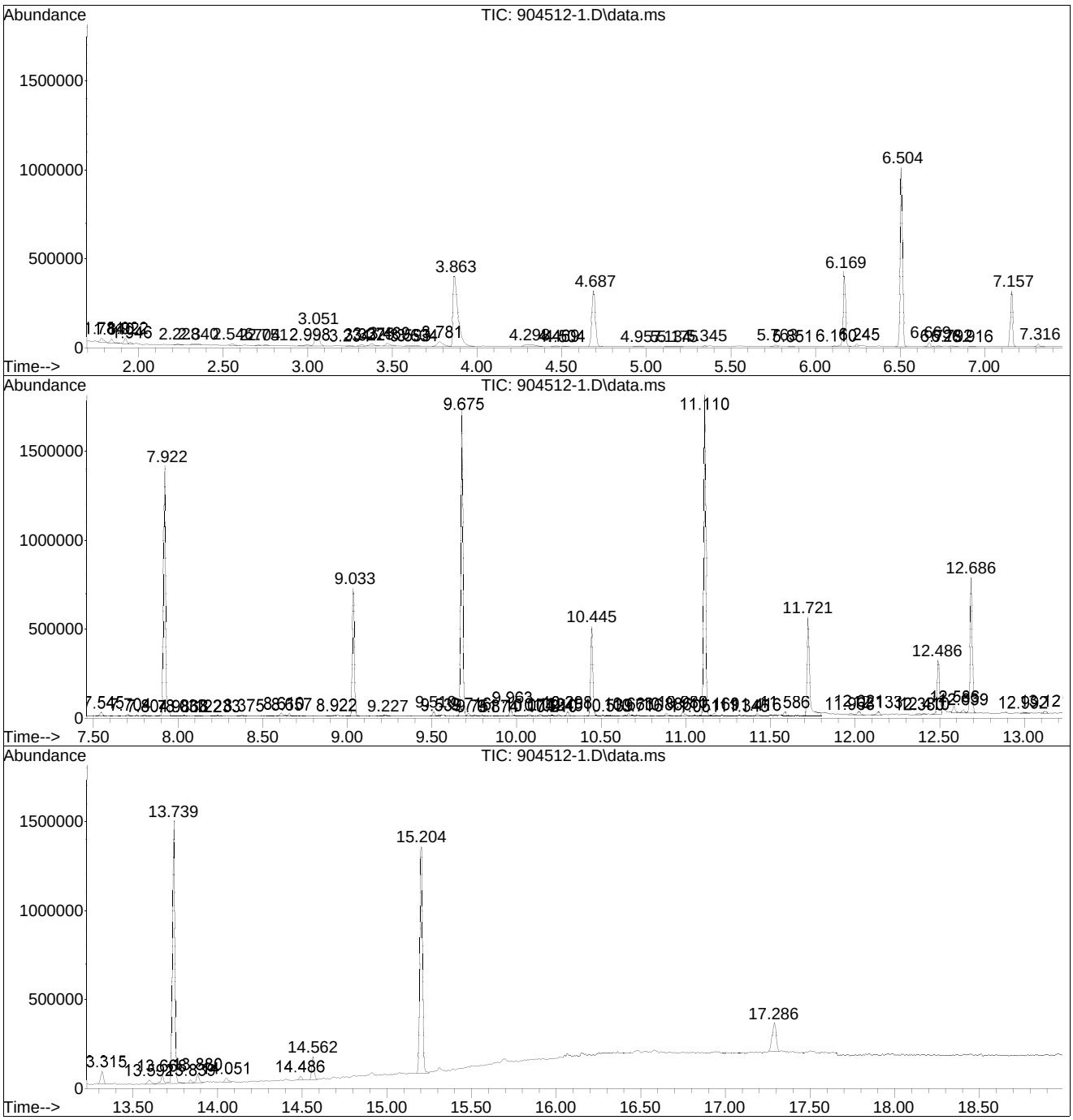
Sum of corrected areas: 14731474

LSC Report - Integrated Chromatogram

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

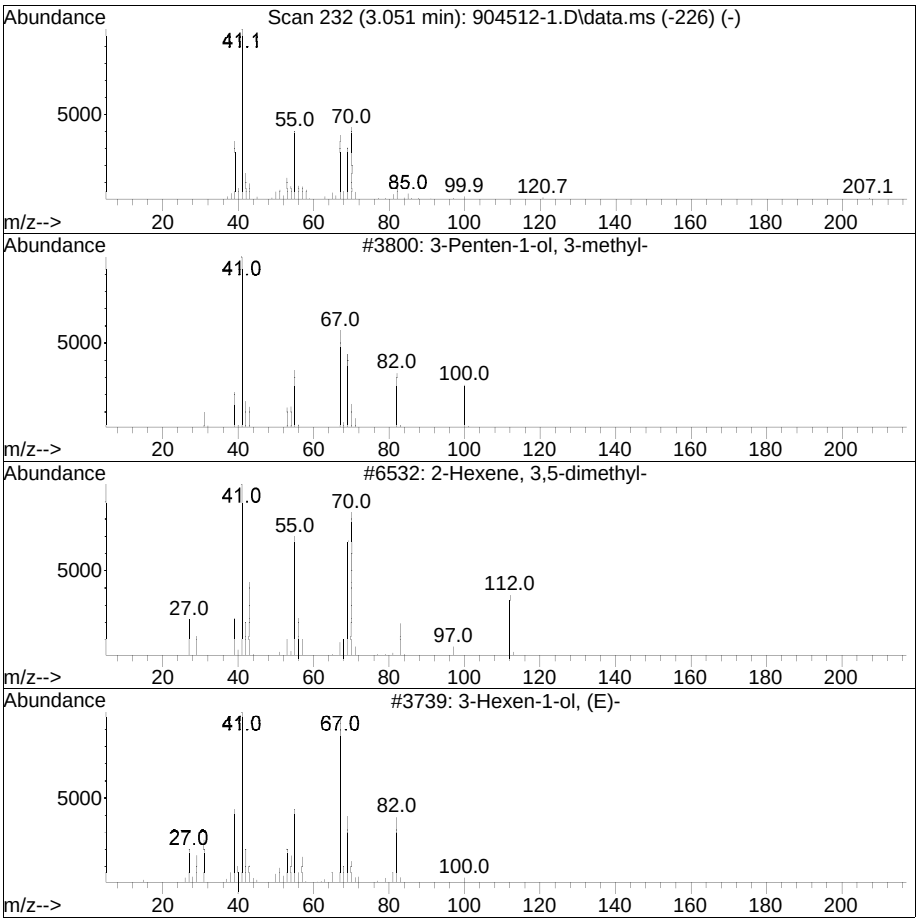
TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

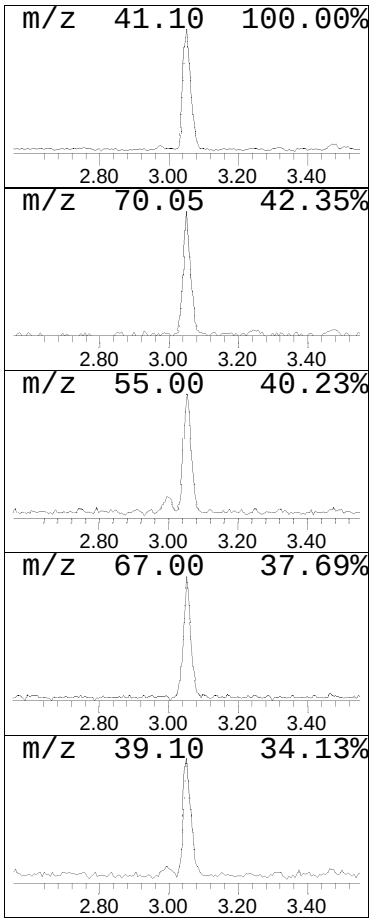
****

Peak Number 1 Unknown Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.051	0.66 ug/ml	156232	IS2_1,4-Dichlorobenzene-d4	6.504

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Penten-1-ol, 3-methyl-	100	C6H12O	001708-99-2	43
2	2-Hexene, 3,5-dimethyl-	112	C8H16	003404-79-3	42
3	3-Hexen-1-ol, (E)-	100	C6H12O	000928-97-2	35
4	3-Hexen-1-ol	100	C6H12O	000544-12-7	35
5	1-Pentene, 2,3-dimethyl-	98	C7H14	003404-72-6	33





Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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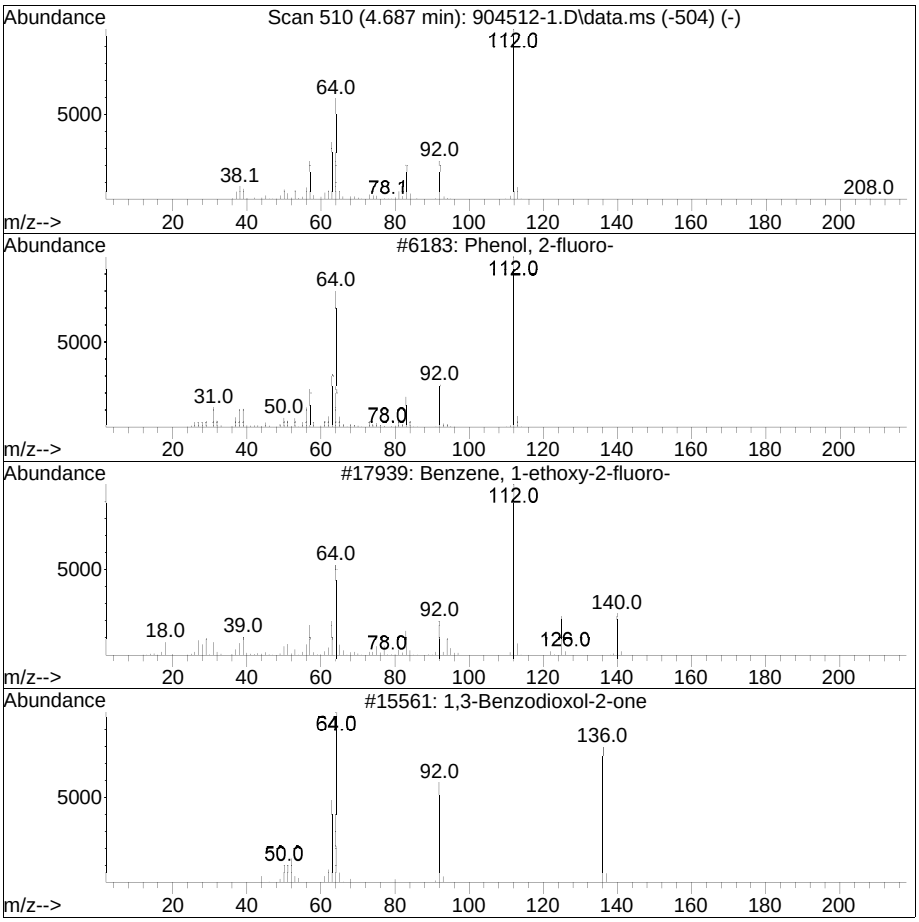
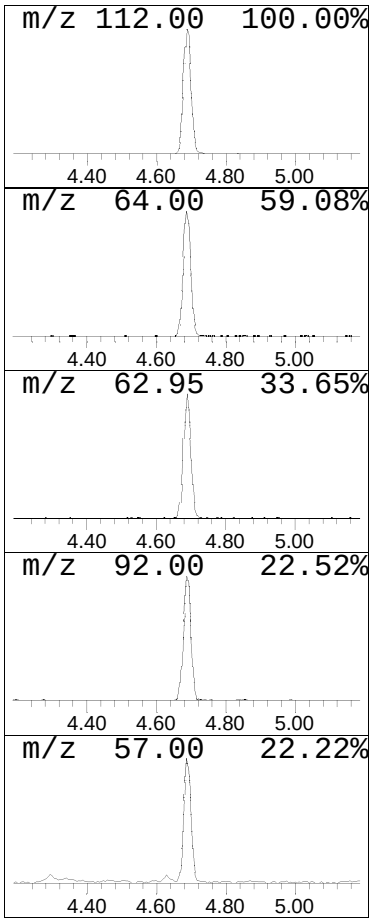
Peak Number 3 Unknown Phenol Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.687	1.92 ug/ml	456143	IS2_1,4-Dichlorobenzene-d4	6.504

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-fluoro-	112	C6H5FO	000367-12-4	91
2	Benzene, 1-ethoxy-2-fluoro-	140	C8H9FO	000451-80-9	83
3	1,3-Benzodioxol-2-one	136	C7H4O3	002171-74-6	50
4	Phenol, 4-fluoro-	112	C6H5FO	000371-41-5	27
5	Benzenediazonium, 4-hydroxy-, hy...	120	C6H4N2O	006925-01-5	25





Library Search Compound Report

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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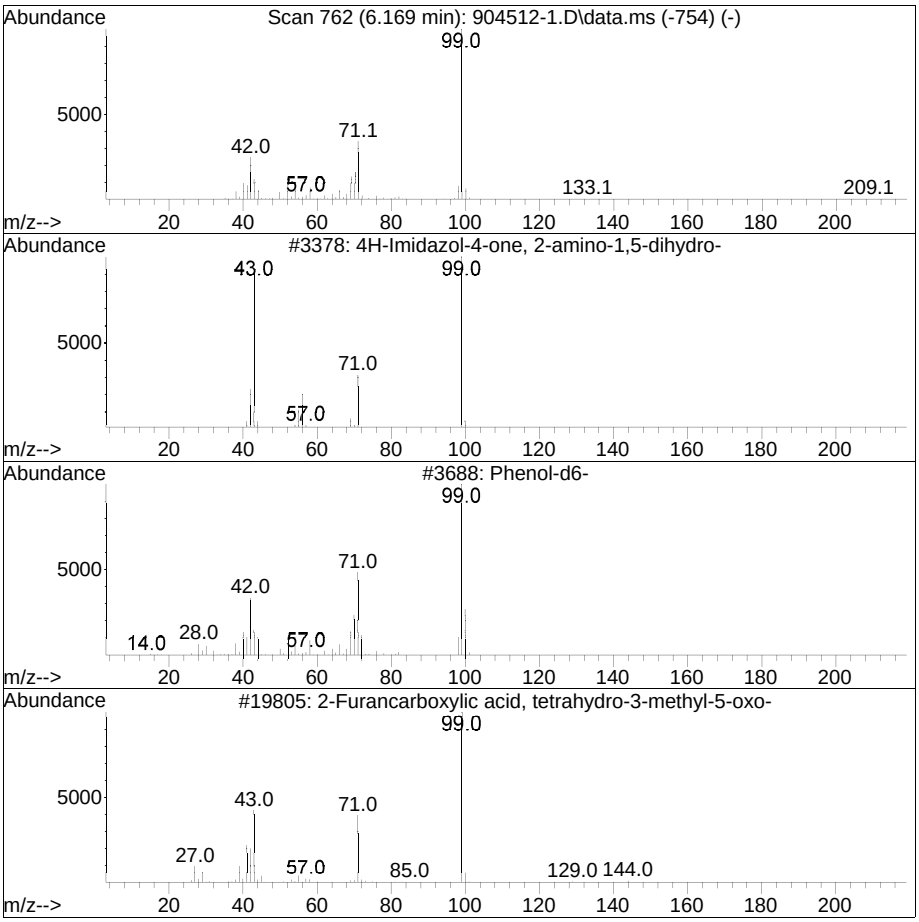
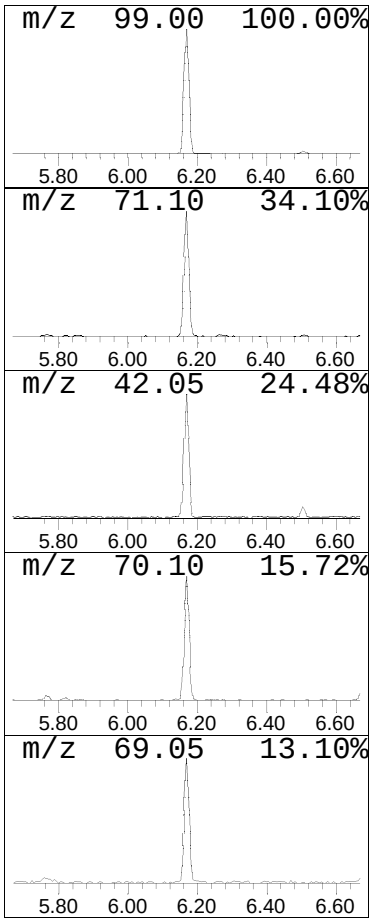
Peak Number 4 Unknown Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.169	1.66 ug/ml	394705	IS2_1,4-Dichlorobenzene-d4	6.504

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4H-Imidazol-4-one, 2-amino-1,5-d...	99	C3H5N3O	000503-86-6	72
2	Phenol-d6-	100	C6D6O	013127-88-3	64
3	2-Furancarboxylic acid, tetrahyd...	144	C6H8O4	022073-04-7	59
4	3,5-Diamino-1,2,4-triazole	99	C2H5N5	001455-77-2	50
5	2-Pyrrolidinone, 4-methyl-	99	C5H9NO	1000197-00-3	50





Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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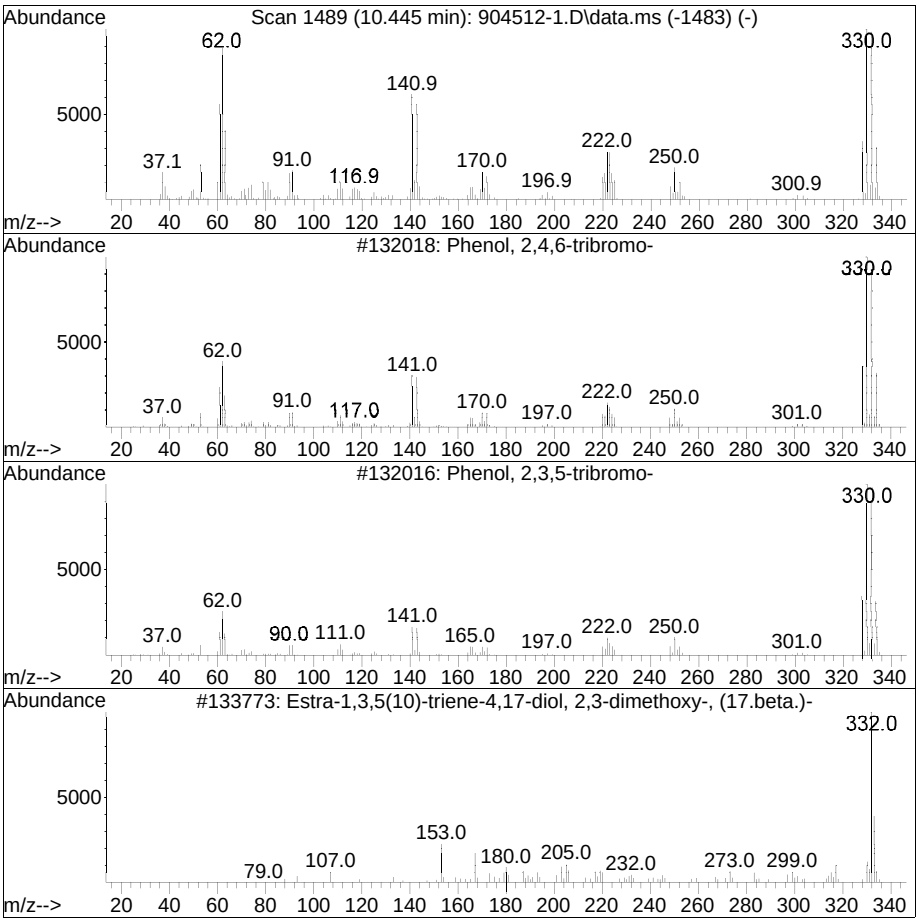
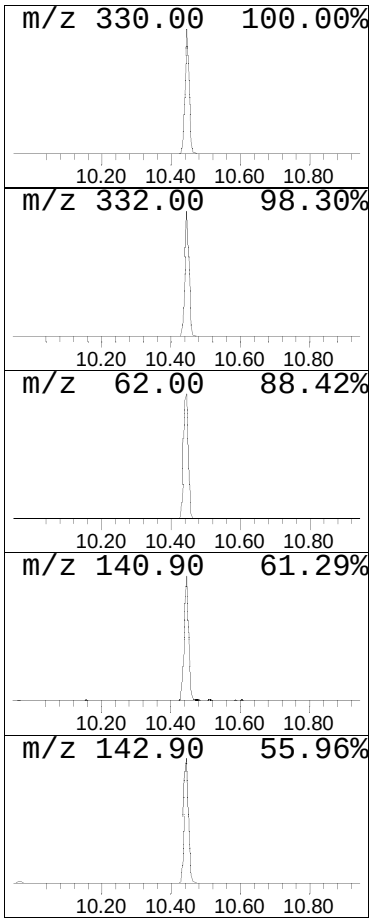
Peak Number 5 Unknown Phenol Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.445	1.20 ug/ml	450146	IS1_Phenanthrene-d10	11.110

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2,4,6-tribromo-	328	C6H3Br3O	000118-79-6	99
2	Phenol, 2,3,5-tribromo-	328	C6H3Br3O	057383-81-0	83
3	Estra-1,3,5(10)-triene-4,17-diol...	332	C20H28O4	065968-98-1	10
4	4-[p-Chlorophenoxy]-6-methoxy-8-...	330	C16H11ClN2O4	063456-77-9	9
5	2,2',3,3',5,5',6,6'-Octafluoro-4...	330	C12H2F8O2	002200-70-6	9





Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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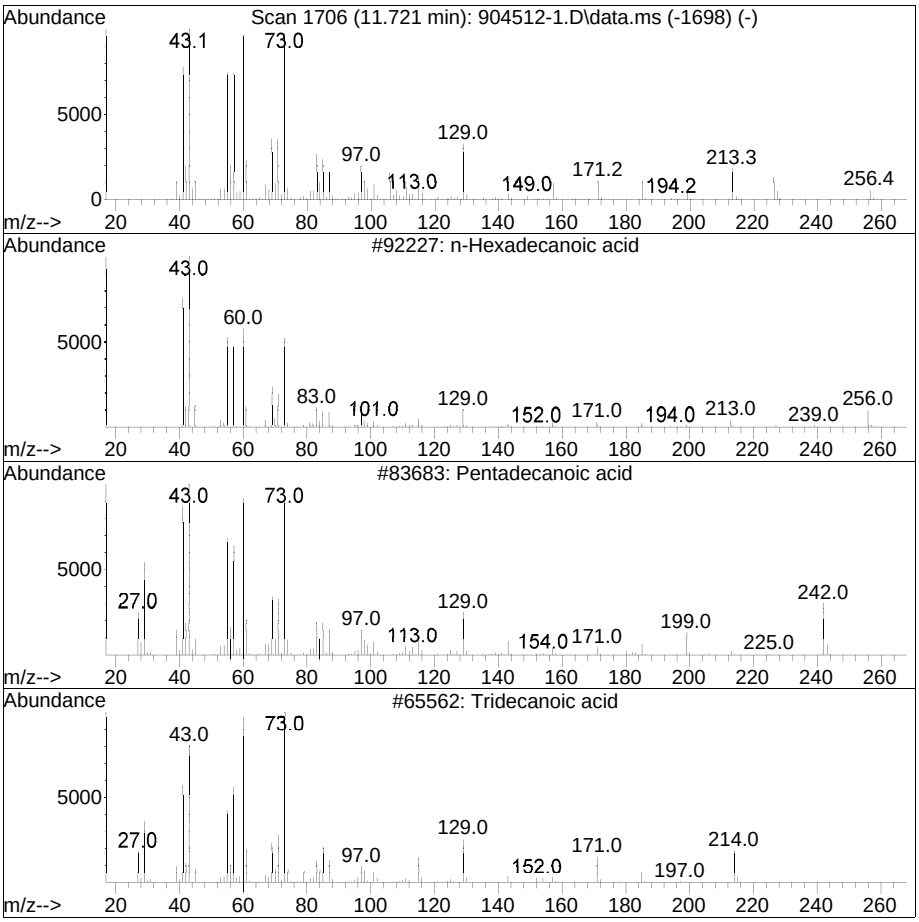
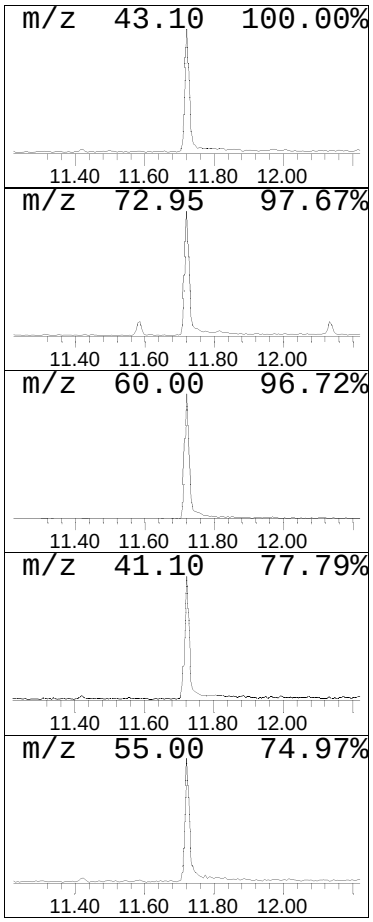
Peak Number 6 Unknown Organic Acid Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.721	1.54 ug/ml	579519	IS3_Phenanthrene-d10	11.110

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	96
2	Pentadecanoic acid	242	C15H30O2	001002-84-2	80
3	Tridecanoic acid	214	C13H26O2	000638-53-9	74
4	Tetradecanoic acid	228	C14H28O2	000544-63-8	72
5	Undecanoic acid	186	C11H22O2	000112-37-8	59





Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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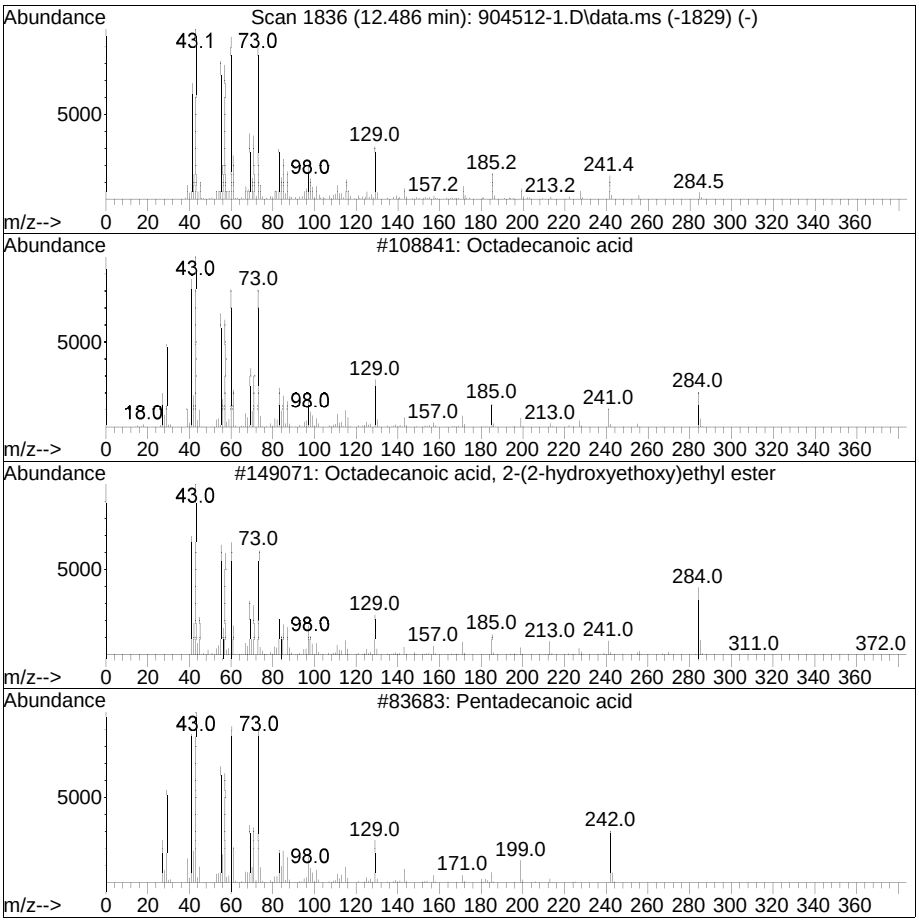
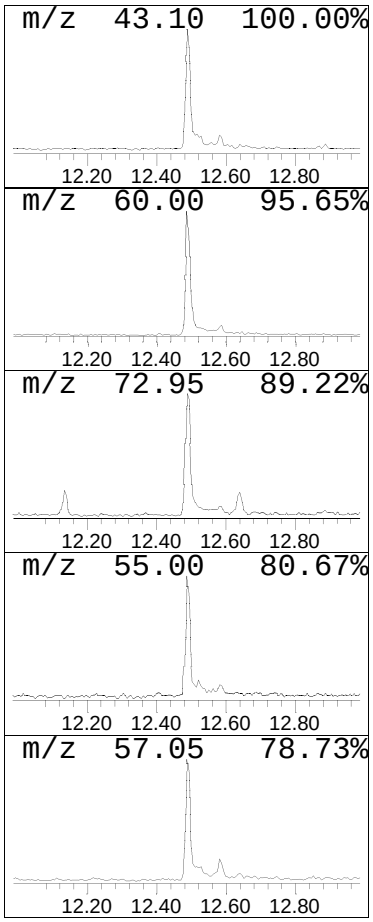
Peak Number 7 Unknown Organic Acid Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.486	0.91 ug/ml	322244	IS1_Chrysene-d12	13.739

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	99
2	Octadecanoic acid, 2-(2-hydroxye...	372	C22H44O4	000106-11-6	87
3	Pentadecanoic acid	242	C15H30O2	001002-84-2	80
4	Tetradecanoic acid	228	C14H28O2	000544-63-8	72
5	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	59





Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

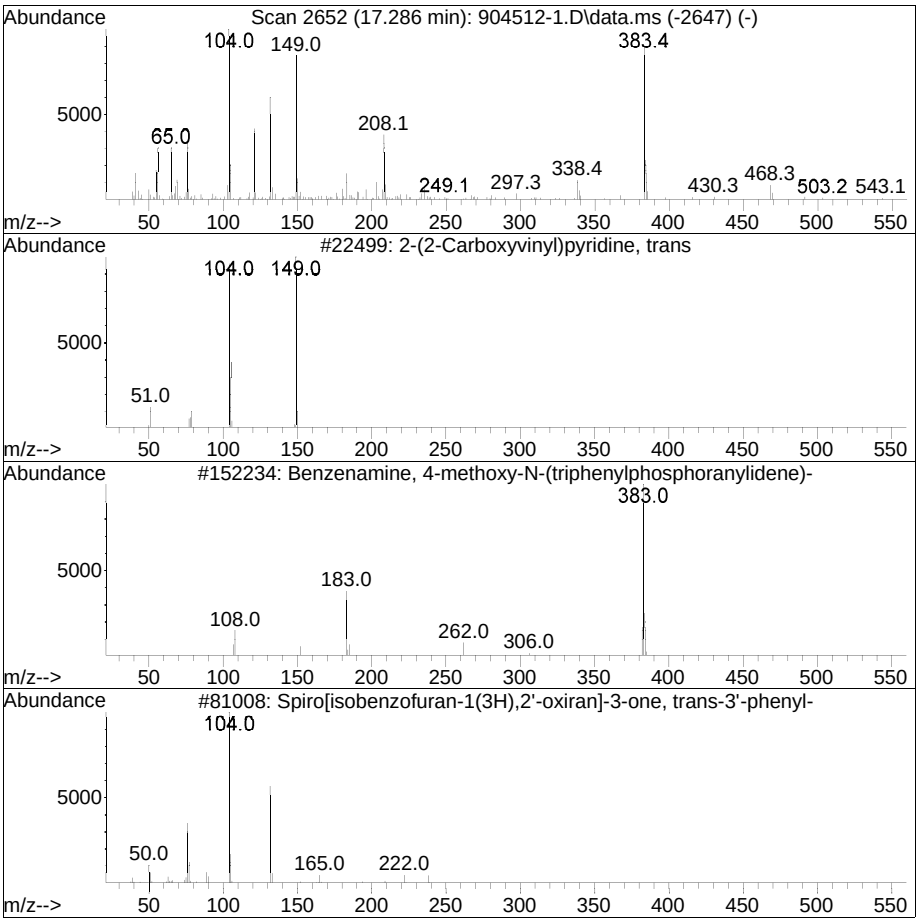
TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

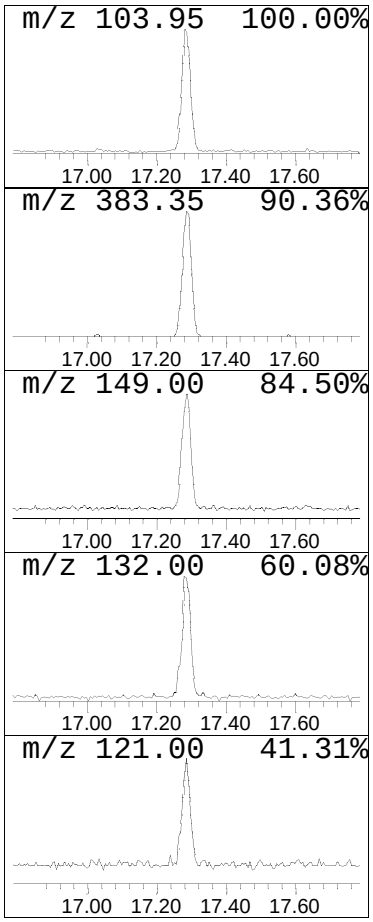
****

Peak Number 8 Unknown Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.286	0.71 ug/ml	252148	IS1_Perylene-d12	15.204

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-(2-Carboxyvinyl)pyridine, trans	149	C8H7NO2	007340-22-9	27
2	Benzenamine, 4-methoxy-N-(triphe...	383	C25H22NOP	014796-89-5	22
3	Spiro[isobenzofuran-1(3H),2'-oxi...	238	C15H10O3	135455-97-9	22
4	1,2-Benzenedicarboxylic acid, di...	250	C14H18O4	000131-16-8	14
5	Indane-1,3(2H)-dione, 2-(2-methy...	339	C16H9N3O6	1000263-60-8	14





Tentatively Identified Compound (LSC) summary

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-1.D
Acq On : 4 Apr 2024 1:02 pm
Operator : SV107:ljg
Sample : WG1904510-1,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Unknown	3.051	0.7	ug/ml	156232	1	6.504	950459	4.0
Unknown Phenol	4.687	1.9	ug/ml	456143	1	6.504	950459	4.0
Unknown	6.169	1.7	ug/ml	394705	1	6.504	950459	4.0
Unknown Phenol	10.445	1.2	ug/ml	450146	9	11.110	1500730	4.0
Unknown Organic...	11.721	1.5	ug/ml	579519	11	11.110	1500730	4.0
Unknown Organic...	12.486	0.9	ug/ml	322244	12	13.739	1422680	4.0
Unknown	17.286	0.7	ug/ml	252148	13	15.204	1429050	4.0

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-2.D
Acq On : 4 Apr 2024 1:27 pm
Operator : SV107:ljg
Sample : WG1904510-2,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 17:00:51 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	152713	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 109.09%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	152713	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 89.98%			
32) IS3_1,4-Dichlorobenzen...	6.504	152	152713	4.000	ug/ml	0.00
Standard Area 2 = 155385			Recovery = 98.28%			
34) IS1_Naphthalene-d8	7.922	136	583048	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 110.23%			
54) IS2_Naphthalene-d8	7.922	136	583048	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 93.09%			
62) IS1_Acenaphthene-d10	9.675	164	313352	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 106.18%			
82) IS2_Acenaphthene-d10	9.675	164	313352	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 93.11%			
85) IS3_Acenaphthene-d10	9.675	164	313352	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 98.05%			
87) IS1_Phenanthrene-d10	11.110	188	602766	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 107.37%			
99) IS3_Phenanthrene-d10	11.110	188	602766	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 100.76%			
103) IS1_Chrysene-d12	13.739	240	468953	4.000	ug/ml	0.00
Standard Area 1 = 474982			Recovery = 98.73%			
112) IS1_Perylene-d12	15.204	264	486293	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 92.89%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.699	112	130952	2.925	ug/ml	0.02
Spiked Amount 5.000	Range 15 - 110		Recovery = 58.50%			
7) Phenol-d6	6.169	99	138697	2.443	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 48.86%			
19) Nitrobenzene-d5	7.157	82	93809	1.801	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 72.04%			
45) 2-Fluorobiphenyl	9.034	172	188615	1.406	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 56.24%			
78) 2,4,6-Tribromophenol	10.445	330	35350	3.019	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 60.38%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-2.D
Acq On : 4 Apr 2024 1:27 pm
Operator : SV107:ljg
Sample : WG1904510-2,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 17:00:51 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) 4-Terphenyl-d14	12.686	244	206647	1.557	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 62.28%			
Target Compounds						Qvalue
6) 2-Chlorophenol	6.257	128	163666	3.329	ug/ml	95
8) Phenol	6.187	94	149939	2.423	ug/ml	99
9) Bis(2-chloroethyl)ether	6.228	93	156608	3.049	ug/ml	97
14) Bis(2-chloroisopropyl)...	6.881	45	268921	3.878	ug/ml#	62
15) 2-Methylphenol	6.893	108	143531M3	3.313	ug/ml	
17) n-Nitrosodi-n-propylamine	7.028	70	123067	3.521	ug/ml#	92
18) 3-Methylphenol/4-Methy...	7.081	108	166235	3.546	ug/ml	94
20) Nitrobenzene	7.175	77	178782	3.352	ug/ml	99
21) Isophorone	7.451	82	331118	3.603	ug/ml	95
22) 2-Nitrophenol	7.528	139	86369	3.943	ug/ml#	91
23) 2,4-Dimethylphenol	7.640	107	137579	3.766	ug/ml	97
24) Bis(2-chloroethoxy)met...	7.722	93	205306	3.311	ug/ml#	97
25) 2,4-Dichlorophenol	7.804	162	146572	3.428	ug/ml	97
28) Benzaldehyde	5.946	105	137479	3.647	ug/ml	98
29) Acetophenone	6.998	105	242182	3.785	ug/ml#	88
37) 4-Chloroaniline	8.028	65	57618M3	2.876	ug/ml	
39) p-Chloro-m-cresol	8.557	107	152325	3.669	ug/ml	97
42) Hexachlorocyclopentadiene	8.834	237	51327	2.132	ug/ml	94
43) 2,4,6-Trichlorophenol	8.957	196	109053	3.320	ug/ml	98
44) 2,4,5-Trichlorophenol	8.992	196	116232	3.263	ug/ml	99
47) 2-Nitroaniline	9.245	138	101921	3.322	ug/ml	96
50) Dimethyl phthalate	9.445	163	366509	3.039	ug/ml#	98
52) 2,6-Dinitrotoluene	9.492	165	75125	2.988	ug/ml	93
59) Caprolactam	8.339	55	42171	2.454	ug/ml#	81
60) 1,2,4,5-Tetrachloroben...	8.828	216	159696	2.728	ug/ml	97
61) Biphenyl	9.128	154	409010	3.124	ug/ml	97
63) 3-Nitroaniline	9.651	138	83246	3.511	ug/ml#	97
65) 2,4-Dinitrophenol	9.751	184	14495	1.848	ug/ml	95
66) Dibenzofuran	9.875	168	467815	3.226	ug/ml#	80
67) 2,4-Dinitrotoluene	9.881	165	105363	3.444	ug/ml	91
68) 4-Nitrophenol	9.851	65	75475	3.776	ug/ml#	1
70) 2,3,4,6-Tetrachlorophenol	10.010	232	81902	3.257	ug/ml	98
71) Diethyl phthalate	10.139	149	359881	3.529	ug/ml	100

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-2.D
Acq On : 4 Apr 2024 1:27 pm
Operator : SV107:ljg
Sample : WG1904510-2,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 17:00:51 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
73) 4-Chlorophenyl phenyl ...	10.228	204	162741	2.899	ug/ml	94
74) 4-Nitroaniline	10.239	138	78109	3.270	ug/ml#	90
75) 4,6-Dinitro-o-cresol	10.269	198	46876	3.158	ug/ml#	72
76) NDPA/DPA	10.345	169	293277	3.353	ug/ml	93
79) 4-Bromophenyl phenyl e...	10.698	248	85765	2.910	ug/ml	93
86) Atrazine	10.880	200	96679	3.855	ug/ml	95
90) Carbazole	11.351	167	515960	3.593	ug/ml	98
91) Di-n-butylphthalate	11.733	149	578732	3.788	ug/ml	99
96) Butyl benzyl phthalate	13.204	149	252350	3.802	ug/ml	92
105) 3,3'-Dichlorobenzidine	13.727	252	174969	3.670	ug/ml	97
107) Bis(2-ethylhexyl)phtha...	13.839	149	350514	4.297	ug/ml#	91
108) Di-n-octylphthalate	14.516	149	593726	4.671	ug/ml#	76

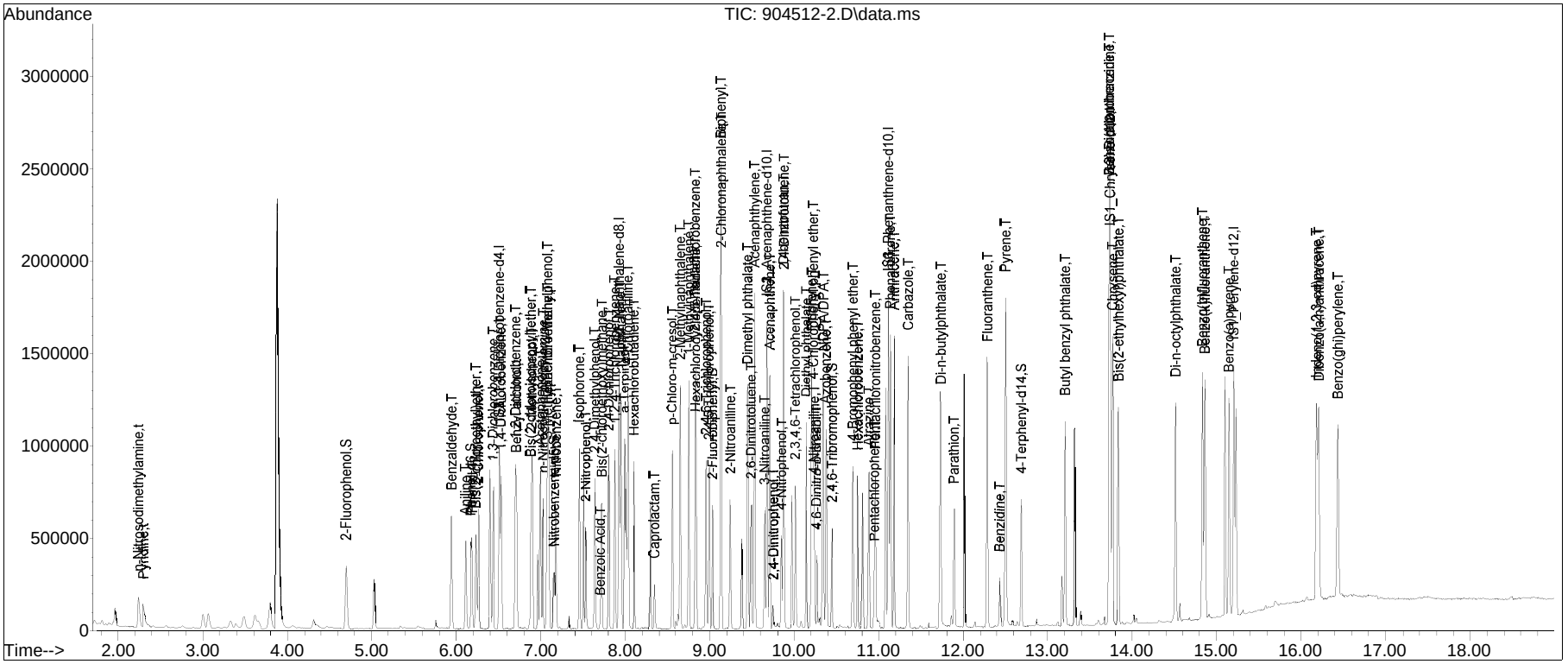
(#) = qualifier out of range (m) = manual integration (+) = signals summed

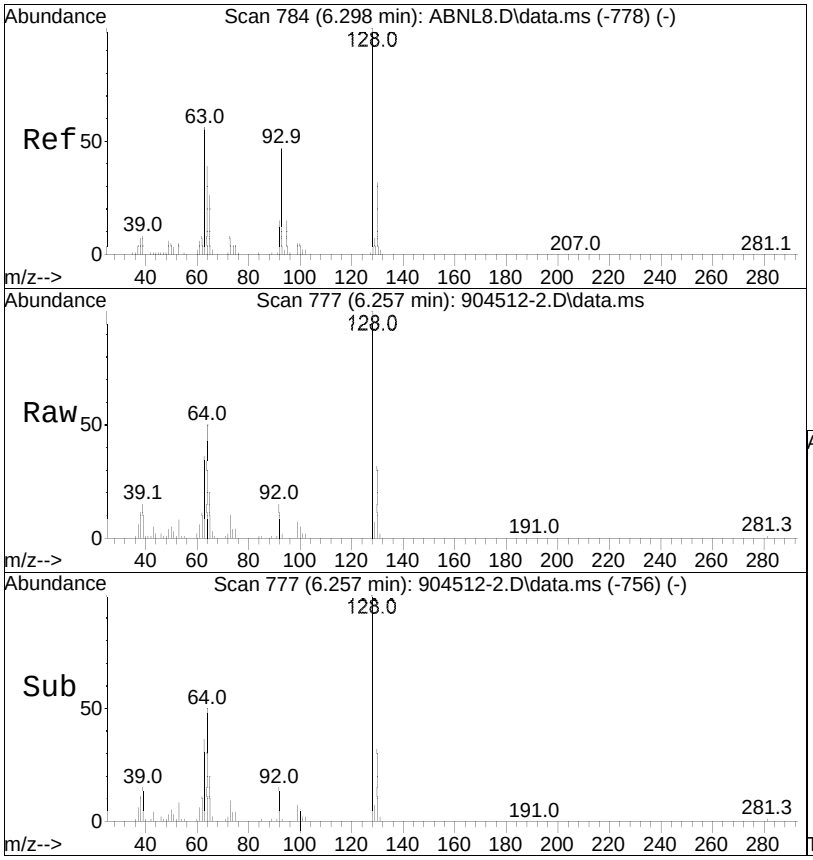
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-2.D
Acq On : 4 Apr 2024 1:27 pm
Operator : SV107:ljg
Sample : WG1904510-2,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 17:00:51 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

Sub List : 8270TCL_REV2 - TCL/CT/MAlvi\AP90404.D••

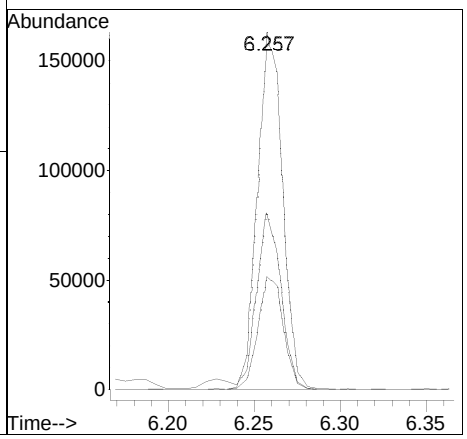


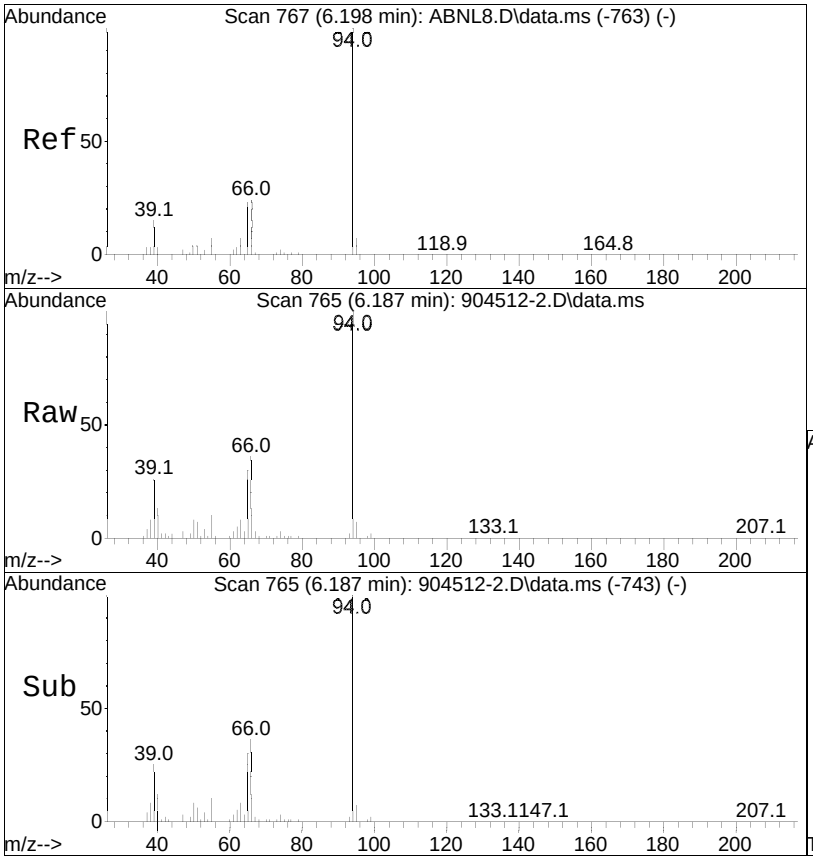


#6
2-Chlorophenol
Concen: 3.33 ug/ml
RT: 6.257 min Scan# 777
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:128 Resp: 163666

Ion	Ratio	Lower	Upper
128	100		
64	51.2	45.1	67.7
130	32.2	26.2	39.4

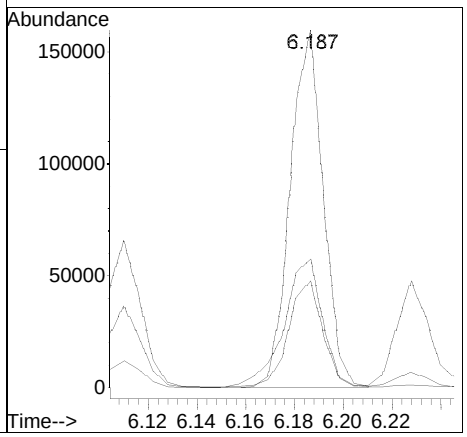


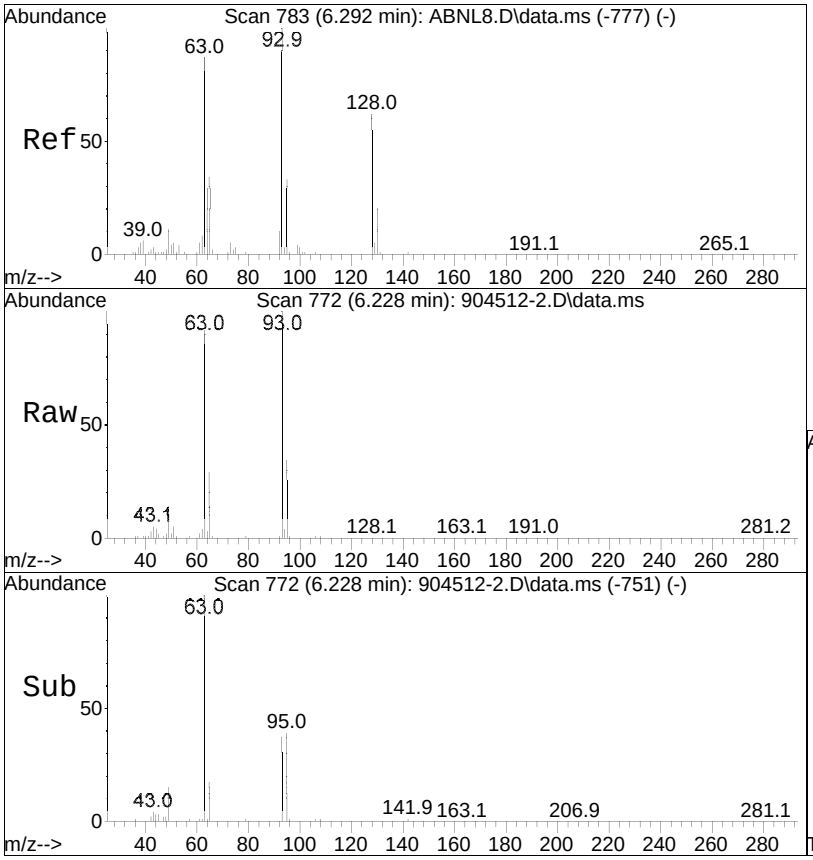


#8
Phenol
Concen: 2.42 ug/ml
RT: 6.187 min Scan# 765
Delta R.T. 0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 94 Resp: 149939

Ion	Ratio	Lower	Upper
94	100		
65	31.0	26.0	39.0
66	42.4	33.8	50.8

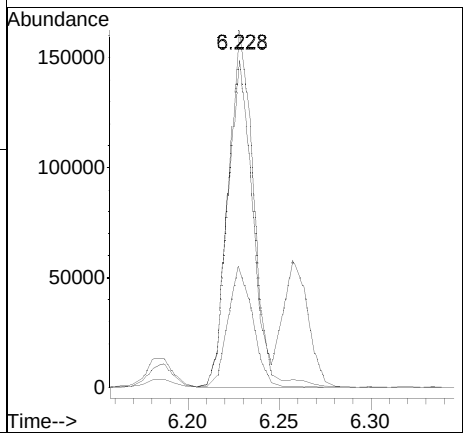


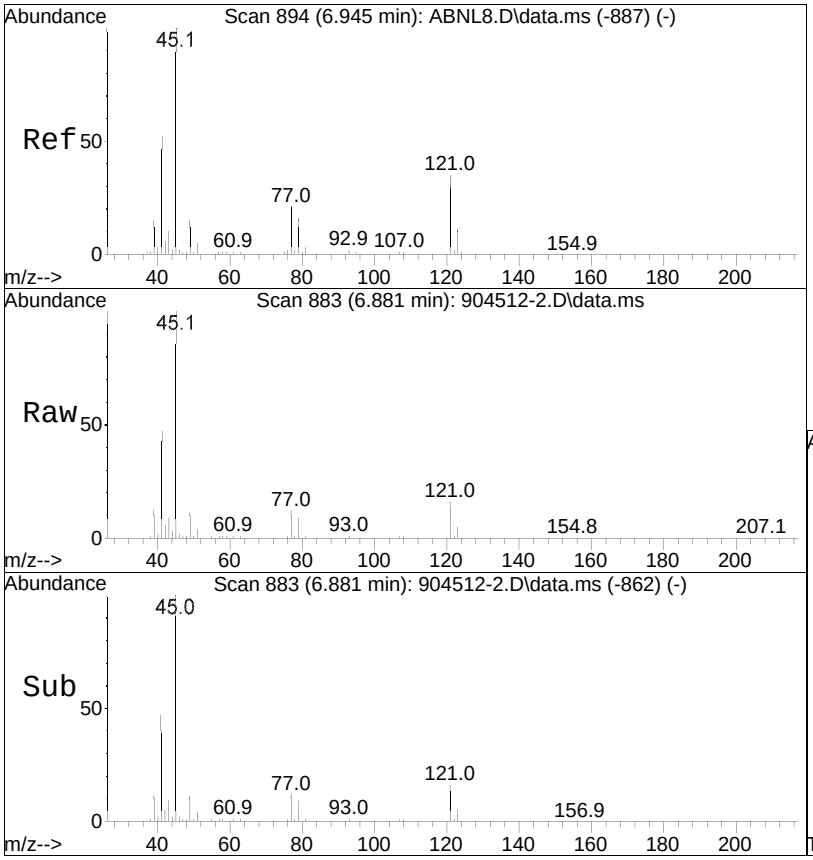


#9
Bis(2-chloroethyl)ether
Concen: 3.05 ug/ml
RT: 6.228 min Scan# 772
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 93 Resp: 156608

Ion	Ratio	Lower	Upper
93	100		
63	89.5	74.6	111.8
95	33.4	25.9	38.9

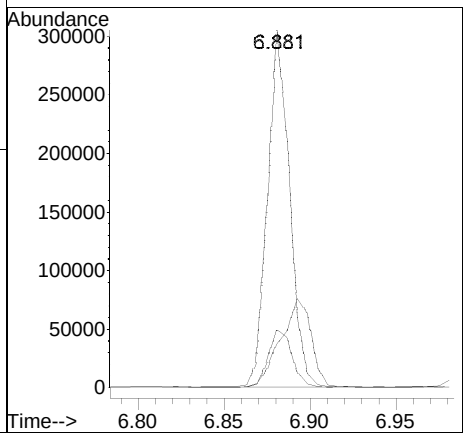


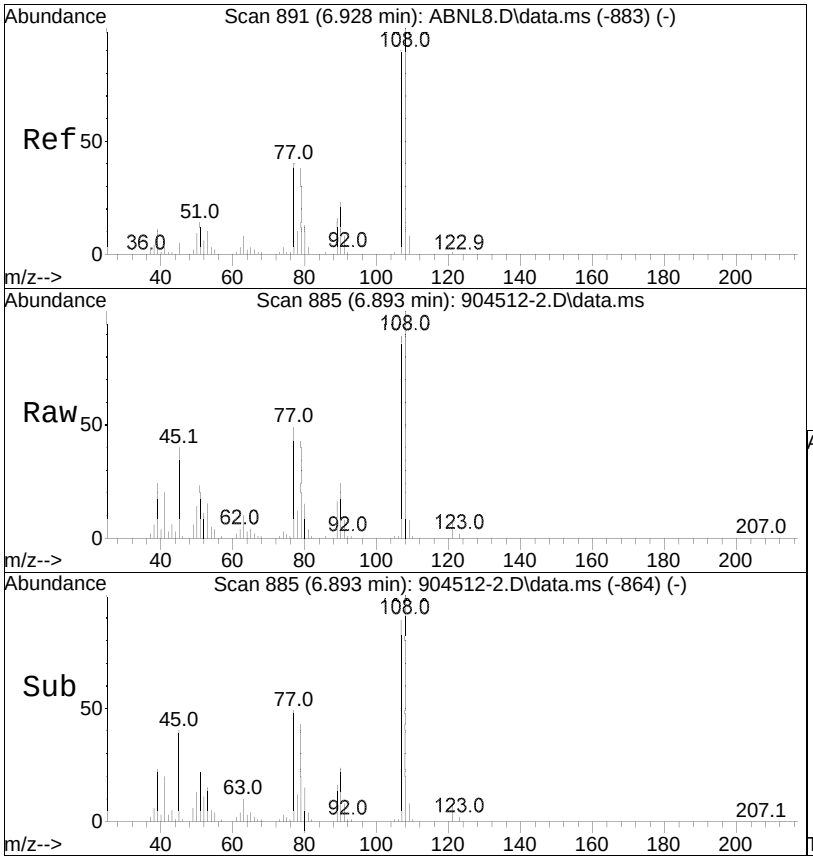


#14
Bis(2-chloroisopropyl)ether
Concen: 3.88 ug/ml
RT: 6.881 min Scan# 883
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 45 Resp: 268921

Ion	Ratio	Lower	Upper
45	100		
121	17.5	9.8	14.6#
77	34.4	6.1	9.1#

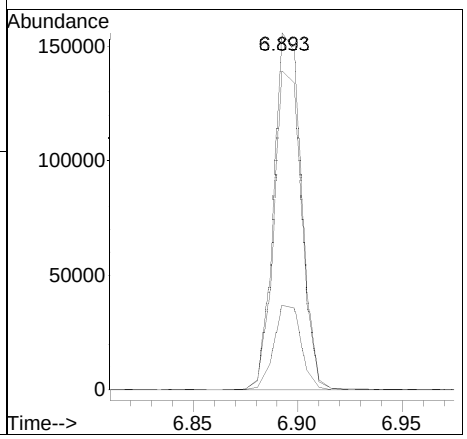


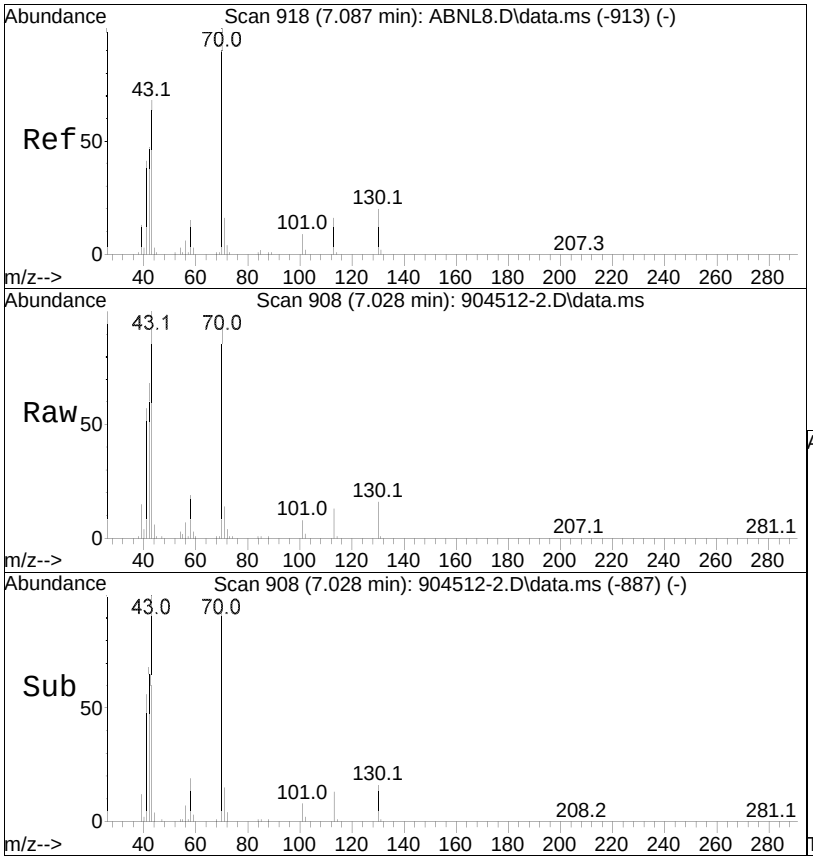


#15
2-Methylphenol
Concen: 3.31 ug/ml M3
RT: 6.893 min Scan# 885
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:108 Resp: 143531

Ion	Ratio	Lower	Upper
108	100		
107	89.5	70.7	106.1
90	23.3	18.7	28.1

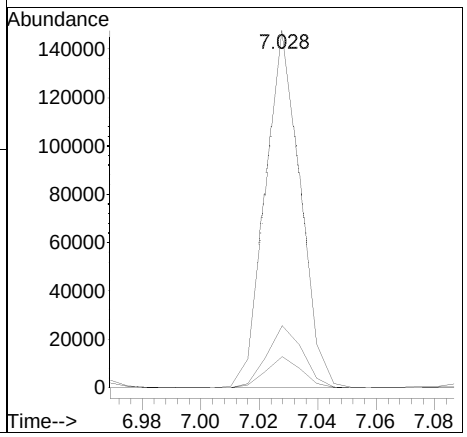


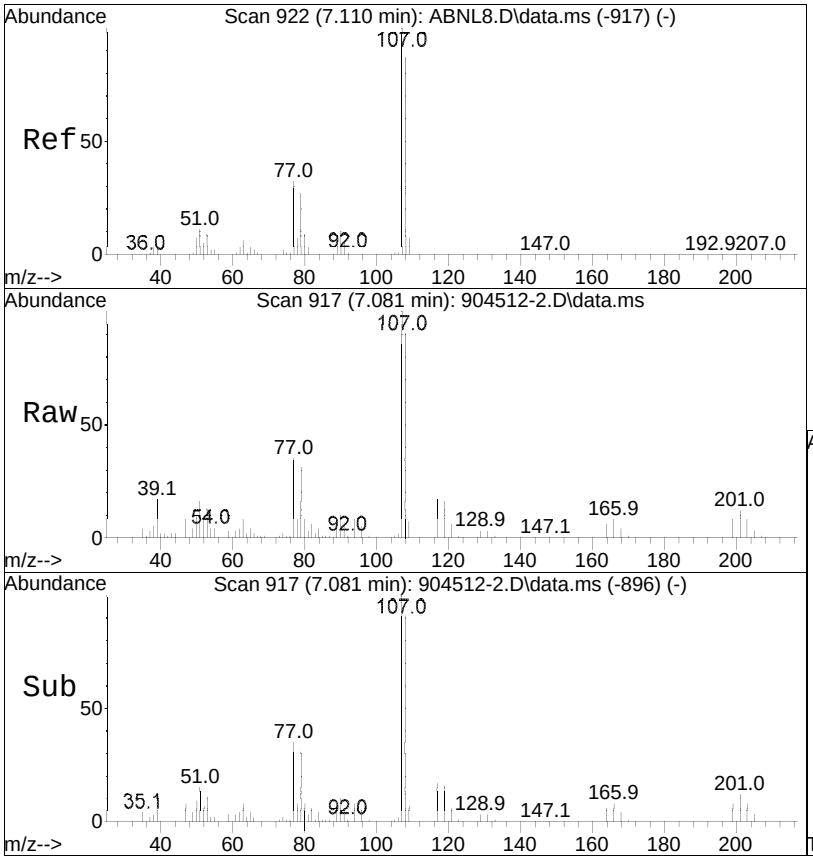


#17
n-Nitrosodi-n-propylamine
Concen: 3.52 ug/ml
RT: 7.028 min Scan# 908
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 70 Resp: 123067

Ion	Ratio	Lower	Upper
70	100		
130	17.6	18.2	27.4#
101	8.8	7.8	11.8

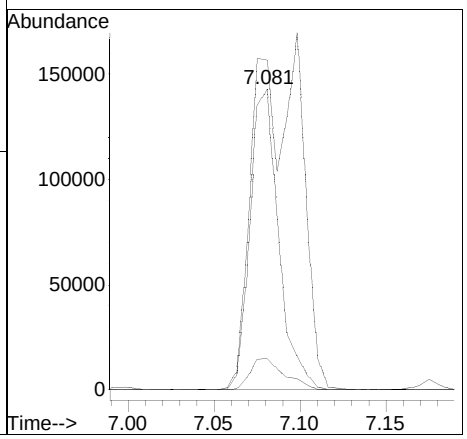


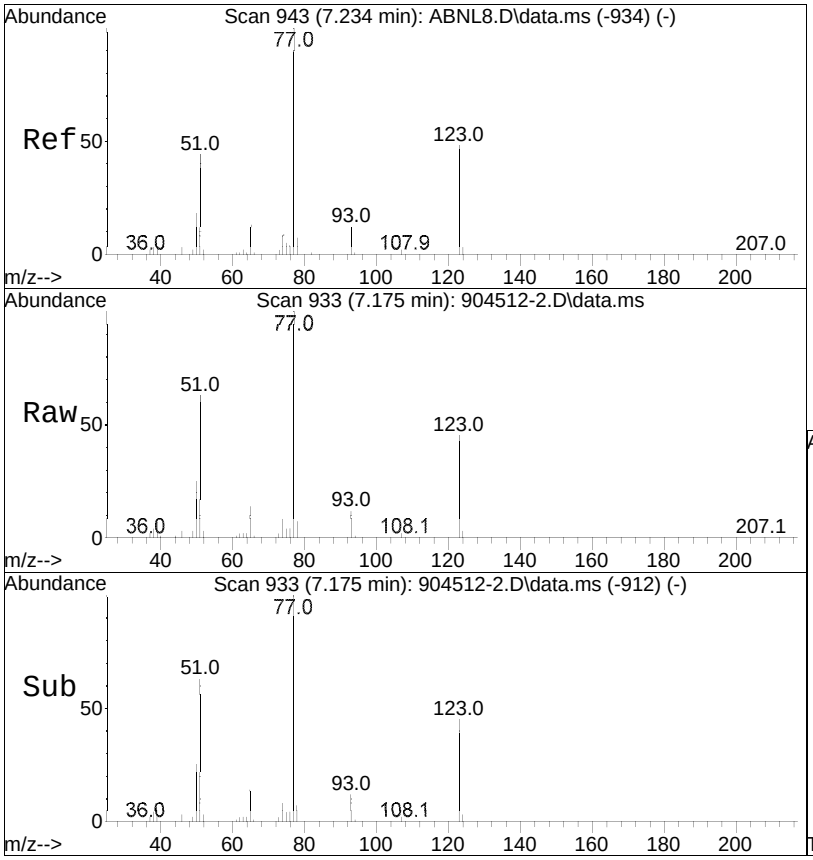


#18
3-Methylphenol/4-Methylphenol
Concen: 3.55 ug/ml
RT: 7.081 min Scan# 917
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:108 Resp: 166235

Ion	Ratio	Lower	Upper
108	100		
107	104.4	88.6	132.8
90	12.6	8.8	13.2

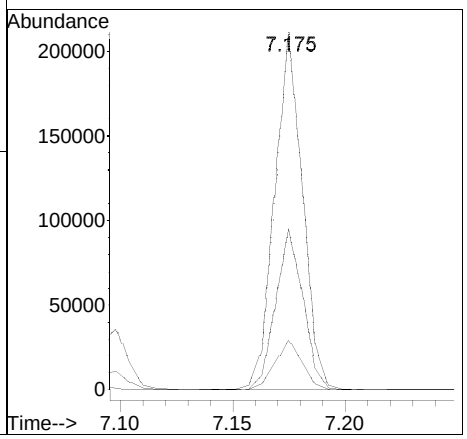


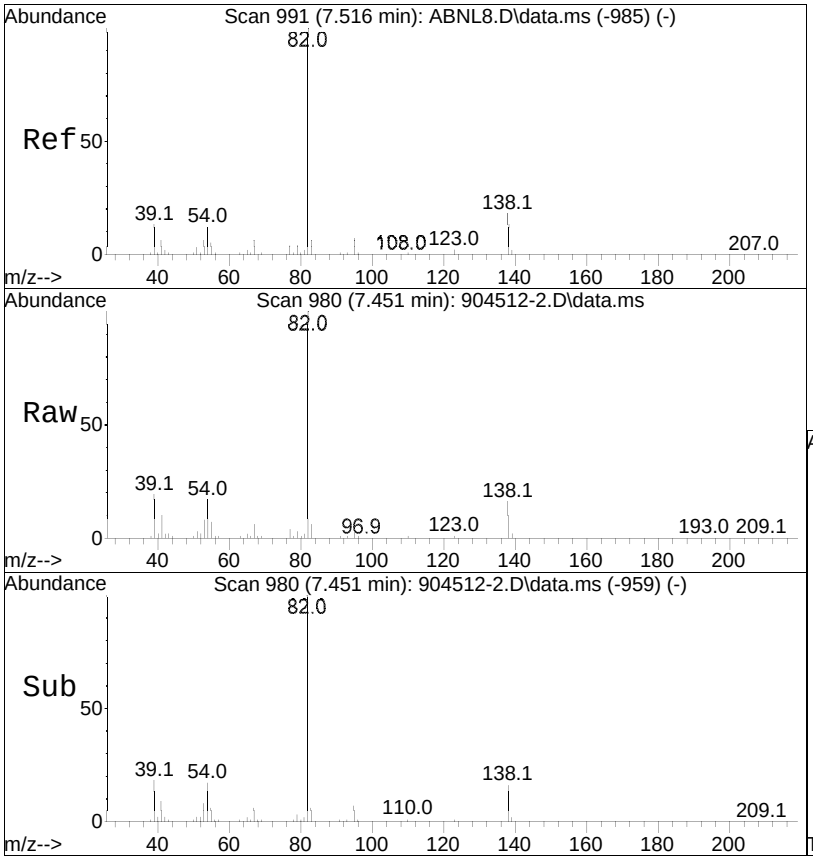


#20
Nitrobenzene
Concen: 3.35 ug/ml
RT: 7.175 min Scan# 933
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 77 Resp: 178782

Ion	Ratio	Lower	Upper
77	100		
123	44.9	36.3	54.5
65	14.0	11.6	17.4

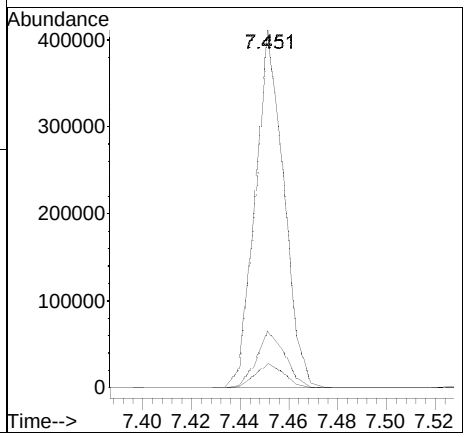


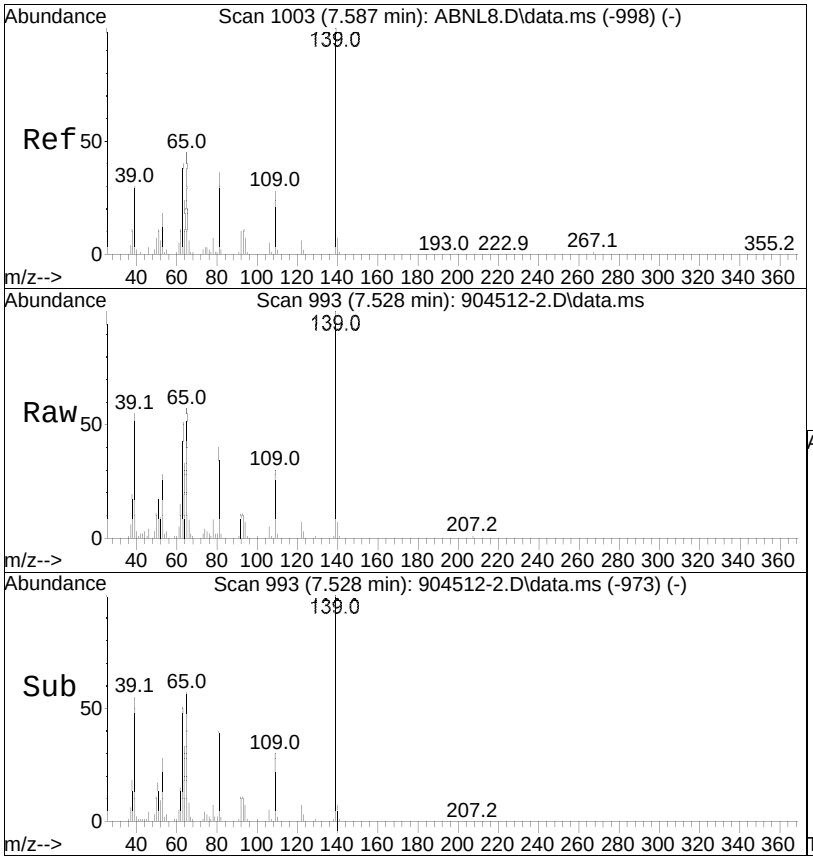


#21
Isophorone
Concen: 3.60 ug/ml
RT: 7.451 min Scan# 980
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 82 Resp: 331118

Ion	Ratio	Lower	Upper
82	100		
138	15.9	14.7	22.1
95	7.1	5.2	7.8

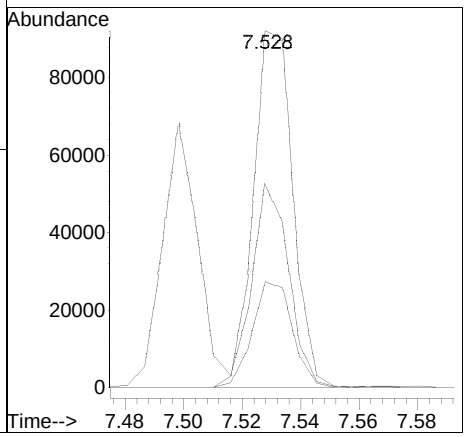


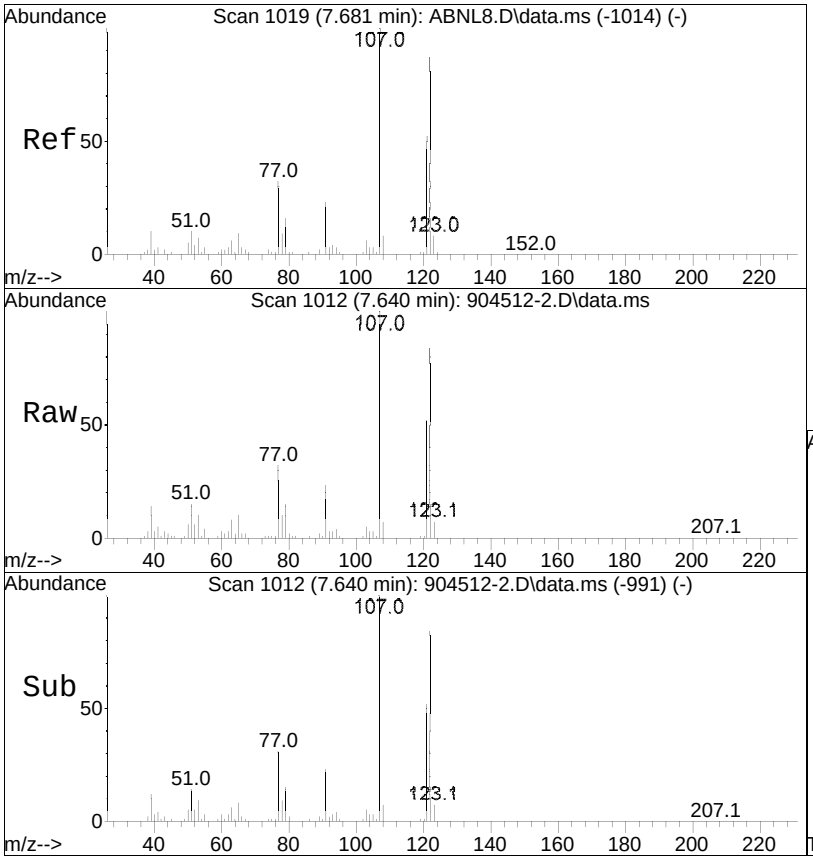


#22
2-Nitrophenol
Concen: 3.94 ug/ml
RT: 7.528 min Scan# 993
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:139 Resp: 86369

Ion	Ratio	Lower	Upper
139	100		
109	30.1	19.4	29.0#
65	52.0	46.1	69.1

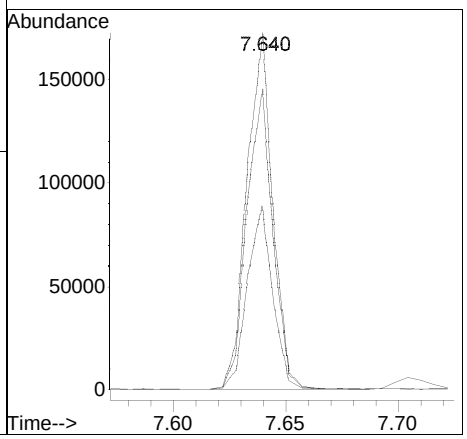


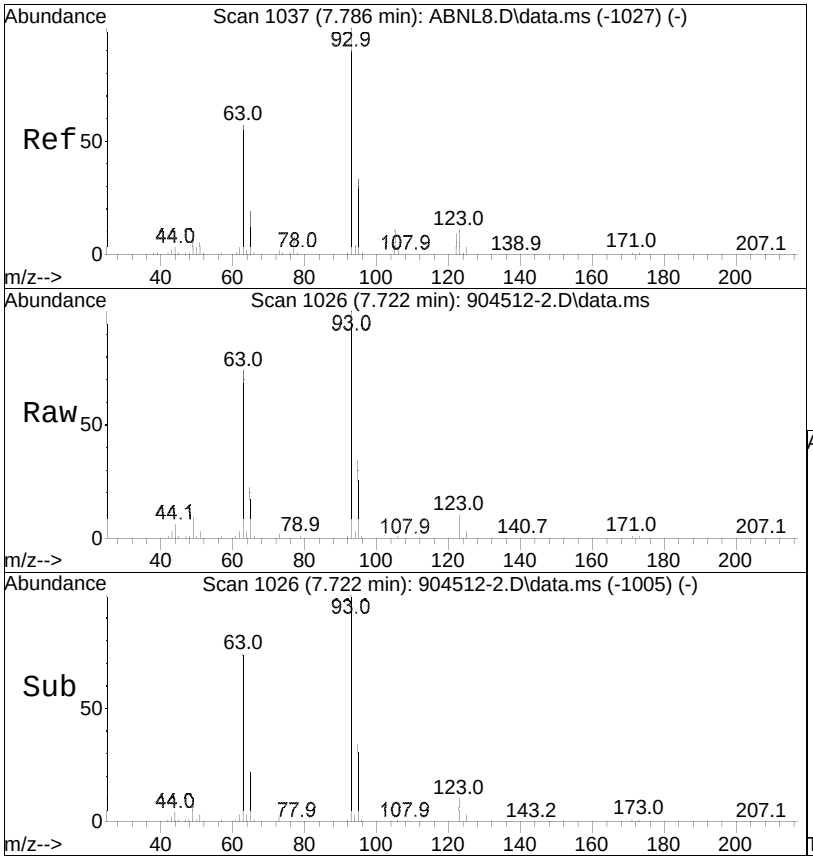


#23
2,4-Dimethylphenol
Concen: 3.77 ug/ml
RT: 7.640 min Scan# 1012
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:107 Resp: 137579

Ion	Ratio	Lower	Upper
107	100		
121	50.6	40.0	60.0
122	84.5	70.2	105.4

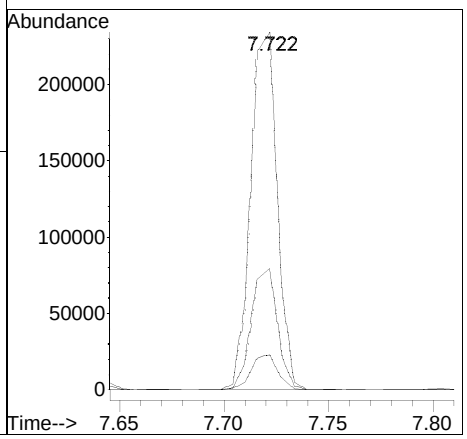


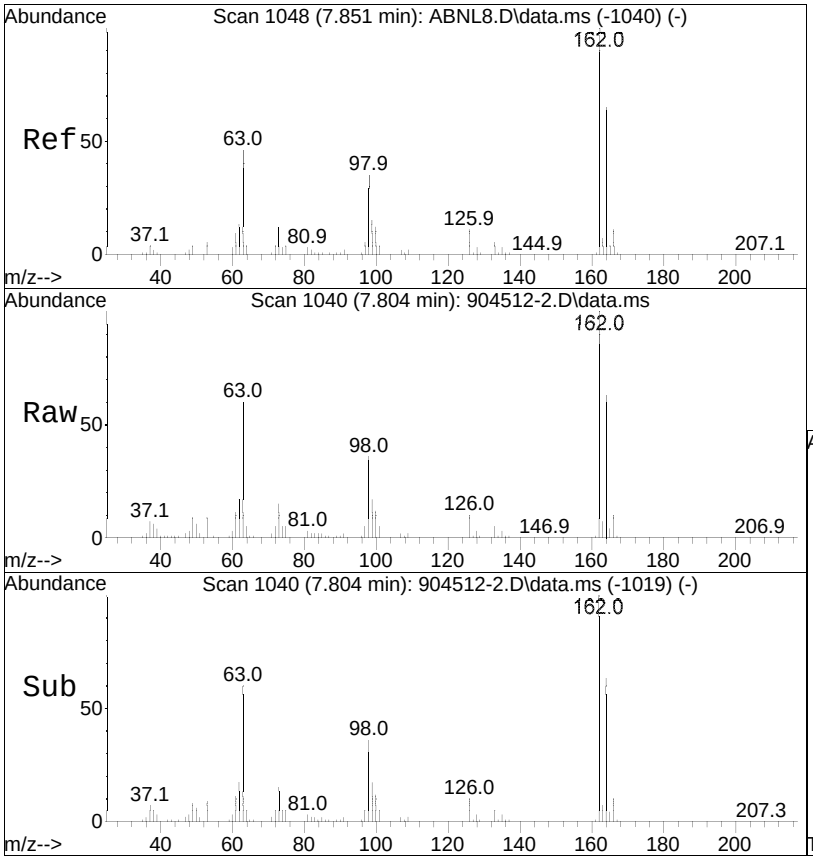


#24
Bis(2-chloroethoxy)methane
Concen: 3.31 ug/ml
RT: 7.722 min Scan# 1026
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 93 Resp: 205306

Ion	Ratio	Lower	Upper
93	100		
95	33.5	25.8	38.8
123	10.0	10.1	15.1#

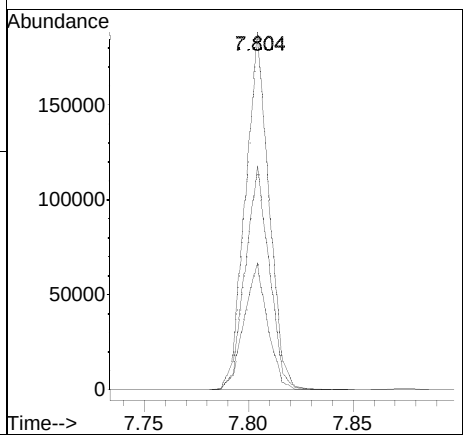


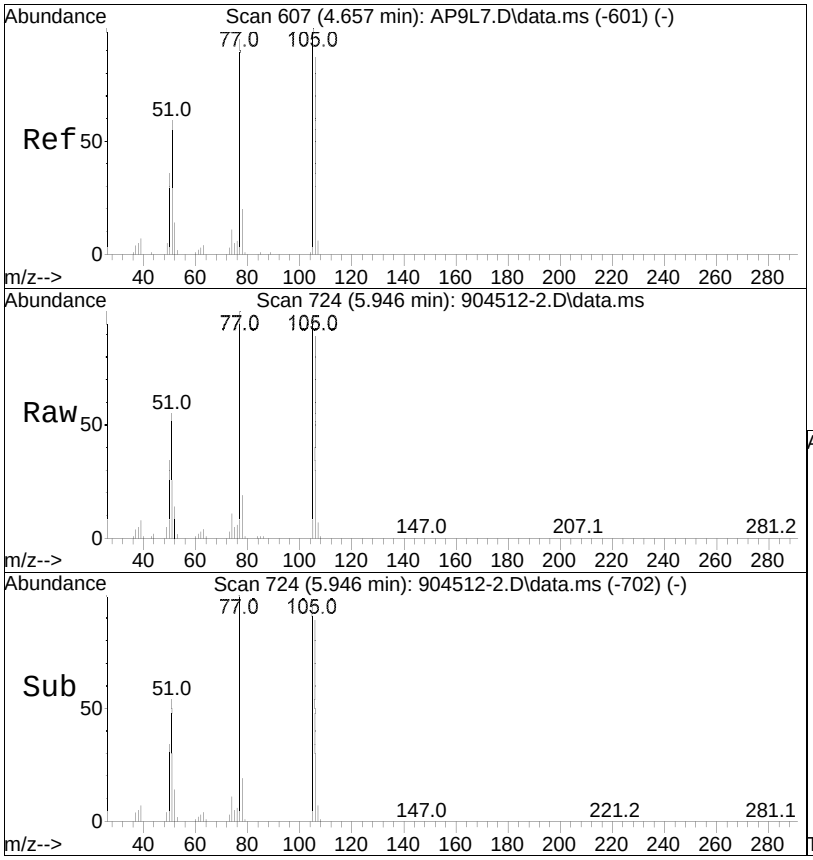


#25
2,4-Dichlorophenol
Concen: 3.43 ug/ml
RT: 7.804 min Scan# 1040
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:162 Resp: 146572

Ion	Ratio	Lower	Upper
162	100		
164	63.6	51.0	76.4
98	35.6	32.2	48.2

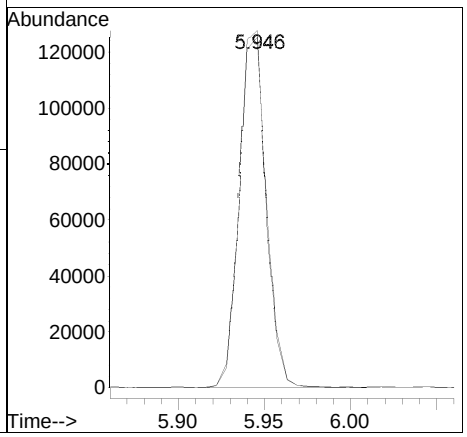


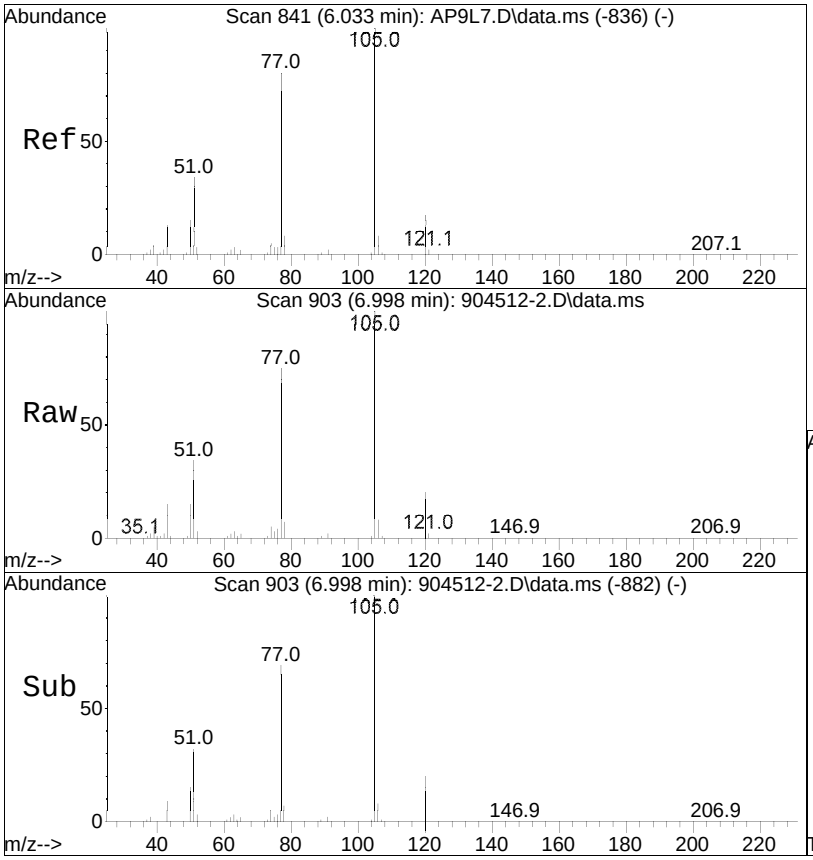


#28
Benzaldehyde
Concen: 3.65 ug/ml
RT: 5.946 min Scan# 724
Delta R.T. 0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:105 Resp: 137479

Ion	Ratio	Lower	Upper
105	100		
77	100.4	82.2	123.4

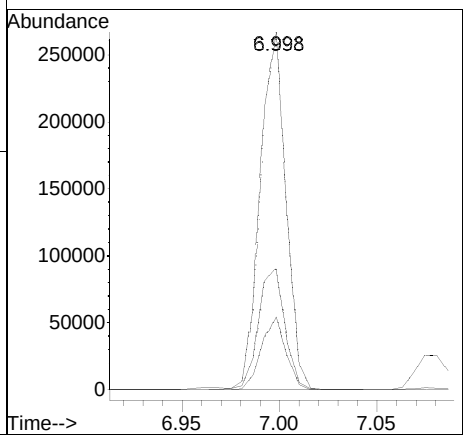


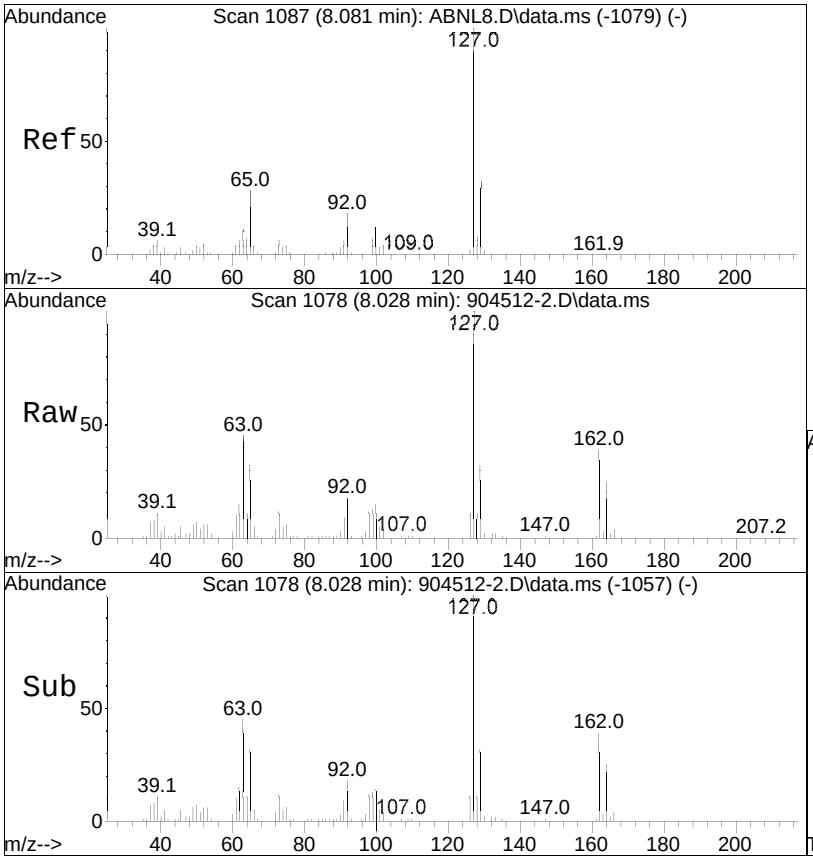


#29
Acetophenone
Concen: 3.79 ug/ml
RT: 6.998 min Scan# 903
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:105 Resp: 242182

Ion	Ratio	Lower	Upper
105	100		
120	19.6	20.5	30.7#
51	35.8	34.9	52.3

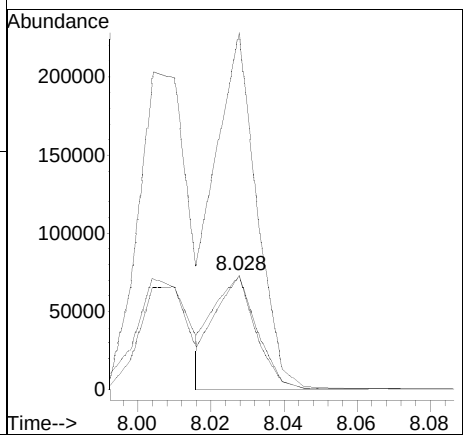


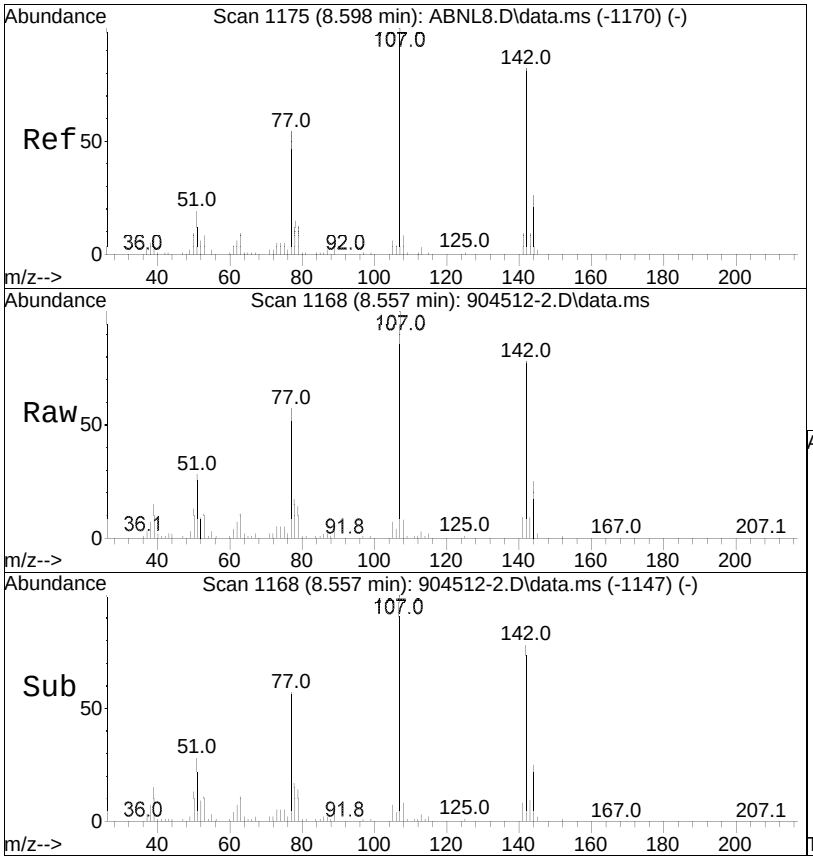


#37
4-Chloroaniline
Concen: 2.88 ug/ml M3
RT: 8.028 min Scan# 1078
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 65 Resp: 57618

Ion	Ratio	Lower	Upper
65	100		
127	338.7	237.6	356.4
129	110.2	76.3	114.5

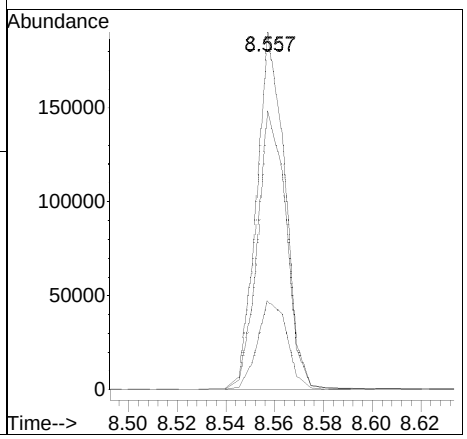


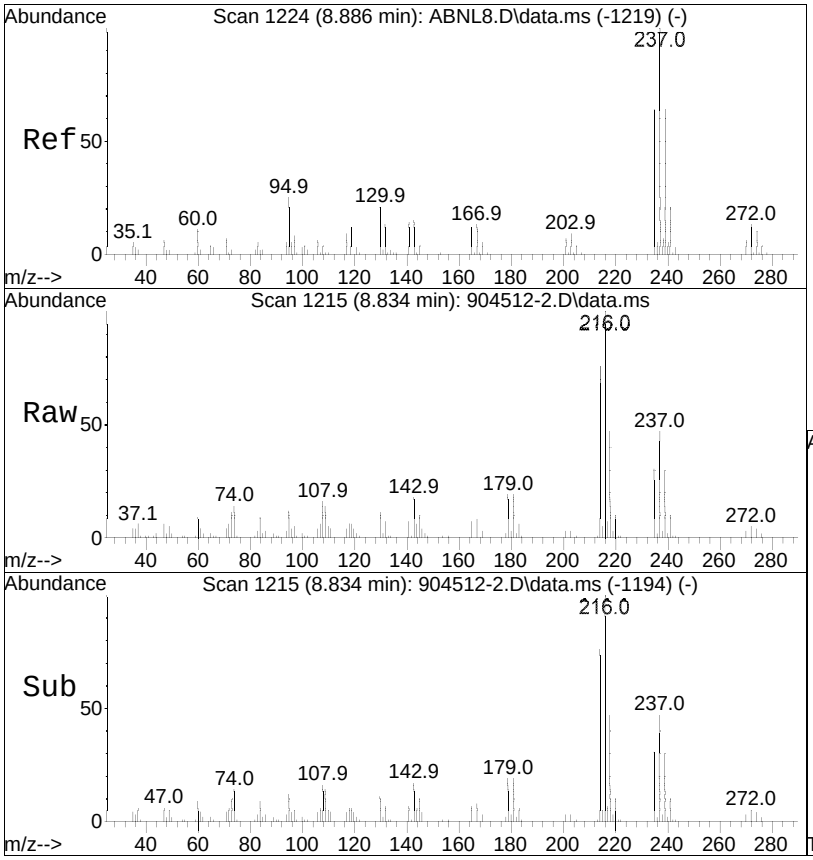


#39
p-Chloro-m-cresol
Concen: 3.67 ug/ml
RT: 8.557 min Scan# 1168
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:107 Resp: 152325

Ion	Ratio	Lower	Upper
107	100		
144	26.2	20.9	31.3
142	79.5	66.1	99.1

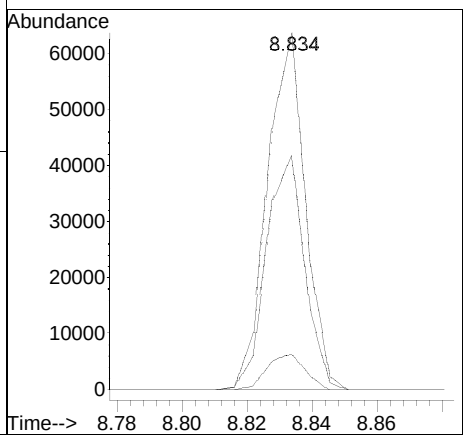


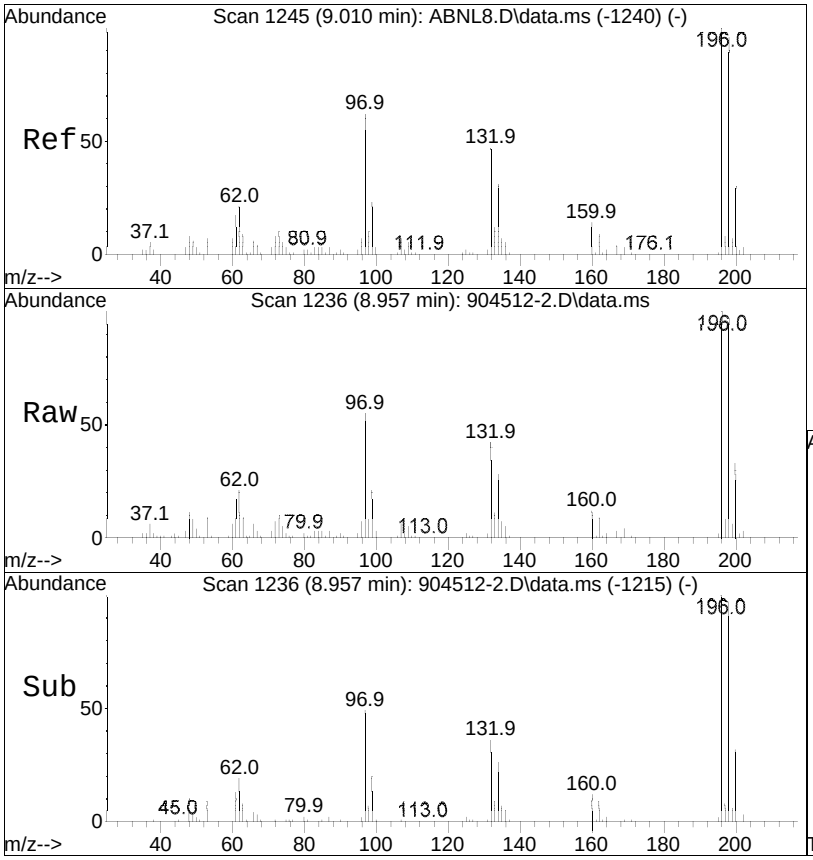


#42
Hexachlorocyclopentadiene
Concen: 2.13 ug/ml
RT: 8.834 min Scan# 1215
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:237 Resp: 51327

Ion	Ratio	Lower	Upper
237	100		
235	66.6	49.7	74.5
272	10.2	9.8	14.6

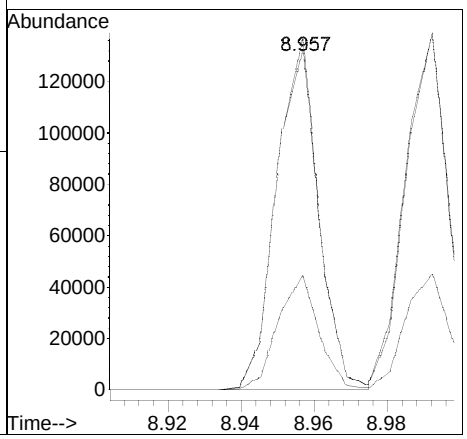


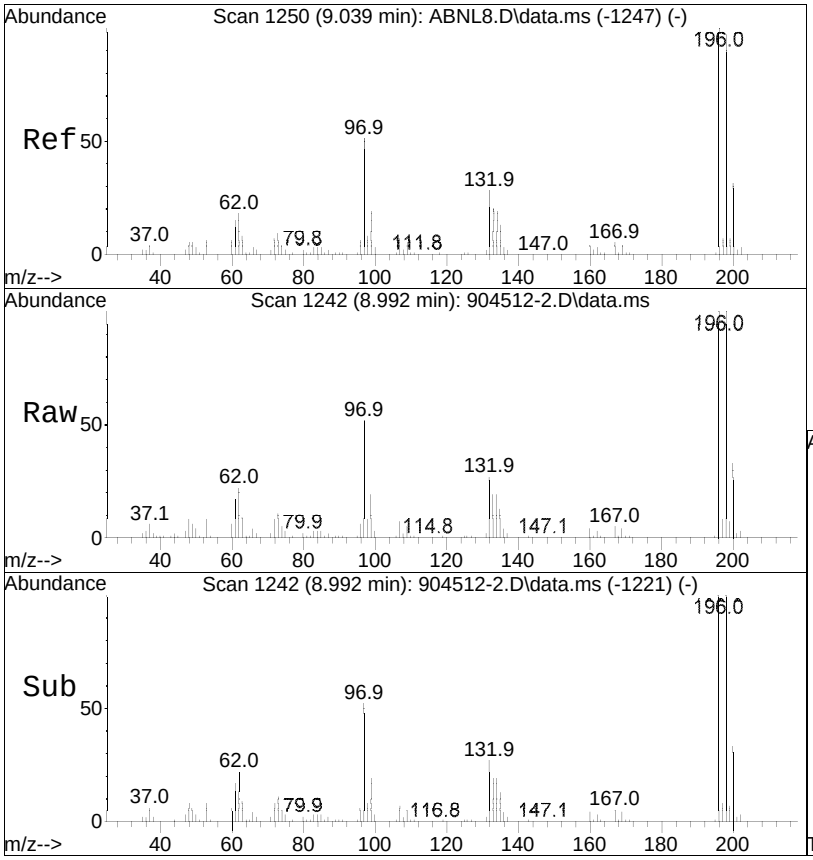


#43
2,4,6-Trichlorophenol
Concen: 3.32 ug/ml
RT: 8.957 min Scan# 1236
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:196 Resp: 109053

Ion	Ratio	Lower	Upper
196	100		
198	98.6	77.5	116.3
200	31.9	23.8	35.6

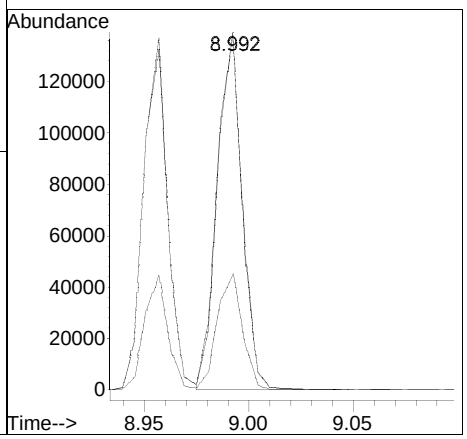


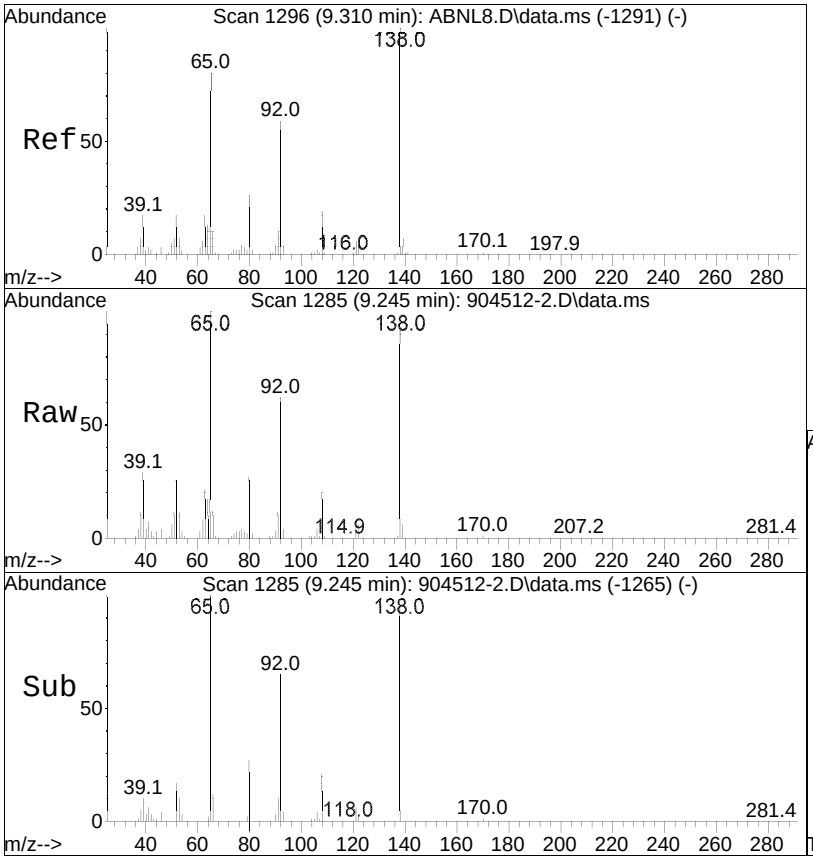


#44
2,4,5-Trichlorophenol
Concen: 3.26 ug/ml
RT: 8.992 min Scan# 1242
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:196 Resp: 116232

Ion	Ratio	Lower	Upper
196	100		
200	32.8	25.4	38.0
198	98.7	78.0	117.0

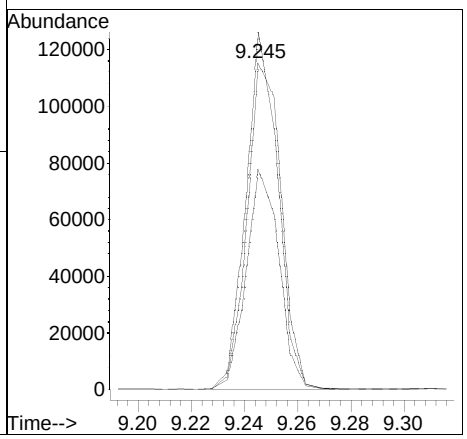


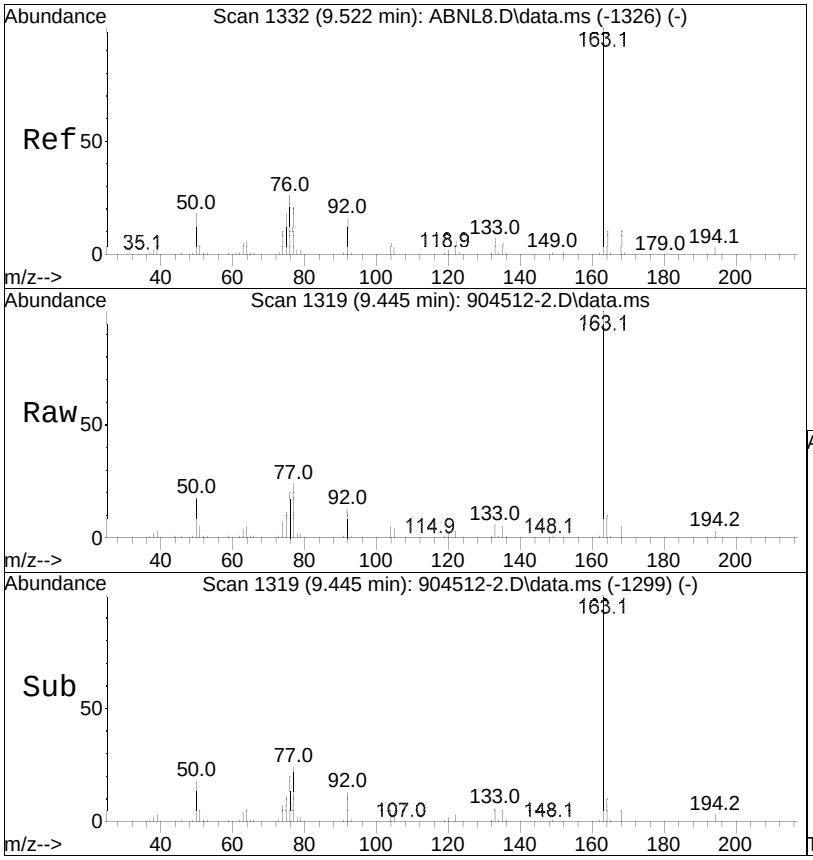


#47
2-Nitroaniline
Concen: 3.32 ug/ml
RT: 9.245 min Scan# 1285
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:138 Resp: 101921

Ion	Ratio	Lower	Upper
138	100		
92	64.9	53.5	80.3
65	102.7	86.3	129.5

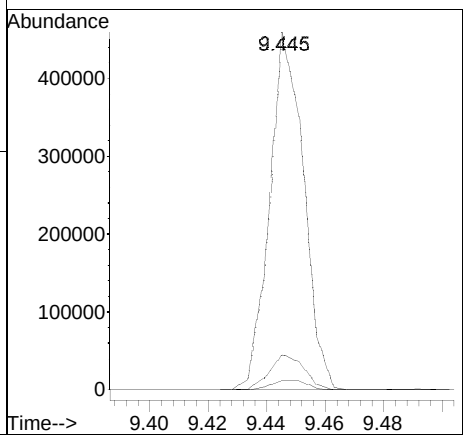


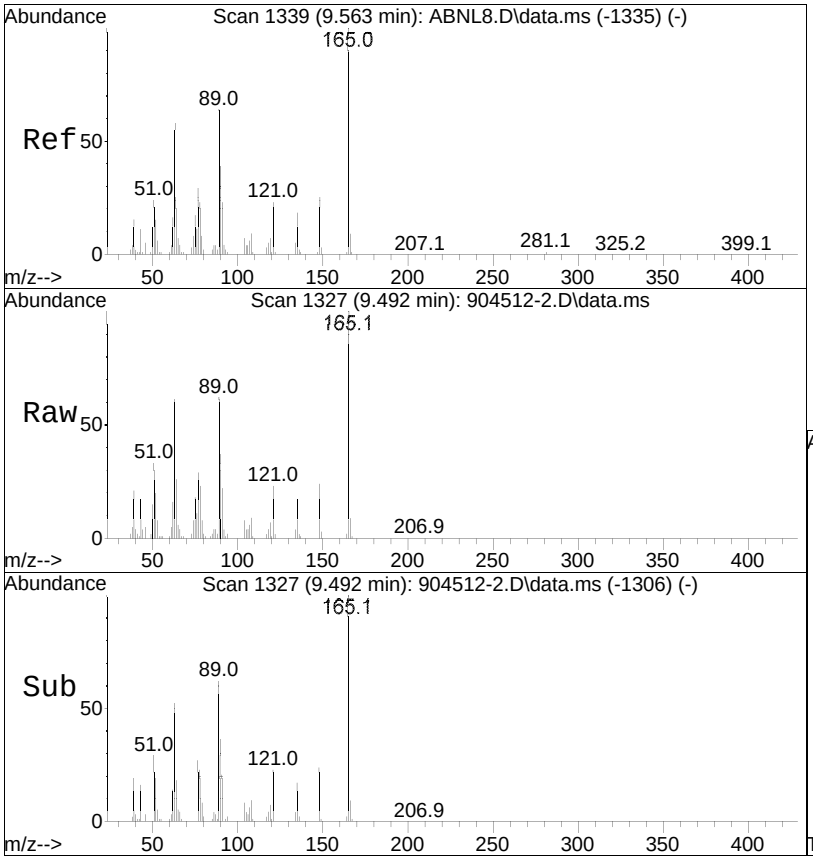


#50
Dimethyl phthalate
Concen: 3.04 ug/ml
RT: 9.445 min Scan# 1319
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:163 Resp: 366509

Ion	Ratio	Lower	Upper
163	100		
194	2.9	3.5	5.3#
164	10.2	7.9	11.9

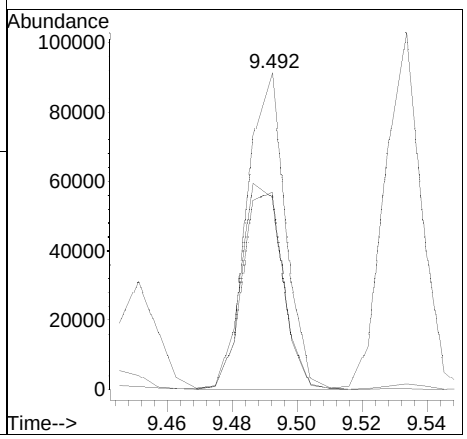


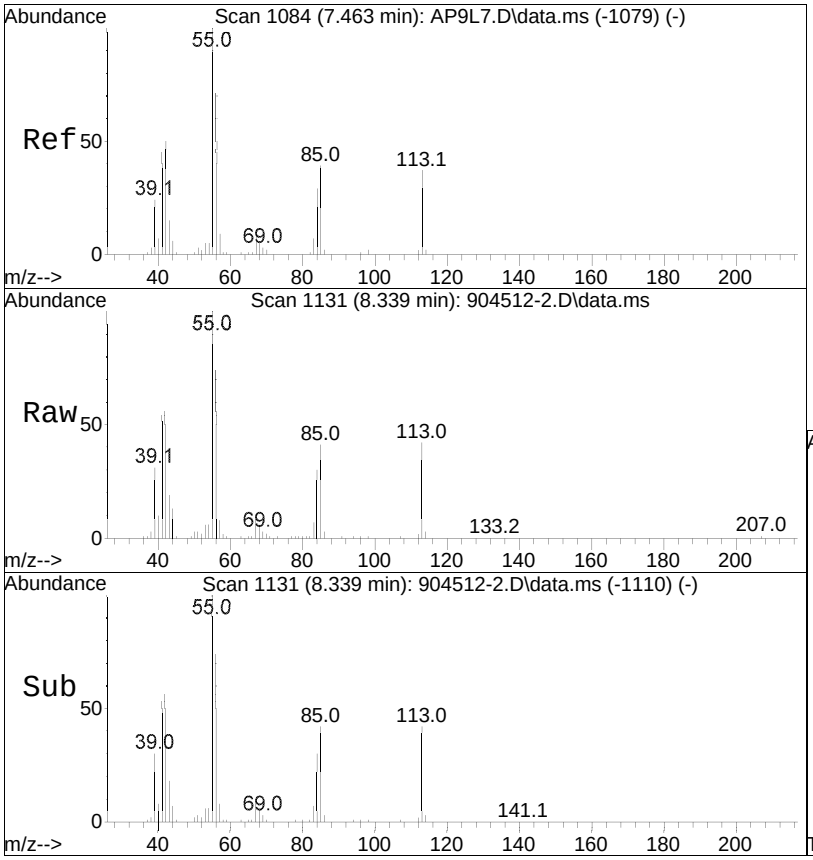


#52
2,6-Dinitrotoluene
Concen: 2.99 ug/ml
RT: 9.492 min Scan# 1327
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:165 Resp: 75125

Ion	Ratio	Lower	Upper
165	100		
89	67.0	54.2	81.2
63	70.0	64.2	96.2

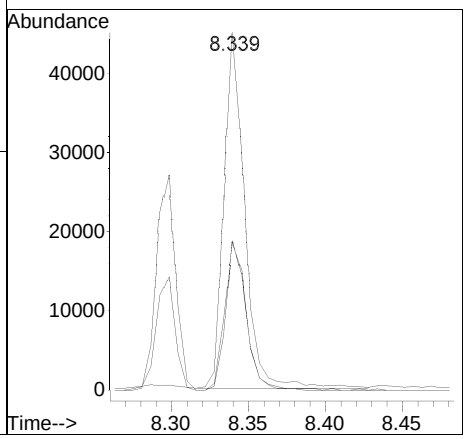


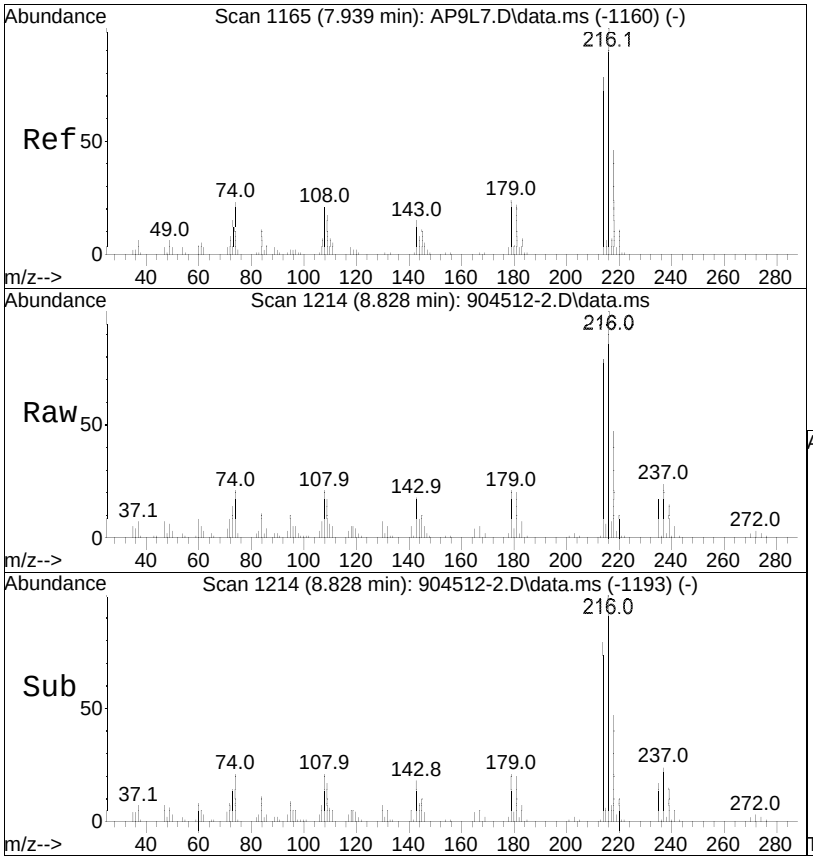


#59
Caprolactam
Concen: 2.45 ug/ml
RT: 8.339 min Scan# 1131
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 55 Resp: 42171

Ion	Ratio	Lower	Upper
55	100		
85	43.6	19.8	29.6#
113	40.7	29.6	44.4

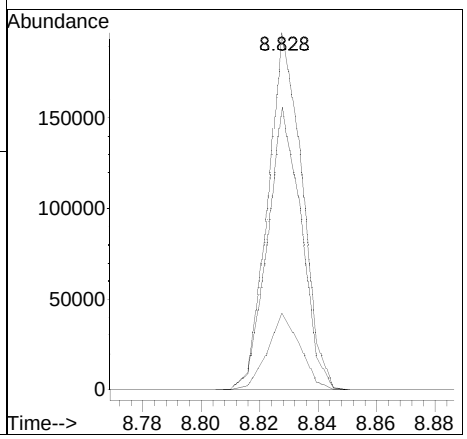


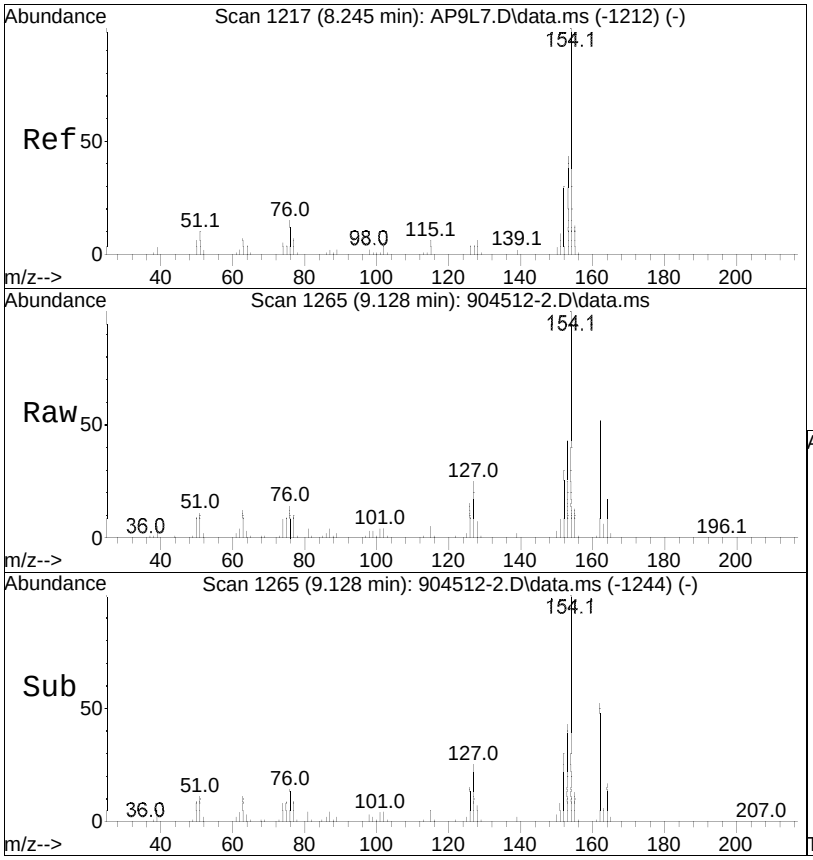


#60
1,2,4,5-Tetrachlorobenzene
Concen: 2.73 ug/ml
RT: 8.828 min Scan# 1214
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:216 Resp: 159696

Ion	Ratio	Lower	Upper
216	100		
214	78.5	63.7	95.5
179	20.5	19.0	28.6

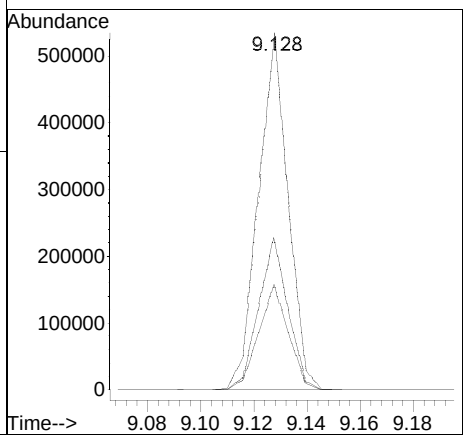


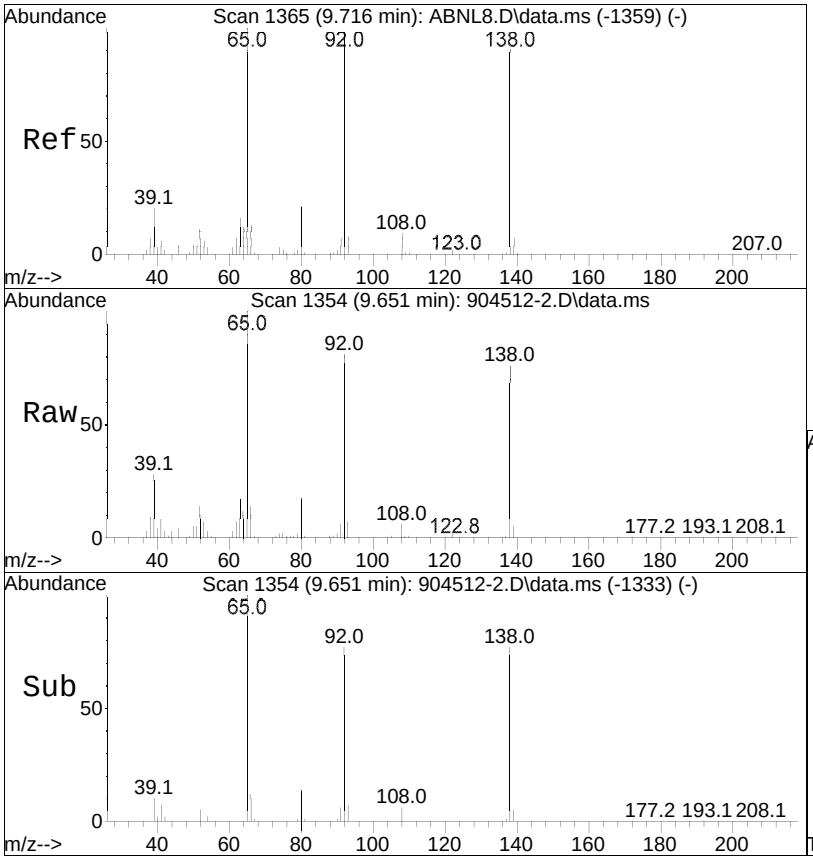


#61
Biphenyl
Concen: 3.12 ug/ml
RT: 9.128 min Scan# 1265
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:154 Resp: 409010

Ion	Ratio	Lower	Upper
154	100		
153	42.5	32.3	48.5
152	29.8	22.5	33.7

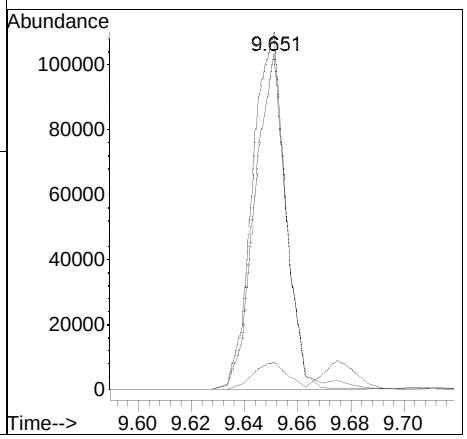


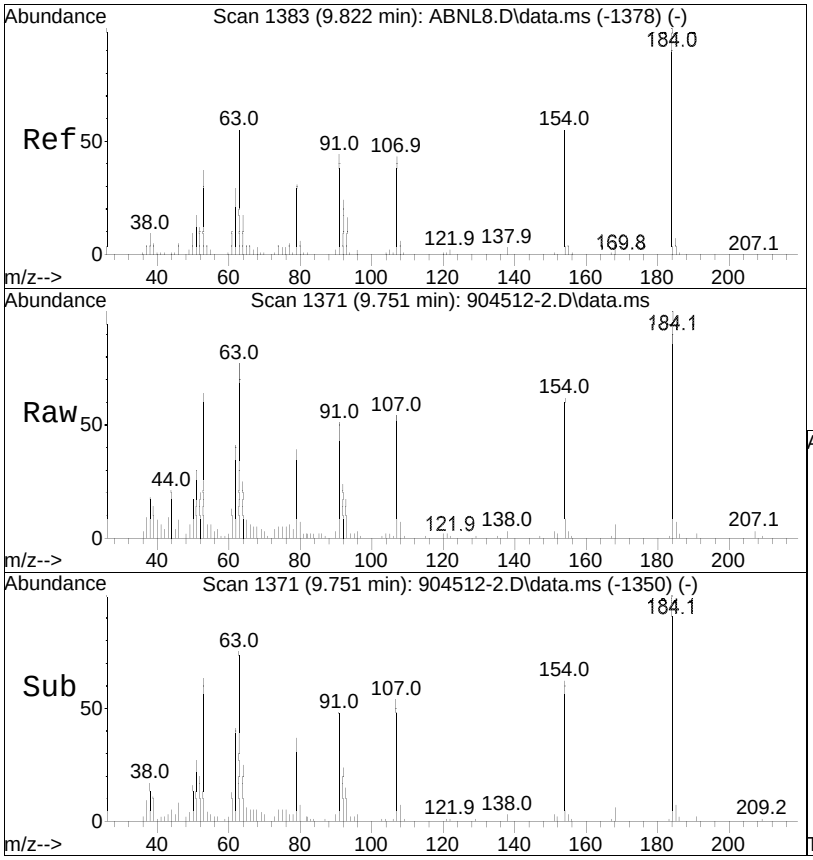


#63
3-Nitroaniline
Concen: 3.51 ug/ml
RT: 9.651 min Scan# 1354
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:138 Resp: 83246

Ion	Ratio	Lower	Upper
138	100		
92	114.3	93.4	140.2
108	9.1	9.5	14.3#

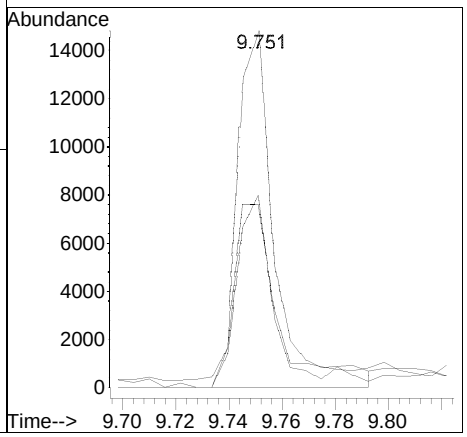


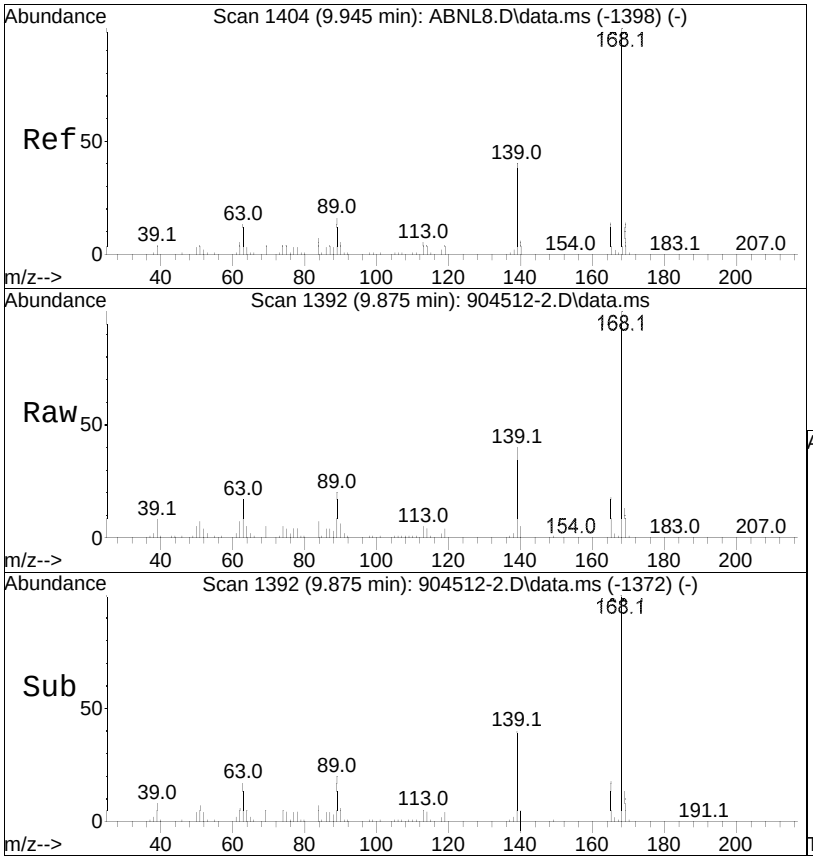


#65
2,4-Dinitrophenol
Concen: 1.85 ug/ml
RT: 9.751 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:184 Resp: 14495

Ion	Ratio	Lower	Upper
184	100		
107	50.6	37.7	56.5
91	54.3	46.3	69.5

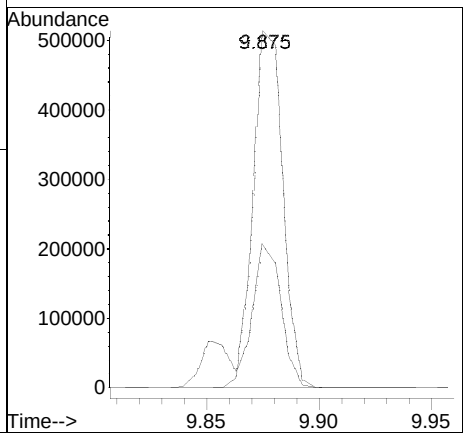


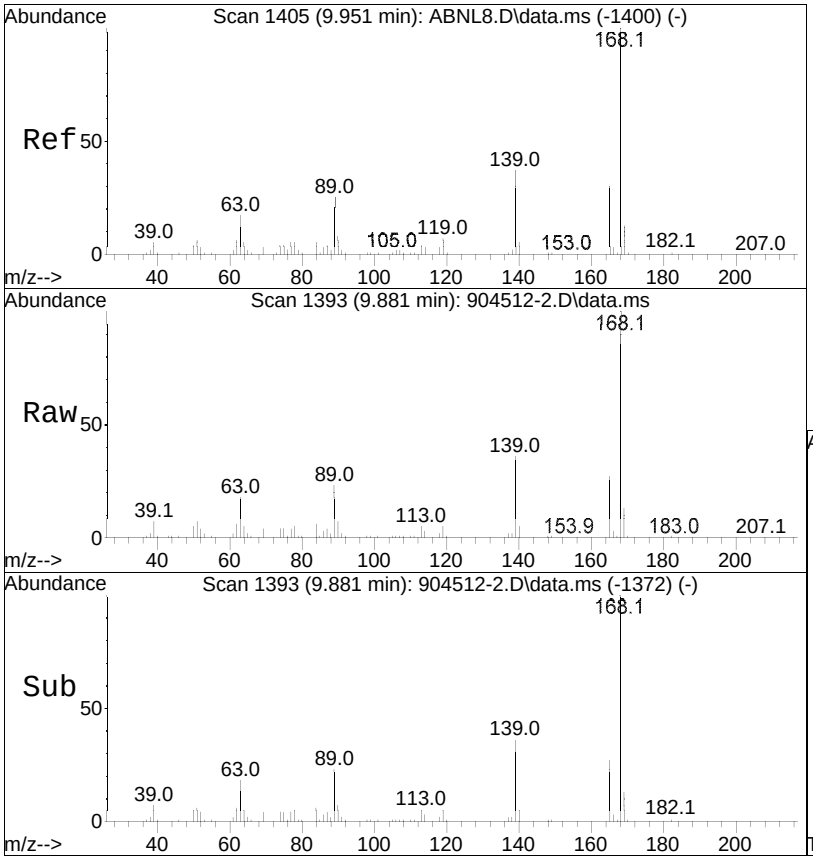


#66
Dibenzofuran
Concen: 3.23 ug/ml
RT: 9.875 min Scan# 1392
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:168 Resp: 467815

Ion	Ratio	Lower	Upper
168	100		
139	51.4	31.4	47.2#

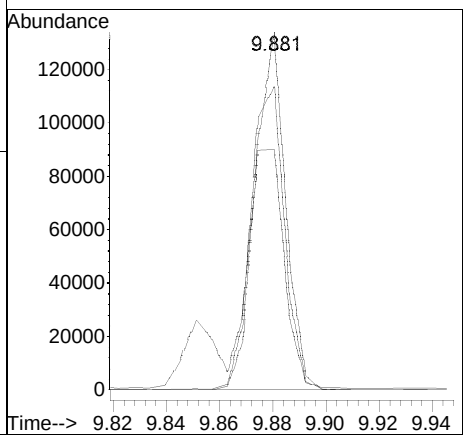


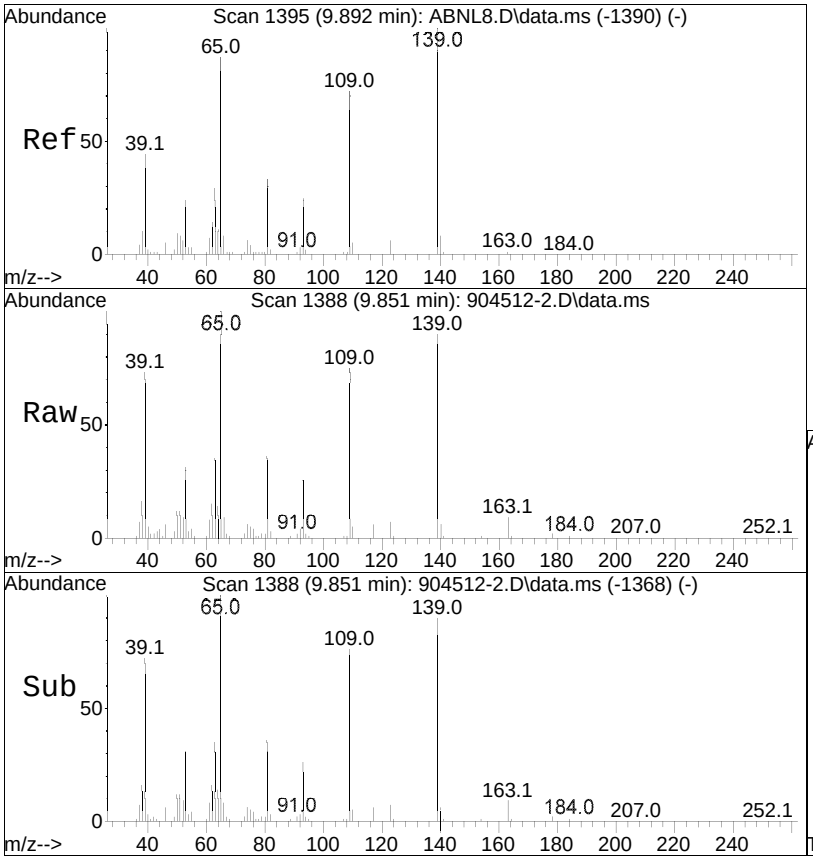


#67
2,4-Dinitrotoluene
Concen: 3.44 ug/ml
RT: 9.881 min Scan# 1393
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:165 Resp: 105363

Ion	Ratio	Lower	Upper
165	100		
89	94.3	72.0	108.0
63	78.6	52.7	79.1

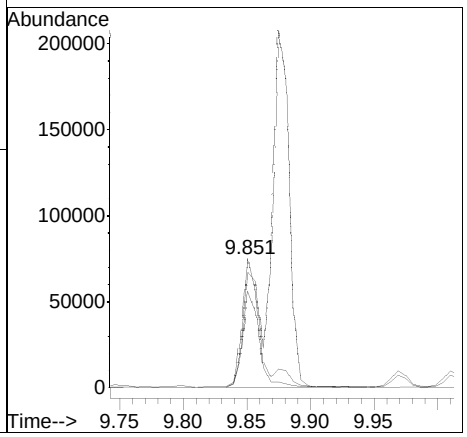


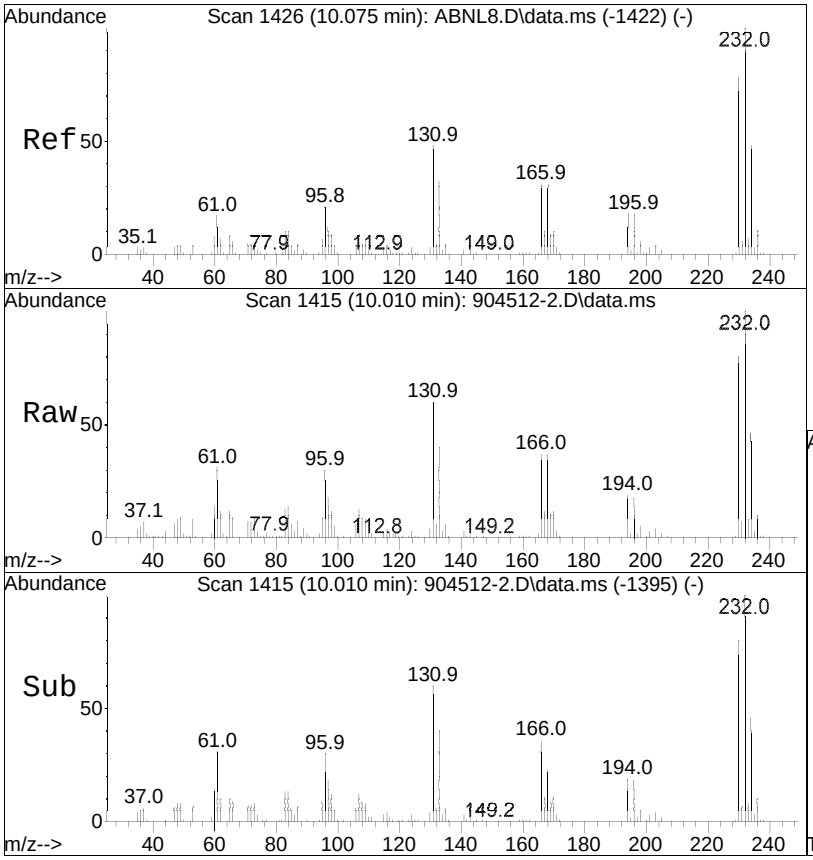


#68
4-Nitrophenol
Concen: 3.78 ug/ml
RT: 9.851 min Scan# 1388
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion: 65 Resp: 75475

Ion	Ratio	Lower	Upper
65	100		
109	66.9	47.4	71.2
139	318.8	76.6	115.0#

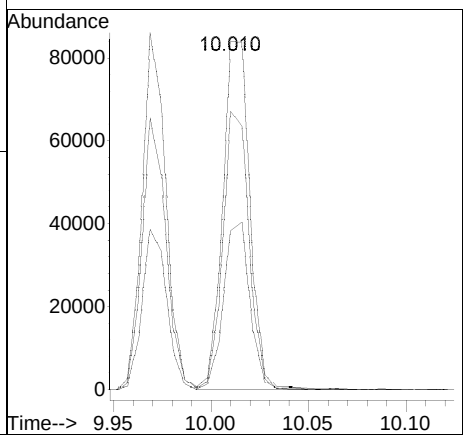


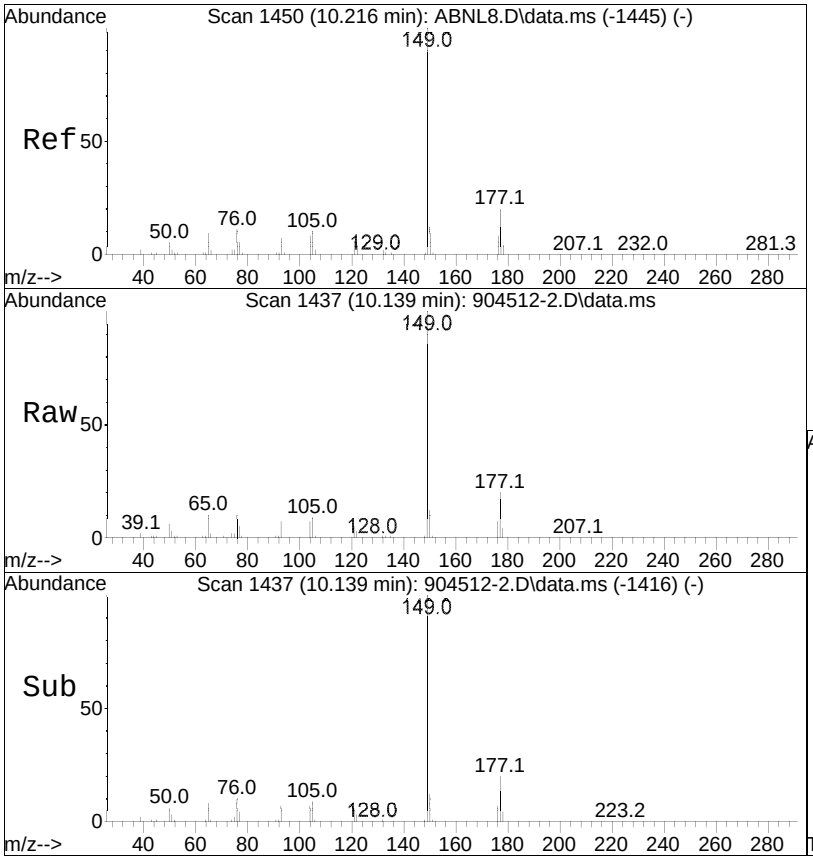


#70
2,3,4,6-Tetrachlorophenol
Concen: 3.26 ug/ml
RT: 10.010 min Scan# 1415
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:232 Resp: 81902

Ion	Ratio	Lower	Upper
232	100		
230	76.0	61.8	92.8
234	46.9	36.2	54.2

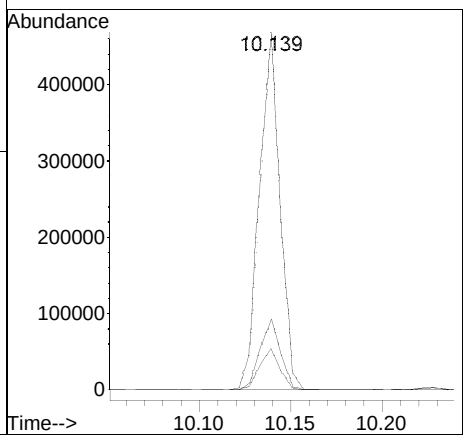


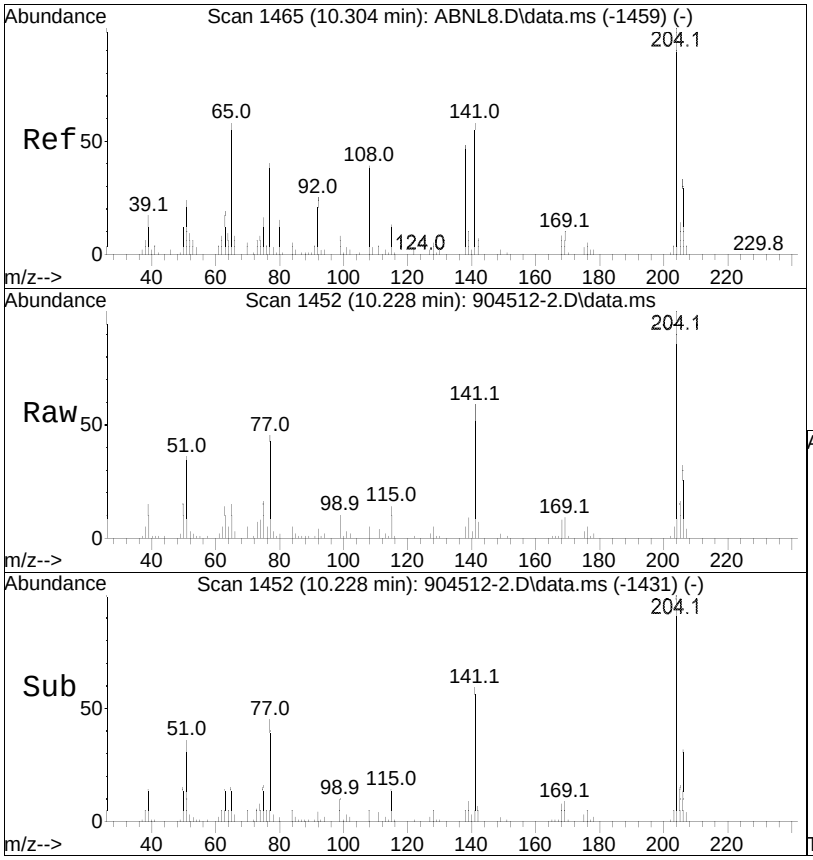


#71
Diethyl phthalate
Concen: 3.53 ug/ml
RT: 10.139 min Scan# 1437
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:149 Resp: 359881

Ion	Ratio	Lower	Upper
149	100		
177	20.1	16.1	24.1
150	11.7	9.4	14.2

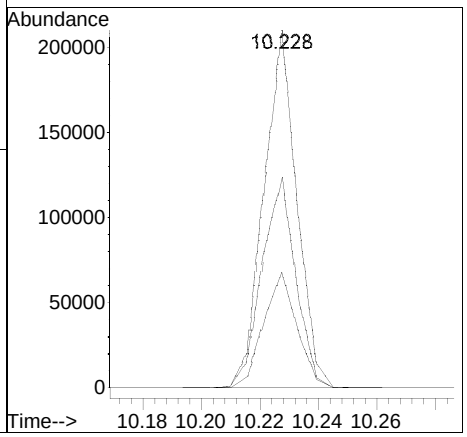


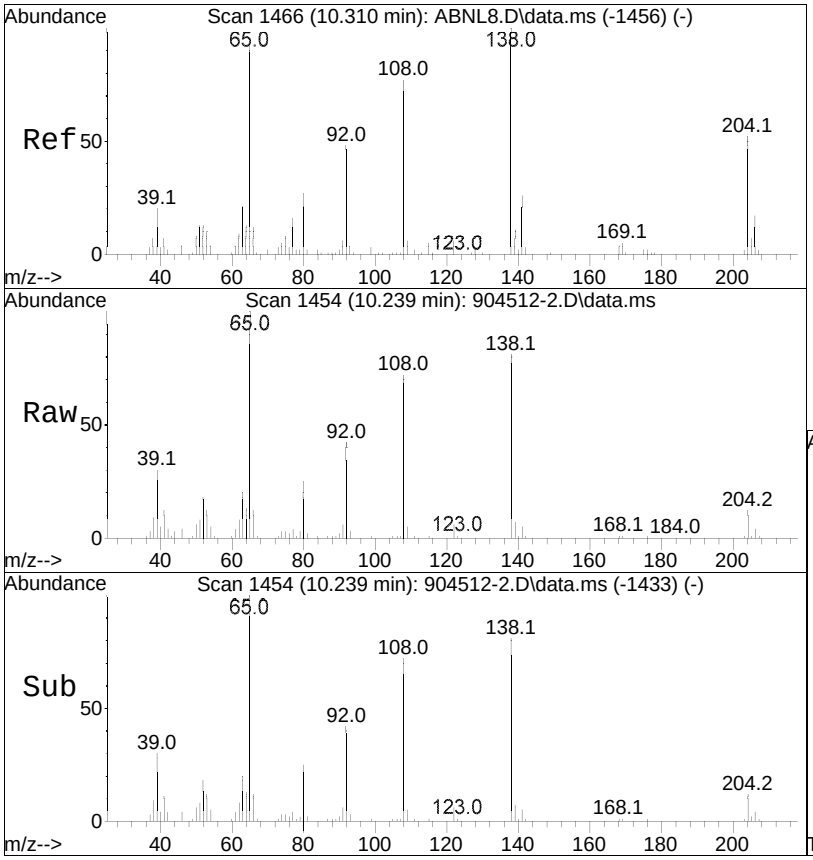


#73
4-Chlorophenyl phenyl ether
Concen: 2.90 ug/ml
RT: 10.228 min Scan# 1452
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:204 Resp: 162741

Ion	Ratio	Lower	Upper
204	100		
206	33.1	25.8	38.6
141	60.7	53.6	80.4

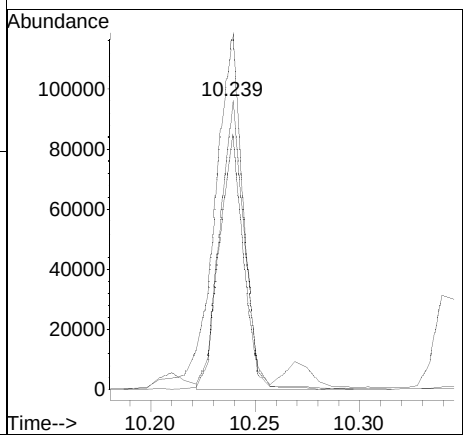


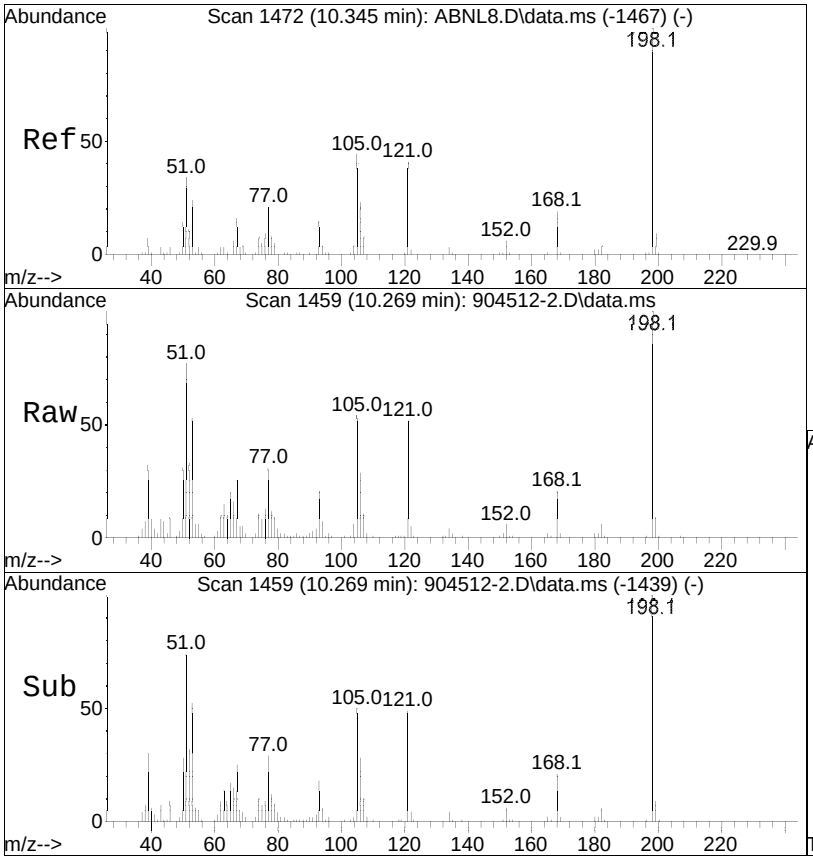


#74
4-Nitroaniline
Concen: 3.27 ug/ml
RT: 10.239 min Scan# 1454
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:138 Resp: 78109

Ion	Ratio	Lower	Upper
138	100		
108	88.6	52.1	78.1#
65	142.2	115.0	172.6

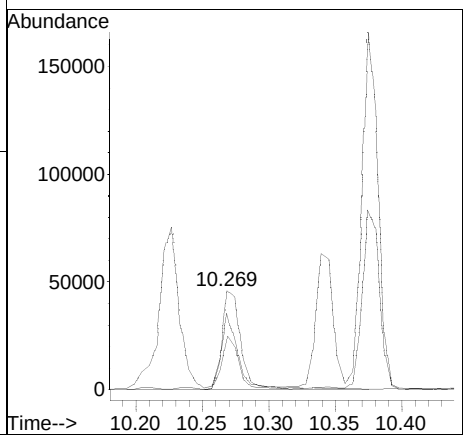


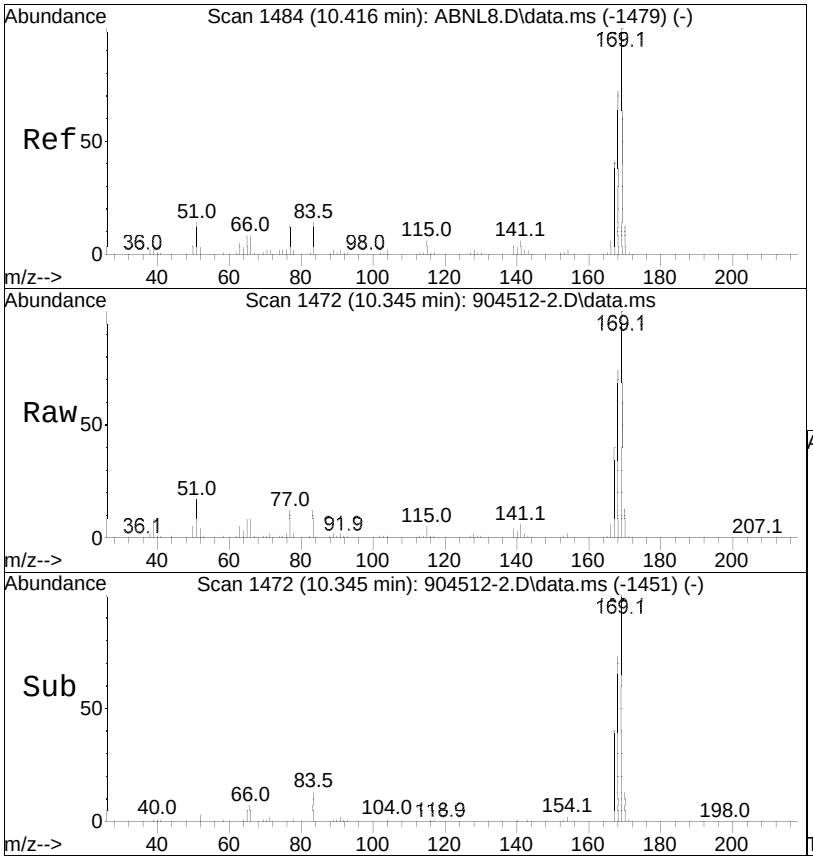


#75
4,6-Dinitro-o-cresol
Concen: 3.16 ug/ml
RT: 10.269 min Scan# 1459
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:198 Resp: 46876

Ion	Ratio	Lower	Upper
198	100		
51	60.3	76.0	114.0#
105	46.0	45.6	68.4

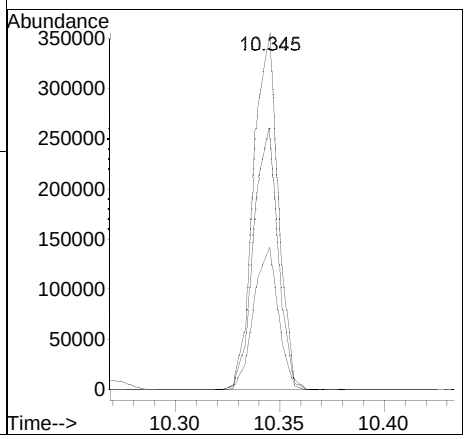


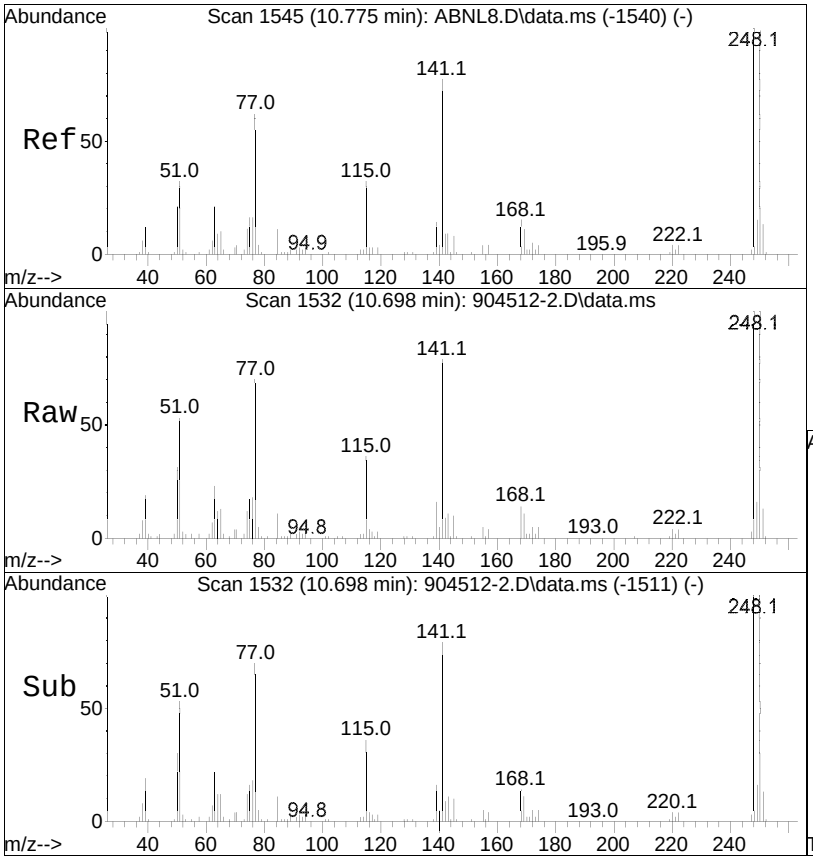


#76
NDPA/DPA
Concen: 3.35 ug/ml
RT: 10.345 min Scan# 1472
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:169 Resp: 293277

Ion	Ratio	Lower	Upper
169	100		
168	72.7	54.0	81.0
167	39.9	28.6	42.8

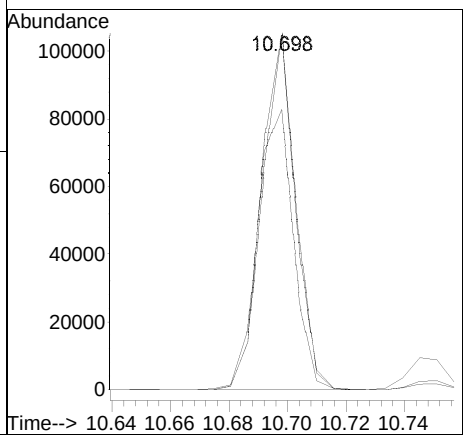


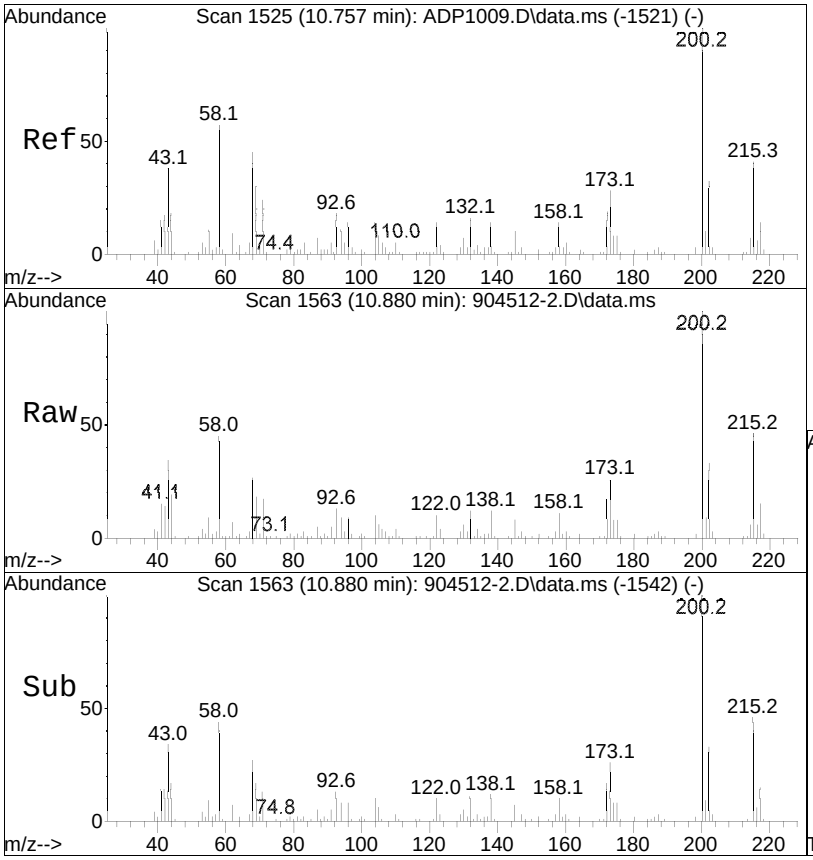


#79
4-Bromophenyl phenyl ether
Concen: 2.91 ug/ml
RT: 10.698 min Scan# 1532
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:248 Resp: 85765

Ion	Ratio	Lower	Upper
248	100		
141	83.0	76.6	114.8
250	95.8	77.3	115.9

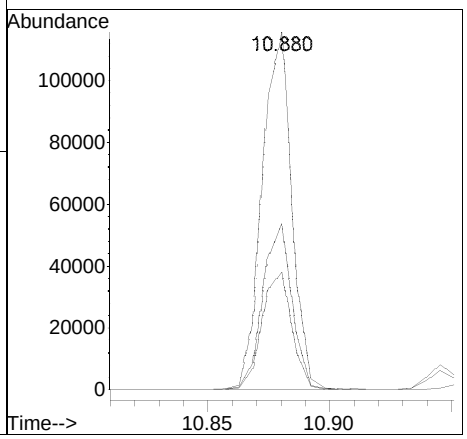


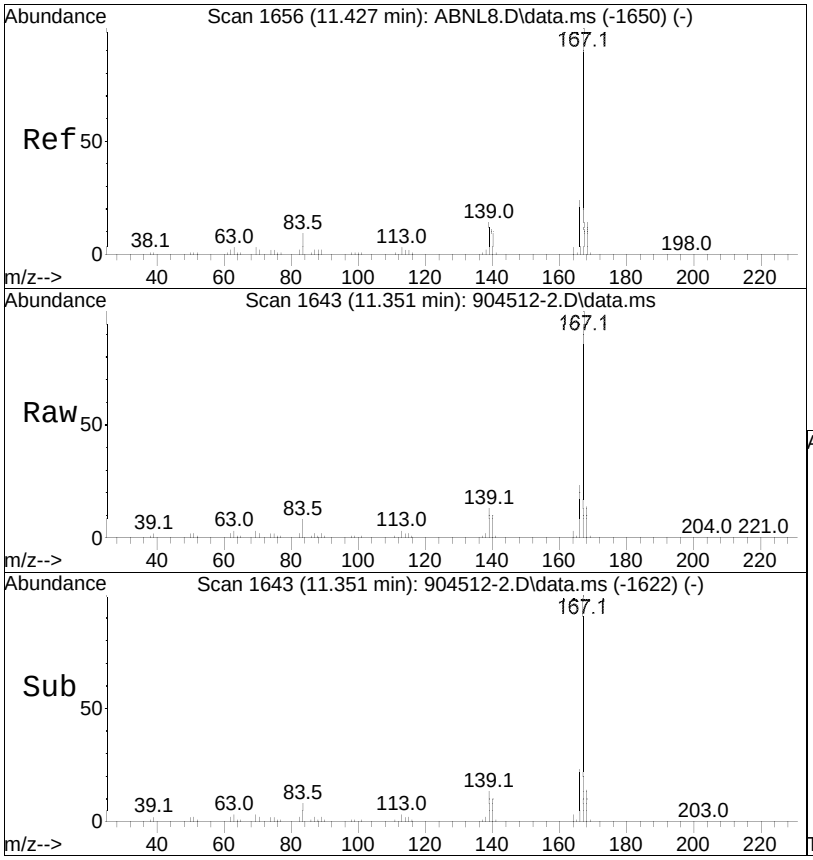


#86
Atrazine
Concen: 3.86 ug/ml
RT: 10.880 min Scan# 1563
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:200 Resp: 96679

Ion	Ratio	Lower	Upper
200	100		
202	33.2	25.8	38.6
215	45.6	40.2	60.4

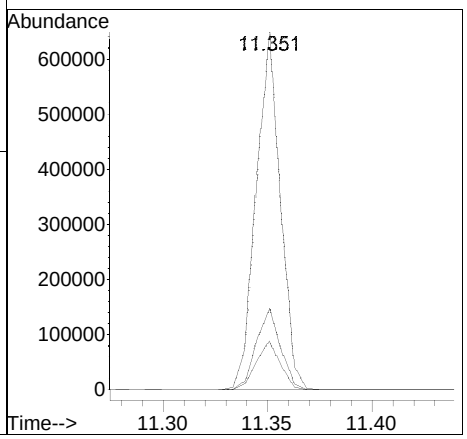


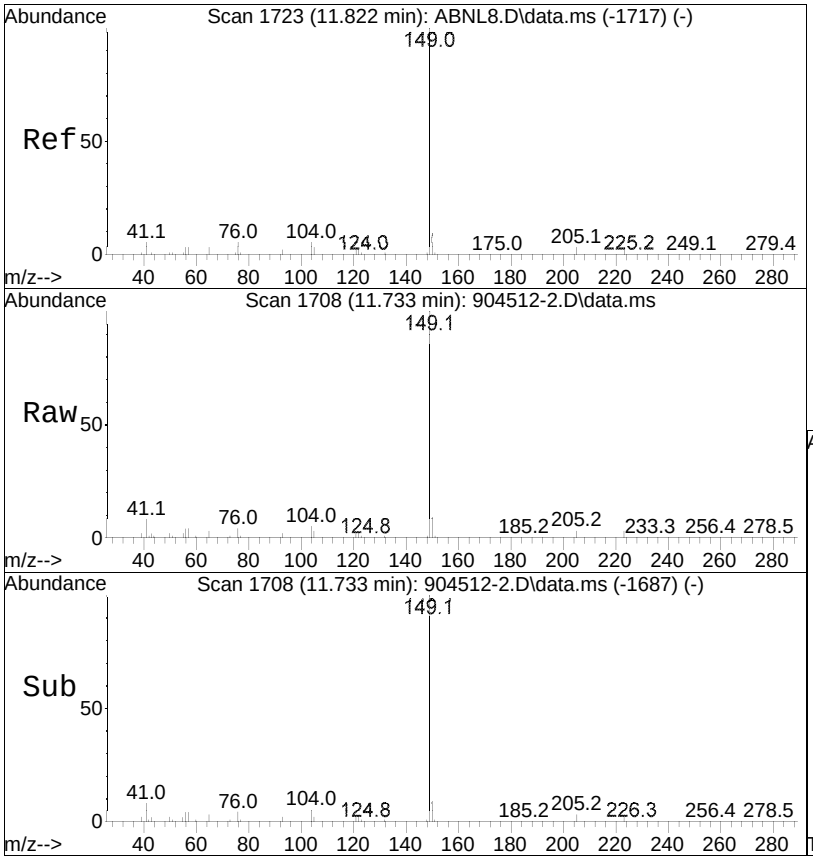


#90
Carbazole
Concen: 3.59 ug/ml
RT: 11.351 min Scan# 1643
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:167 Resp: 515960

Ion	Ratio	Lower	Upper
167	100		
168	13.8	10.6	15.8
166	23.0	17.4	26.0

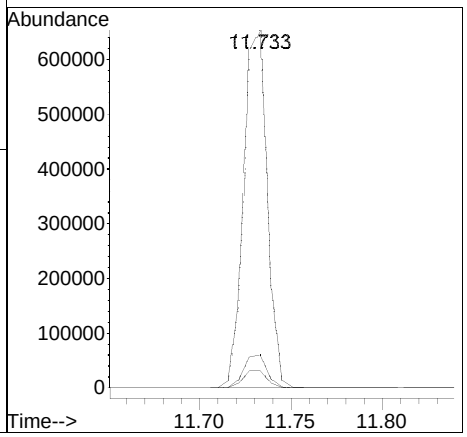


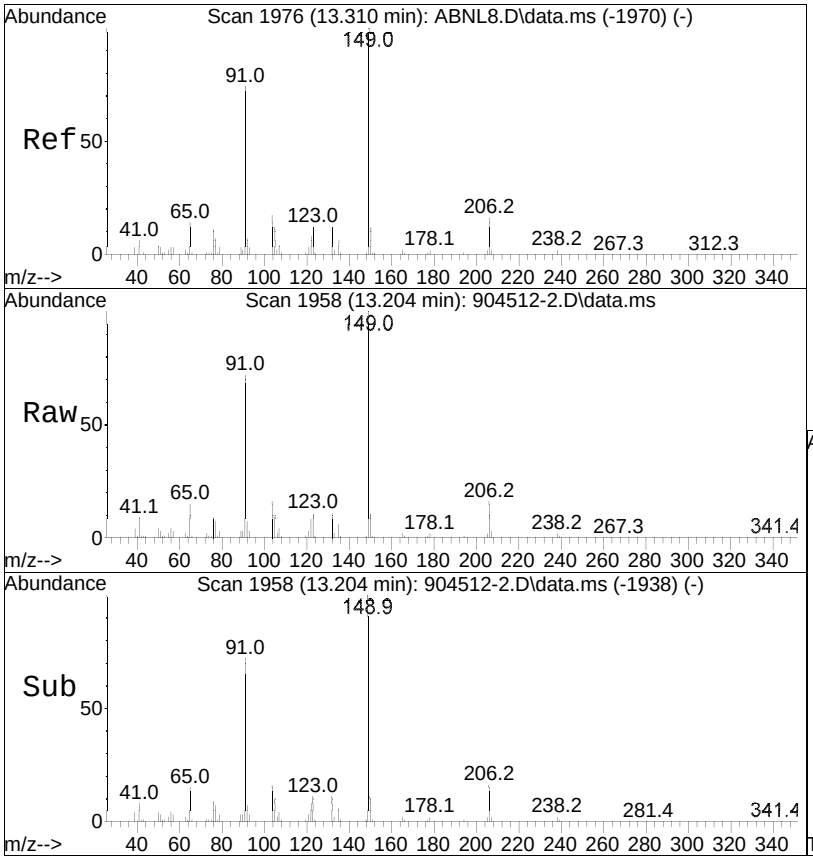


#91
Di-n-butylphthalate
Concen: 3.79 ug/ml
RT: 11.733 min Scan# 1708
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:149 Resp: 578732

Ion	Ratio	Lower	Upper
149	100		
150	9.1	7.0	10.6
104	5.0	4.5	6.7

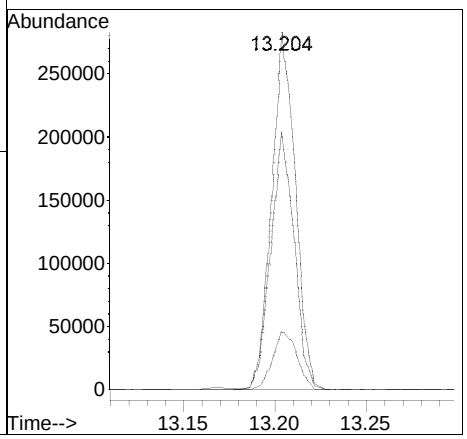


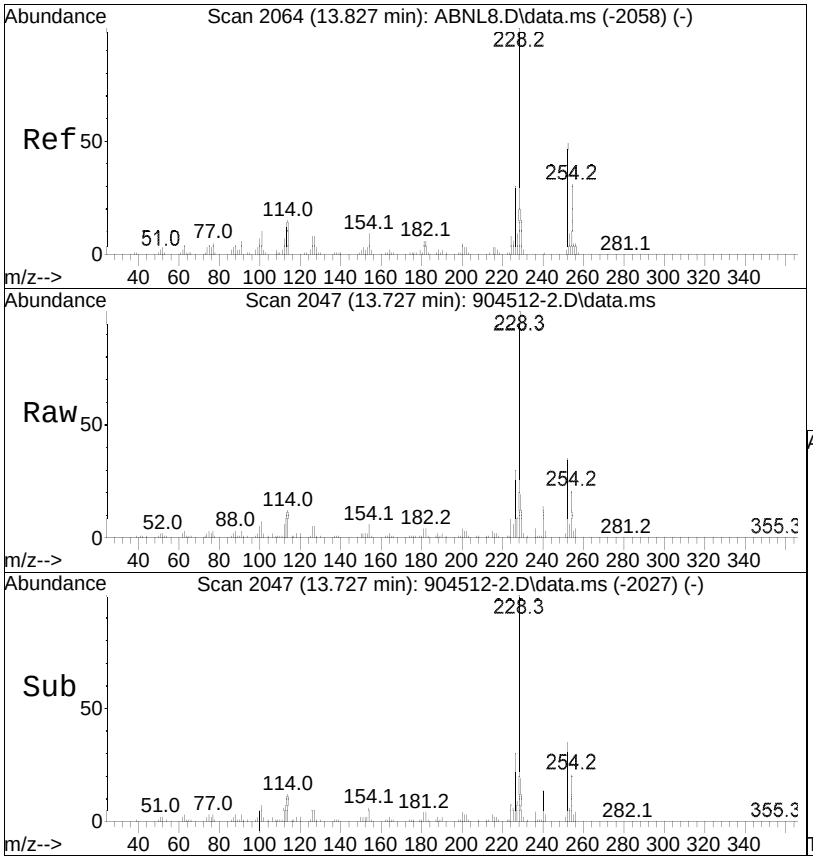


#96
Butyl benzyl phthalate
Concen: 3.80 ug/ml
RT: 13.204 min Scan# 1958
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:149 Resp: 252350

Ion	Ratio	Lower	Upper
149	100		
91	70.9	63.3	94.9
206	16.9	13.9	20.9

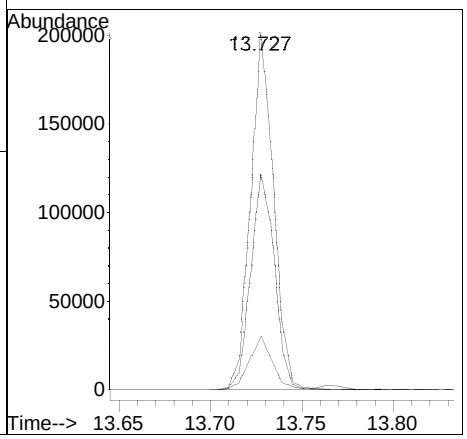


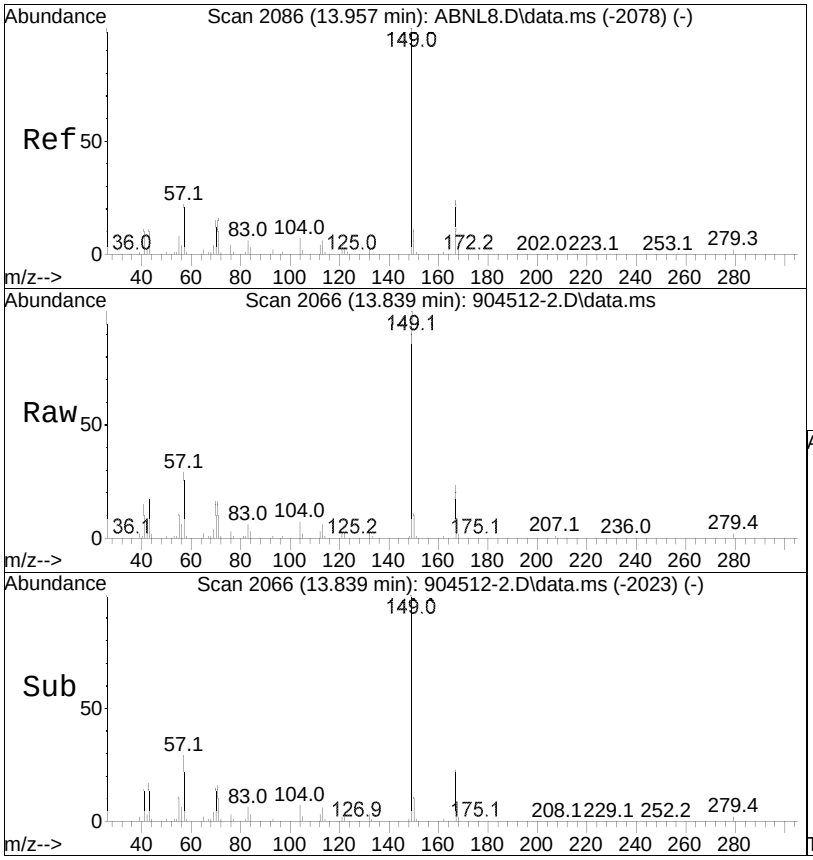


#105
3,3'-Dichlorobenzidine
Concen: 3.67 ug/ml
RT: 13.727 min Scan# 2047
Delta R.T. -0.006 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:252 Resp: 174969

Ion	Ratio	Lower	Upper
252	100		
126	15.2	14.5	21.7
254	62.7	51.2	76.8

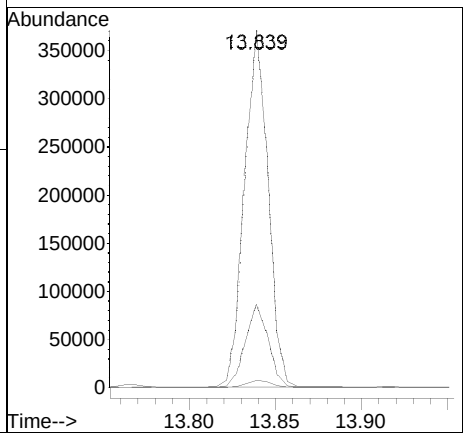


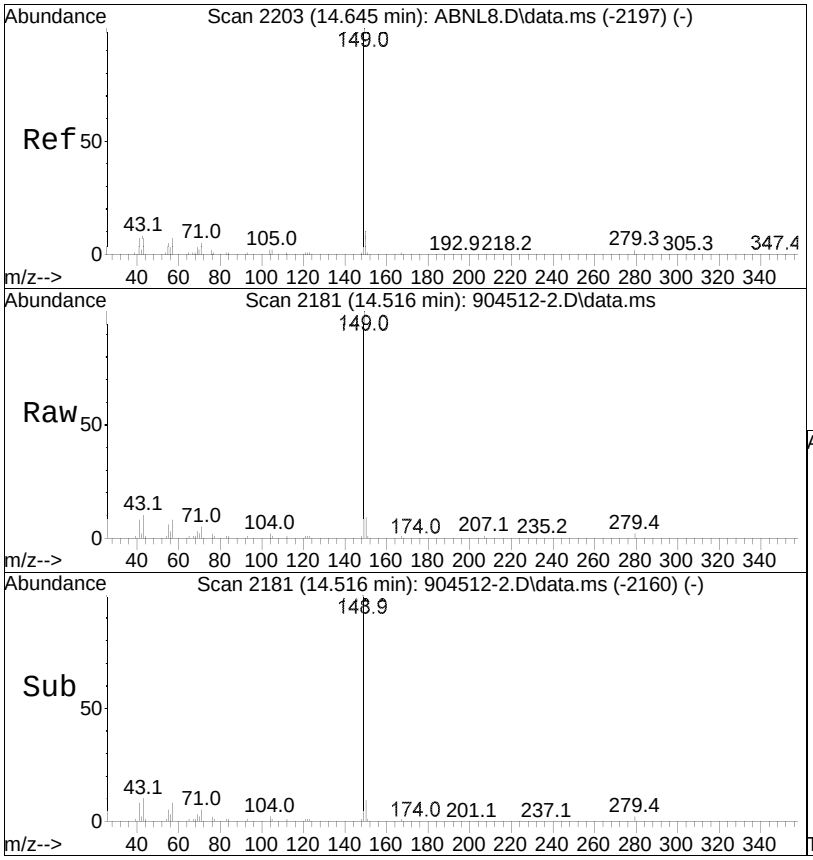


#107
Bis(2-ethylhexyl)phthalate
Concen: 4.30 ug/ml
RT: 13.839 min Scan# 2066
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:149 Resp: 350514

Ion	Ratio	Lower	Upper
149	100		
167	22.9	22.1	33.1
279	1.9	3.0	4.4#

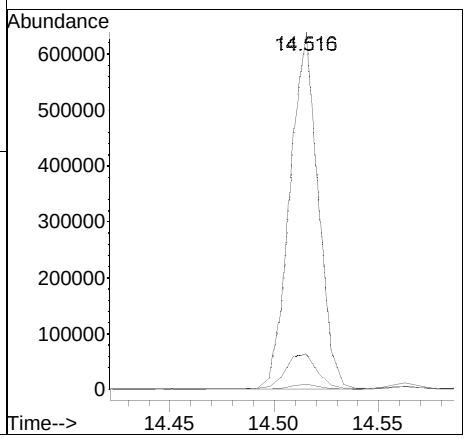




#108
Di-n-octylphthalate
Concen: 4.67 ug/ml
RT: 14.516 min Scan# 2181
Delta R.T. 0.000 min
Lab File: 904512-2.D
Acq: 4 Apr 2024 1:27 pm

Tgt Ion:149 Resp: 593726

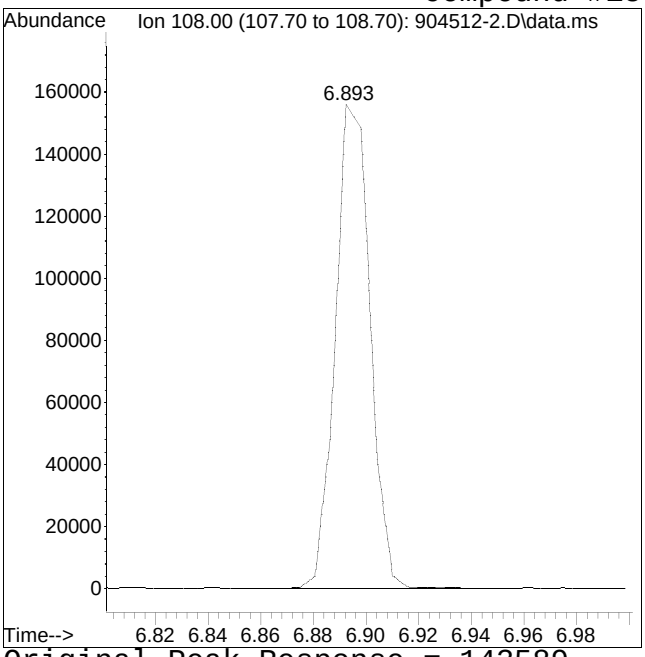
Ion	Ratio	Lower	Upper
149	100		
43	11.0	18.8	28.2#
167	1.5	1.3	1.9



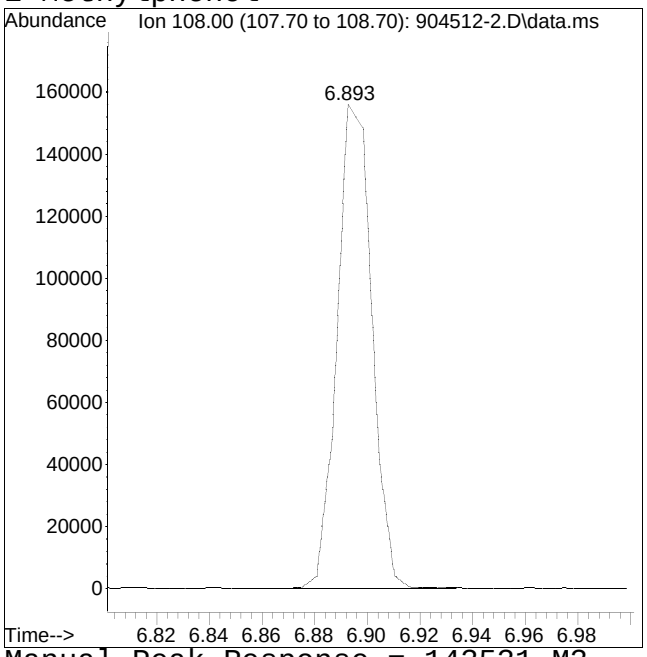
Manual Integration Report

Data Path : I:\8270\SV107\240404lvi\ QMethod : FS240211SV107RVT.m
Data File : 904512-2.D Operator : SV107:ljg
Date Inj'd : 4/4/2024 1:27 pm Instrument : SV107
Sample : WG1904510-2,32,,gmr Quant Date : 4/4/2024 5:00 pm

Compound #15: 2-Methylphenol



Original Peak Response = 143589



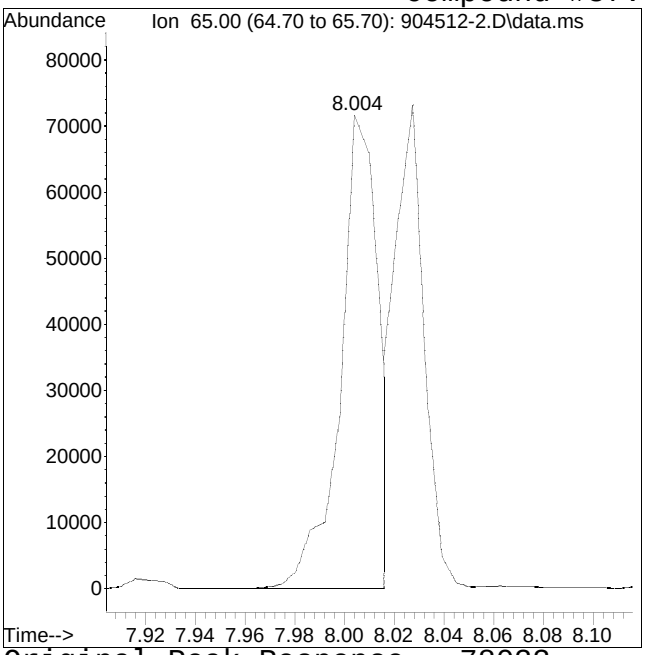
Manual Peak Response = 143531 M3

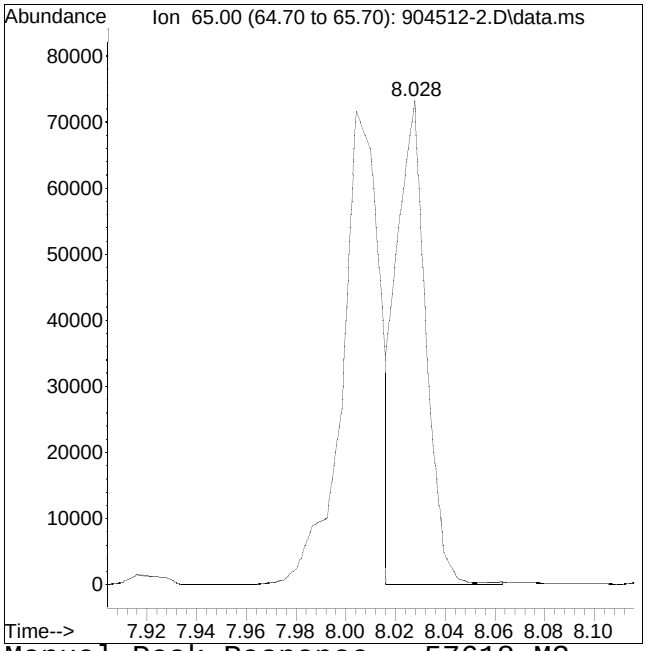
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

Data Path : I:\8270\SV107\240404lvi\ QMethod : FS240211SV107RVT.m
Data File : 904512-2.D Operator : SV107:ljg
Date Inj'd : 4/4/2024 1:27 pm Instrument : SV107
Sample : WG1904510-2,32,,gmr Quant Date : 4/4/2024 5:00 pm

Compound #37: 4-Chloroaniline





Original Peak Response = 78033 Manual Peak Response = 57618 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-3.D
Acq On : 4 Apr 2024 1:52 pm
Operator : SV107:ljg
Sample : WG1904510-3,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 17:01:19 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	158899	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 113.51%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	158899	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 93.62%			
32) IS3_1,4-Dichlorobenzen...	6.504	152	158899	4.000	ug/ml	0.00
Standard Area 2 = 155385			Recovery = 102.26%			
34) IS1_Naphthalene-d8	7.922	136	610495	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 115.42%			
54) IS2_Naphthalene-d8	7.922	136	610495	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 97.47%			
62) IS1_Acenaphthene-d10	9.675	164	346949	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 117.57%			
82) IS2_Acenaphthene-d10	9.675	164	346949	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 103.09%			
85) IS3_Acenaphthene-d10	9.675	164	346949	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 108.56%			
87) IS1_Phenanthrene-d10	11.110	188	628147	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 111.89%			
99) IS3_Phenanthrene-d10	11.110	188	628147	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 105.01%			
103) IS1_Chrysene-d12	13.739	240	503984	4.000	ug/ml	0.00
Standard Area 1 = 474982			Recovery = 106.11%			
112) IS1_Perylene-d12	15.204	264	531734	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 101.56%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.704	112	138362	2.970	ug/ml	0.02
Spiked Amount 5.000	Range 15 - 110		Recovery = 59.40%			
7) Phenol-d6	6.169	99	144510	2.446	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 48.92%			
19) Nitrobenzene-d5	7.151	82	94612	1.746	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 69.84%			
45) 2-Fluorobiphenyl	9.034	172	183830	1.309	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 52.36%			
78) 2,4,6-Tribromophenol	10.445	330	40325	3.110	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 62.20%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-3.D
Acq On : 4 Apr 2024 1:52 pm
Operator : SV107:ljg
Sample : WG1904510-3,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 17:01:19 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) 4-Terphenyl-d14	12.686	244	210217	1.520	ug/ml	0.00

Spiked Amount 2.500 Range 30 - 130 Recovery = 60.80%

Target Compounds						Qvalue
6) 2-Chlorophenol	6.263	128	166492	3.254	ug/ml	94
8) Phenol	6.187	94	157842	2.451	ug/ml	98
9) Bis(2-chloroethyl)ether	6.228	93	158599	2.967	ug/ml	97
14) Bis(2-chloroisopropyl)...	6.881	45	274144	3.799	ug/ml#	63
15) 2-Methylphenol	6.892	108	148156M3	3.286	ug/ml	
17) n-Nitrosodi-n-propylamine	7.028	70	122073	3.356	ug/ml#	93
18) 3-Methylphenol/4-Methy...	7.081	108	166956	3.422	ug/ml	96
20) Nitrobenzene	7.175	77	180527	3.253	ug/ml	98
21) Isophorone	7.451	82	334651	3.499	ug/ml	95
22) 2-Nitrophenol	7.528	139	86291	3.786	ug/ml#	94
23) 2,4-Dimethylphenol	7.639	107	135212	3.558	ug/ml	98
24) Bis(2-chloroethoxy)met...	7.722	93	203517	3.154	ug/ml	97
25) 2,4-Dichlorophenol	7.804	162	148034	3.327	ug/ml	96
28) Benzaldehyde	5.945	105	137188	3.497	ug/ml	99
29) Acetophenone	6.998	105	244545	3.673	ug/ml#	88
37) 4-Chloroaniline	8.028	65	58419	2.785	ug/ml	99
39) p-Chloro-m-cresol	8.557	107	146203	3.364	ug/ml	98
42) Hexachlorocyclopentadiene	8.834	237	53492	2.122	ug/ml	97
43) 2,4,6-Trichlorophenol	8.957	196	104401	3.036	ug/ml	98
44) 2,4,5-Trichlorophenol	8.992	196	115010	3.083	ug/ml	99
47) 2-Nitroaniline	9.245	138	100043	3.132	ug/ml	96
50) Dimethyl phthalate	9.445	163	397264	3.145	ug/ml#	98
52) 2,6-Dinitrotoluene	9.492	165	81172	3.079	ug/ml#	87
59) Caprolactam	8.339	55	43645	2.433	ug/ml#	80
60) 1,2,4,5-Tetrachloroben...	8.828	216	158570	2.587	ug/ml	98
61) Biphenyl	9.128	154	412935	3.012	ug/ml	98
63) 3-Nitroaniline	9.651	138	87684	3.340	ug/ml#	96
65) 2,4-Dinitrophenol	9.751	184	21082	2.203	ug/ml	92
66) Dibenzofuran	9.875	168	488118	3.040	ug/ml	98
67) 2,4-Dinitrotoluene	9.880	165	109703	3.247	ug/ml	95
68) 4-Nitrophenol	9.851	65	67334	3.042	ug/ml#	88
70) 2,3,4,6-Tetrachlorophenol	10.010	232	90567	3.253	ug/ml	96
71) Diethyl phthalate	10.139	149	376218	3.332	ug/ml	99

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-3.D
Acq On : 4 Apr 2024 1:52 pm
Operator : SV107:ljg
Sample : WG1904510-3,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 17:01:19 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_REV2 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
73) 4-Chlorophenyl phenyl ...	10.228	204	176586	2.841	ug/ml	91
74) 4-Nitroaniline	10.239	138	85522	3.233	ug/ml#	84
75) 4,6-Dinitro-o-cresol	10.269	198	49952	3.054	ug/ml#	71
76) NDPA/DPA	10.345	169	309814	3.199	ug/ml	95
79) 4-Bromophenyl phenyl e...	10.698	248	93965	2.880	ug/ml	92
86) Atrazine	10.880	200	99576	3.602	ug/ml	96
90) Carbazole	11.351	167	509375	3.404	ug/ml	98
91) Di-n-butylphthalate	11.727	149	615648	3.866	ug/ml	99
96) Butyl benzyl phthalate	13.204	149	263369	3.807	ug/ml	93
105) 3,3'-Dichlorobenzidine	13.727	252	175619	3.428	ug/ml	98
107) Bis(2-ethylhexyl)phtha...	13.839	149	376789	4.298	ug/ml#	92
108) Di-n-octylphthalate	14.515	149	627517	4.602	ug/ml#	76

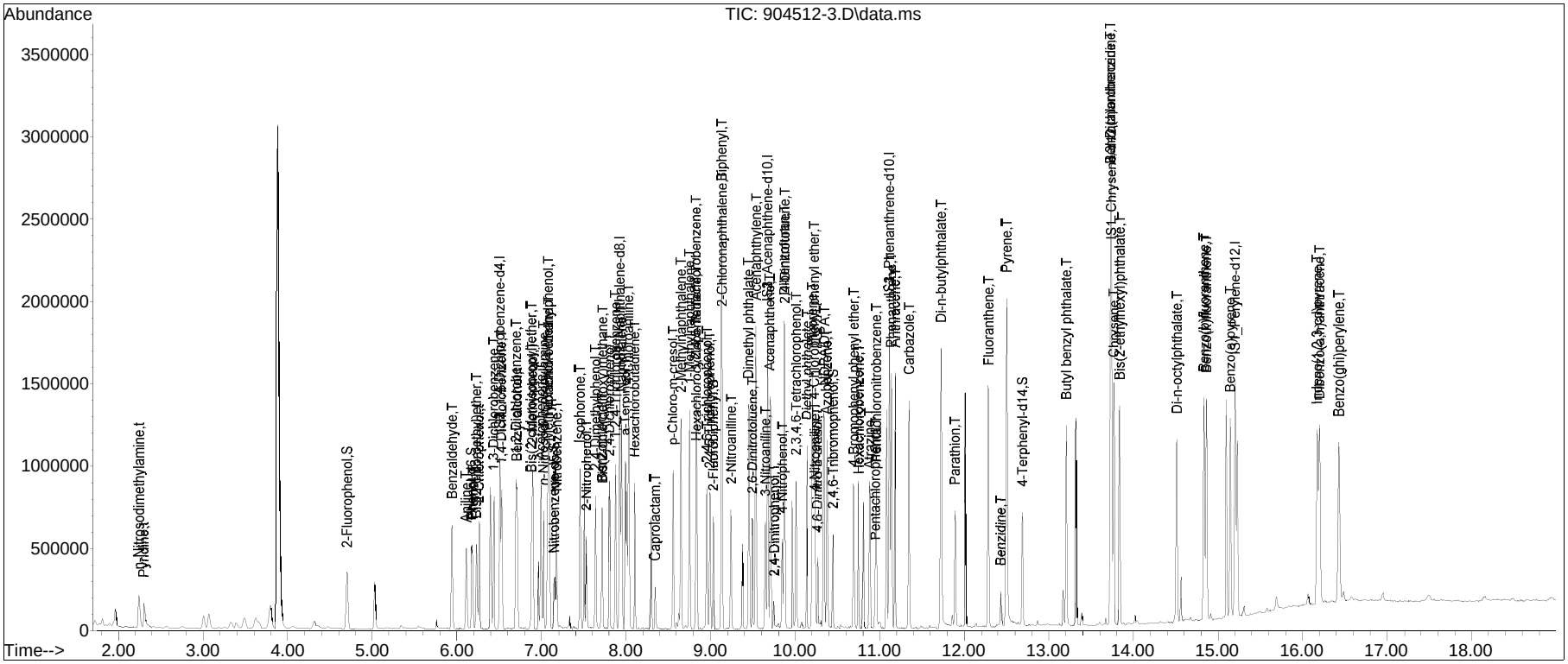
(#) = qualifier out of range (m) = manual integration (+) = signals summed

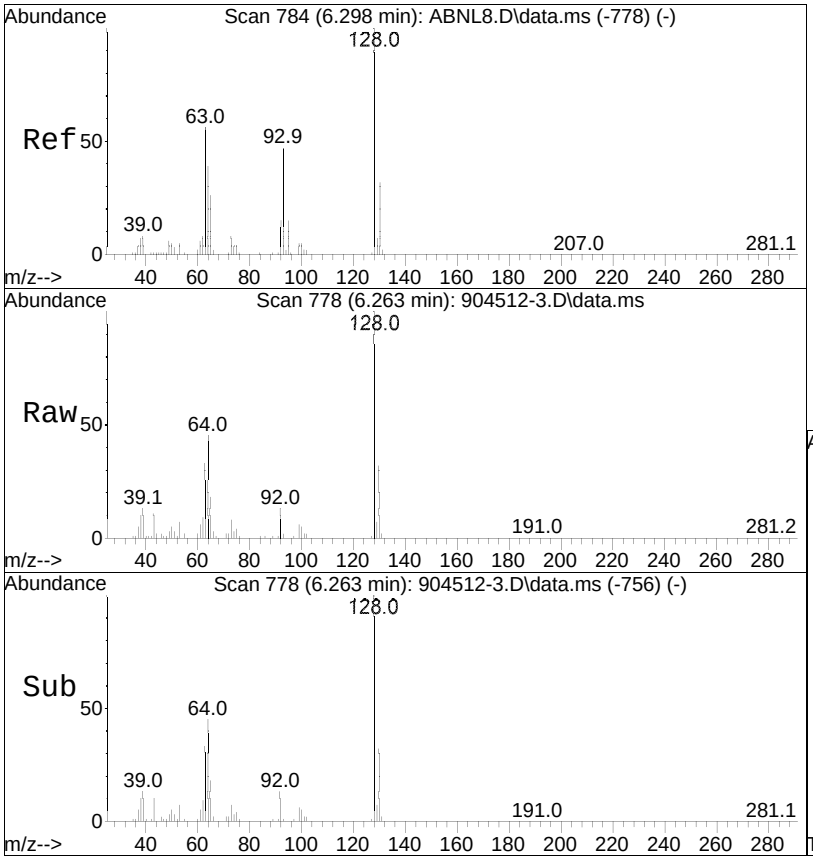
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-3.D
Acq On : 4 Apr 2024 1:52 pm
Operator : SV107:ljg
Sample : WG1904510-3,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 17:01:19 2024
Quant Method : I:\8270\SV107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 16:54:30 2024
Response via : Initial Calibration

Sub List : 8270TCL_REV2 - TCL/CT/MAlvi\AP90404.D••

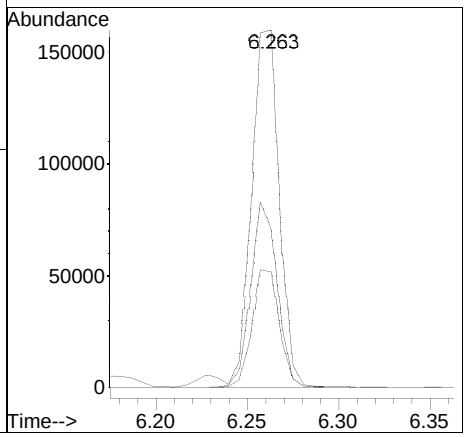


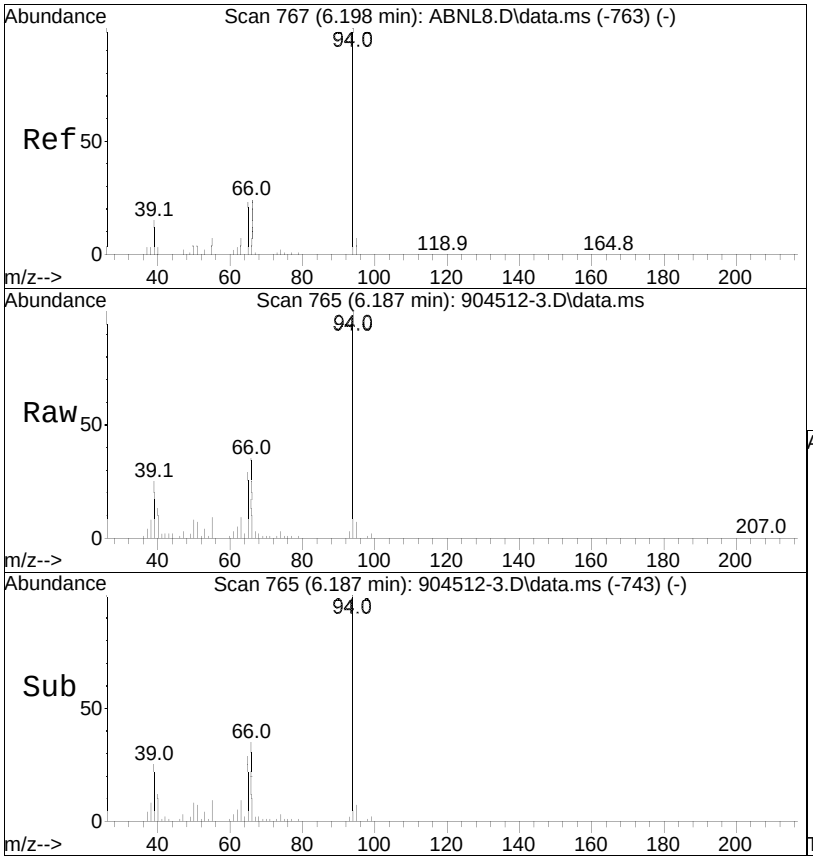


#6
2-Chlorophenol
Concen: 3.25 ug/ml
RT: 6.263 min Scan# 778
Delta R.T. 0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:128 Resp: 166492

Ion	Ratio	Lower	Upper
128	100		
64	49.3	45.1	67.7
130	32.7	26.2	39.4

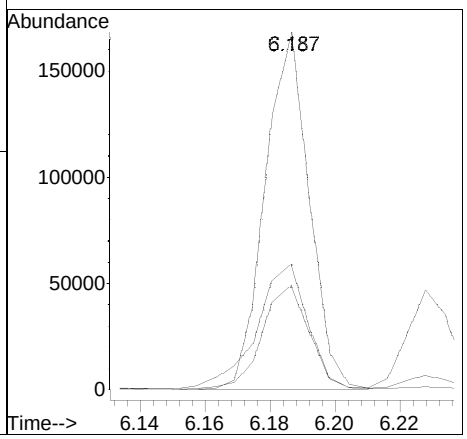


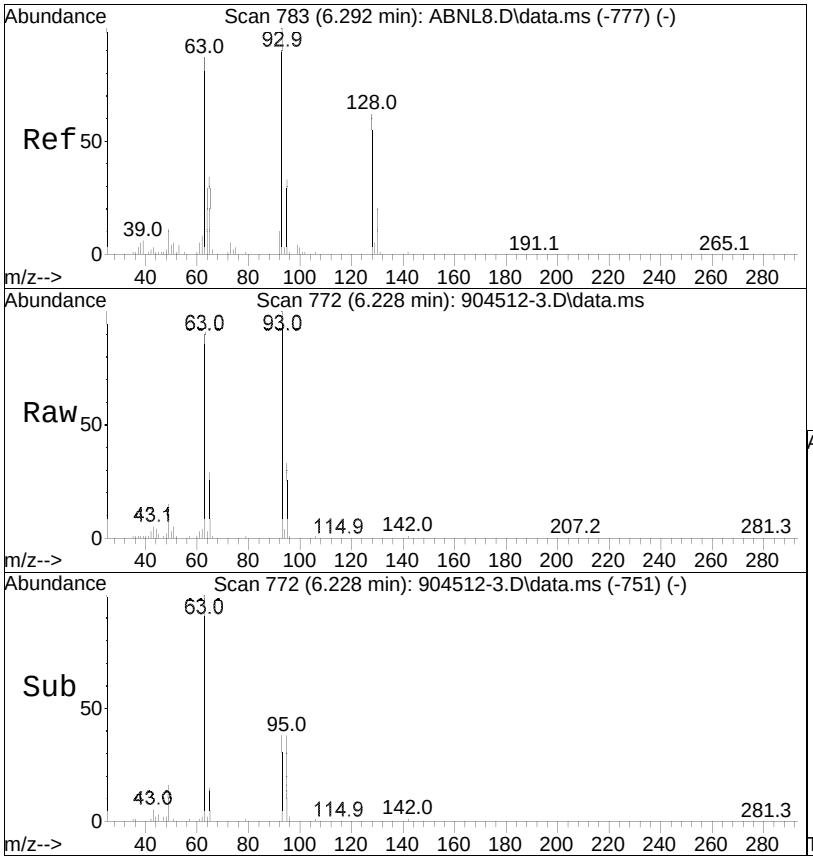


#8
Phenol
Concen: 2.45 ug/ml
RT: 6.187 min Scan# 765
Delta R.T. 0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 94 Resp: 157842

Ion	Ratio	Lower	Upper
94	100		
65	31.4	26.0	39.0
66	41.4	33.8	50.8

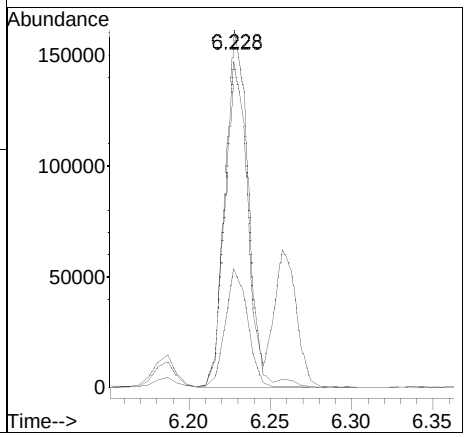


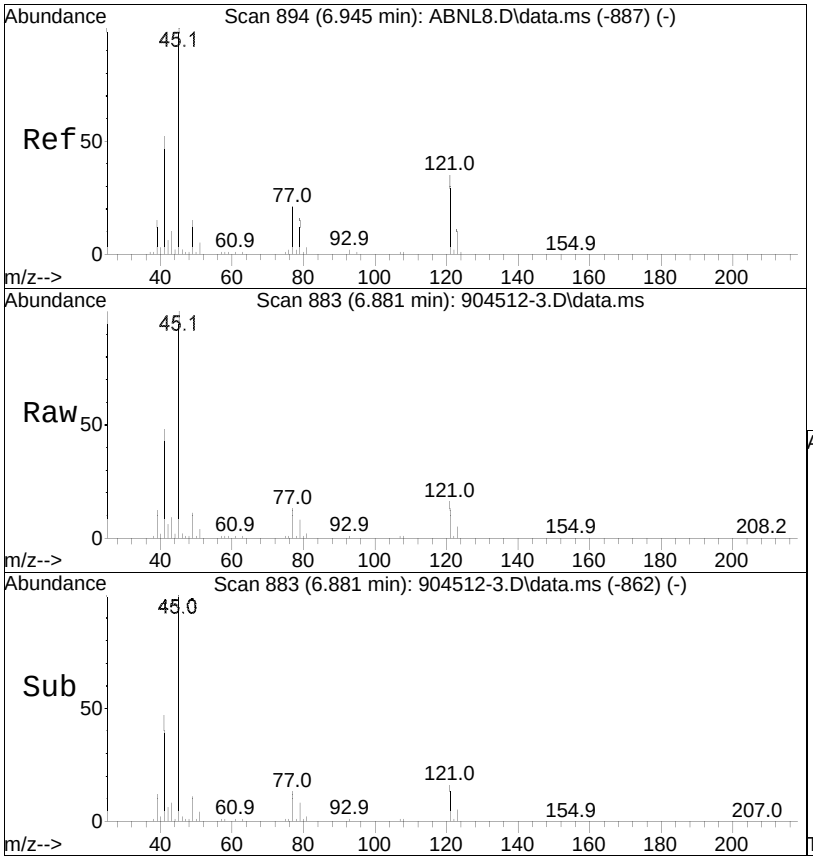


#9
Bis(2-chloroethyl)ether
Concen: 2.97 ug/ml
RT: 6.228 min Scan# 772
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 93 Resp: 158599

Ion	Ratio	Lower	Upper
93	100		
63	89.1	74.6	111.8
95	32.6	25.9	38.9

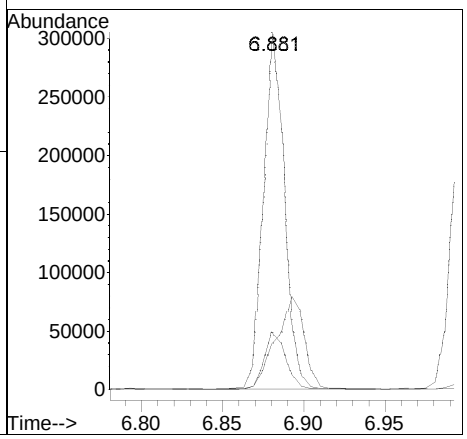


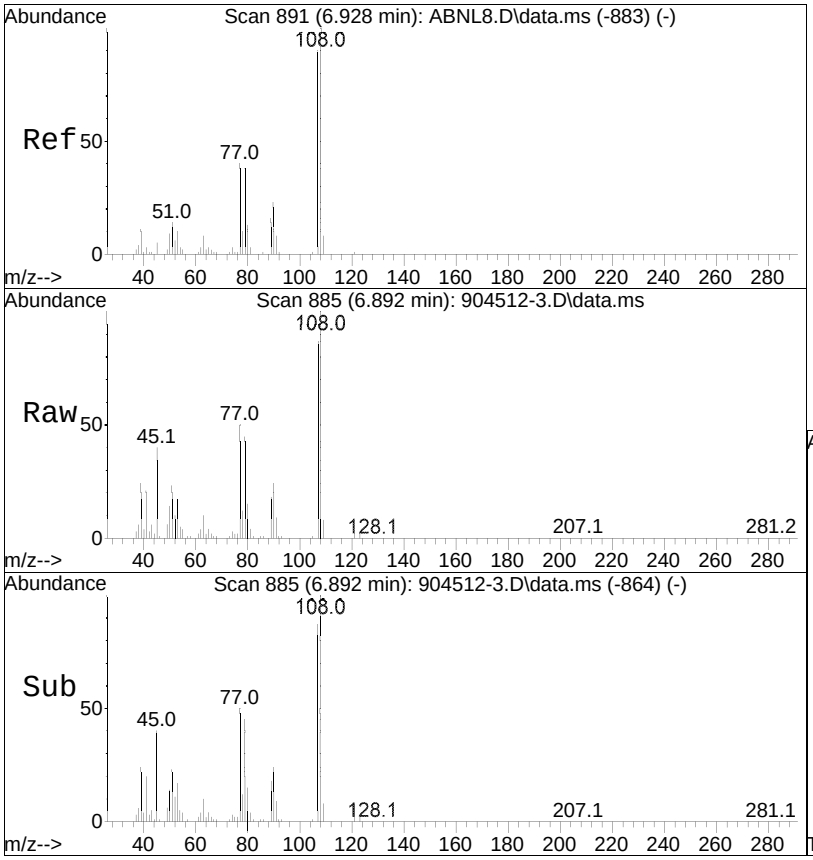


#14
Bis(2-chloroisopropyl)ether
Concen: 3.80 ug/ml
RT: 6.881 min Scan# 883
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 45 Resp: 274144

Ion	Ratio	Lower	Upper
45	100		
121	16.7	9.8	14.6#
77	35.1	6.1	9.1#

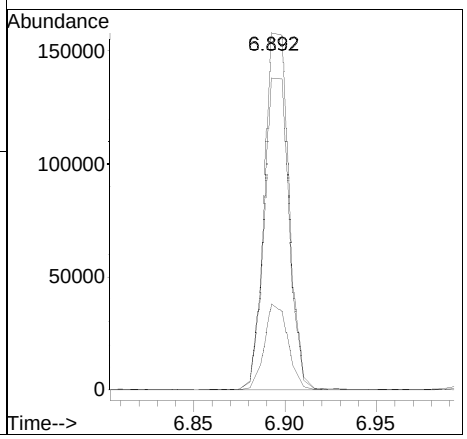


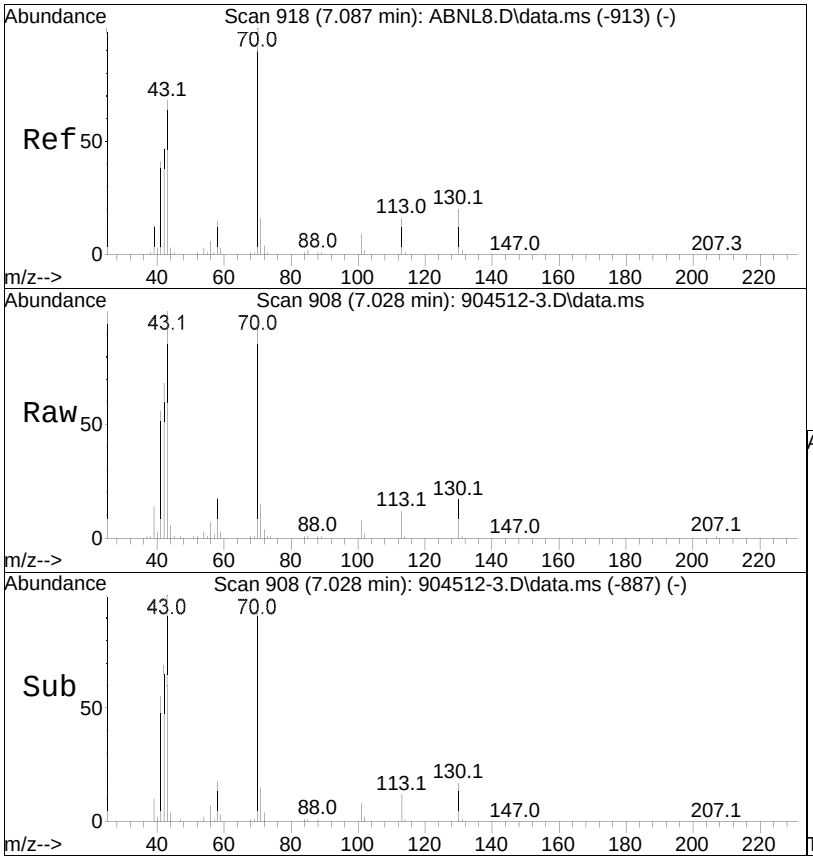


#15
2-Methylphenol
Concen: 3.29 ug/ml M3
RT: 6.892 min Scan# 885
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:108 Resp: 148156

Ion	Ratio	Lower	Upper
108	100		
107	88.2	70.7	106.1
90	23.0	18.7	28.1

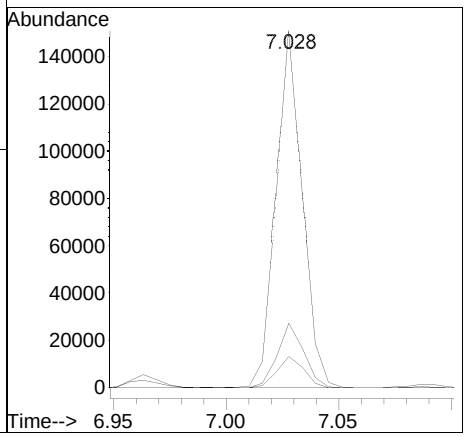


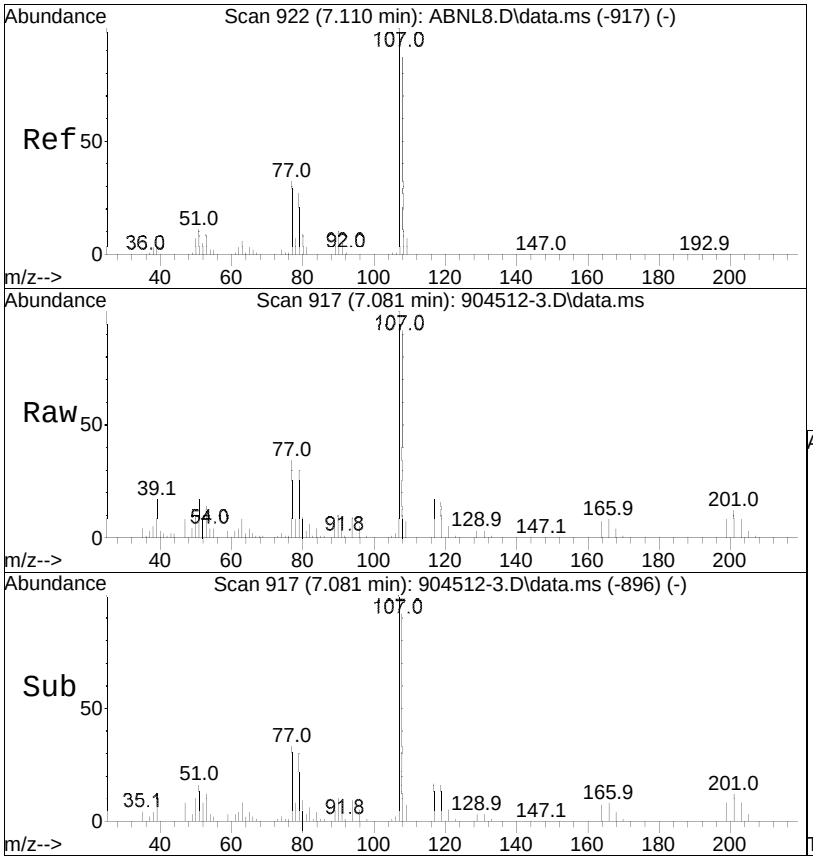


#17
n-Nitrosodi-n-propylamine
Concen: 3.36 ug/ml
RT: 7.028 min Scan# 908
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 70 Resp: 122073

Ion	Ratio	Lower	Upper
70	100		
130	18.1	18.2	27.4#
101	9.0	7.8	11.8

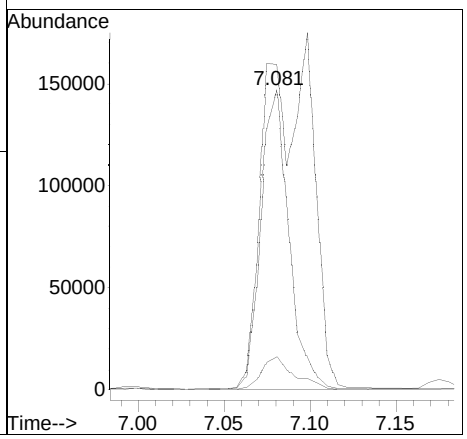


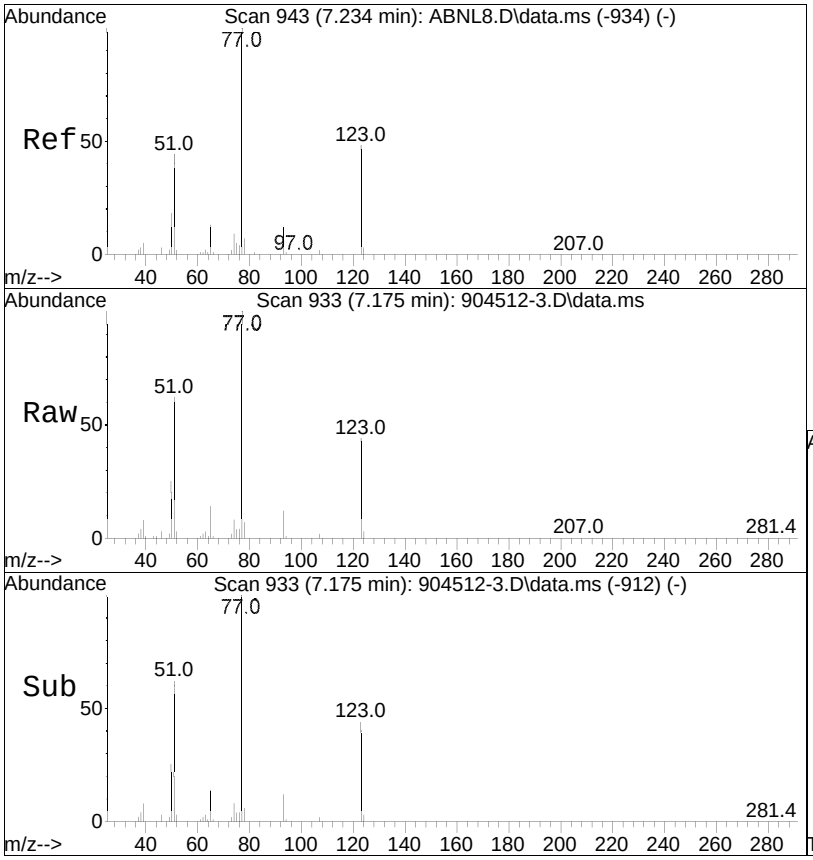


#18
3-Methylphenol/4-Methylphenol
Concen: 3.42 ug/ml
RT: 7.081 min Scan# 917
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:108 Resp: 166956

Ion	Ratio	Lower	Upper
108	100		
107	106.5	88.6	132.8
90	12.5	8.8	13.2

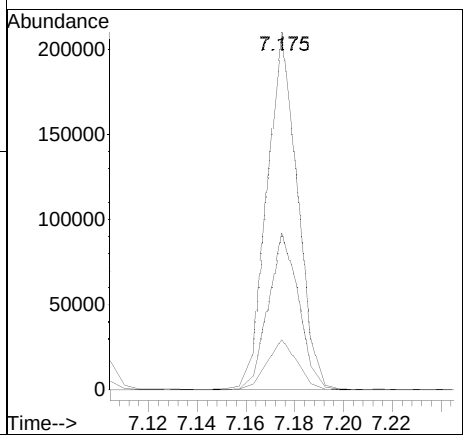


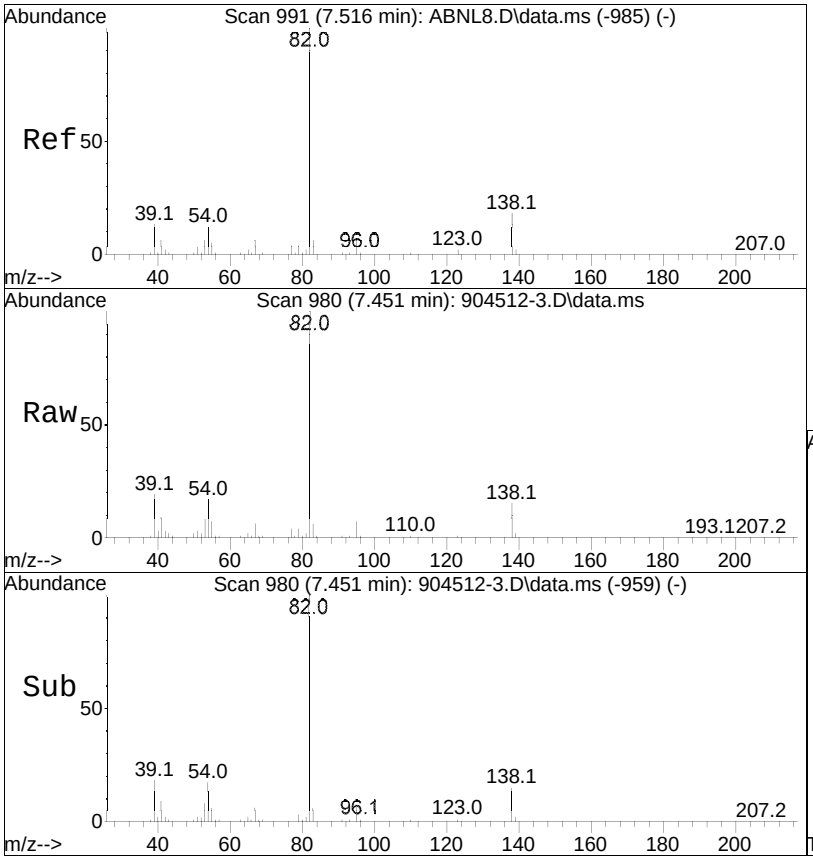


#20
Nitrobenzene
Concen: 3.25 ug/ml
RT: 7.175 min Scan# 933
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 77 Resp: 180527

Ion	Ratio	Lower	Upper
77	100		
123	44.0	36.3	54.5
65	14.1	11.6	17.4

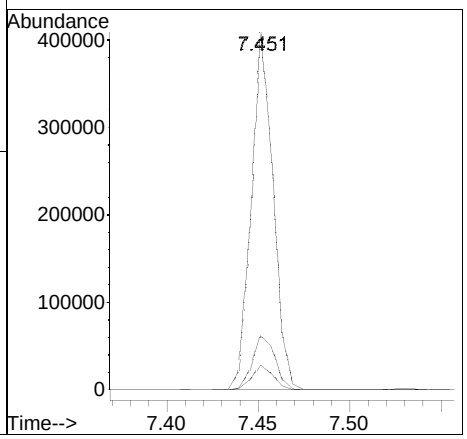


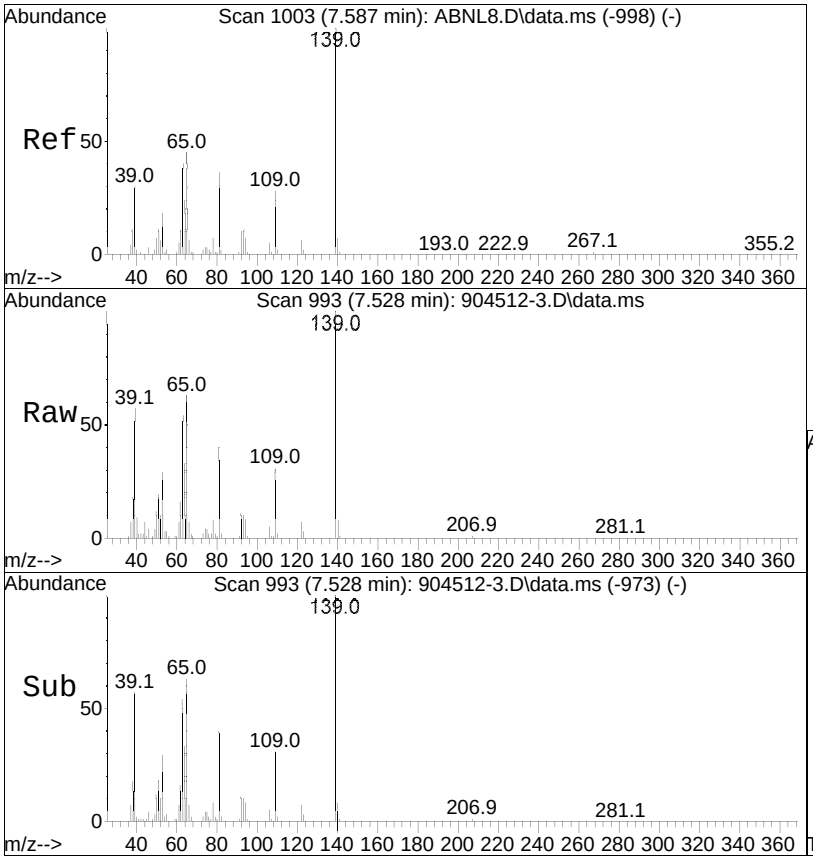


#21
Isophorone
Concen: 3.50 ug/ml
RT: 7.451 min Scan# 980
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 82 Resp: 334651

Ion	Ratio	Lower	Upper
82	100		
138	15.8	14.7	22.1
95	6.9	5.2	7.8

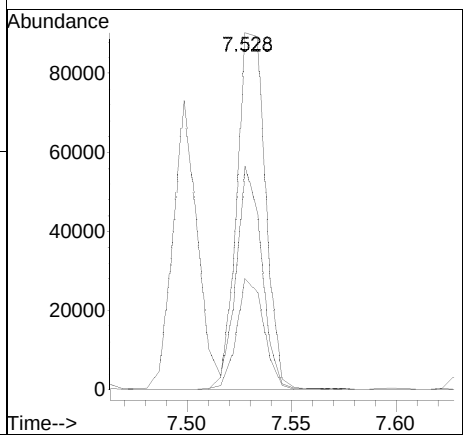


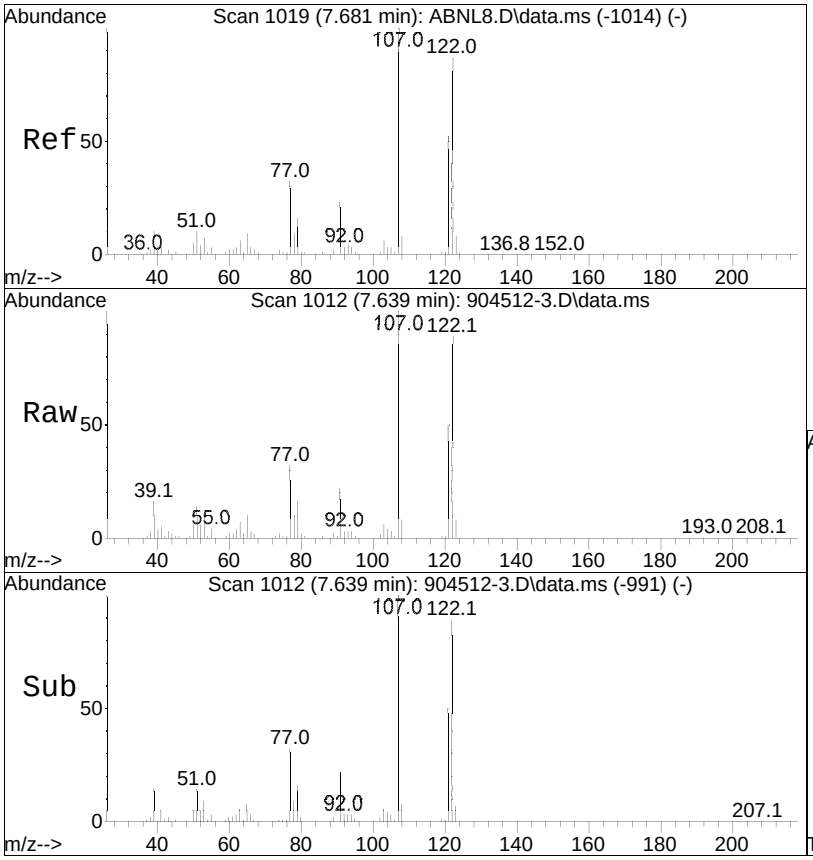


#22
2-Nitrophenol
Concen: 3.79 ug/ml
RT: 7.528 min Scan# 993
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:139 Resp: 86291

Ion	Ratio	Lower	Upper
139	100		
109	29.7	19.4	29.0#
65	55.2	46.1	69.1

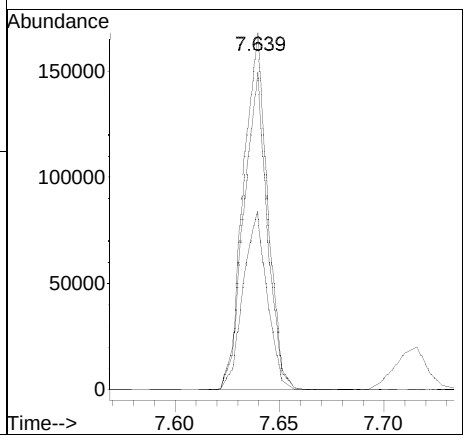


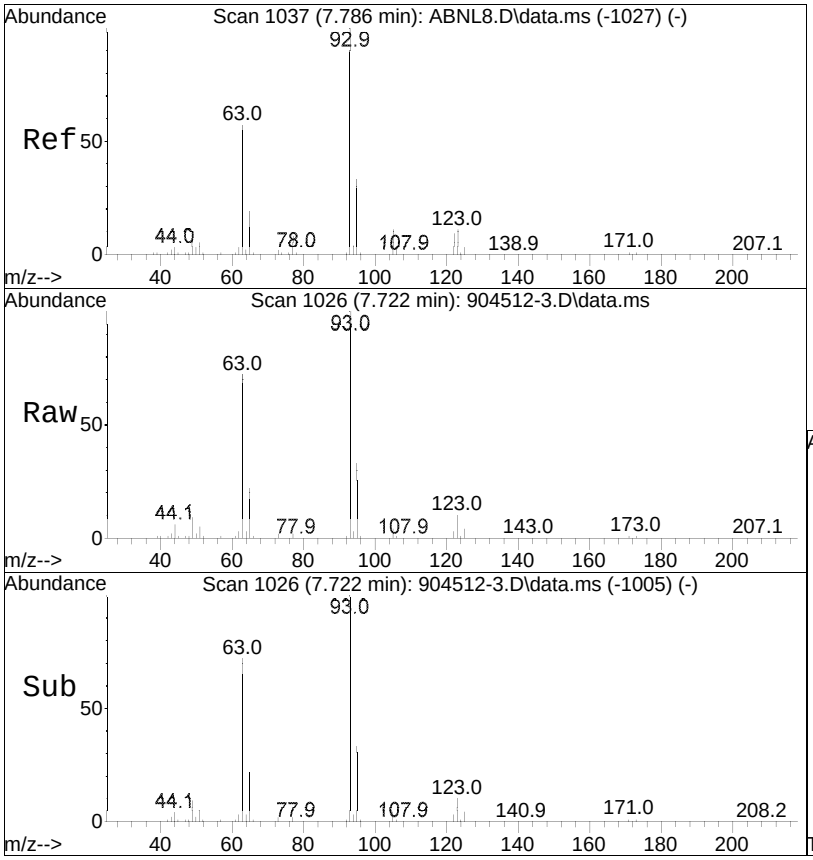


#23
2,4-Dimethylphenol
Concen: 3.56 ug/ml
RT: 7.639 min Scan# 1012
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:107 Resp: 135212

Ion	Ratio	Lower	Upper
107	100		
121	49.7	40.0	60.0
122	85.8	70.2	105.4

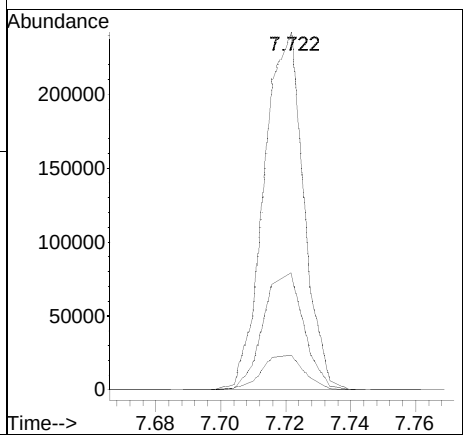


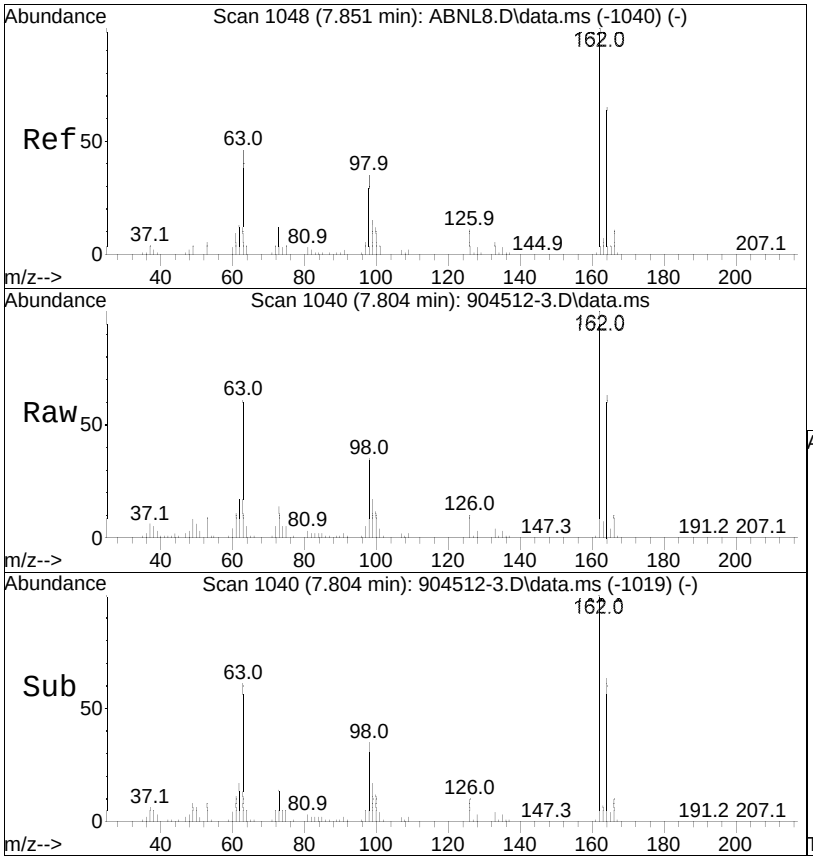


#24
Bis(2-chloroethoxy)methane
Concen: 3.15 ug/ml
RT: 7.722 min Scan# 1026
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 93 Resp: 203517

Ion	Ratio	Lower	Upper
93	100		
95	33.7	25.8	38.8
123	10.5	10.1	15.1

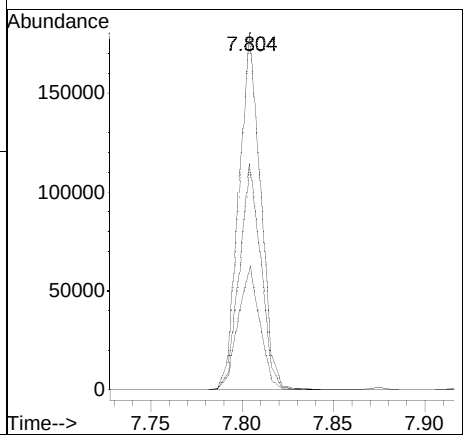


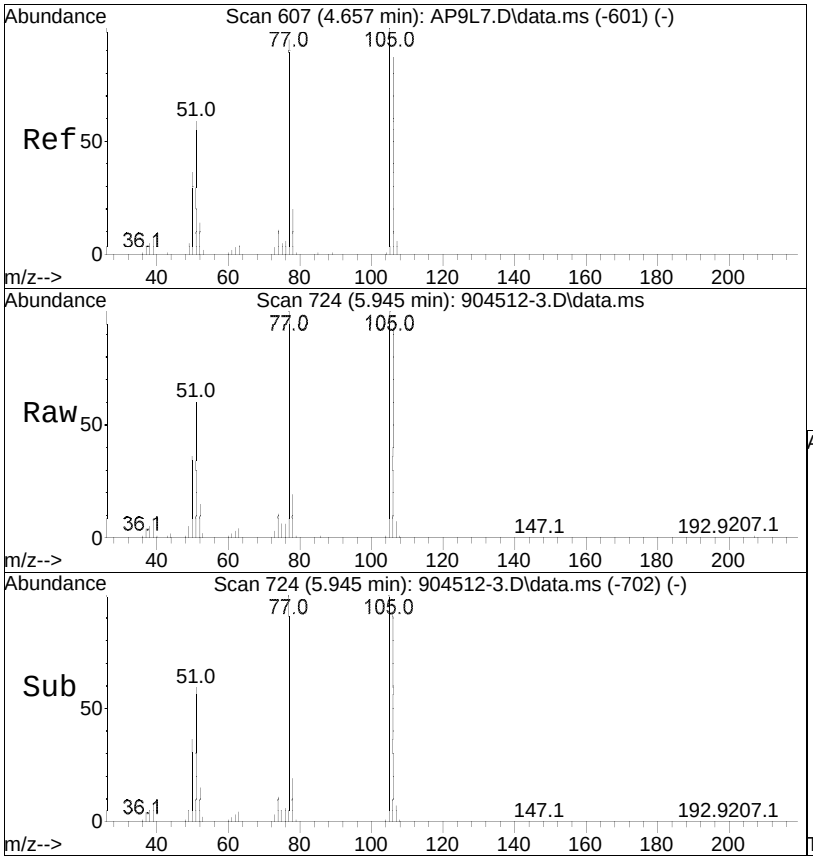


#25
2,4-Dichlorophenol
Concen: 3.33 ug/ml
RT: 7.804 min Scan# 1040
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:162 Resp: 148034

Ion	Ratio	Lower	Upper
162	100		
164	62.4	51.0	76.4
98	34.9	32.2	48.2

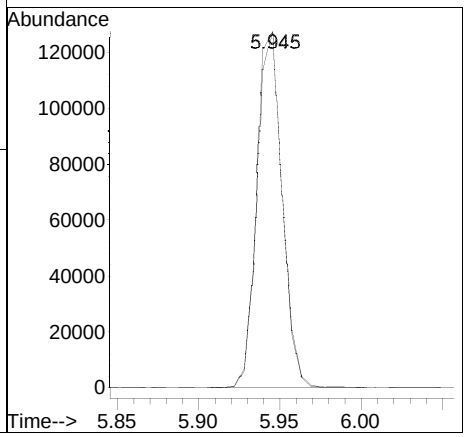


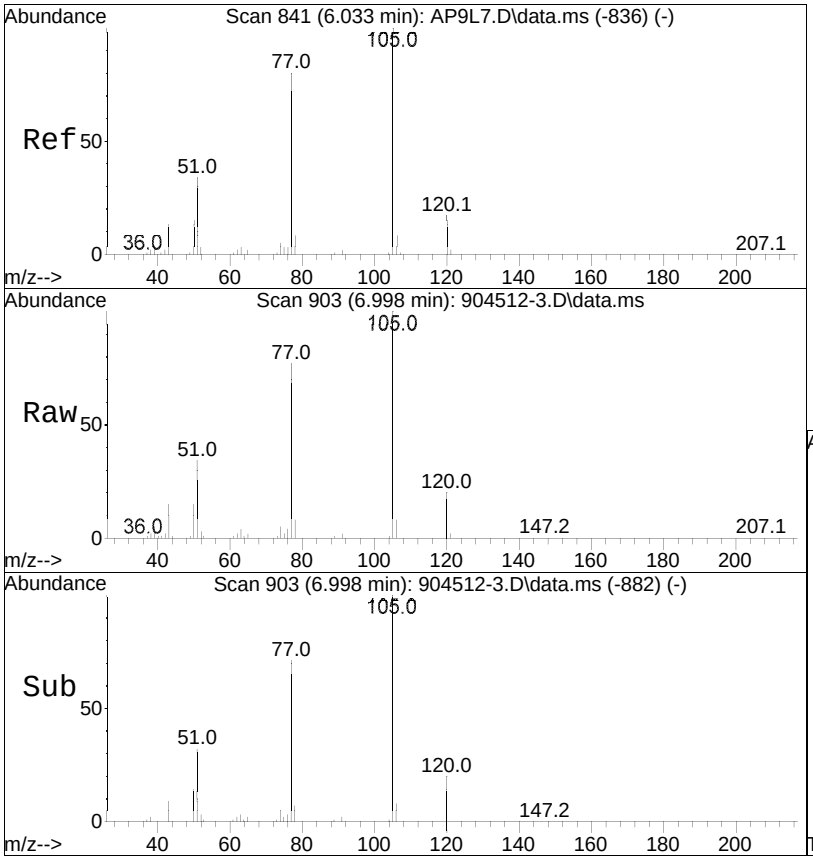


#28
Benzaldehyde
Concen: 3.50 ug/ml
RT: 5.945 min Scan# 724
Delta R.T. 0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:105 Resp: 137188

Ion	Ratio	Lower	Upper
105	100		
77	101.9	82.2	123.4

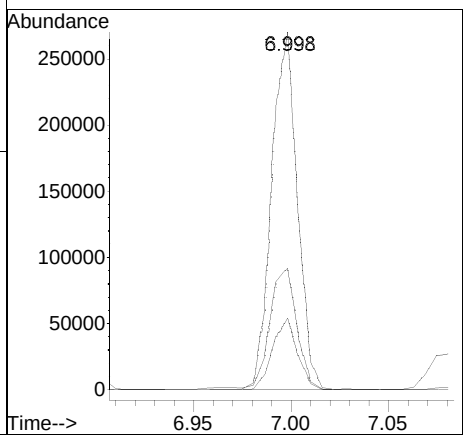


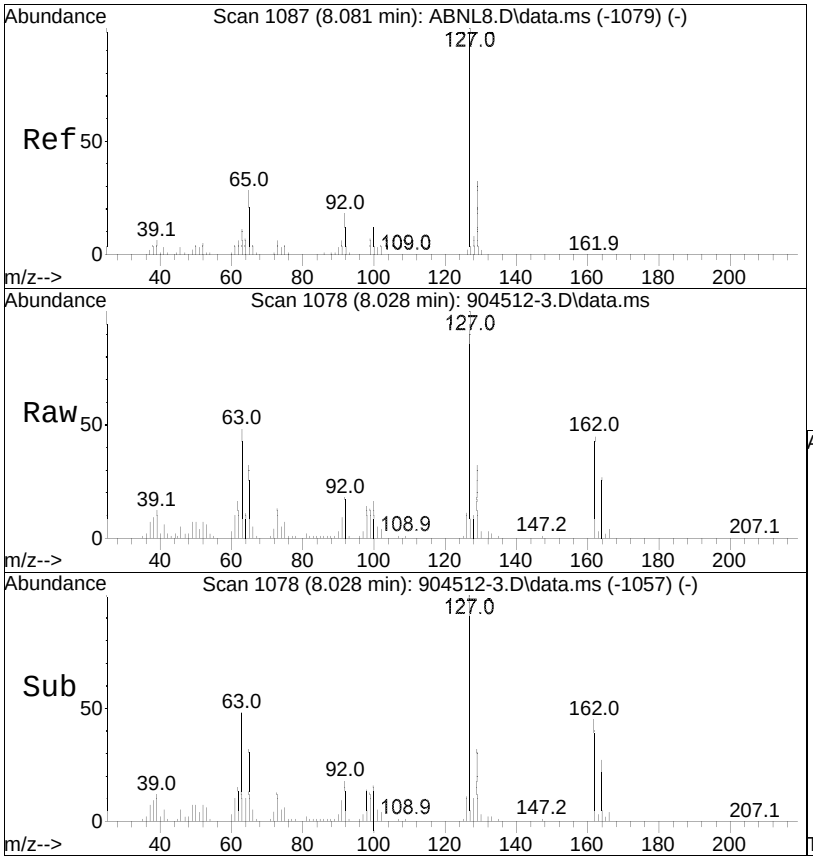


#29
Acetophenone
Concen: 3.67 ug/ml
RT: 6.998 min Scan# 903
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:105 Resp: 244545

Ion	Ratio	Lower	Upper
105	100		
120	19.5	20.5	30.7#
51	36.4	34.9	52.3

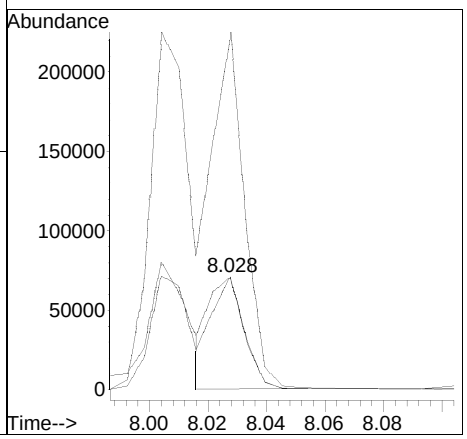


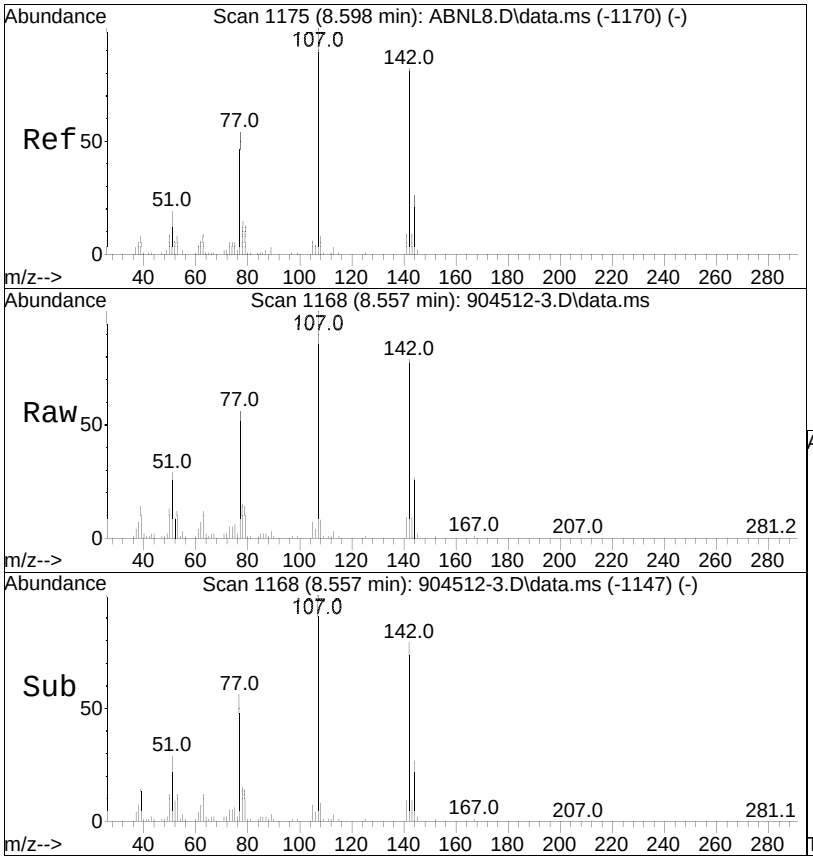


#37
4-Chloroaniline
Concen: 2.78 ug/ml
RT: 8.028 min Scan# 1078
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 65 Resp: 58419

Ion	Ratio	Lower	Upper
65	100		
127	298.4	237.6	356.4
129	94.4	76.3	114.5

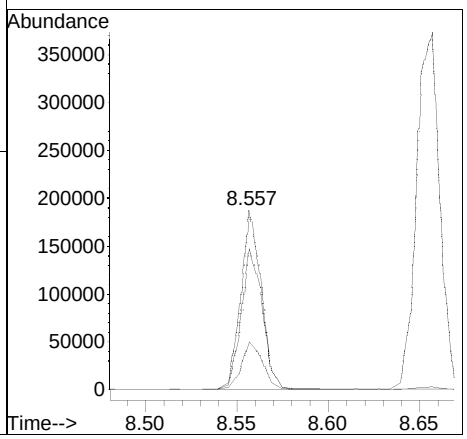


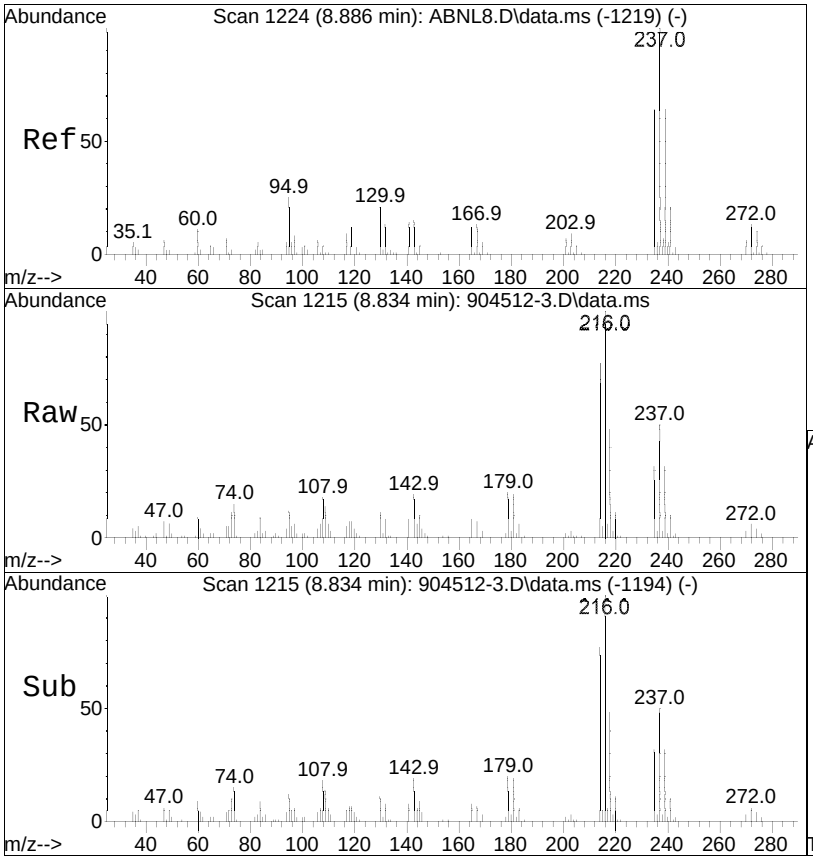


#39
p-Chloro-m-cresol
Concen: 3.36 ug/ml
RT: 8.557 min Scan# 1168
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:107 Resp: 146203

Ion	Ratio	Lower	Upper
107	100		
144	27.2	20.9	31.3
142	81.3	66.1	99.1

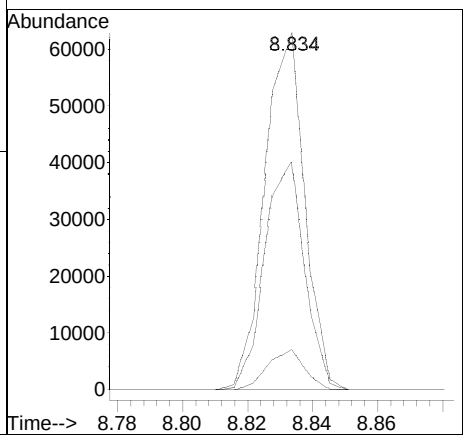


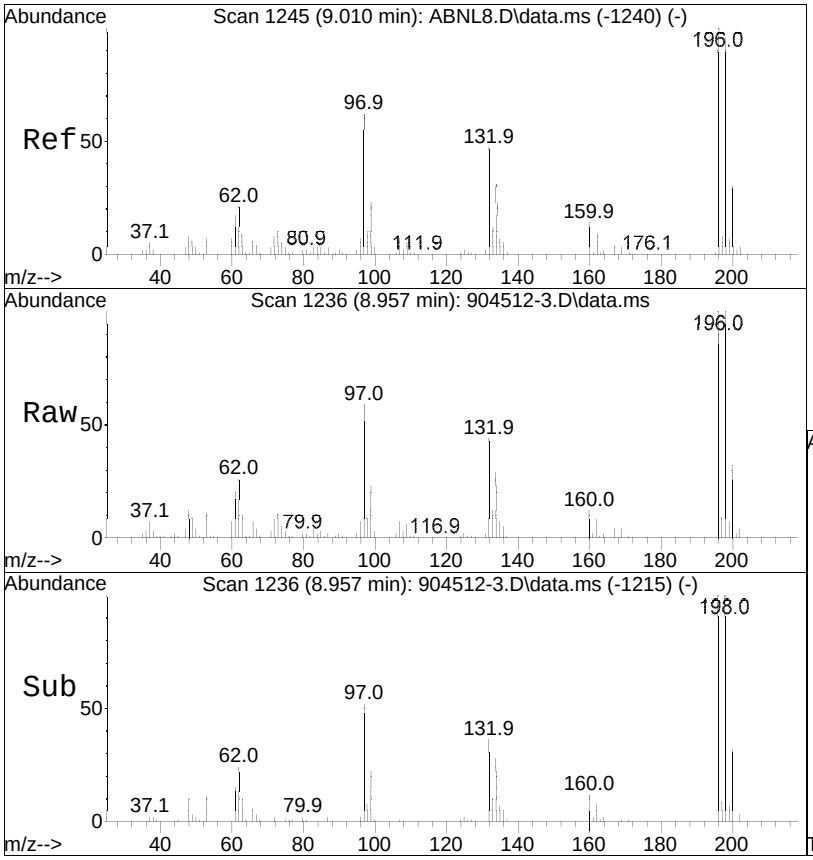


#42
Hexachlorocyclopentadiene
Concen: 2.12 ug/ml
RT: 8.834 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:237 Resp: 53492

Ion	Ratio	Lower	Upper
237	100		
235	64.2	49.7	74.5
272	10.7	9.8	14.6

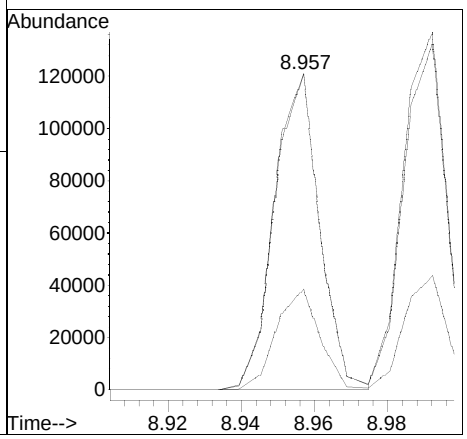


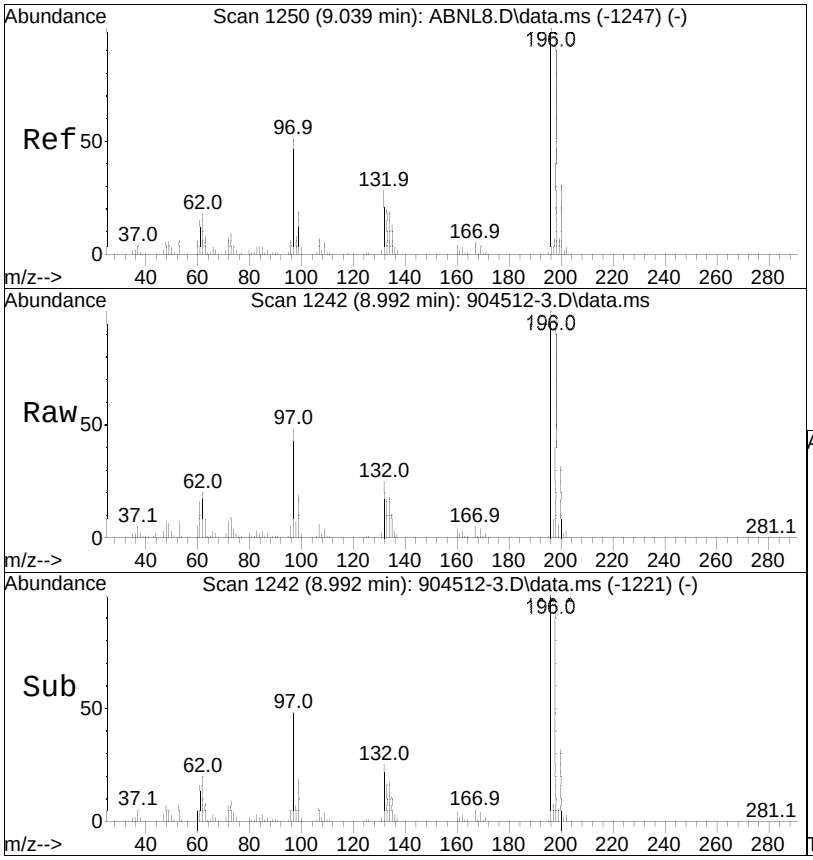


#43
2,4,6-Trichlorophenol
Concen: 3.04 ug/ml
RT: 8.957 min Scan# 1236
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:196 Resp: 104401

Ion	Ratio	Lower	Upper
196	100		
198	98.7	77.5	116.3
200	30.8	23.8	35.6

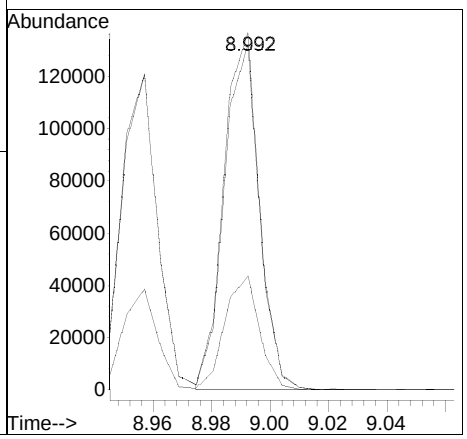


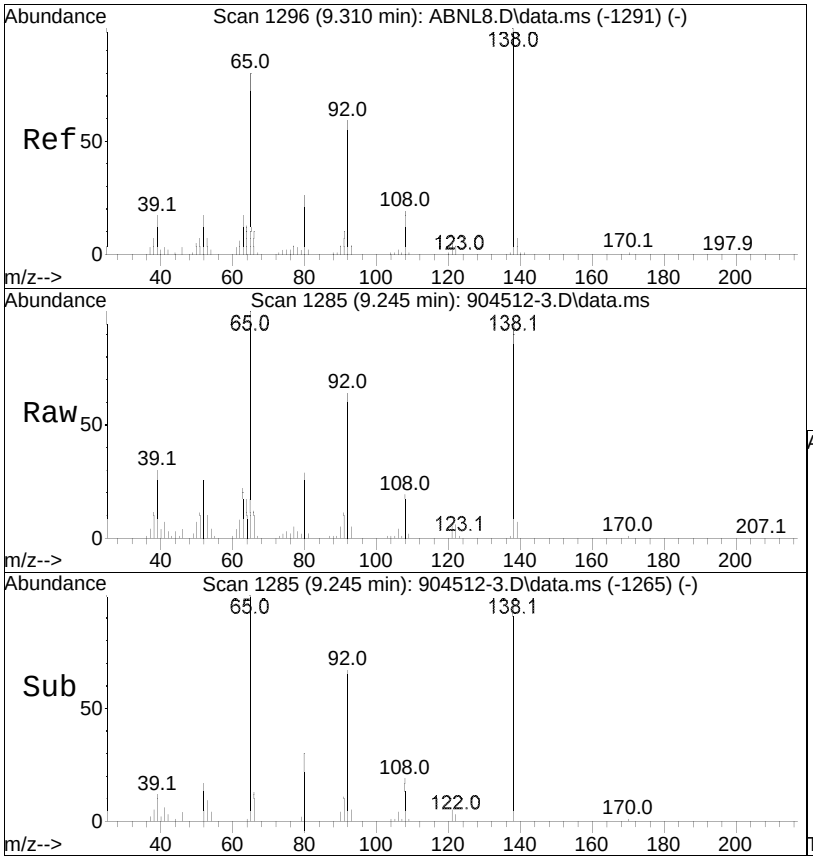


#44
2,4,5-Trichlorophenol
Concen: 3.08 ug/ml
RT: 8.992 min Scan# 1242
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:196 Resp: 115010

Ion	Ratio	Lower	Upper
196	100		
200	31.3	25.4	38.0
198	96.2	78.0	117.0

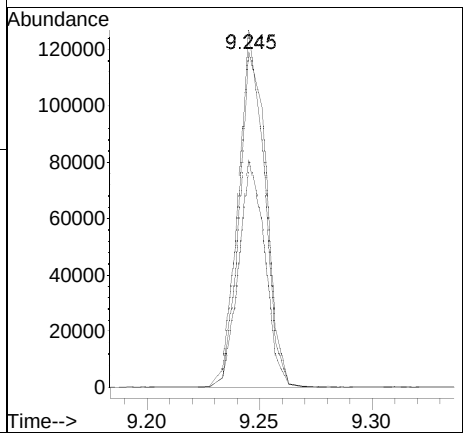


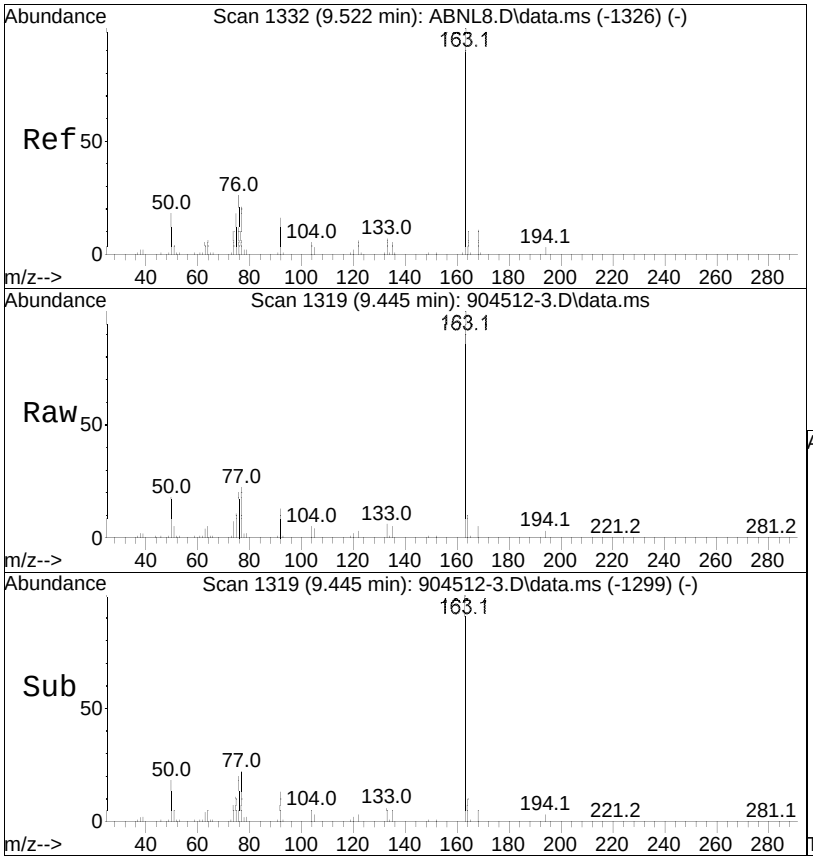


#47
2-Nitroaniline
Concen: 3.13 ug/ml
RT: 9.245 min Scan# 1285
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:138 Resp: 100043

Ion	Ratio	Lower	Upper
138	100		
92	65.7	53.5	80.3
65	102.5	86.3	129.5

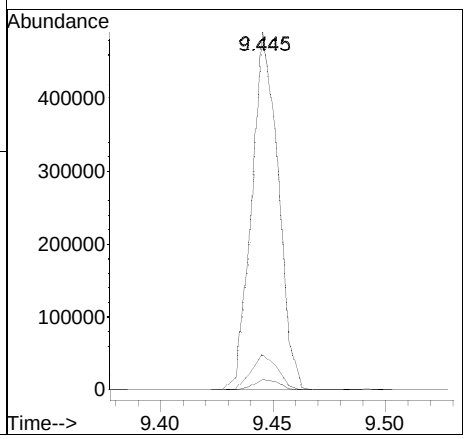


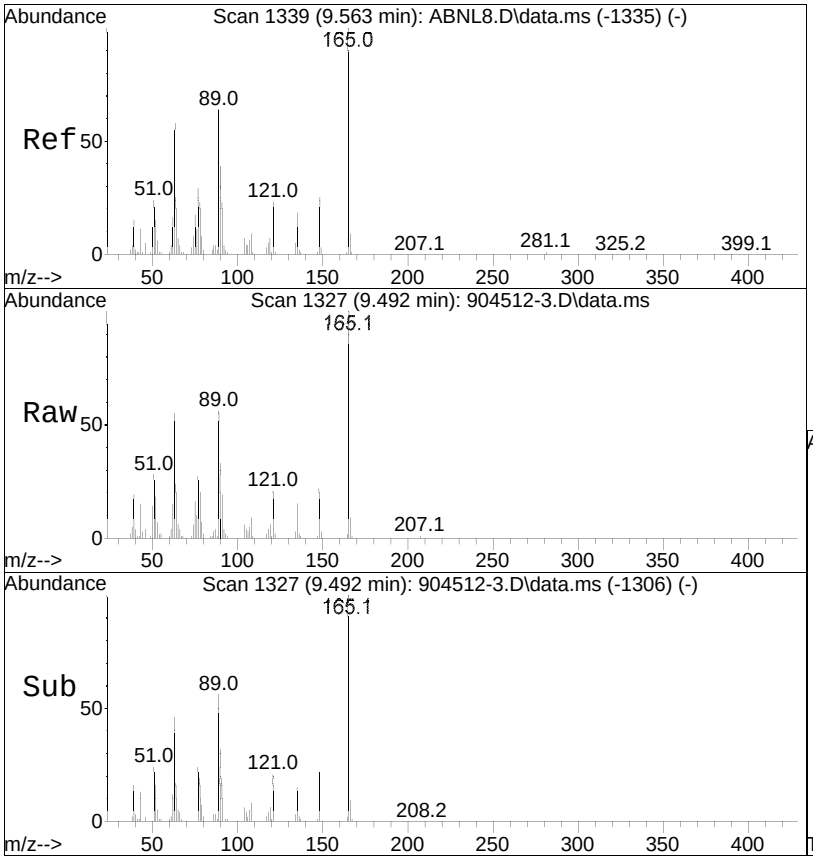


#50
Dimethyl phthalate
Concen: 3.15 ug/ml
RT: 9.445 min Scan# 1319
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:163 Resp: 397264

Ion	Ratio	Lower	Upper
163	100		
194	2.9	3.5	5.3#
164	9.8	7.9	11.9

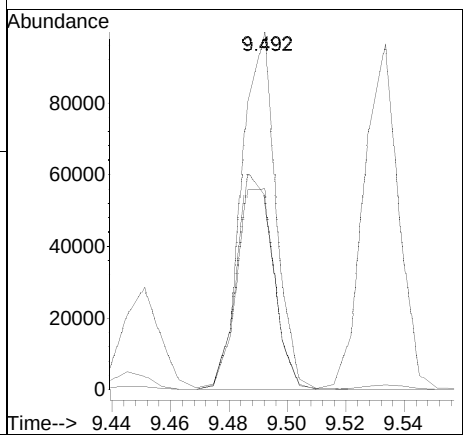


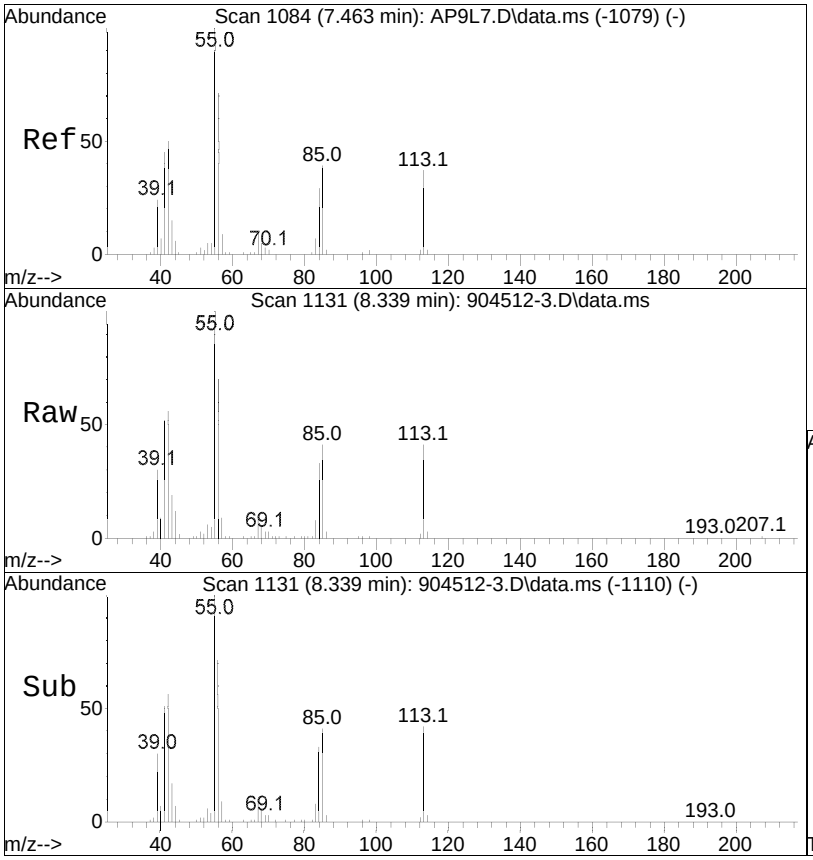


#52
2,6-Dinitrotoluene
Concen: 3.08 ug/ml
RT: 9.492 min Scan# 1327
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:165 Resp: 81172

Ion	Ratio	Lower	Upper
165	100		
89	62.2	54.2	81.2
63	64.1	64.2	96.2#

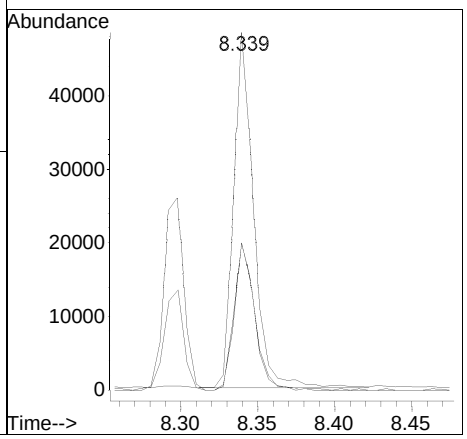


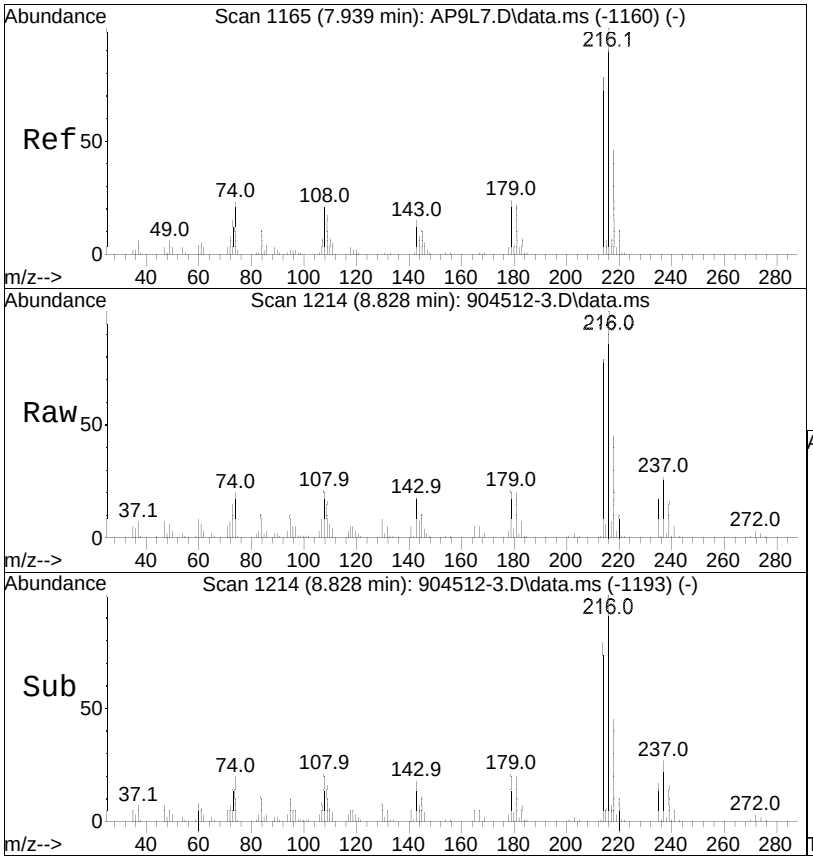


#59
Caprolactam
Concen: 2.43 ug/ml
RT: 8.339 min Scan# 1131
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 55 Resp: 43645

Ion	Ratio	Lower	Upper
55	100		
85	42.8	19.8	29.6#
113	42.1	29.6	44.4

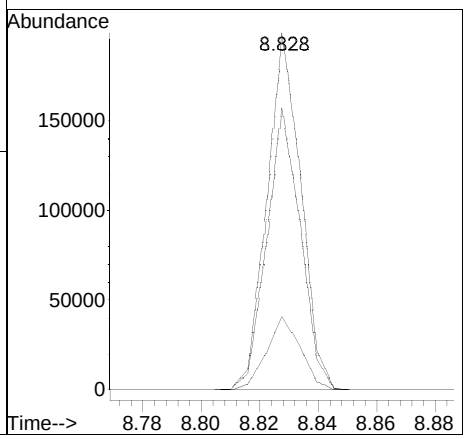


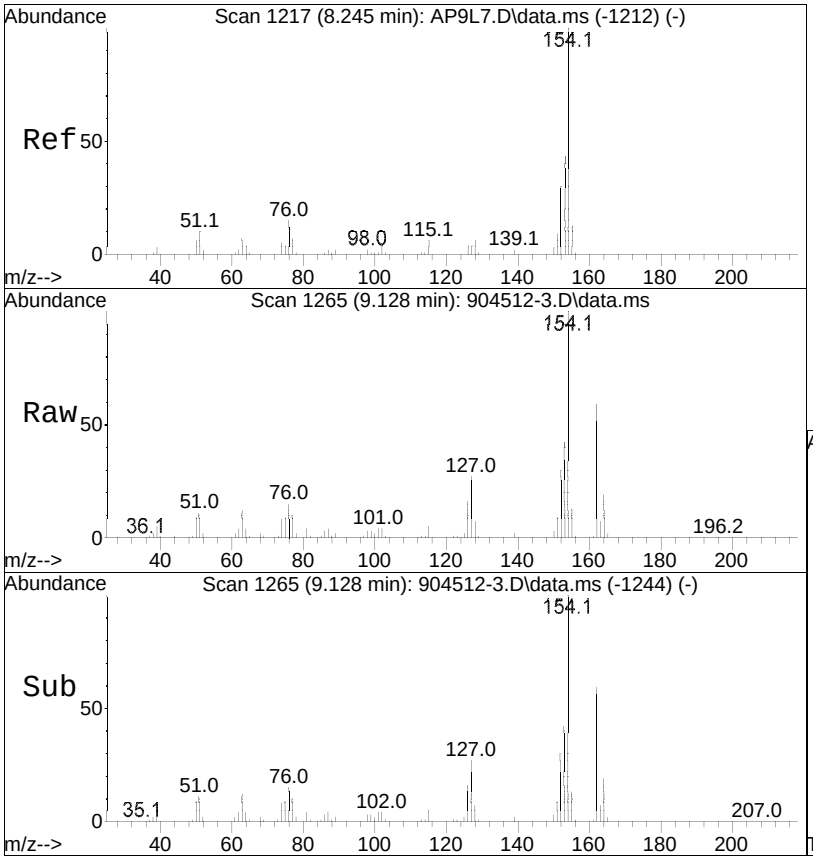


#60
1,2,4,5-Tetrachlorobenzene
Concen: 2.59 ug/ml
RT: 8.828 min Scan# 1214
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:216 Resp: 158570

Ion	Ratio	Lower	Upper
216	100		
214	78.5	63.7	95.5
179	20.7	19.0	28.6

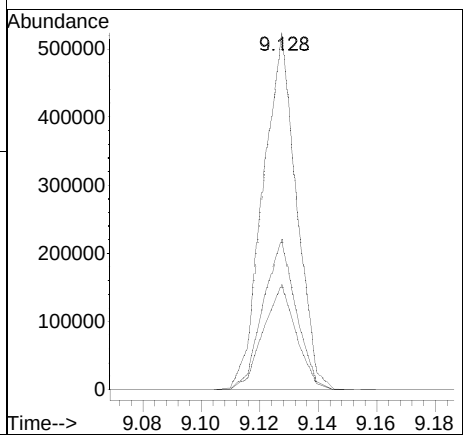


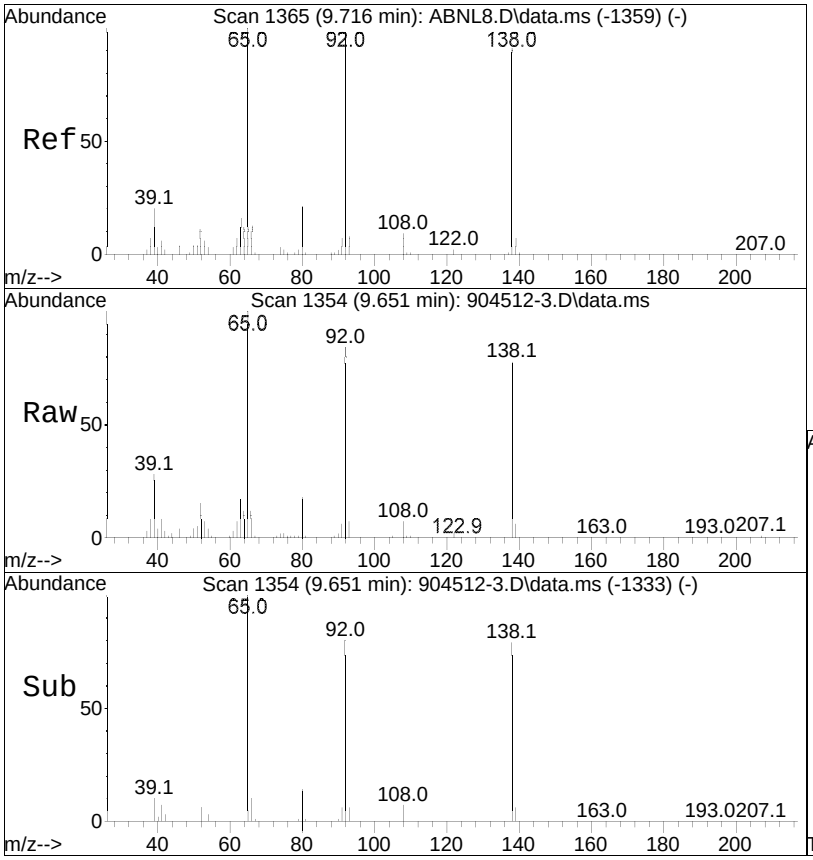


#61
Biphenyl
Concen: 3.01 ug/ml
RT: 9.128 min Scan# 1265
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:154 Resp: 412935

Ion	Ratio	Lower	Upper
154	100		
153	41.6	32.3	48.5
152	29.4	22.5	33.7

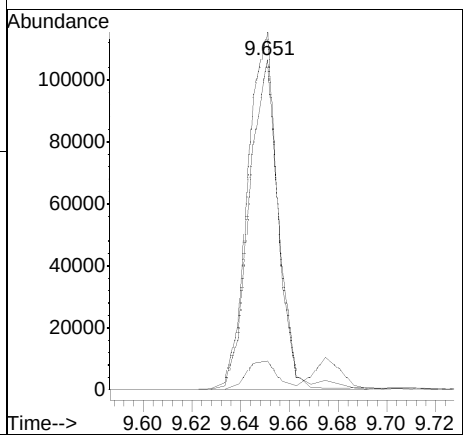


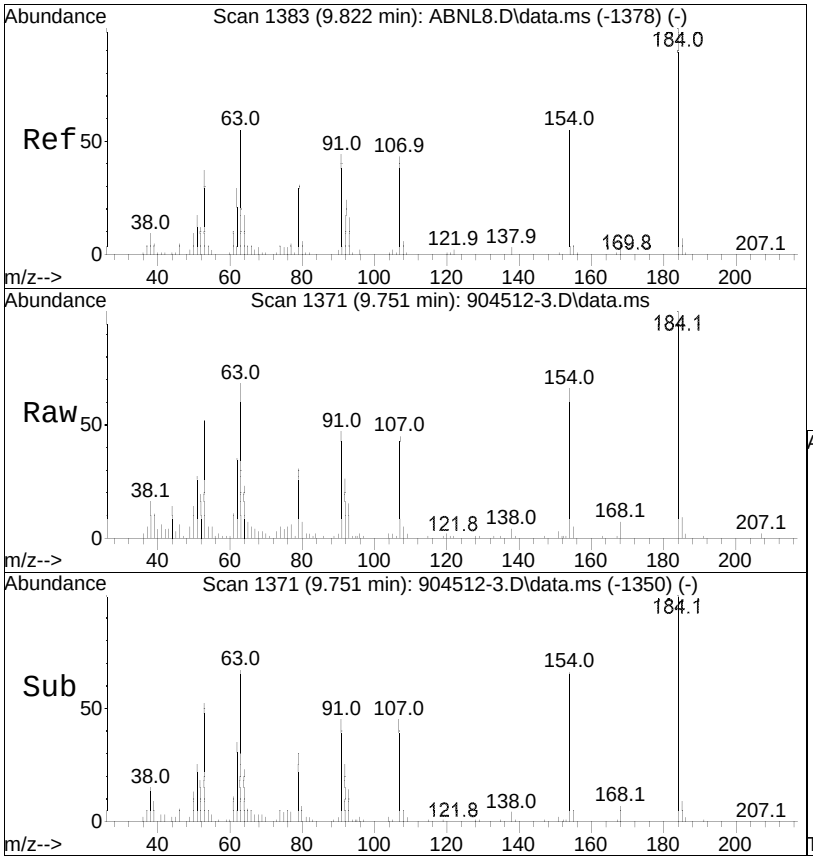


#63
3-Nitroaniline
Concen: 3.34 ug/ml
RT: 9.651 min Scan# 1354
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:138 Resp: 87684

Ion	Ratio	Lower	Upper
138	100		
92	112.3	93.4	140.2
108	9.3	9.5	14.3#

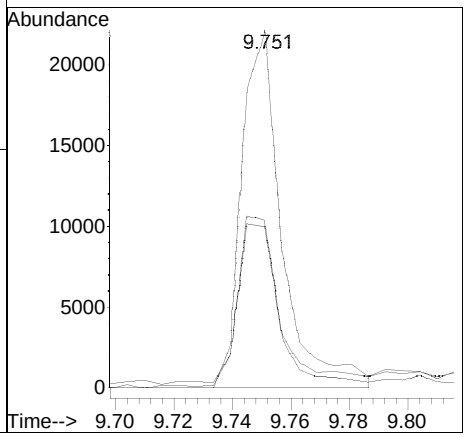


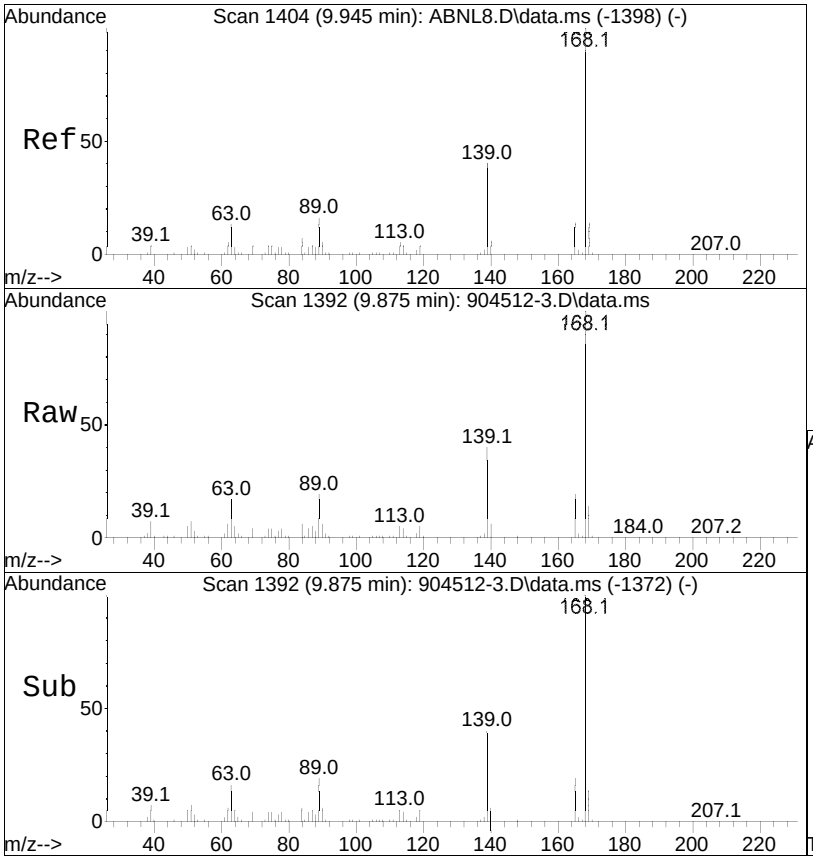


#65
2,4-Dinitrophenol
Concen: 2.20 ug/ml
RT: 9.751 min Scan# 1371
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:184 Resp: 21082

Ion	Ratio	Lower	Upper
184	100		
107	49.1	37.7	56.5
91	49.6	46.3	69.5

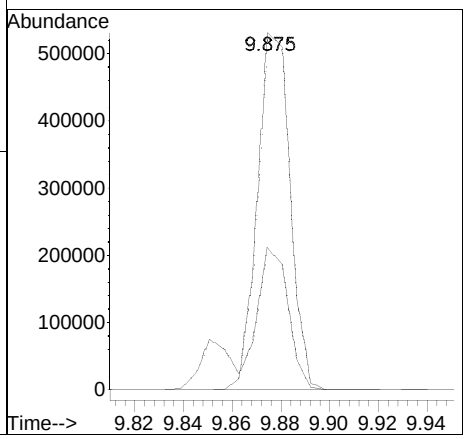


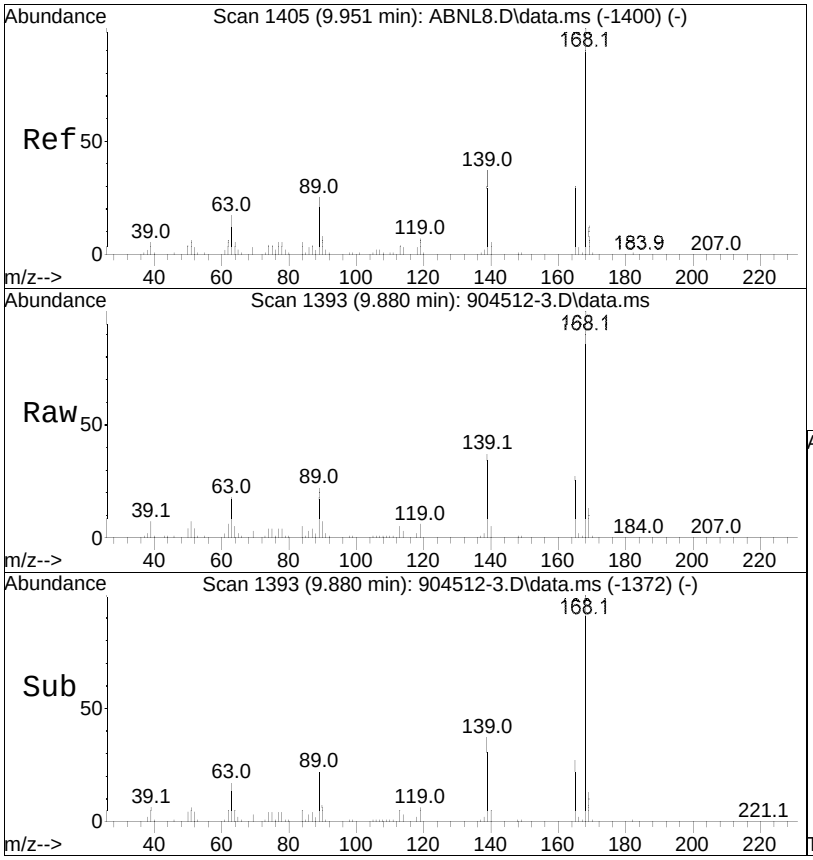


#66
Dibenzofuran
Concen: 3.04 ug/ml
RT: 9.875 min Scan# 1392
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:168 Resp: 488118

Ion	Ratio	Lower	Upper
168	100		
139	37.9	31.4	47.2

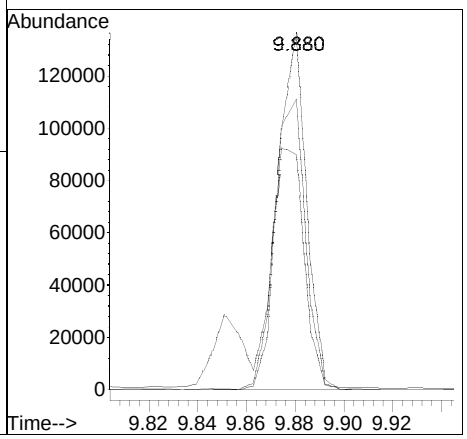


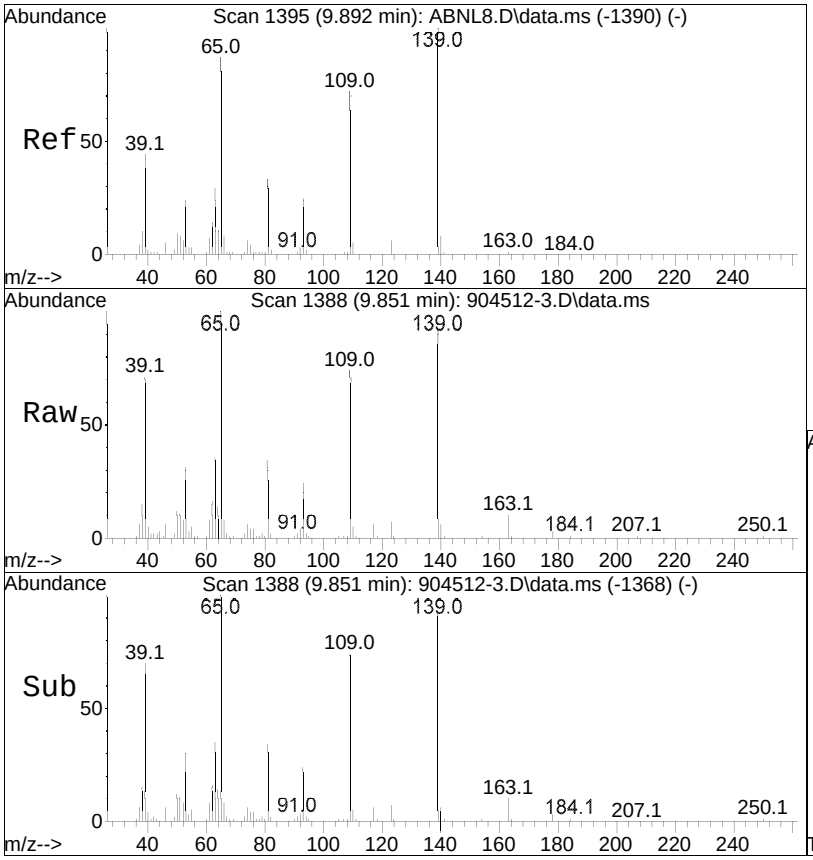


#67
2,4-Dinitrotoluene
Concen: 3.25 ug/ml
RT: 9.880 min Scan# 1393
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:165 Resp: 109703

Ion	Ratio	Lower	Upper
165	100		
89	89.9	72.0	108.0
63	76.0	52.7	79.1

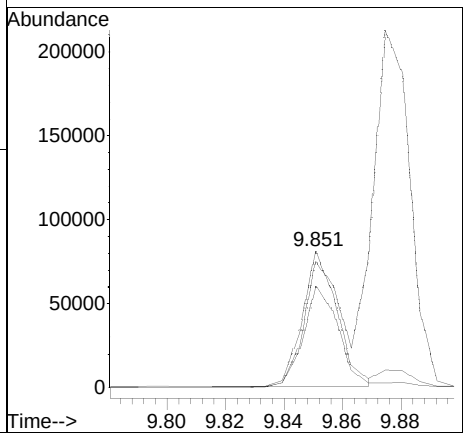


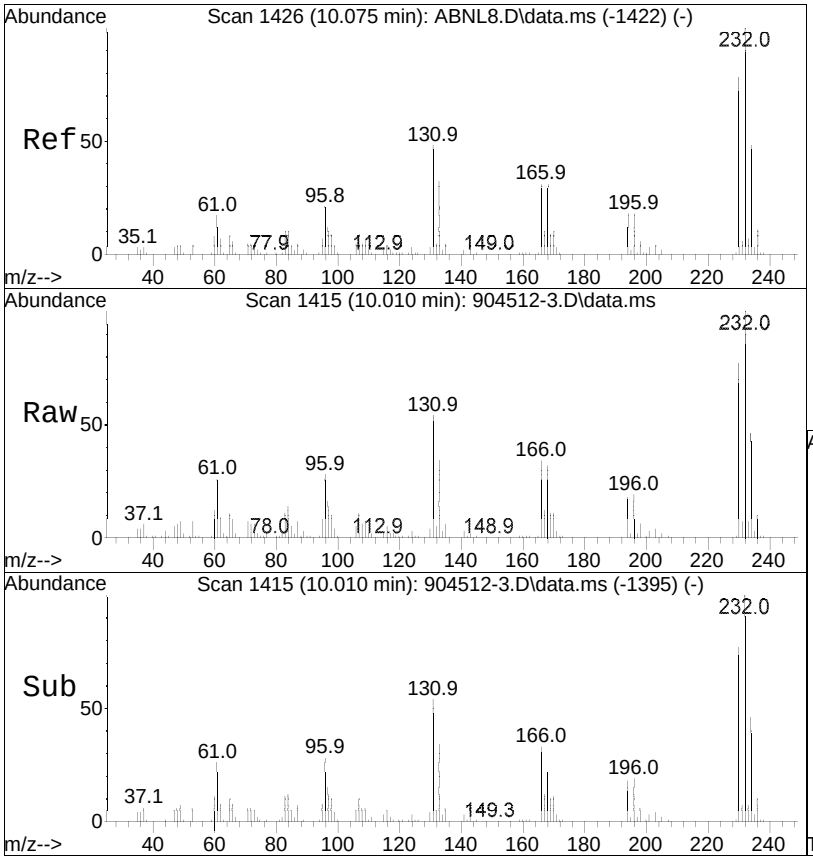


#68
4-Nitrophenol
Concen: 3.04 ug/ml
RT: 9.851 min Scan# 1388
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion: 65 Resp: 67334

Ion	Ratio	Lower	Upper
65	100		
109	79.0	47.4	71.2#
139	98.3	76.6	115.0

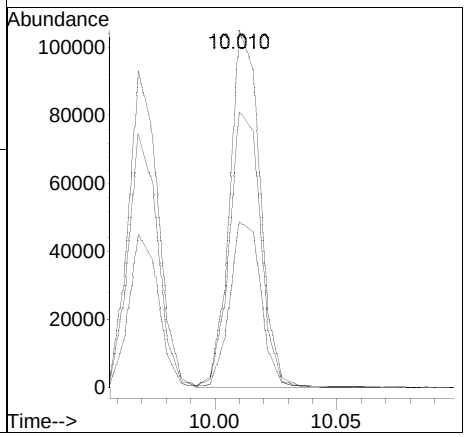


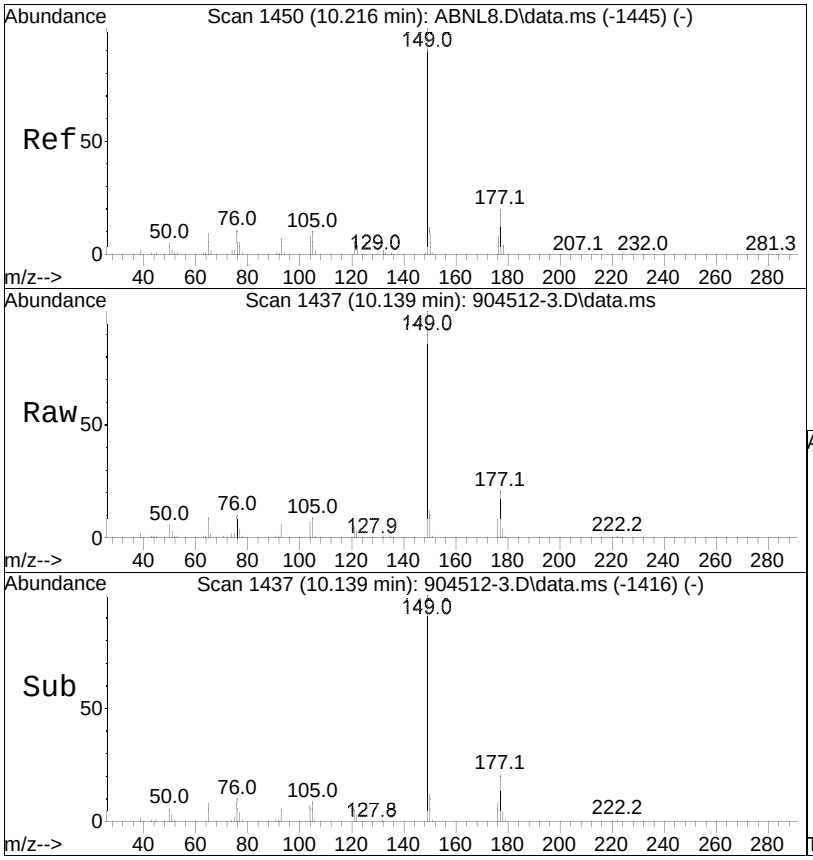


#70
2,3,4,6-Tetrachlorophenol
Concen: 3.25 ug/ml
RT: 10.010 min Scan# 1415
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:232 Resp: 90567

Ion	Ratio	Lower	Upper
232	100		
230	80.5	61.8	92.8
234	48.4	36.2	54.2

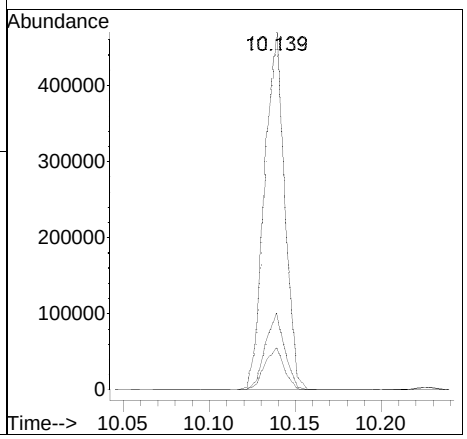


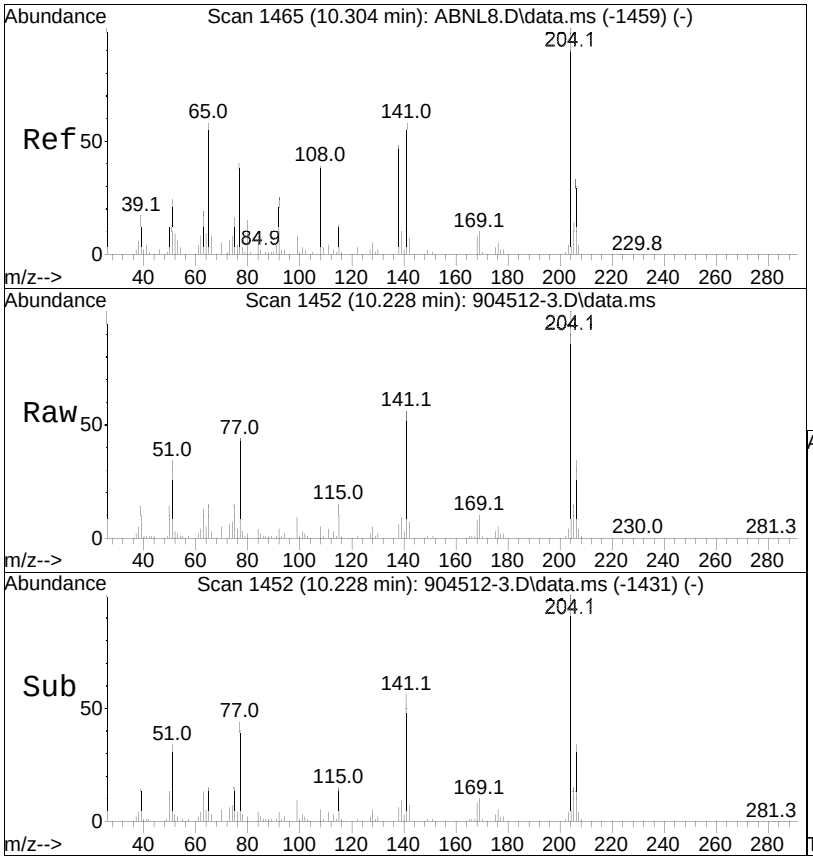


#71
Diethyl phthalate
Concen: 3.33 ug/ml
RT: 10.139 min Scan# 1437
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:149 Resp: 376218

Ion	Ratio	Lower	Upper
149	100		
177	21.0	16.1	24.1
150	11.8	9.4	14.2

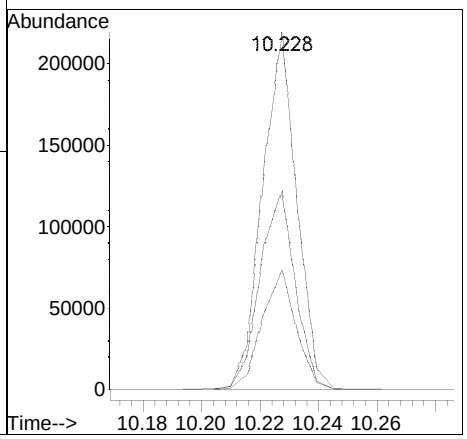


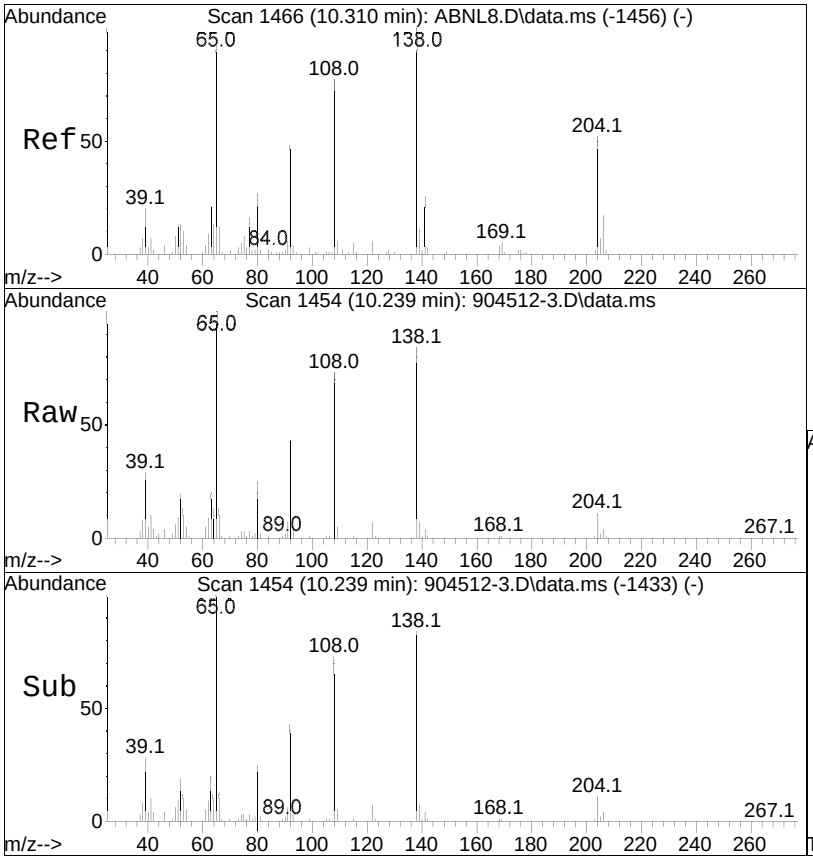


#73
4-Chlorophenyl phenyl ether
Concen: 2.84 ug/ml
RT: 10.228 min Scan# 1452
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:204 Resp: 176586

Ion	Ratio	Lower	Upper
204	100		
206	33.4	25.8	38.6
141	57.4	53.6	80.4

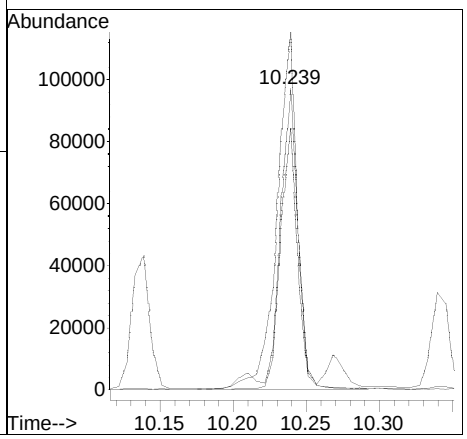


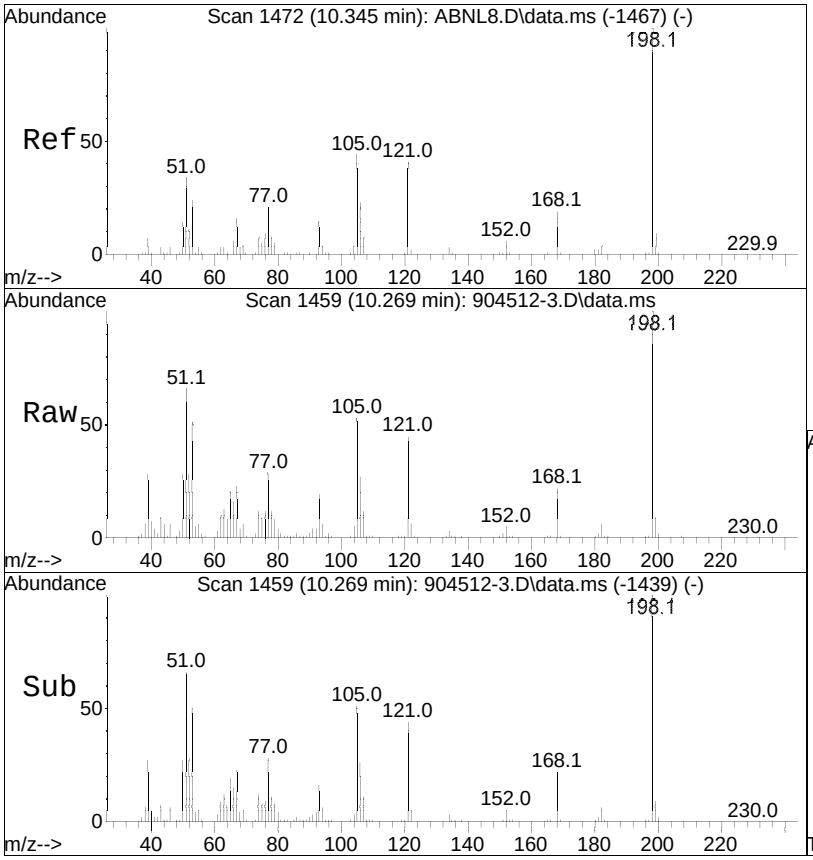


#74
4-Nitroaniline
Concen: 3.23 ug/ml
RT: 10.239 min Scan# 1454
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:138 Resp: 85522

Ion	Ratio	Lower	Upper
138	100		
108	80.6	52.1	78.1#
65	126.8	115.0	172.6

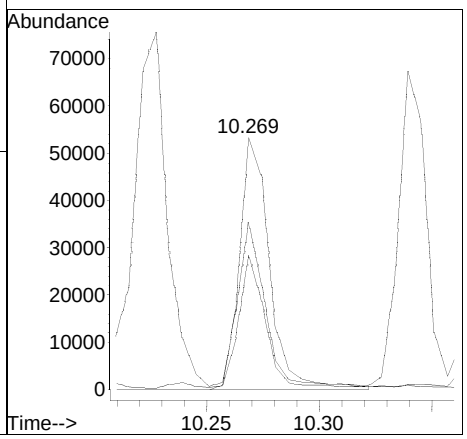


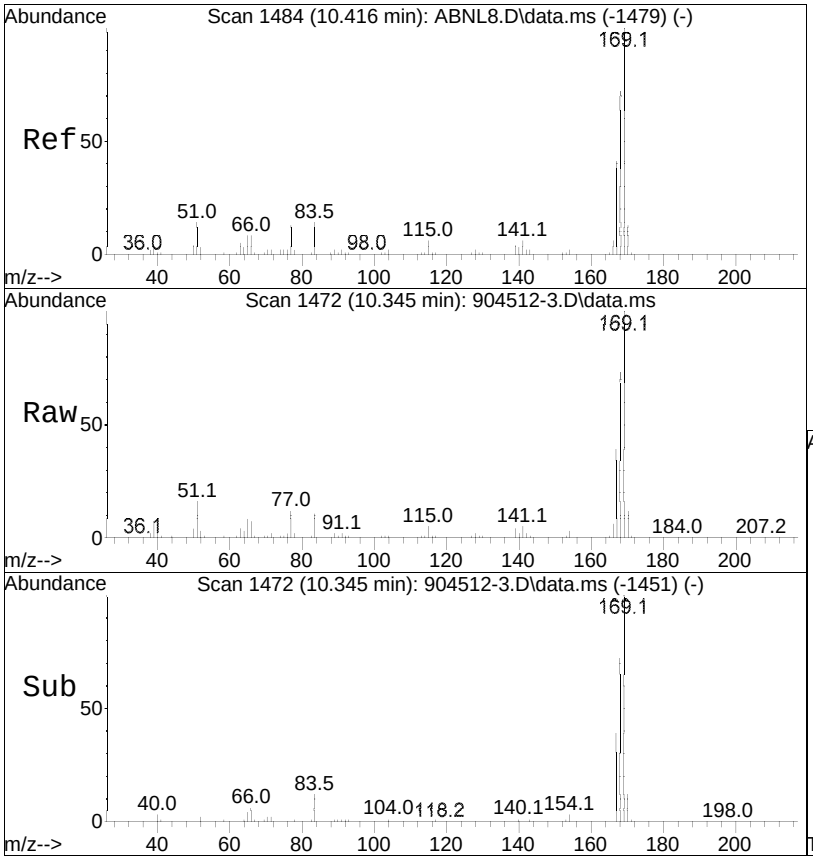


#75
4,6-Dinitro-o-cresol
Concen: 3.05 ug/ml
RT: 10.269 min Scan# 1459
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:198 Resp: 49952

Ion	Ratio	Lower	Upper
198	100		
51	57.9	76.0	114.0#
105	46.0	45.6	68.4

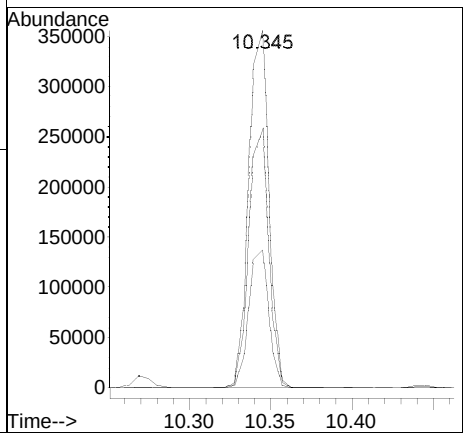


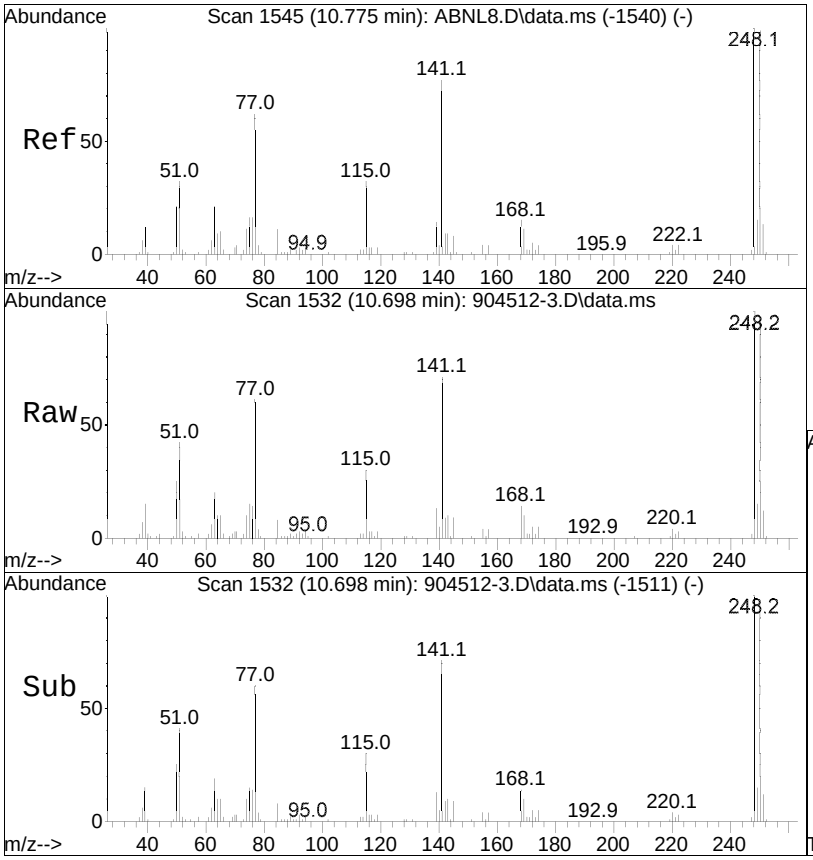


#76
NDPA/DPA
Concen: 3.20 ug/ml
RT: 10.345 min Scan# 1472
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:169 Resp: 309814

Ion	Ratio	Lower	Upper
169	100		
168	71.8	54.0	81.0
167	38.5	28.6	42.8

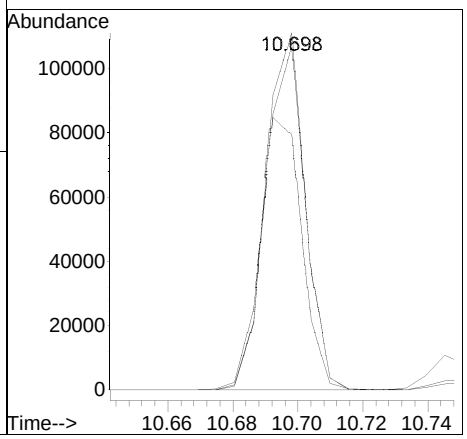


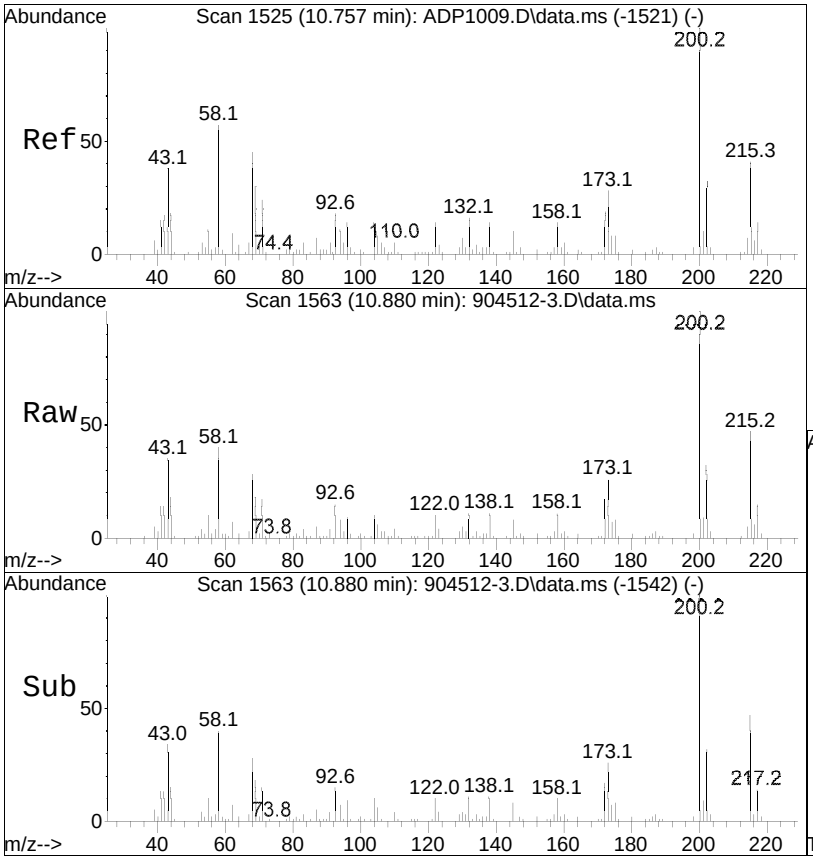


#79
4-Bromophenyl phenyl ether
Concen: 2.88 ug/ml
RT: 10.698 min Scan# 1532
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:248 Resp: 93965

Ion	Ratio	Lower	Upper
248	100		
141	81.2	76.6	114.8
250	96.8	77.3	115.9

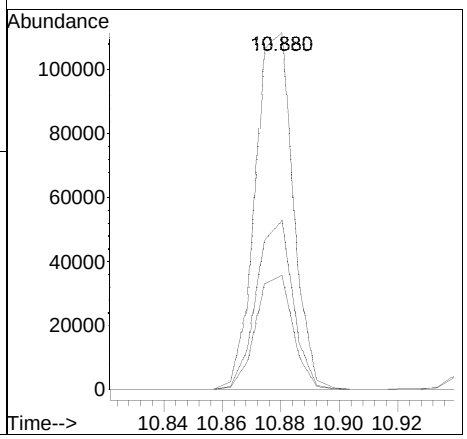


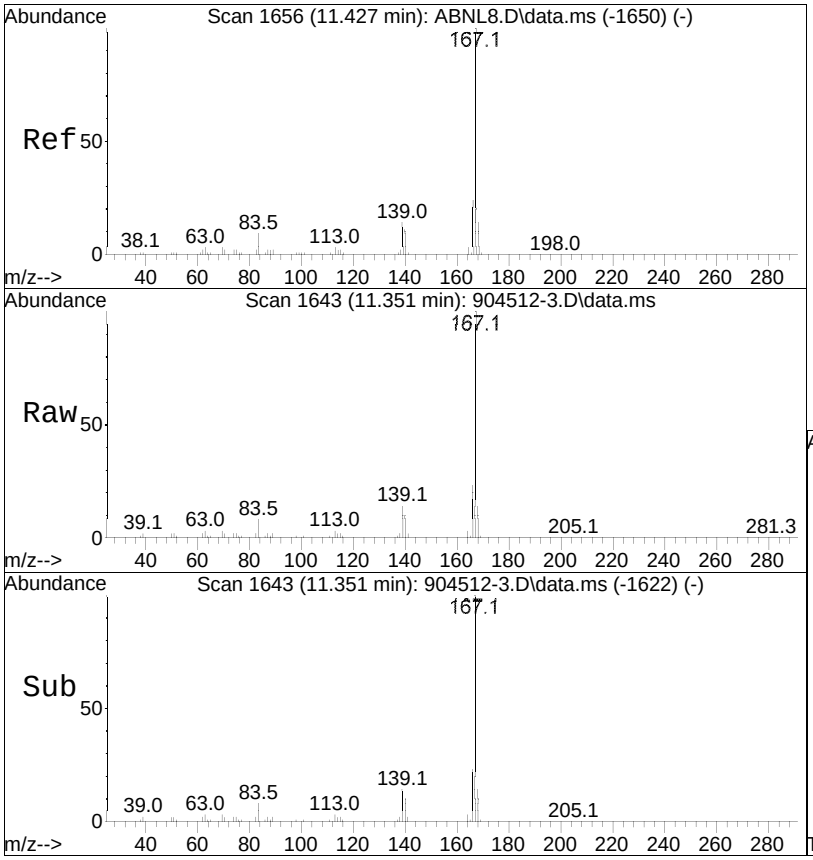


#86
Atrazine
Concen: 3.60 ug/ml
RT: 10.880 min Scan# 1563
Delta R.T. 0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:200 Resp: 99576

Ion	Ratio	Lower	Upper
200	100		
202	31.7	25.8	38.6
215	45.9	40.2	60.4

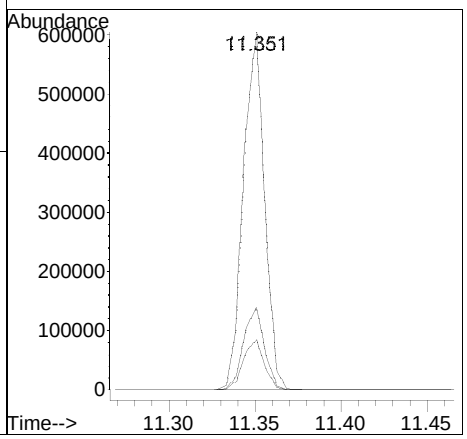


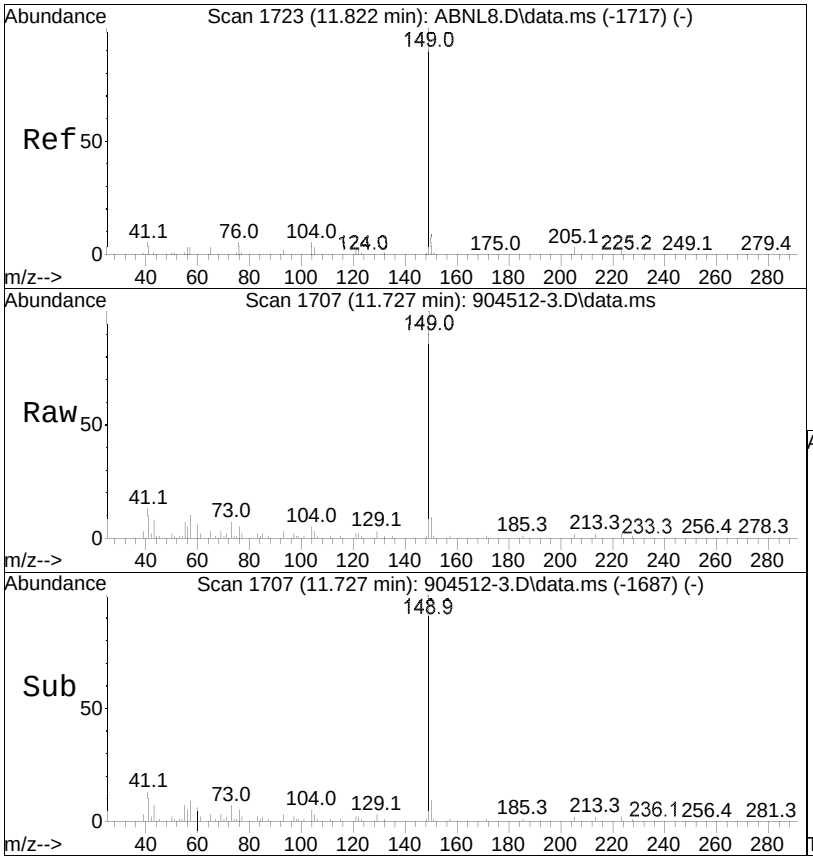


#90
Carbazole
Concen: 3.40 ug/ml
RT: 11.351 min Scan# 1643
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:167 Resp: 509375

Ion	Ratio	Lower	Upper
167	100		
168	14.1	10.6	15.8
166	23.0	17.4	26.0

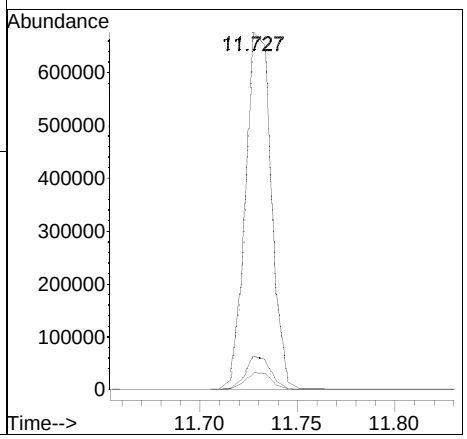


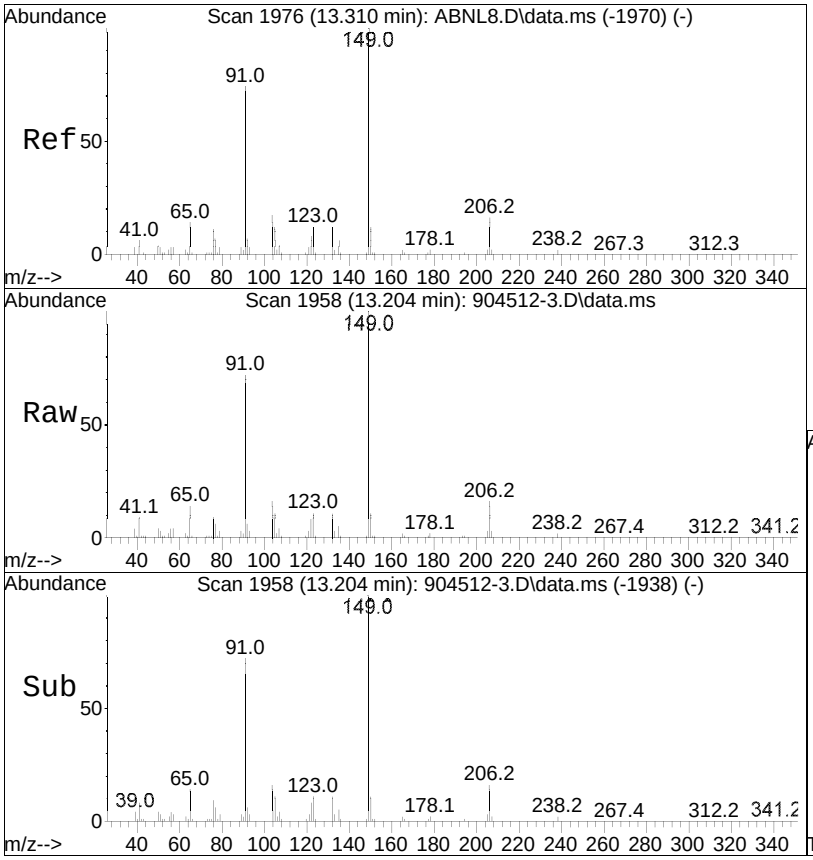


#91
Di-n-butylphthalate
Concen: 3.87 ug/ml
RT: 11.727 min Scan# 1707
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:149 Resp: 615648

Ion	Ratio	Lower	Upper
149	100		
150	9.1	7.0	10.6
104	4.8	4.5	6.7

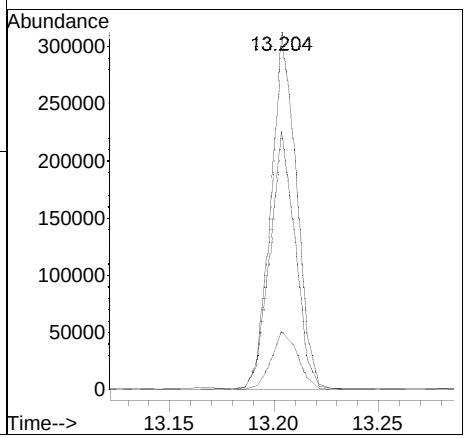


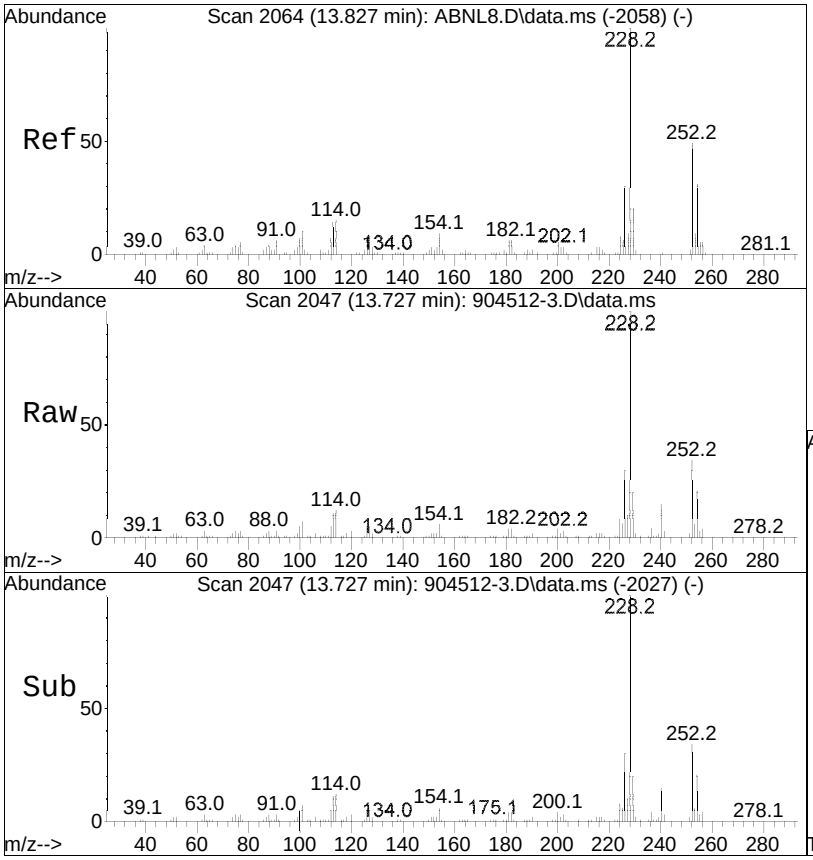


#96
Butyl benzyl phthalate
Concen: 3.81 ug/ml
RT: 13.204 min Scan# 1958
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:149 Resp: 263369

Ion	Ratio	Lower	Upper
149	100		
91	71.4	63.3	94.9
206	17.0	13.9	20.9

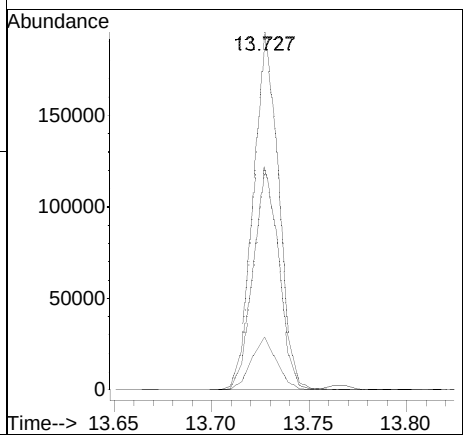


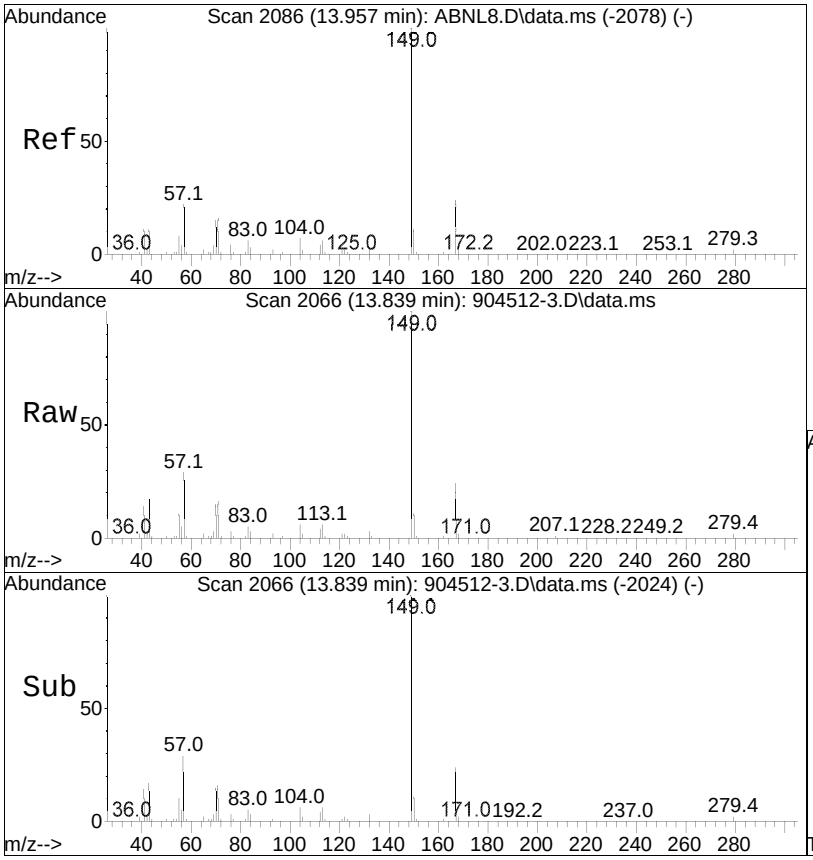


#105
3,3'-Dichlorobenzidine
Concen: 3.43 ug/ml
RT: 13.727 min Scan# 2047
Delta R.T. -0.006 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:252 Resp: 175619

Ion	Ratio	Lower	Upper
252	100		
126	15.0	14.5	21.7
254	63.4	51.2	76.8

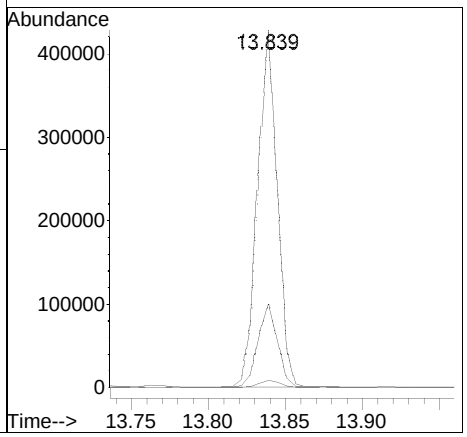


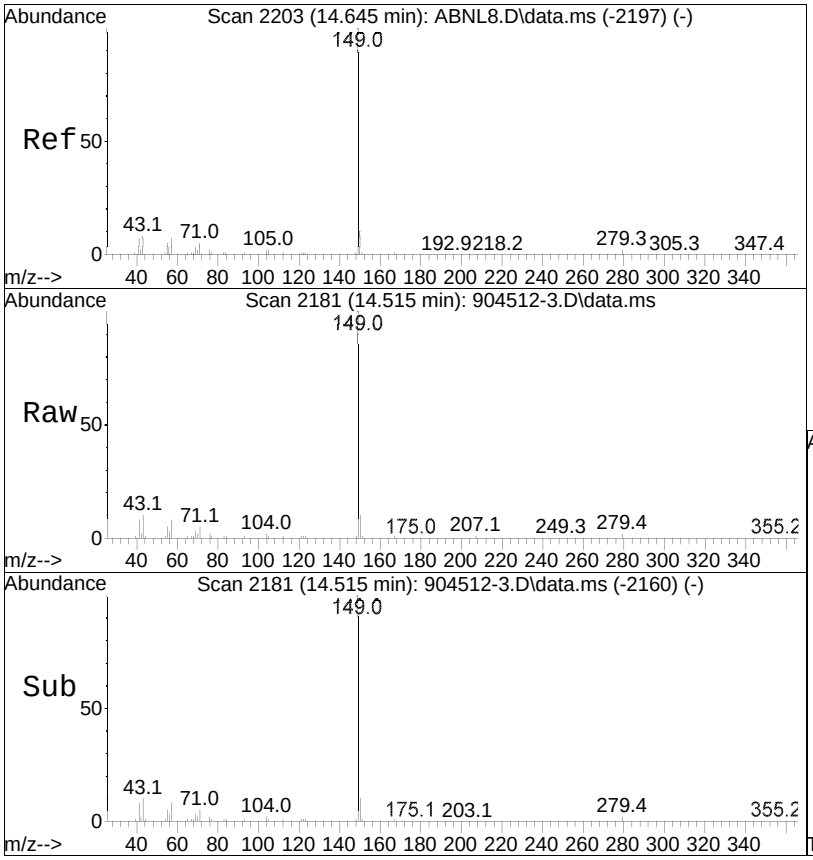


#107
Bis(2-ethylhexyl)phthalate
Concen: 4.30 ug/ml
RT: 13.839 min Scan# 2066
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:149 Resp: 376789

Ion	Ratio	Lower	Upper
149	100		
167	23.4	22.1	33.1
279	2.0	3.0	4.4#

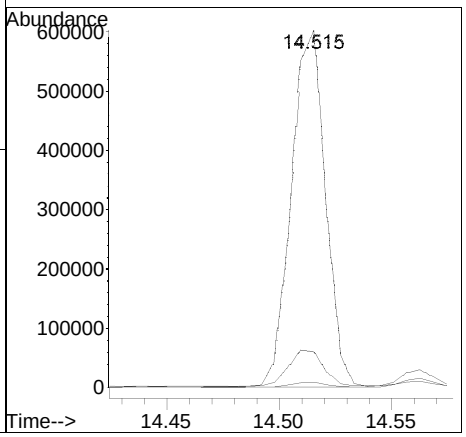




#108
Di-n-octylphthalate
Concen: 4.60 ug/ml
RT: 14.515 min Scan# 2181
Delta R.T. -0.000 min
Lab File: 904512-3.D
Acq: 4 Apr 2024 1:52 pm

Tgt Ion:149 Resp: 627517

Ion	Ratio	Lower	Upper
149	100		
43	10.7	18.8	28.2#
167	1.5	1.3	1.9

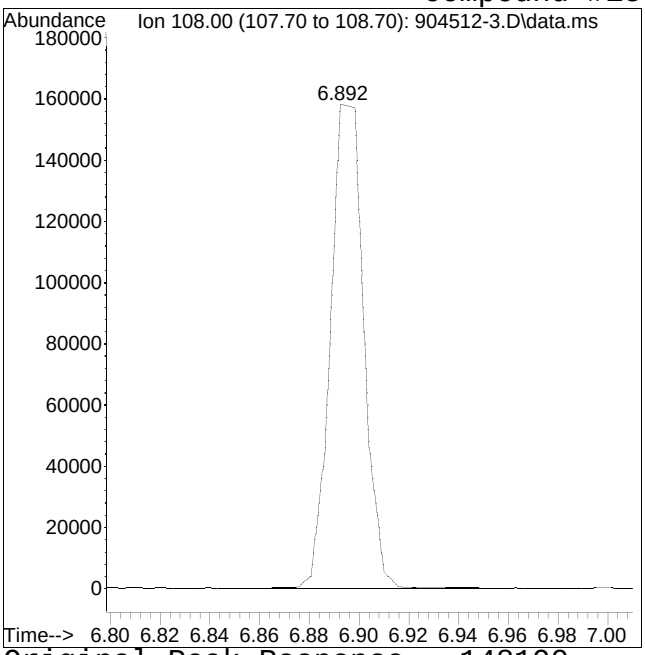


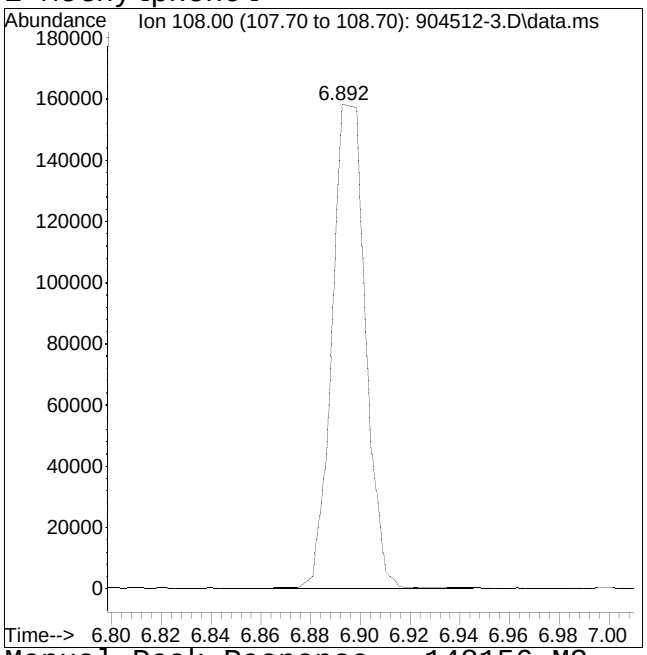
Manual Integration Report

Data Path : I:\8270\SV107\240404lvi\
Data File : 904512-3.D
Date Inj'd : 4/4/2024 1:52 pm
Sample : WG1904510-3,32,,gmr

QMethod : FS240211SV107RVT.m
Operator : SV107:ljg
Instrument : SV107
Quant Date : 4/4/2024 5:01 pm

Compound #15: 2-Methylphenol





Original Peak Response = 148190 Manual Peak Response = 148156 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-4.D
Acq On : 4 Apr 2024 7:00 pm
Operator : SV107:sz
Sample : WG1904510-4,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 08:22:14 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:21:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.510	152	161634	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 115.46%			
27) IS2_1,4-Dichlorobenzen...	6.510	152	161634	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 95.23%			
34) IS1_Naphthalene-d8	7.922	136	605605	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 114.49%			
54) IS2_Naphthalene-d8	7.922	136	605605	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 96.69%			
62) IS1_Acenaphthene-d10	9.675	164	334166	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 113.24%			
82) IS2_Acenaphthene-d10	9.675	164	334166	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 99.29%			
85) IS3_Acenaphthene-d10	9.675	164	334166	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 104.56%			
87) IS1_Phenanthrene-d10	11.110	188	601154	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 107.08%			
99) IS3_Phenanthrene-d10	11.110	188	601154	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 100.49%			
103) IS1_Chrysene-d12	13.739	240	469045	4.000	ug/ml	0.00
Standard Area 1 = 474982			Recovery = 98.75%			
112) IS1_Perylene-d12	15.198	264	507008	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 96.84%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.698	112	124016	2.617	ug/ml	0.02
Spiked Amount 5.000	Range 15 - 110		Recovery = 52.34%			
7) Phenol-d6	6.169	99	130189	2.167	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 43.34%			
19) Nitrobenzene-d5	7.157	82	83787	1.520	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 60.80%			
45) 2-Fluorobiphenyl	9.033	172	181462	1.302	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 52.08%			
78) 2,4,6-Tribromophenol	10.445	330	35341	2.830	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 56.60%			
95) 4-Terphenyl-d14	12.680	244	178037	1.345	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 53.80%			

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-4.D
Acq On : 4 Apr 2024 7:00 pm
Operator : SV107:sz
Sample : WG1904510-4,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 08:22:14 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:21:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	6.257	128	149286	2.869	ug/ml	93
8) Phenol	6.187	94	142302	2.172	ug/ml	98
9) Bis(2-chloroethyl)ether	6.228	93	139397	2.564	ug/ml	96
14) Bis(2-chloroisopropyl)...	6.881	45	233807	3.185	ug/ml#	60
15) 2-Methylphenol	6.898	108	132080	2.880	ug/ml	99
17) n-Nitrosodi-n-propylamine	7.028	70	105761	2.859	ug/ml	93
18) 3-Methylphenol/4-Methy...	7.081	108	154106	3.106	ug/ml#	40
20) Nitrobenzene	7.175	77	159025	2.817	ug/ml	99
21) Isophorone	7.451	82	299296	3.077	ug/ml	96
22) 2-Nitrophenol	7.534	139	78674	3.393	ug/ml#	92
23) 2,4-Dimethylphenol	7.639	107	110733	2.864	ug/ml	98
24) Bis(2-chloroethoxy)met...	7.722	93	180474	2.750	ug/ml	97
25) 2,4-Dichlorophenol	7.804	162	142555	3.150	ug/ml	95
28) Benzaldehyde	5.945	105	124516	3.121	ug/ml	97
29) Acetophenone	6.998	105	217679	3.214	ug/ml#	86
37) 4-Chloroaniline	8.028	65	52256M3	2.511	ug/ml	
39) p-Chloro-m-cresol	8.557	107	146074	3.388	ug/ml	98
42) Hexachlorocyclopentadiene	8.834	237	54046	2.161	ug/ml	99
43) 2,4,6-Trichlorophenol	8.957	196	108358	3.176	ug/ml	98
44) 2,4,5-Trichlorophenol	8.992	196	119205	3.221	ug/ml	99
47) 2-Nitroaniline	9.245	138	99125	3.128	ug/ml	92
50) Dimethyl phthalate	9.445	163	362607	2.894	ug/ml#	98
52) 2,6-Dinitrotoluene	9.492	165	73127	2.808	ug/ml#	87
59) Caprolactam	8.339	55	39390	2.271	ug/ml#	76
60) 1,2,4,5-Tetrachloroben...	8.828	216	157449	2.590	ug/ml	97
61) Biphenyl	9.128	154	380029	2.795	ug/ml	98
63) 3-Nitroaniline	9.651	138	83783	3.313	ug/ml#	96
65) 2,4-Dinitrophenol	9.745	184	13419	1.698	ug/ml#	89
66) Dibenzofuran	9.875	168	437615	2.830	ug/ml#	78
67) 2,4-Dinitrotoluene	9.880	165	100914	3.107	ug/ml#	84
68) 4-Nitrophenol	9.851	65	70976	3.329	ug/ml#	1
70) 2,3,4,6-Tetrachlorophenol	10.010	232	85019	3.170	ug/ml	97
71) Diethyl phthalate	10.139	149	337331	3.102	ug/ml	100
73) 4-Chlorophenyl phenyl ...	10.228	204	151287	2.527	ug/ml	93
74) 4-Nitroaniline	10.239	138	83976	3.296	ug/ml#	86
75) 4,6-Dinitro-o-cresol	10.269	198	33118	2.221	ug/ml#	72

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-4.D
Acq On : 4 Apr 2024 7:00 pm
Operator : SV107:sz
Sample : WG1904510-4,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 08:22:14 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:21:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	10.339	169	274045	2.938	ug/ml	93
79)	4-Bromophenyl phenyl e...	10.692	248	77054	2.452	ug/ml	93
86)	Atrazine	10.875	200	86479	3.268	ug/ml	95
90)	Carbazole	11.351	167	473042	3.303	ug/ml	97
91)	Di-n-butylphthalate	11.727	149	536467	3.520	ug/ml	99
96)	Butyl benzyl phthalate	13.204	149	235996	3.590	ug/ml	94
105)	3,3'-Dichlorobenzidine	13.727	252	167155	3.506	ug/ml	99
107)	Bis(2-ethylhexyl)phtha...	13.833	149	332897	4.094	ug/ml#	91
108)	Di-n-octylphthalate	14.510	149	562479	4.451	ug/ml#	77

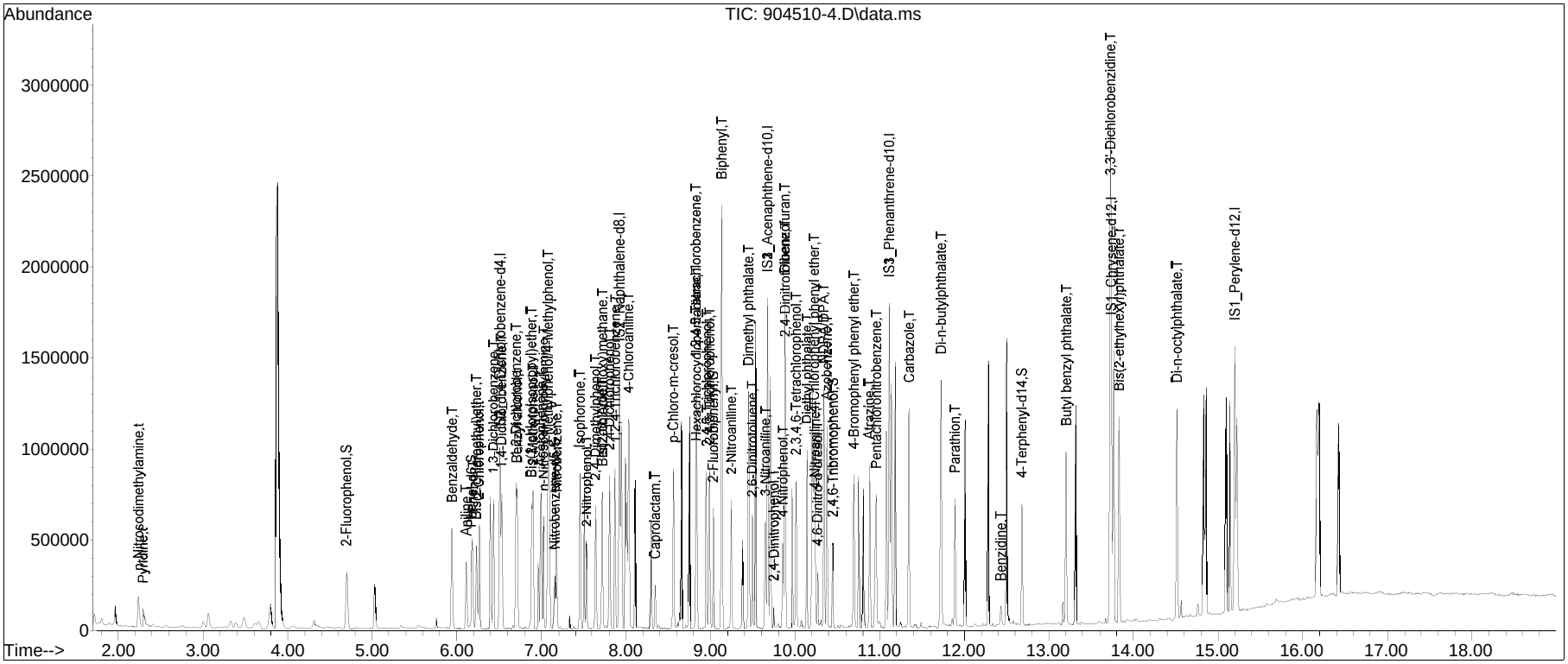
(#) = qualifier out of range (m) = manual integration (+) = signals summed

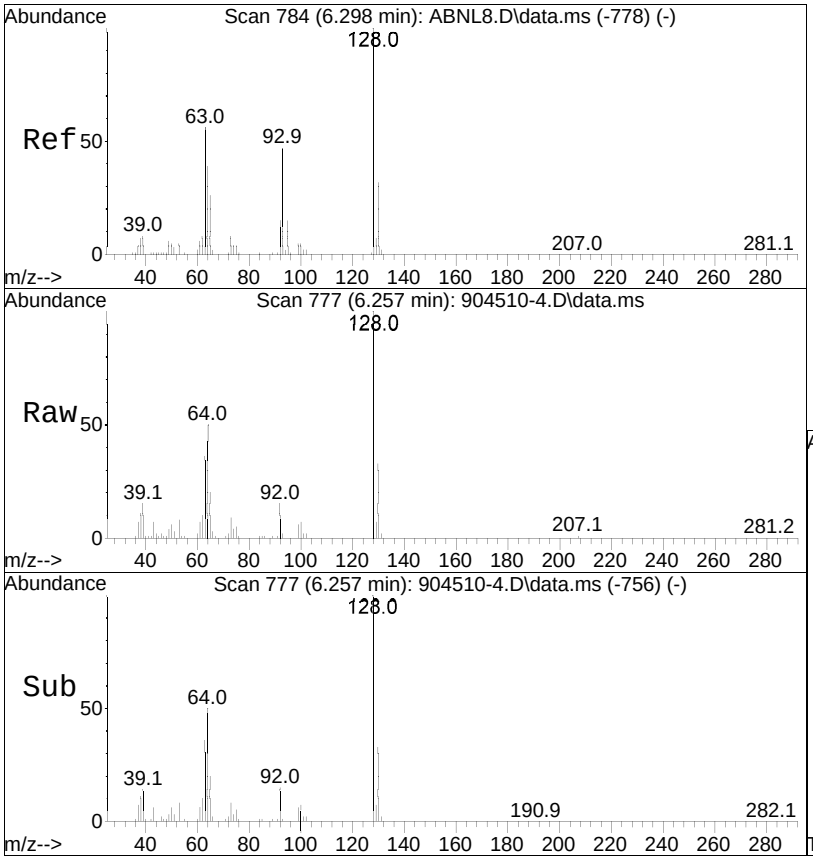
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-4.D
Acq On : 4 Apr 2024 7:00 pm
Operator : SV107:sz
Sample : WG1904510-4,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 08:22:14 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:21:01 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••

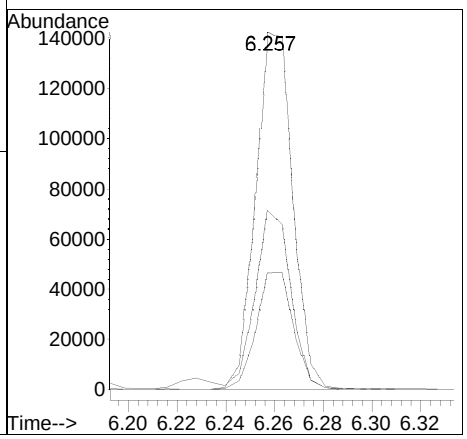


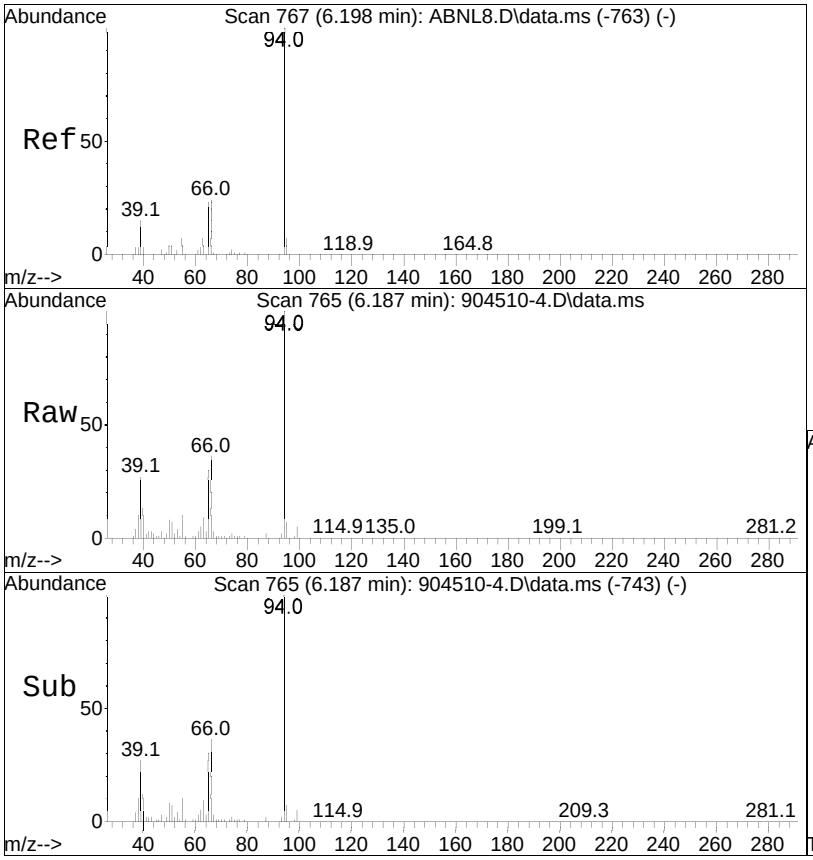


#6
2-Chlorophenol
Concen: 2.87 ug/ml
RT: 6.257 min Scan# 777
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:128 Resp: 149286

Ion	Ratio	Lower	Upper
128	100		
64	48.5	45.1	67.7
130	33.1	26.2	39.4

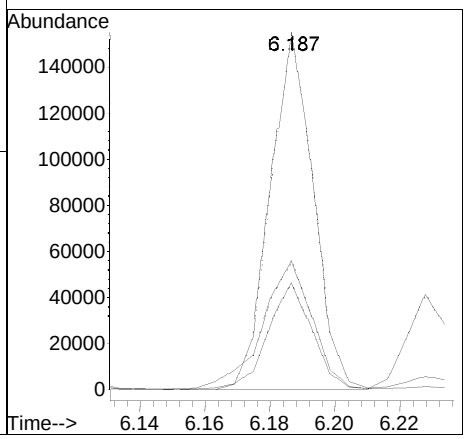


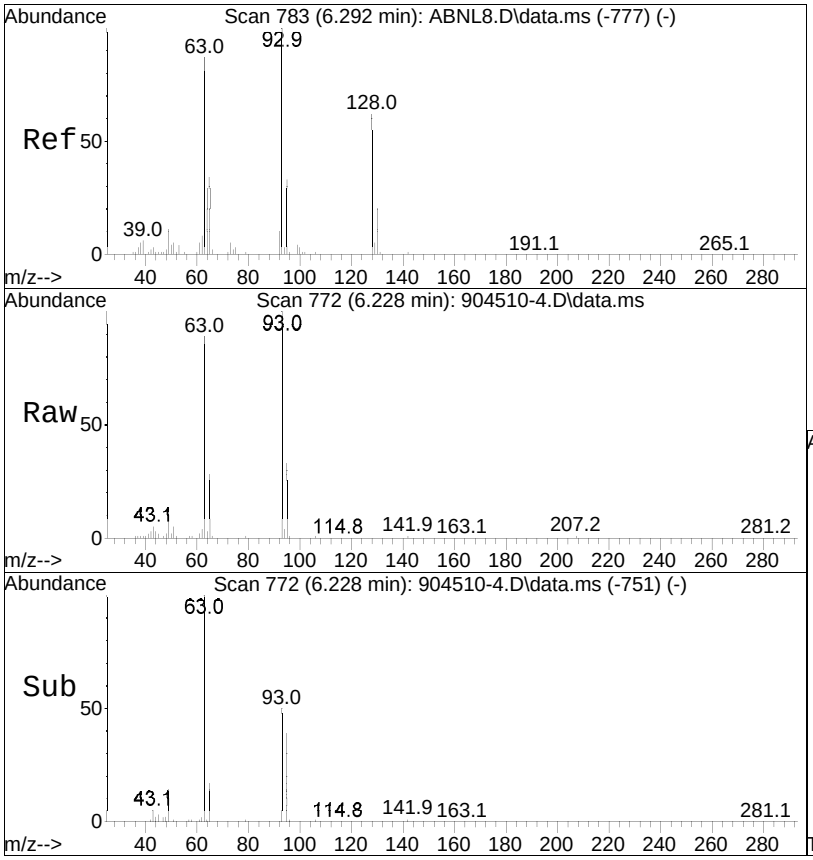


#8
Phenol
Concen: 2.17 ug/ml
RT: 6.187 min Scan# 765
Delta R.T. 0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 94 Resp: 142302

Ion	Ratio	Lower	Upper
94	100		
65	30.9	26.0	39.0
66	42.0	33.8	50.8

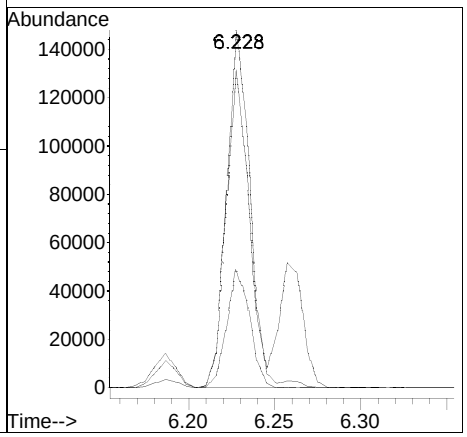


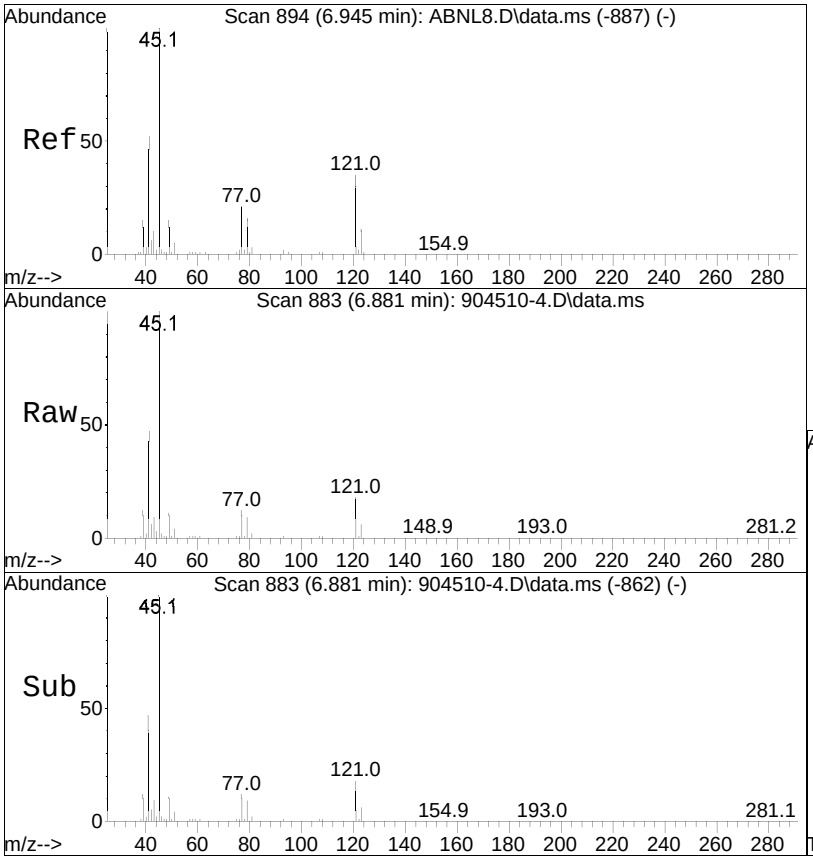


#9
Bis(2-chloroethyl)ether
Concen: 2.56 ug/ml
RT: 6.228 min Scan# 772
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 93 Resp: 139397

Ion	Ratio	Lower	Upper
93	100		
63	87.8	74.6	111.8
95	32.9	25.9	38.9

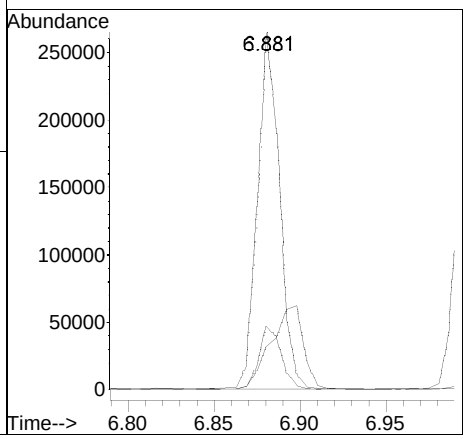


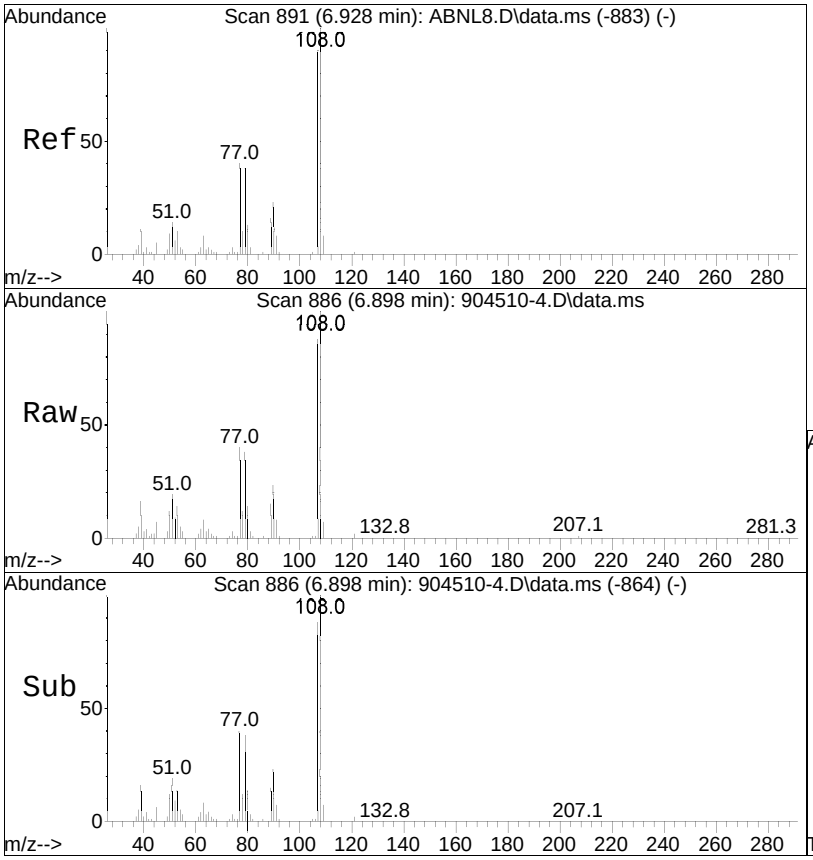


#14
Bis(2-chloroisopropyl)ether
Concen: 3.19 ug/ml
RT: 6.881 min Scan# 883
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 45 Resp: 233807

Ion	Ratio	Lower	Upper
45	100		
121	18.3	9.8	14.6#
77	35.4	6.1	9.1#

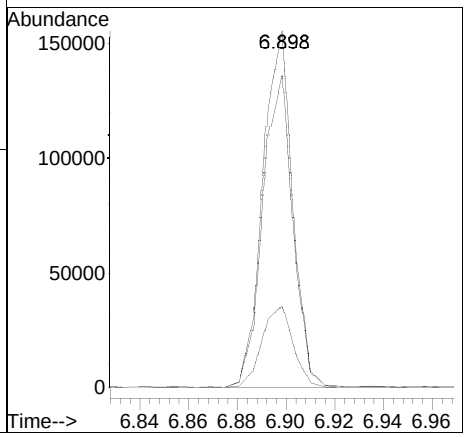


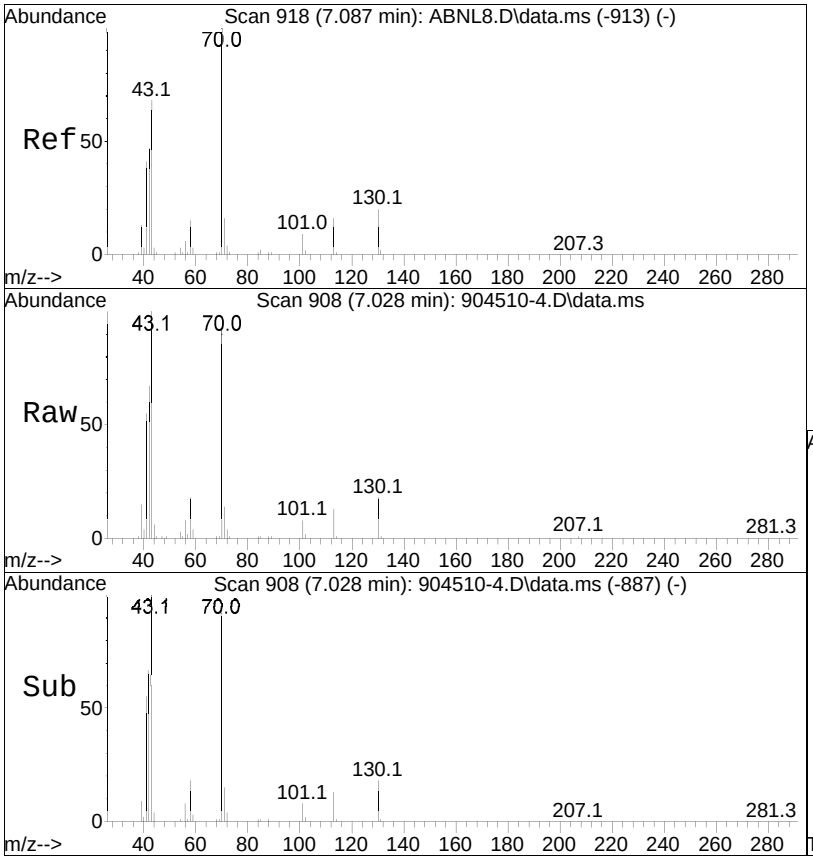


#15
2-Methylphenol
Concen: 2.88 ug/ml
RT: 6.898 min Scan# 886
Delta R.T. 0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:108 Resp: 132080

Ion	Ratio	Lower	Upper
108	100		
107	89.0	70.7	106.1
90	23.9	18.7	28.1

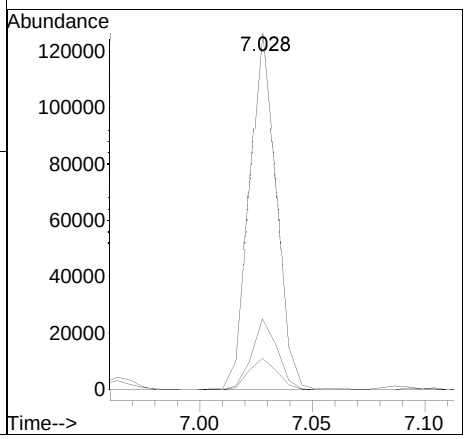


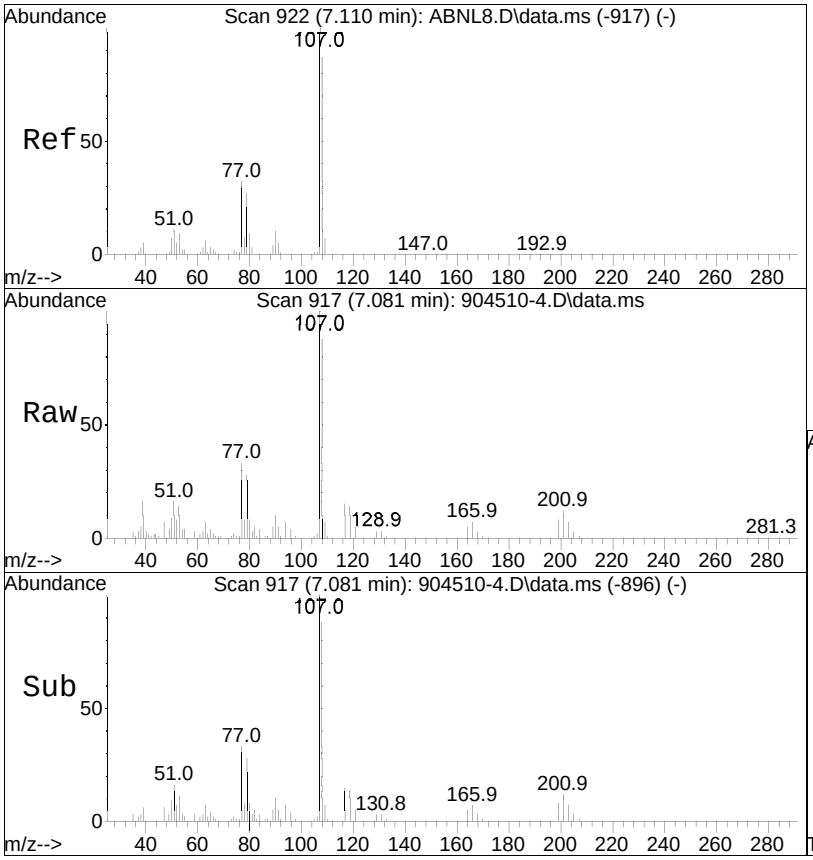


#17
n-Nitrosodi-n-propylamine
Concen: 2.86 ug/ml
RT: 7.028 min Scan# 908
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 70 Resp: 105761

Ion	Ratio	Lower	Upper
70	100		
130	18.6	18.2	27.4
101	9.2	7.8	11.8

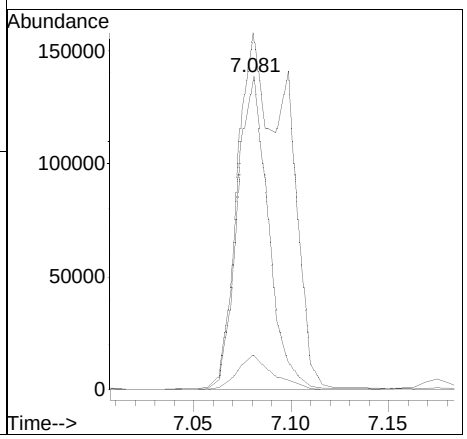


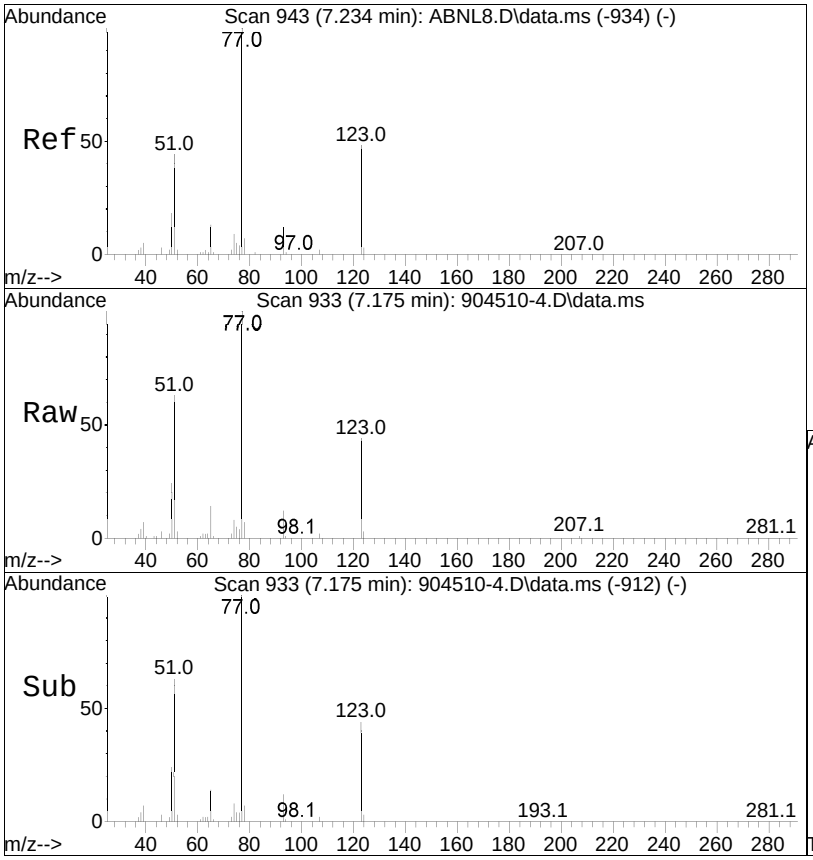


#18
3-Methylphenol/4-Methylphenol
Concen: 3.11 ug/ml
RT: 7.081 min Scan# 917
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:108 Resp: 154106

Ion	Ratio	Lower	Upper
108	100		
107	180.1	88.6	132.8#
90	12.3	8.8	13.2

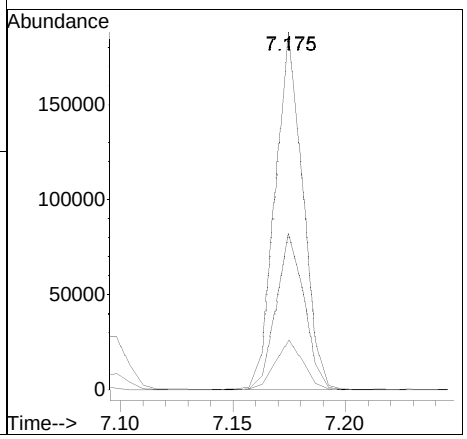


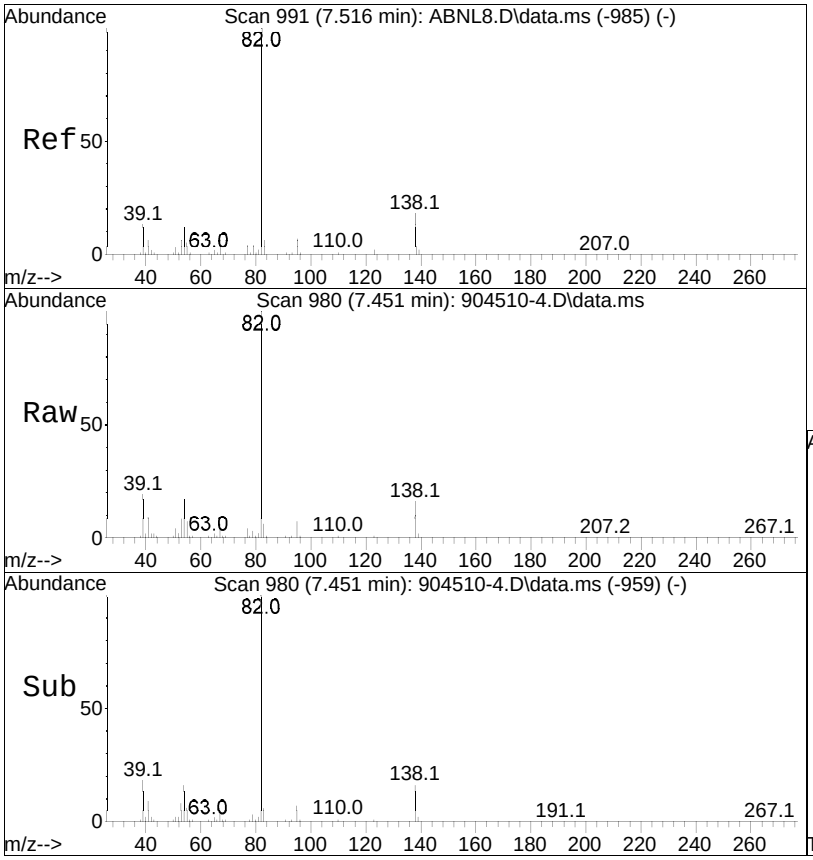


#20
Nitrobenzene
Concen: 2.82 ug/ml
RT: 7.175 min Scan# 933
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 77 Resp: 159025

Ion	Ratio	Lower	Upper
77	100		
123	44.9	36.3	54.5
65	14.4	11.6	17.4

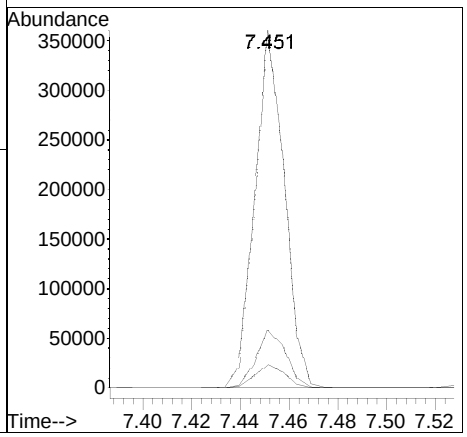


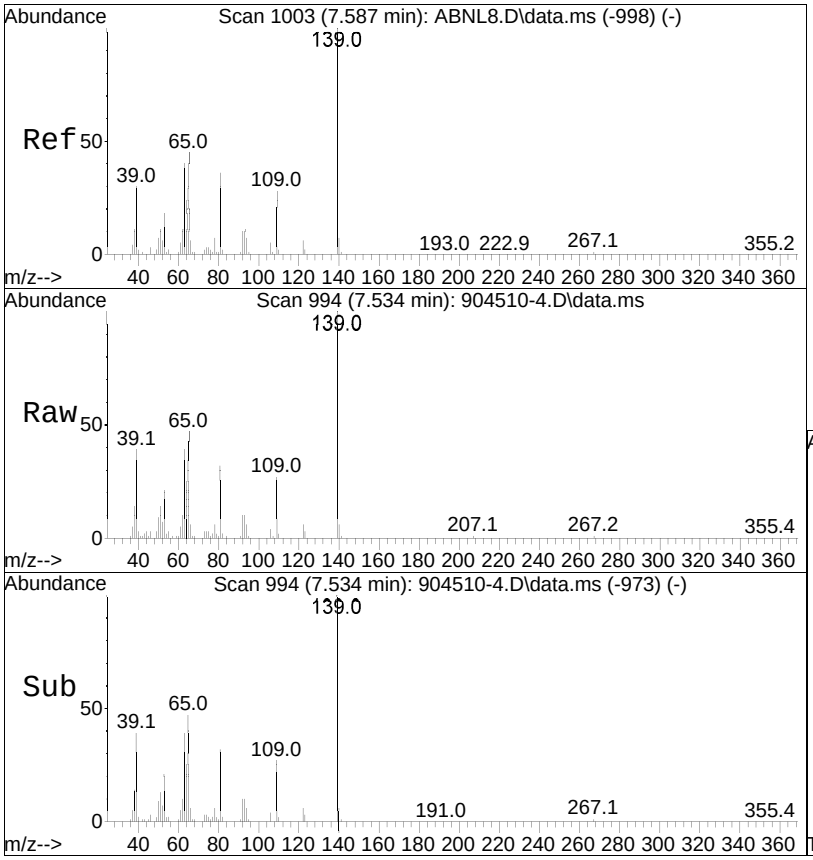


#21
Isophorone
Concen: 3.08 ug/ml
RT: 7.451 min Scan# 980
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 82 Resp: 299296

Ion	Ratio	Lower	Upper
82	100		
138	16.4	14.7	22.1
95	6.9	5.2	7.8

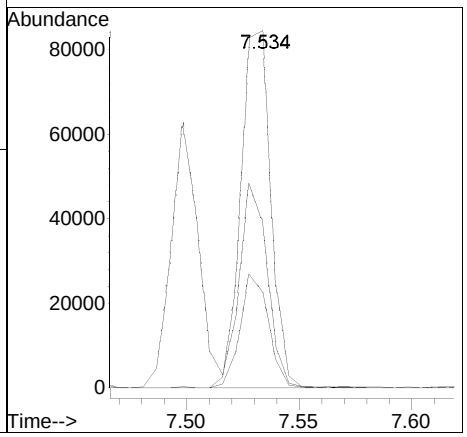


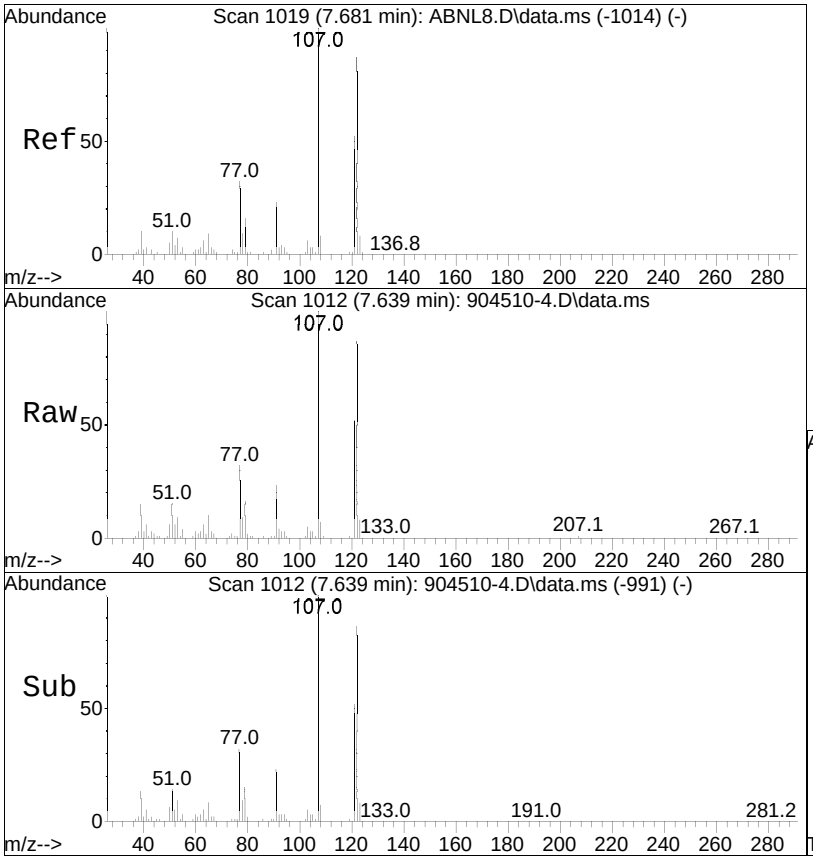


#22
2-Nitrophenol
Concen: 3.39 ug/ml
RT: 7.534 min Scan# 994
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:139 Resp: 78674

Ion	Ratio	Lower	Upper
139	100		
109	30.2	19.4	29.0#
65	52.9	46.1	69.1

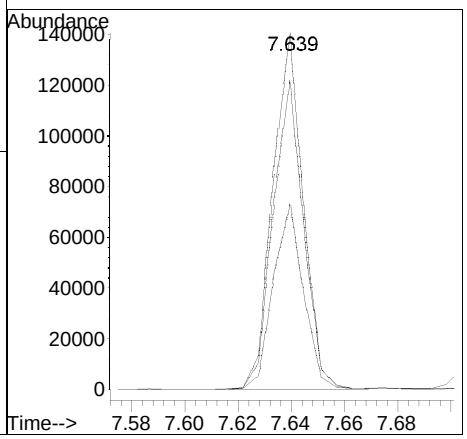


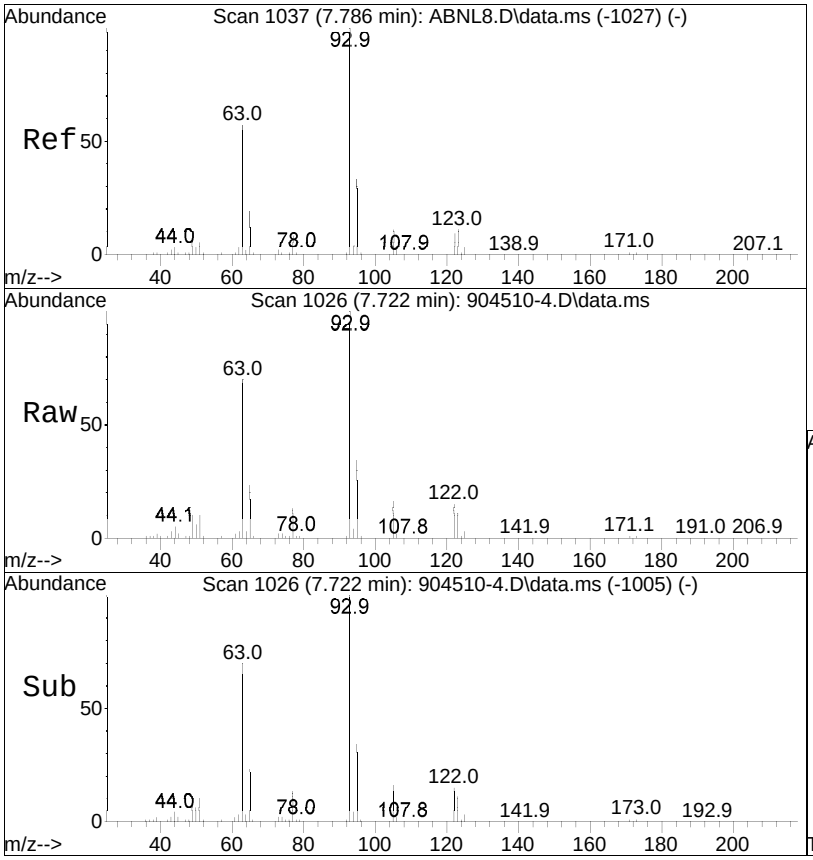


#23
2,4-Dimethylphenol
Concen: 2.86 ug/ml
RT: 7.639 min Scan# 1012
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:107 Resp: 110733

Ion	Ratio	Lower	Upper
107	100		
121	52.3	40.0	60.0
122	87.1	70.2	105.4

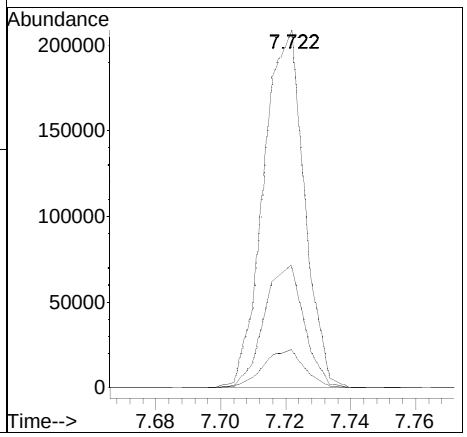


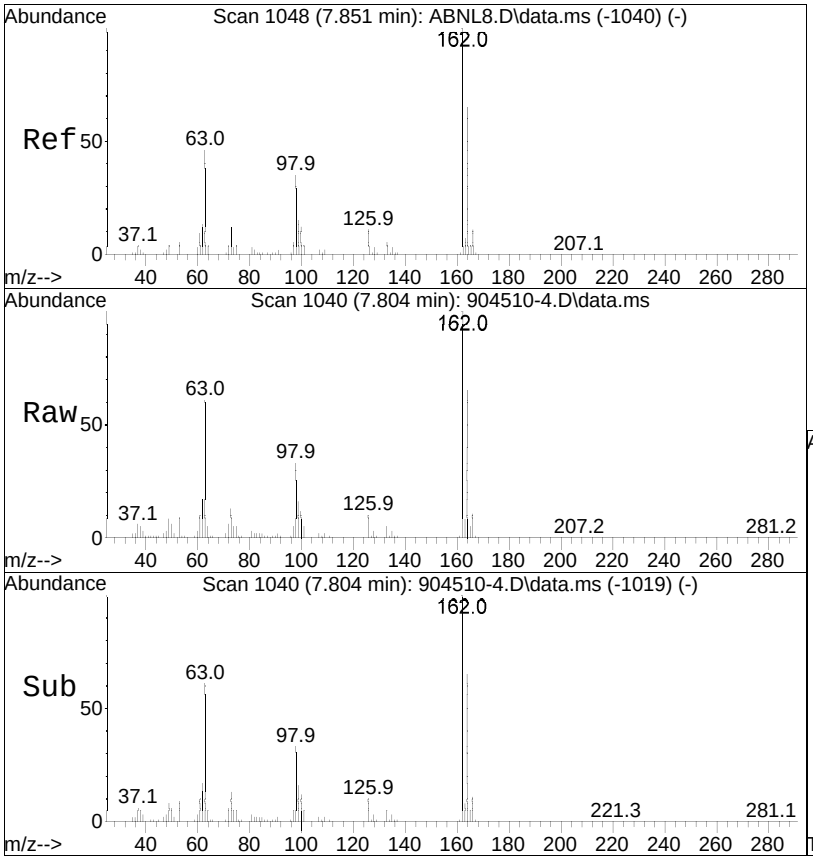


#24
Bis(2-chloroethoxy)methane
Concen: 2.75 ug/ml
RT: 7.722 min Scan# 1026
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 93 Resp: 180474

Ion	Ratio	Lower	Upper
93	100		
95	34.0	25.8	38.8
123	11.1	10.1	15.1

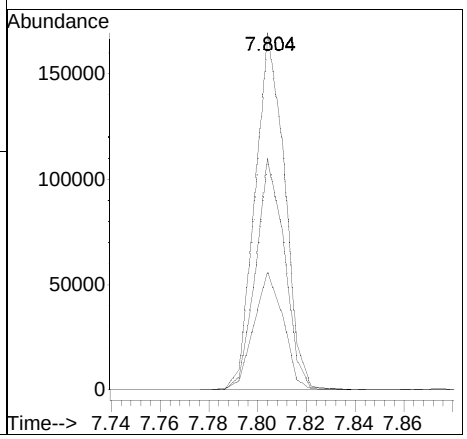


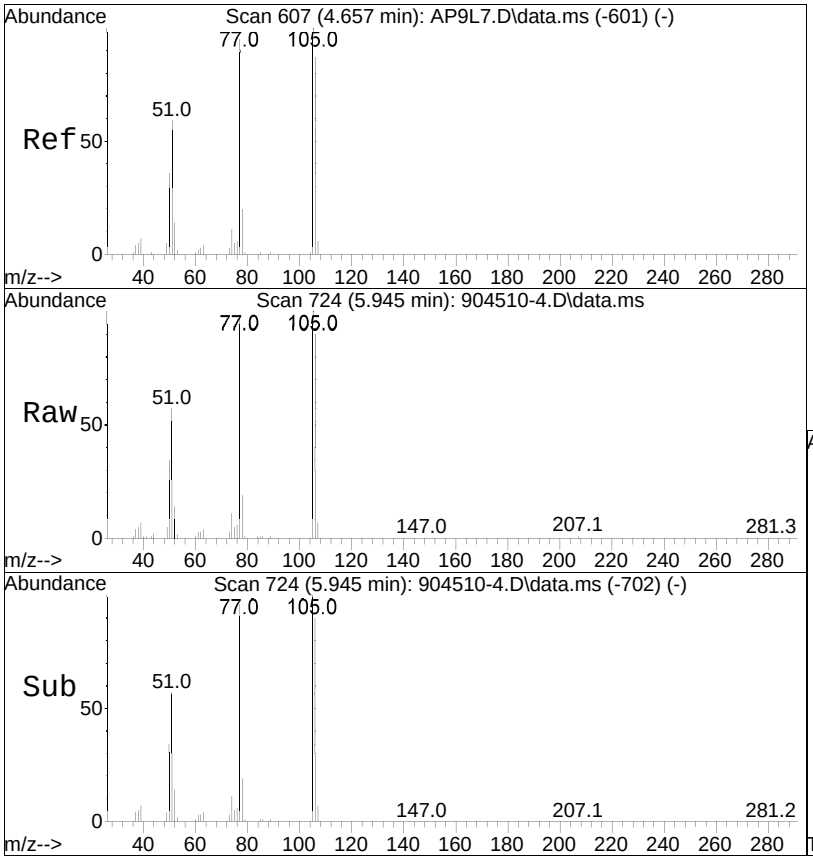


#25
2,4-Dichlorophenol
Concen: 3.15 ug/ml
RT: 7.804 min Scan# 1040
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:162 Resp: 142555

Ion	Ratio	Lower	Upper
162	100		
164	63.5	51.0	76.4
98	33.2	32.2	48.2

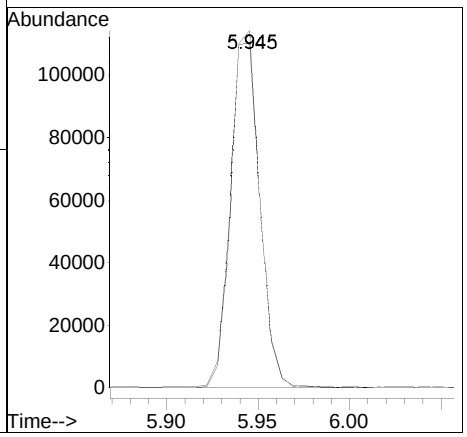


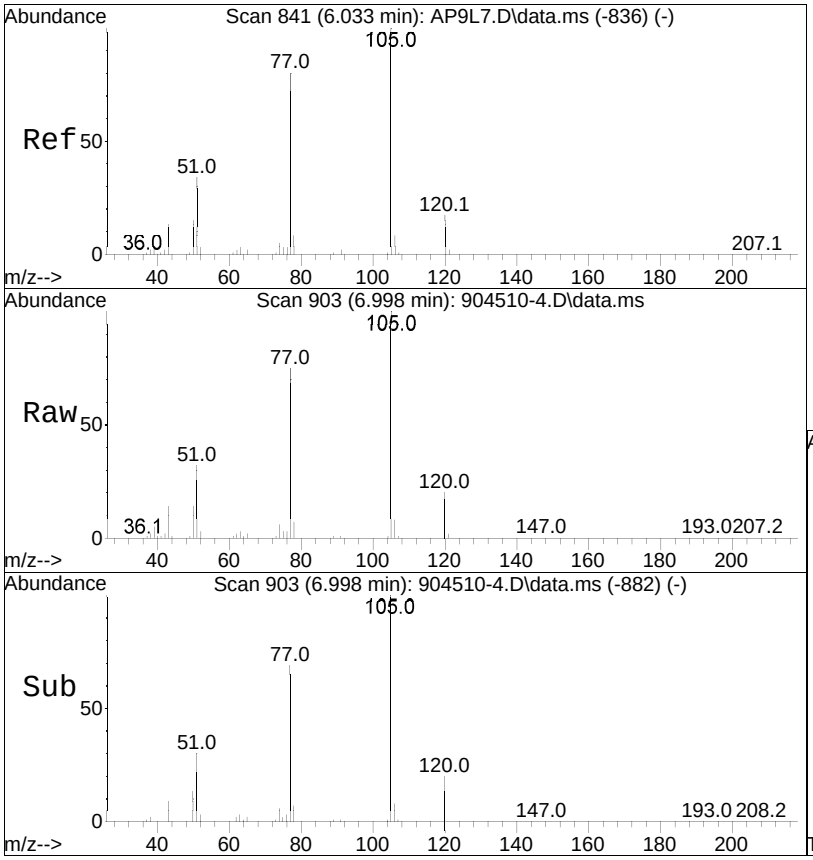


#28
Benzaldehyde
Concen: 3.12 ug/ml
RT: 5.945 min Scan# 724
Delta R.T. 0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:105 Resp: 124516

Ion	Ratio	Lower	Upper
105	100		
77	100.1	82.2	123.4

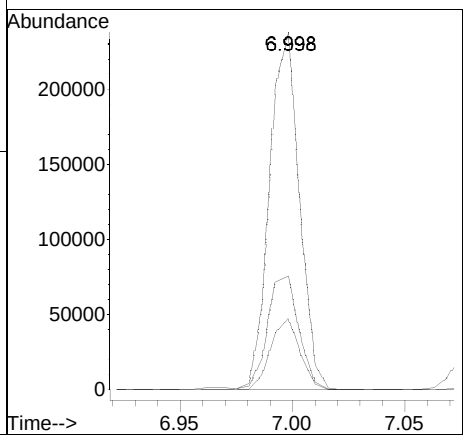


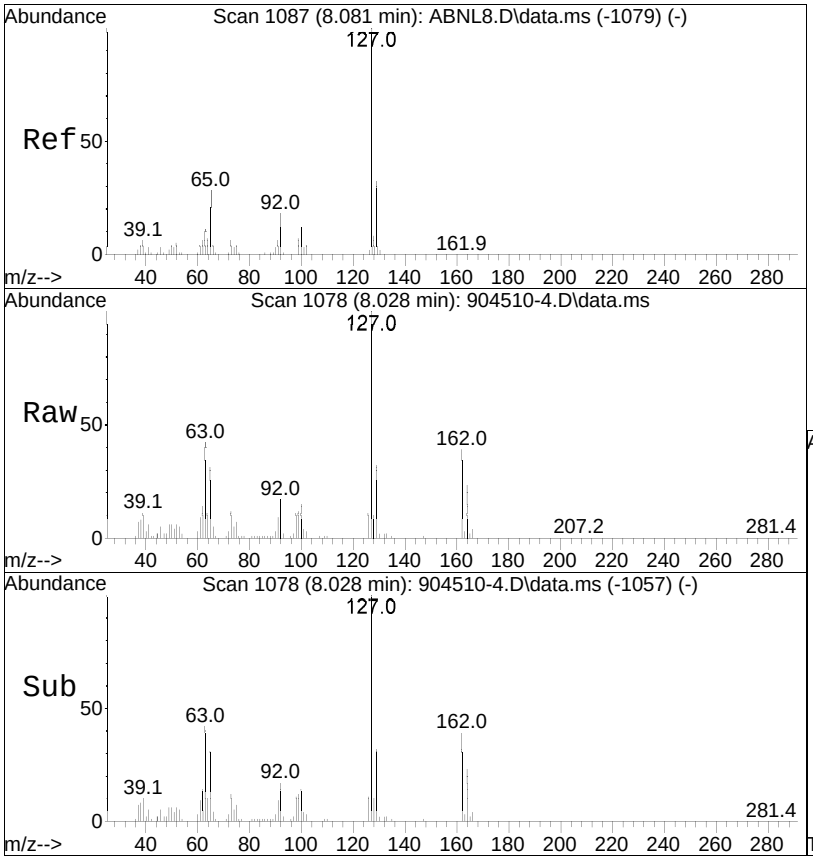


#29
Acetophenone
Concen: 3.21 ug/ml
RT: 6.998 min Scan# 903
Delta R.T. 0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:105 Resp: 217679

Ion	Ratio	Lower	Upper
105	100		
120	19.8	20.5	30.7#
51	33.9	34.9	52.3#

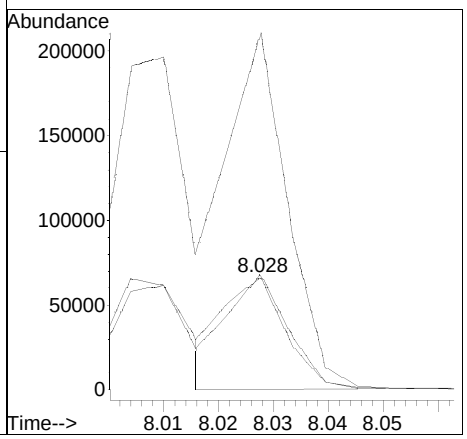


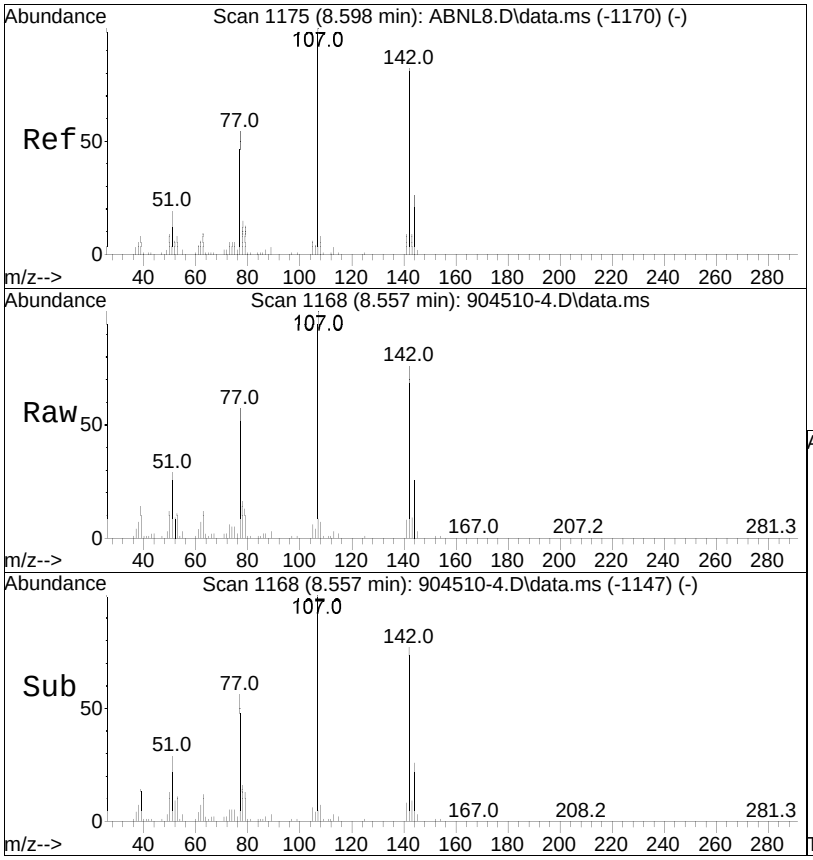


#37
4-Chloroaniline
Concen: 2.51 ug/ml M3
RT: 8.028 min Scan# 1078
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 65 Resp: 52256

Ion	Ratio	Lower	Upper
65	100		
127	359.0	237.6	356.4#
129	111.4	76.3	114.5

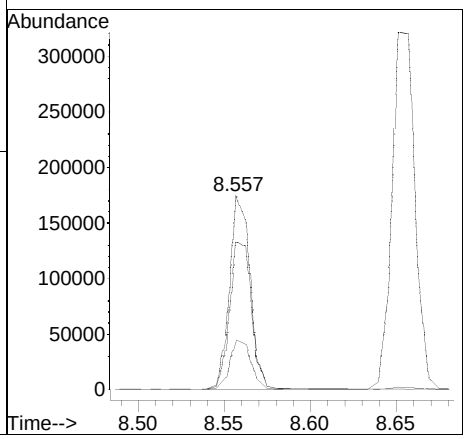


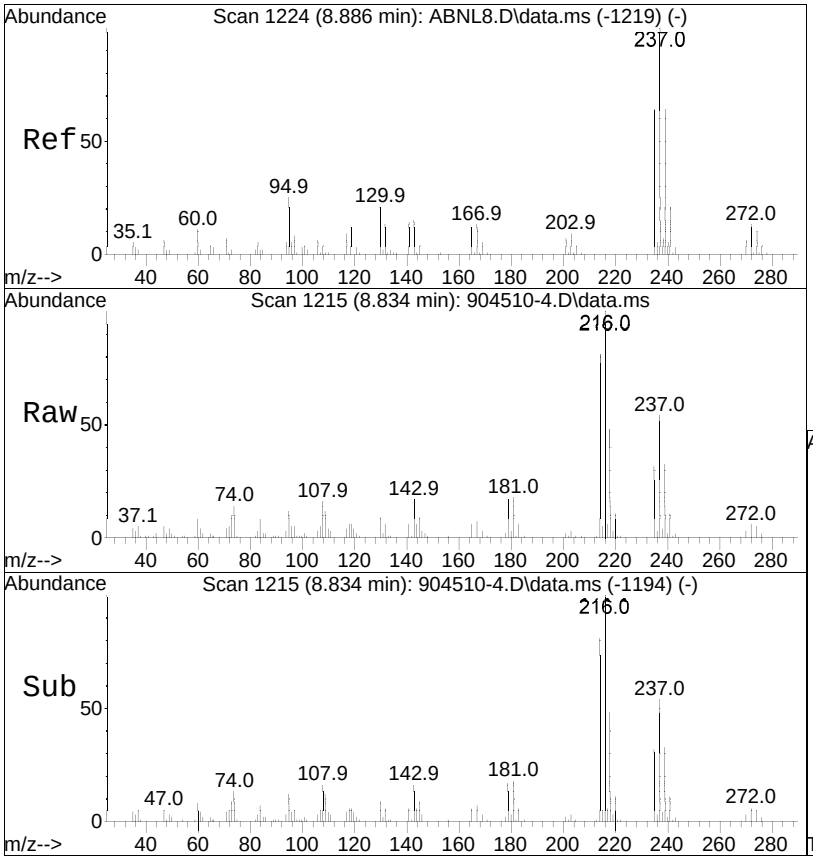


#39
p-Chloro-m-cresol
Concen: 3.39 ug/ml
RT: 8.557 min Scan# 1168
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:107 Resp: 146074

Ion	Ratio	Lower	Upper
107	100		
144	26.0	20.9	31.3
142	80.6	66.1	99.1

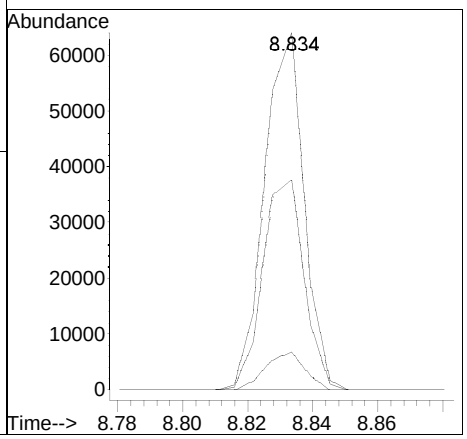


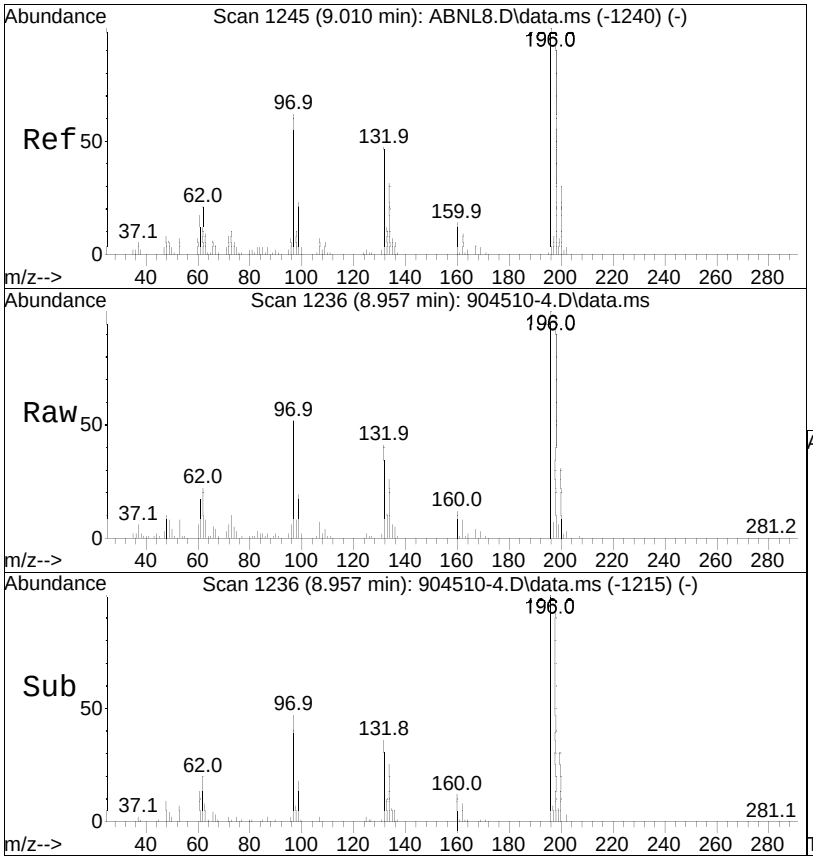


#42
Hexachlorocyclopentadiene
Concen: 2.16 ug/ml
RT: 8.834 min Scan# 1215
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:237 Resp: 54046

Ion	Ratio	Lower	Upper
237	100		
235	61.6	49.7	74.5
272	10.7	9.8	14.6

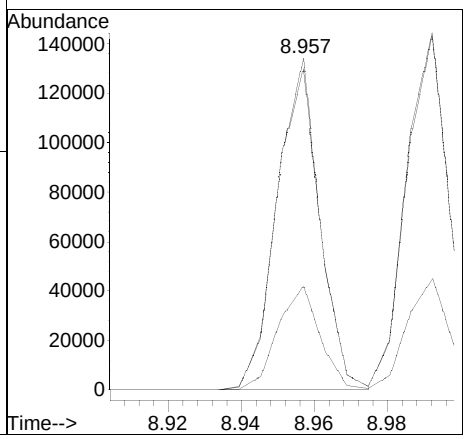


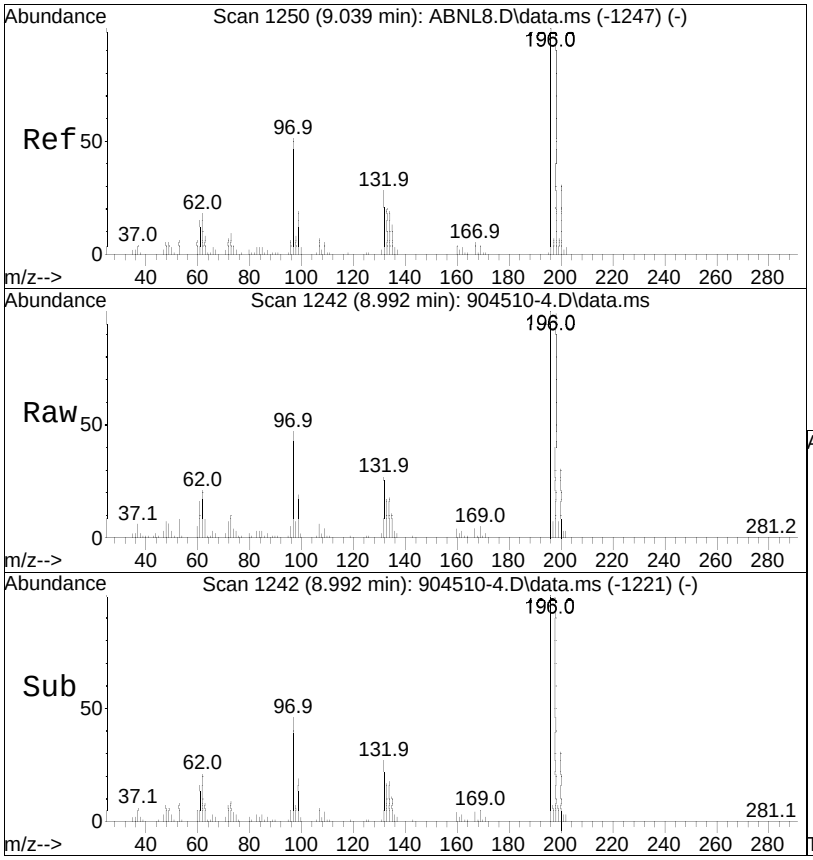


#43
2,4,6-Trichlorophenol
Concen: 3.18 ug/ml
RT: 8.957 min Scan# 1236
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:196 Resp: 108358

Ion	Ratio	Lower	Upper
196	100		
198	99.1	77.5	116.3
200	31.1	23.8	35.6

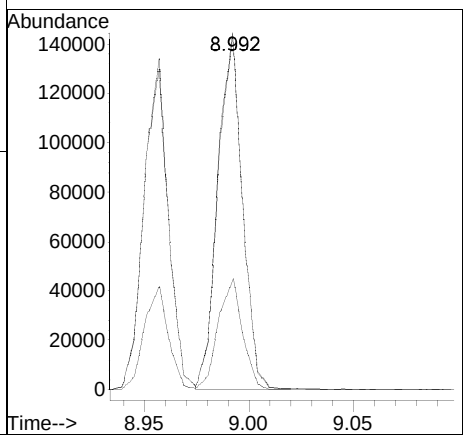


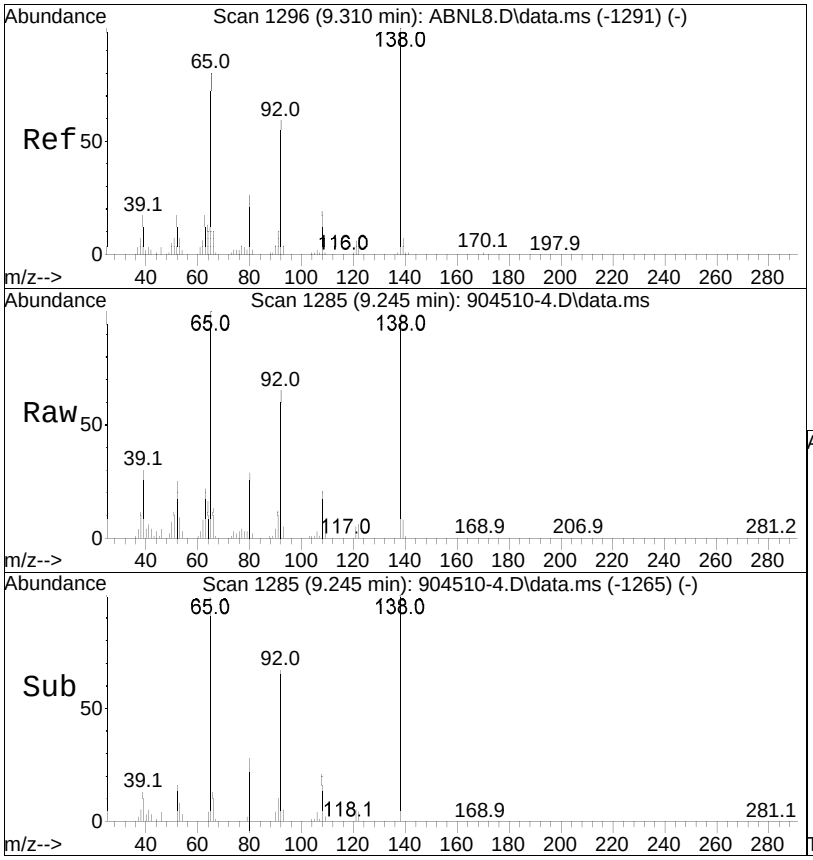


#44
2,4,5-Trichlorophenol
Concen: 3.22 ug/ml
RT: 8.992 min Scan# 1242
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:196 Resp: 119205

Ion	Ratio	Lower	Upper
196	100		
200	30.6	25.4	38.0
198	98.1	78.0	117.0

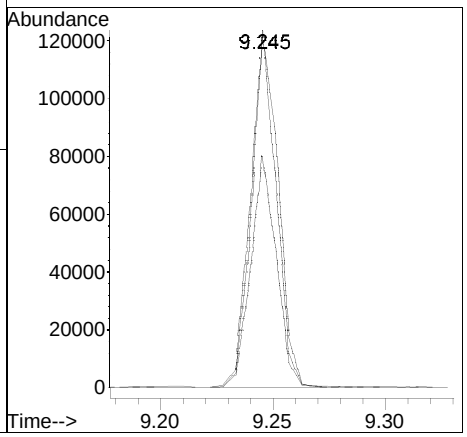


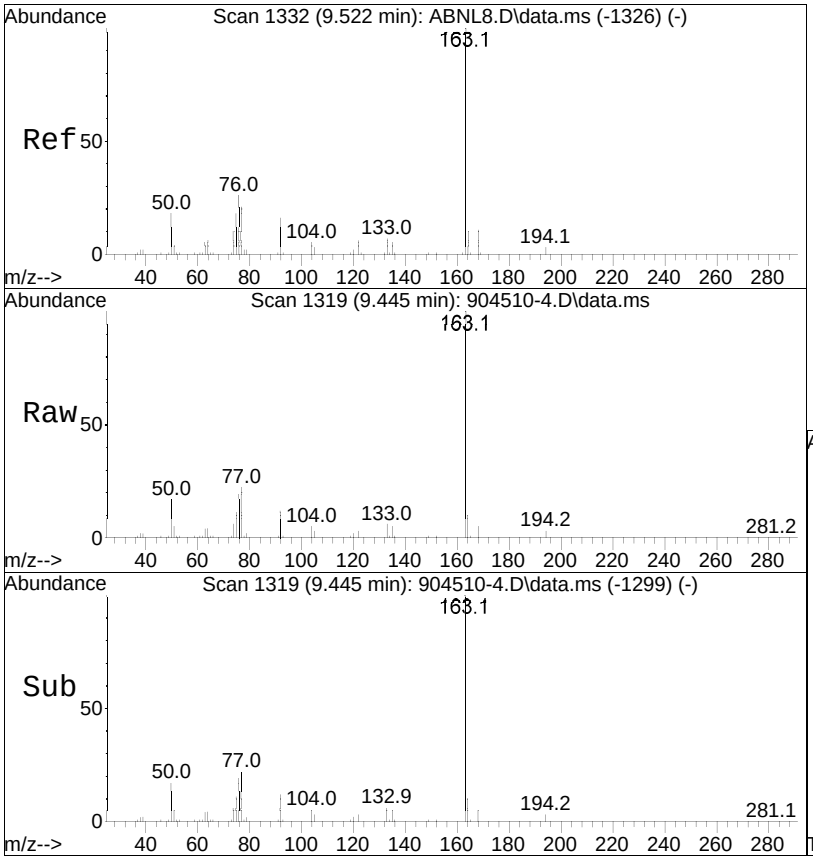


#47
2-Nitroaniline
Concen: 3.13 ug/ml
RT: 9.245 min Scan# 1285
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:138 Resp: 99125

Ion	Ratio	Lower	Upper
138	100		
92	63.1	53.5	80.3
65	97.2	86.3	129.5

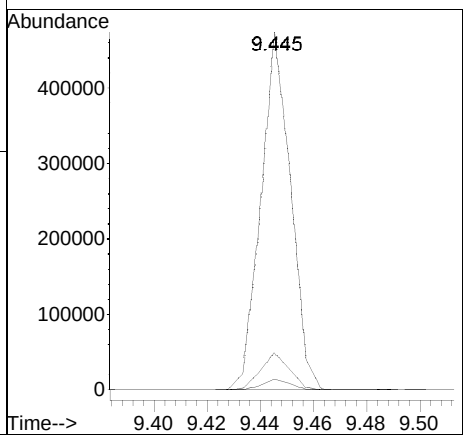


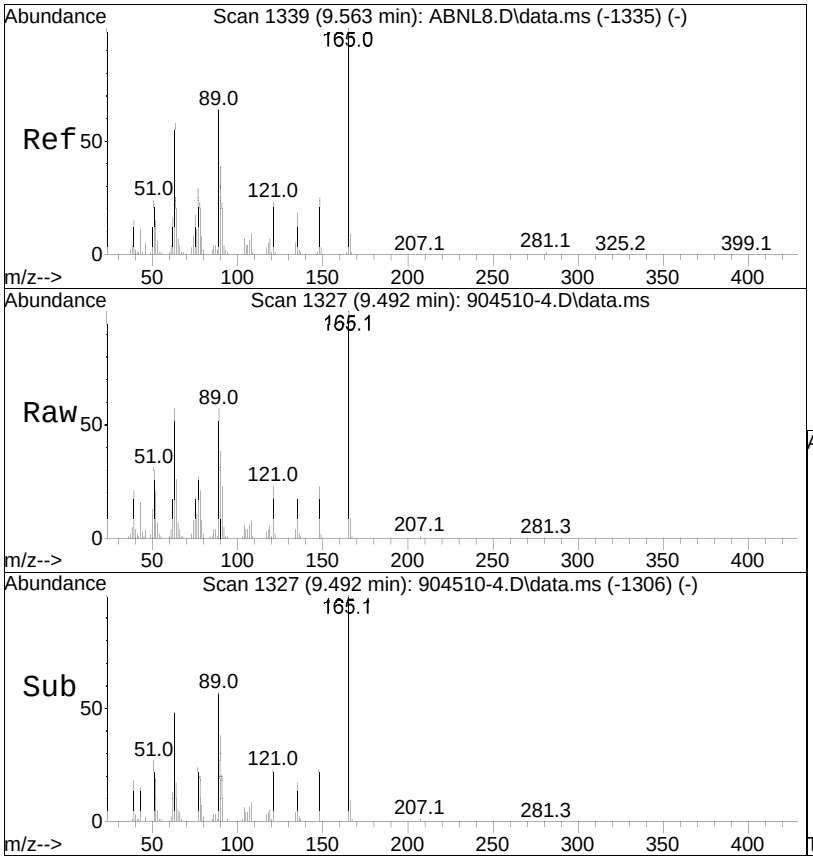


#50
Dimethyl phthalate
Concen: 2.89 ug/ml
RT: 9.445 min Scan# 1319
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:163 Resp: 362607

Ion	Ratio	Lower	Upper
163	100		
194	3.0	3.5	5.3#
164	10.3	7.9	11.9

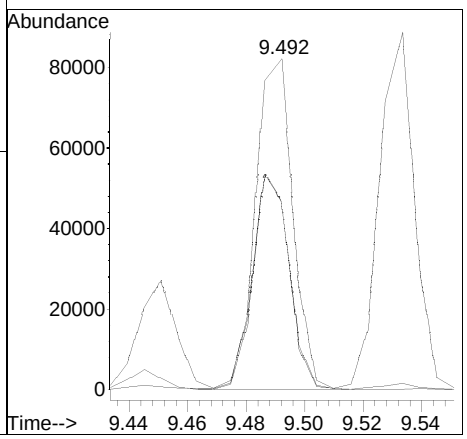


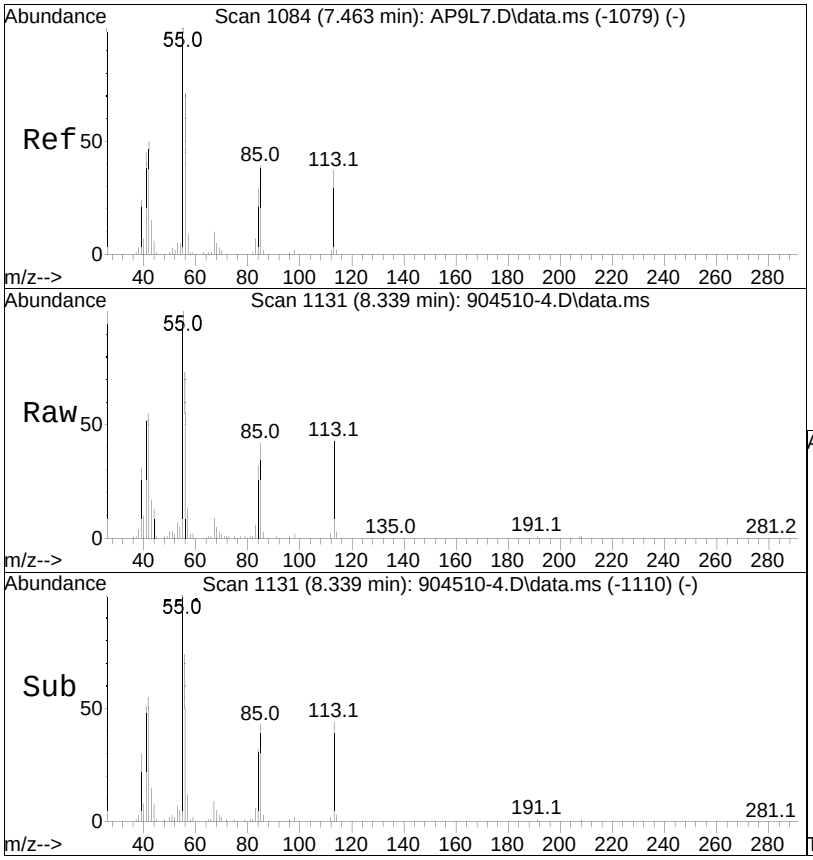


#52
2,6-Dinitrotoluene
Concen: 2.81 ug/ml
RT: 9.492 min Scan# 1327
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:165 Resp: 73127

Ion	Ratio	Lower	Upper
165	100		
89	62.7	54.2	81.2
63	63.5	64.2	96.2#

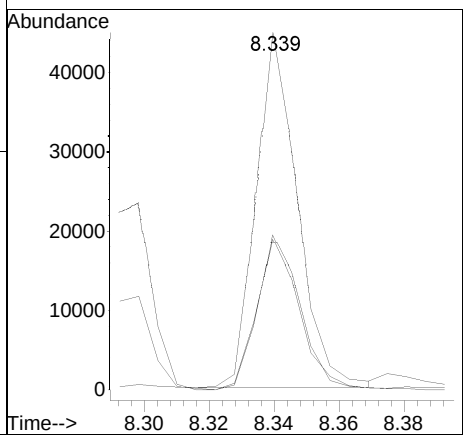


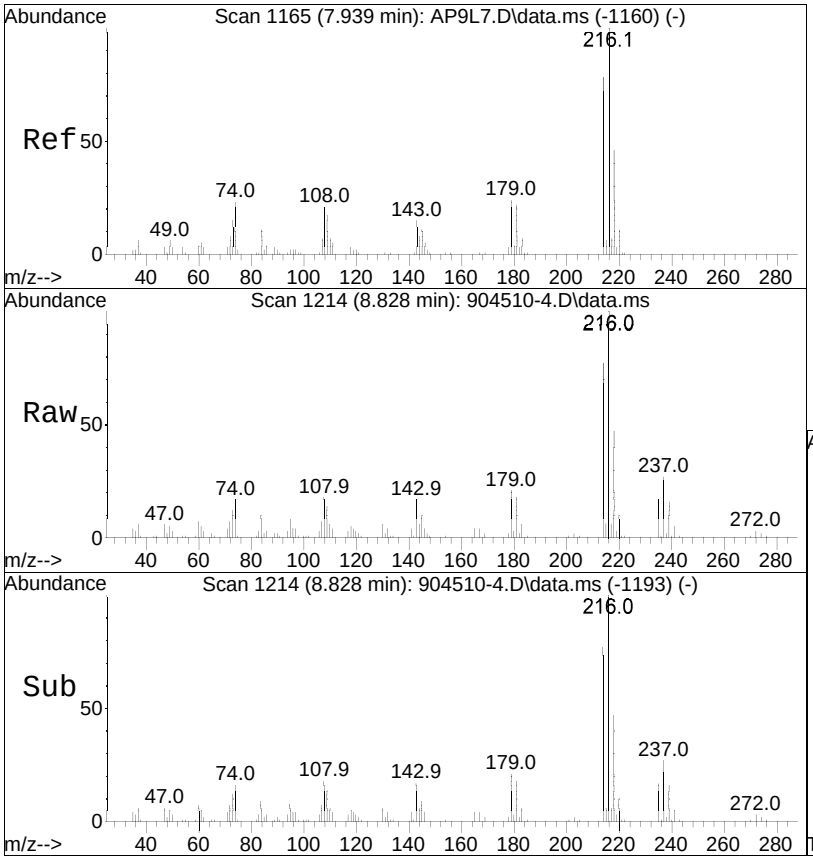


#59
Caprolactam
Concen: 2.27 ug/ml
RT: 8.339 min Scan# 1131
Delta R.T. 0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 55 Resp: 39390

Ion	Ratio	Lower	Upper
55	100		
85	44.4	19.8	29.6#
113	45.5	29.6	44.4#

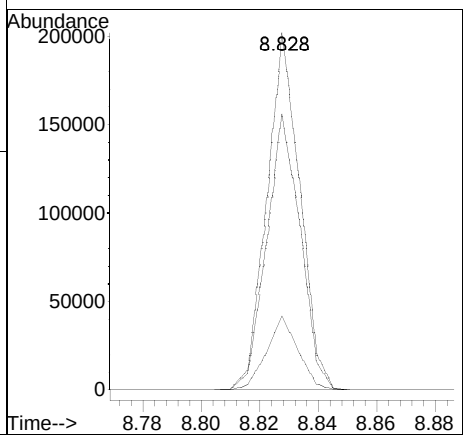


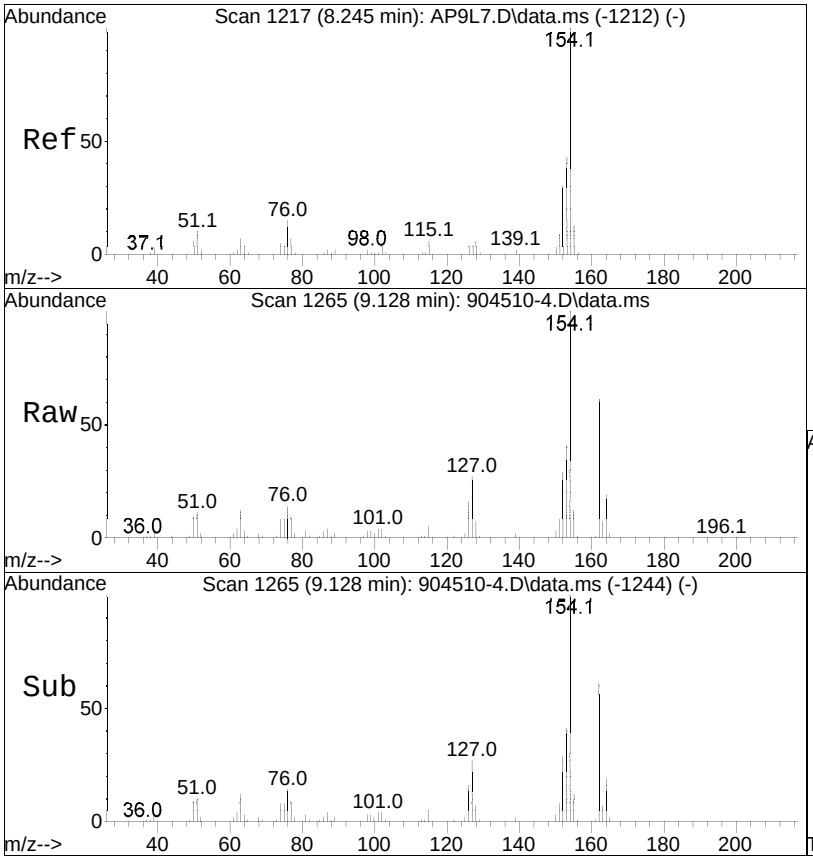


#60
1,2,4,5-Tetrachlorobenzene
Concen: 2.59 ug/ml
RT: 8.828 min Scan# 1214
Delta R.T. 0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:216 Resp: 157449

Ion	Ratio	Lower	Upper
216	100		
214	78.7	63.7	95.5
179	19.9	19.0	28.6

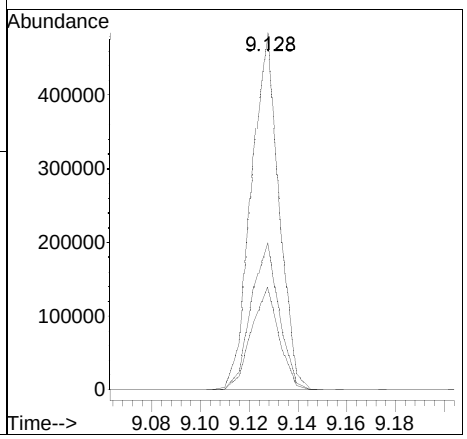


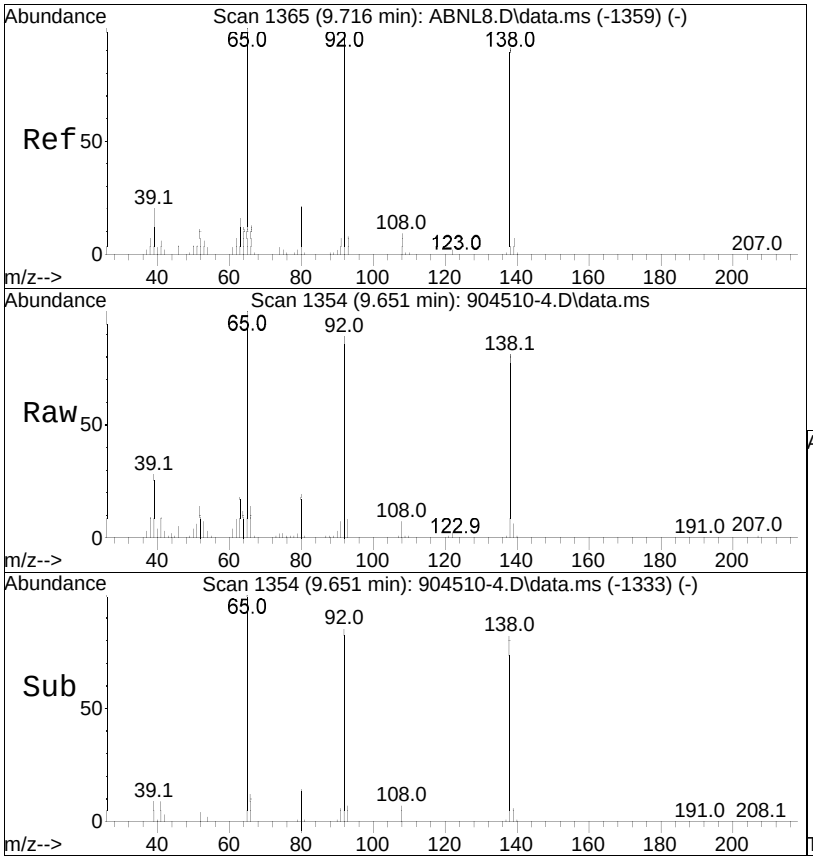


#61
Biphenyl
Concen: 2.79 ug/ml
RT: 9.128 min Scan# 1265
Delta R.T. 0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:154 Resp: 380029

Ion	Ratio	Lower	Upper
154	100		
153	41.8	32.3	48.5
152	29.0	22.5	33.7

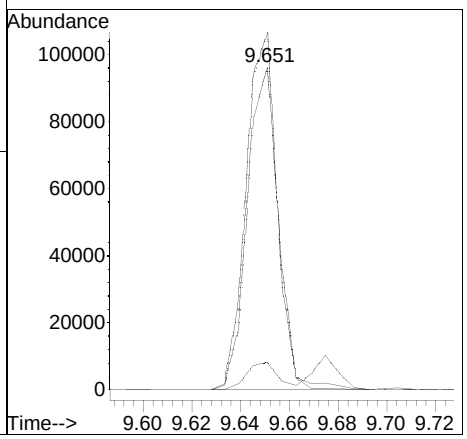


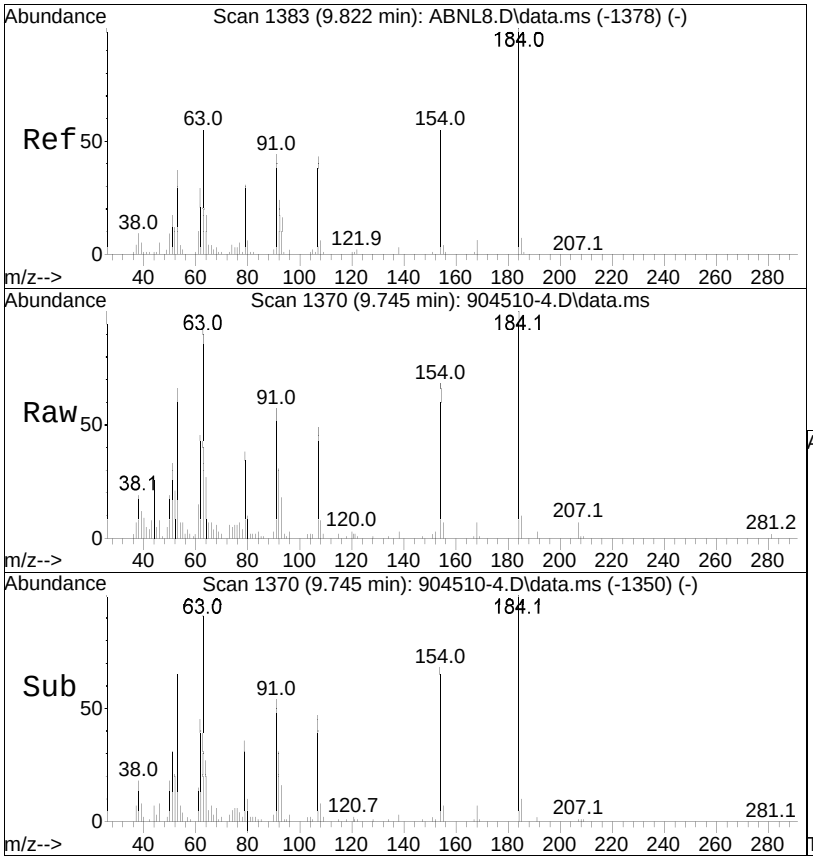


#63
3-Nitroaniline
Concen: 3.31 ug/ml
RT: 9.651 min Scan# 1354
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:138 Resp: 83783

Ion	Ratio	Lower	Upper
138	100		
92	112.8	93.4	140.2
108	9.0	9.5	14.3#

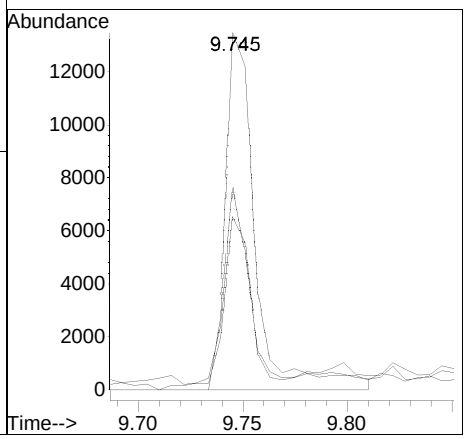


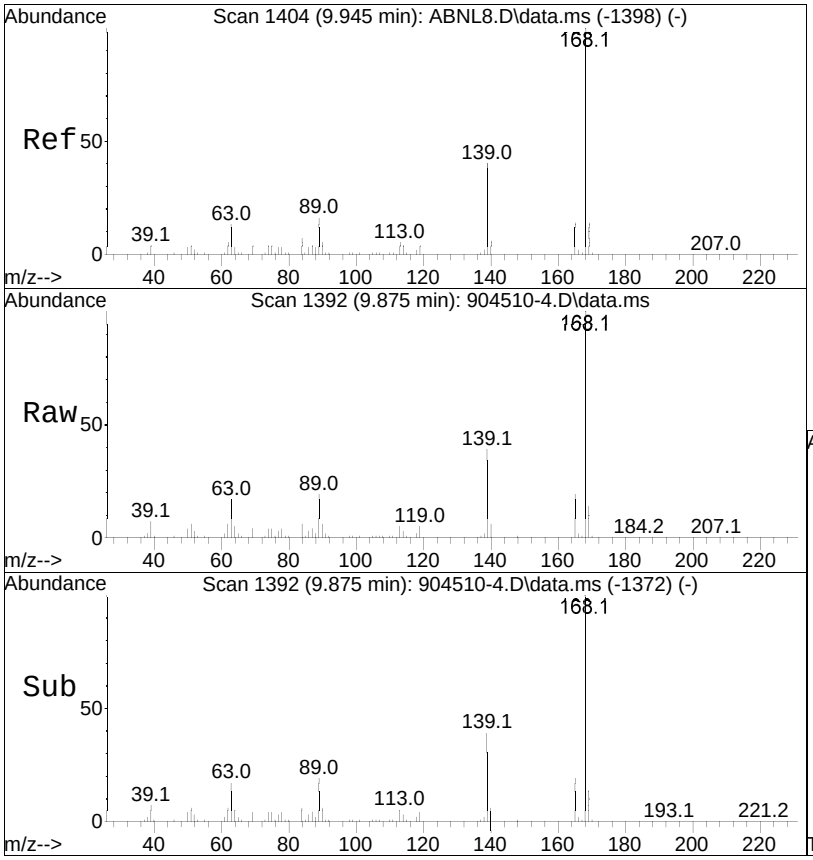


#65
2,4-Dinitrophenol
Concen: 1.70 ug/ml
RT: 9.745 min Scan# 1370
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:184 Resp: 13419

Ion	Ratio	Lower	Upper
184	100		
107	45.1	37.7	56.5
91	44.6	46.3	69.5#

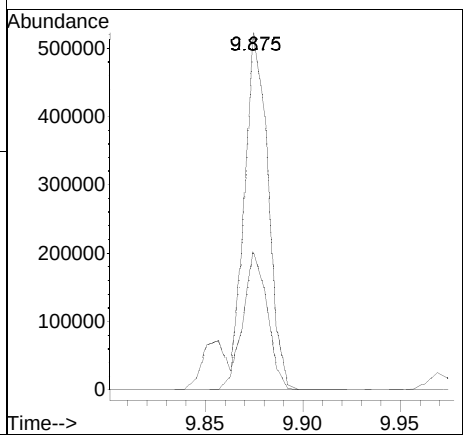


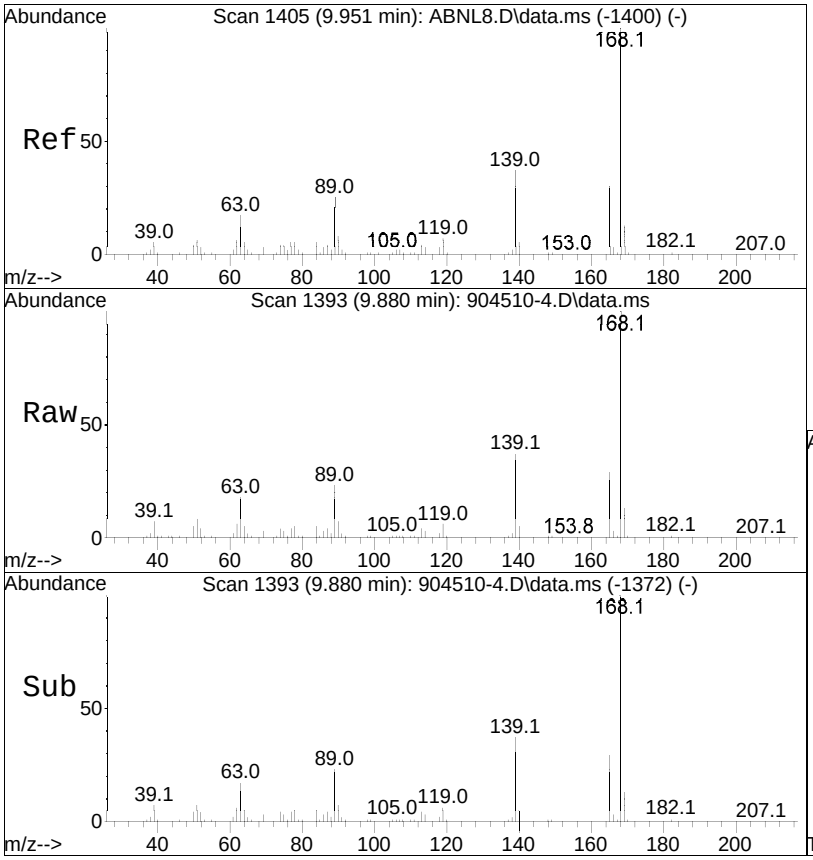


#66
Dibenzofuran
Concen: 2.83 ug/ml
RT: 9.875 min Scan# 1392
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:168 Resp: 437615

Ion	Ratio	Lower	Upper
168	100		
139	52.8	31.4	47.2#

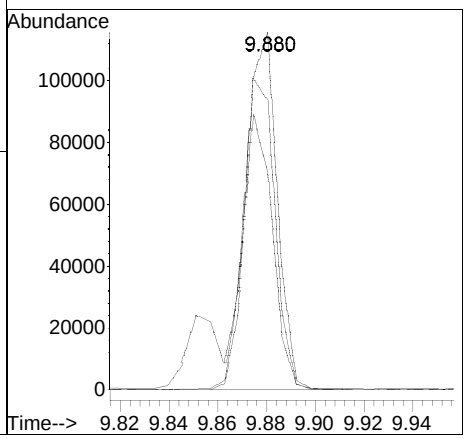


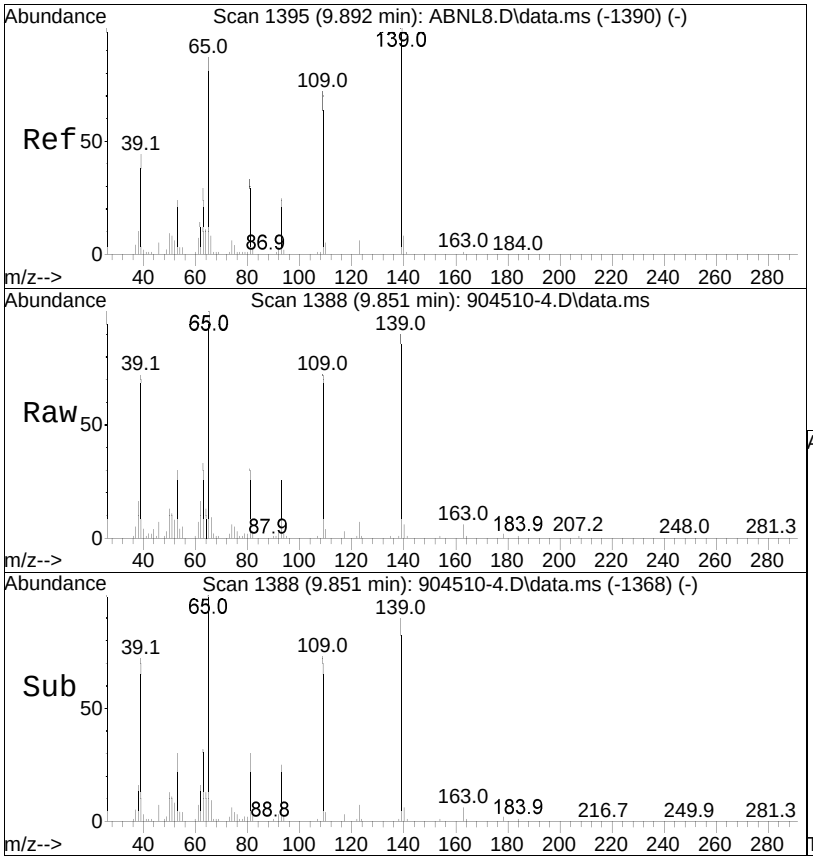


#67
2,4-Dinitrotoluene
Concen: 3.11 ug/ml
RT: 9.880 min Scan# 1393
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:165 Resp: 100914

Ion	Ratio	Lower	Upper
165	100		
89	90.6	72.0	108.0
63	95.6	52.7	79.1#

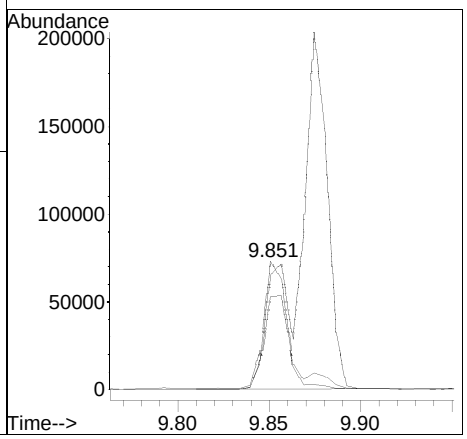


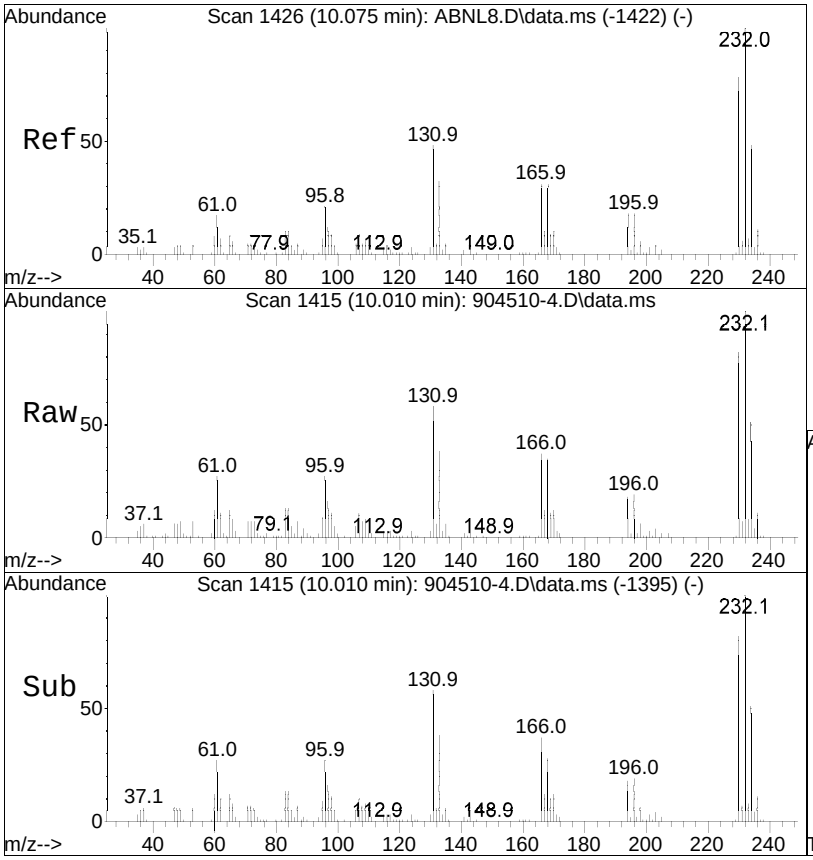


#68
4-Nitrophenol
Concen: 3.33 ug/ml
RT: 9.851 min Scan# 1388
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion: 65 Resp: 70976

Ion	Ratio	Lower	Upper
65	100		
109	72.3	47.4	71.2#
139	325.7	76.6	115.0#

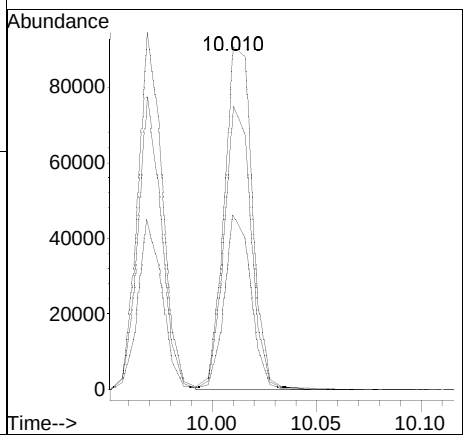


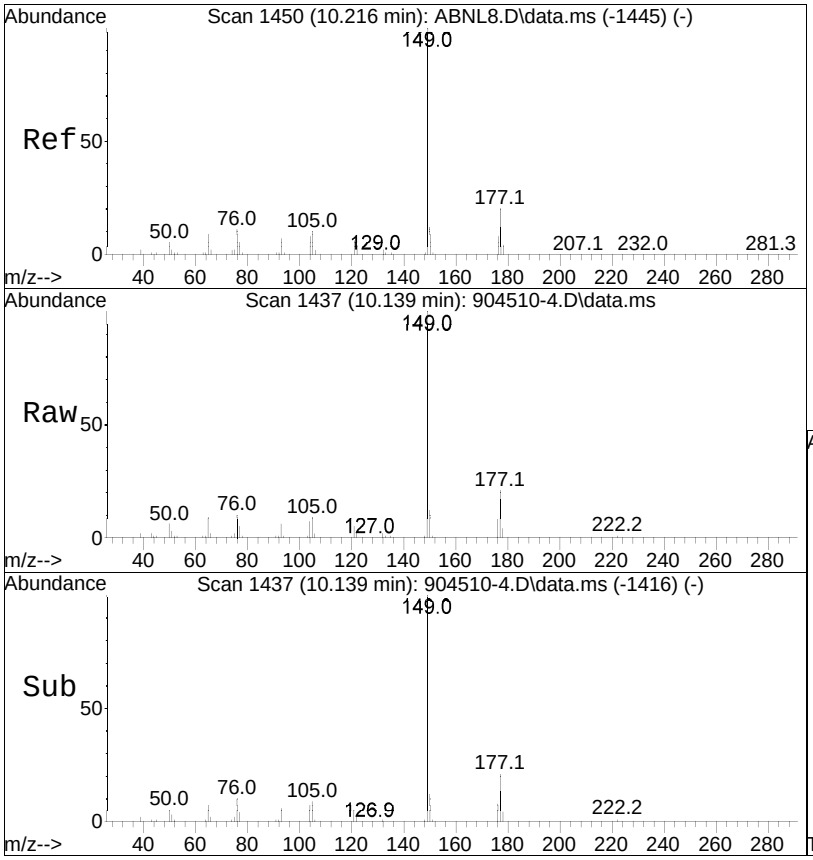


#70
2,3,4,6-Tetrachlorophenol
Concen: 3.17 ug/ml
RT: 10.010 min Scan# 1415
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:232 Resp: 85019

Ion	Ratio	Lower	Upper
232	100		
230	78.8	61.8	92.8
234	48.5	36.2	54.2

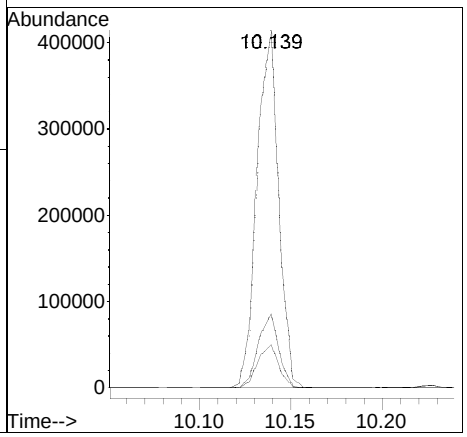


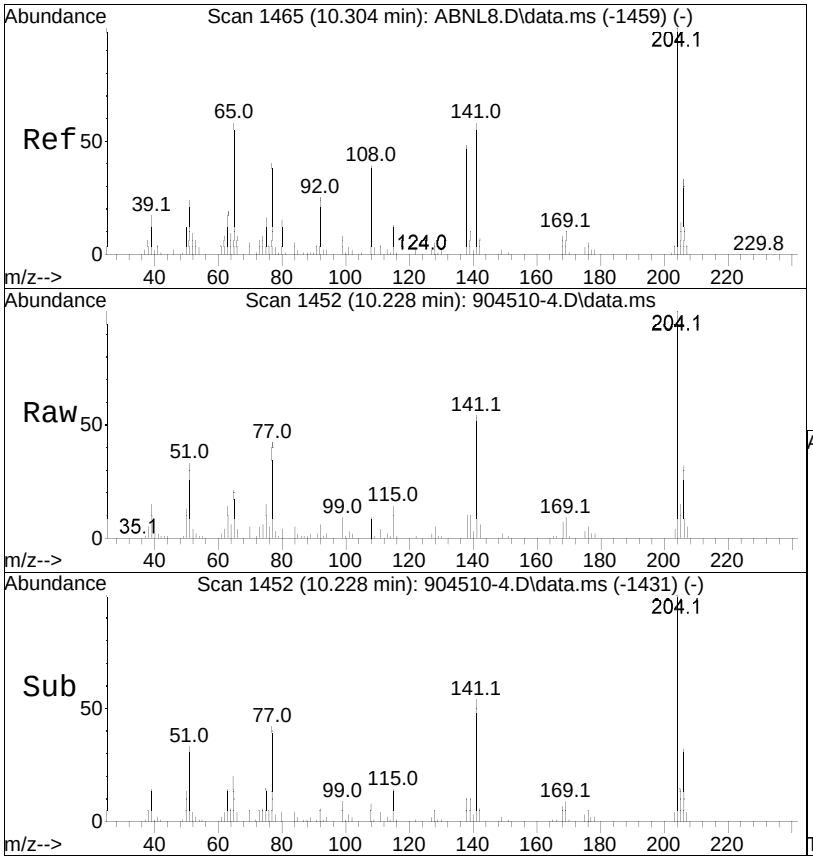


#71
Diethyl phthalate
Concen: 3.10 ug/ml
RT: 10.139 min Scan# 1437
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:149 Resp: 337331

Ion	Ratio	Lower	Upper
149	100		
177	19.9	16.1	24.1
150	12.0	9.4	14.2

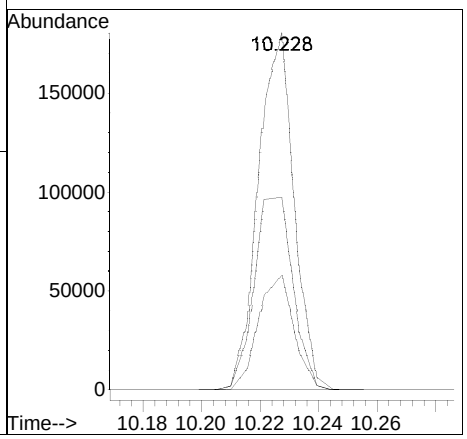


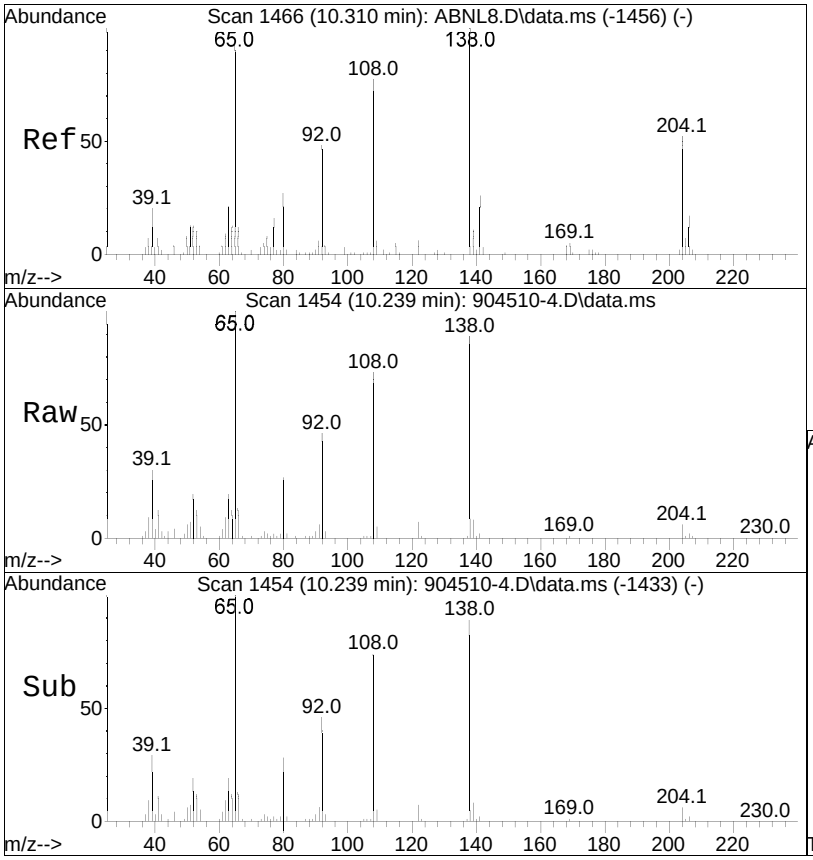


#73
4-Chlorophenyl phenyl ether
Concen: 2.53 ug/ml
RT: 10.228 min Scan# 1452
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:204 Resp: 151287

Ion	Ratio	Lower	Upper
204	100		
206	32.3	25.8	38.6
141	59.1	53.6	80.4

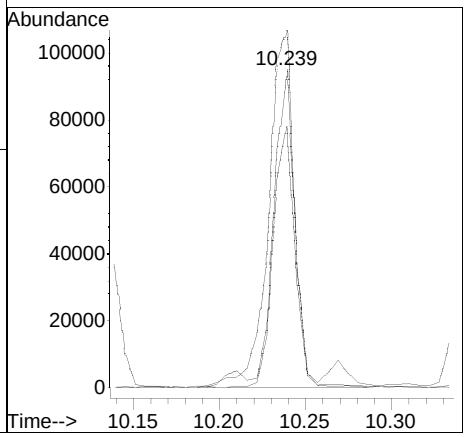


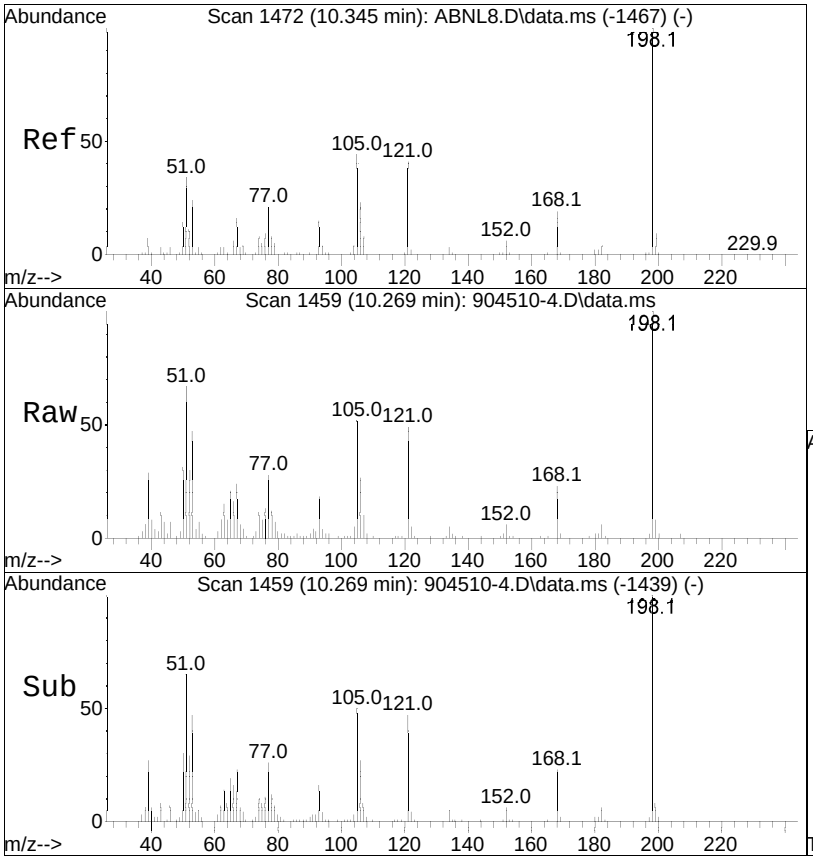


#74
4-Nitroaniline
Concen: 3.30 ug/ml
RT: 10.239 min Scan# 1454
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:138 Resp: 83976

Ion	Ratio	Lower	Upper
138	100		
108	81.7	52.1	78.1#
65	131.1	115.0	172.6

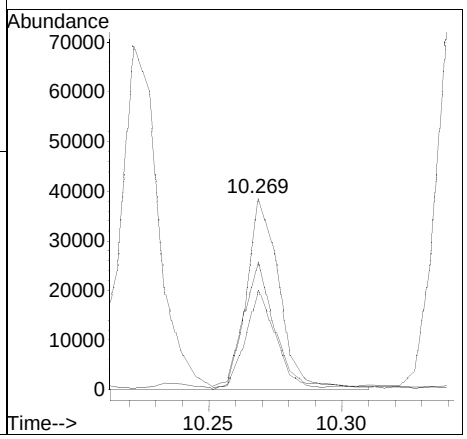


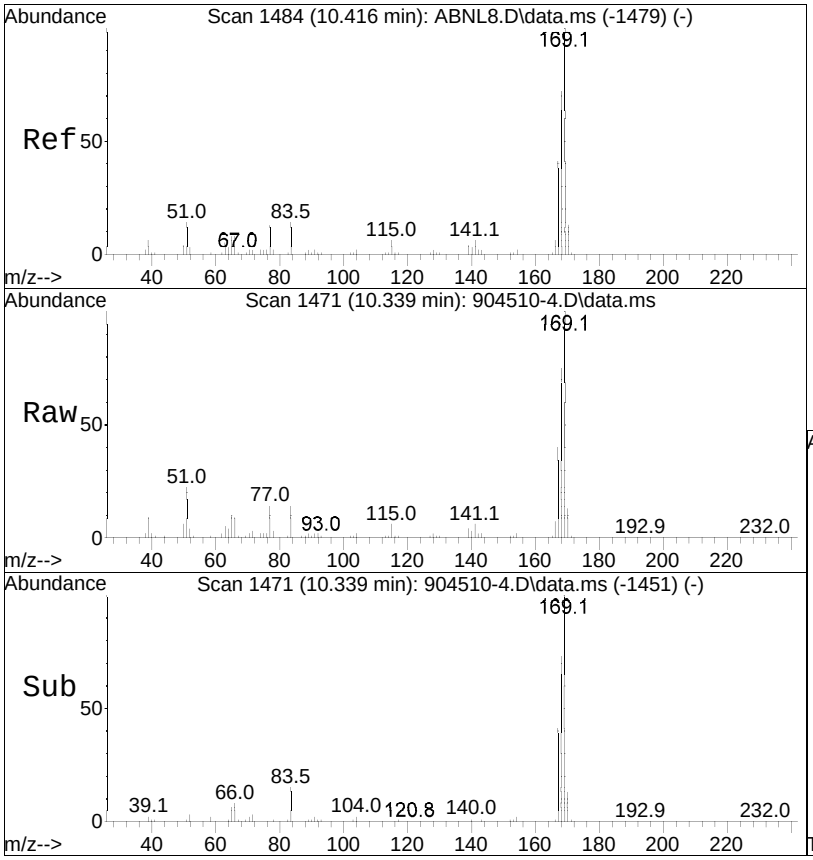


#75
4,6-Dinitro-o-cresol
Concen: 2.22 ug/ml
RT: 10.269 min Scan# 1459
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:198 Resp: 33118

Ion	Ratio	Lower	Upper
198	100		
51	59.6	76.0	114.0#
105	47.0	45.6	68.4

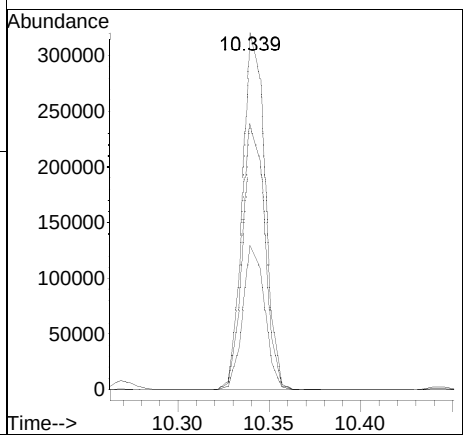


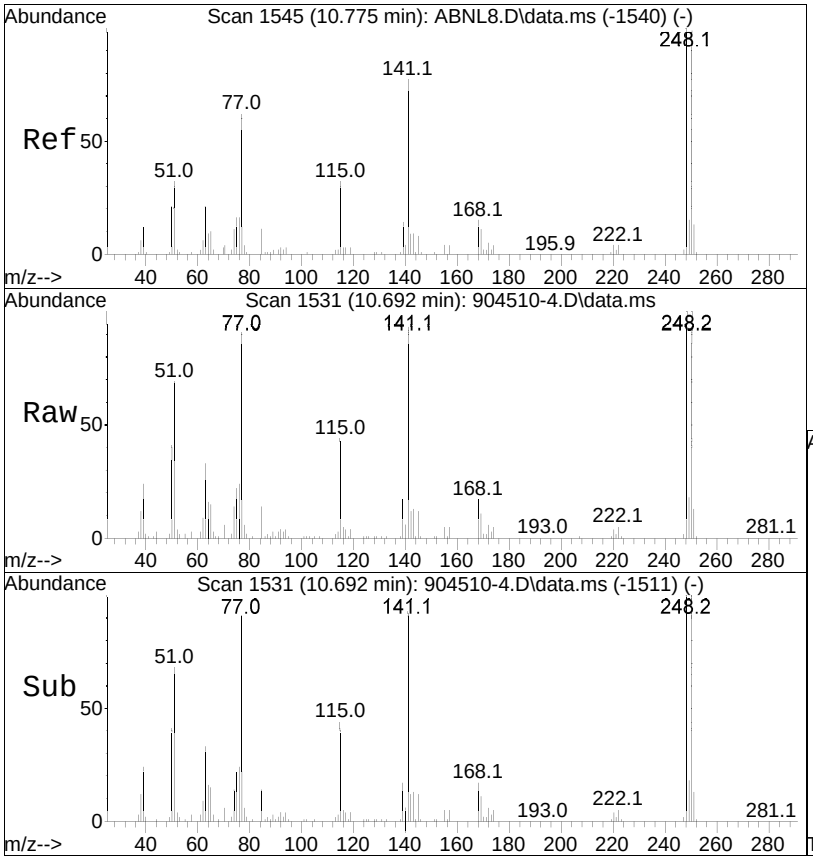


#76
NDPA/DPA
Concen: 2.94 ug/ml
RT: 10.339 min Scan# 1471
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:169 Resp: 274045

Ion	Ratio	Lower	Upper
169	100		
168	73.7	54.0	81.0
167	39.8	28.6	42.8

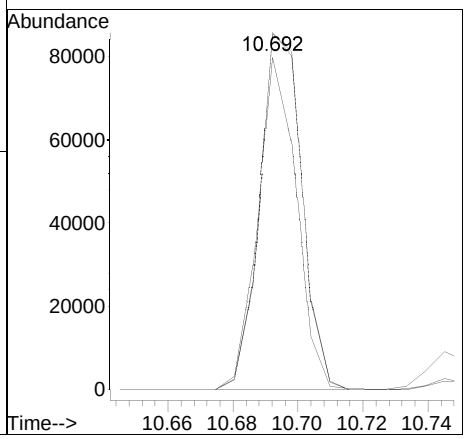


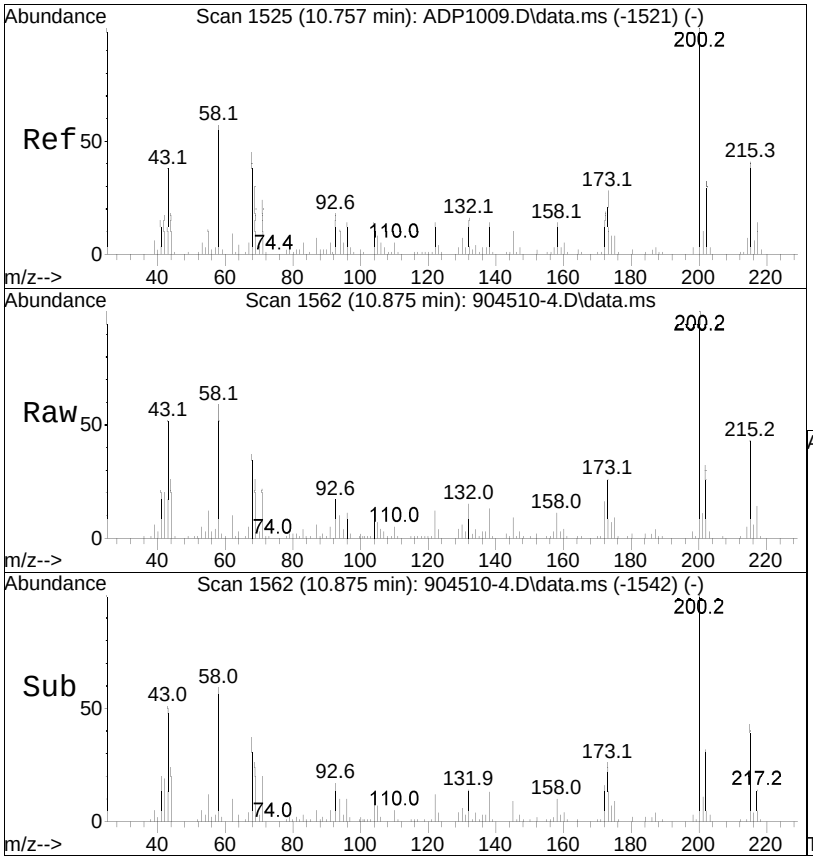


#79
4-Bromophenyl phenyl ether
Concen: 2.45 ug/ml
RT: 10.692 min Scan# 1531
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:248 Resp: 77054

Ion	Ratio	Lower	Upper
248	100		
141	85.4	76.6	114.8
250	99.7	77.3	115.9

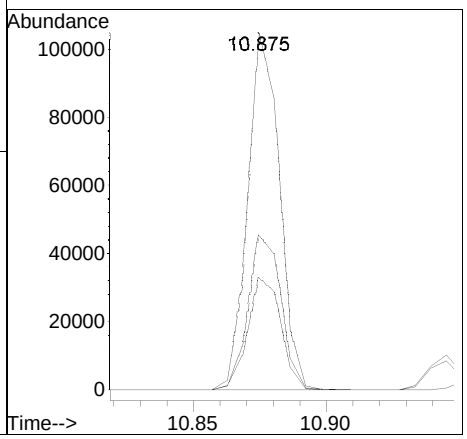


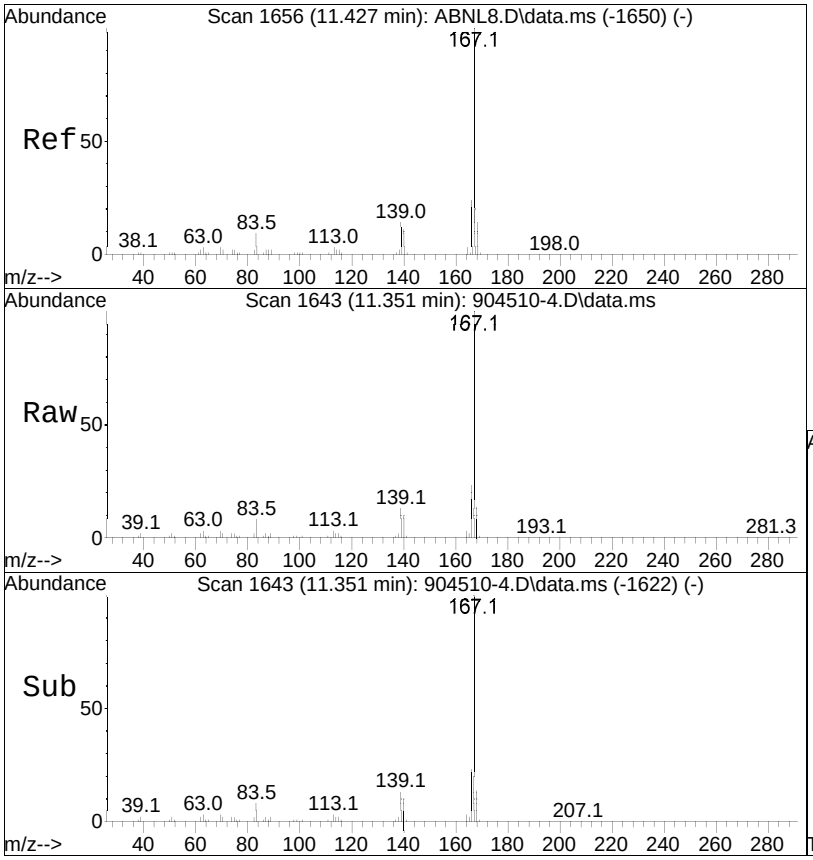


#86
Atrazine
Concen: 3.27 ug/ml
RT: 10.875 min Scan# 1562
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:200 Resp: 86479

Ion	Ratio	Lower	Upper
200	100		
202	33.0	25.8	38.6
215	45.1	40.2	60.4

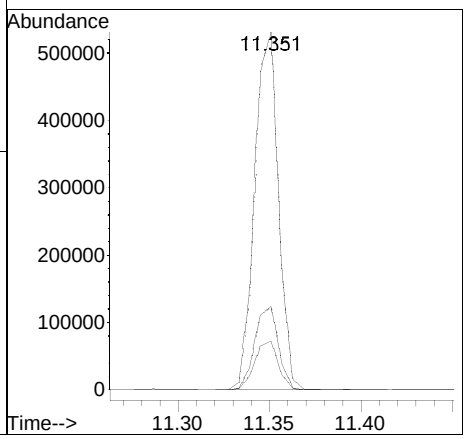


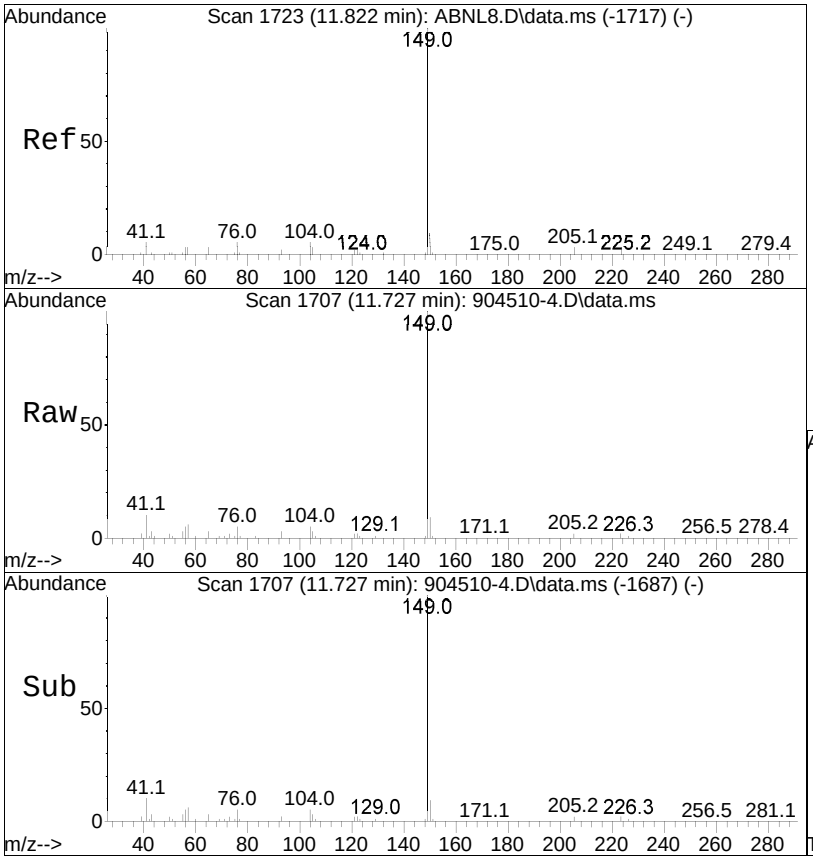


#90
Carbazole
Concen: 3.30 ug/ml
RT: 11.351 min Scan# 1643
Delta R.T. -0.000 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:167 Resp: 473042

Ion	Ratio	Lower	Upper
167	100		
168	13.8	10.6	15.8
166	23.4	17.4	26.0

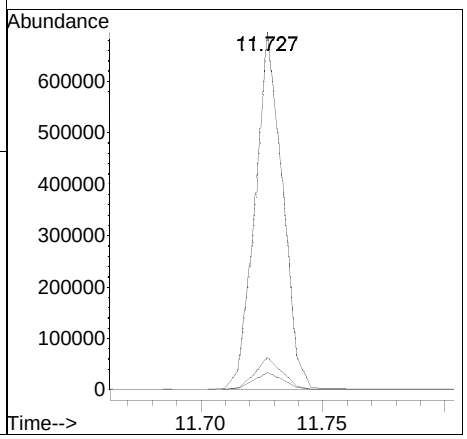


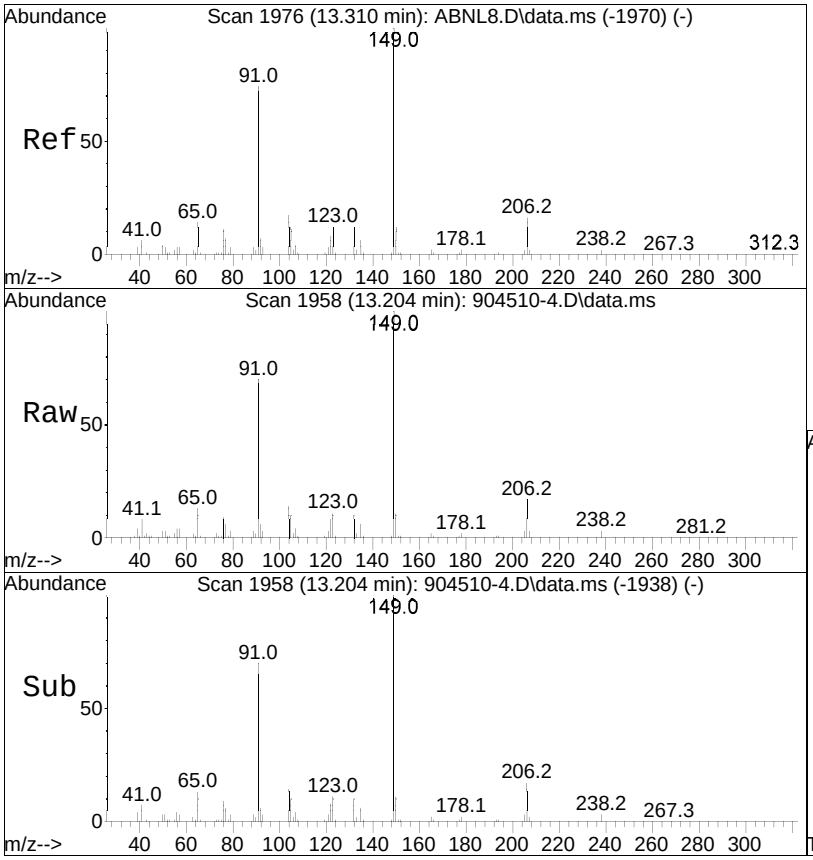


#91
Di-n-butylphthalate
Concen: 3.52 ug/ml
RT: 11.727 min Scan# 1707
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:149 Resp: 536467

Ion	Ratio	Lower	Upper
149	100		
150	9.0	7.0	10.6
104	5.1	4.5	6.7

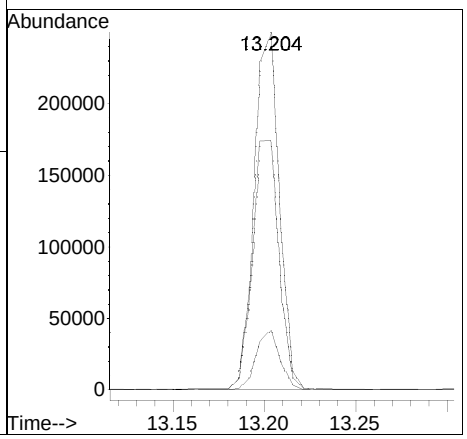


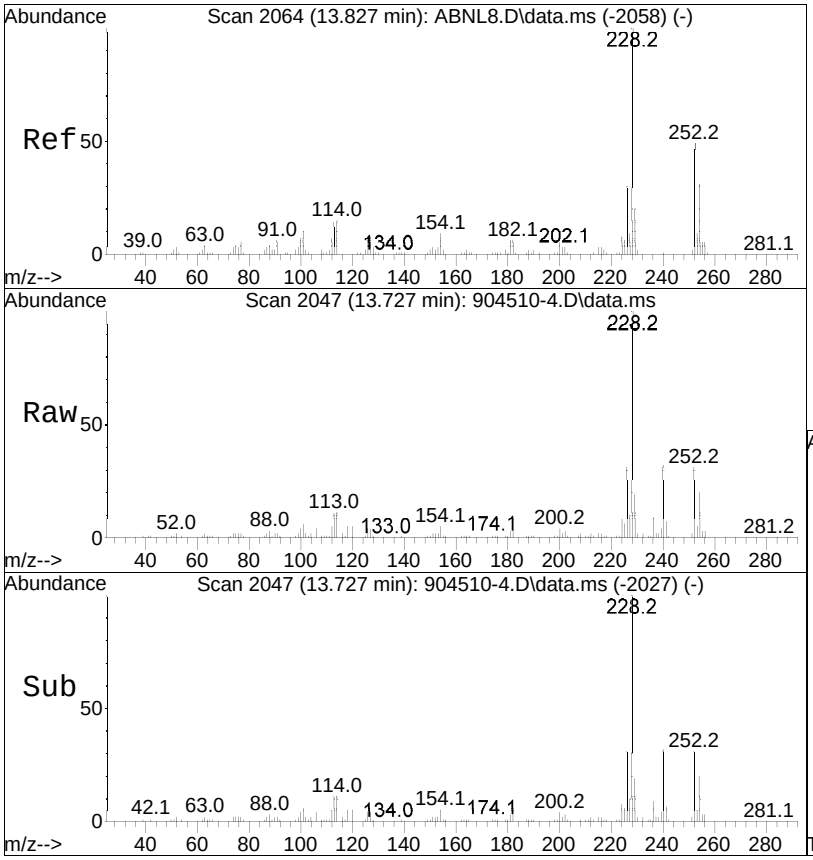


#96
Butyl benzyl phthalate
Concen: 3.59 ug/ml
RT: 13.204 min Scan# 1958
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:149 Resp: 235996

Ion	Ratio	Lower	Upper
149	100		
91	73.0	63.3	94.9
206	15.9	13.9	20.9

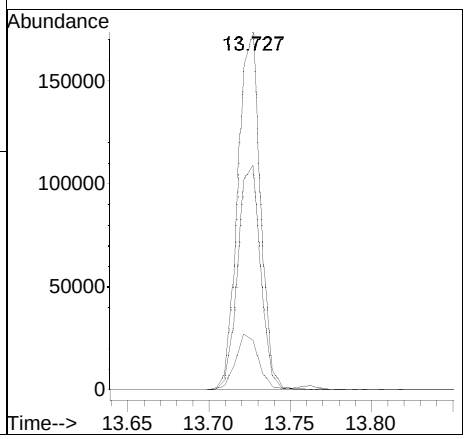


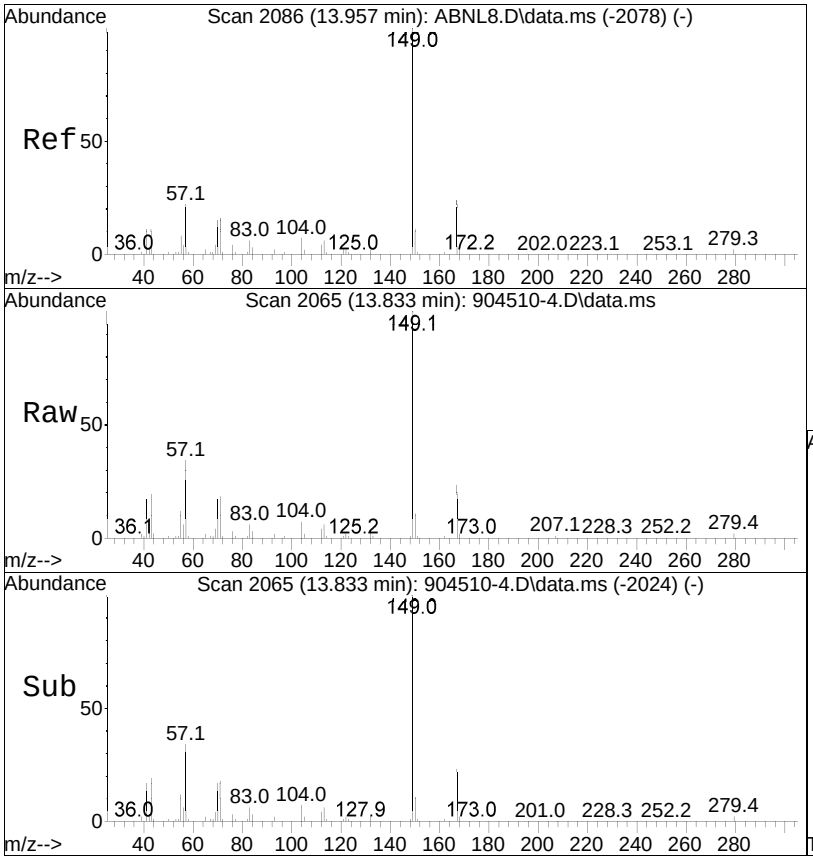


#105
3,3'-Dichlorobenzidine
Concen: 3.51 ug/ml
RT: 13.727 min Scan# 2047
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:252 Resp: 167155

Ion	Ratio	Lower	Upper
252	100		
126	16.2	14.5	21.7
254	63.5	51.2	76.8

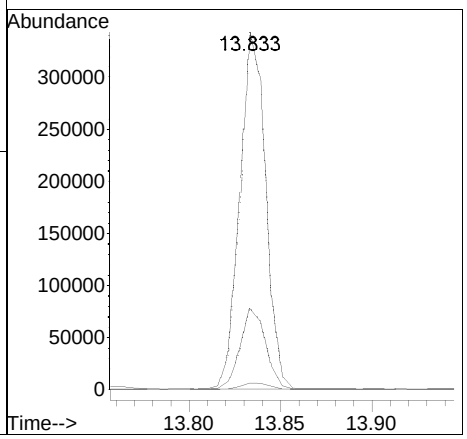


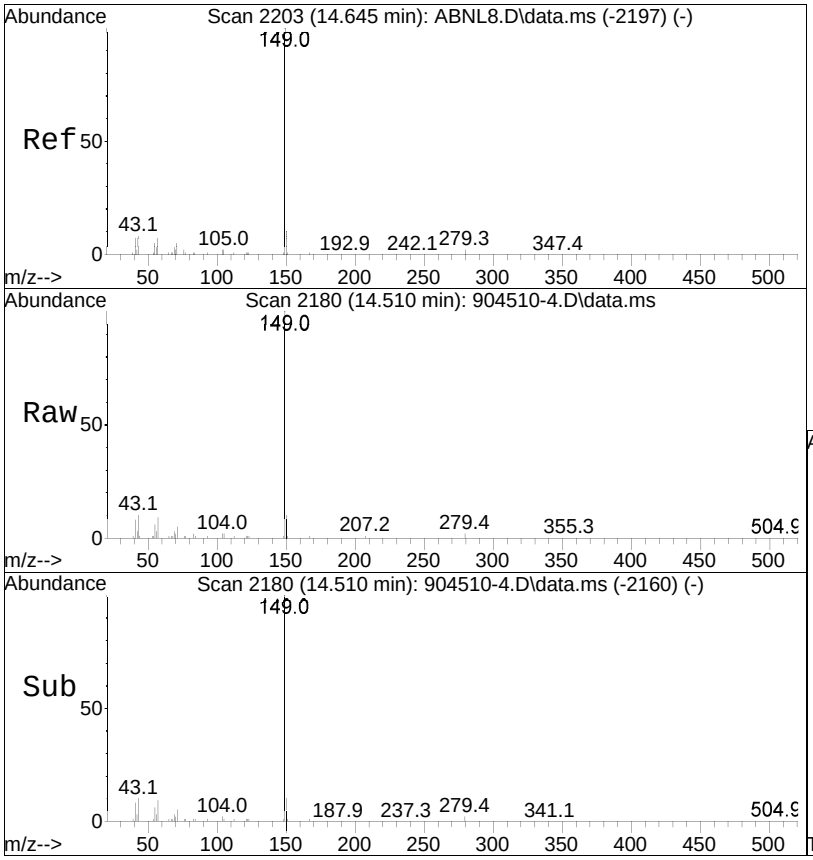


#107
Bis(2-ethylhexyl)phthalate
Concen: 4.09 ug/ml
RT: 13.833 min Scan# 2065
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:149 Resp: 332897

Ion	Ratio	Lower	Upper
149	100		
167	22.9	22.1	33.1
279	1.9	3.0	4.4#

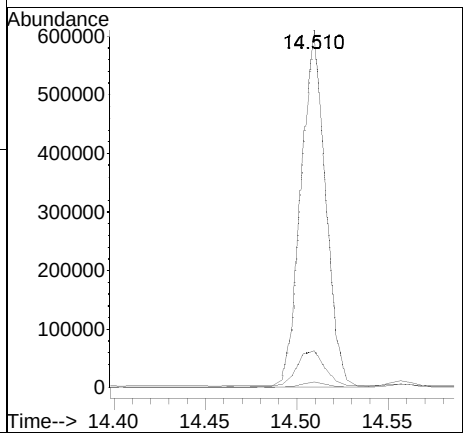




#108
Di-n-octylphthalate
Concen: 4.45 ug/ml
RT: 14.510 min Scan# 2180
Delta R.T. -0.006 min
Lab File: 904510-4.D
Acq: 4 Apr 2024 7:00 pm

Tgt Ion:149 Resp: 562479

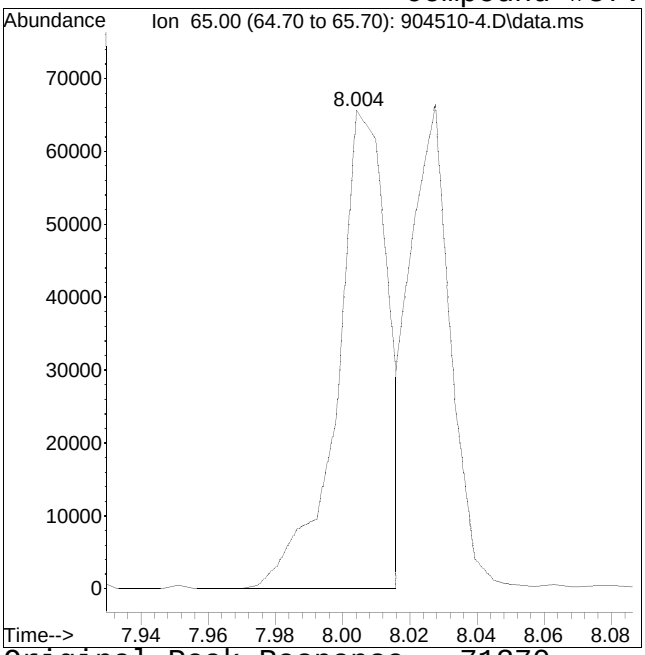
Ion	Ratio	Lower	Upper
149	100		
43	11.2	18.8	28.2#
167	1.5	1.3	1.9

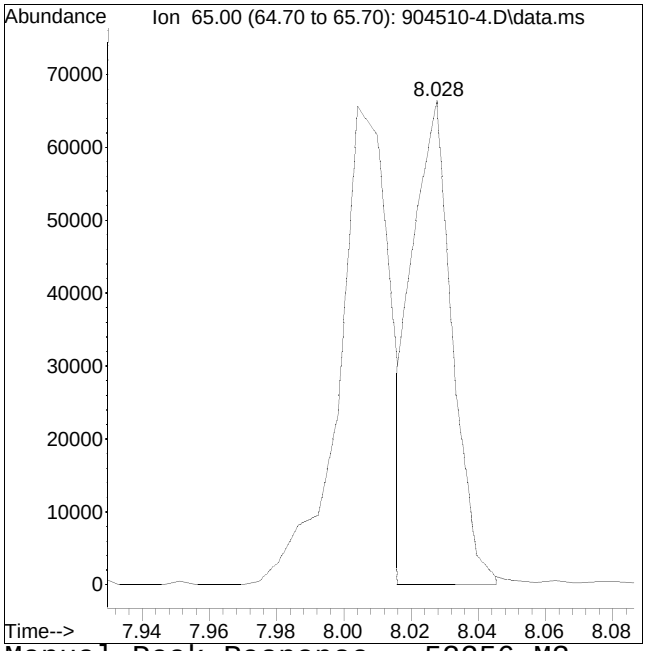


Manual Integration Report

Data Path : I:\8270\SV107\240404lvi\ QMethod : FS240211SV107RVT.m
Data File : 904510-4.D Operator : SV107:sz
Date Inj'd : 4/4/2024 7:00 pm Instrument : SV107
Sample : WG1904510-4,32,,gmr Quant Date : 4/4/2024 7:21 pm

Compound #37: 4-Chloroaniline





Original Peak Response = 71370 Manual Peak Response = 52256 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-5.D
Acq On : 4 Apr 2024 7:26 pm
Operator : SV107:sz
Sample : WG1904510-5,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 05 08:22:58 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:46:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) IS1_1,4-Dichlorobenzen...	6.504	152	158935	4.000	ug/ml	0.00
Standard Area 1 = 139992			Recovery = 113.53%			
27) IS2_1,4-Dichlorobenzen...	6.504	152	158935	4.000	ug/ml	0.00
Standard Area 3 = 169725			Recovery = 93.64%			
34) IS1_Naphthalene-d8	7.922	136	592148	4.000	ug/ml	0.00
Standard Area 1 = 528956			Recovery = 111.95%			
54) IS2_Naphthalene-d8	7.922	136	592148	4.000	ug/ml	0.00
Standard Area 3 = 626345			Recovery = 94.54%			
62) IS1_Acenaphthene-d10	9.675	164	316979	4.000	ug/ml	0.00
Standard Area 1 = 295101			Recovery = 107.41%			
82) IS2_Acenaphthene-d10	9.675	164	316979	4.000	ug/ml	0.00
Standard Area 3 = 336550			Recovery = 94.18%			
85) IS3_Acenaphthene-d10	9.675	164	316979	4.000	ug/ml	0.00
Standard Area 2 = 319594			Recovery = 99.18%			
87) IS1_Phenanthrene-d10	11.110	188	576686	4.000	ug/ml	0.00
Standard Area 1 = 561413			Recovery = 102.72%			
99) IS3_Phenanthrene-d10	11.110	188	576686	4.000	ug/ml	0.00
Standard Area 2 = 598205			Recovery = 96.40%			
103) IS1_Chrysene-d12	13.733	240	445808	4.000	ug/ml	-0.01
Standard Area 1 = 474982			Recovery = 93.86%			
112) IS1_Perylene-d12	15.198	264	469087	4.000	ug/ml	0.00
Standard Area 1 = 523541			Recovery = 89.60%			
System Monitoring Compounds						
4) 2-Fluorophenol	4.704	112	132361	2.841	ug/ml	0.02
Spiked Amount 5.000	Range 15 - 110		Recovery = 56.82%			
7) Phenol-d6	6.169	99	140454	2.377	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 47.54%			
19) Nitrobenzene-d5	7.151	82	93406	1.723	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 68.92%			
45) 2-Fluorobiphenyl	9.033	172	183603	1.347	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 53.88%			
78) 2,4,6-Tribromophenol	10.445	330	36178	3.054	ug/ml	0.00
Spiked Amount 5.000	Range 15 - 110		Recovery = 61.08%			
95) 4-Terphenyl-d14	12.680	244	184233	1.451	ug/ml	0.00
Spiked Amount 2.500	Range 30 - 130		Recovery = 58.04%			

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-5.D
Acq On : 4 Apr 2024 7:26 pm
Operator : SV107:sz
Sample : WG1904510-5,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 05 08:22:58 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:46:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
6) 2-Chlorophenol	6.257	128	162092	3.168	ug/ml	93
8) Phenol	6.187	94	151031	2.345	ug/ml	98
9) Bis(2-chloroethyl)ether	6.228	93	154324	2.887	ug/ml	97
14) Bis(2-chloroisopropyl)...	6.881	45	270862	3.753	ug/ml#	63
15) 2-Methylphenol	6.898	108	141484	3.138	ug/ml	100
17) n-Nitrosodi-n-propylamine	7.028	70	123197	3.387	ug/ml#	92
18) 3-Methylphenol/4-Methy...	7.081	108	159276	3.264	ug/ml#	61
20) Nitrobenzene	7.175	77	182555	3.289	ug/ml	99
21) Isophorone	7.451	82	332122	3.472	ug/ml	96
22) 2-Nitrophenol	7.528	139	83455	3.661	ug/ml#	94
23) 2,4-Dimethylphenol	7.639	107	108177	2.846	ug/ml	98
24) Bis(2-chloroethoxy)met...	7.722	93	202226	3.134	ug/ml	98
25) 2,4-Dichlorophenol	7.804	162	148386	3.334	ug/ml	97
28) Benzaldehyde	5.940	105	134499	3.428	ug/ml	99
29) Acetophenone	6.998	105	248237	3.728	ug/ml#	86
37) 4-Chloroaniline	8.028	65	31623M3	1.554	ug/ml	
39) p-Chloro-m-cresol	8.557	107	149960	3.557	ug/ml	98
42) Hexachlorocyclopentadiene	8.828	237	56330	2.304	ug/ml	99
43) 2,4,6-Trichlorophenol	8.957	196	106212	3.184	ug/ml	96
44) 2,4,5-Trichlorophenol	8.992	196	119228	3.295	ug/ml	99
47) 2-Nitroaniline	9.245	138	104757	3.359	ug/ml	94
50) Dimethyl phthalate	9.445	163	380923	3.109	ug/ml#	98
52) 2,6-Dinitrotoluene	9.492	165	76566	2.998	ug/ml	91
59) Caprolactam	8.339	55	44212	2.513	ug/ml#	81
60) 1,2,4,5-Tetrachloroben...	8.828	216	153093	2.575	ug/ml	98
61) Biphenyl	9.128	154	404867	3.045	ug/ml	98
63) 3-Nitroaniline	9.651	138	82544	3.441	ug/ml	99
65) 2,4-Dinitrophenol	9.745	184	17786	2.089	ug/ml	92
66) Dibenzofuran	9.875	168	466436	3.179	ug/ml#	78
67) 2,4-Dinitrotoluene	9.880	165	104123	3.368	ug/ml#	78
68) 4-Nitrophenol	9.851	65	77284	3.822	ug/ml#	1
70) 2,3,4,6-Tetrachlorophenol	10.010	232	85333	3.354	ug/ml	97
71) Diethyl phthalate	10.139	149	365890	3.547	ug/ml	99
73) 4-Chlorophenyl phenyl ...	10.227	204	163035	2.871	ug/ml	93
74) 4-Nitroaniline	10.239	138	90437	3.742	ug/ml#	85
75) 4,6-Dinitro-o-cresol	10.269	198	41123	2.789	ug/ml#	74

Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-5.D
Acq On : 4 Apr 2024 7:26 pm
Operator : SV107:sz
Sample : WG1904510-5,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 05 08:22:58 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:46:01 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270\sv107\240404lvi\ABN0404a.D
: 2 - I:\8270\sv107\240404lvi\ADP0404.D
: 3 - I:\8270\sv107\240404lvi\AP90404.D
Sub List : 8270TCL_combo_REV1 - TCL/CT/MA

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
76)	NDPA/DPA	10.339	169	288052	3.256	ug/ml	92
79)	4-Bromophenyl phenyl e...	10.692	248	83954	2.816	ug/ml	94
86)	Atrazine	10.874	200	91405	3.618	ug/ml	95
90)	Carbazole	11.351	167	493542	3.593	ug/ml	97
91)	Di-n-butylphthalate	11.727	149	570262	3.901	ug/ml	99
96)	Butyl benzyl phthalate	13.204	149	253269	3.968	ug/ml	93
105)	3,3'-Dichlorobenzidine	13.721	252	165267	3.647	ug/ml	98
107)	Bis(2-ethylhexyl)phtha...	13.833	149	356336	4.576	ug/ml#	90
108)	Di-n-octylphthalate	14.510	149	593382	4.883	ug/ml#	78

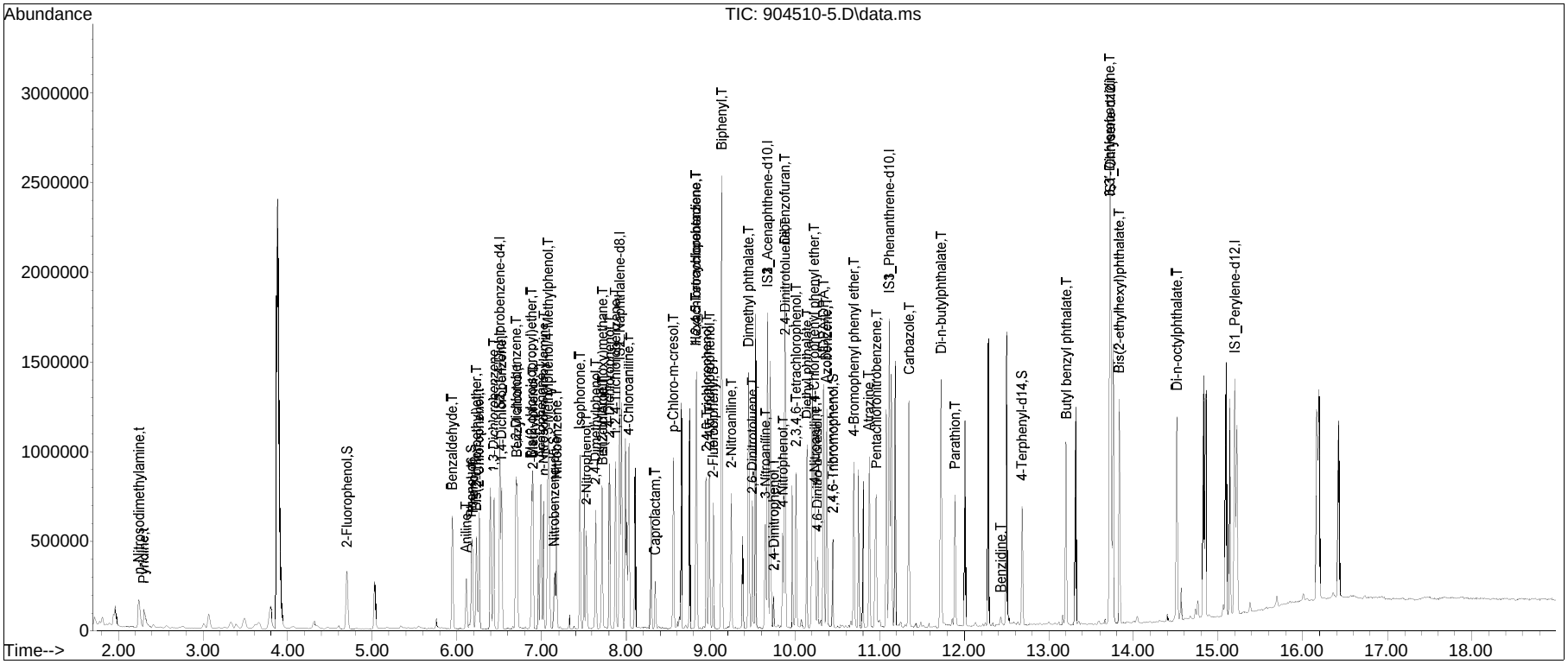
(#) = qualifier out of range (m) = manual integration (+) = signals summed

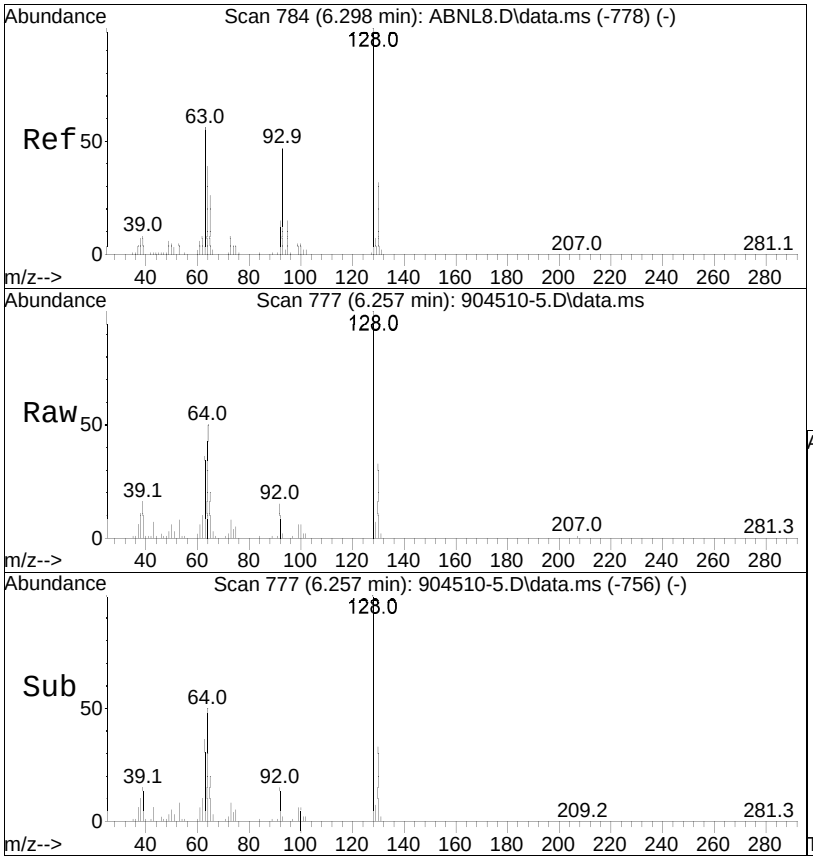
Quantitation Report (QT Reviewed)

Data Path : I:\8270\SV107\240404lvi\
Data File : 904510-5.D
Acq On : 4 Apr 2024 7:26 pm
Operator : SV107:sz
Sample : WG1904510-5,32,,gmr
Misc : WG1904833,WG1904510,ical20861
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 05 08:22:58 2024
Quant Method : I:\8270\sv107\240404lvi\FS240211SV107RVT.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 19:46:01 2024
Response via : Initial Calibration

Sub List : 8270TCL_combo_REV1 - TCL/CT/MA90404.D••

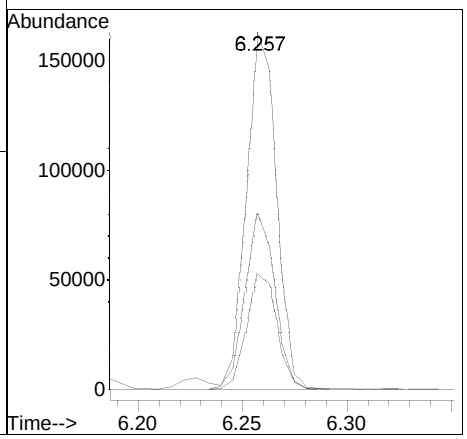


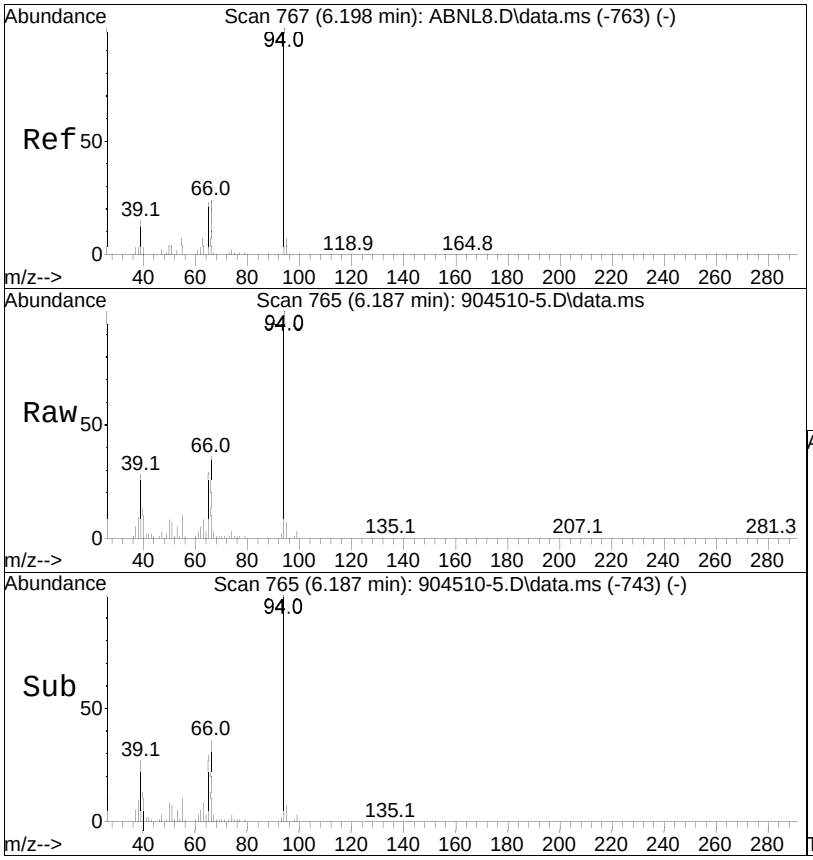


#6
2-Chlorophenol
Concen: 3.17 ug/ml
RT: 6.257 min Scan# 777
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:128 Resp: 162092

Ion	Ratio	Lower	Upper
128	100		
64	48.8	45.1	67.7
130	33.0	26.2	39.4

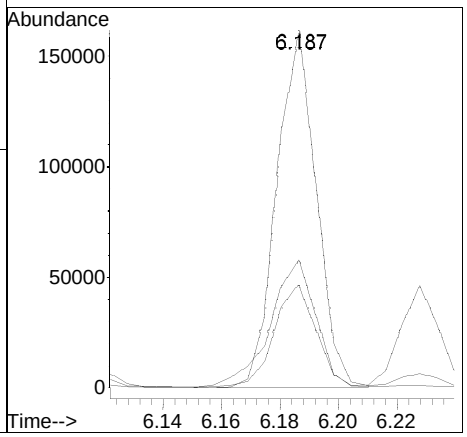


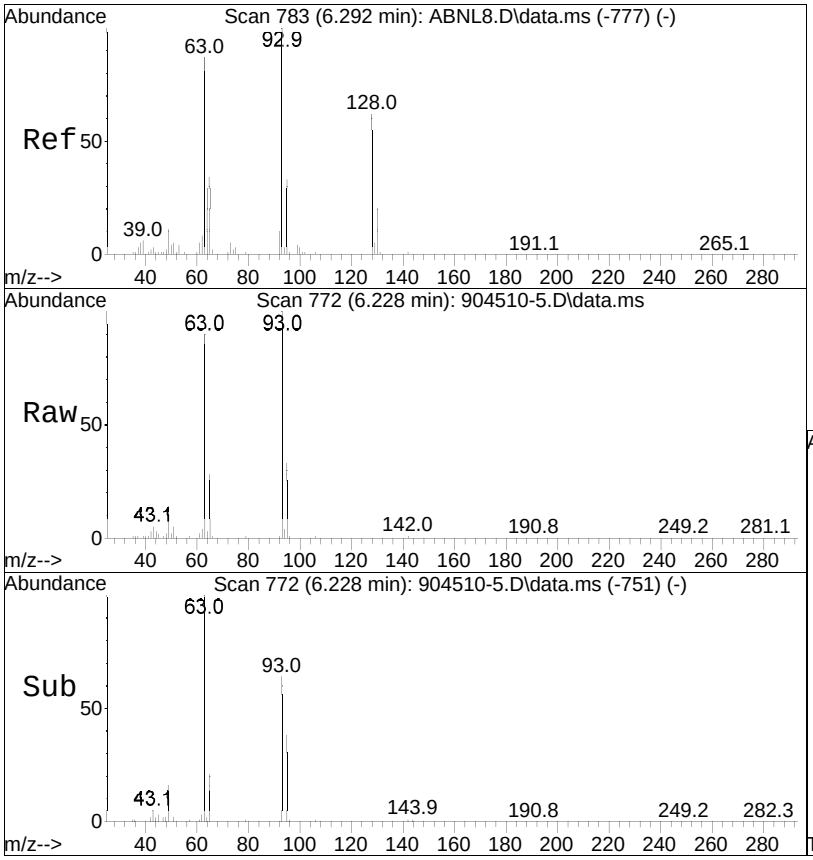


#8
Phenol
Concen: 2.34 ug/ml
RT: 6.187 min Scan# 765
Delta R.T. 0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 94 Resp: 151031

Ion	Ratio	Lower	Upper
94	100		
65	30.6	26.0	39.0
66	41.5	33.8	50.8

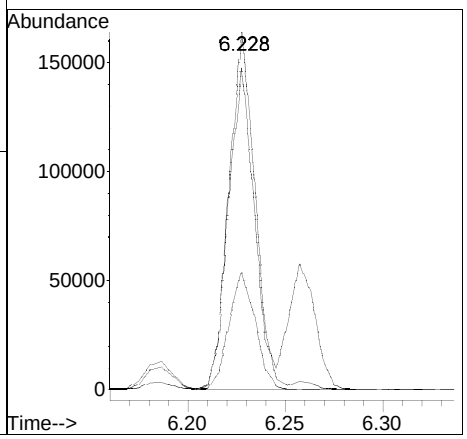


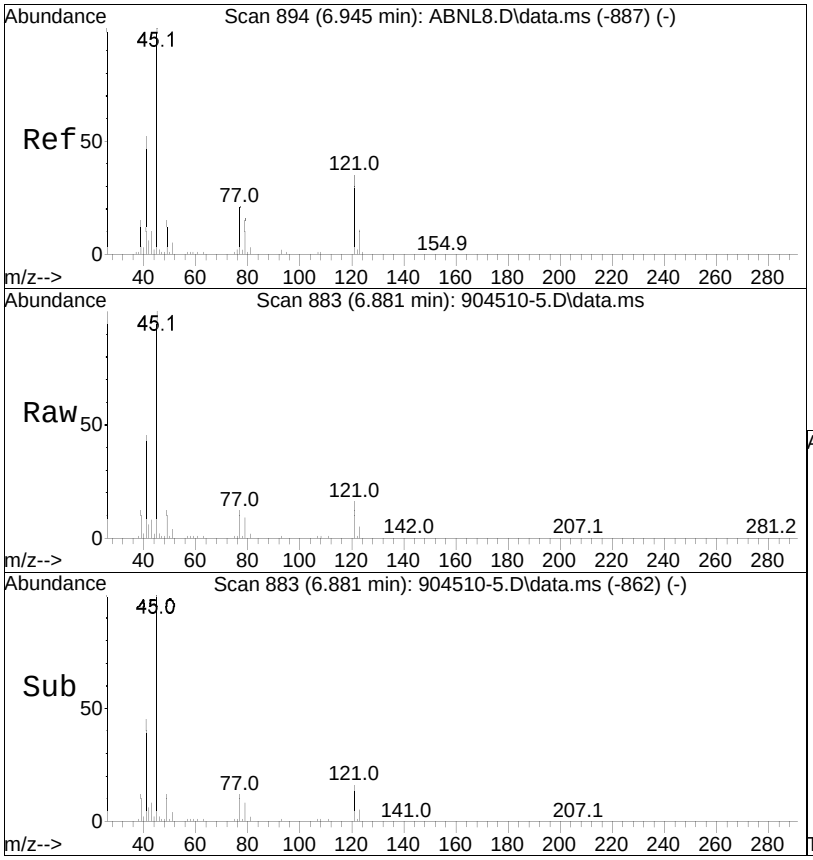


#9
Bis(2-chloroethyl)ether
Concen: 2.89 ug/ml
RT: 6.228 min Scan# 772
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 93 Resp: 154324

Ion	Ratio	Lower	Upper
93	100		
63	89.3	74.6	111.8
95	33.0	25.9	38.9

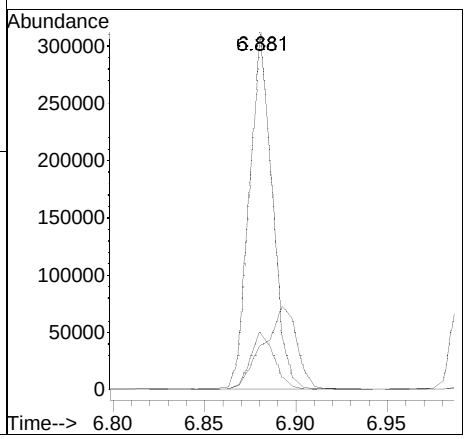


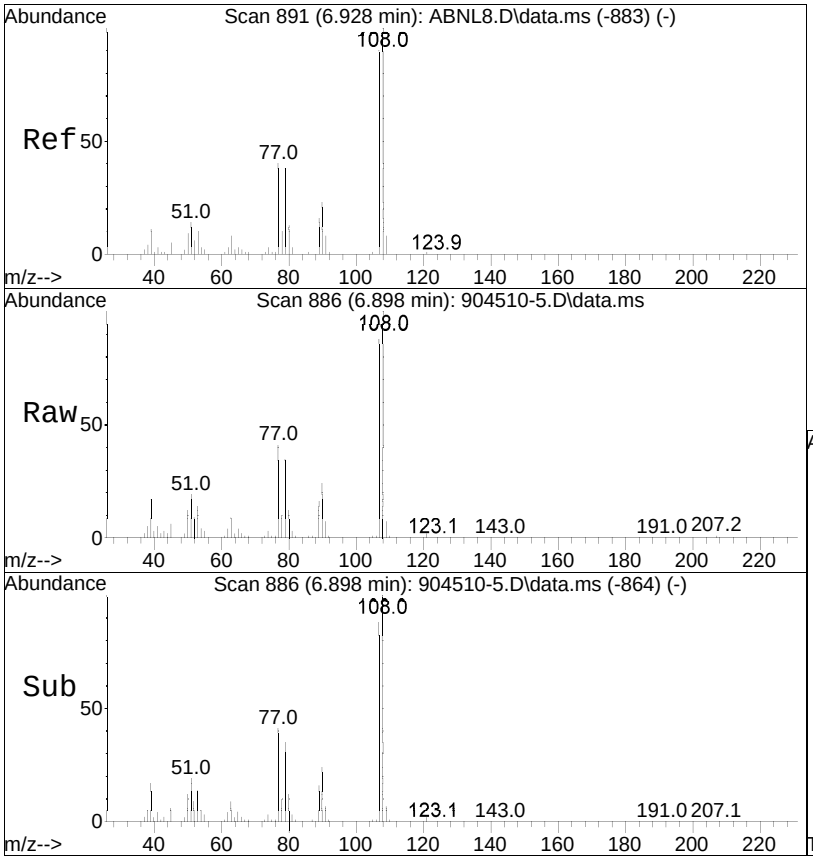


#14
Bis(2-chloroisopropyl)ether
Concen: 3.75 ug/ml
RT: 6.881 min Scan# 883
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 45 Resp: 270862

Ion	Ratio	Lower	Upper
45	100		
121	17.0	9.8	14.6#
77	34.0	6.1	9.1#

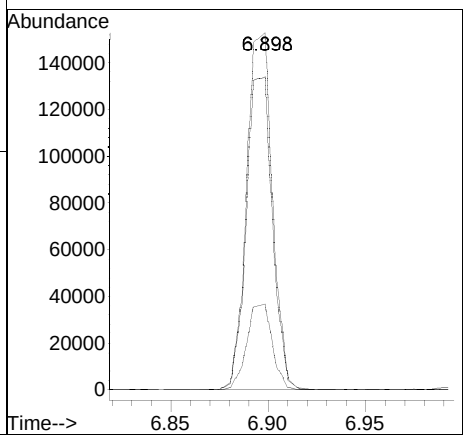


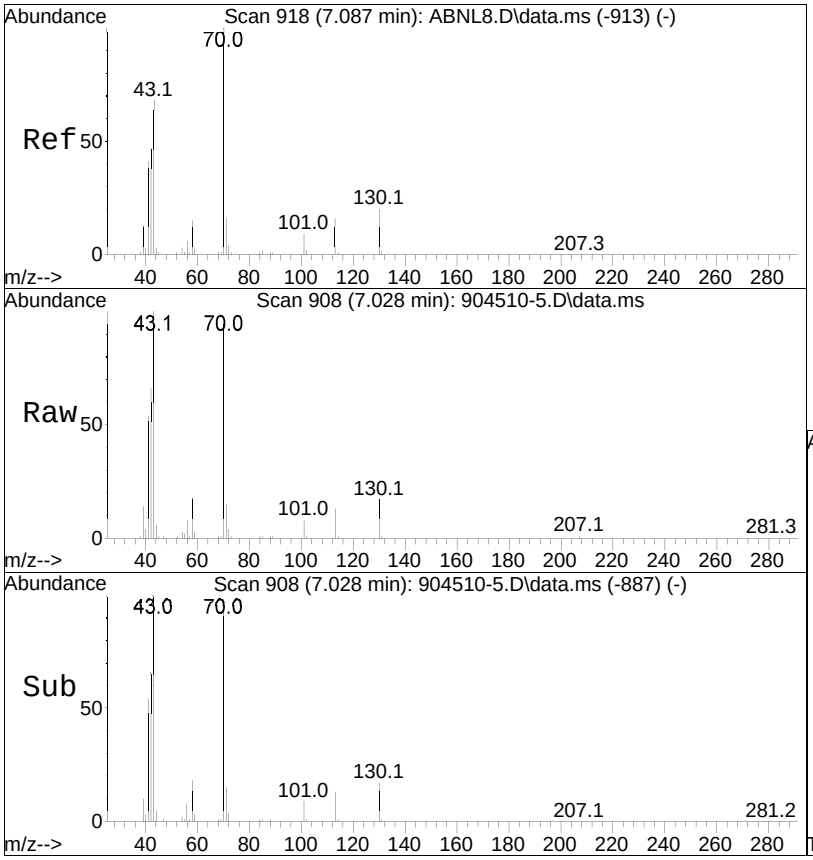


#15
2-Methylphenol
Concen: 3.14 ug/ml
RT: 6.898 min Scan# 886
Delta R.T. 0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:108 Resp: 141484

Ion	Ratio	Lower	Upper
108	100		
107	88.7	70.7	106.1
90	23.7	18.7	28.1

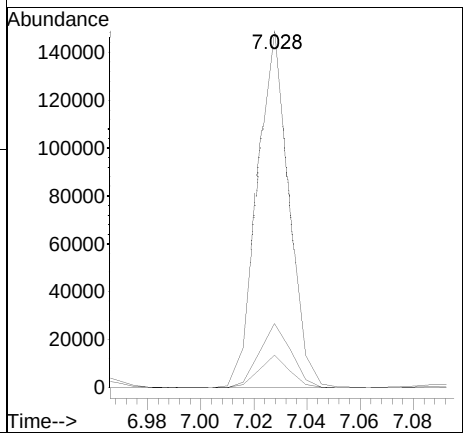


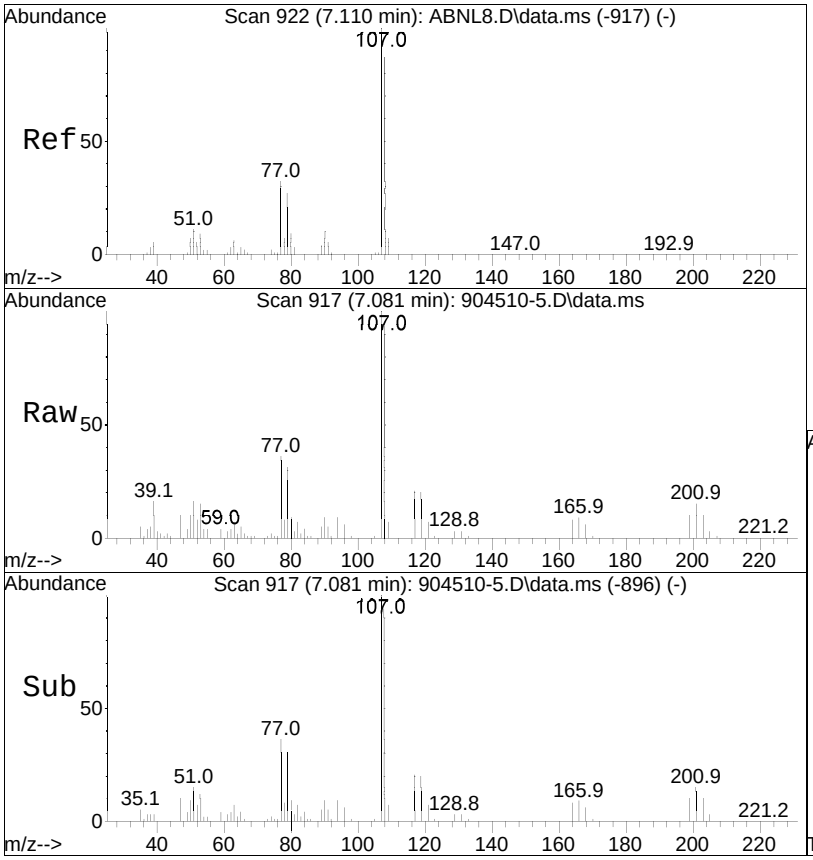


#17
n-Nitrosodi-n-propylamine
Concen: 3.39 ug/ml
RT: 7.028 min Scan# 908
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 70 Resp: 123197

Ion	Ratio	Lower	Upper
70	100		
130	18.0	18.2	27.4#
101	8.8	7.8	11.8

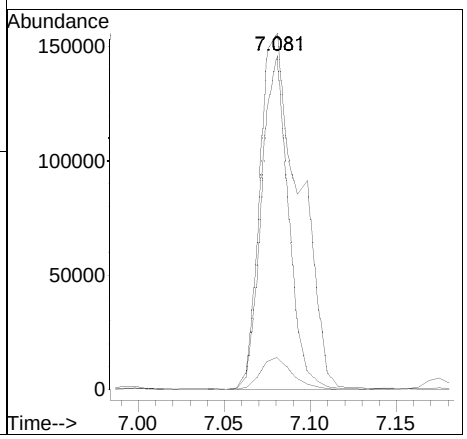


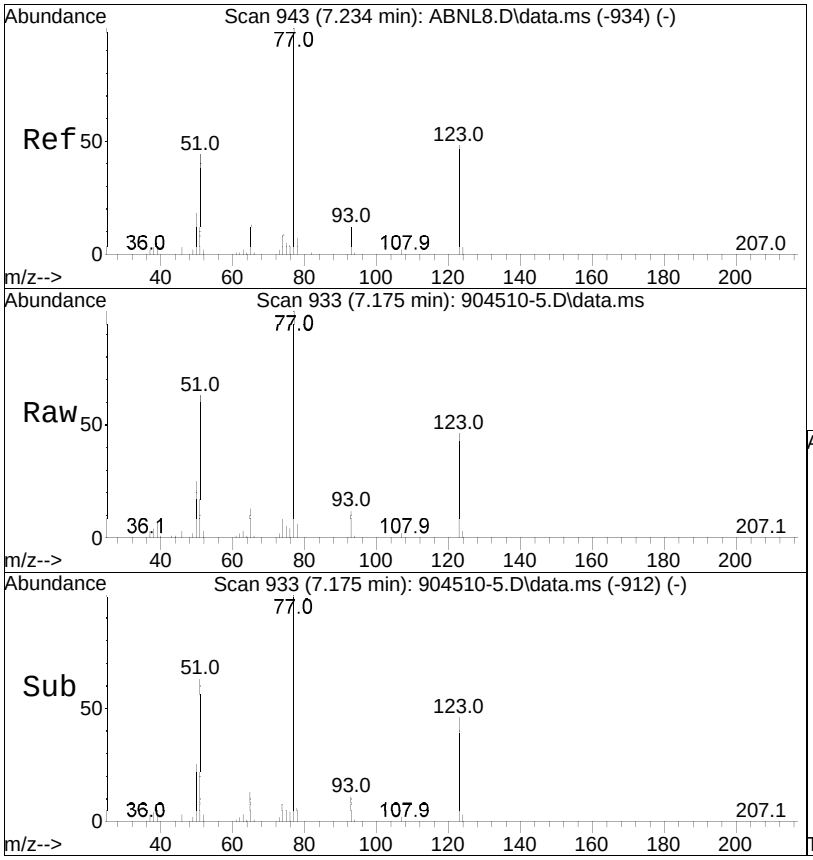


#18
3-Methylphenol/4-Methylphenol
Concen: 3.26 ug/ml
RT: 7.081 min Scan# 917
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:108 Resp: 159276

Ion	Ratio	Lower	Upper
108	100		
107	155.7	88.6	132.8#
90	11.1	8.8	13.2

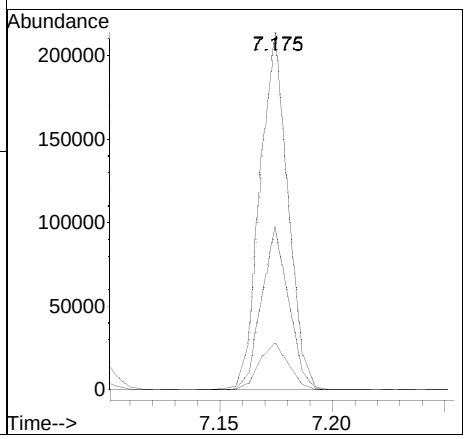


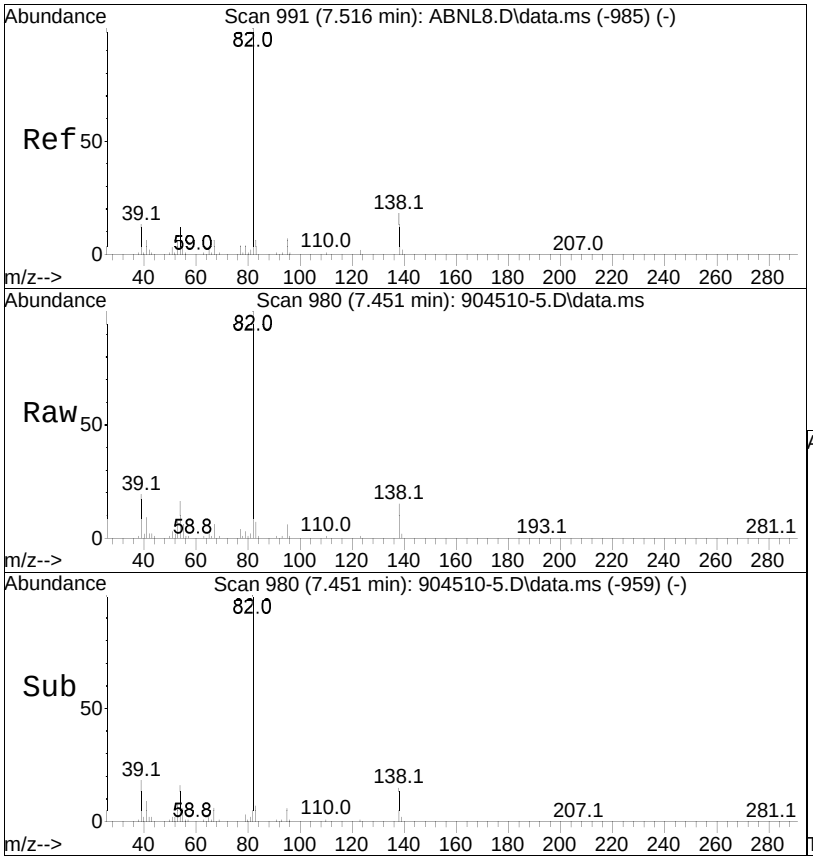


#20
Nitrobenzene
Concen: 3.29 ug/ml
RT: 7.175 min Scan# 933
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 77 Resp: 182555

Ion	Ratio	Lower	Upper
77	100		
123	44.6	36.3	54.5
65	14.0	11.6	17.4

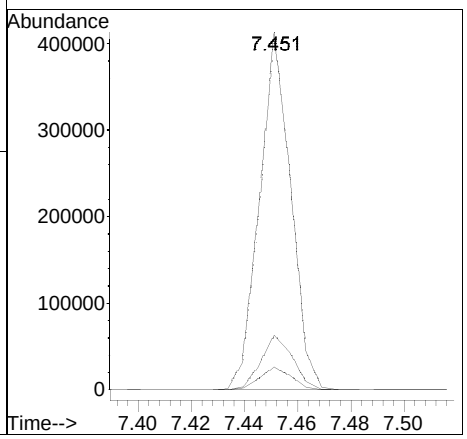


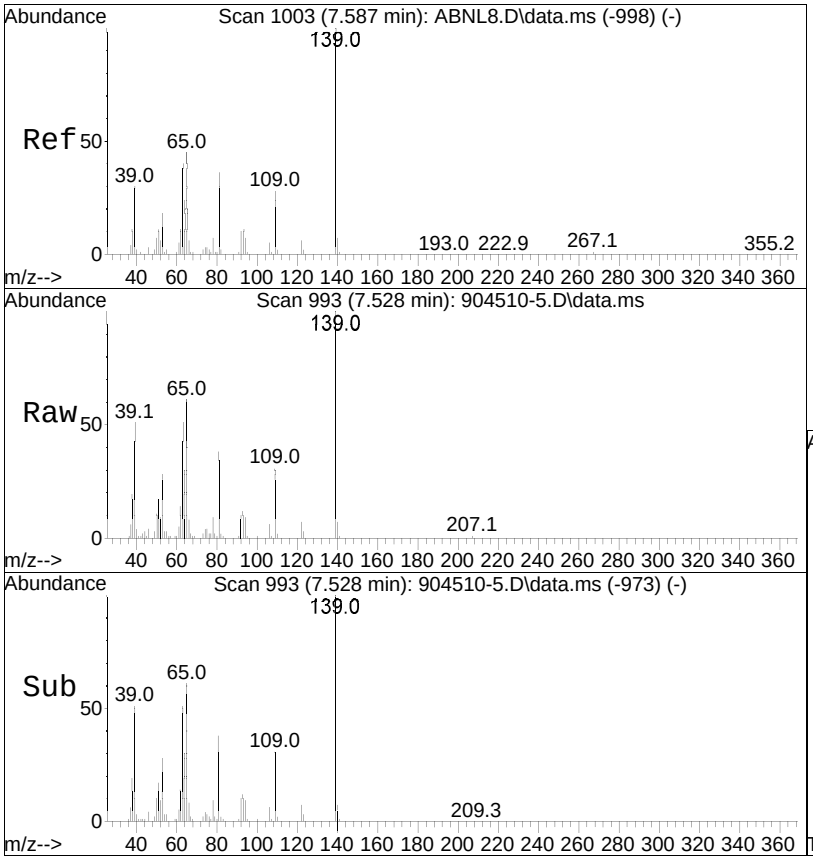


#21
Isophorone
Concen: 3.47 ug/ml
RT: 7.451 min Scan# 980
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 82 Resp: 332122

Ion	Ratio	Lower	Upper
82	100		
138	15.8	14.7	22.1
95	6.7	5.2	7.8

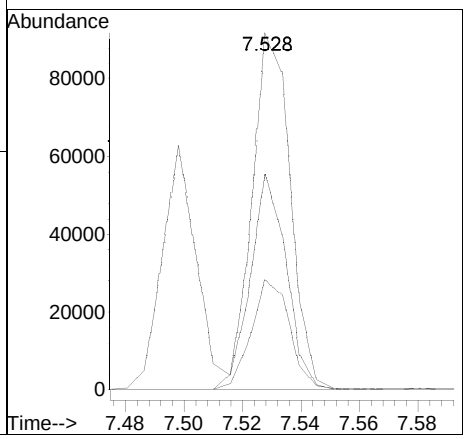


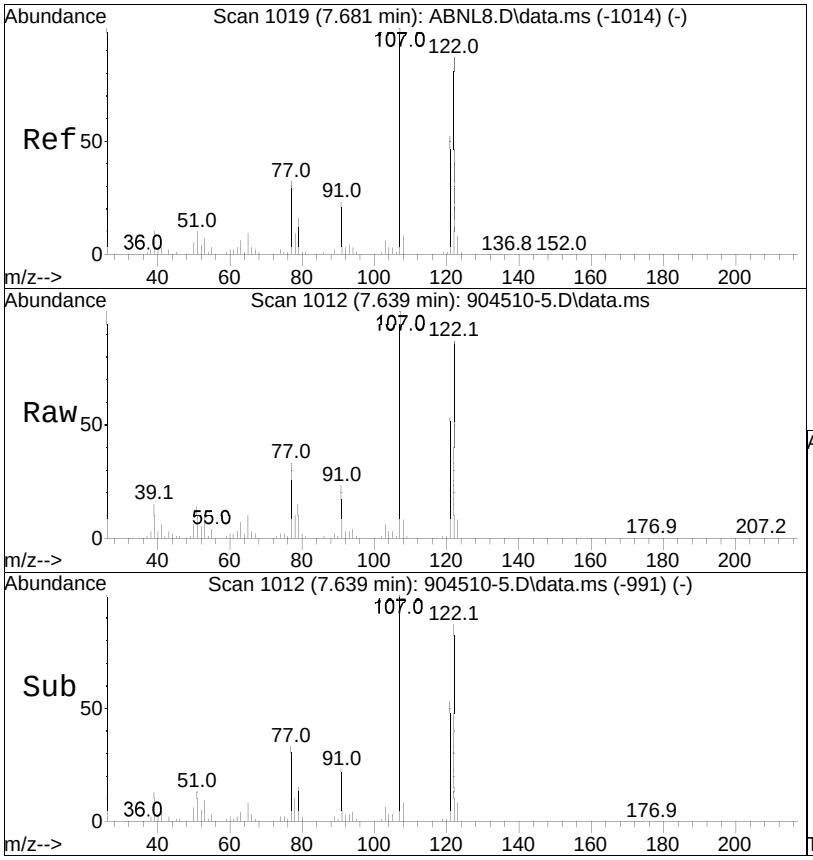


#22
2-Nitrophenol
Concen: 3.66 ug/ml
RT: 7.528 min Scan# 993
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:139 Resp: 83455

Ion	Ratio	Lower	Upper
139	100		
109	31.0	19.4	29.0#
65	55.0	46.1	69.1

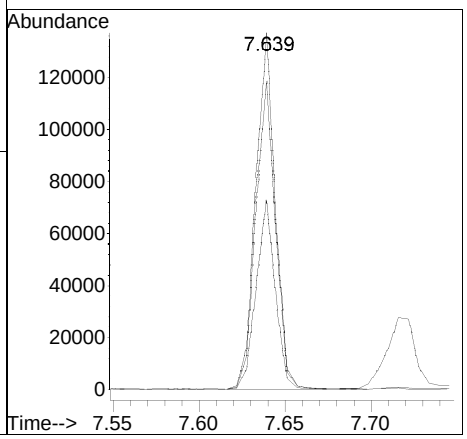


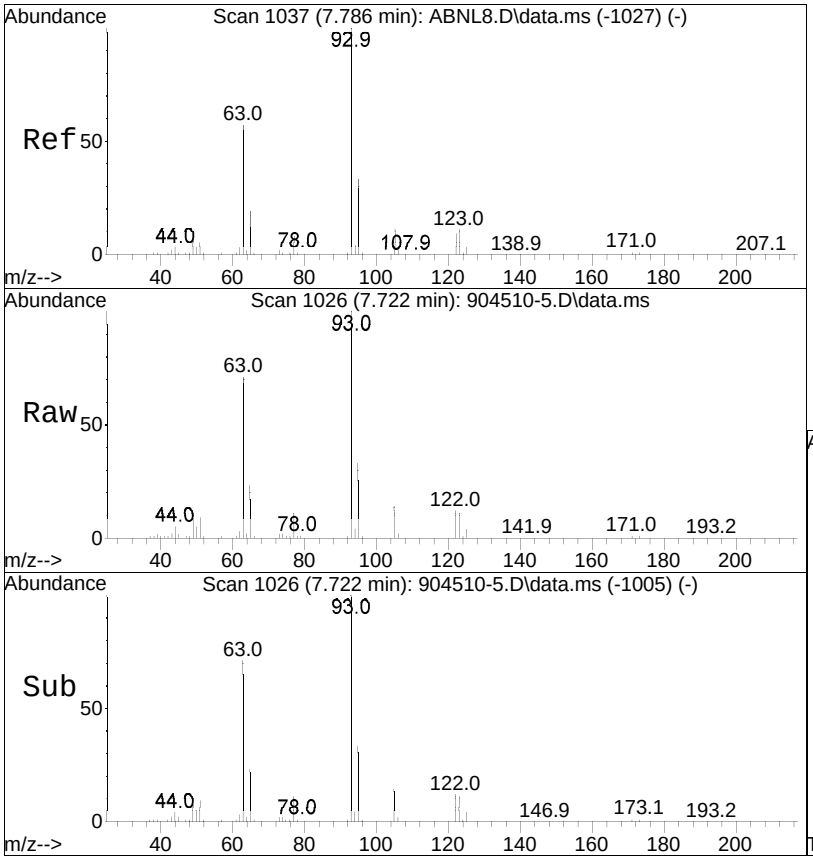


#23
2,4-Dimethylphenol
Concen: 2.85 ug/ml
RT: 7.639 min Scan# 1012
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:107 Resp: 108177

Ion	Ratio	Lower	Upper
107	100		
121	52.3	40.0	60.0
122	87.0	70.2	105.4

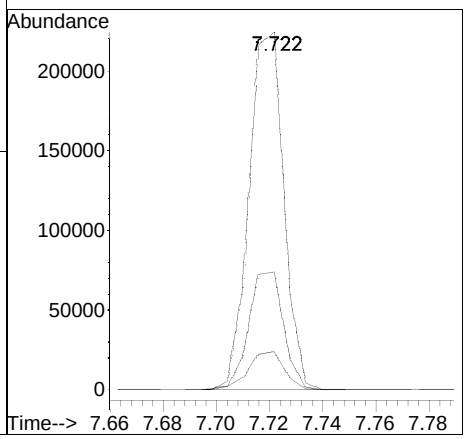


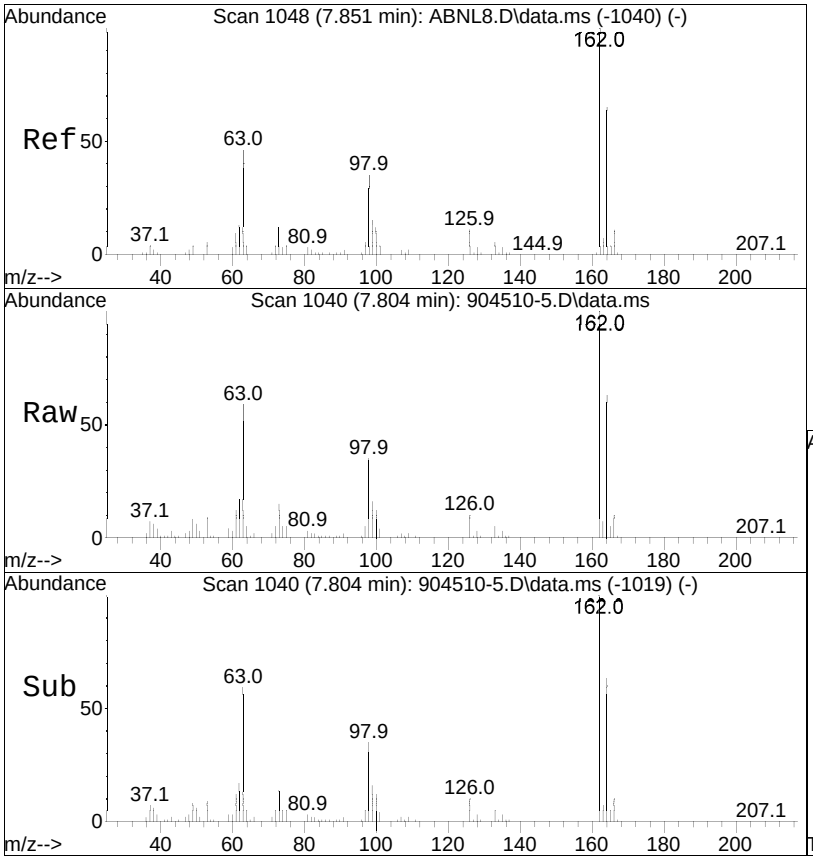


#24
Bis(2-chloroethoxy)methane
Concen: 3.13 ug/ml
RT: 7.722 min Scan# 1026
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 93 Resp: 202226

Ion	Ratio	Lower	Upper
93	100		
95	33.3	25.8	38.8
123	11.3	10.1	15.1

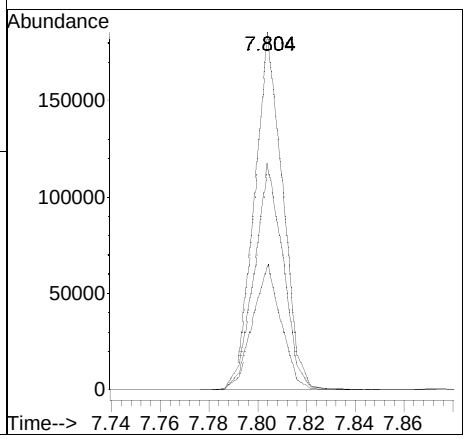


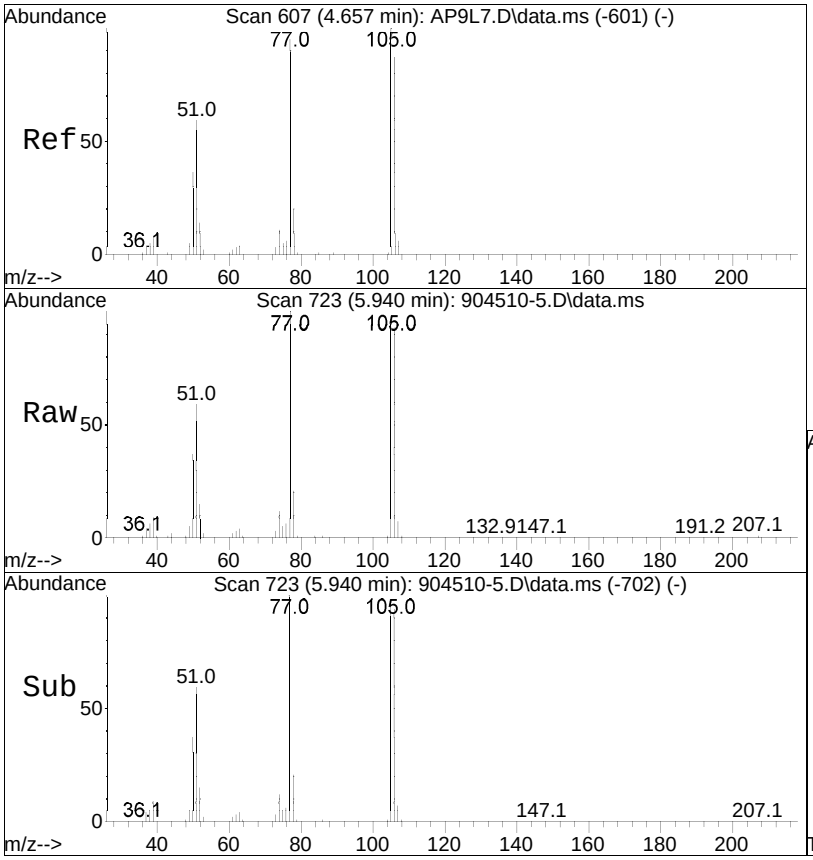


#25
2,4-Dichlorophenol
Concen: 3.33 ug/ml
RT: 7.804 min Scan# 1040
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:162 Resp: 148386

Ion	Ratio	Lower	Upper
162	100		
164	64.2	51.0	76.4
98	35.7	32.2	48.2

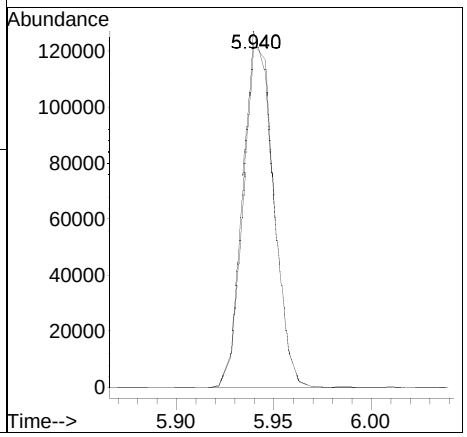


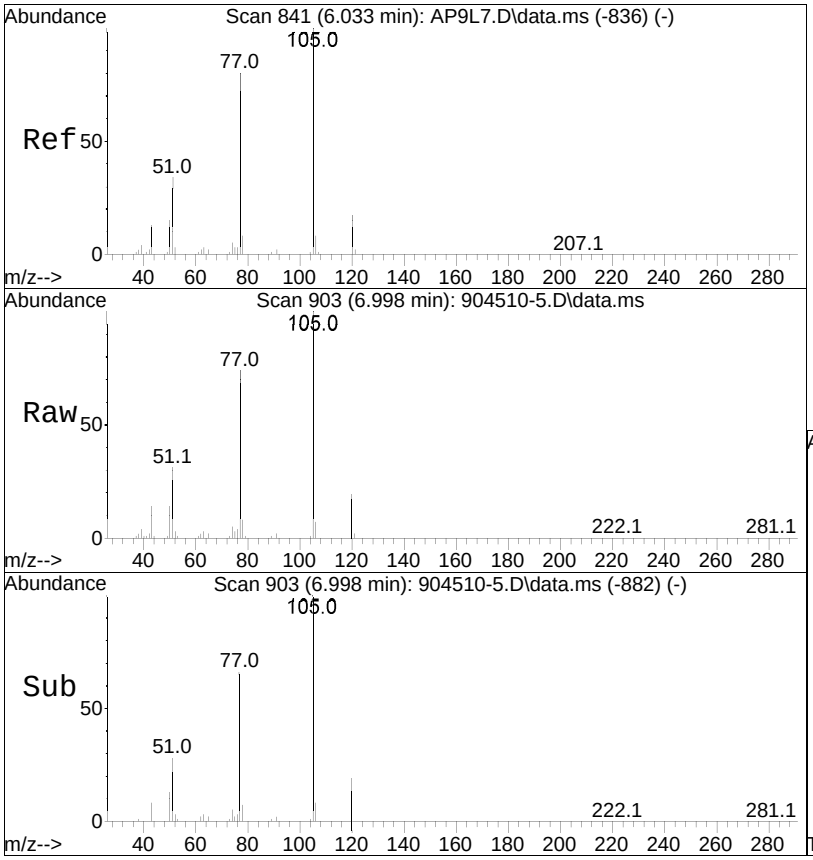


#28
Benzaldehyde
Concen: 3.43 ug/ml
RT: 5.940 min Scan# 723
Delta R.T. 0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:105 Resp: 134499

Ion	Ratio	Lower	Upper
105	100		
77	102.1	82.2	123.4

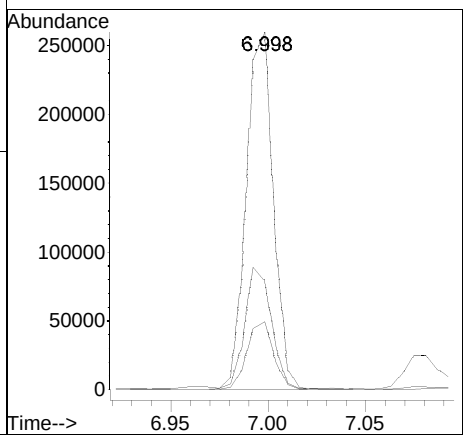


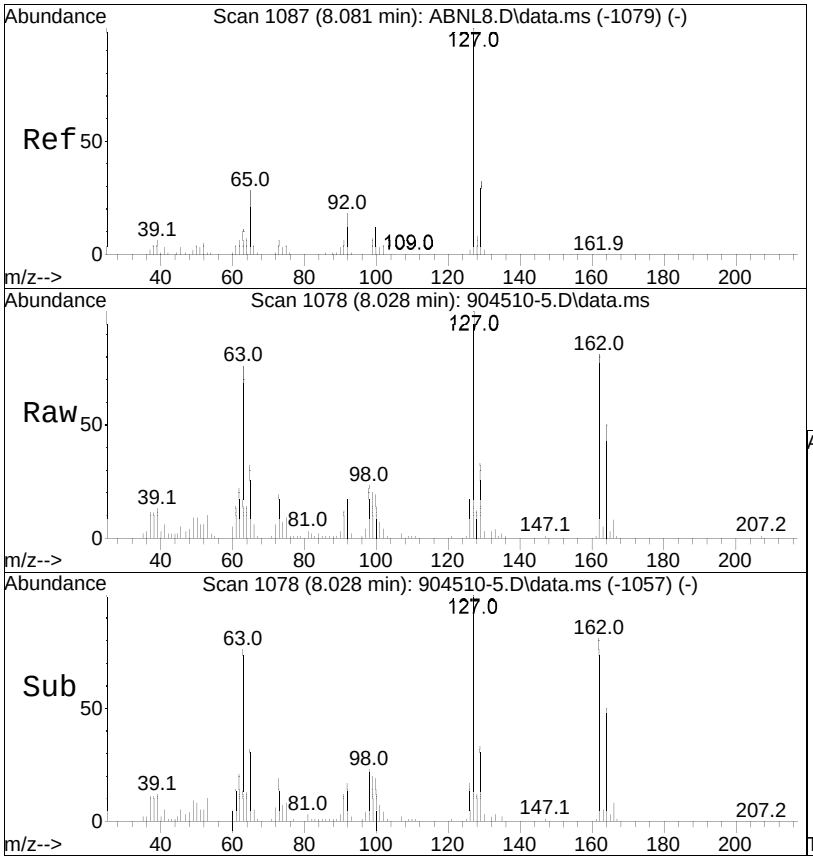


#29
Acetophenone
Concen: 3.73 ug/ml
RT: 6.998 min Scan# 903
Delta R.T. 0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:105 Resp: 248237

Ion	Ratio	Lower	Upper
105	100		
120	18.9	20.5	30.7#
51	34.7	34.9	52.3#

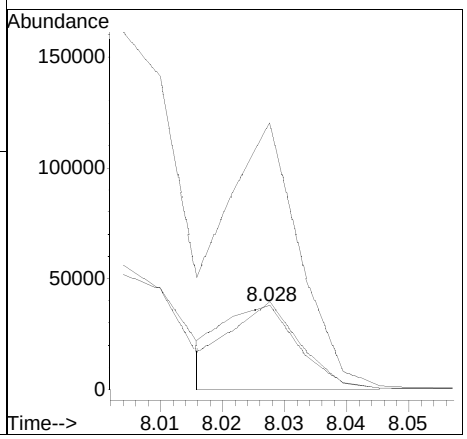


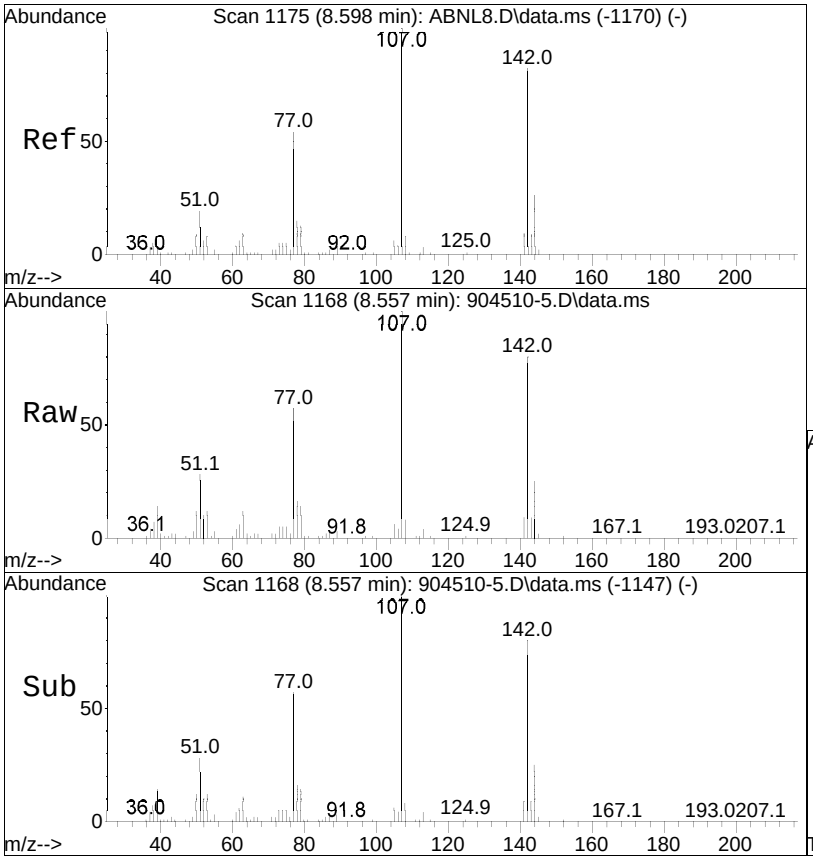


#37
4-Chloroaniline
Concen: 1.55 ug/ml M3
RT: 8.028 min Scan# 1078
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 65 Resp: 31623

Ion	Ratio	Lower	Upper
65	100		
127	460.5	237.6	356.4#
129	147.3	76.3	114.5#

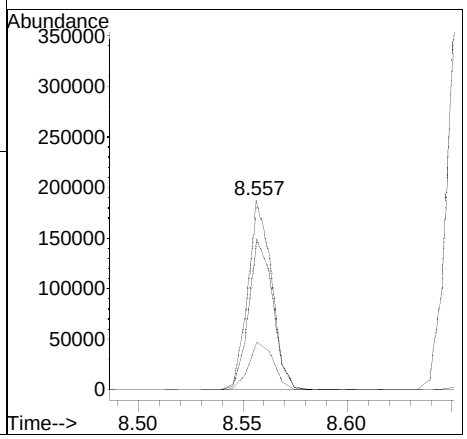


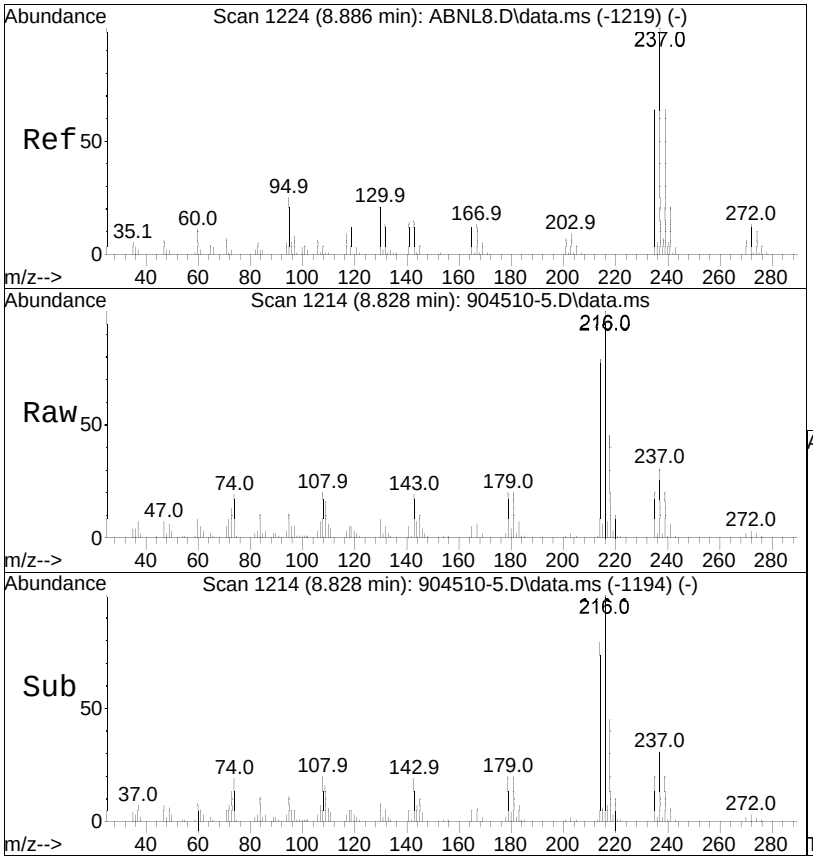


#39
p-Chloro-m-cresol
Concen: 3.56 ug/ml
RT: 8.557 min Scan# 1168
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:107 Resp: 149960

Ion	Ratio	Lower	Upper
107	100		
144	26.0	20.9	31.3
142	80.9	66.1	99.1

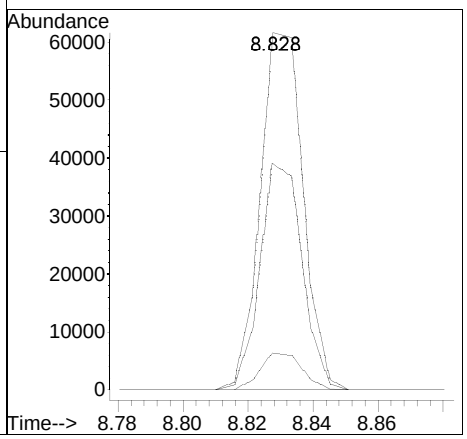


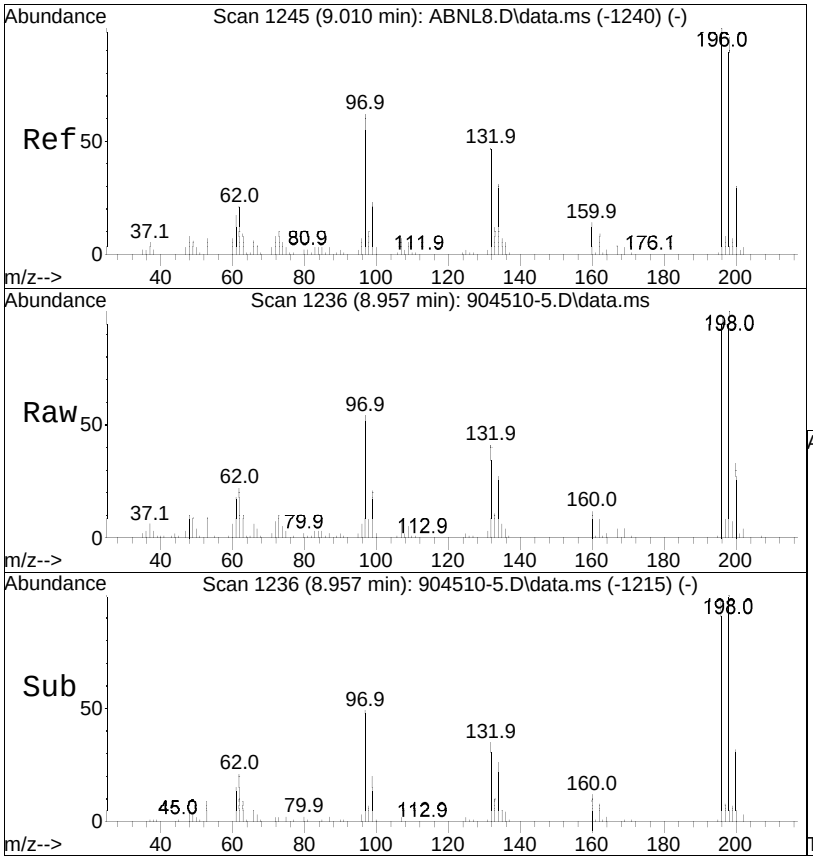


#42
Hexachlorocyclopentadiene
Concen: 2.30 ug/ml
RT: 8.828 min Scan# 1214
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:237 Resp: 56330

Ion	Ratio	Lower	Upper
237	100		
235	62.2	49.7	74.5
272	10.2	9.8	14.6

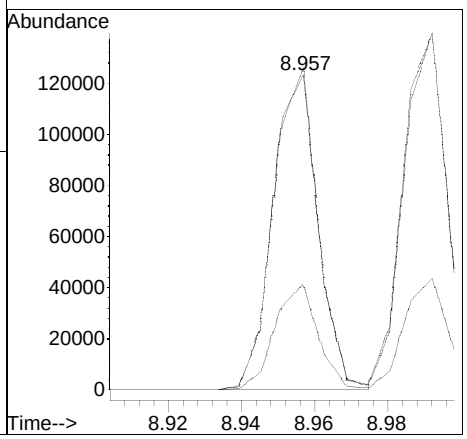


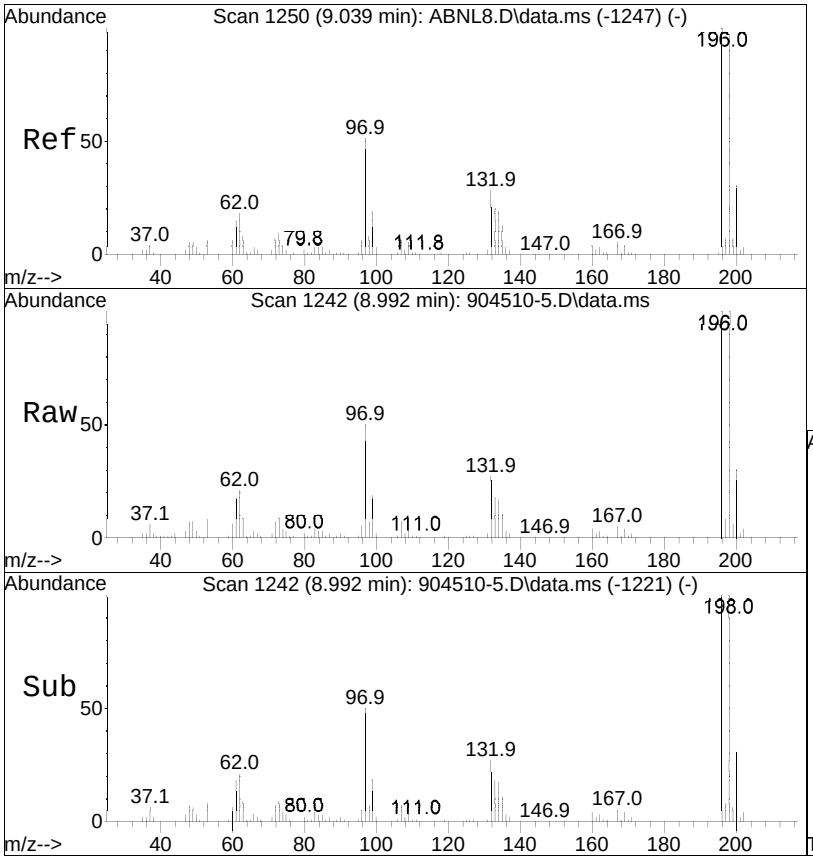


#43
2,4,6-Trichlorophenol
Concen: 3.18 ug/ml
RT: 8.957 min Scan# 1236
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:196 Resp: 106212

Ion	Ratio	Lower	Upper
196	100		
198	100.3	77.5	116.3
200	32.2	23.8	35.6

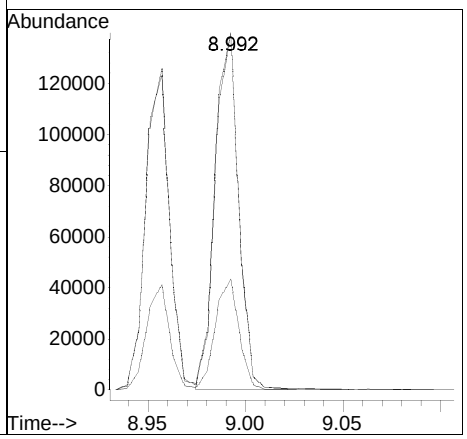


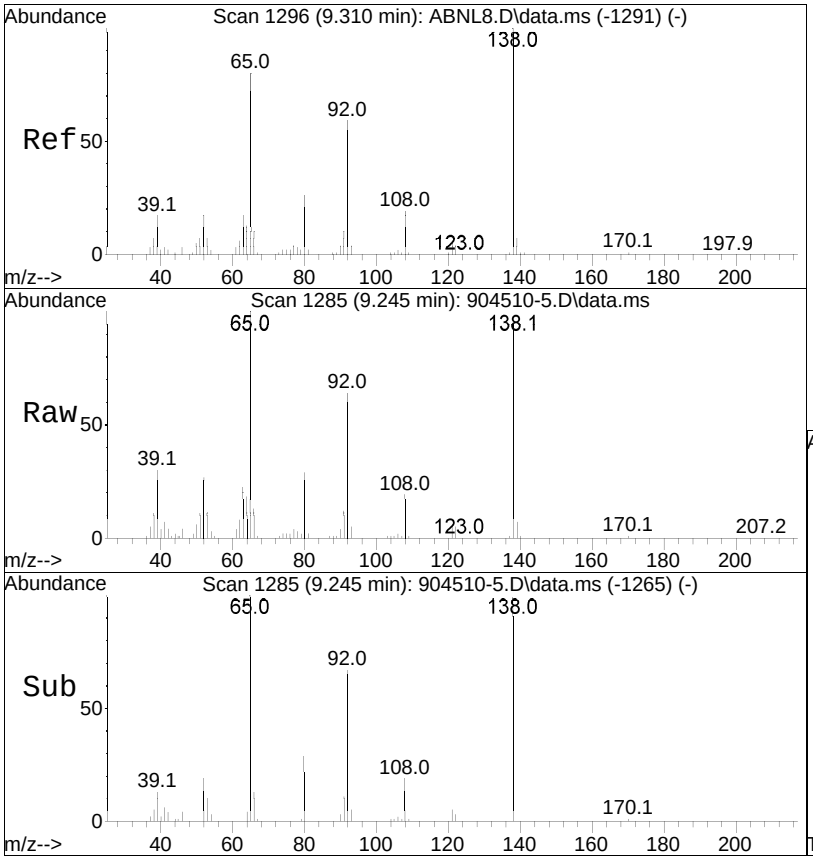


#44
2,4,5-Trichlorophenol
Concen: 3.30 ug/ml
RT: 8.992 min Scan# 1242
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:196 Resp: 119228

Ion	Ratio	Lower	Upper
196	100		
200	30.8	25.4	38.0
198	97.7	78.0	117.0

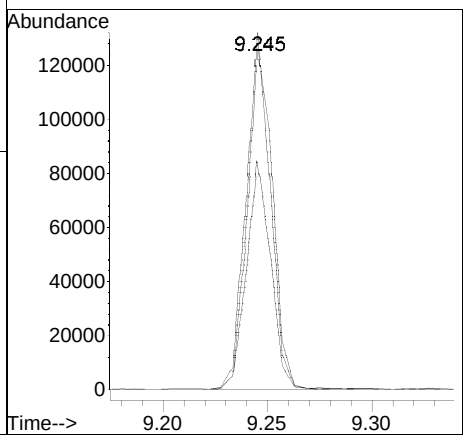


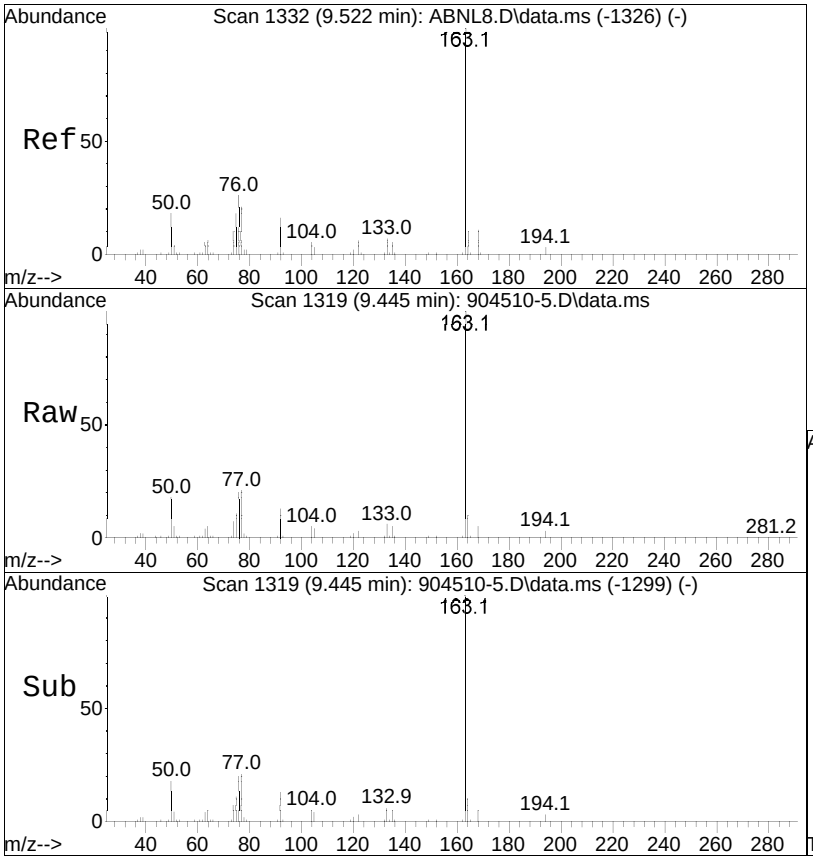


#47
2-Nitroaniline
Concen: 3.36 ug/ml
RT: 9.245 min Scan# 1285
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:138 Resp: 104757

Ion	Ratio	Lower	Upper
138	100		
92	64.1	53.5	80.3
65	100.8	86.3	129.5

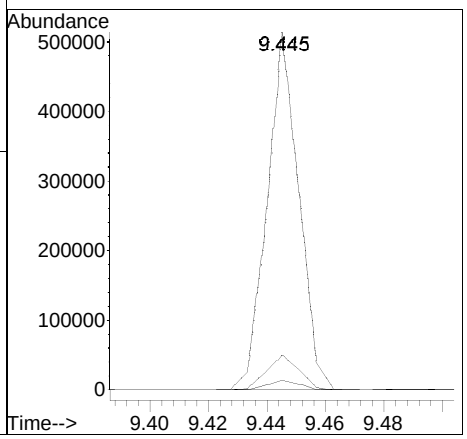


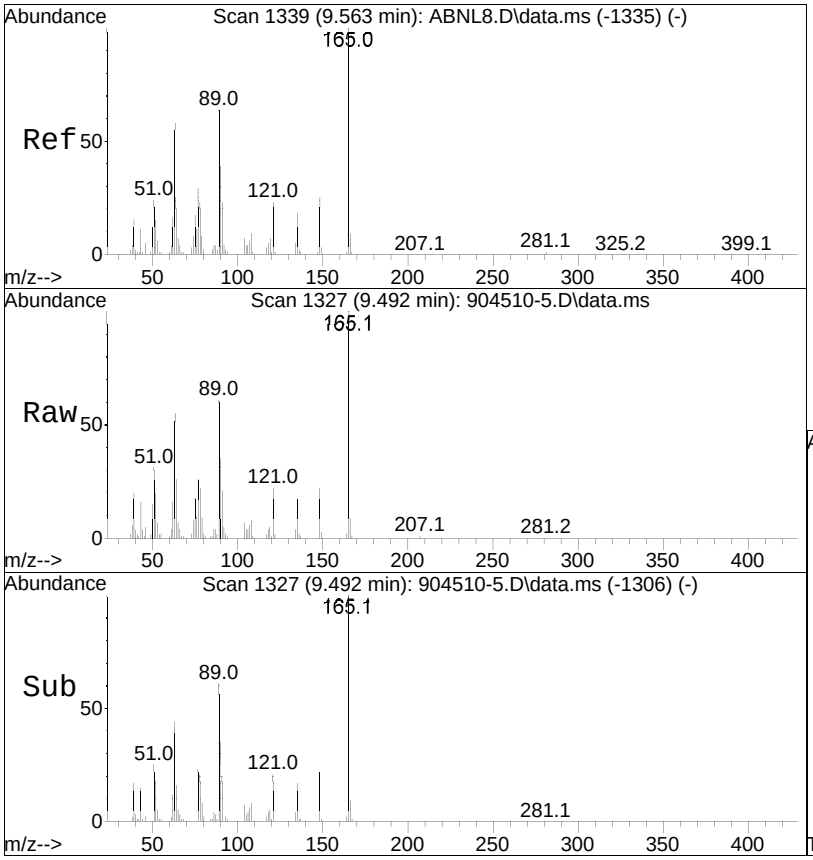


#50
Dimethyl phthalate
Concen: 3.11 ug/ml
RT: 9.445 min Scan# 1319
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:163 Resp: 380923

Ion	Ratio	Lower	Upper
163	100		
194	2.8	3.5	5.3#
164	10.2	7.9	11.9

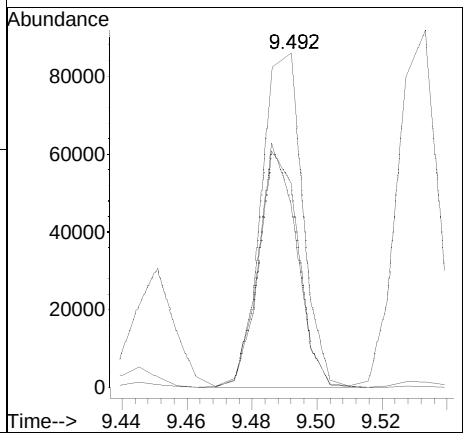


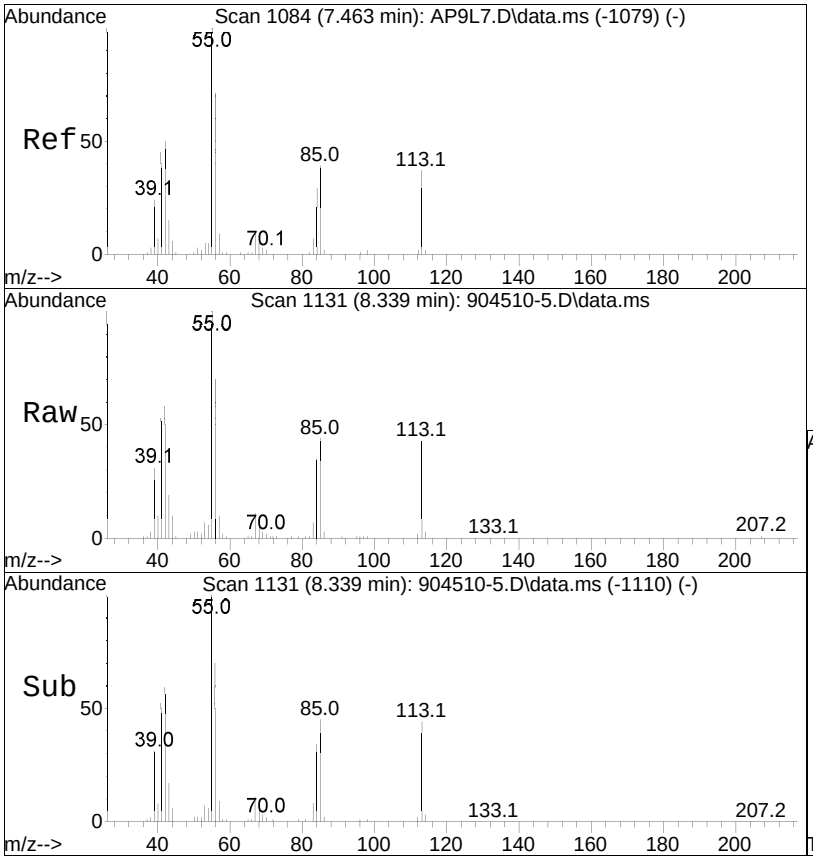


#52
2,6-Dinitrotoluene
Concen: 3.00 ug/ml
RT: 9.492 min Scan# 1327
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:165 Resp: 76566

Ion	Ratio	Lower	Upper
165	100		
89	67.2	54.2	81.2
63	66.7	64.2	96.2

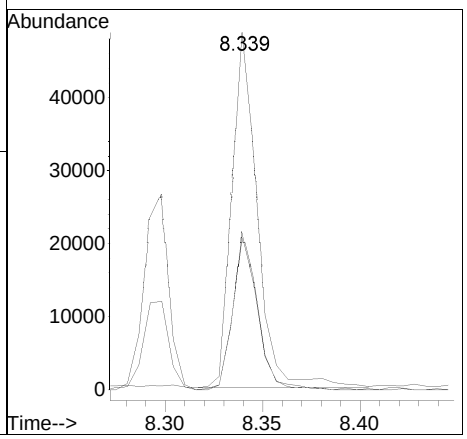


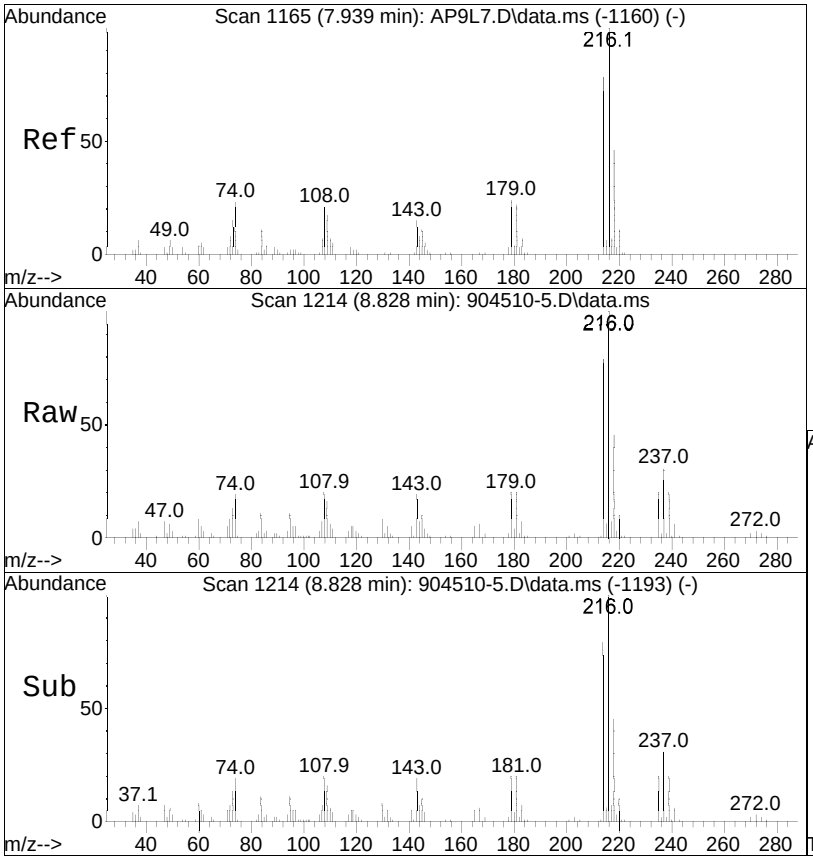


#59
Caprolactam
Concen: 2.51 ug/ml
RT: 8.339 min Scan# 1131
Delta R.T. 0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 55 Resp: 44212

Ion	Ratio	Lower	Upper
55	100		
85	42.9	19.8	29.6#
113	41.4	29.6	44.4

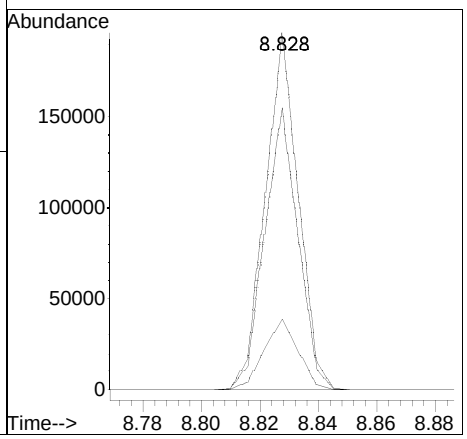


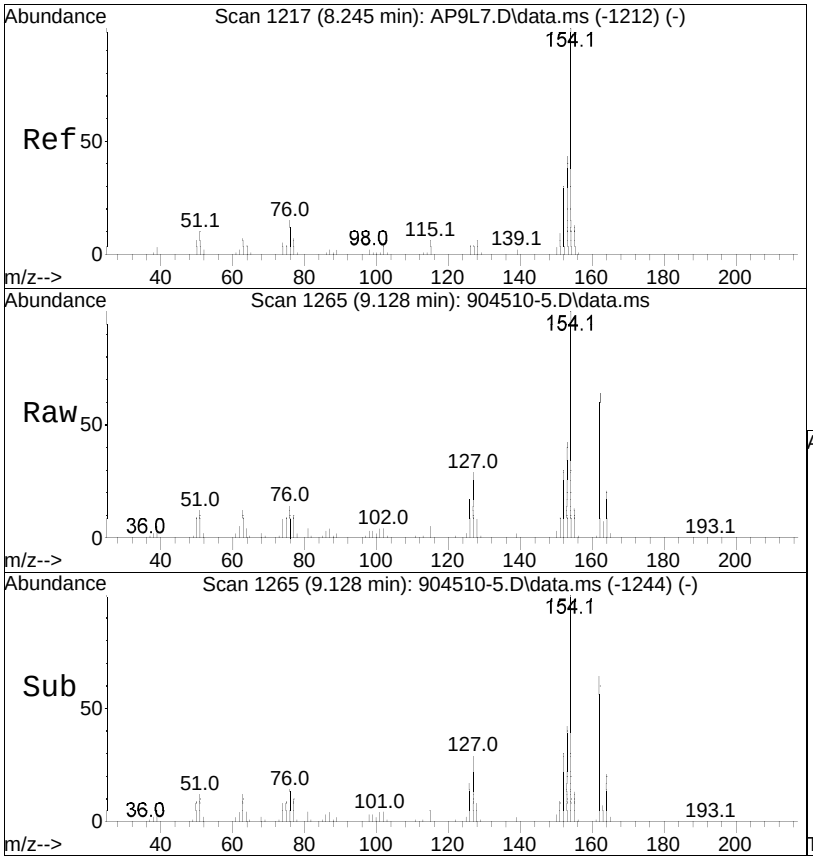


#60
1,2,4,5-Tetrachlorobenzene
Concen: 2.58 ug/ml
RT: 8.828 min Scan# 1214
Delta R.T. 0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:216 Resp: 153093

Ion	Ratio	Lower	Upper
216	100		
214	79.6	63.7	95.5
179	20.6	19.0	28.6

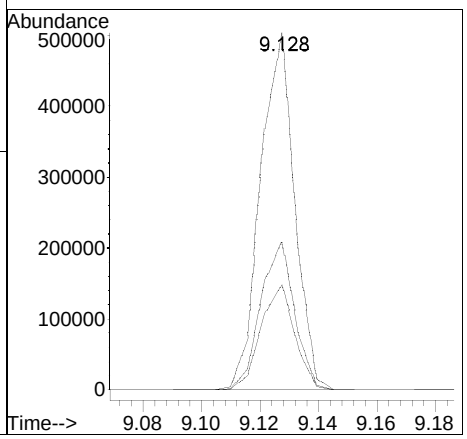


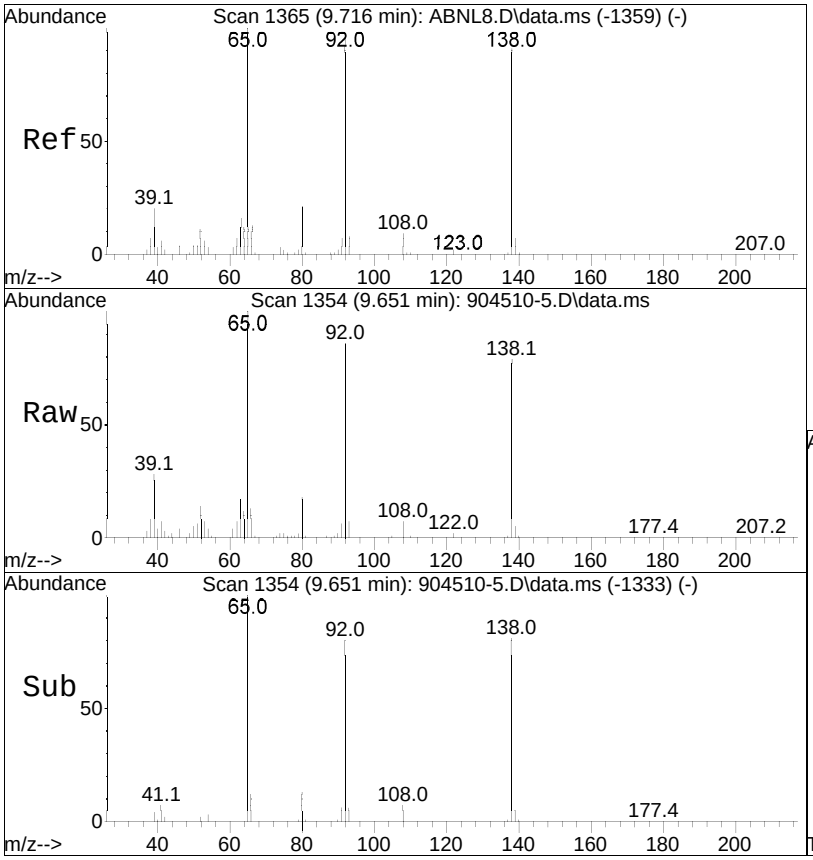


#61
Biphenyl
Concen: 3.04 ug/ml
RT: 9.128 min Scan# 1265
Delta R.T. 0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:154 Resp: 404867

Ion	Ratio	Lower	Upper
154	100		
153	41.4	32.3	48.5
152	29.5	22.5	33.7

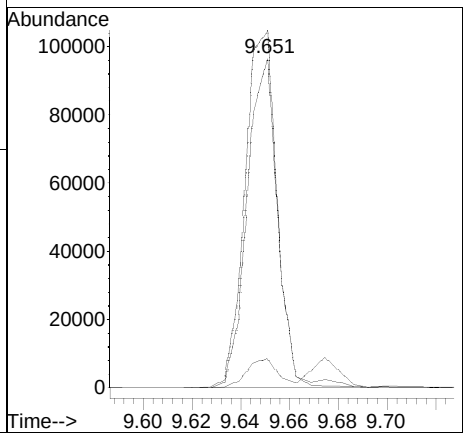


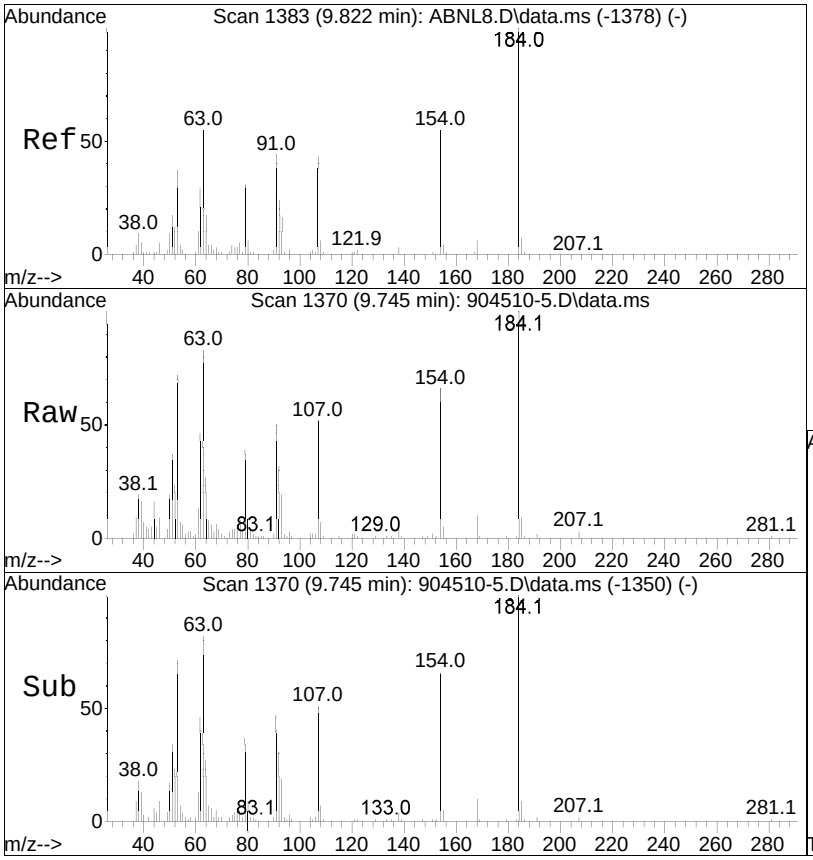


#63
3-Nitroaniline
Concen: 3.44 ug/ml
RT: 9.651 min Scan# 1354
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:138 Resp: 82544

Ion	Ratio	Lower	Upper
138	100		
92	116.3	93.4	140.2
108	9.6	9.5	14.3

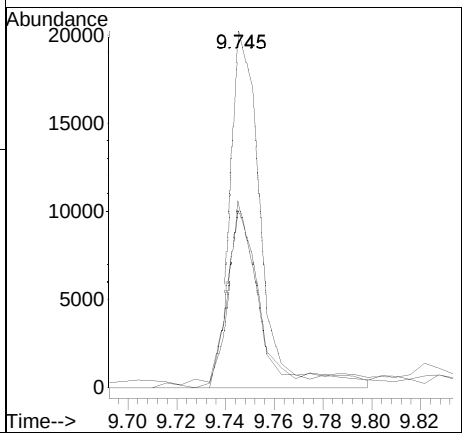


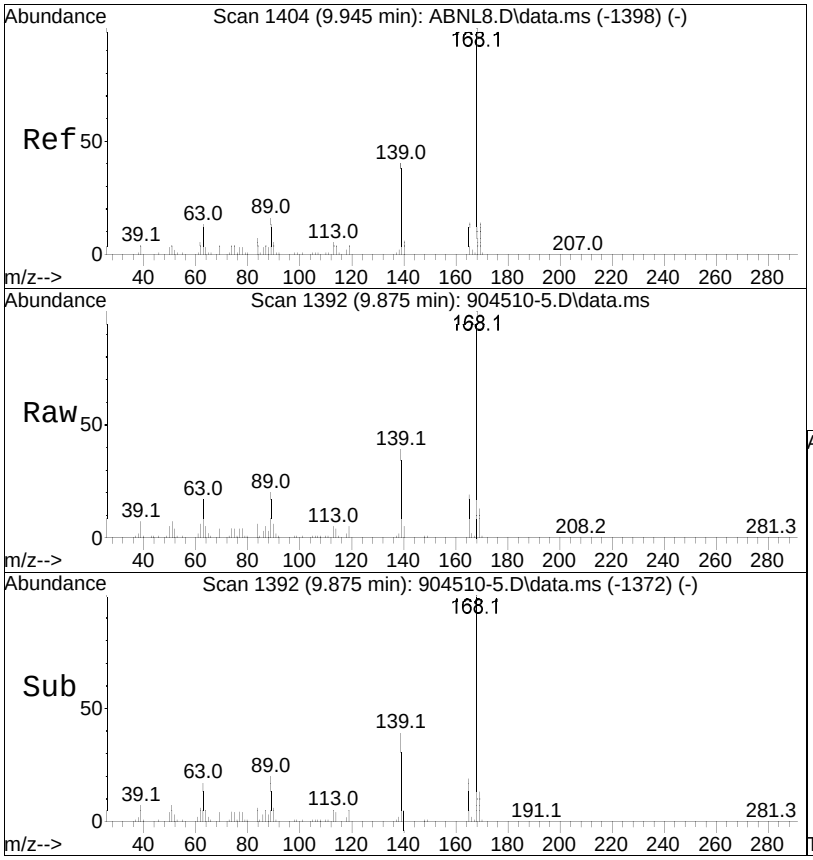


#65
2,4-Dinitrophenol
Concen: 2.09 ug/ml
RT: 9.745 min Scan# 1370
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:184 Resp: 17786

Ion	Ratio	Lower	Upper
184	100		
107	49.0	37.7	56.5
91	48.8	46.3	69.5

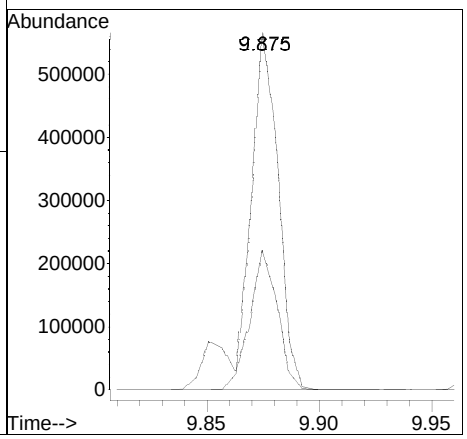


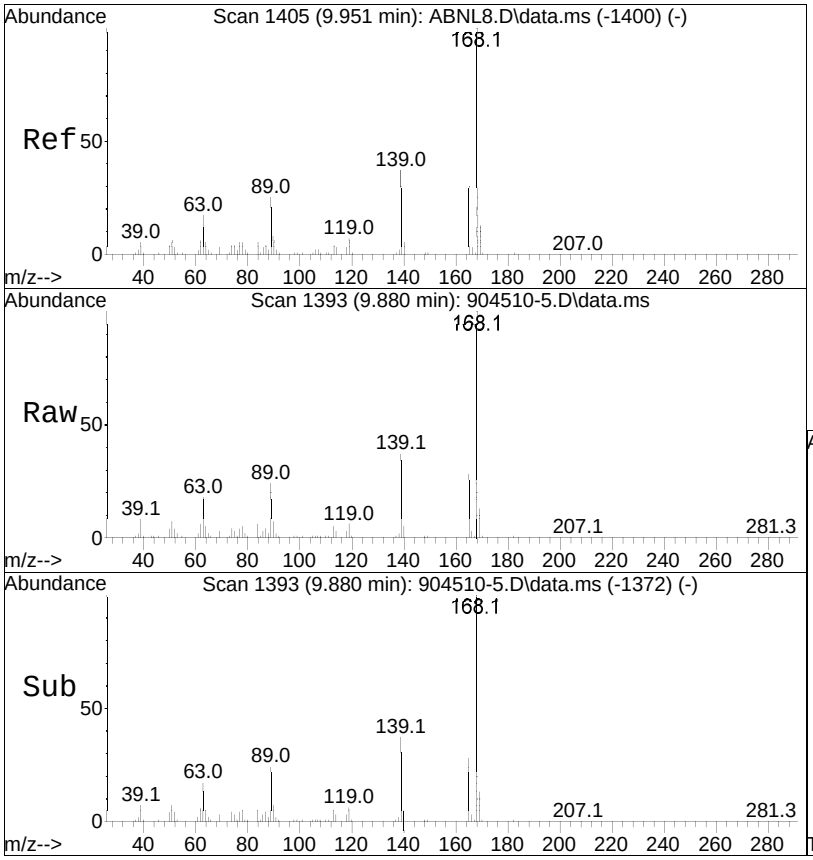


#66
Dibenzofuran
Concen: 3.18 ug/ml
RT: 9.875 min Scan# 1392
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:168 Resp: 466436

Ion	Ratio	Lower	Upper
168	100		
139	52.7	31.4	47.2#

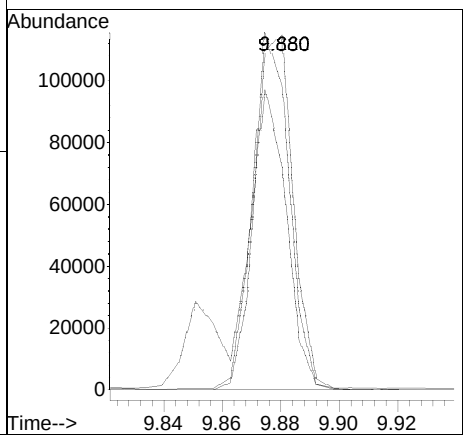


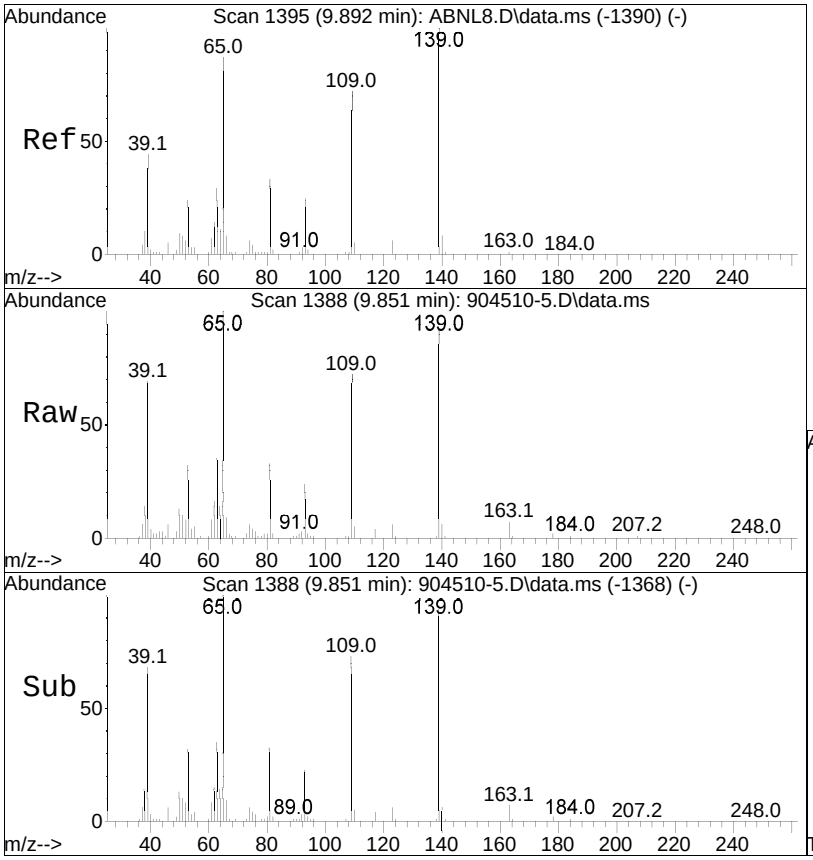


#67
2,4-Dinitrotoluene
Concen: 3.37 ug/ml
RT: 9.880 min Scan# 1393
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:165 Resp: 104123

Ion	Ratio	Lower	Upper
165	100		
89	96.9	72.0	108.0
63	99.8	52.7	79.1#

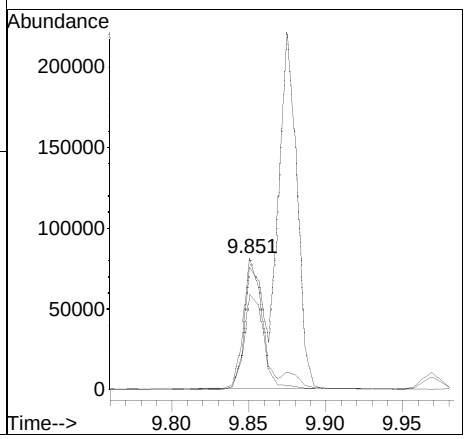


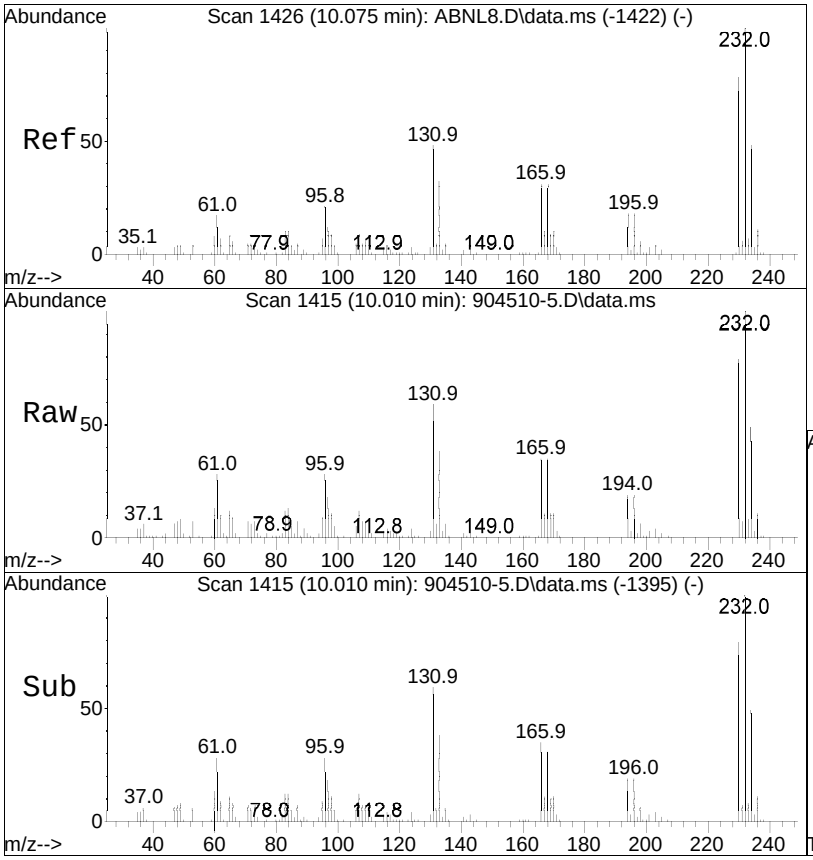


#68
4-Nitrophenol
Concen: 3.82 ug/ml
RT: 9.851 min Scan# 1388
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion: 65 Resp: 77284

Ion	Ratio	Lower	Upper
65	100		
109	69.3	47.4	71.2
139	318.1	76.6	115.0#

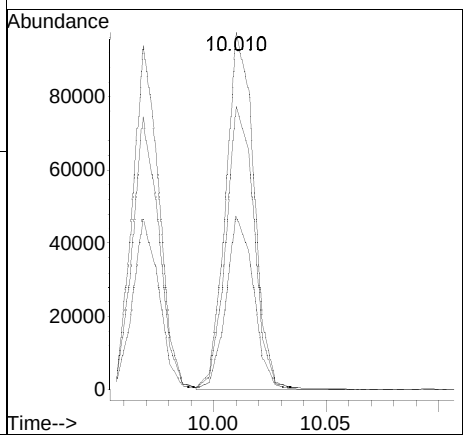


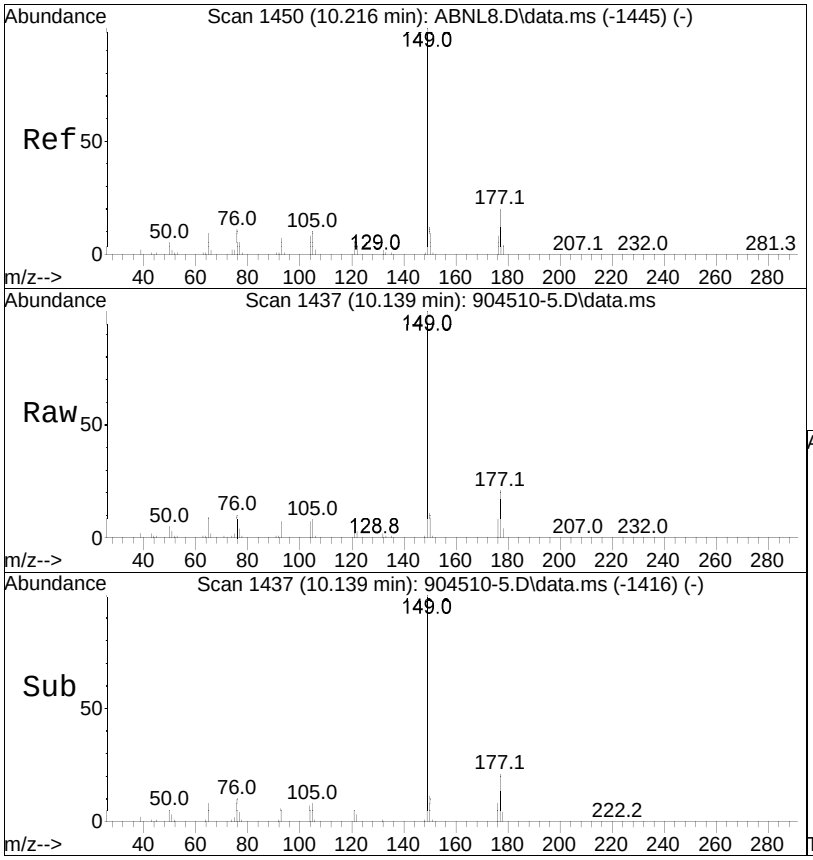


#70
2,3,4,6-Tetrachlorophenol
Concen: 3.35 ug/ml
RT: 10.010 min Scan# 1415
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:232 Resp: 85333

Ion	Ratio	Lower	Upper
232	100		
230	79.3	61.8	92.8
234	47.6	36.2	54.2

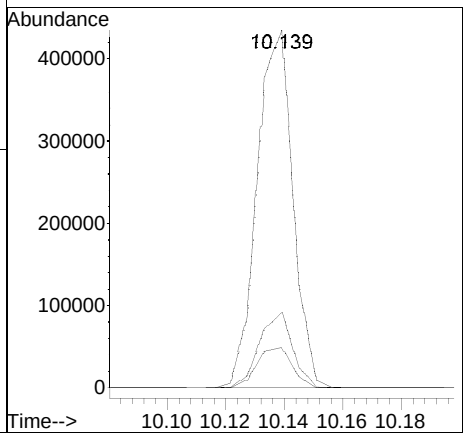


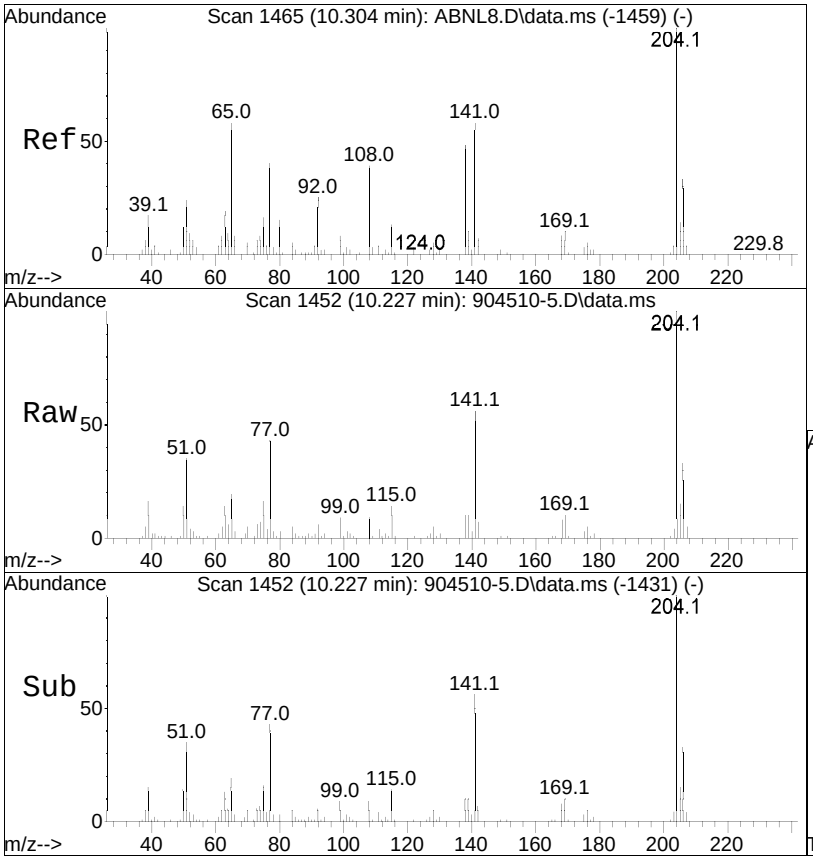


#71
Diethyl phthalate
Concen: 3.55 ug/ml
RT: 10.139 min Scan# 1437
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:149 Resp: 365890

Ion	Ratio	Lower	Upper
149	100		
177	19.9	16.1	24.1
150	11.5	9.4	14.2

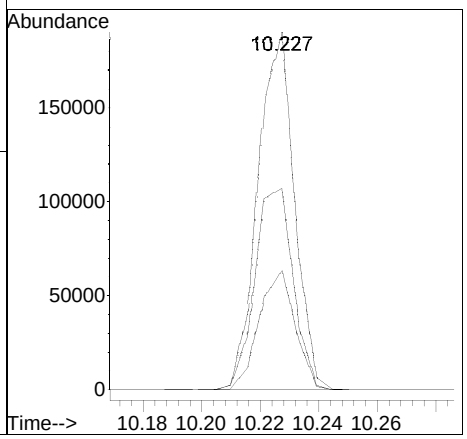


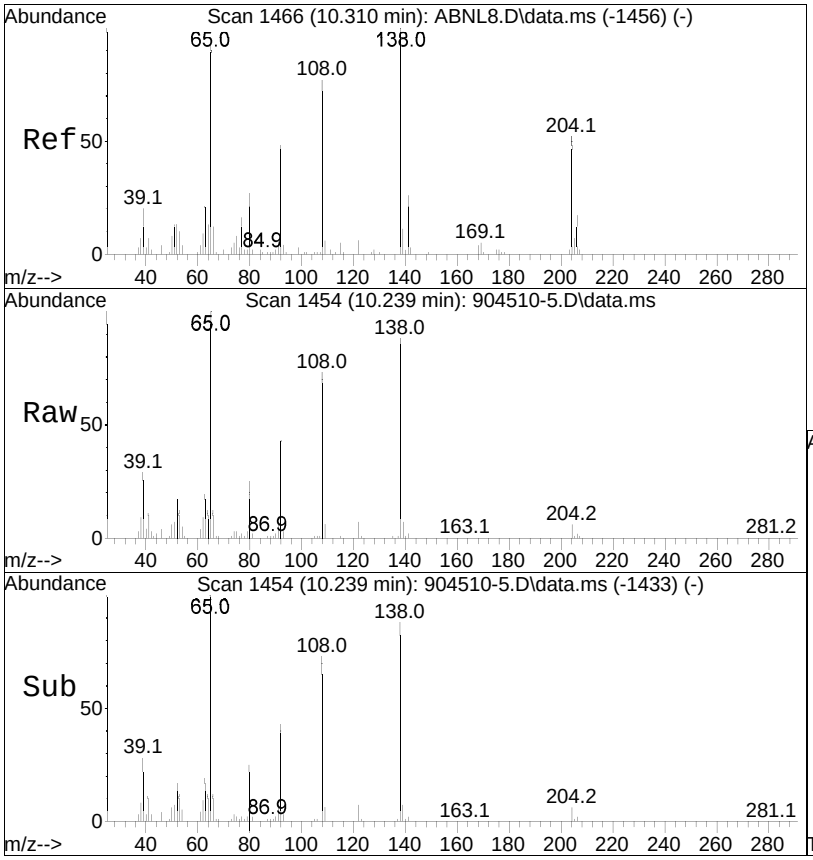


#73
4-Chlorophenyl phenyl ether
Concen: 2.87 ug/ml
RT: 10.227 min Scan# 1452
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:204 Resp: 163035

Ion	Ratio	Lower	Upper
204	100		
206	33.3	25.8	38.6
141	59.7	53.6	80.4

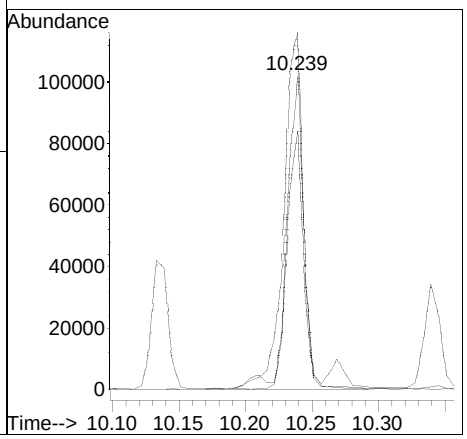


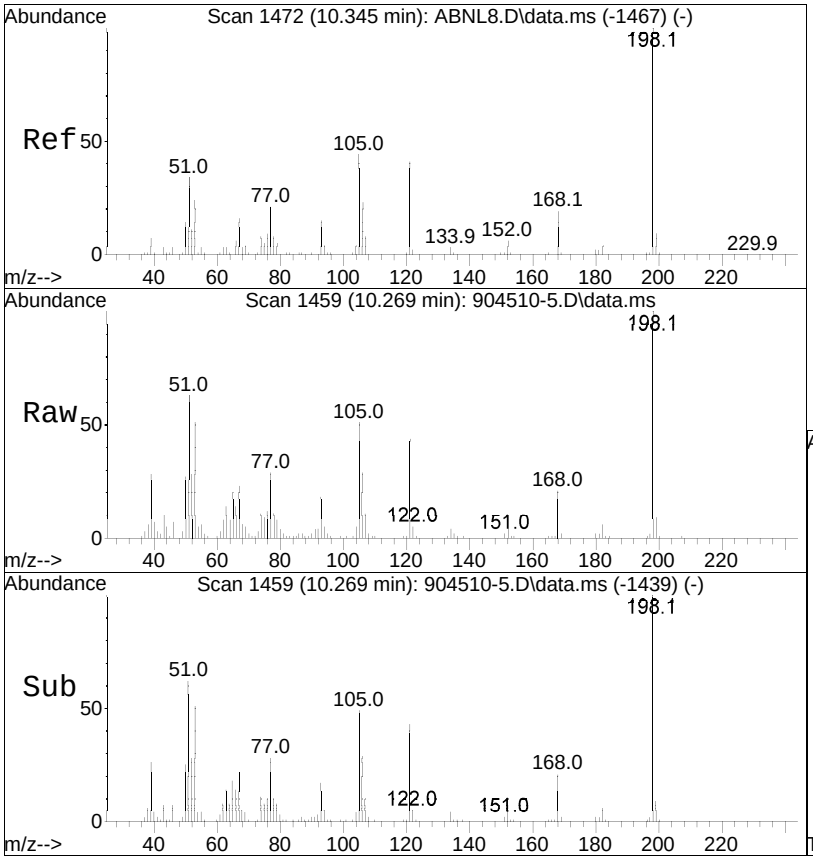


#74
4-Nitroaniline
Concen: 3.74 ug/ml
RT: 10.239 min Scan# 1454
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:138 Resp: 90437

Ion	Ratio	Lower	Upper
138	100		
108	80.5	52.1	78.1#
65	127.8	115.0	172.6

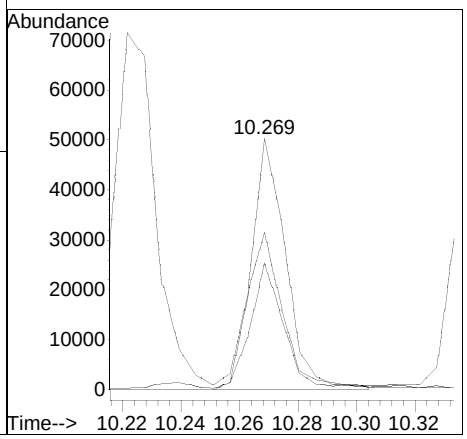


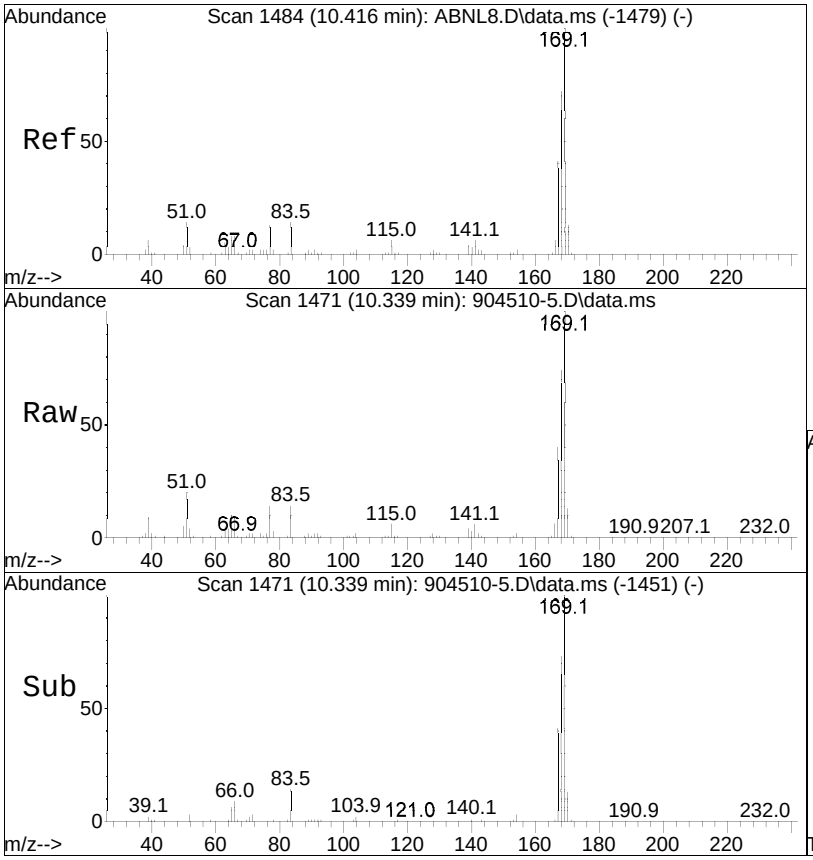


#75
4,6-Dinitro-o-cresol
Concen: 2.79 ug/ml
RT: 10.269 min Scan# 1459
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:198 Resp: 41123

Ion	Ratio	Lower	Upper
198	100		
51	60.8	76.0	114.0#
105	48.5	45.6	68.4

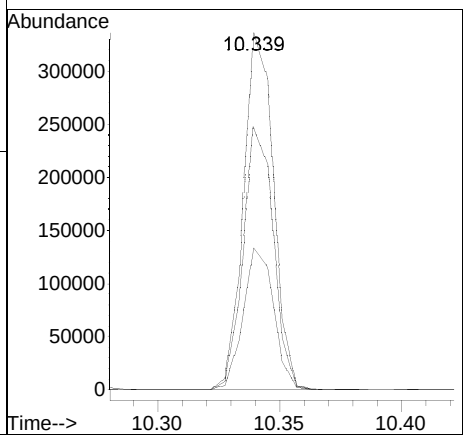


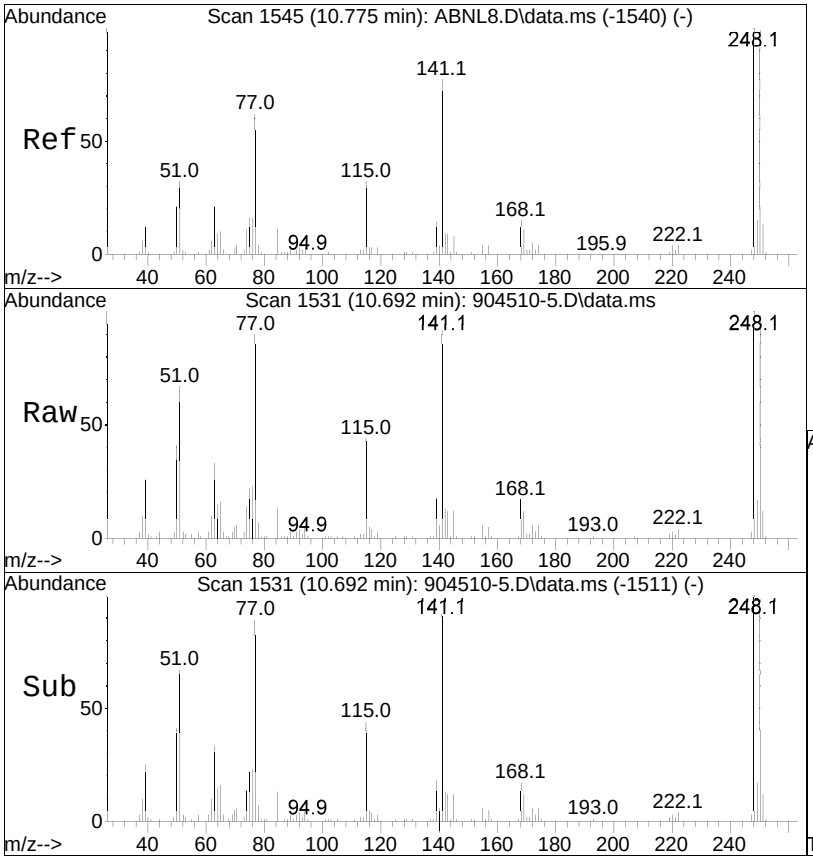


#76
NDPA/DPA
Concen: 3.26 ug/ml
RT: 10.339 min Scan# 1471
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:169 Resp: 288052

Ion	Ratio	Lower	Upper
169	100		
168	74.0	54.0	81.0
167	40.4	28.6	42.8

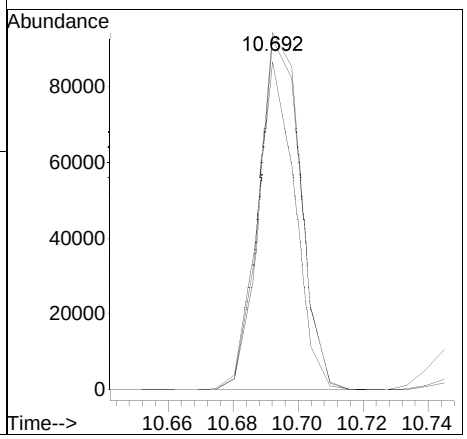


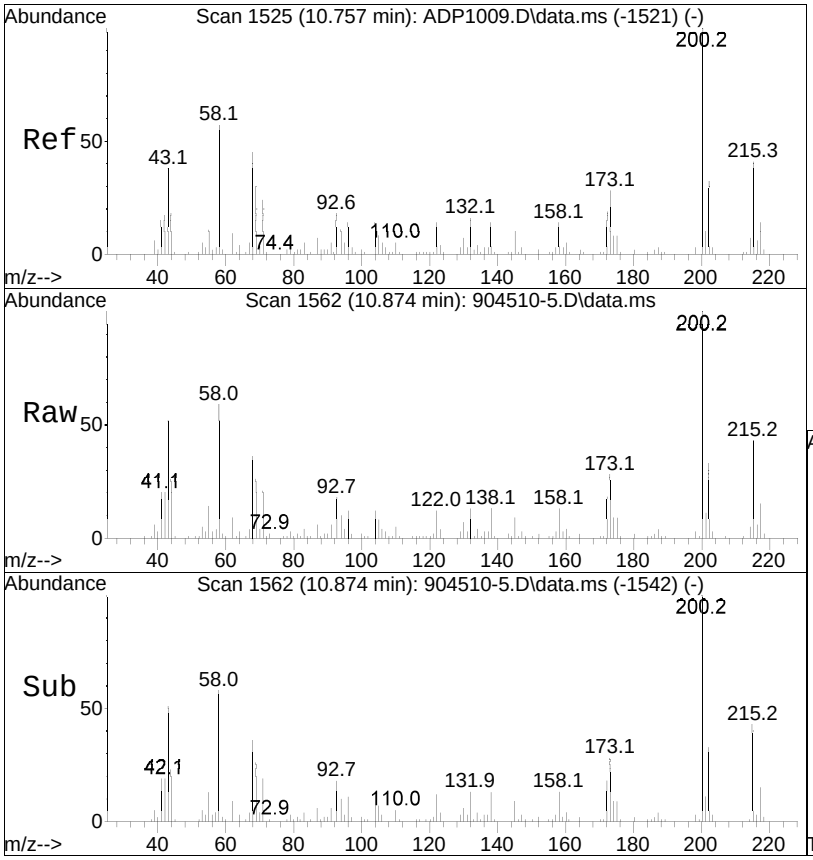


#79
4-Bromophenyl phenyl ether
Concen: 2.82 ug/ml
RT: 10.692 min Scan# 1531
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:248 Resp: 83954

Ion	Ratio	Lower	Upper
248	100		
141	83.2	76.6	114.8
250	96.5	77.3	115.9

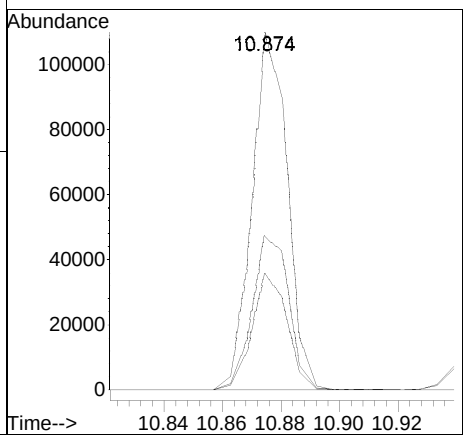


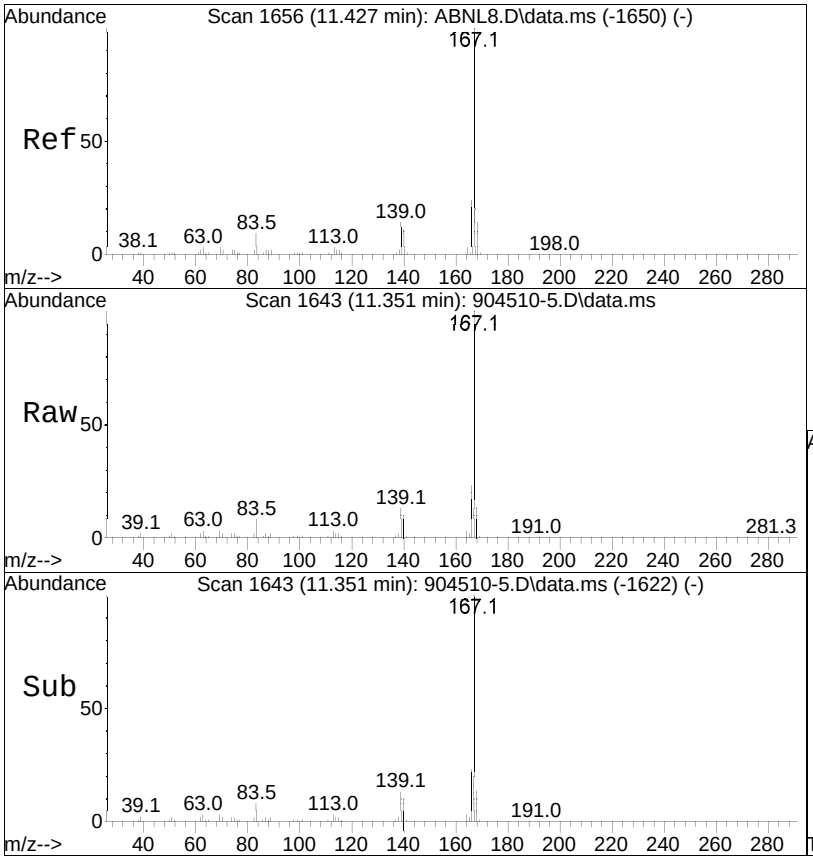


#86
Atrazine
Concen: 3.62 ug/ml
RT: 10.874 min Scan# 1562
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:200 Resp: 91405

Ion	Ratio	Lower	Upper
200	100		
202	32.6	25.8	38.6
215	44.9	40.2	60.4

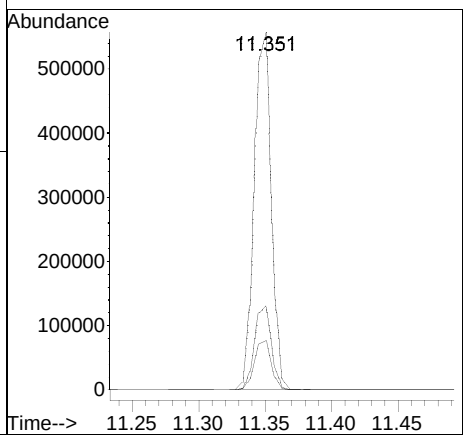


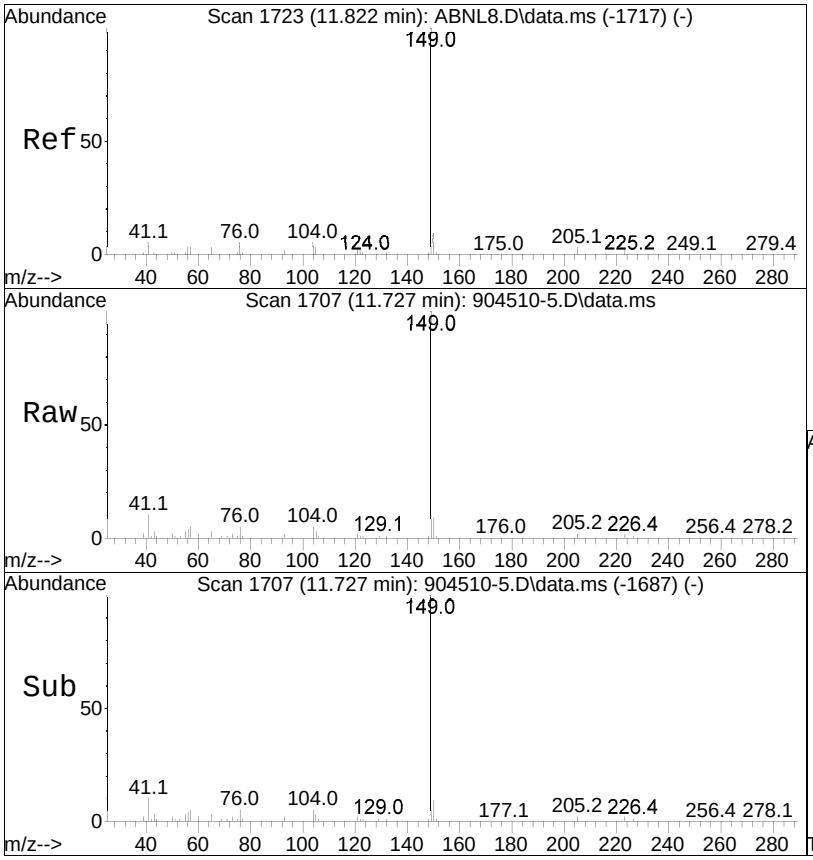


#90
Carbazole
Concen: 3.59 ug/ml
RT: 11.351 min Scan# 1643
Delta R.T. -0.000 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:167 Resp: 493542

Ion	Ratio	Lower	Upper
167	100		
168	13.8	10.6	15.8
166	23.4	17.4	26.0

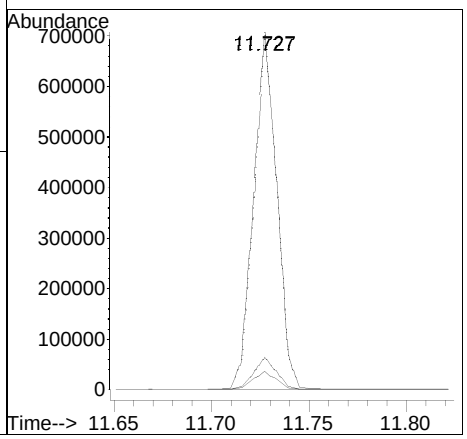


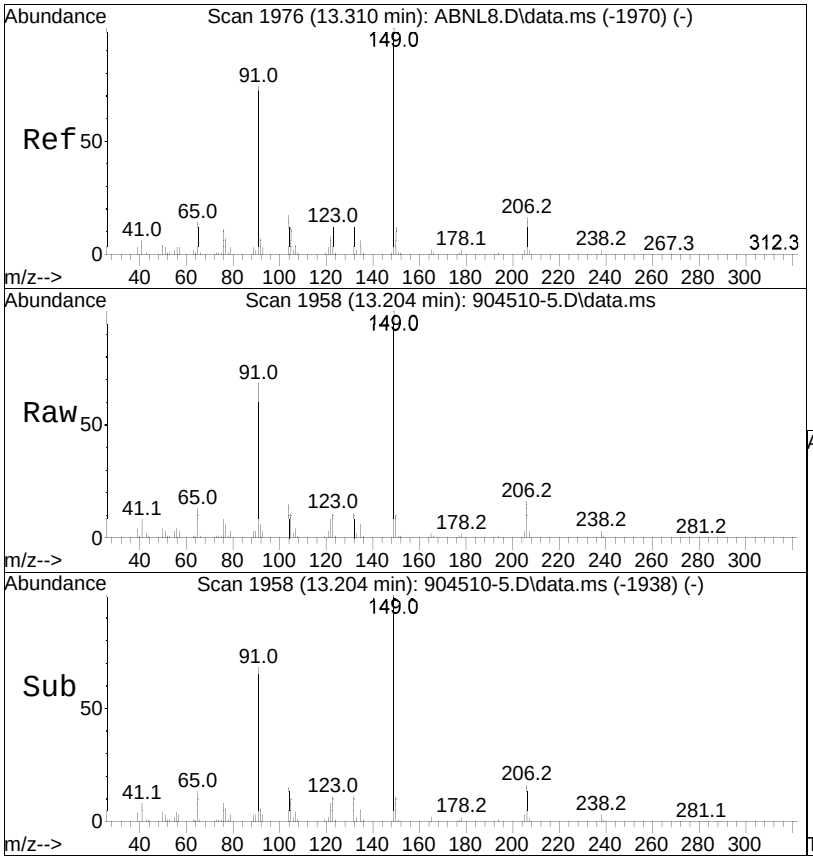


#91
Di-n-butylphthalate
Concen: 3.90 ug/ml
RT: 11.727 min Scan# 1707
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:149 Resp: 570262

Ion	Ratio	Lower	Upper
149	100		
150	8.9	7.0	10.6
104	5.1	4.5	6.7

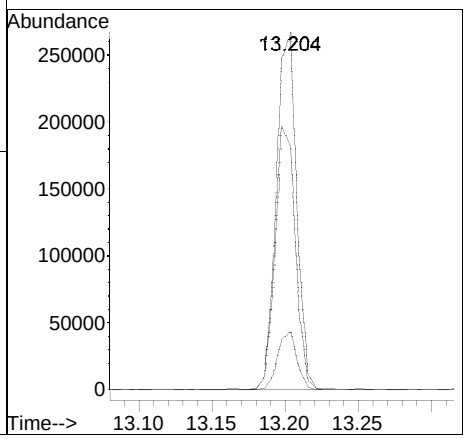


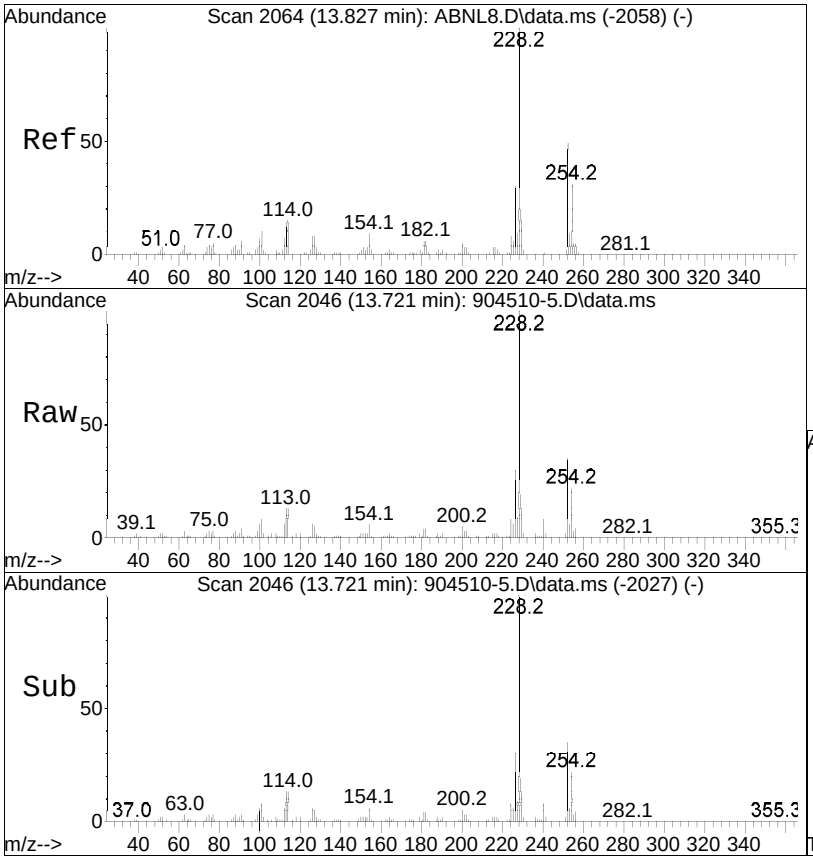


#96
Butyl benzyl phthalate
Concen: 3.97 ug/ml
RT: 13.204 min Scan# 1958
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:149 Resp: 253269

Ion	Ratio	Lower	Upper
149	100		
91	72.8	63.3	94.9
206	15.6	13.9	20.9

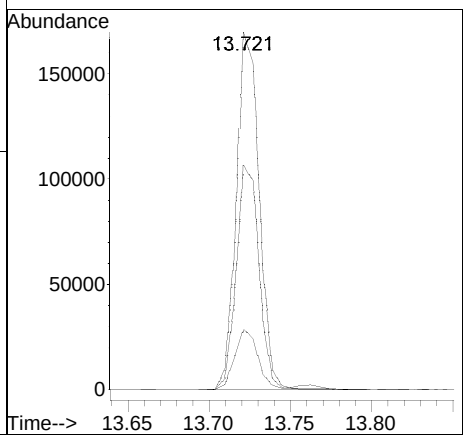


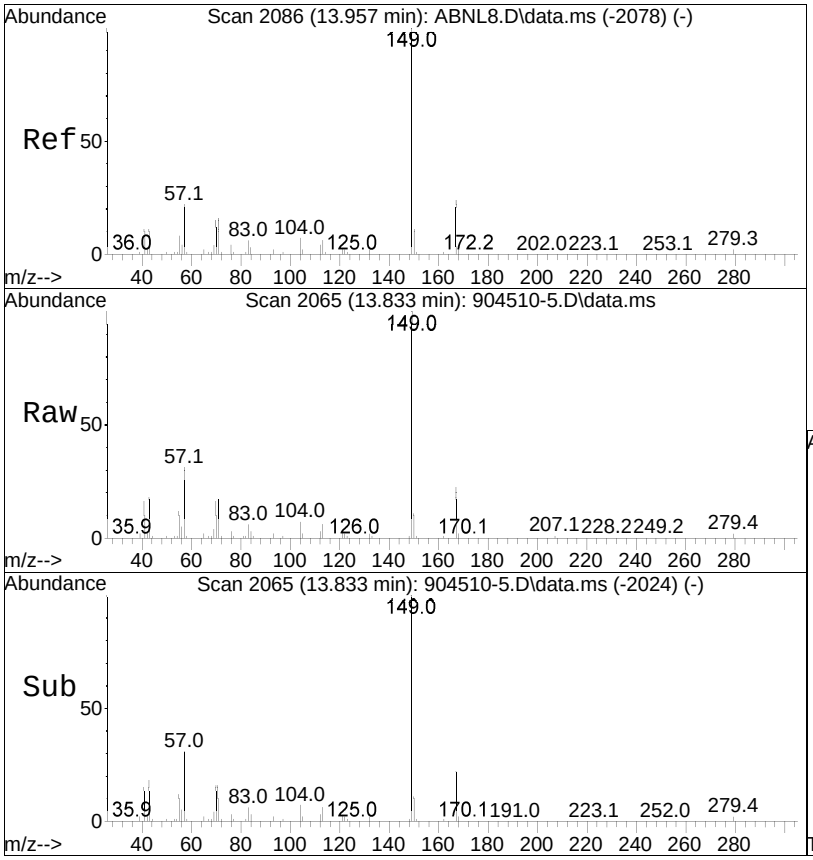


#105
3,3'-Dichlorobenzidine
Concen: 3.65 ug/ml
RT: 13.721 min Scan# 2046
Delta R.T. -0.012 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:252 Resp: 165267

Ion	Ratio	Lower	Upper
252	100		
126	17.3	14.5	21.7
254	62.7	51.2	76.8

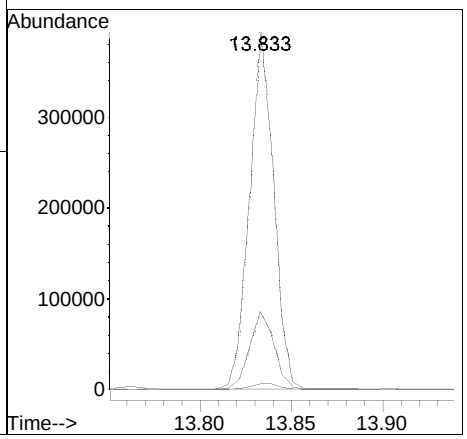


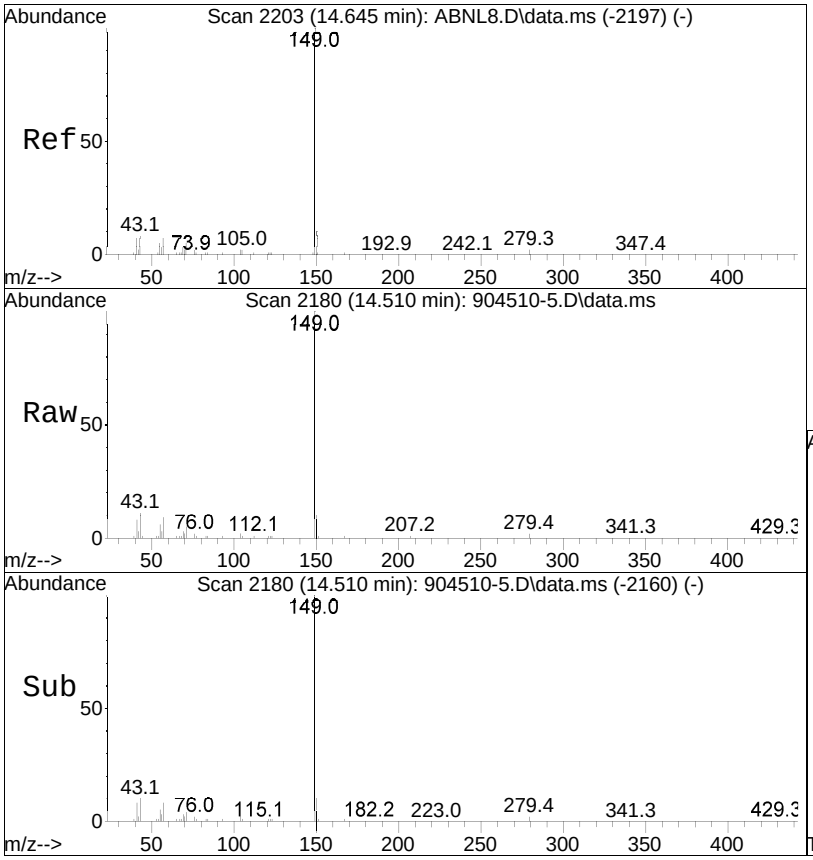


#107
Bis(2-ethylhexyl)phthalate
Concen: 4.58 ug/ml
RT: 13.833 min Scan# 2065
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:149 Resp: 356336

Ion	Ratio	Lower	Upper
149	100		
167	22.3	22.1	33.1
279	1.8	3.0	4.4#

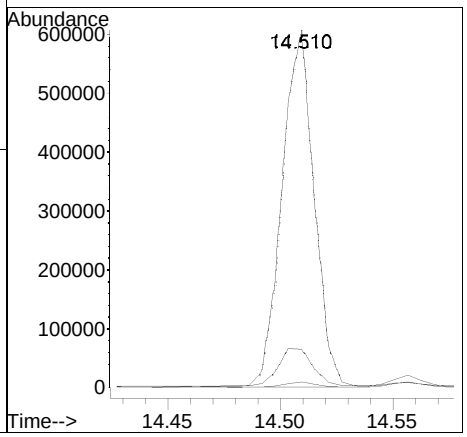




#108
Di-n-octylphthalate
Concen: 4.88 ug/ml
RT: 14.510 min Scan# 2180
Delta R.T. -0.006 min
Lab File: 904510-5.D
Acq: 4 Apr 2024 7:26 pm

Tgt Ion:149 Resp: 593382

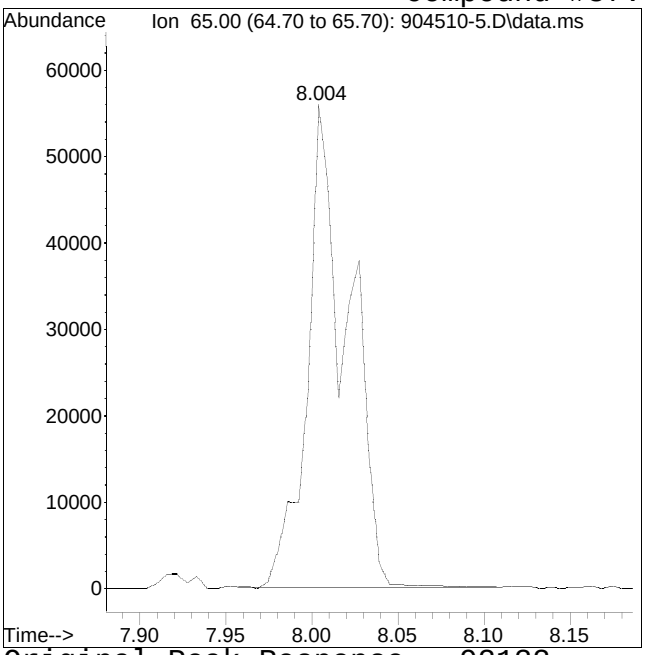
Ion	Ratio	Lower	Upper
149	100		
43	11.8	18.8	28.2#
167	1.4	1.3	1.9

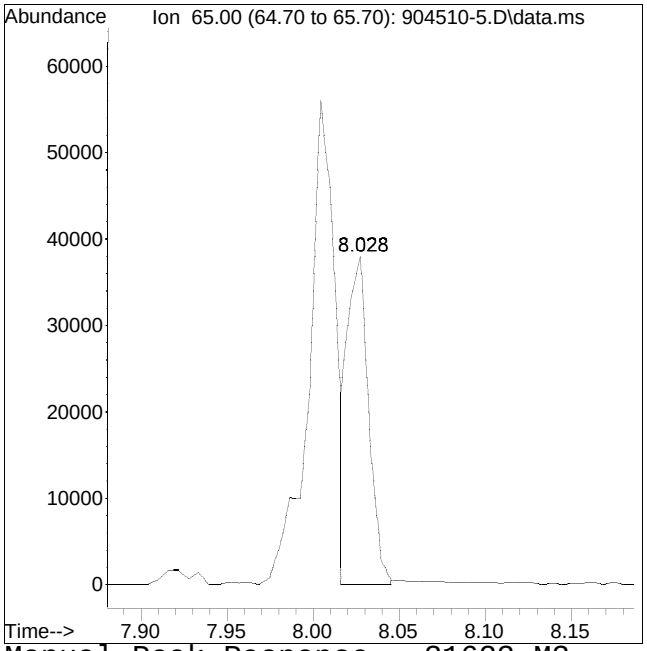


Manual Integration Report

Data Path	: I:\8270\SV107\240404lvi\	QMethod	: FS240211SV107RVT.m
Data File	: 904510-5.D	Operator	: SV107:sz
Date Inj'd	: 4/4/2024 7:26 pm	Instrument	: SV107
Sample	: WG1904510-5,32,,gmr	Quant Date	: 4/4/2024 7:46 pm

Compound #37: 4-Chloroaniline





Original Peak Response = 92132 Manual Peak Response = 31623 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Calculation of Semi Volatile Organic Compounds

Aqueous Concentration Formula: Amt * DF * 1000 * (1/Vo) * Vf

Where:
DF = Dilution Factor
Vo = Volume of Sample (mL)
Vf = Extraction Lab Final Volume (mL)

Soil Concentration Formula: Amt * DF * 1000 * (1/Wt) * Vf * (100/TS)
Where:
DF = Dilution Factor
Wt = Weight of Sample (g)
Vf = Extraction Lab Final Volume (mL)
TS = Total Solids

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Apr 05 2024, 09:04 am

Work Group: WG1904510 for Department: 2 Organic Preparation

Created: 03-APR-24 Due: Operator: DAE

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2417074-01	MW-3A	C	NYTCL-8270-LVI	WATER	DONE	U	0404	0404	S0	Amber-A.25
L2417074-02	MW-6AR	C	NYTCL-8270-LVI	WATER	DONE	U	0404	0404	S0	Amber-A.25
L2417074-03	MW-7A	C	NYTCL-8270-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417074-04	MW-7B	C	NYTCL-8270-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417074-05	MW-7C	C	NYTCL-8270-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417074-06	DUP	C	NYTCL-8270-LVI	WATER	DONE	U	0404	0404	S0	Amber-A.25
L2417074-07	EQ BLANK	C	NYTCL-8270-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417832-01	HRP-MW3 040224	C	NYTCL-8270-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-02	HRP-MW1 040224	C	NYTCL-8270-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-03	GW-17B 040224	C	NYTCL-8270-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-04	MW-21B 040224	C	NYTCL-8270-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-05	MW-21A 040224	C	NYTCL-8270-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-06	HRP-MW5A 040224	C	NYTCL-8270-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
WG1904510-1	Laboratory Method Bl	S	NYTCL-8270-LVI	WATER	DONE	U				
WG1904510-2	Laboratory Control S	S	NYTCL-8270-LVI	WATER	DONE	U				
WG1904510-3	LCS Duplicate	S	NYTCL-8270-LVI	WATER	DONE	U				
WG1904510-4	Matrix Spike	S	NYTCL-8270-LVI	WATER	DONE	U				
WG1904510-5	Matrix Spike Duplica	S	NYTCL-8270-LVI	WATER	DONE	U				

Comments:

WG1904510-3	WG1904510-2
WG1904510-4	L2417074-01
WG1904510-5	L2417074-01

Analysis log File

Total Files Reported in Log : 33
Log Generated From Directory: I:\8270\SV107\240211ical\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	Tune1.D	40MLTEST.M	Tune	WG1886439	2/12/2024 3:31 pm
2	ABNL9.D	40MLTEST.M	IL1,32,,ABNL50 Lot# 104	WG1886439	2/12/2024 3:57 pm
3	ABNL8.D	40MLTEST.M	IL2,32,,ABNL25 Lot# 104	WG1886439	2/12/2024 4:22 pm
4	ABNL7.D	40MLTEST.M	IL3,32,,ABNL10 Lot# 104	WG1886439	2/12/2024 4:48 pm
5	ABNL6.D	40MLTEST.M	IL4,32,,ABNL5 Lot# 1049	WG1886439	2/12/2024 5:14 pm
6	ABNL5.D	40MLTEST.M	IL5,32,,ABNL2.5 Lot# 10	WG1886439	2/12/2024 5:40 pm
7	ABNL4.D	40MLTEST.M	IL6,32,,ABNL1 Lot# 1049	WG1886439	2/12/2024 6:06 pm
8	ABNL3.D	40MLTEST.M	IL7,32,,ABNL0.5 Lot# 10	WG1886439	2/12/2024 6:32 pm
9	ABNL2.D	40MLTEST.M	IL8,32,,ABNL0.2 Lot# 10	WG1886439	2/12/2024 6:59 pm
10	ABNL1.D	40MLTEST.M	IL9,32,,ABNL0.1 Lot# 10	WG1886439	2/12/2024 7:25 pm
11	AP9L9.D	40MLTEST.M	IL1,32,,AP9L50 Lot# 105	WG1886439	2/12/2024 7:52 pm
12	AP9L8.D	40MLTEST.M	IL2,32,,AP9L25 Lot# 105	WG1886439	2/12/2024 8:18 pm
13	AP9L7.D	40MLTEST.M	IL3,32,,AP9L10 Lot# 105	WG1886439	2/12/2024 8:45 pm
14	AP9L6.D	40MLTEST.M	IL4,32,,AP9L5 Lot# 1054	WG1886439	2/12/2024 9:11 pm
15	AP9L5.D	40MLTEST.M	IL5,32,,AP9L2.5 Lot# 10	WG1886439	2/12/2024 9:38 pm
16	AP9L4.D	40MLTEST.M	IL6,32,,AP9L1 Lot# 1055	WG1886439	2/12/2024 10:04 pm
17	AP9L3.D	40MLTEST.M	IL7,32,,AP9L0.5 Lot# 10	WG1886439	2/12/2024 10:30 pm
18	AP9L2.D	40MLTEST.M	IL8,32,,AP9L0.2 Lot# 10	WG1886439	2/12/2024 10:56 pm
19	AP9L1.D	40MLTEST.M	IL9,32,,AP9L0.1 Lot# 10	WG1886439	2/12/2024 11:22 pm
20	ABNICV.D	40MLTEST.M	CQICV1,32,,ABNICV Lot#	WG1886439	2/12/2024 11:48 pm
21	AP9ICV.D	40MLTEST.M	CQICV2,32,,AP9ICV Lot#	WG1886439	2/13/2024 12:14 am
22	Tune2.D	40MLTEST.M	Tune	WG1886439	2/13/2024 12:40 am
23	ADPL9.D	40MLTEST.M	IL1,32,,ADPL50 Lot# 105	WG1886439	2/13/2024 1:06 am
24	ADPL8.D	40MLTEST.M	IL3,32,,ADPL25 Lot# 105	WG1886439	2/13/2024 1:32 am
25	ADPL7.D	40MLTEST.M	IL4,32,,ADPL10 Lot# 105	WG1886439	2/13/2024 1:58 am
26	ADPL6.D	40MLTEST.M	IL5,32,,ADPL5 Lot# 1051	WG1886439	2/13/2024 2:23 am
27	ADPL5.D	40MLTEST.M	IL6,32,,ADPL2.5 Lot# 10	WG1886439	2/13/2024 2:49 am
28	ADPL4.D	40MLTEST.M	IL7,32,,ADPL1 Lot# 1051	WG1886439	2/13/2024 3:15 am
29	ADPL3.D	40MLTEST.M	IL8,32,,ADPL0.5 Lot# 10	WG1886439	2/13/2024 3:40 am
30	ADPL2.D	40MLTEST.M	IL9,32,,ADPL0.2 Lot# 10	WG1886439	2/13/2024 4:06 am
31	ADPL1.D	40MLTEST.M	IL10,32,,ADPL0.1 Lot# 1	WG1886439	2/13/2024 4:31 am
32	ADPICV.D	40MLTEST.M	CQICV3,32,,ADPICV Lot#	WG1886439	2/13/2024 4:57 am
33	InstBlnk.D	40MLTEST.M	Instrument Blank	WG1886439	2/13/2024 5:22 am

Dep.: GCMS
Inst: **SV107**
Date: **04/04/24**
Run:

Method
GC: 8270 FSLVI

Seq: **WG1904833**

Vial	Data File	Sample	CCAL	notes	initials
141	DEG0404	wg-1,32,,SV107 Degdftp			
142	ABN0404a	wg-3,32,,ABN 10360 gmr0327A			
143	AP90404	wg-4,32,,AP9 10340 gmr0327A			
144	ADP0404	wg-5,32,,ADP 10309 gmr0327A			
1	904512-1	WG1904512-1,32,,gmr			
2	904512-2	WG1904512-2,32,,gmr			
3	904512-3	WG1904512-3,32,,gmr			
4	17832-01	L2417832-01,32,,R3A,gmr			
5	17832-02	L2417832-02,32,,R3A,gmr			
6	17832-03	L2417832-03,32,,R3A,gmr			
7	17832-04	L2417832-04,32,,R3A,gmr			
8	17832-05	L2417832-05,32,,R3A,gmr			
9	17832-06	L2417832-06,32,,R3A,gmr			
10	16663-03	L2416663-03,32,,gmr			
11	755-02d1	L2416755-02d,32,10,rv,gmr			
12	752-05d1	L2416752-05d,32,10,rv,gmr			
13	16957-02	L2416957-02,32,,gmr			
14	17074-01	L2417074-01,32,,gmr			
15	904510-4	WG1904510-4,32,,gmr			
16	904510-5	WG1904510-5,32,,gmr			
17	17074-02	L2417074-02,32,,gmr			
18	17074-03	L2417074-03,32,,gmr			
19	17074-04	L2417074-04,32,,gmr			
20	17074-05	L2417074-05,32,,gmr			
21	17074-06	L2417074-06,32,,gmr			
22	17074-07	L2417074-07,32,,gmr			Gmr 04/05

ORGANIC ELN REPORT

Workgroup: WG1904510

Prep Method: EPA 3510C
Solvent Type: DCM
Surrogate Type: ABN
Spike Type: ABN
Spike Verify by: DAE
Lims Spikelot: 8270-LVI

Lot #: EI200
Lot #: 10614ae,09/20/2024,
Lot #: 10588am,09/08/2024,10575bd,(

Additional Reagents/Stds

H2SO4	A030924
Na2SO4	23F1561004
NaOH	10NNaOH031624

Conc.Method: Buchi
Solvent Type: DCM
Lot #: EI200

Additional Reagents/Stds

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Vol ml	Ph	Surr Amt ml	Spike Amt ml	Concentration: Conc Date	Analyst	Final Vol ml	Conc Unit
L2417074-01 WATER	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H
L2417074-02 WATER	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H
L2417074-03 WATER	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H
L2417074-04 WATER	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H
L2417074-05 WATER	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H
L2417074-06 WATER	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H

Reported: 05-APR-24 09:05 AM

ORGANIC ELN REPORT

Workgroup: WG1904510

Sample/ Type	Extraction						Concentration			
	Extract Date	Analyst	Sample Vol **ml**	Ph	Surr Amt **ml**	Spike Amt **ml**	Conc Date	Analyst	Final Vol **ml**	Conc Unit
L2417074-07 WATER	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H
L2417832-01 SAMP	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 03:53	Annabella Sarfo	1	H
L2417832-02 SAMP	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 03:53	Annabella Sarfo	1	H
L2417832-03 SAMP	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 03:53	Annabella Sarfo	1	H
L2417832-04 SAMP	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 03:53	Annabella Sarfo	1	H
L2417832-05 SAMP	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 03:53	Annabella Sarfo	1	H
L2417832-06 SAMP	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 03:53	Annabella Sarfo	1	H
WG1904510-1 BLANK	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1		04/04/24 04:19	Alaina Ohara-Cruz	1	H
	Sharing Qc's with WG1904512									
WG1904510-2 LCS	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1	1	04/04/24 04:19	Alaina Ohara-Cruz	1	H

Reported: 05-APR-24 09:05 AM

ORGANIC ELN REPORT

Workgroup: WG1904510

Sample/ Type	Extraction						Concentration			
	Extract Date	Analyst	Sample Vol **ml**	Ph	Surr Amt **ml**	Spike Amt **ml**	Conc Date	Analyst	Final Vol **ml**	Conc Unit
WG1904510-3 LCSD	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1	1	04/04/24 04:19	Alaina Ohara-Cruz	1	H
WG1904510-4 MS	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1	1	04/04/24 04:19	Alaina Ohara-Cruz	1	H
WG1904510-5 MSD	04/03/24 21:18	Daniel Erhagbai	275	<2,>12	1	1	04/04/24 04:19	Alaina Ohara-Cruz	1	H

Reported: 05-APR-24 09:05 AM

Semivolatiles Data
by Method 8270D-SIM

Semivolatiles QC Summary

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: Alpha Geoscience
Project Name: RANCO SAND & GRAVEL

Lab Number: L2417074
Project Number: 12123
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	TOT OUT
MW-3A (L2417074-01)	57	43	74	77	81	55	0
MW-6AR (L2417074-02)	62	47	82	87	107	63	0
MW-7A (L2417074-03)	60	52	73	79	95	58	0
MW-7B (L2417074-04)	37	28	47	50	52	34*	1
MW-7C (L2417074-05)	57	46	78	87	103	63	0
DUP (L2417074-06)	59	49	85	89	79	61	0
EQ BLANK (L2417074-07)	52	41	65	75	84	53	0
WG1903964-1BLANK	42	33	60	50	71	45	0
WG1903964-2LCS	49	43	59	49	79	42	0
WG1903964-3LCSD	58	52	69	55	82	44	0
MW-3AMS	61	53	74	62	94	48	0
MW-3AMSD	66	57	81	69	102	52	0

QC LIMITS

(21-120) 2FP = 2-FLUOROPHENOL
(10-120) PHL = PHENOL-D6
(23-120) NBZ = NITROBENZENE-D5
(15-120) FBP = 2-FLUOROBIPHENYL
(10-120) TBP = 2,4,6-TRIBROMOPHENOL
(41-149) TPH = 4-TERPHENYL-D14

*** Values outside of QC limits**

FORM II NYTCL-8270-SIM-LVI

Laboratory Control Sample Summary
Form 3
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix (Level)	: WATER (LOW)		
LCS Sample ID	: WG1903964-2 **Analysis Date** : 04/03/24 07:43	**File ID**	: 903964-2
LCSD Sample ID	: WG1903964-3 **Analysis Date** : 04/03/24 08:00	**File ID**	: 903964-3

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Acenaphthene	18	10	58	18	12	66	13	40-140	40
2-Chloronaphthalene	18	9.1	50	18	10	57	13	40-140	40
Fluoranthene	18	10	57	18	11	60	5	40-140	40
Hexachlorobutadiene	18	9.5	52	18	11	60	14	40-140	40
Naphthalene	18	9.4	51	18	13	74	37	40-140	40
Benzo(a)anthracene	18	13	70	18	14	75	7	40-140	40
Benzo(a)pyrene	18	11	58	18	11	62	7	40-140	40
Benzo(b)fluoranthene	18	11	63	18	12	66	5	40-140	40
Benzo(k)fluoranthene	18	11	62	18	12	63	2	40-140	40
Chrysene	18	12	65	18	13	70	7	40-140	40
Acenaphthylene	18	9.1	50	18	10	57	13	40-140	40
Anthracene	18	12	64	18	12	67	5	40-140	40
Benzo(ghi)perylene	18	10	56	18	11	60	7	40-140	40
Fluorene	18	11	59	18	12	65	10	40-140	40
Phenanthrene	18	11	63	18	12	67	6	40-140	40
Dibenzo(a,h)anthracene	18	10	56	18	11	60	7	40-140	40
Indeno(1,2,3-cd)pyrene	18	11	62	18	12	67	8	40-140	40
Pyrene	18	10	56	18	11	59	5	40-140	40
2-Methylnaphthalene	18	9.1	50	18	11	59	17	40-140	40
Pentachlorophenol	18	12	63	18	12	66	5	40-140	40
Hexachlorobenzene	18	13	70	18	13	74	6	40-140	40
Hexachloroethane	18	8.8	48	18	10	56	15	40-140	40

Matrix Spike Sample Summary
Form 3
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix (Level)**	: WATER (LOW)
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/04/24 08:00
Matrix Spike	: WG1903964-6	**MS Analysis Date**	: 04/04/24 08:16
Matrix Spike Dup	: WG1903964-7	**MSD Analysis Date**	: 04/04/24 08:33

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (ug/l)	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Acenaphthene	ND	18.2	12	66	18.2	13	72	8	40-140	40
2-Chloronaphthalene	ND	18.2	12	66	18.2	13	72	8	40-140	40
Fluoranthene	ND	18.2	12	66	18.2	12	66	0	40-140	40
Hexachlorobutadiene	ND	18.2	13	72	18.2	14	77	7	40-140	40
Naphthalene	ND	18.2	12	66	18.2	13	72	8	40-140	40
Benzo(a)anthracene	ND	18.2	14	77	18.2	15	83	7	40-140	40
Benzo(a)pyrene	ND	18.2	12	66	18.2	13	72	8	40-140	40
Benzo(b)fluoranthene	0.04J	18.2	13	72	18.2	13	72	0	40-140	40
Benzo(k)fluoranthene	0.03J	18.2	12	66	18.2	12	66	0	40-140	40
Chrysene	0.03J	18.2	13	72	18.2	14	77	7	40-140	40
Acenaphthylene	ND	18.2	12	66	18.2	13	72	8	40-140	40
Anthracene	ND	18.2	13	72	18.2	14	77	7	40-140	40
Benzo(ghi)perylene	0.03J	18.2	12	66	18.2	12	66	0	40-140	40
Fluorene	ND	18.2	12	66	18.2	13	72	8	40-140	40
Phenanthrene	ND	18.2	12	66	18.2	13	72	8	40-140	40
Dibenzo(a,h)anthracene	0.04J	18.2	12	66	18.2	12	66	0	40-140	40
Indeno(1,2,3-cd)pyrene	0.04J	18.2	13	72	18.2	13	72	0	40-140	40
Pyrene	ND	18.2	11	61	18.2	12	66	9	40-140	40
2-Methylnaphthalene	ND	18.2	12	66	18.2	13	72	8	40-140	40
Pentachlorophenol	ND	18.2	11	61	18.2	13	72	17	40-140	40
Hexachlorobenzene	ND	18.2	14	77	18.2	15	83	7	40-140	40
Hexachloroethane	ND	18.2	11	61	18.2	12	66	9	40-140	40

Method Blank Summary
Form 4
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: WG1903964-1	**Lab File ID**	: 903964-1
Instrument ID	: SV119	**Extraction Date**	: 04/02/24
Matrix	: WATER	**Analysis Date**	: 04/03/24 07:27
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1903964-2LCS	WG1903964-2	04/03/24 07:43
WG1903964-3LCSD	WG1903964-3	04/03/24 08:00
MW-3A	L2417074-01	04/04/24 08:00
MW-3AMS	WG1903964-6	04/04/24 08:16
MW-3AMSD	WG1903964-7	04/04/24 08:33
MW-6AR	L2417074-02	04/04/24 08:50
MW-7A	L2417074-03	04/04/24 09:07
MW-7B	L2417074-04	04/04/24 09:24
MW-7C	L2417074-05	04/04/24 09:40
DUP	L2417074-06	04/04/24 09:57
EQ BLANK	L2417074-07	04/04/24 10:14

Instrument Performance Check (Tune) Summary
Form 5
Semivolatiles
Decafluorotriphenylphosphine (DFTPP)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV119	**Analysis Date**	: 12/07/23 12:42
Tune Standard	: R1772537-1	**Tune File ID**	: TUNE_tune

m/e	Ion Abundance Criteria	%Relative Abundance
51	10.0 - 80.0% of Base Peak	48.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69		100
70	Less than 2.0% of mass 69	0.2 (.6)1
127	10.0 - 80.0% of Base Peak	53.2
197	Less than 2.0% of mass 198	0
198	Base Peak, or >50% of mass 442	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 60.0% of Base Peak	27.9
365	Greater than 1.0% of mass 198	2.5
441	Present, but less than 24% of mass 442	18.2
442	Base Peak, or >50% of mass 198	86.2
443	15.0 - 24.0% of mass 442	16.1 (18.7)2

1-Value is % of mass 69 2-Value is % of mass 442

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
IL10	R1772537-3	IL10	12/07/23 13:10
IL9	R1772537-11	IL9	12/07/23 13:27
IL8	R1772537-10	IL8	12/07/23 13:46
IL7	R1772537-9	IL7	12/07/23 14:03
IL6	R1772537-8	IL6	12/07/23 14:20
IL5	R1772537-7	IL5	12/07/23 14:36
IL4	R1772537-6	IL4	12/07/23 14:53
IL3	R1772537-5	IL3	12/07/23 15:09
IL2	R1772537-4	IL2	12/07/23 15:26
IL1	R1772537-2	IL1	12/07/23 15:42
ICV Quant Report	R1772537-12	ICV	12/07/23 15:59

Instrument Performance Check (Tune) Summary
Form 5
Semivolatiles
Decafluorotriphenylphosphine (DFTPP)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV119	**Analysis Date**	: 04/03/24 06:21
Tune Standard	: WG1904170-1	**Tune File ID**	: deg0403_tune

m/e	Ion Abundance Criteria	%Relative Abundance
51	10.0 - 80.0% of Base Peak	52.8
68	Less than 2.0% of mass 69	0.7 (1.5)1
69		100
70	Less than 2.0% of mass 69	0.1 (.3)1
127	10.0 - 80.0% of Base Peak	53
197	Less than 2.0% of mass 198	0
198	Base Peak, or >50% of mass 442	100
199	5.0 - 9.0% of mass 198	6.2
275	10.0 - 60.0% of Base Peak	21.3
365	Greater than 1.0% of mass 198	2.6
441	Present, but less than 24% of mass 442	14.6
442	Base Peak, or >50% of mass 198	59.8
443	15.0 - 24.0% of mass 442	10.3 (17.1)2

1-Value is % of mass 69 2-Value is % of mass 442

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1904170-4TFACTOR-B	WG1904170-4	DEG0403	04/03/24 06:21
WG1904170-5TFACTOR-P	WG1904170-5	DEG0403	04/03/24 06:21
WG1904170-3CCAL	WG1904170-3	CCV0403	04/03/24 06:40
WG1903964-1BLANK	WG1903964-1	903964-1	04/03/24 07:27
WG1903964-2LCS	WG1903964-2	903964-2	04/03/24 07:43
WG1903964-3LCSD	WG1903964-3	903964-3	04/03/24 08:00

Instrument Performance Check (Tune) Summary
Form 5
Semivolatiles
Decafluorotriphenylphosphine (DFTPP)

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV119	**Analysis Date**	: 04/04/24 06:41
Tune Standard	: WG1904665-1	**Tune File ID**	: deg0404_tune

m/e	Ion Abundance Criteria	%Relative Abundance
51	10.0 - 80.0% of Base Peak	56.8
68	Less than 2.0% of mass 69	0.8 (1.7)1
69		100
70	Less than 2.0% of mass 69	0.4 (.8)1
127	10.0 - 80.0% of Base Peak	60.5
197	Less than 2.0% of mass 198	0
198	Base Peak, or >50% of mass 442	100
199	5.0 - 9.0% of mass 198	7
275	10.0 - 60.0% of Base Peak	26.7
365	Greater than 1.0% of mass 198	2.6
441	Present, but less than 24% of mass 442	16
442	Base Peak, or >50% of mass 198	62.5
443	15.0 - 24.0% of mass 442	13.3 (21.2)2

1-Value is % of mass 69 2-Value is % of mass 442

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1904665-4TFACTOR-B	WG1904665-4	DEG0404	04/04/24 06:41
WG1904665-5TFACTOR-P	WG1904665-5	DEG0404	04/04/24 06:41
WG1904665-3CCAL	WG1904665-3	CCV0404	04/04/24 06:58
MW-3A	L2417074-01	17074-01	04/04/24 08:00
WG1903964-6MS	WG1903964-6	903964-6	04/04/24 08:16
WG1903964-7MSD	WG1903964-7	903964-7	04/04/24 08:33
MW-6AR	L2417074-02	17074-02	04/04/24 08:50
MW-7A	L2417074-03	17074-03	04/04/24 09:07
MW-7B	L2417074-04	17074-04	04/04/24 09:24
MW-7C	L2417074-05	17074-05	04/04/24 09:40
DUP	L2417074-06	17074-06	04/04/24 09:57
EQ BLANK	L2417074-07	17074-07	04/04/24 10:14

Internal Standard Area and RT Summary
Form 8a
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV119	**Analysis Date**	: 04/03/24 06:40:00
Sample No	: WG1904170-3	**Lab File ID**	: CCV0403

	1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
	Area	RT	Area	RT	Area	RT
WG1904170-3	53851	2.23	173620	2.90	87313	3.88
Upper Limit	107702	2.73	347240	3.40	174626	4.38
Lower Limit	26926	1.73	86810	2.40	43657	3.38
Sample ID						
WG1903964-1 BLANK	57802	2.22	185304	2.89	94282	3.87
WG1903964-2 LCS	59038	2.23	197307	2.89	97755	3.87
WG1903964-3 LCSD	57305	2.23	189107	2.90	93371	3.88

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

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Internal Standard Area and RT Summary
Form 8a
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV119	**Analysis Date**	: 04/03/24 06:40:00
Sample No	: WG1904170-3	**Lab File ID**	: CCV0403

	Phenanthrene-d10		Chrysene-d12		Perylene-d12	
	Area	RT	Area	RT	Area	RT
WG1904170-3	180904	4.72	149911	6.29	170346	7.50
Upper Limit	361808	5.22	299822	6.79	340692	8.00
Lower Limit	90452	4.22	74956	5.79	85173	7.00
Sample ID						
WG1903964-1 BLANK	188485	4.72	152967	6.34	154601	7.56
WG1903964-2 LCS	200181	4.72	142595	6.29	144309	7.50
WG1903964-3 LCSD	191708	4.72	144653	6.28	154565	7.49

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

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Internal Standard Area and RT Summary
Form 8a
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV119	**Analysis Date**	: 04/04/24 06:58:00
Sample No	: WG1904665-3	**Lab File ID**	: CCV0404

	1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
	Area	RT	Area	RT	Area	RT
WG1904665-3	63465	2.24	190169	2.90	110246	3.88
Upper Limit	126930	2.74	380338	3.40	220492	4.38
Lower Limit	31733	1.74	95085	2.40	55123	3.38
Sample ID						
MW-3A	52870	2.21	144543	2.88	93430	3.87
MW-3A MS	57916	2.23	183063	2.89	97862	3.87
MW-3A MSD	56109	2.23	176340	2.90	96066	3.87
MW-6AR	54140	2.23	152218	2.90	100663	3.87
MW-7A	54276	2.23	147040	2.90	97937	3.87
MW-7B	52381	2.23	136641	2.90	92448	3.87
MW-7C	53579	2.23	144860	2.90	97015	3.87
DUP	55404	2.23	152894	2.90	101035	3.87
EQ BLANK	54292	2.23	145011	2.90	98847	3.87

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

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Internal Standard Area and RT Summary
Form 8a
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: SV119	**Analysis Date**	: 04/04/24 06:58:00
Sample No	: WG1904665-3	**Lab File ID**	: CCV0404

	Phenanthrene-d10		Chrysene-d12		Perylene-d12	
	Area	RT	Area	RT	Area	RT
WG1904665-3	244714	4.72	210122	6.28	221293	7.49
Upper Limit	489428	5.22	420244	6.78	442586	7.99
Lower Limit	122357	4.22	105061	5.78	110647	6.99
Sample ID						
MW-3A	202629	4.72	188689	6.37	197303	7.59
MW-3A MS	206501	4.72	153670	6.29	163145	7.50
MW-3A MSD	206437	4.72	158446	6.28	170397	7.49
MW-6AR	217056	4.72	200061	6.28	206059	7.49
MW-7A	208974	4.72	190114	6.28	195443	7.49
MW-7B	201735	4.72	189183	6.28	195440	7.49
MW-7C	209773	4.72	192099	6.28	198948	7.48
DUP	217413	4.72	198932	6.28	204119	7.49
EQ BLANK	214576	4.72	194736	6.28	195599	7.48

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

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Date Created: 03/07/23
Created By: Jason Hebert
File: PM14021-1
Page: 1

EPA 8270E Low Level PAH (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 1000ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	0.1	0.035	ug/l	40-140	40	40-140	40	40			
2-Chloronaphthalene	91-58-7	0.2	0.035	ug/l	40-140	40	40-140	40	40			
Fluoranthene	206-44-0	0.1	0.038	ug/l	40-140	40	40-140	40	40			
Hexachlorobutadiene	87-68-3	0.5	0.036	ug/l	40-140	40	40-140	40	40			
Naphthalene	91-20-3	0.1	0.043	ug/l	40-140	40	40-140	40	40			
Benzo(a)anthracene	56-55-3	0.1	0.018	ug/l	40-140	40	40-140	40	40			
Benzo(a)pyrene	50-32-8	0.1	0.039	ug/l	40-140	40	40-140	40	40			
Benzo(b)fluoranthene	205-99-2	0.1	0.016	ug/l	40-140	40	40-140	40	40			
Benzo(k)fluoranthene	207-08-9	0.1	0.042	ug/l	40-140	40	40-140	40	40			
Chrysene	218-01-9	0.1	0.038	ug/l	40-140	40	40-140	40	40			
Acenaphthylene	208-96-8	0.1	0.035	ug/l	40-140	40	40-140	40	40			
Anthracene	120-12-7	0.1	0.035	ug/l	40-140	40	40-140	40	40			
Benzo(ghi)perylene	191-24-2	0.1	0.042	ug/l	40-140	40	40-140	40	40			
Fluorene	86-73-7	0.1	0.037	ug/l	40-140	40	40-140	40	40			
Phenanthrene	85-01-8	0.1	0.015	ug/l	40-140	40	40-140	40	40			
Dibenzo(a,h)anthracene	53-70-3	0.1	0.039	ug/l	40-140	40	40-140	40	40			
Indeno(1,2,3-cd)Pyrene	193-39-5	0.1	0.04	ug/l	40-140	40	40-140	40	40			
Pyrene	129-00-0	0.1	0.04	ug/l	40-140	40	40-140	40	40			
1-Methylnaphthalene	90-12-0	0.1	0.041	ug/l	40-140	40	40-140	40	40			
2-Methylnaphthalene	91-57-6	0.1	0.045	ug/l	40-140	40	40-140	40	40			
Pentachlorophenol	87-86-5	0.8	0.22	ug/l	40-140	40	40-140	40	40			
Hexachlorobenzene	118-74-1	0.8	0.032	ug/l	40-140	40	40-140	40	40			
Hexachloroethane	67-72-1	0.8	0.03	ug/l	40-140	40	40-140	40	40			
2-Fluorophenol	*367-12-4*									*21-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*15-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-120*		
4-Terphenyl-d14	*1718-51-0*									*41-149*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 03/07/23
Created By: Jason Hebert
File: PM14022-1
Page: 1

EPA 8270E Low Level PAH (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	6.68	1.4028	ug/kg	40-140	50	40-140	50	50			
2-Chloronaphthalene	91-58-7	6.68	0.8684	ug/kg	40-140	50	40-140	50	50			
Fluoranthene	206-44-0	6.68	0.4676	ug/kg	40-140	50	40-140	50	50			
Hexachlorobutadiene	87-68-3	6.68	0.9352	ug/kg	34-107	50	40-140	50	50			
Naphthalene	91-20-3	6.68	1.2024	ug/kg	40-140	50	40-140	50	50			
Benzo(a)anthracene	56-55-3	6.68	0.6346	ug/kg	40-140	50	40-140	50	50			
Benzo(a)pyrene	50-32-8	6.68	0.8016	ug/kg	40-140	50	40-140	50	50			
Benzo(b)fluoranthene	205-99-2	6.68	0.6346	ug/kg	40-140	50	40-140	50	50			
Benzo(k)fluoranthene	207-08-9	6.68	0.6012	ug/kg	40-140	50	40-140	50	50			
Chrysene	218-01-9	6.68	0.501	ug/kg	40-140	50	40-140	50	50			
Acenaphthylene	208-96-8	6.68	0.835	ug/kg	40-140	50	40-140	50	50			
Anthracene	120-12-7	6.68	0.5344	ug/kg	40-140	50	40-140	50	50			
Benzo(ghi)perylene	191-24-2	6.68	0.5678	ug/kg	40-140	50	40-140	50	50			
Fluorene	86-73-7	6.68	0.8016	ug/kg	40-140	50	40-140	50	50			
Phenanthrene	85-01-8	6.68	0.5678	ug/kg	40-140	50	40-140	50	50			
Dibenzo(a,h)anthracene	53-70-3	6.68	0.668	ug/kg	40-140	50	40-140	50	50			
Indeno(1,2,3-cd)Pyrene	193-39-5	6.68	0.8016	ug/kg	40-140	50	40-140	50	50			
Pyrene	129-00-0	6.68	0.4676	ug/kg	35-142	50	35-142	50	50			
1-Methylnaphthalene	90-12-0	6.68	1.0354	ug/kg	40-140	50	40-140	50	50			
2-Methylnaphthalene	91-57-6	6.68	1.9038	ug/kg	40-140	50	40-140	50	50			
Pentachlorophenol	87-86-5	26.72	2.9392	ug/kg	17-109	50	17-109	50	50			
Hexachlorobenzene	118-74-1	6.68	0.7014	ug/kg	40-140	50	40-140	50	50			
Hexachloroethane	67-72-1	6.68	1.2358	ug/kg	29-106	50	40-140	50	50			
2-Fluorophenol	*367-12-4*									*25-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*30-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-136*		
4-Terphenyl-d14	*1718-51-0*									*18-120*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Semivolatile Sample Data

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 08:00
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 17074-01	**Analyst**	: JJW
Sample Amount	: 275 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	ND	0.10	0.05	U
56-55-3	Benzo(a)anthracene	ND	0.10	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	0.04	0.10	0.01	J
207-08-9	Benzo(k)fluoranthene	0.03	0.10	0.01	J
218-01-9	Chrysene	0.03	0.10	0.01	J
208-96-8	Acenaphthylene	ND	0.10	0.01	U
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	0.03	0.10	0.01	J
86-73-7	Fluorene	ND	0.10	0.01	U
85-01-8	Phenanthrene	ND	0.10	0.02	U
53-70-3	Dibenzo(a,h)anthracene	0.04	0.10	0.01	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.04	0.10	0.01	J
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	ND	0.10	0.02	U
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	ND	0.80	0.01	U
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 08:50
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 17074-02	**Analyst**	: JJW
Sample Amount	: 275 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	0.51	0.10	0.05	
56-55-3	Benzo(a)anthracene	ND	0.10	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.01	U
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.01	U
218-01-9	Chrysene	ND	0.10	0.01	U
208-96-8	Acenaphthylene	0.02	0.10	0.01	J
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U
86-73-7	Fluorene	0.03	0.10	0.01	J
85-01-8	Phenanthrene	0.03	0.10	0.02	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	0.03	0.10	0.02	J
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	0.02	0.80	0.01	J
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 09:07
Sample Matrix	: WATER	**Date Extracted**	: 04/02/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 17074-03	**Analyst**	: JJW
Sample Amount	: 154 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.18	0.03	U
91-58-7	2-Chloronaphthalene	ND	0.36	0.03	U
206-44-0	Fluoranthene	ND	0.18	0.04	U
87-68-3	Hexachlorobutadiene	ND	0.89	0.08	U
91-20-3	Naphthalene	ND	0.18	0.09	U
56-55-3	Benzo(a)anthracene	ND	0.18	0.04	U
50-32-8	Benzo(a)pyrene	ND	0.18	0.03	U
205-99-2	Benzo(b)fluoranthene	ND	0.18	0.02	U
207-08-9	Benzo(k)fluoranthene	ND	0.18	0.02	U
218-01-9	Chrysene	ND	0.18	0.02	U
208-96-8	Acenaphthylene	ND	0.18	0.02	U
120-12-7	Anthracene	ND	0.18	0.03	U
191-24-2	Benzo(ghi)perylene	ND	0.18	0.02	U
86-73-7	Fluorene	ND	0.18	0.03	U
85-01-8	Phenanthrene	ND	0.18	0.04	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.18	0.02	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.18	0.02	U
129-00-0	Pyrene	ND	0.18	0.03	U
91-57-6	2-Methylnaphthalene	ND	0.18	0.04	U
87-86-5	Pentachlorophenol	ND	1.4	0.03	U
118-74-1	Hexachlorobenzene	ND	1.4	0.02	U
67-72-1	Hexachloroethane	ND	1.4	0.11	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 09:24
Sample Matrix	: WATER	**Date Extracted**	: 04/02/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 17074-04	**Analyst**	: JJW
Sample Amount	: 275 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	0.31	0.10	0.05	
56-55-3	Benzo(a)anthracene	ND	0.10	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.01	U
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.01	U
218-01-9	Chrysene	ND	0.10	0.01	U
208-96-8	Acenaphthylene	ND	0.10	0.01	U
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U
86-73-7	Fluorene	ND	0.10	0.01	U
85-01-8	Phenanthrene	ND	0.10	0.02	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	0.03	0.10	0.02	J
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	ND	0.80	0.01	U
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 09:40
Sample Matrix	: WATER	**Date Extracted**	: 04/02/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 17074-05	**Analyst**	: JJW
Sample Amount	: 275 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	0.10	0.10	0.05	J
56-55-3	Benzo(a)anthracene	ND	0.10	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.01	U
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.01	U
218-01-9	Chrysene	ND	0.10	0.01	U
208-96-8	Acenaphthylene	ND	0.10	0.01	U
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U
86-73-7	Fluorene	ND	0.10	0.01	U
85-01-8	Phenanthrene	ND	0.10	0.02	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	ND	0.10	0.02	U
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	ND	0.80	0.01	U
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 09:57
Sample Matrix	: WATER	**Date Extracted**	: 04/03/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 17074-06	**Analyst**	: JJW
Sample Amount	: 275 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	ND	0.10	0.05	U
56-55-3	Benzo(a)anthracene	ND	0.10	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	0.01	0.10	0.01	J
207-08-9	Benzo(k)fluoranthene	0.01	0.10	0.01	J
218-01-9	Chrysene	0.01	0.10	0.01	J
208-96-8	Acenaphthylene	ND	0.10	0.01	U
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U
86-73-7	Fluorene	0.02	0.10	0.01	J
85-01-8	Phenanthrene	ND	0.10	0.02	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	ND	0.10	0.02	U
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	0.01	0.80	0.01	J
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 10:14
Sample Matrix	: WATER	**Date Extracted**	: 04/02/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 17074-07	**Analyst**	: JJW
Sample Amount	: 275 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	ND	0.10	0.05	U
56-55-3	Benzo(a)anthracene	ND	0.10	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.01	U
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.01	U
218-01-9	Chrysene	ND	0.10	0.01	U
208-96-8	Acenaphthylene	ND	0.10	0.01	U
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U
86-73-7	Fluorene	ND	0.10	0.01	U
85-01-8	Phenanthrene	ND	0.10	0.02	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	ND	0.10	0.02	U
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	ND	0.80	0.01	U
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903964-1	**Date Collected**	: NA
Client ID	: WG1903964-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/03/24 07:27
Sample Matrix	: WATER	**Date Extracted**	: 04/02/24
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: 903964-1	**Analyst**	: AH
Sample Amount	: 275 ml	**Instrument ID**	: SV119
Extraction Method	: EPA 3510C	**GC Column**	: RXI-5SilM
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	ND	0.10	0.05	U
56-55-3	Benzo(a)anthracene	ND	0.10	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.01	U
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.01	U
218-01-9	Chrysene	ND	0.10	0.01	U
208-96-8	Acenaphthylene	ND	0.10	0.01	U
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U
86-73-7	Fluorene	ND	0.10	0.01	U
85-01-8	Phenanthrene	ND	0.10	0.02	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	ND	0.10	0.02	U
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	ND	0.80	0.01	U
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-01.D
Acq On : 04 Apr 2024 08:00 am
Operator : sv119:jjw
Sample : L2417074-01,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 10:50:13 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.212	152	52870	4000.000	ng/ml	-0.03
Standard Area 1 = 63465			Recovery = 83.31%			
8) Naphthalene-d8	2.884	136	144543	4000.000	ng/ml	-0.02
Standard Area 1 = 190169			Recovery = 76.01%			
17) Acenaphthene-d10	3.868	164	93430	4000.000	ng/ml	-0.01
Standard Area 1 = 110246			Recovery = 84.75%			
22) Phenanthrene-d10	4.721	188	202629	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 82.80%			
31) Chrysene-d12	6.369	240	188689M3	4000.000	ng/ml	0.09
Standard Area 1 = 210122			Recovery = 89.80%			
36) Perylene-d12	7.590	264	197303M3	4000.000	ng/ml	0.10
Standard Area 1 = 221293			Recovery = 89.16%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.618	112	41340	2858.758	ng/ml	-0.03
Spiked Amount 5000.000	Range 15 - 110		Recovery = 57.18%			
3) Phenol-d6	2.033	99	37350	2154.713	ng/ml	-0.03
Spiked Amount 5000.000	Range 15 - 110		Recovery = 43.09%			
7) Nitrobenzene-d5	2.496	82	24204	1840.800	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 130		Recovery = 73.63%			
13) 2-Fluorobiphenyl	3.488	172	61973	1919.736	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 130		Recovery = 76.79%			
21) 2,4,6-Tribromophenol	4.323	330	20768	4031.881	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 80.64%			
30) 4-Terphenyl-d14	5.690	244	67993M3	1368.793	ng/ml	0.05
Spiked Amount 2500.000	Range 30 - 130		Recovery = 54.75%			
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.896	128	155M6	4.491	ng/ml	
10) Hexachlorobutadiene	0.000		0	N.D.		
11) 2-Methylnaphthalene	0.000		0	N.D.	d	
14) 2-Chloronaphthalene	0.000		0	N.D.	d	
16) Acenaphthylene	0.000		0	N.D.	d	
18) Acenaphthene	0.000		0	N.D.	d	
20) Fluorene	0.000		0	N.D.	d	
24) Hexachlorobenzene	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-01.D
Acq On : 04 Apr 2024 08:00 am
Operator : sv119:jjw
Sample : L2417074-01,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 10:50:13 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
25) Pentachlorophenol	0.000		0	N.D.	d	
26) Phenanthrene	4.735	178	190M1	3.691	ng/ml	
27) Anthracene	4.762	178	65M6	1.273	ng/ml	
28) Fluoranthene	5.449	202	311M1	4.585	ng/ml	
29) Pyrene	5.587	202	224M3	3.214	ng/ml	
32) Benzo[a]anthracene	6.369	228	794M1	1.957	ng/ml	
34) Chrysene	6.388	228	566M6	9.089	ng/ml	
37) Benzo[b]fluoranthene	7.218	252	771M3	11.185	ng/ml	
38) Benzo[k]fluoranthene	7.243	252	596M4	9.106	ng/ml	
39) Benzo[a]pyrene	0.000		0	N.D.	d	
40) Indeno[1,2,3-cd]pyrene	8.807	276	671M1	10.176	ng/ml	
41) Dibenzo[a,h]anthracene	8.849	278	591M2	9.633	ng/ml	
42) Benzo[g,h,i]perylene	9.145	276	568M1	8.468	ng/ml	

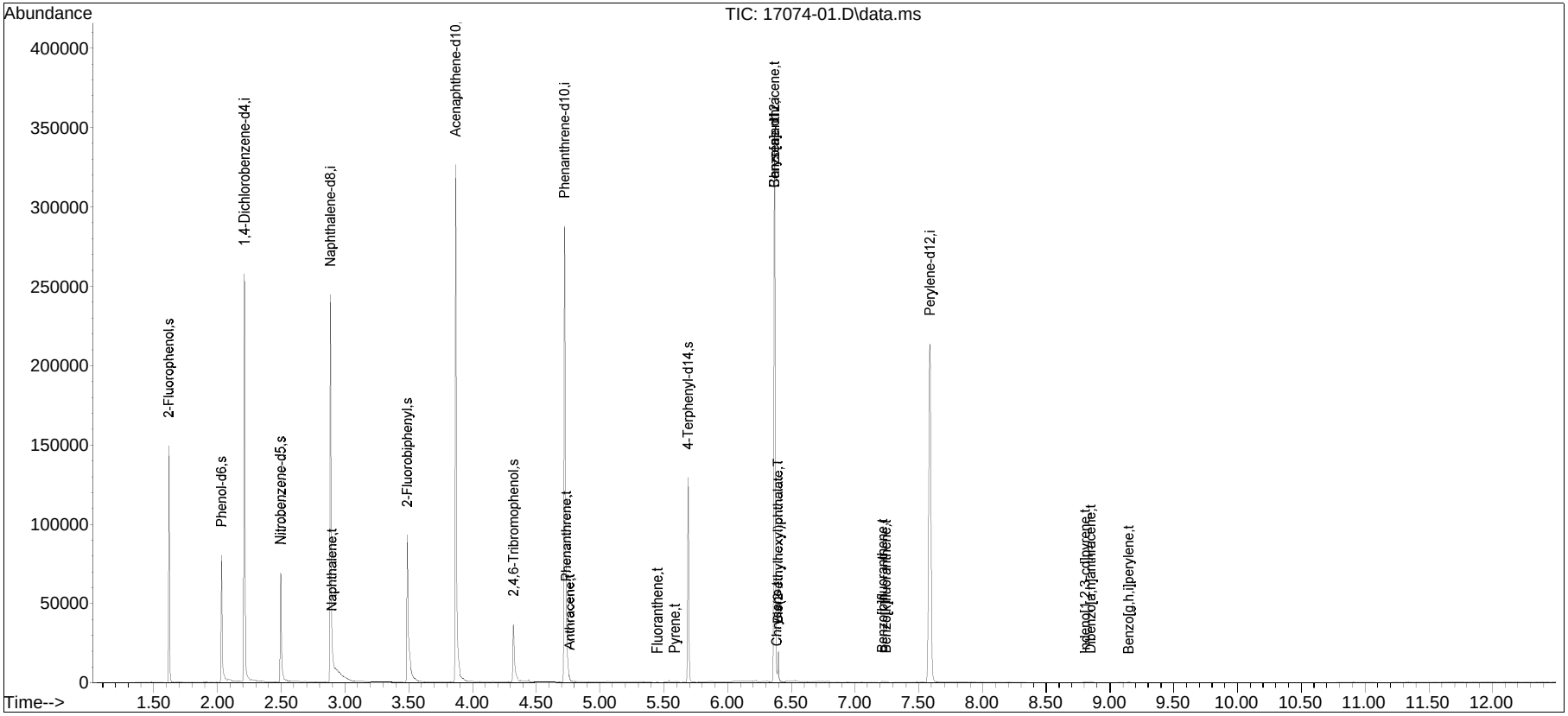
(#) = qualifier out of range (m) = manual integration (+) = signals summed

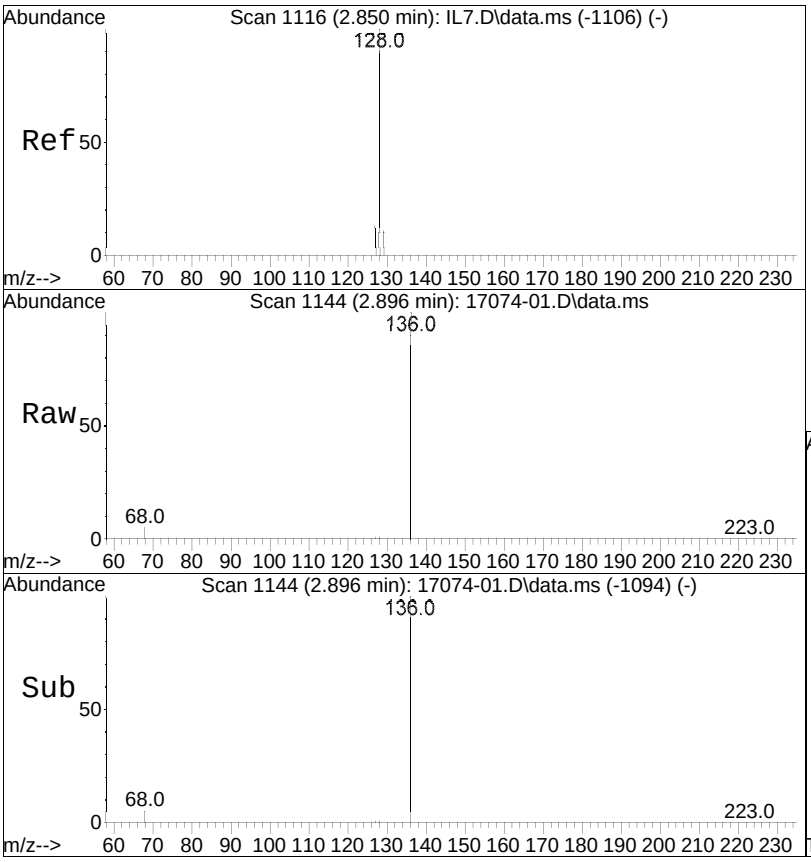
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-01.D
Acq On : 04 Apr 2024 08:00 am
Operator : sv119:jjw
Sample : L2417074-01,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 10:50:13 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

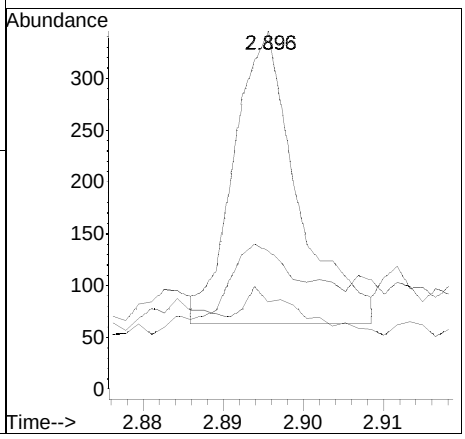


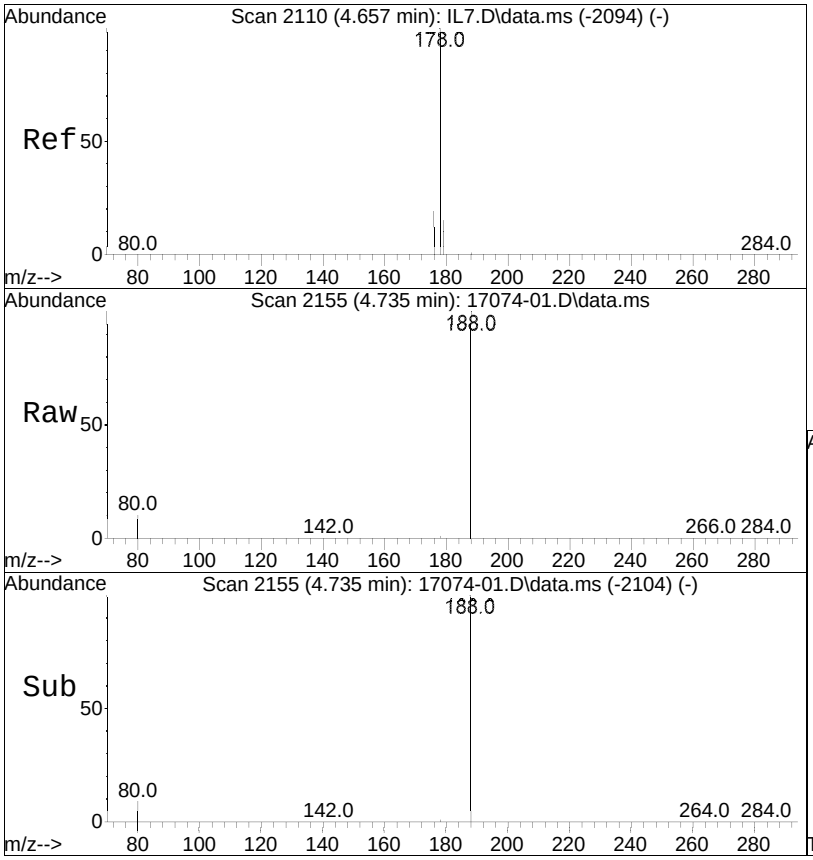


#9
Naphthalene
Concen: 4.49 ng/ml M6
RT: 2.896 min Scan# 1144
Delta R.T. -0.019 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:128 Resp: 155

Ion	Ratio	Lower	Upper
128	100		
129	14.8	8.8	13.2#
127	43.2	10.6	15.8#

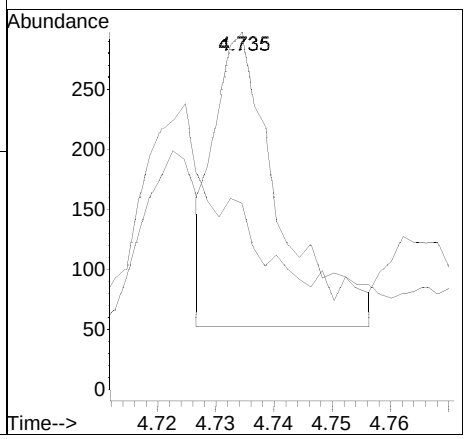


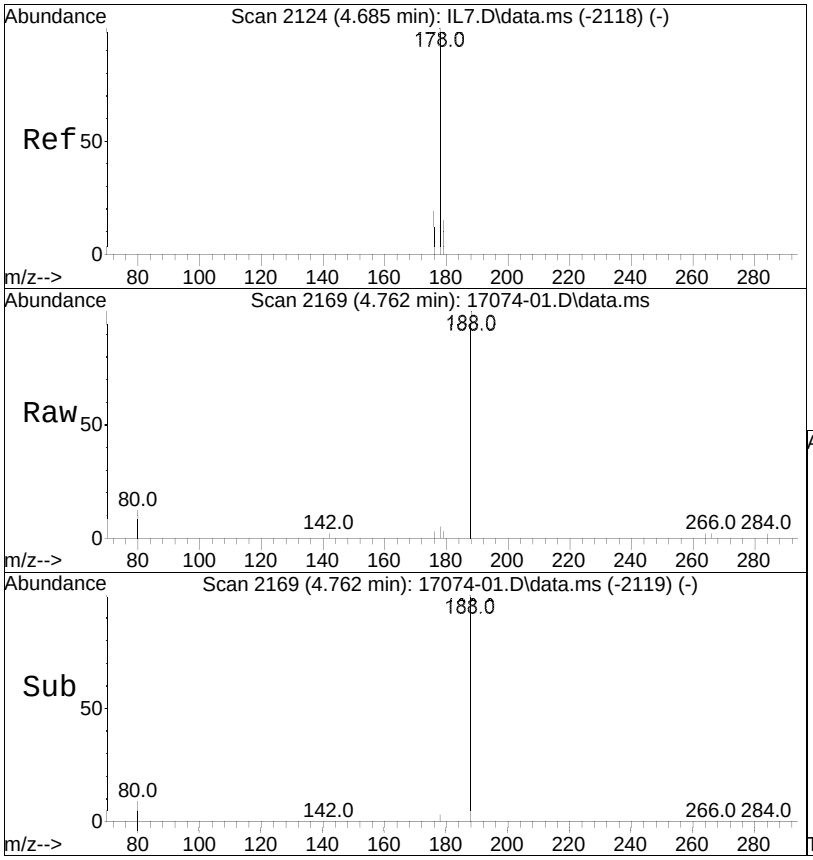


#26
Phenanthrene
Concen: 3.69 ng/ml M1
RT: 4.735 min Scan# 2155
Delta R.T. -0.000 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:178 Resp: 190

Ion	Ratio	Lower	Upper
178	100		
179	20.0	12.3	18.5#

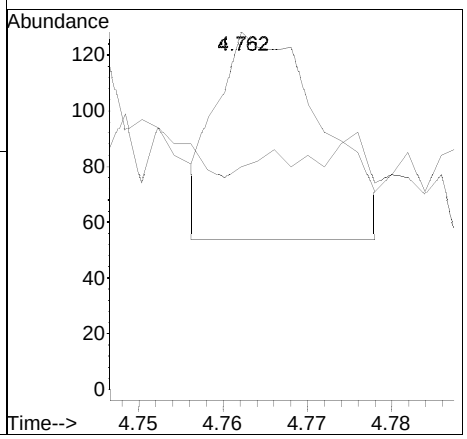


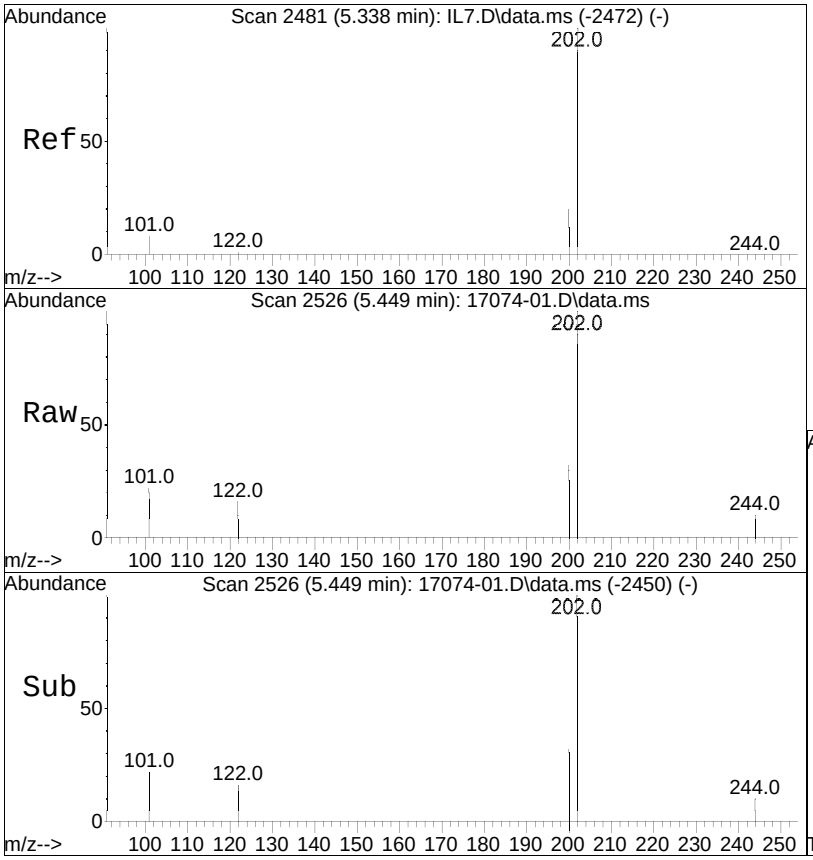


#27
Anthracene
Concen: 1.27 ng/ml M6
RT: 4.762 min Scan# 2169
Delta R.T. -0.002 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:178 Resp: 65

Ion	Ratio	Lower	Upper
178	100		
179	21.5	12.2	18.4#

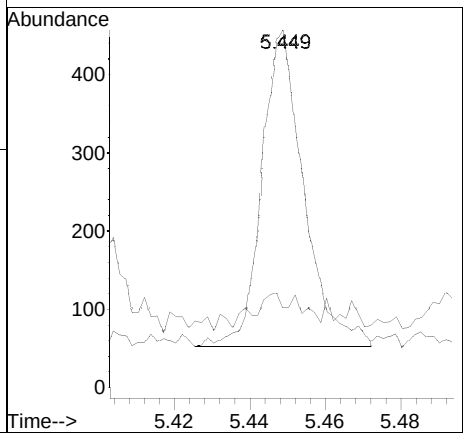


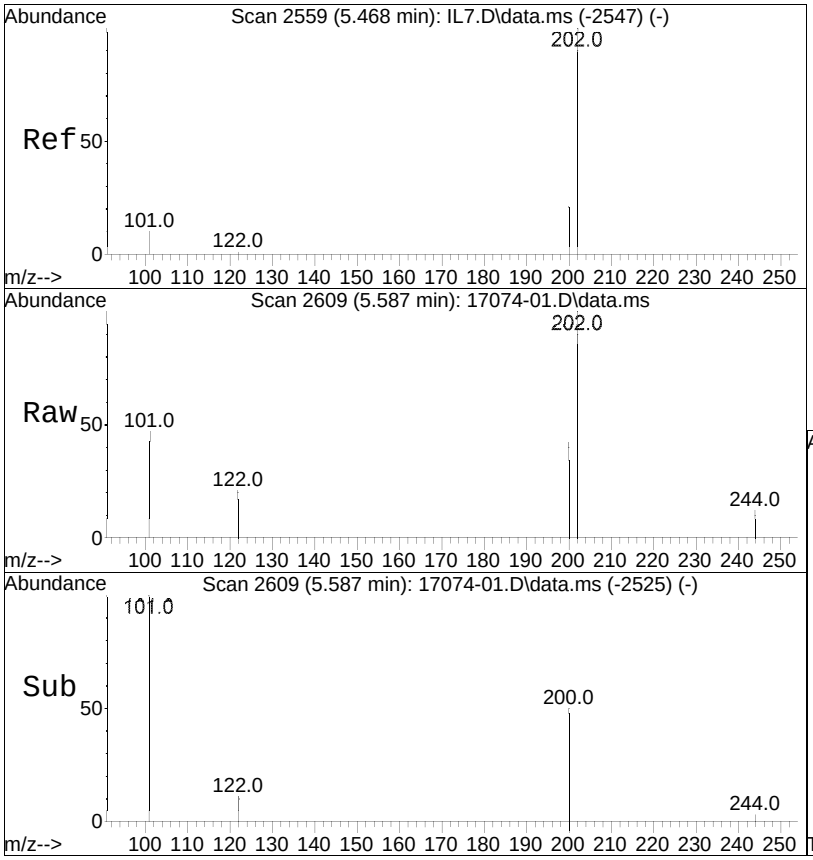


#28
Fluoranthene
Concen: 4.58 ng/ml M1
RT: 5.449 min Scan# 2526
Delta R.T. 0.031 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:202 Resp: 311

Ion	Ratio	Lower	Upper
202	100		
101	10.9	8.3	12.5

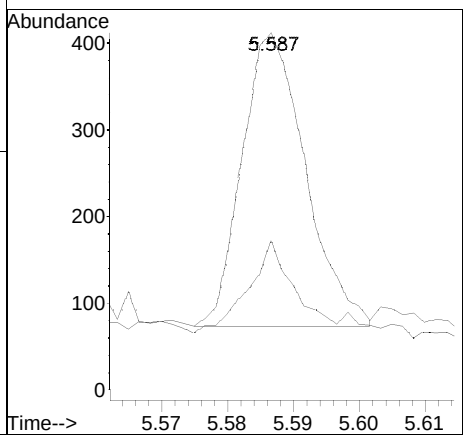


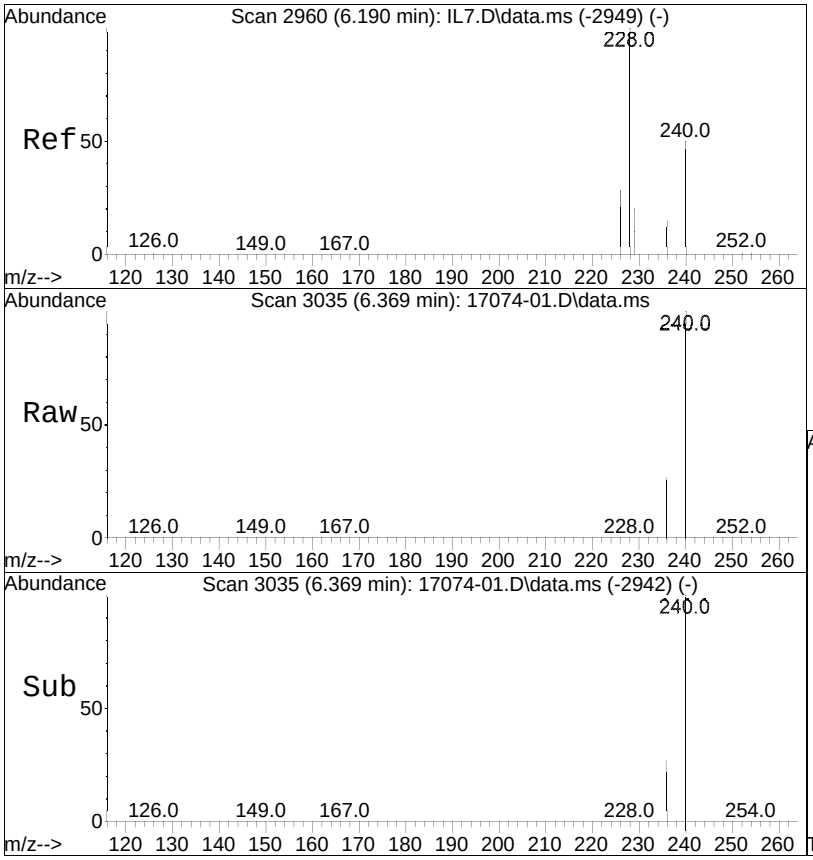


#29
Pyrene
Concen: 3.21 ng/ml M3
RT: 5.587 min Scan# 2609
Delta R.T. 0.040 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:202 Resp: 224

Ion	Ratio	Lower	Upper
202	100		
200	22.8	17.3	25.9

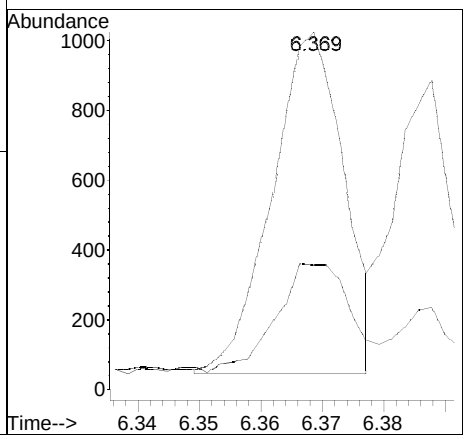


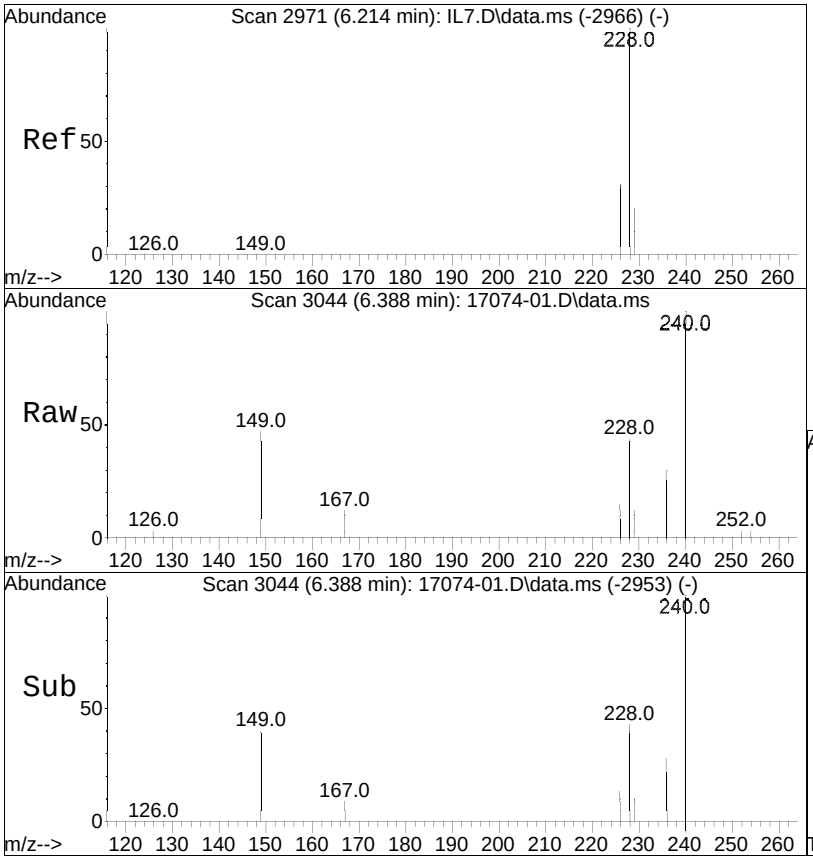


#32
Benzo[a]anthracene
Concen: 1.96 ng/ml M1
RT: 6.369 min Scan# 3035
Delta R.T. 0.098 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:228 Resp: 794

Ion	Ratio	Lower	Upper
228	100		
229	32.1	15.6	23.4#

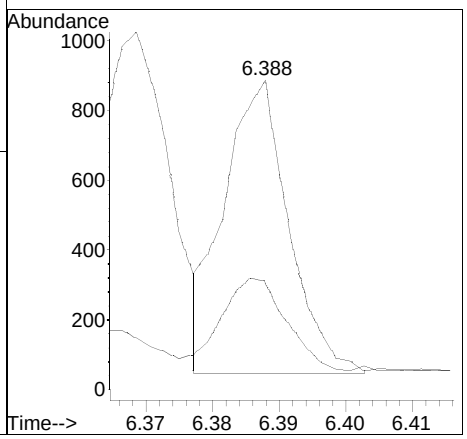


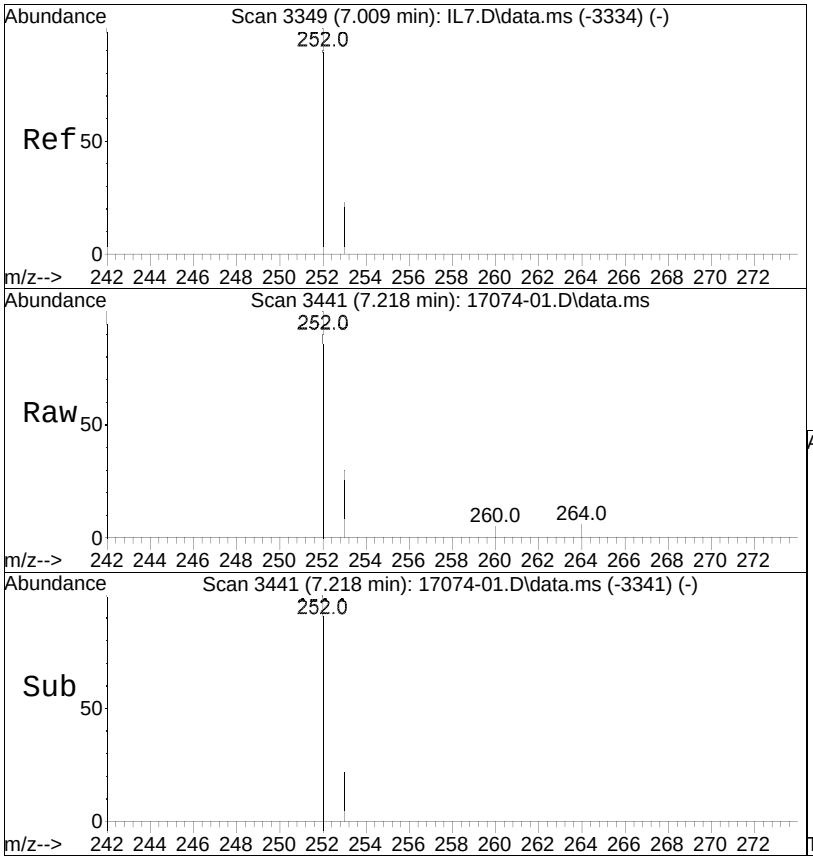


#34
Chrysene
Concen: 9.09 ng/ml M6
RT: 6.388 min Scan# 3044
Delta R.T. 0.094 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:228 Resp: 566

Ion	Ratio	Lower	Upper
228	100		
226	32.9	24.5	36.7

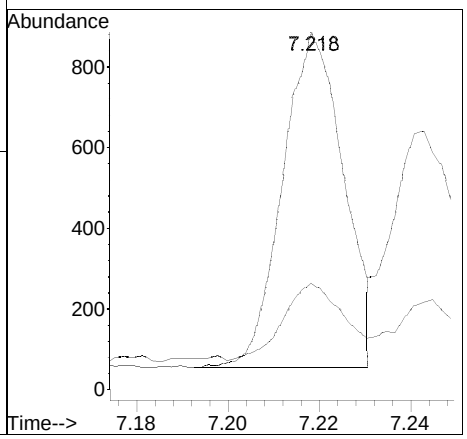


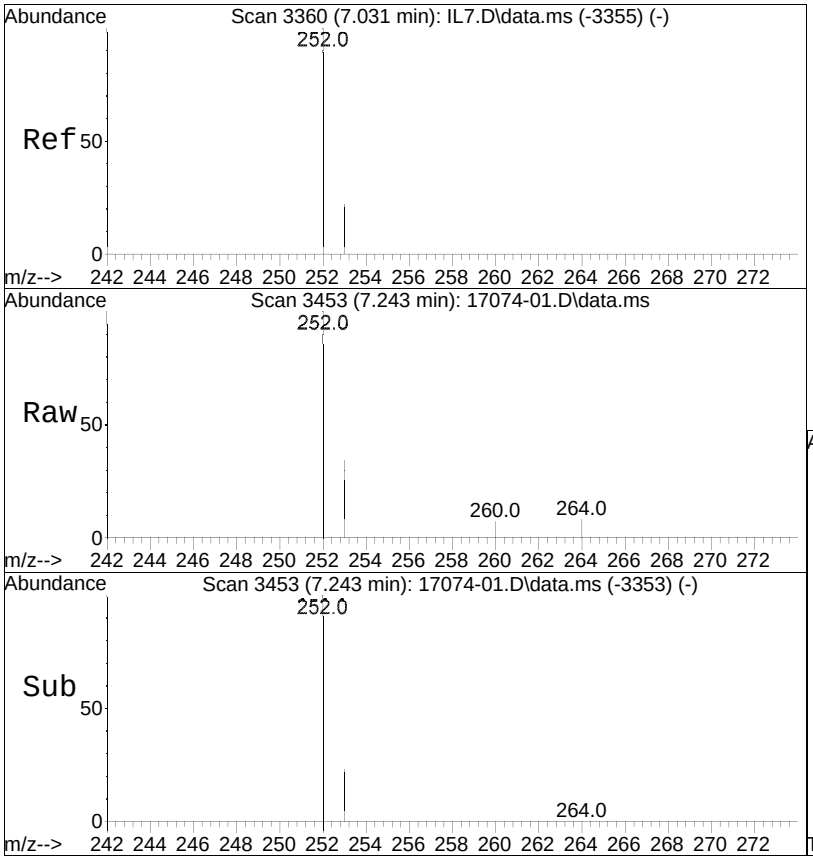


#37
Benzo[b]fluoranthene
Concen: 11.19 ng/ml M3
RT: 7.218 min Scan# 3441
Delta R.T. 0.104 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:252 Resp: 771

Ion	Ratio	Lower	Upper
252	100		
253	23.3	17.3	25.9

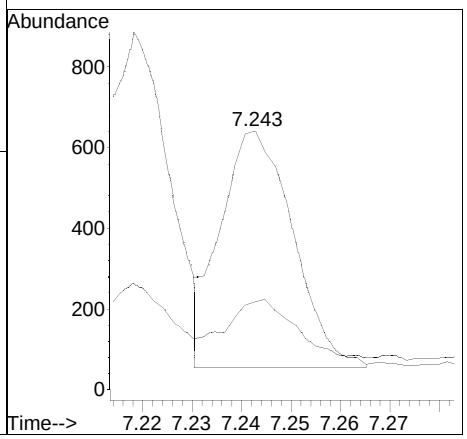


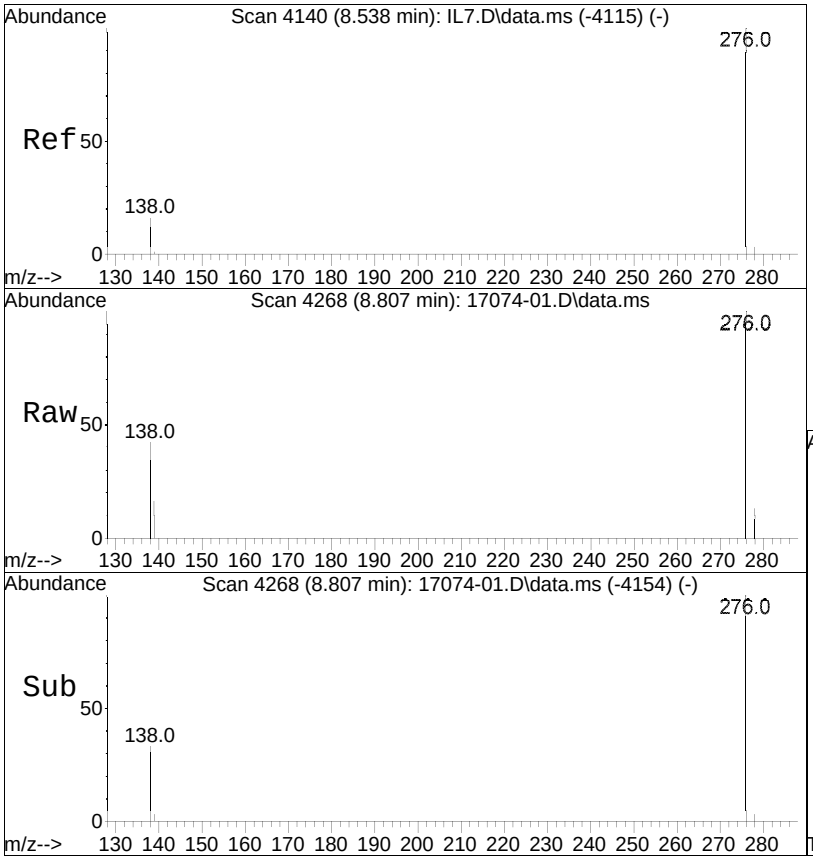


#38
Benzo[k]fluoranthene
Concen: 9.11 ng/ml M4
RT: 7.243 min Scan# 3453
Delta R.T. 0.104 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:252 Resp: 596

Ion	Ratio	Lower	Upper
252	100		
253	23.7	17.4	26.2

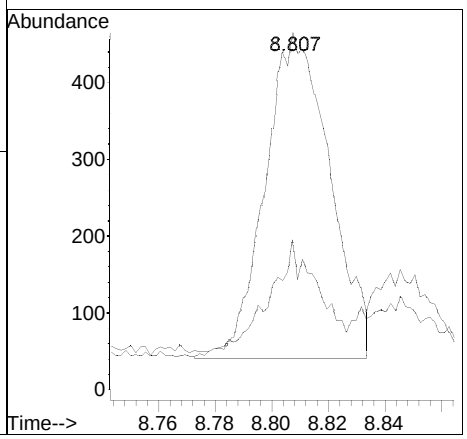


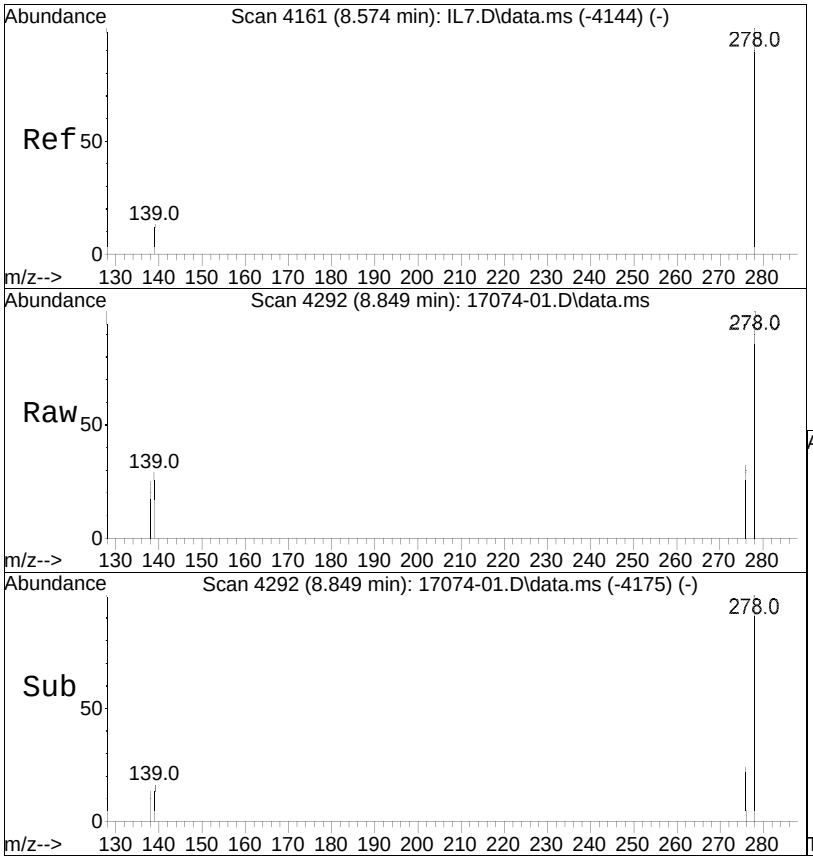


#40
Indeno[1,2,3-cd]pyrene
Concen: 10.18 ng/ml M1
RT: 8.807 min Scan# 4268
Delta R.T. 0.097 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:276 Resp: 671

Ion	Ratio	Lower	Upper
276	100		
138	25.2	14.8	22.2#

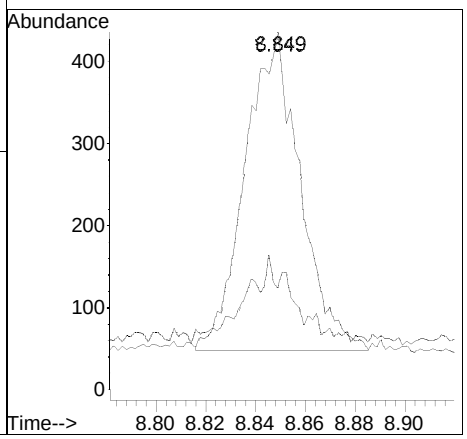


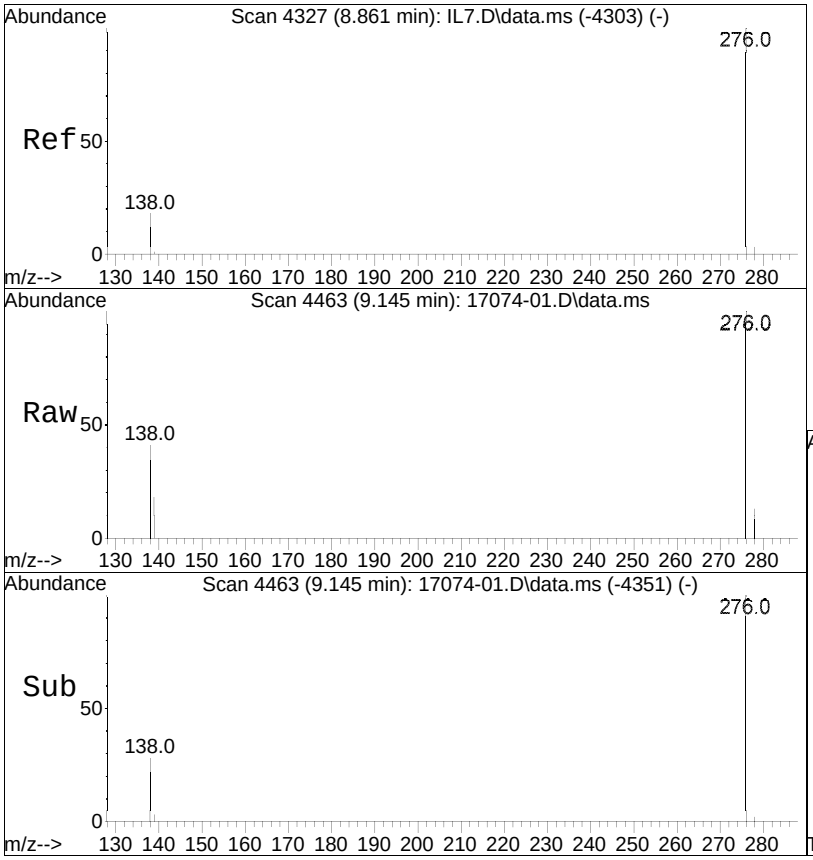


#41
Dibenzo[a,h]anthracene
Concen: 9.63 ng/ml M2
RT: 8.849 min Scan# 4292
Delta R.T. 0.102 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:278 Resp: 591

Ion	Ratio	Lower	Upper
278	100		
139	17.1	12.2	18.4

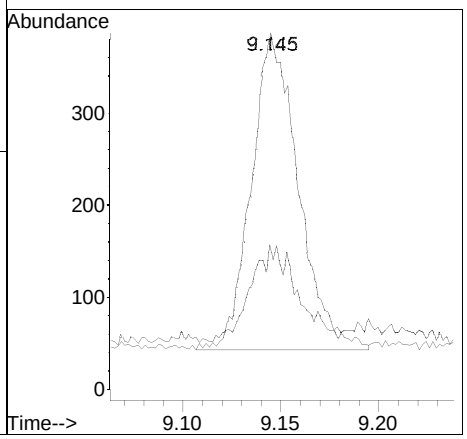




#42
Benzo[g,h,i]perylene
Concen: 8.47 ng/ml M1
RT: 9.145 min Scan# 4463
Delta R.T. 0.093 min
Lab File: 17074-01.D
Acq: 04 Apr 2024 08:00 am

Tgt Ion:276 Resp: 568

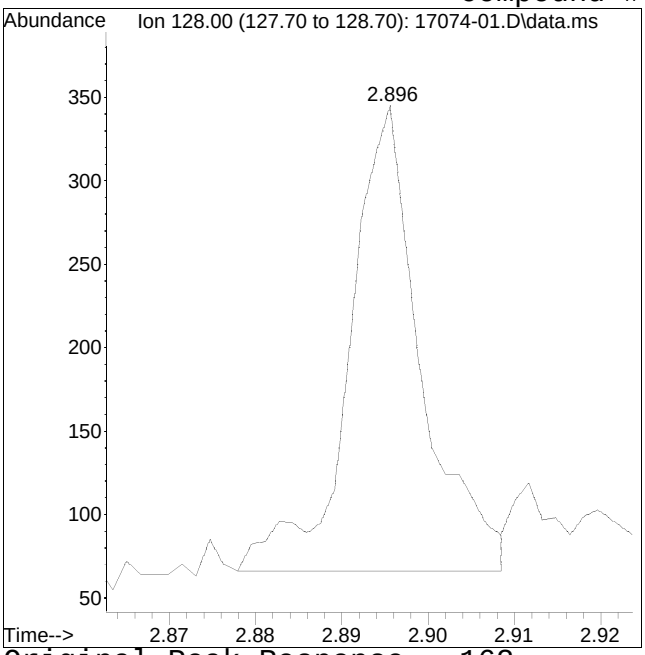
Ion	Ratio	Lower	Upper
276	100		
138	31.2	16.8	25.2#



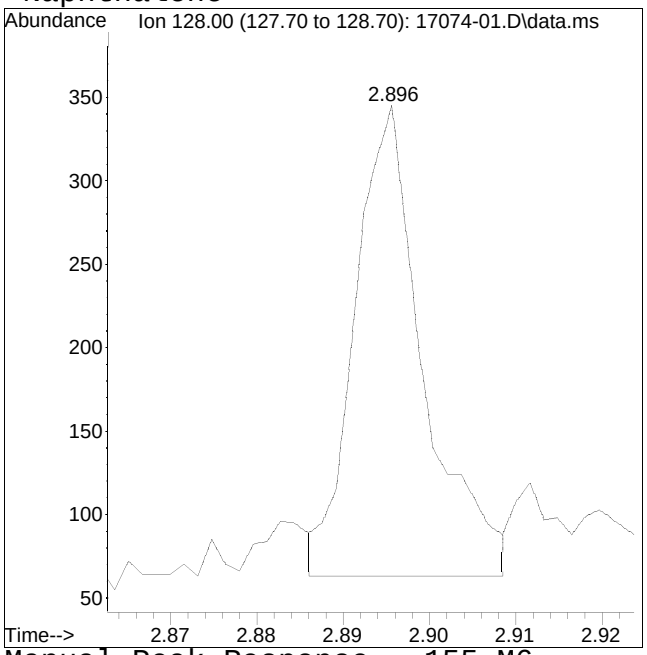
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #9: Naphthalene



Original Peak Response = 162



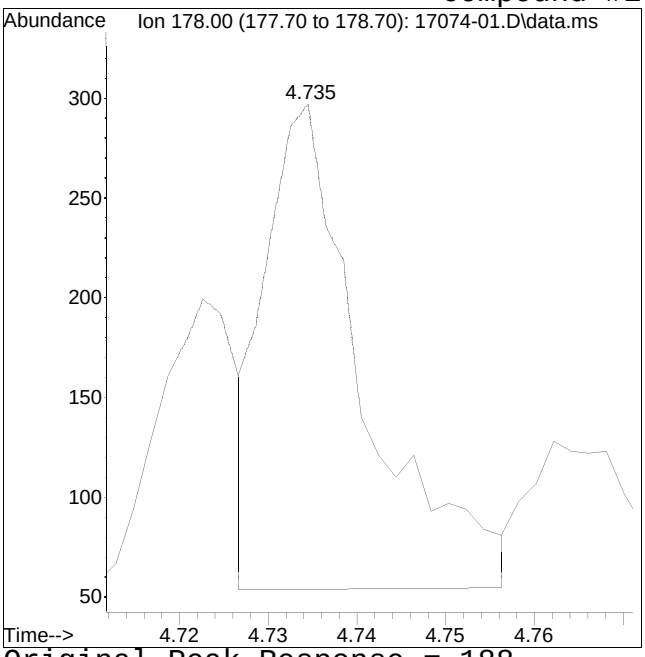
Manual Peak Response = 155 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

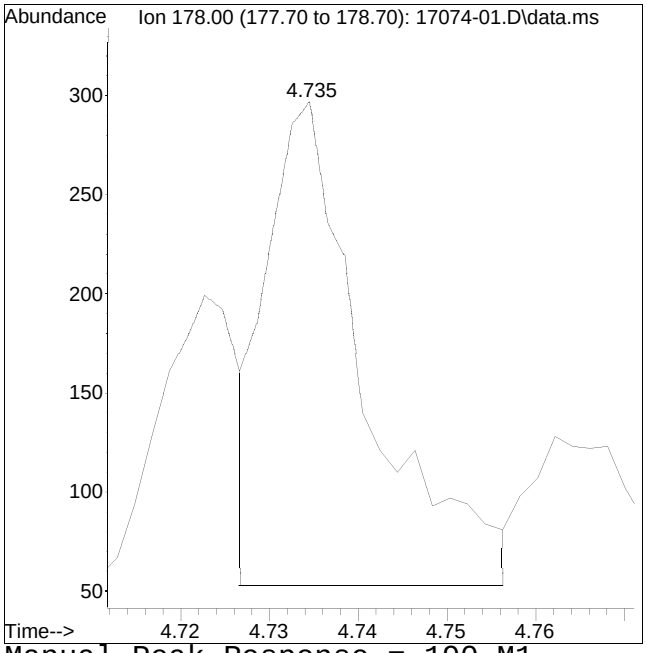
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #26: Phenanthrene



Original Peak Response = 188



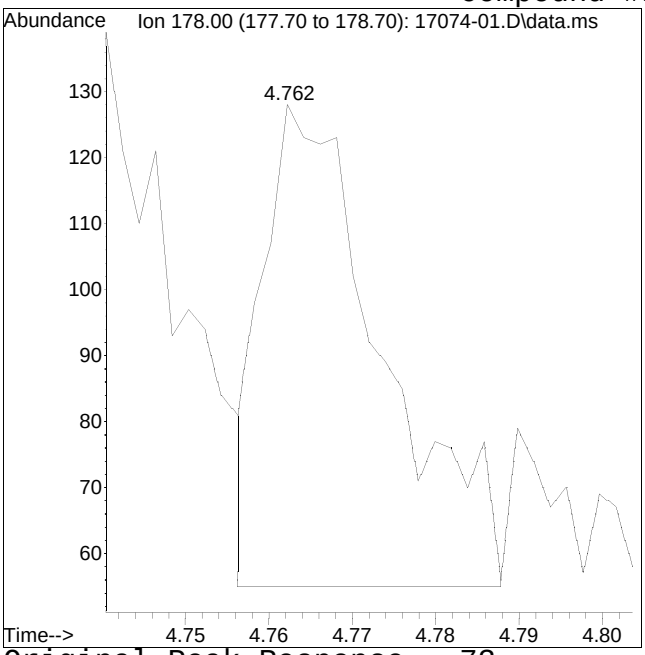
Manual Peak Response = 190 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

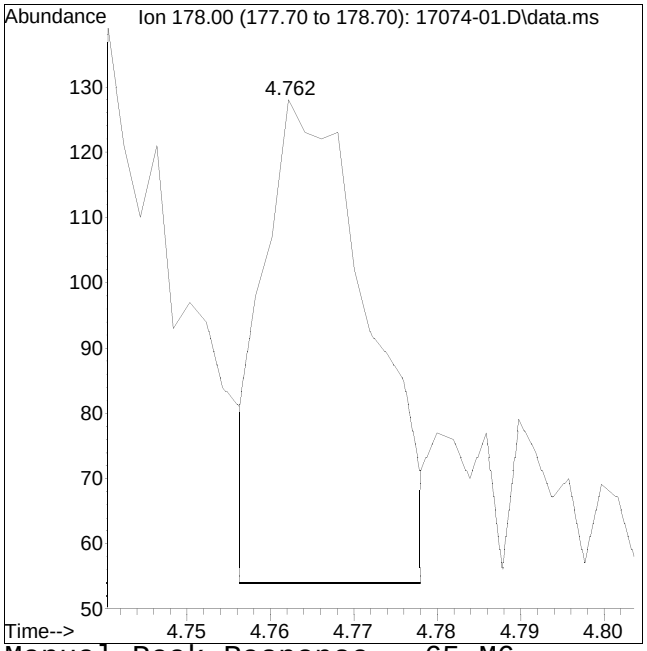
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #27: Anthracene



Original Peak Response = 73



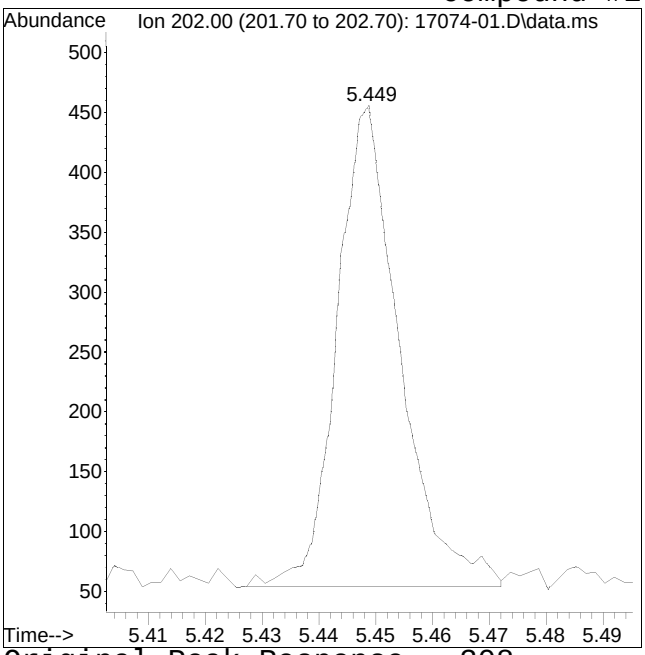
Manual Peak Response = 65 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

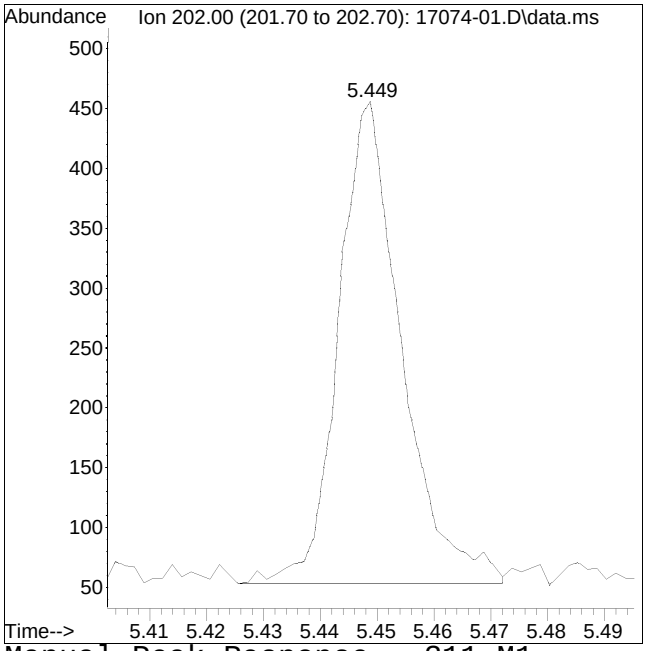
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #28: Fluoranthene



Original Peak Response = 308



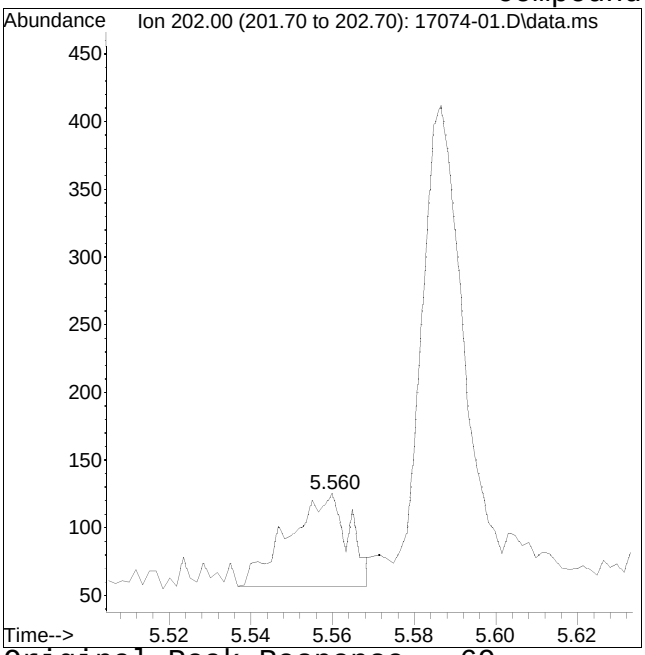
Manual Peak Response = 311 M1

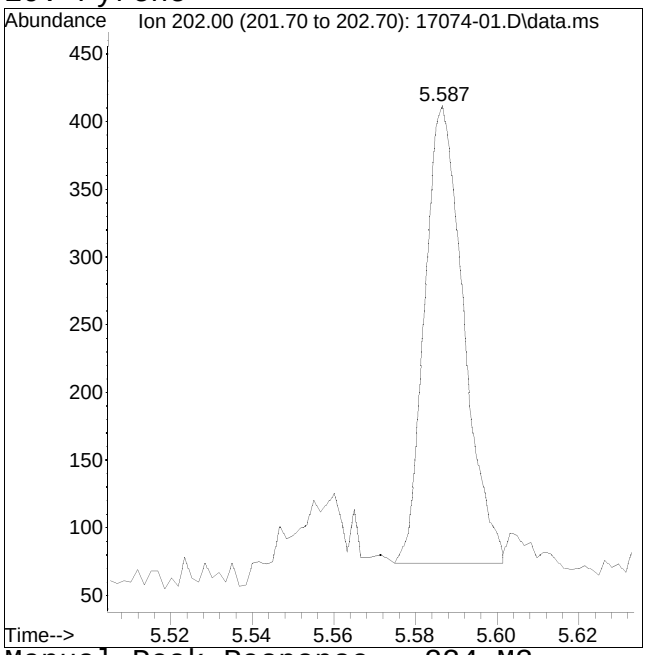
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #29: Pyrene





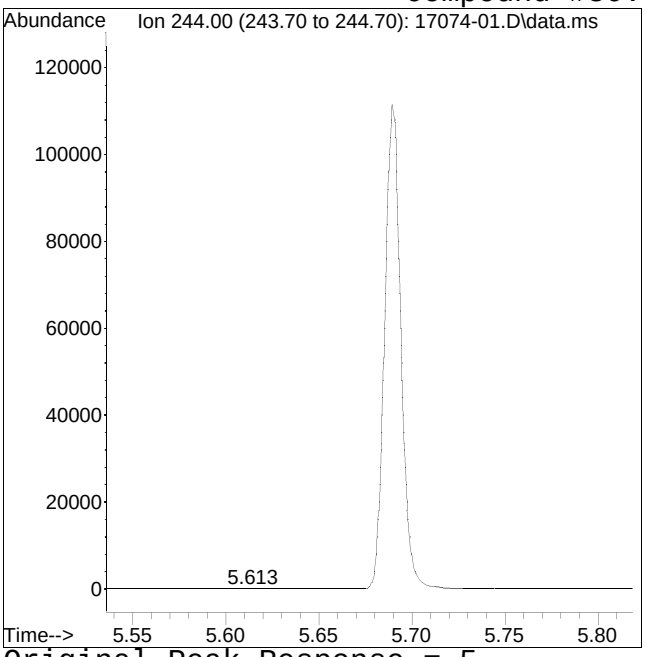
Original Peak Response = 69 Manual Peak Response = 224 M3

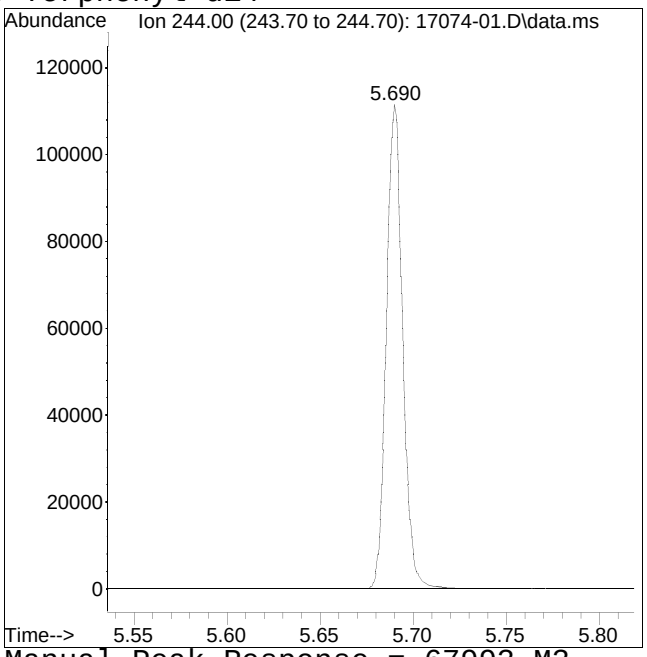
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #30: 4-Terphenyl-d14



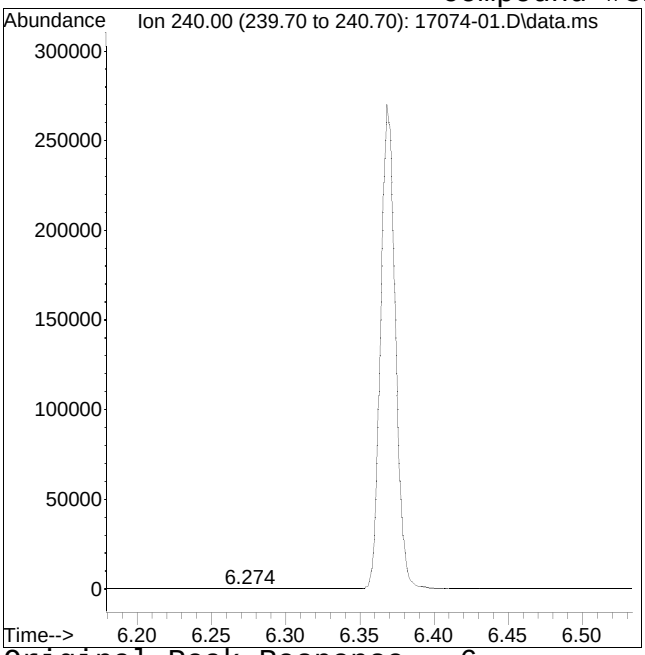


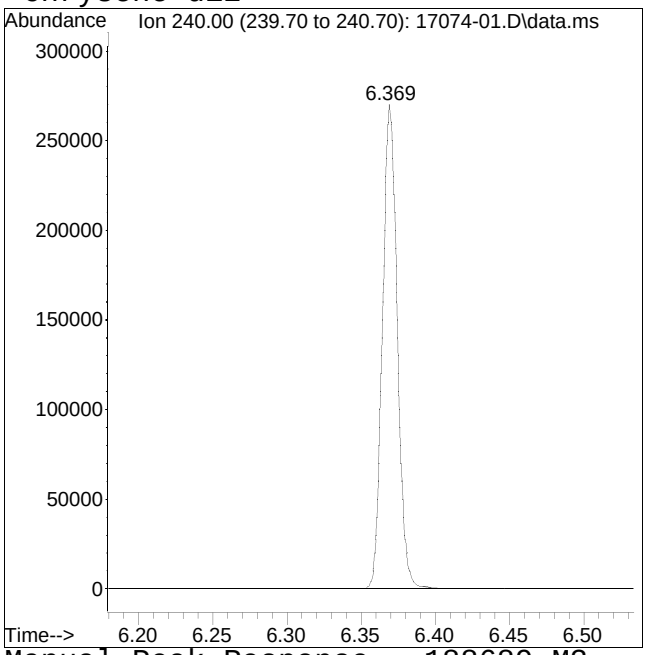
Original Peak Response = 5 Manual Peak Response = 67993 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #31: Chrysene-d12



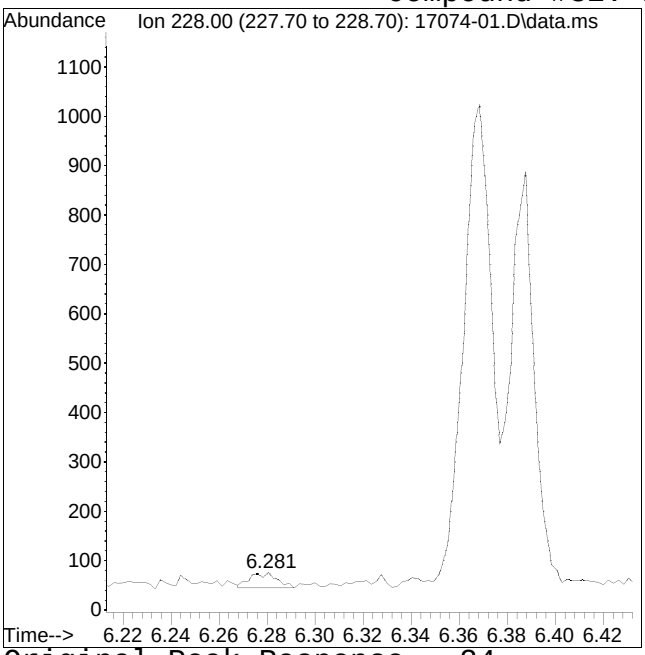


Original Peak Response = 6 Manual Peak Response = 188689 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

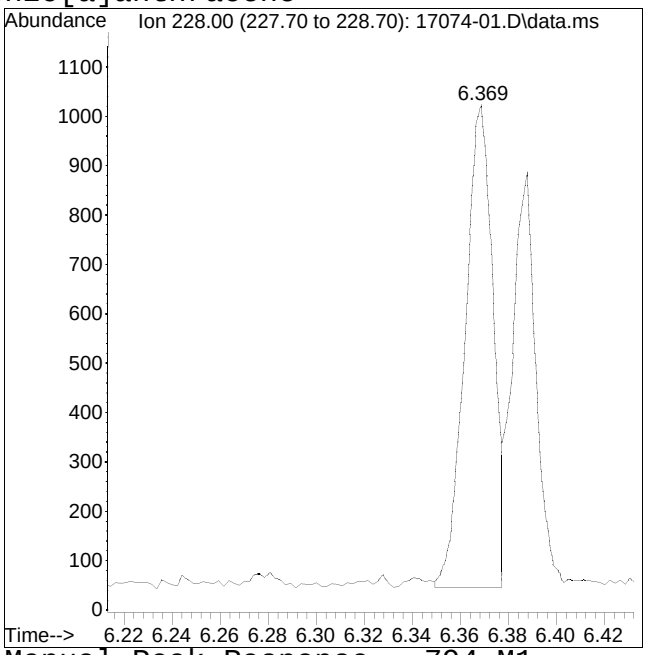
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #32: Benzo[a]anthracene



Original Peak Response = 24



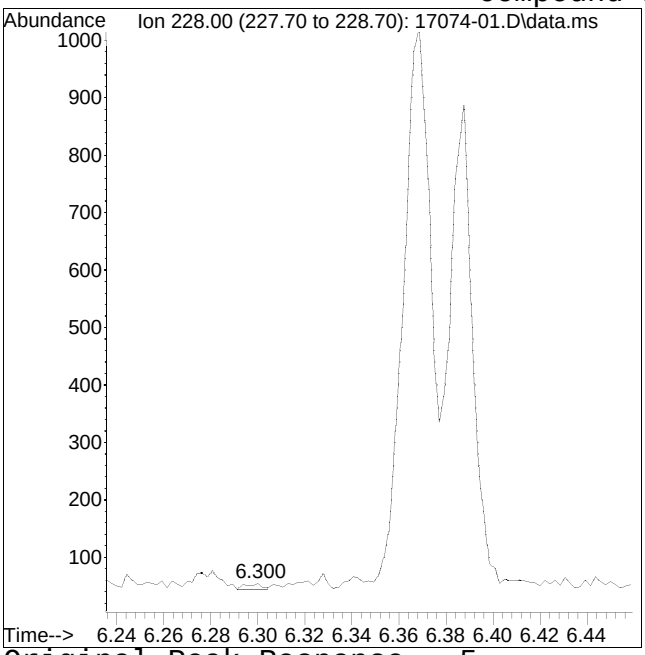
Manual Peak Response = 794 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

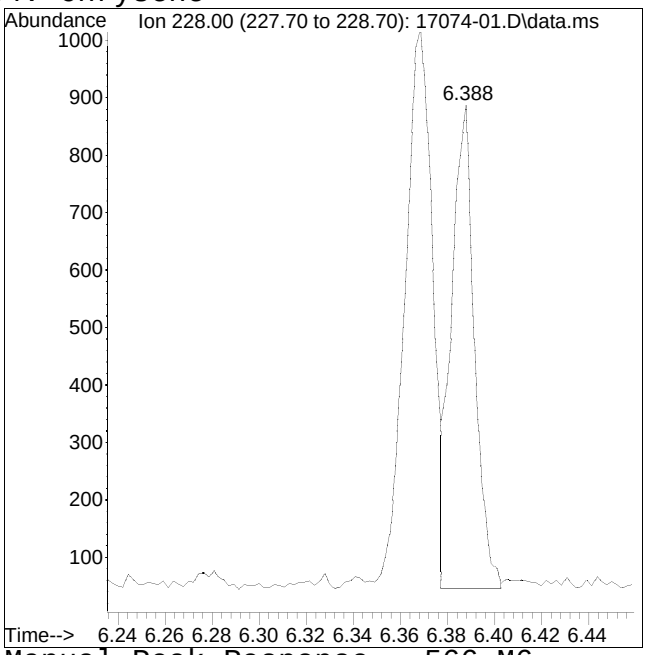
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #34: Chrysene



Original Peak Response = 5



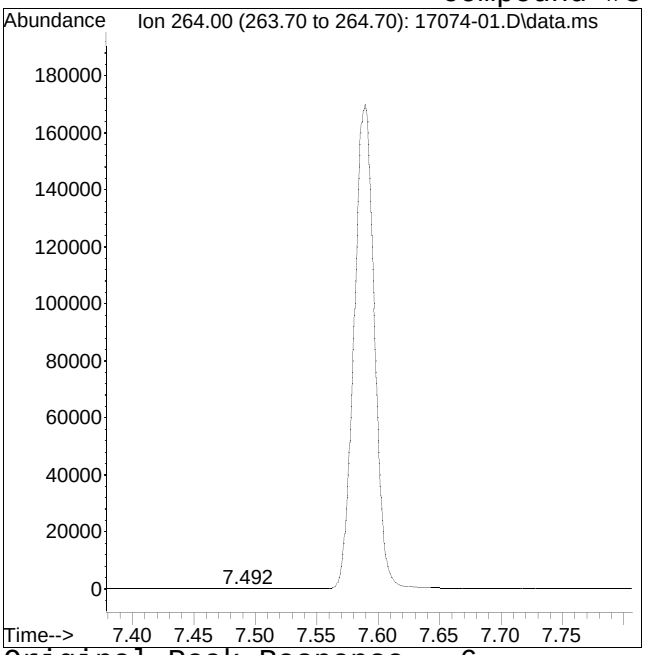
Manual Peak Response = 566 M6

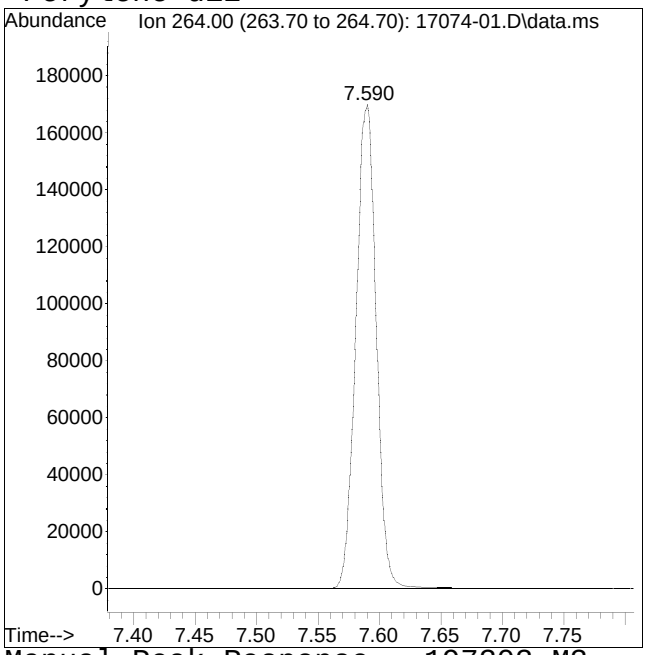
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #36: Perylene-d12





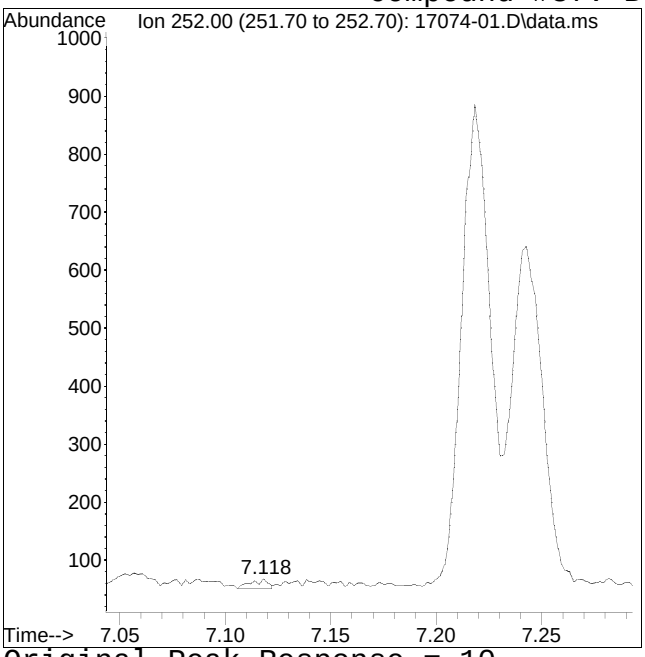
Original Peak Response = 6 Manual Peak Response = 197303 M3

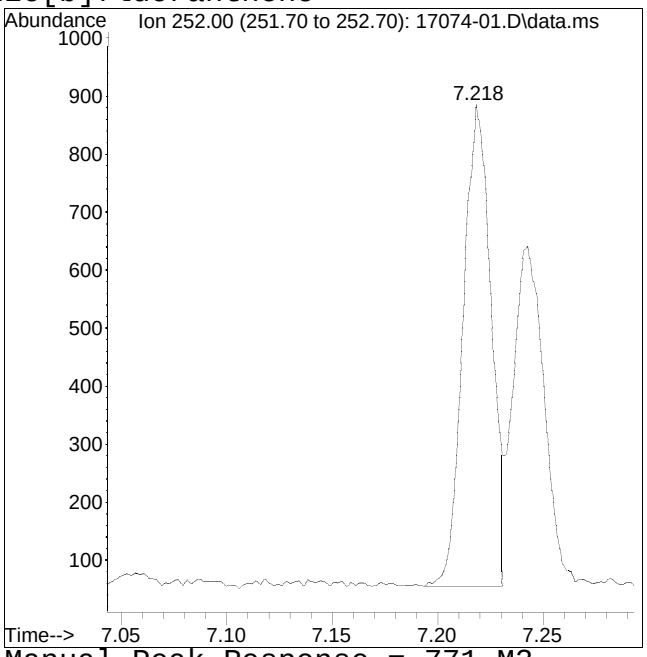
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #37: Benzo[b]fluoranthene



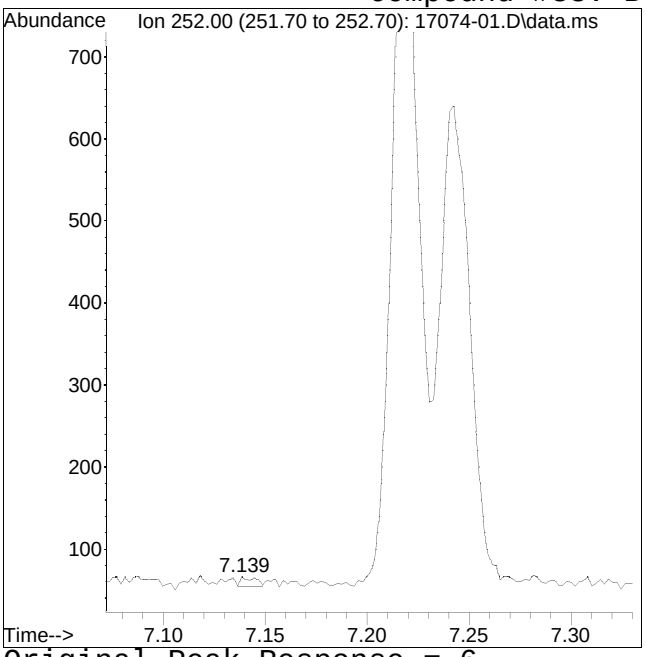


Original Peak Response = 10 Manual Peak Response = 771 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

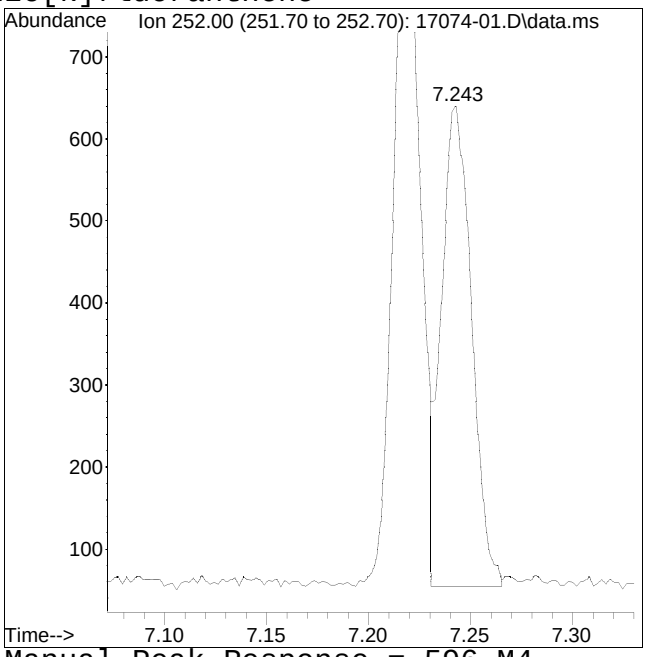
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #38: Benzo[k]fluoranthene



Original Peak Response = 6



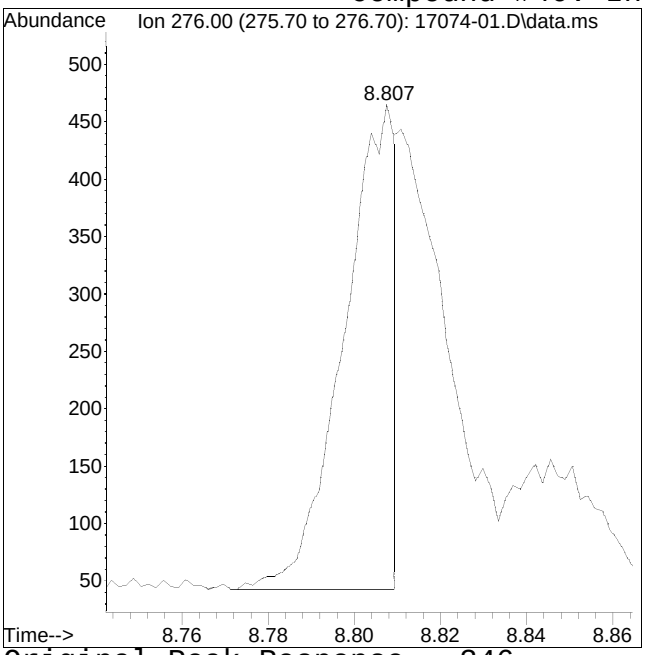
Manual Peak Response = 596 M4

M4 = Poor automated baseline construction.

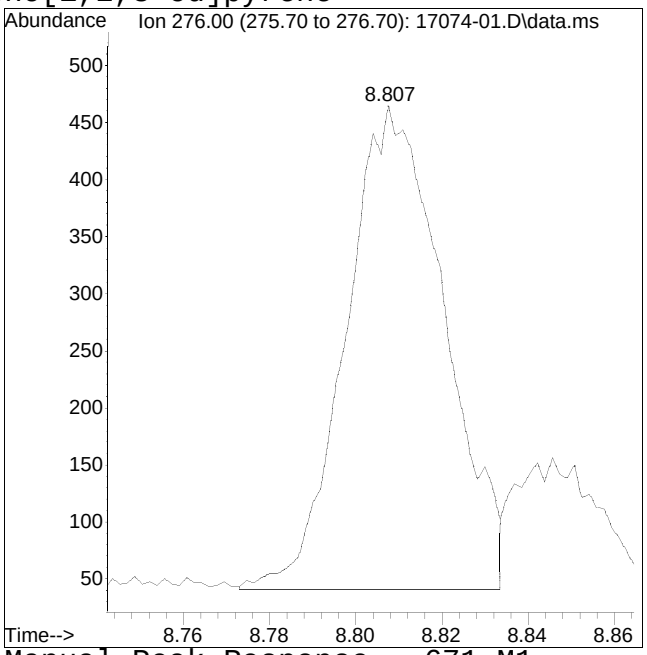
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #40: Indeno[1,2,3-cd]pyrene



Original Peak Response = 346



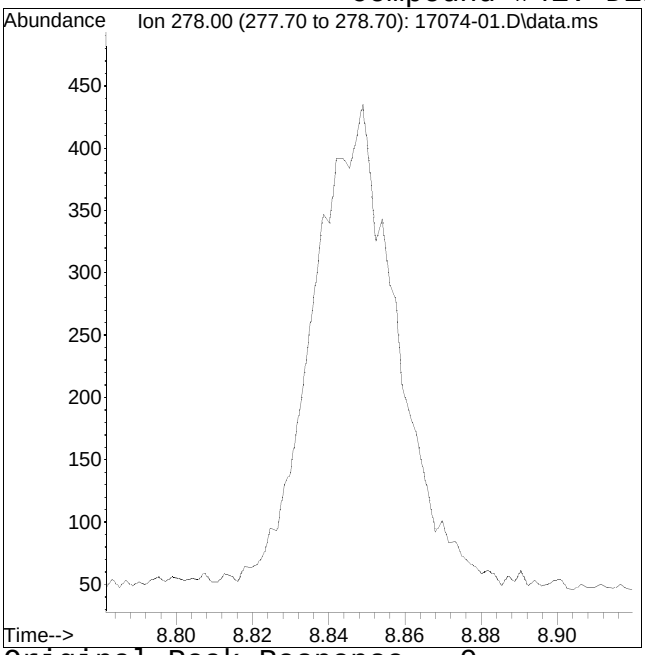
Manual Peak Response = 671 M1

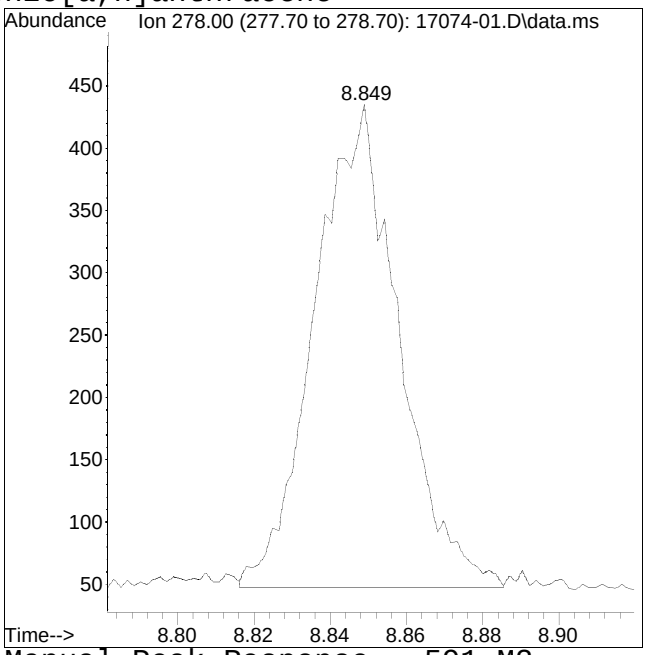
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #41: Dibenzo[a,h]anthracene



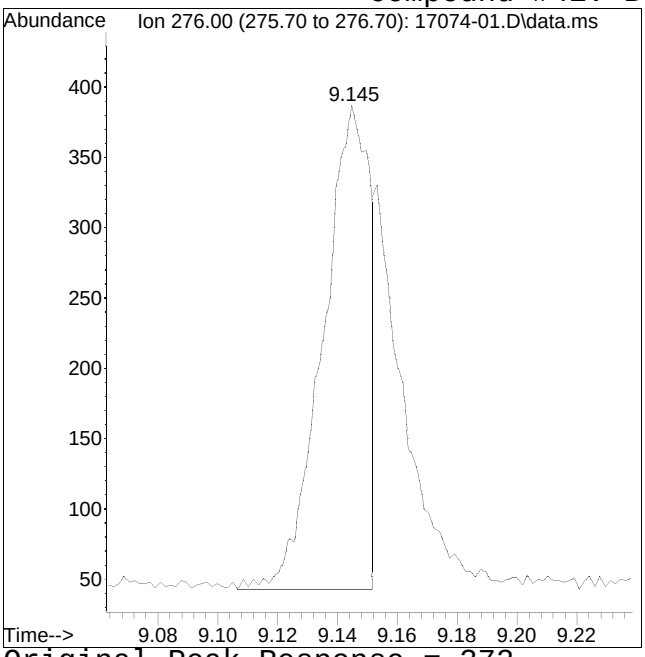


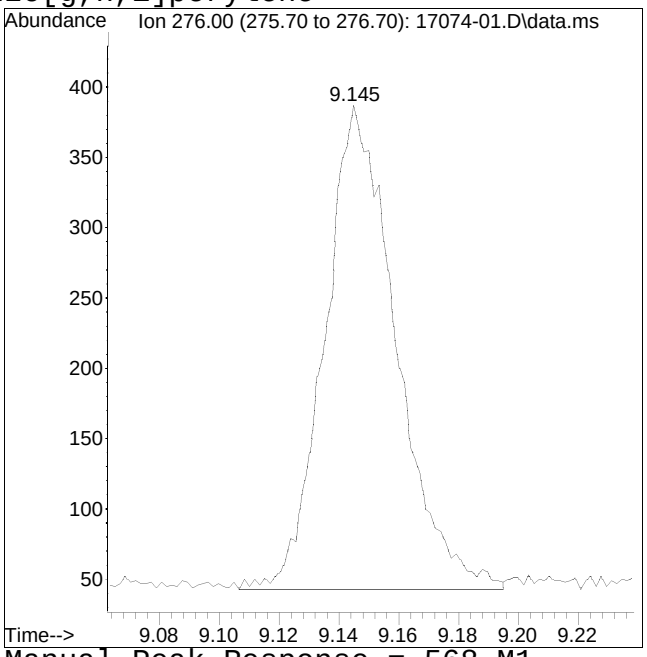
Original Peak Response = 0 Manual Peak Response = 591 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-01.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:00 am Instrument : SV119
Sample : L2417074-01,32,,ah Quant Date : 4/4/2024 8:14 am

Compound #42: Benzo[g,h,i]perylene





Original Peak Response = 372 Manual Peak Response = 568 M1
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-02.D
Acq On : 04 Apr 2024 08:50 am
Operator : sv119:jjw
Sample : L2417074-02,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 04 10:52:45 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.231	152	54140	4000.000	ng/ml	0.00
Standard Area 1 = 63465			Recovery = 85.31%			
8) Naphthalene-d8	2.896	136	152218	4000.000	ng/ml	0.00
Standard Area 1 = 190169			Recovery = 80.04%			
17) Acenaphthene-d10	3.872	164	100663	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery = 91.31%			
22) Phenanthrene-d10	4.717	188	217056	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 88.70%			
31) Chrysene-d12	6.283	240	200061	4000.000	ng/ml	0.00
Standard Area 1 = 210122			Recovery = 95.21%			
36) Perylene-d12	7.492	264	206059	4000.000	ng/ml	0.00
Standard Area 1 = 221293			Recovery = 93.12%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.641	112	46141	3115.910	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 62.32%			
3) Phenol-d6	2.055	99	42129	2373.401	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 47.47%			
7) Nitrobenzene-d5	2.512	82	27632	2052.215	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 82.09%			
13) 2-Fluorobiphenyl	3.494	172	73916	2174.245	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 86.97%			
21) 2,4,6-Tribromophenol	4.323	330	29638	5340.457	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 106.81%			
30) 4-Terphenyl-d14	5.640	244	83248	1564.506	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 62.58%			
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.907	128	5141	141.444	ng/ml	97
10) Hexachlorobutadiene	0.000		0	N.D.	d	
11) 2-Methylnaphthalene	3.289	142	238	8.856	ng/ml	100
14) 2-Chloronaphthalene	0.000		0	N.D.	d	
16) Acenaphthylene	3.792	152	245	5.759	ng/ml	96
18) Acenaphthene	3.890	153	69	2.217	ng/ml#	61
20) Fluorene	4.185	166	282M6	7.581	ng/ml	
24) Hexachlorobenzene	4.500	284	66M6	4.703	ng/ml	
25) Pentachlorophenol	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-02.D
Acq On : 04 Apr 2024 08:50 am
Operator : sv119:jjw
Sample : L2417074-02,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 04 10:52:45 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.729	178	506M4	9.177	ng/ml	
27) Anthracene	4.760	178	165M4	3.018	ng/ml	
28) Fluoranthene	5.416	202	251M7	3.454	ng/ml	
29) Pyrene	5.545	202	207M6	2.773	ng/ml	
32) Benzo[a]anthracene	0.000		0	N.D.	d	
34) Chrysene	0.000		0	N.D.	d	
37) Benzo[b]fluoranthene	0.000		0	N.D.	d	
38) Benzo[k]fluoranthene	0.000		0	N.D.	d	
39) Benzo[a]pyrene	0.000		0	N.D.	d	
40) Indeno[1,2,3-cd]pyrene	0.000		0	N.D.	d	
41) Dibenzo[a,h]anthracene	0.000		0	N.D.	d	
42) Benzo[g,h,i]perylene	0.000		0	N.D.	d	

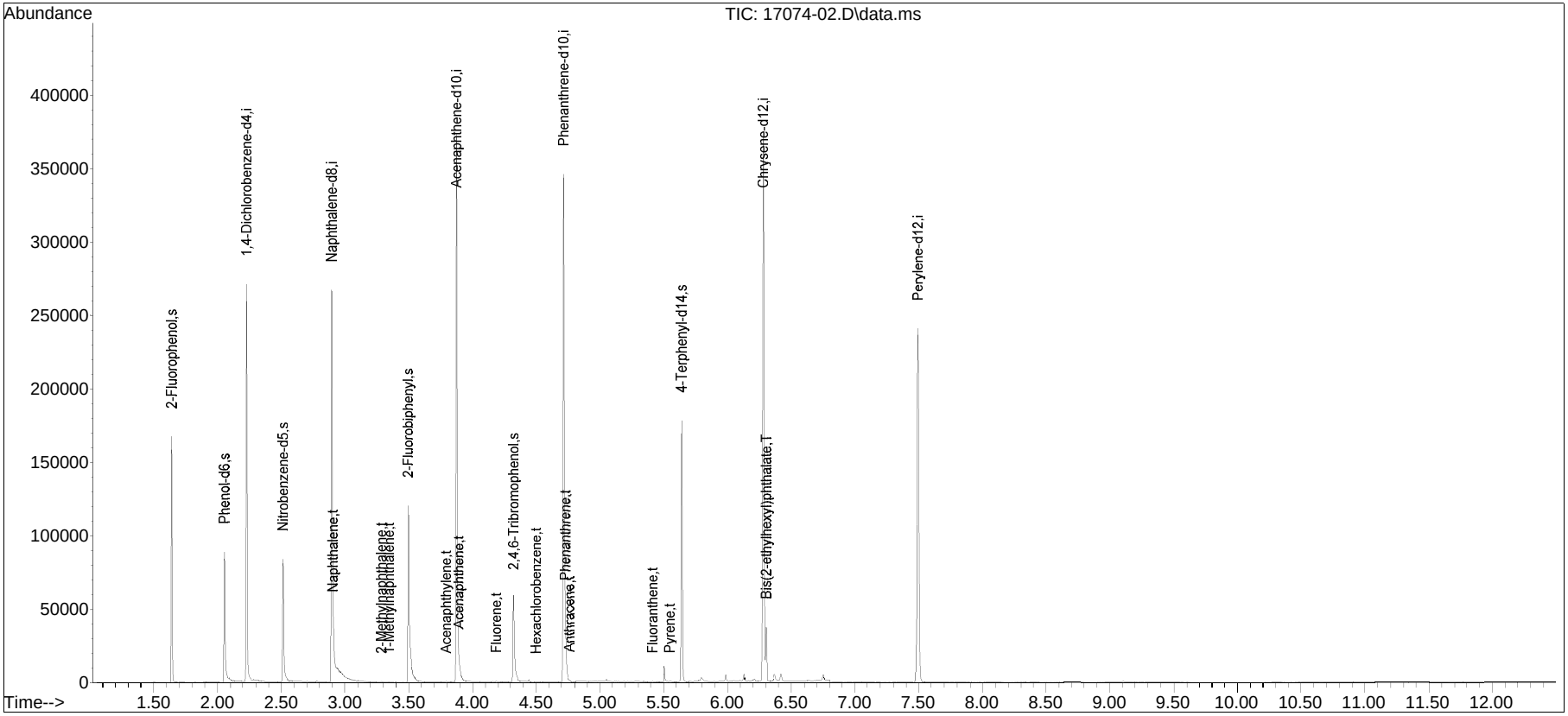
(#) = qualifier out of range (m) = manual integration (+) = signals summed

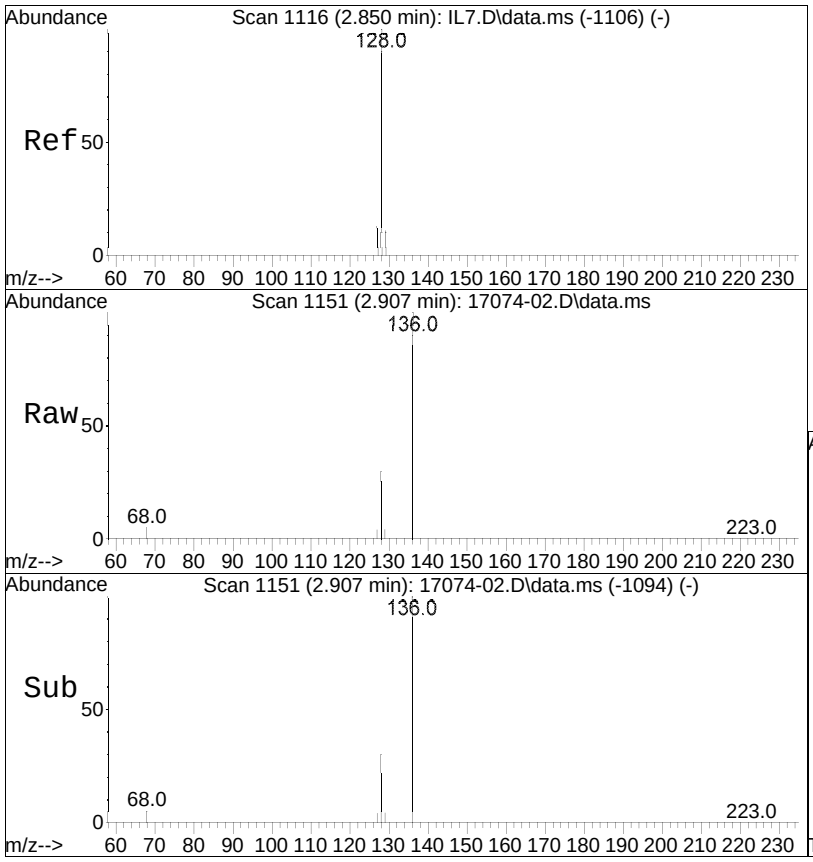
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-02.D
Acq On : 04 Apr 2024 08:50 am
Operator : sv119:jjw
Sample : L2417074-02,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 04 10:52:45 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

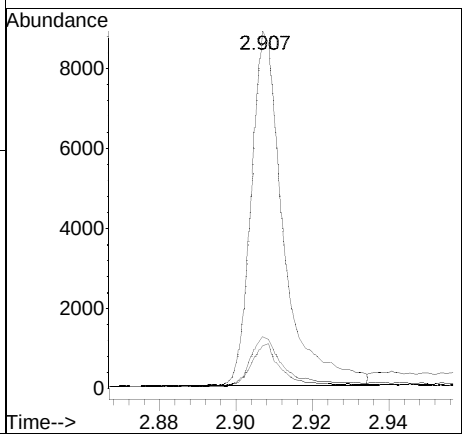


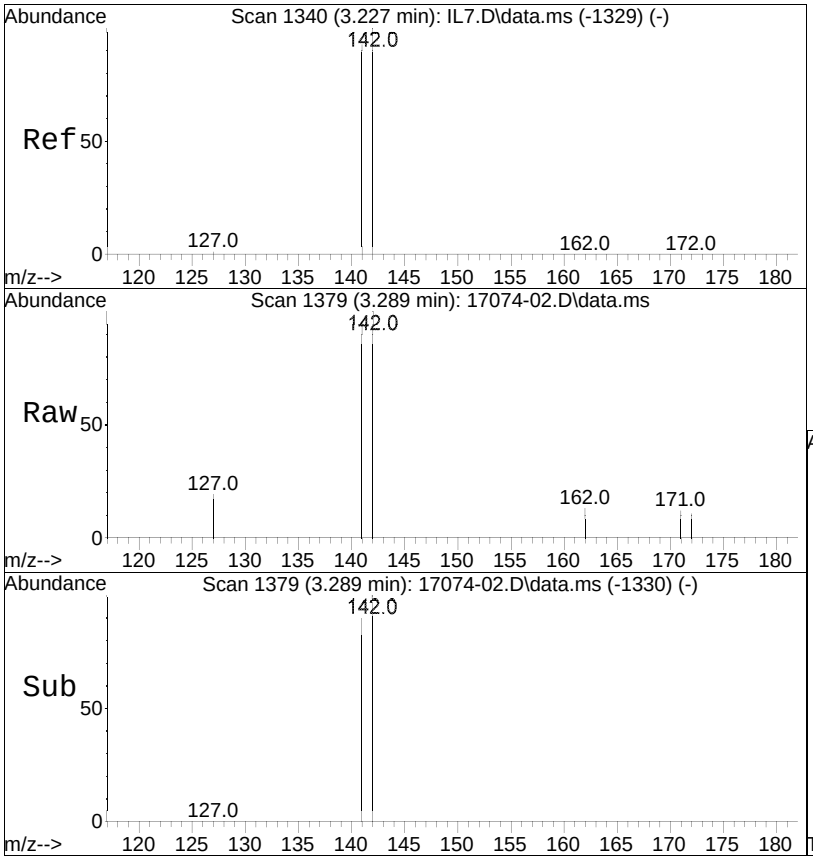


#9
Naphthalene
Concen: 141.44 ng/ml
RT: 2.907 min Scan# 1151
Delta R.T. -0.008 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:128 Resp: 5141

Ion	Ratio	Lower	Upper
128	100		
129	11.4	8.8	13.2
127	15.2	10.6	15.8

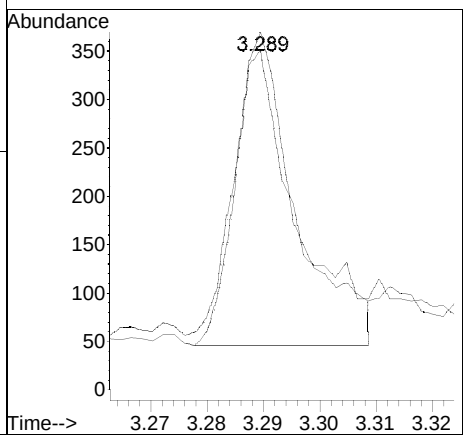


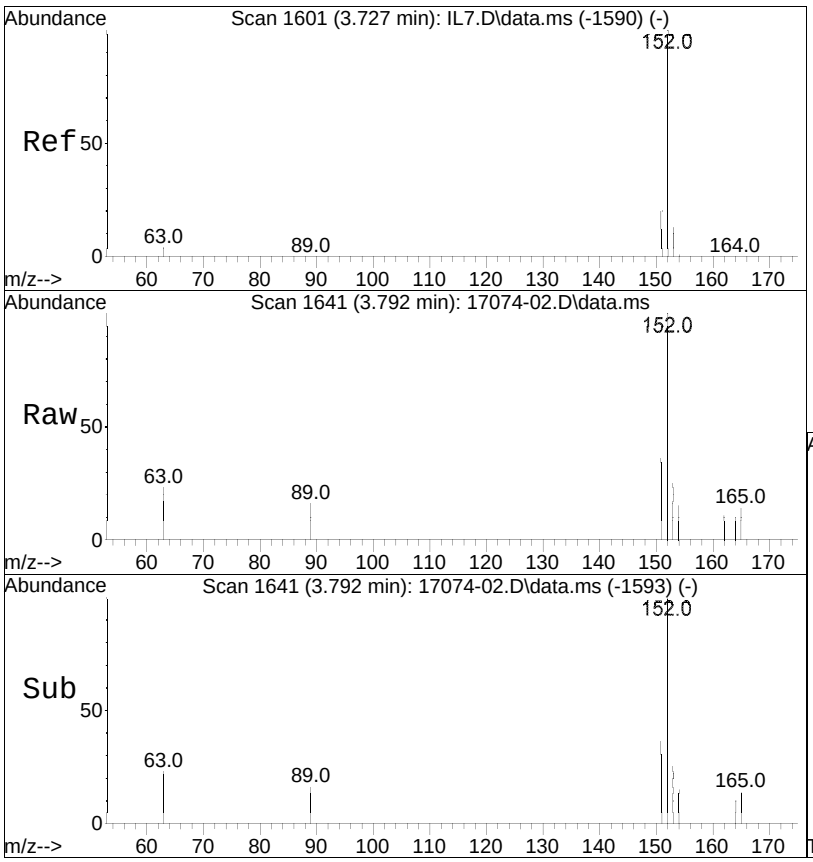


#11
2-Methylnaphthalene
Concen: 8.86 ng/ml
RT: 3.289 min Scan# 1379
Delta R.T. -0.006 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:142 Resp: 238

Ion	Ratio	Lower	Upper
142	100		
141	92.9	74.1	111.1

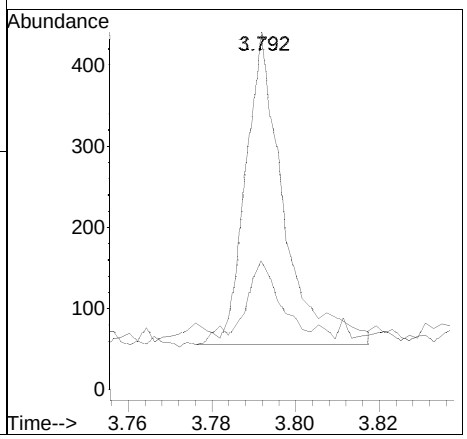


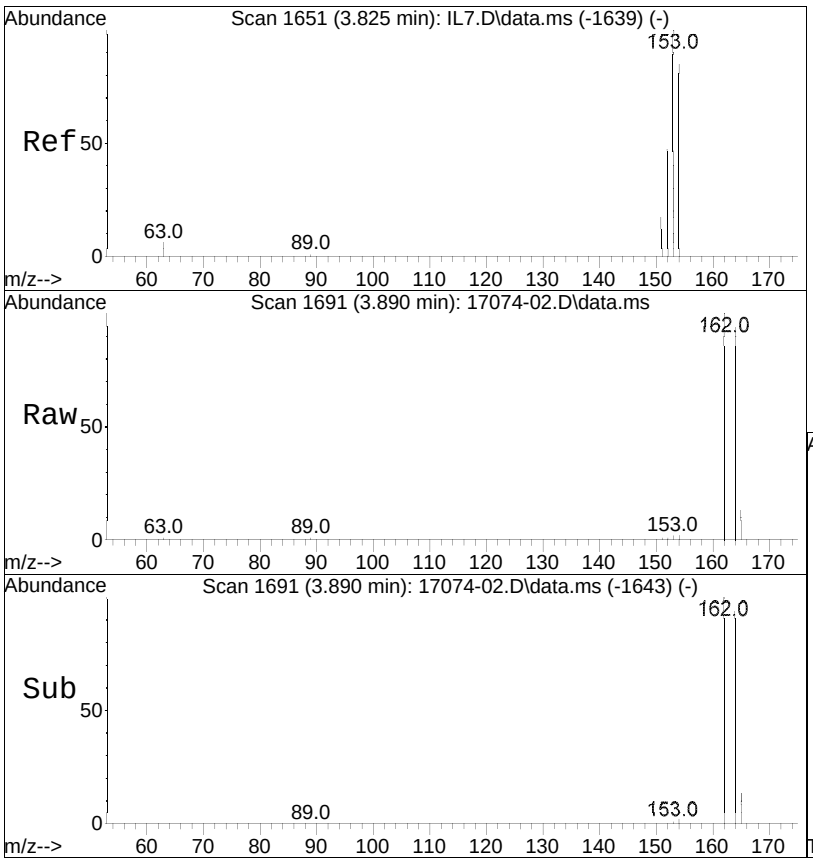


#16
Acenaphthylene
Concen: 5.76 ng/ml
RT: 3.792 min Scan# 1641
Delta R.T. -0.006 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:152 Resp: 245

Ion	Ratio	Lower	Upper
152	100		
151	18.4	16.0	24.0

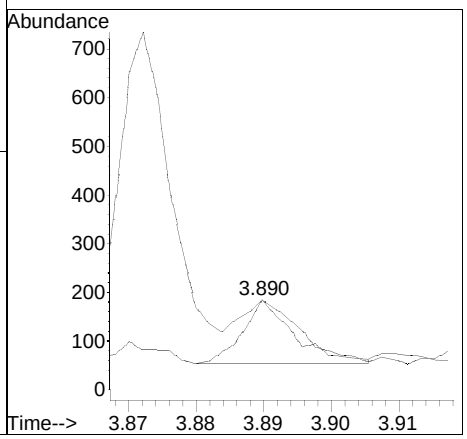


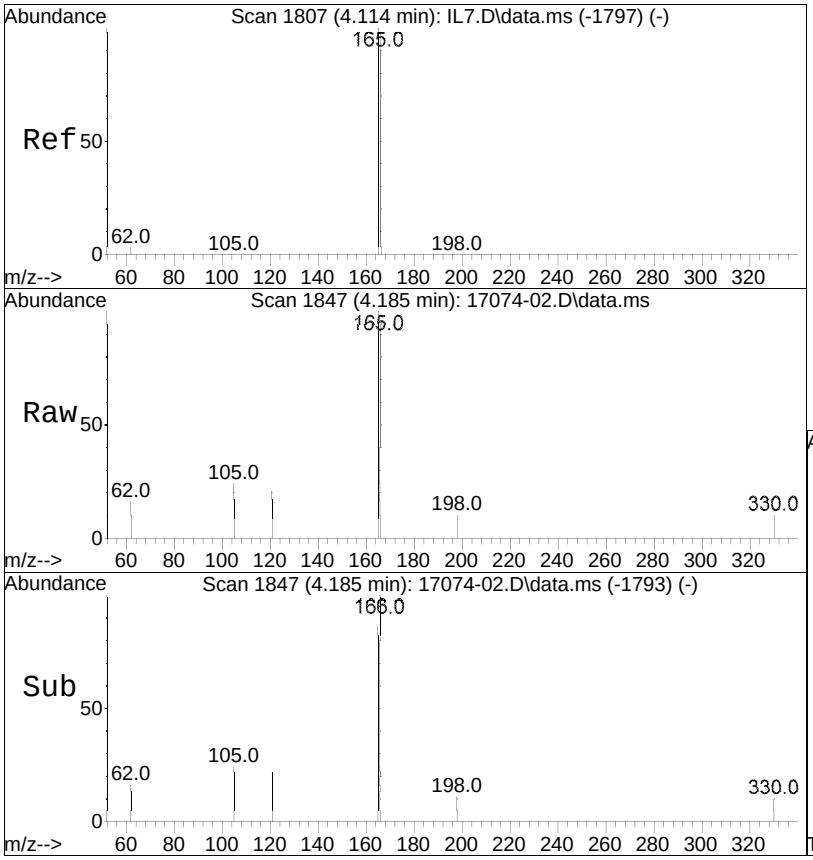


#18
Acenaphthene
Concen: 2.22 ng/ml
RT: 3.890 min Scan# 1691
Delta R.T. -0.006 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:153 Resp: 69

Ion	Ratio	Lower	Upper
153	100		
154	118.8	66.9	100.3#

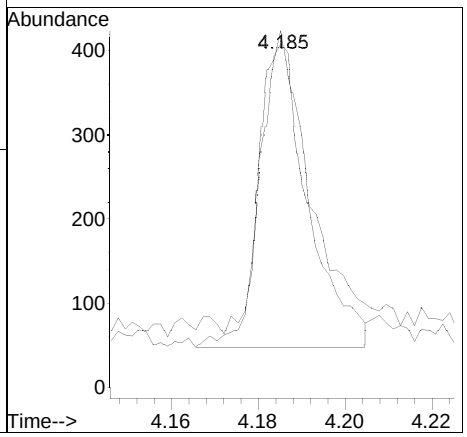


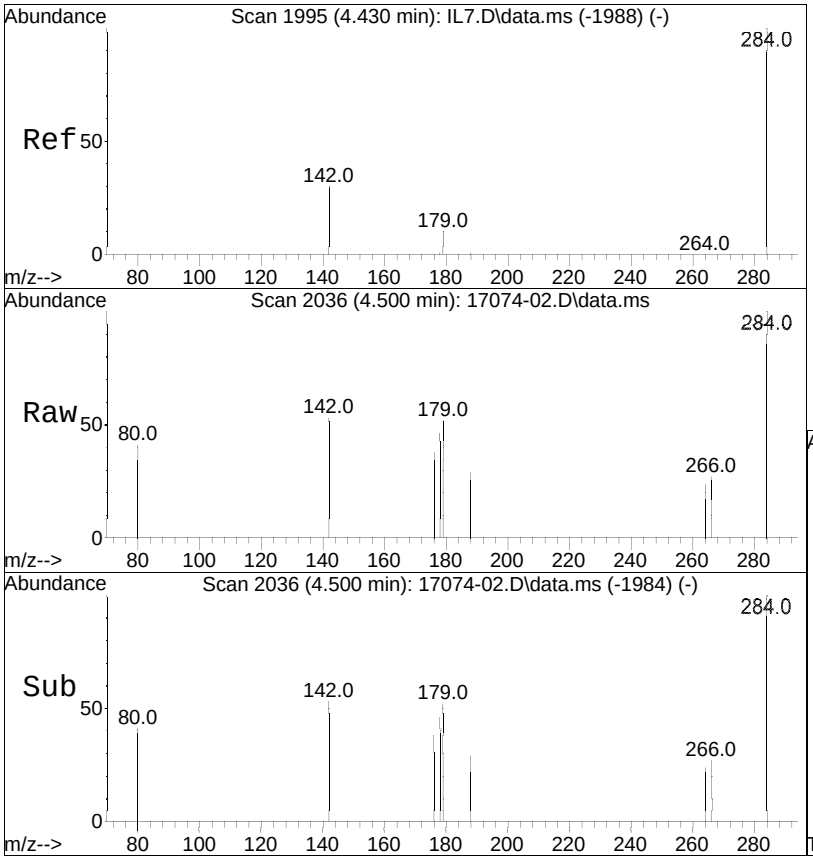


#20
Fluorene
Concen: 7.58 ng/ml M6
RT: 4.185 min Scan# 1847
Delta R.T. -0.005 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:166 Resp: 282

Ion	Ratio	Lower	Upper
166	100		
165	106.7	82.9	124.3

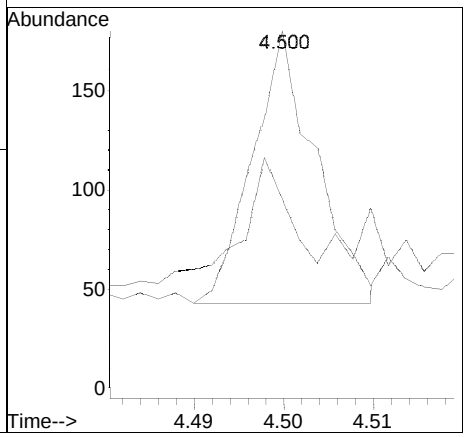


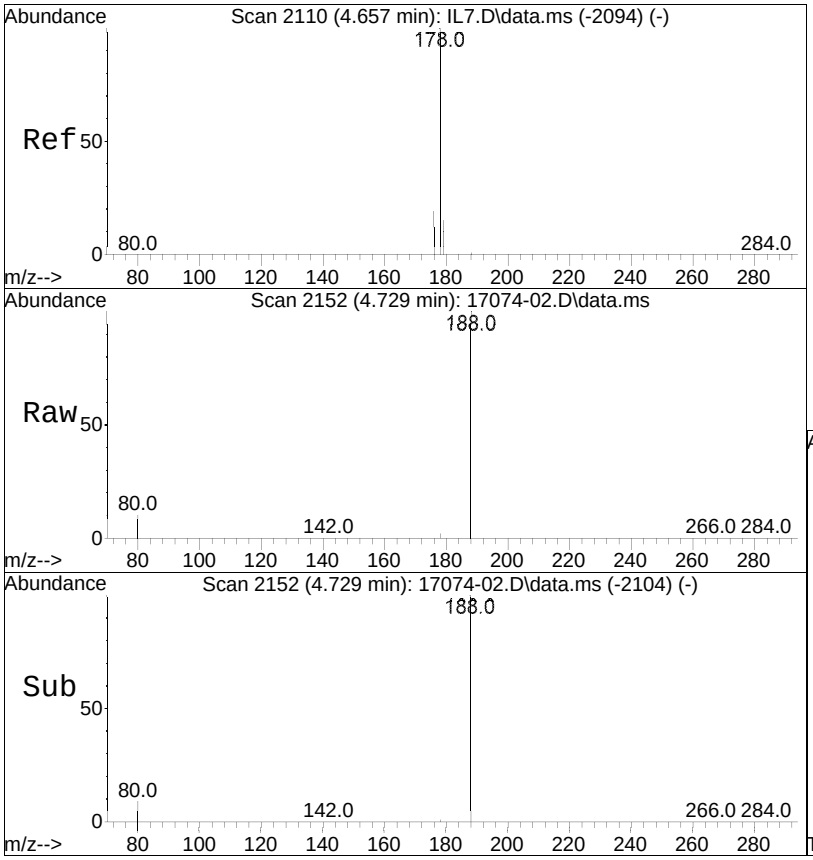


#24
Hexachlorobenzene
Concen: 4.70 ng/ml M6
RT: 4.500 min Scan# 2036
Delta R.T. -0.006 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:284 Resp: 66

Ion	Ratio	Lower	Upper
284	100		
142	36.4	26.9	40.3

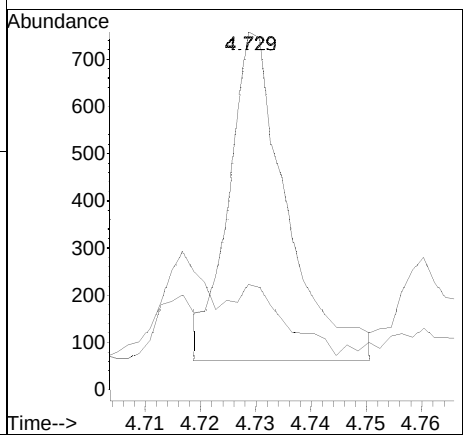


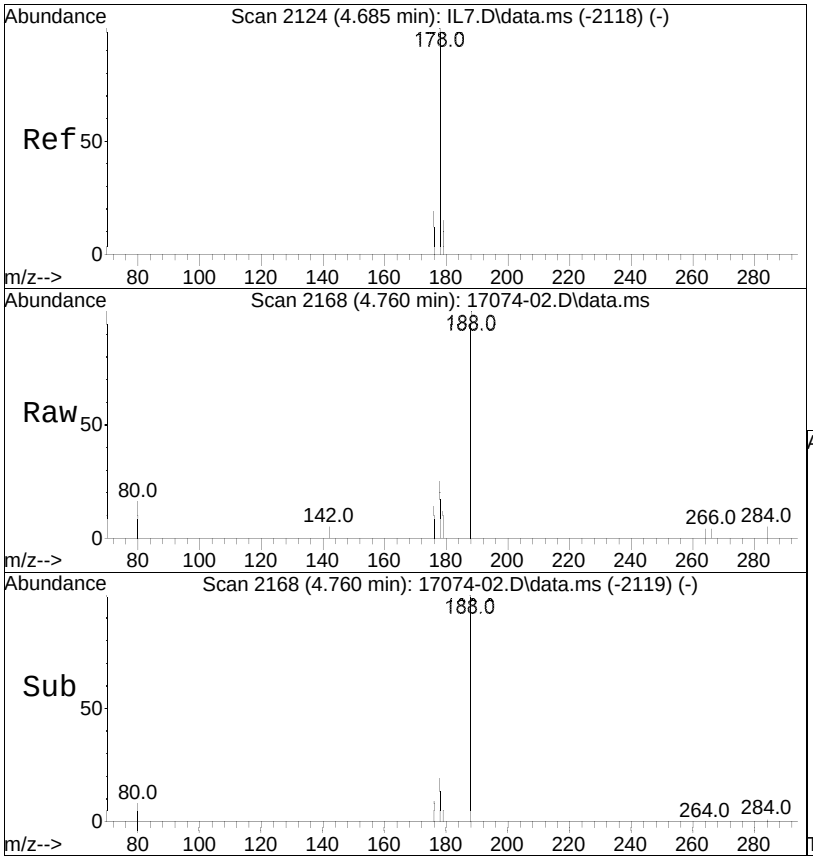


#26
Phenanthrene
Concen: 9.18 ng/ml M4
RT: 4.729 min Scan# 2152
Delta R.T. -0.006 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:178 Resp: 506

Ion	Ratio	Lower	Upper
178	100		
179	15.0	12.3	18.5

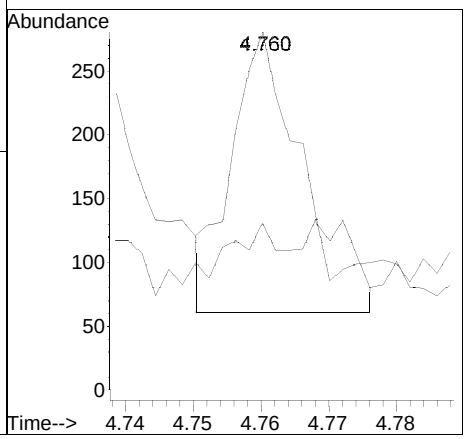


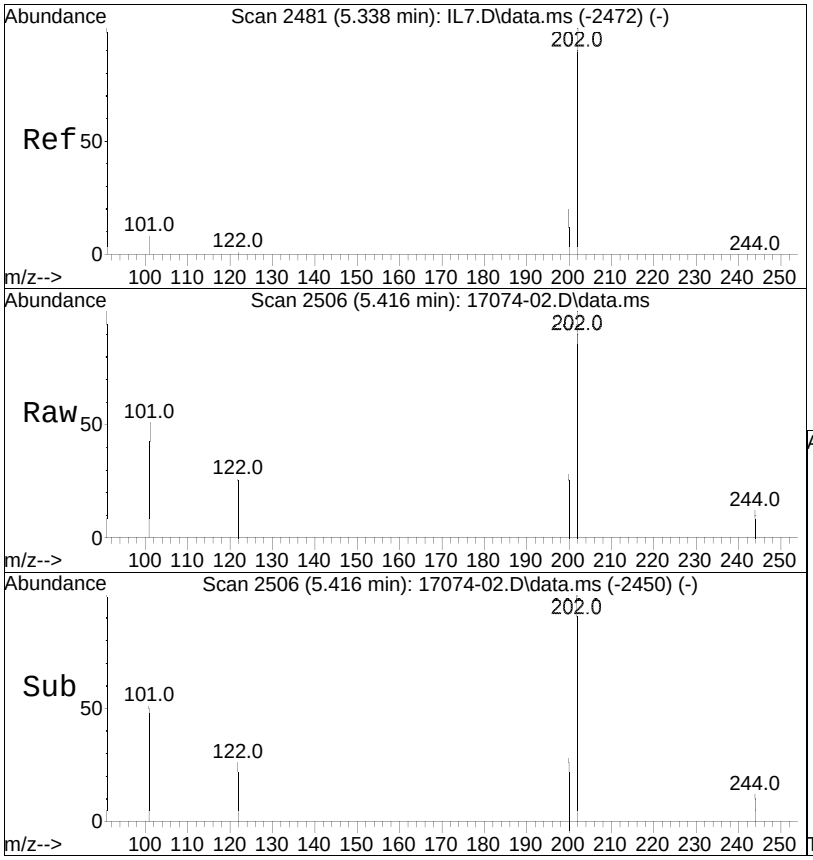


#27
Anthracene
Concen: 3.02 ng/ml M4
RT: 4.760 min Scan# 2168
Delta R.T. -0.004 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:178 Resp: 165

Ion	Ratio	Lower	Upper
178	100		
179	22.4	12.2	18.4#

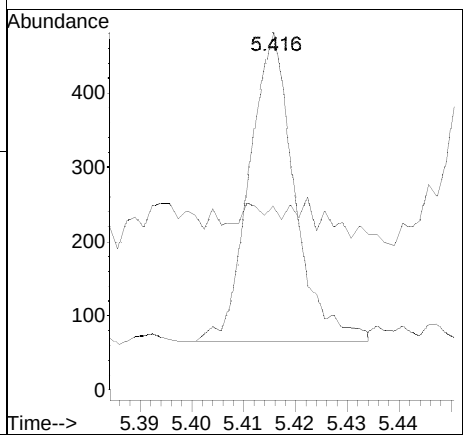


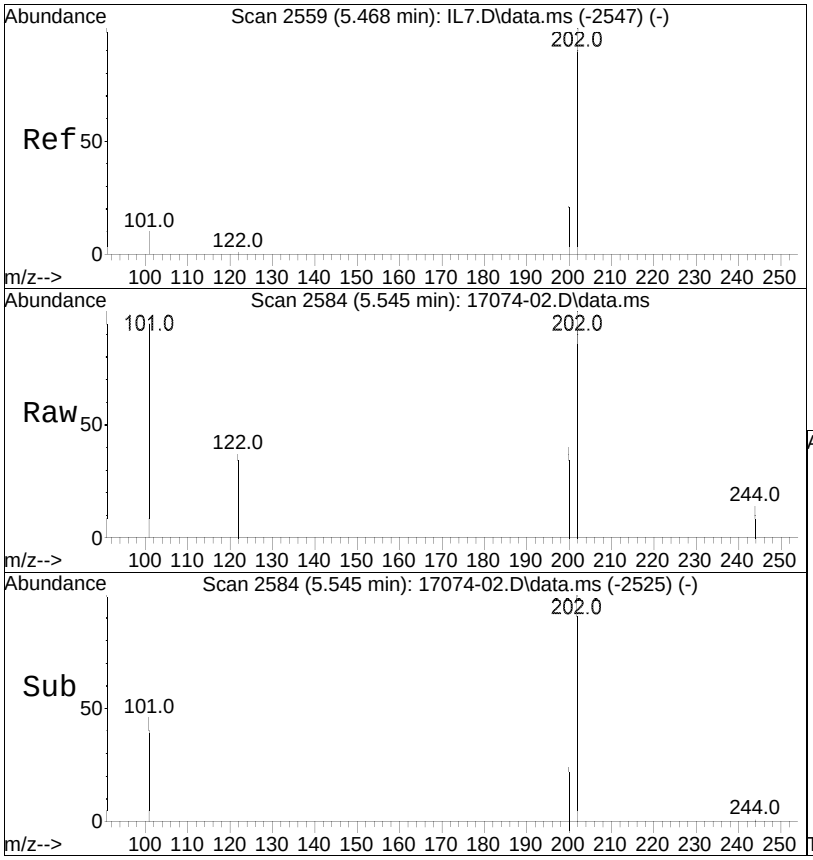


#28
Fluoranthene
Concen: 3.45 ng/ml M7
RT: 5.416 min Scan# 2506
Delta R.T. -0.002 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:202 Resp: 251

Ion	Ratio	Lower	Upper
202	100		
101	12.0	8.3	12.5

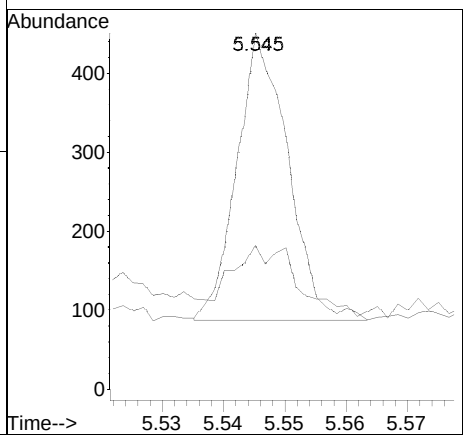




#29
Pyrene
Concen: 2.77 ng/ml M6
RT: 5.545 min Scan# 2584
Delta R.T. -0.002 min
Lab File: 17074-02.D
Acq: 04 Apr 2024 08:50 am

Tgt Ion:202 Resp: 207

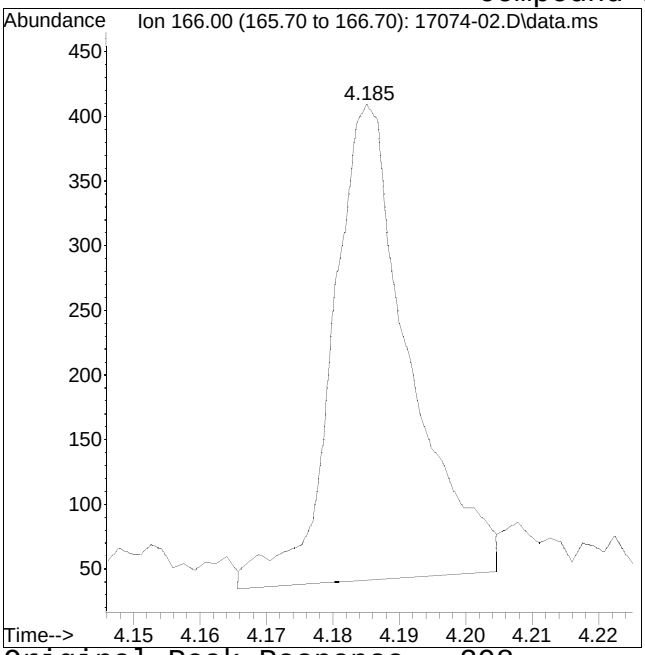
Ion	Ratio	Lower	Upper
202	100		
200	30.9	17.3	25.9#



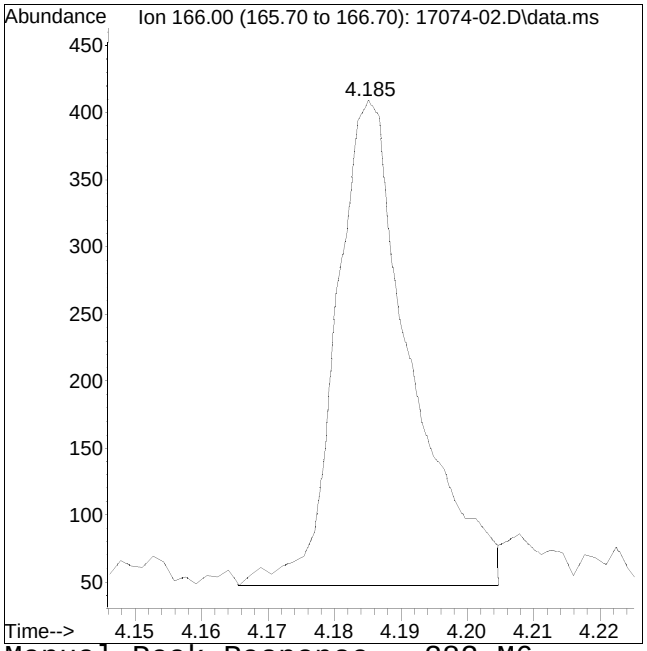
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-02.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:50 am Instrument : SV119
Sample : L2417074-02,32,,ah Quant Date : 4/4/2024 9:06 am

Compound #20: Fluorene



Original Peak Response = 298



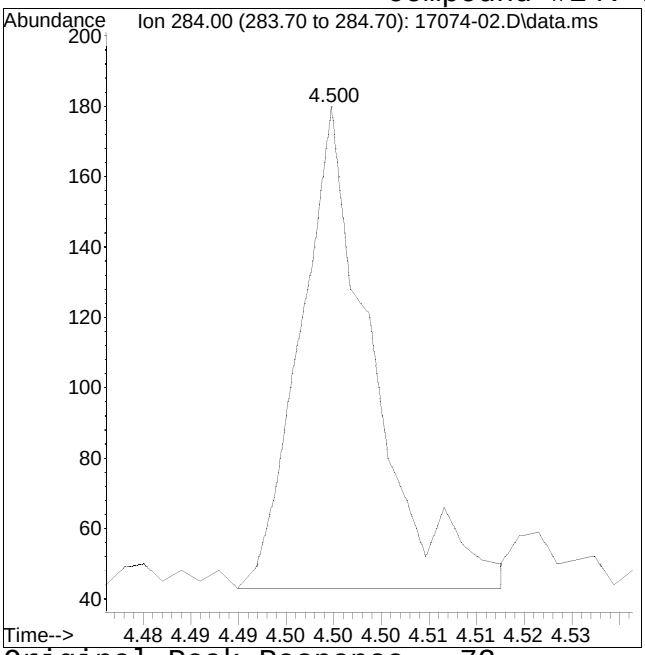
Manual Peak Response = 282 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

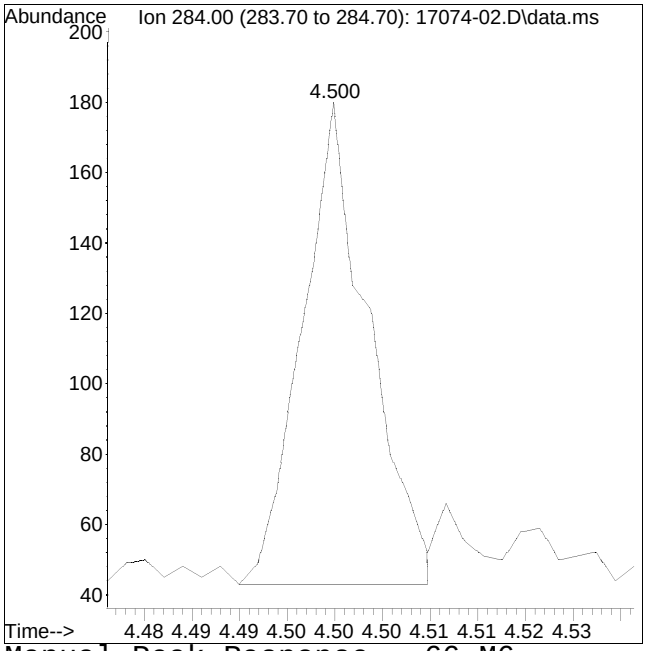
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-02.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:50 am Instrument : SV119
Sample : L2417074-02,32,,ah Quant Date : 4/4/2024 9:06 am

Compound #24: Hexachlorobenzene



Original Peak Response = 72



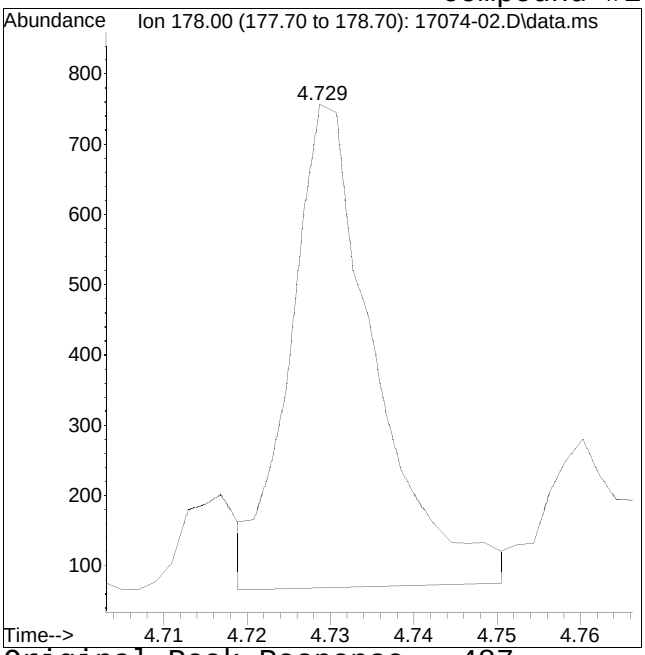
Manual Peak Response = 66 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

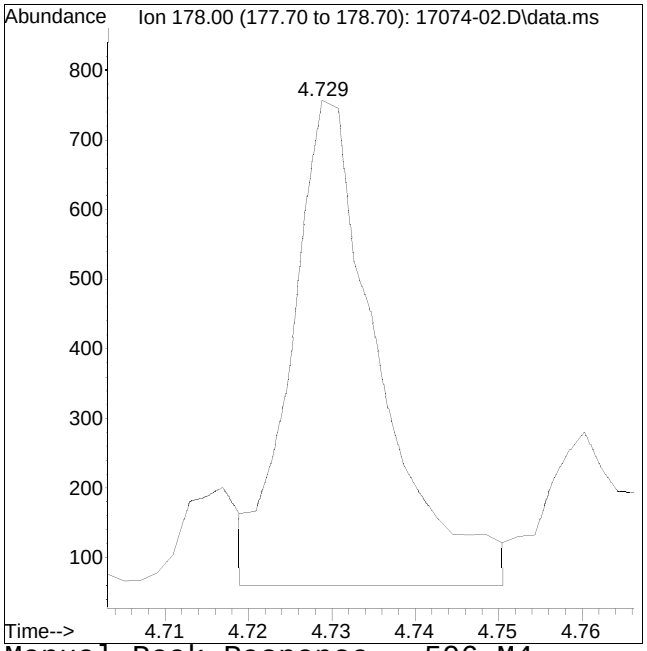
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-02.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:50 am Instrument : SV119
Sample : L2417074-02,32,,ah Quant Date : 4/4/2024 9:06 am

Compound #26: Phenanthrene



Original Peak Response = 487



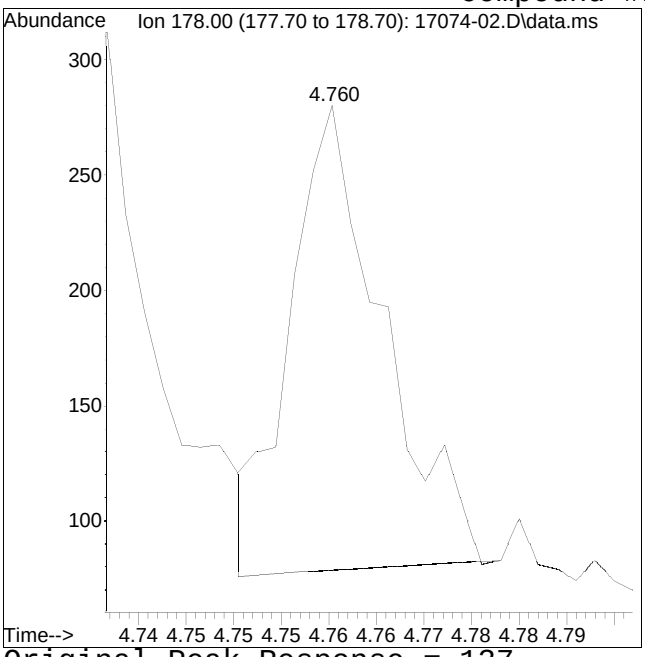
Manual Peak Response = 506 M4

M4 = Poor automated baseline construction.

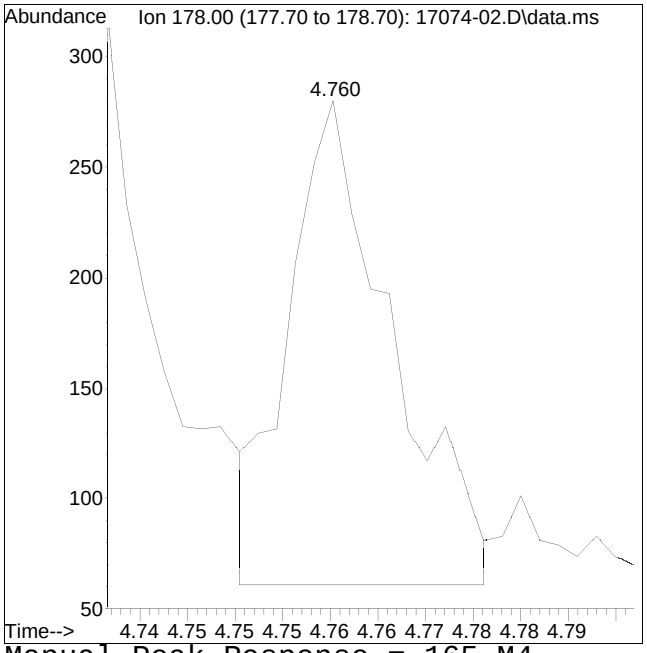
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-02.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:50 am Instrument : SV119
Sample : L2417074-02,32,,ah Quant Date : 4/4/2024 9:06 am

Compound #27: Anthracene



Original Peak Response = 137



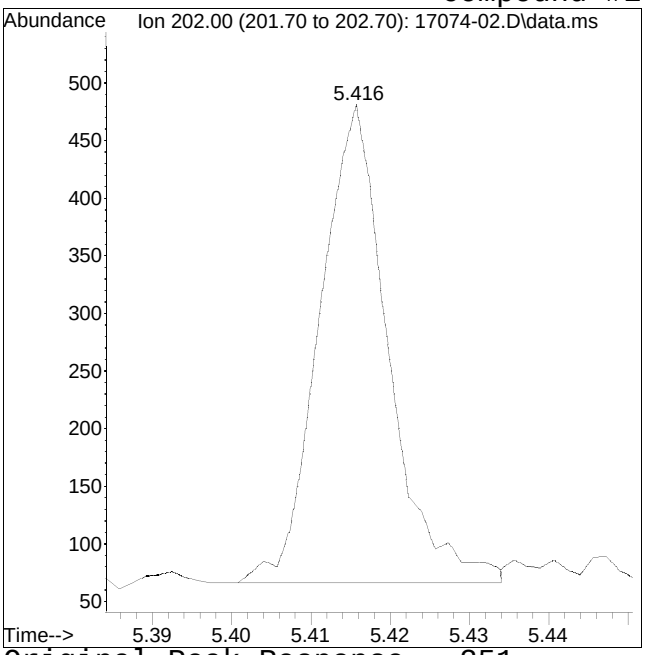
Manual Peak Response = 165 M4

M4 = Poor automated baseline construction.

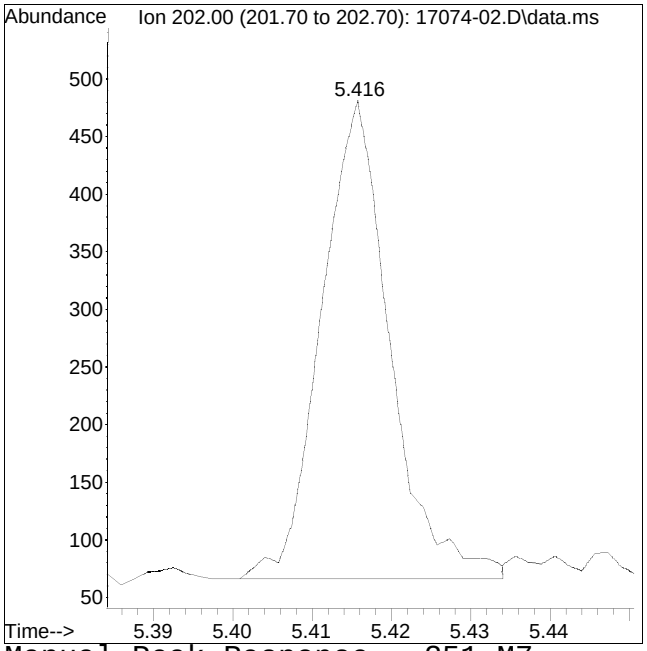
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-02.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:50 am Instrument : SV119
Sample : L2417074-02,32,,ah Quant Date : 4/4/2024 9:06 am

Compound #28: Fluoranthene



Original Peak Response = 251



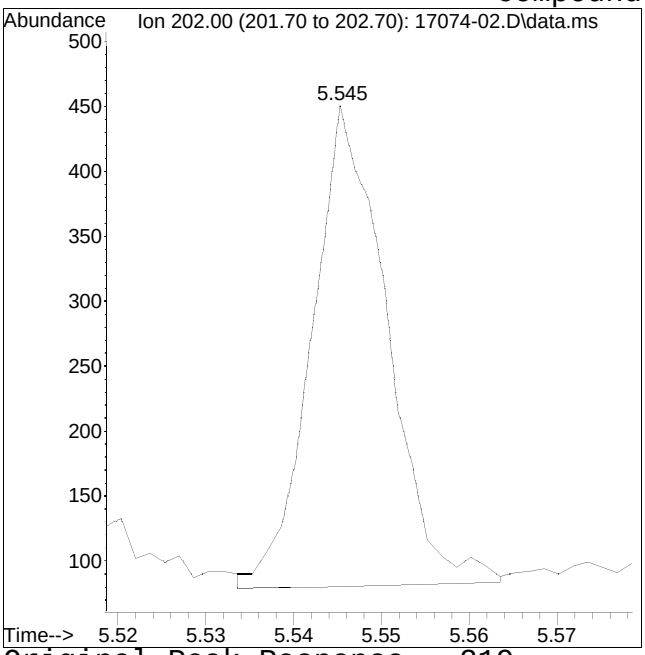
Manual Peak Response = 251 M7

M7 = A qualifier ion was manually integrated (only for GC/MS data).

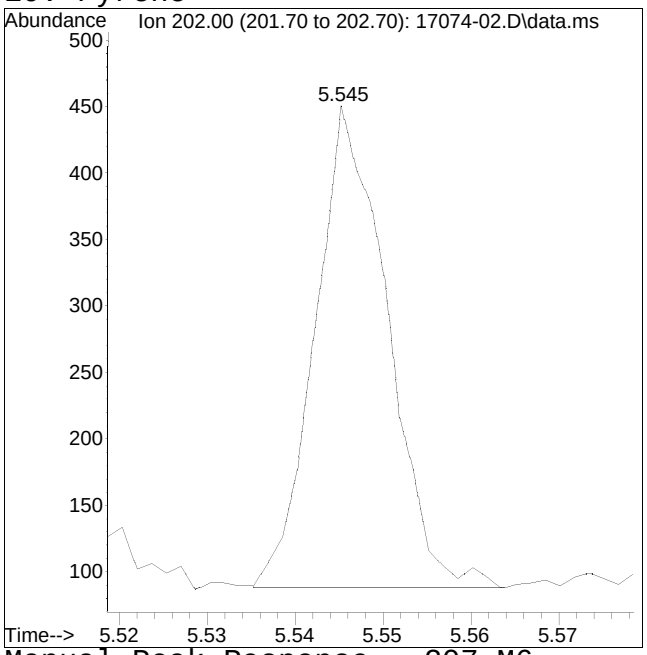
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-02.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:50 am Instrument : SV119
Sample : L2417074-02,32,,ah Quant Date : 4/4/2024 9:06 am

Compound #29: Pyrene



Original Peak Response = 219



Manual Peak Response = 207 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-03.D
Acq On : 04 Apr 2024 09:07 am
Operator : sv119:jjw
Sample : L2417074-03,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 04 10:54:55 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.231	152	54276	4000.000	ng/ml	0.00
Standard Area 1 = 63465			Recovery = 85.52%			
8) Naphthalene-d8	2.897	136	147040	4000.000	ng/ml	0.00
Standard Area 1 = 190169			Recovery = 77.32%			
17) Acenaphthene-d10	3.872	164	97937	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery = 88.83%			
22) Phenanthrene-d10	4.717	188	208974	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 85.40%			
31) Chrysene-d12	6.281	240	190114	4000.000	ng/ml	0.00
Standard Area 1 = 210122			Recovery = 90.48%			
36) Perylene-d12	7.486	264	195443	4000.000	ng/ml	0.00
Standard Area 1 = 221293			Recovery = 88.32%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.642	112	44239	2979.982	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 59.60%			
3) Phenol-d6	2.055	99	46028	2586.559	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 51.73%			
7) Nitrobenzene-d5	2.512	82	24754	1833.861	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 73.35%			
13) 2-Fluorobiphenyl	3.496	172	64993	1979.098	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 79.16%			
21) 2,4,6-Tribromophenol	4.323	330	25573	4736.247	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 94.72%			
30) 4-Terphenyl-d14	5.640	244	73643	1437.522	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 57.50%			
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.909	128	229M6	6.522	ng/ml	
10) Hexachlorobutadiene	0.000		0	N.D.	d	
11) 2-Methylnaphthalene	3.290	142	70M6	2.696	ng/ml	
14) 2-Chloronaphthalene	0.000		0	N.D.	d	
16) Acenaphthylene	0.000		0	N.D.	d	
18) Acenaphthene	0.000		0	N.D.	d	
20) Fluorene	0.000		0	N.D.	d	
24) Hexachlorobenzene	0.000		0	N.D.	d	
25) Pentachlorophenol	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-03.D
Acq On : 04 Apr 2024 09:07 am
Operator : sv119:jjw
Sample : L2417074-03,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 04 10:54:55 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.731	178	181M6	3.410	ng/ml	
27) Anthracene	0.000		0	N.D.	d	
28) Fluoranthene	0.000		0	N.D.	d	
29) Pyrene	0.000		0	N.D.	d	
32) Benzo[a]anthracene	0.000		0	N.D.	d	
34) Chrysene	0.000		0	N.D.	d	
37) Benzo[b]fluoranthene	0.000		0	N.D.	d	
38) Benzo[k]fluoranthene	0.000		0	N.D.	d	
39) Benzo[a]pyrene	0.000		0	N.D.	d	
40) Indeno[1,2,3-cd]pyrene	0.000		0	N.D.	d	
41) Dibenzo[a,h]anthracene	0.000		0	N.D.	d	
42) Benzo[g,h,i]perylene	0.000		0	N.D.	d	

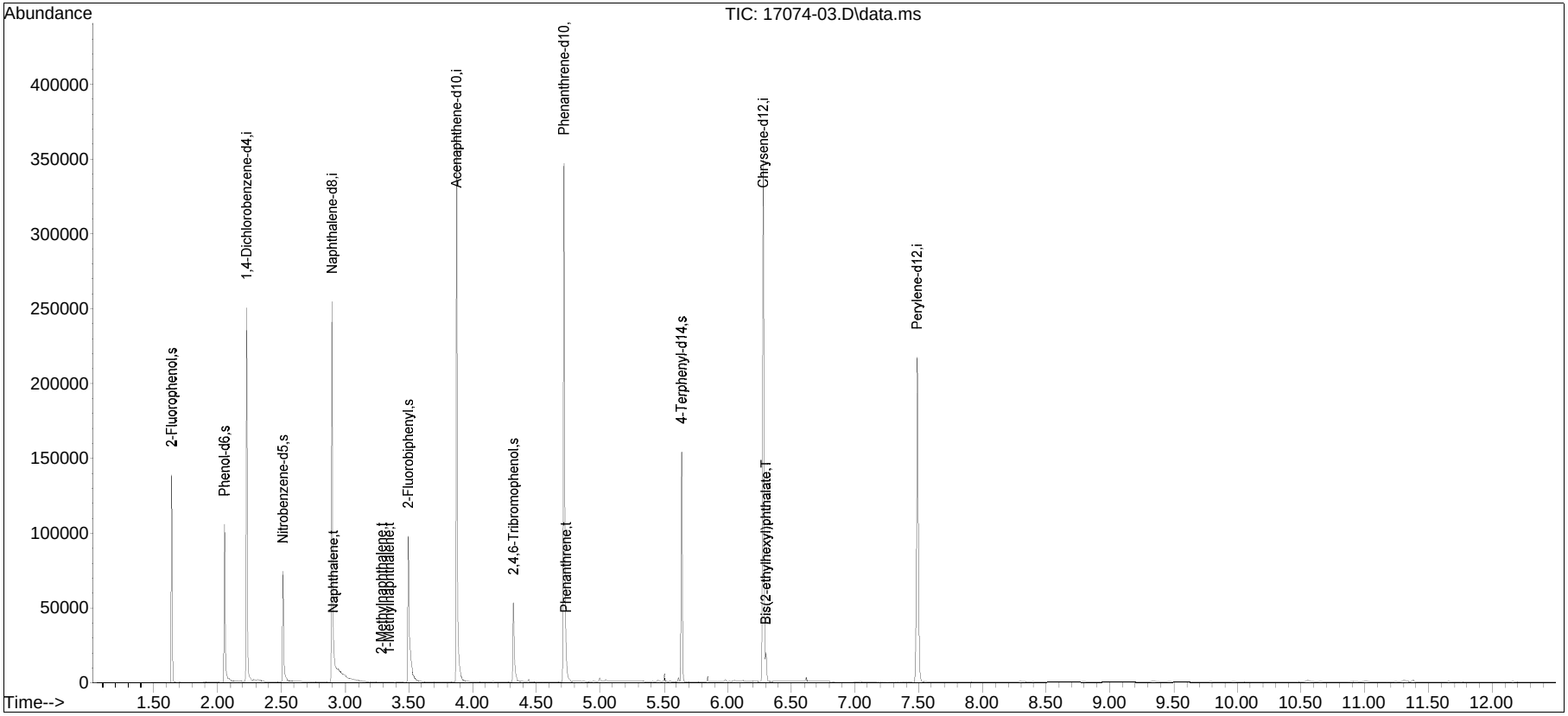
(#) = qualifier out of range (m) = manual integration (+) = signals summed

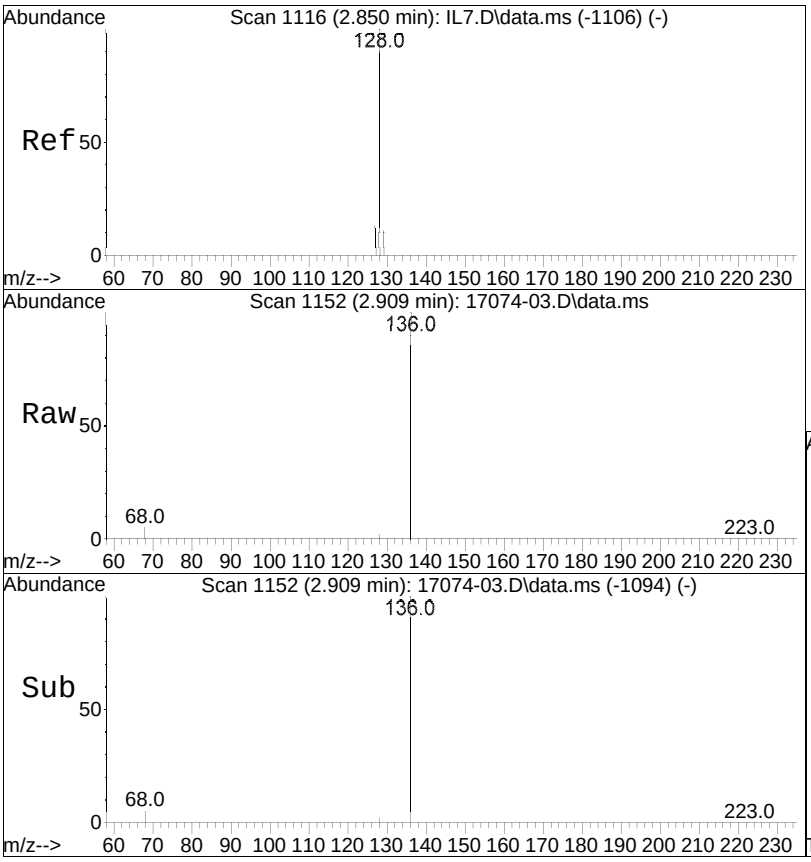
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-03.D
Acq On : 04 Apr 2024 09:07 am
Operator : sv119:jjw
Sample : L2417074-03,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 04 10:54:55 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

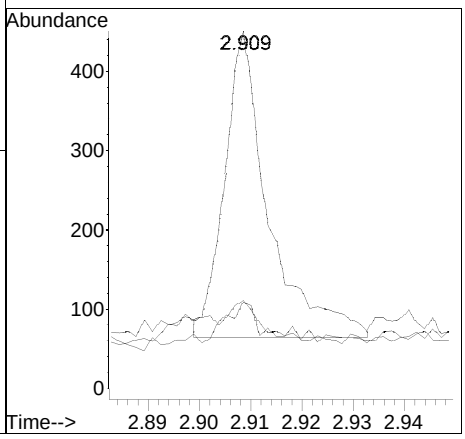


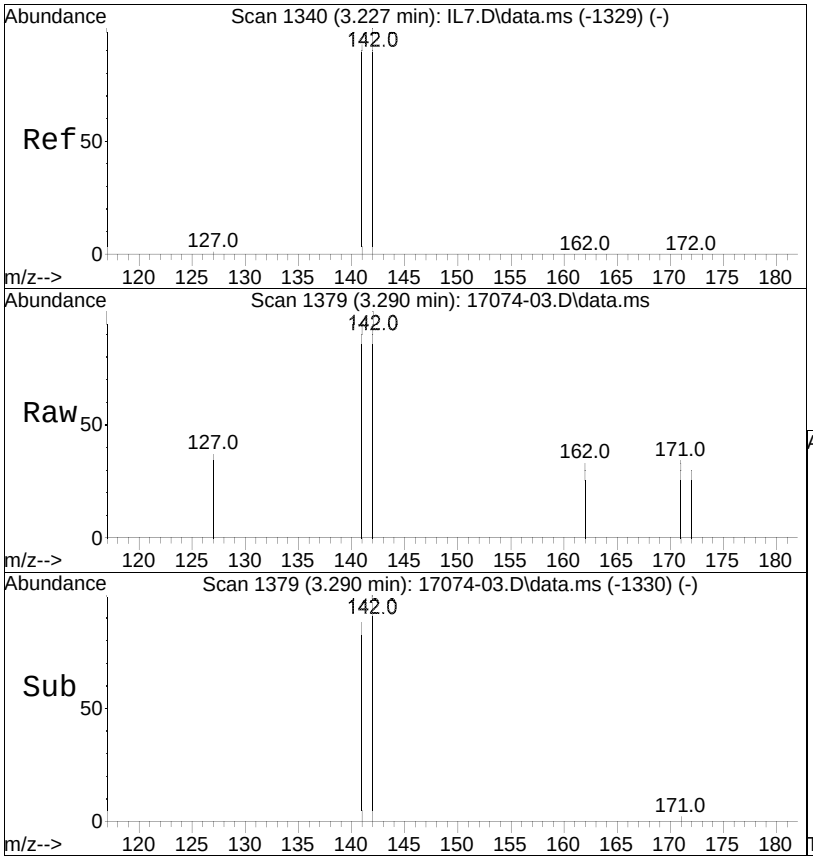


#9
Naphthalene
Concen: 6.52 ng/ml M6
RT: 2.909 min Scan# 1152
Delta R.T. -0.006 min
Lab File: 17074-03.D
Acq: 04 Apr 2024 09:07 am

Tgt Ion:128 Resp: 229

Ion	Ratio	Lower	Upper
128	100		
129	9.2	8.8	13.2
127	12.7	10.6	15.8

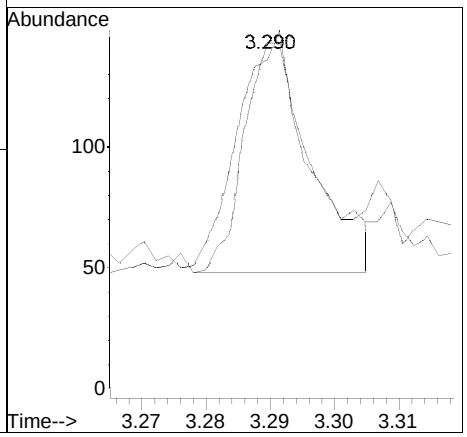


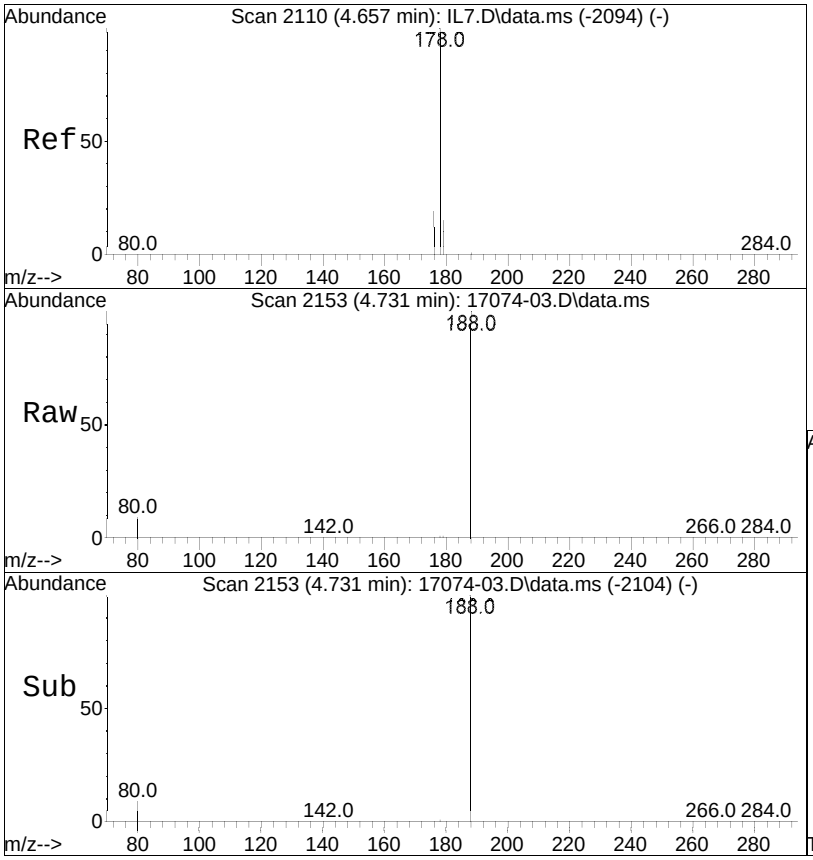


#11
2-Methylnaphthalene
Concen: 2.70 ng/ml M6
RT: 3.290 min Scan# 1379
Delta R.T. -0.006 min
Lab File: 17074-03.D
Acq: 04 Apr 2024 09:07 am

Tgt Ion:142 Resp: 70

Ion	Ratio	Lower	Upper
142	100		
141	98.6	74.1	111.1

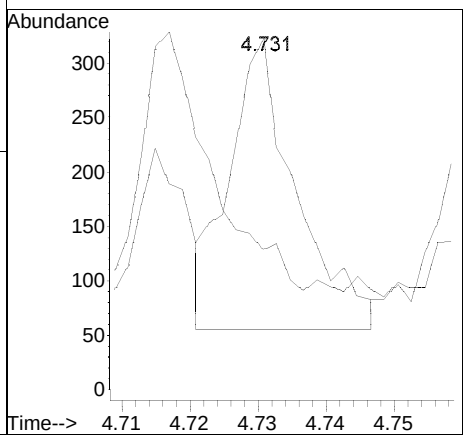




#26
Phenanthrene
Concen: 3.41 ng/ml M6
RT: 4.731 min Scan# 2153
Delta R.T. -0.004 min
Lab File: 17074-03.D
Acq: 04 Apr 2024 09:07 am

Tgt Ion:178 Resp: 181

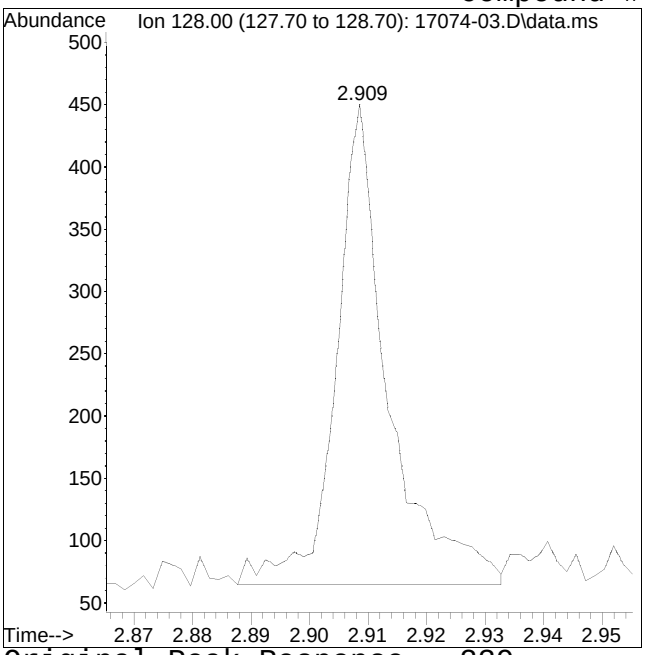
Ion	Ratio	Lower	Upper
178	100		
179	16.6	12.3	18.5



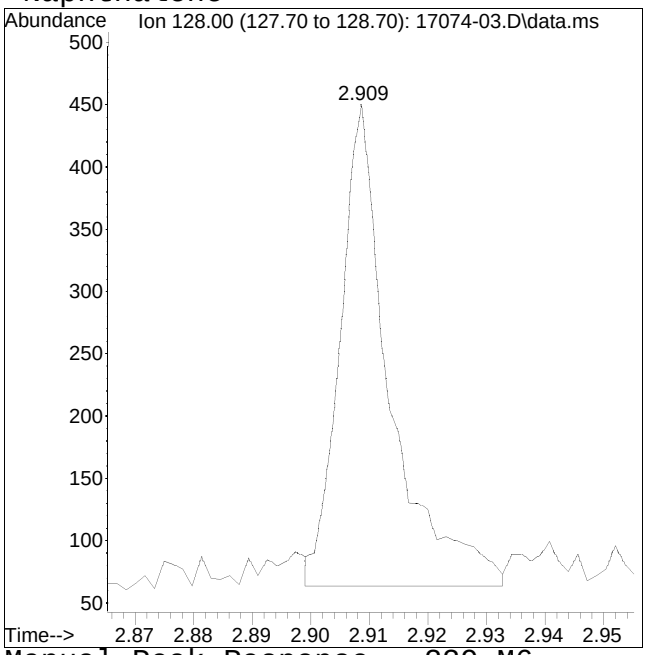
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-03.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:07 am Instrument : SV119
Sample : L2417074-03,32,,ah Quant Date : 4/4/2024 9:21 am

Compound #9: Naphthalene



Original Peak Response = 239



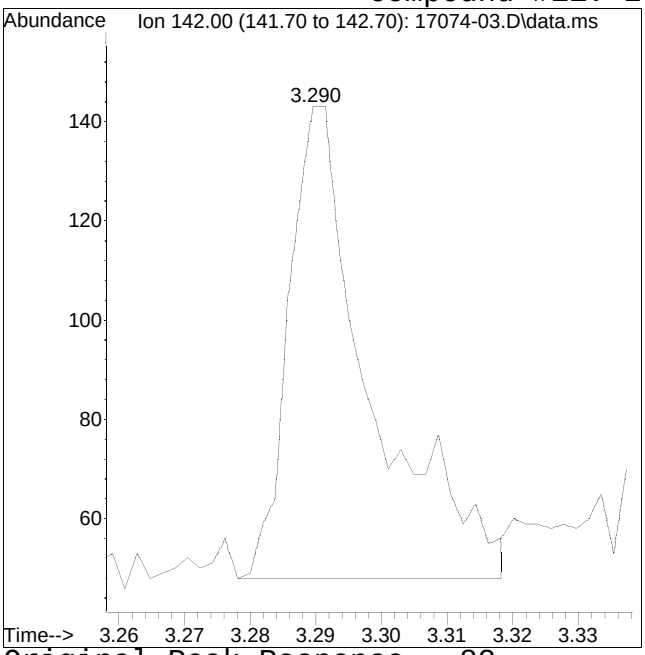
Manual Peak Response = 229 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

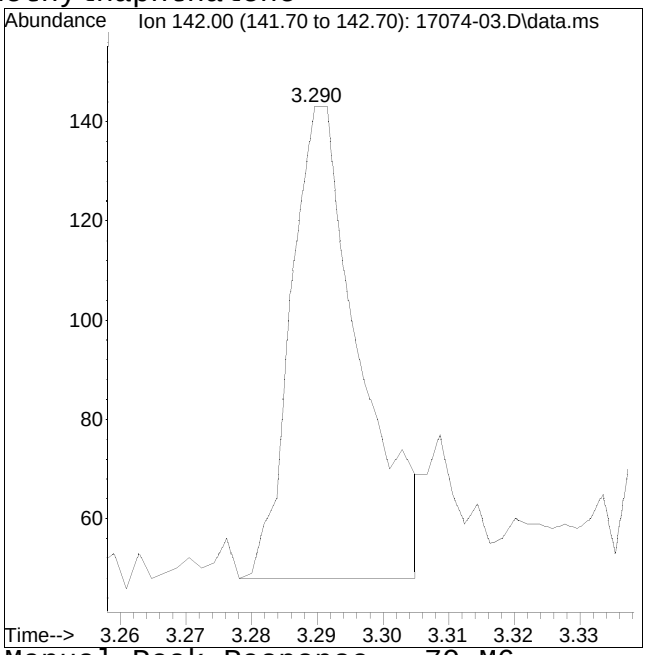
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-03.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:07 am Instrument : SV119
Sample : L2417074-03,32,,ah Quant Date : 4/4/2024 9:21 am

Compound #11: 2-Methylnaphthalene



Original Peak Response = 82



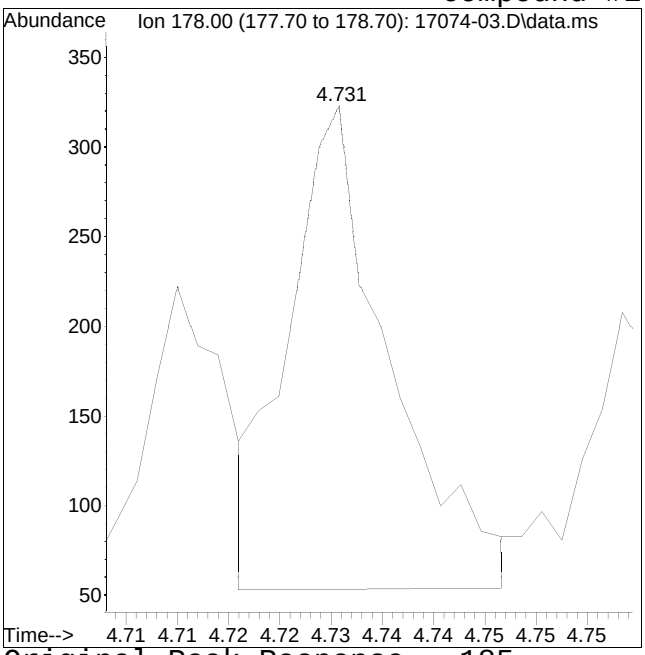
Manual Peak Response = 70 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

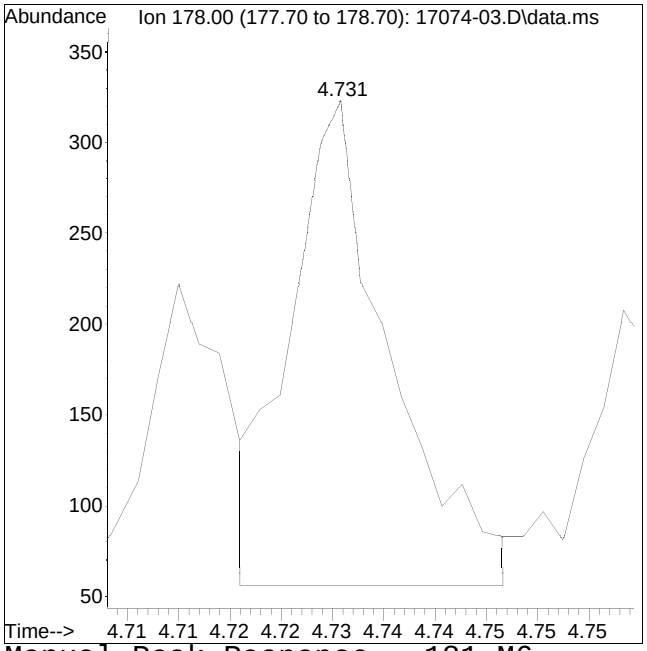
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-03.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:07 am Instrument : SV119
Sample : L2417074-03,32,,ah Quant Date : 4/4/2024 9:21 am

Compound #26: Phenanthrene



Original Peak Response = 185



Manual Peak Response = 181 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-04.D
Acq On : 04 Apr 2024 09:24 am
Operator : sv119:jjw
Sample : L2417074-04,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 04 10:57:18 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.234	152	52381	4000.000	ng/ml	0.00
Standard Area 1 = 63465			Recovery = 82.54%			
8) Naphthalene-d8	2.897	136	136641	4000.000	ng/ml	0.00
Standard Area 1 = 190169			Recovery = 71.85%			
17) Acenaphthene-d10	3.874	164	92448	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery = 83.86%			
22) Phenanthrene-d10	4.717	188	201735	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 82.44%			
31) Chrysene-d12	6.280	240	189183	4000.000	ng/ml	0.00
Standard Area 1 = 210122			Recovery = 90.03%			
36) Perylene-d12	7.487	264	195440	4000.000	ng/ml	0.00
Standard Area 1 = 221293			Recovery = 88.32%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.643	112	26853	1874.283	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 37.49%			
3) Phenol-d6	2.055	99	23911	1392.298	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 27.85%			
7) Nitrobenzene-d5	2.514	82	15331	1176.862	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 47.07%			
13) 2-Fluorobiphenyl	3.496	172	37869	1240.906	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 49.64%			
21) 2,4,6-Tribromophenol	4.323	330	13180	2585.933	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 51.72%			
30) 4-Terphenyl-d14	5.640	244	41460	838.346	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 33.53%			
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.908	128	2793	85.604	ng/ml	99
10) Hexachlorobutadiene	0.000		0	N.D.		
11) 2-Methylnaphthalene	3.291	142	191M1	7.917	ng/ml	
14) 2-Chloronaphthalene	0.000		0	N.D.	d	
16) Acenaphthylene	0.000		0	N.D.	d	
18) Acenaphthene	3.892	153	84M4	2.939	ng/ml	
20) Fluorene	0.000		0	N.D.	d	
24) Hexachlorobenzene	0.000		0	N.D.	d	
25) Pentachlorophenol	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-04.D
Acq On : 04 Apr 2024 09:24 am
Operator : sv119:jjw
Sample : L2417074-04,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 04 10:57:18 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.731	178	141M6	2.752	ng/ml	
27) Anthracene	0.000		0	N.D.	d	
28) Fluoranthene	0.000		0	N.D.	d	
29) Pyrene	0.000		0	N.D.	d	
32) Benzo[a]anthracene	0.000		0	N.D.	d	
34) Chrysene	0.000		0	N.D.	d	
37) Benzo[b]fluoranthene	0.000		0	N.D.	d	
38) Benzo[k]fluoranthene	0.000		0	N.D.	d	
39) Benzo[a]pyrene	0.000		0	N.D.	d	
40) Indeno[1,2,3-cd]pyrene	0.000		0	N.D.	d	
41) Dibenzo[a,h]anthracene	0.000		0	N.D.	d	
42) Benzo[g,h,i]perylene	0.000		0	N.D.	d	

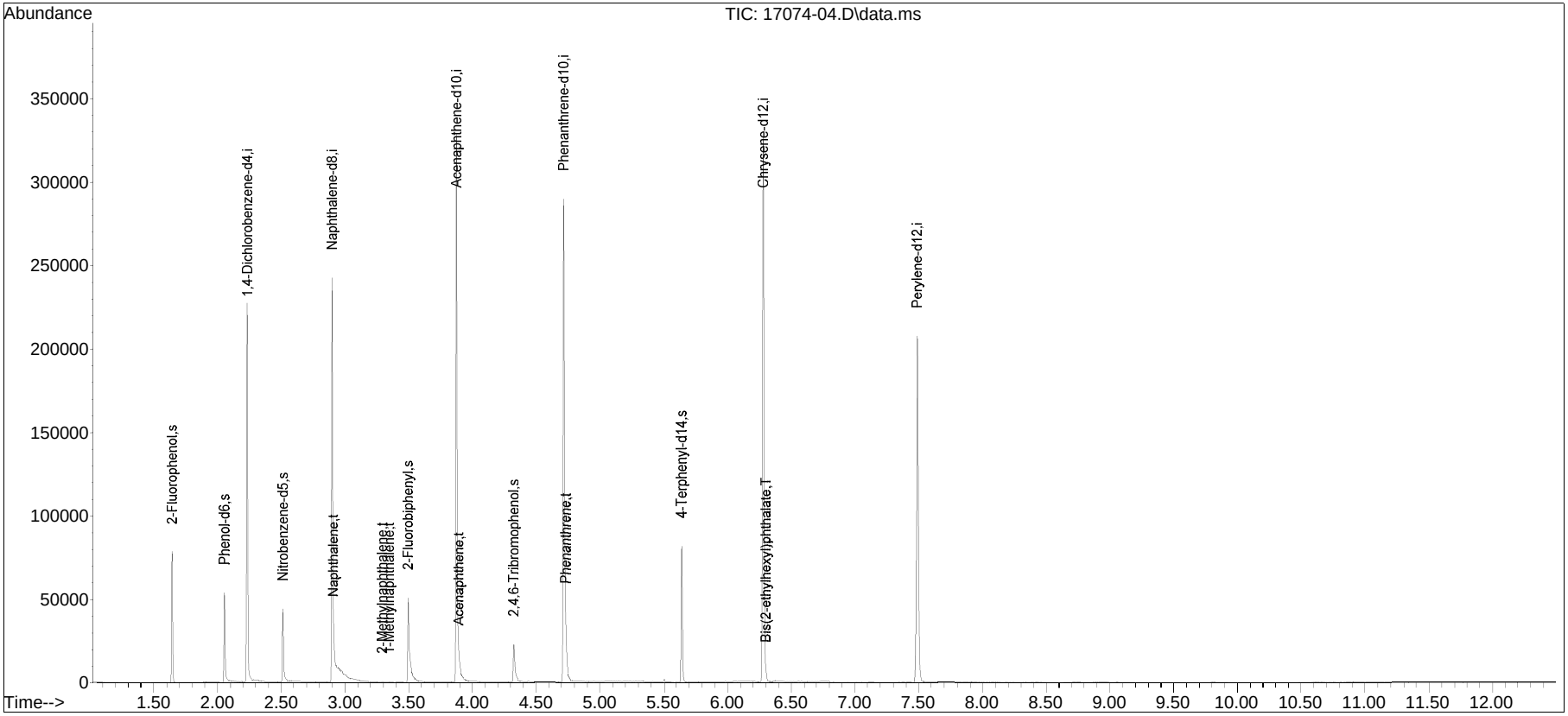
(#) = qualifier out of range (m) = manual integration (+) = signals summed

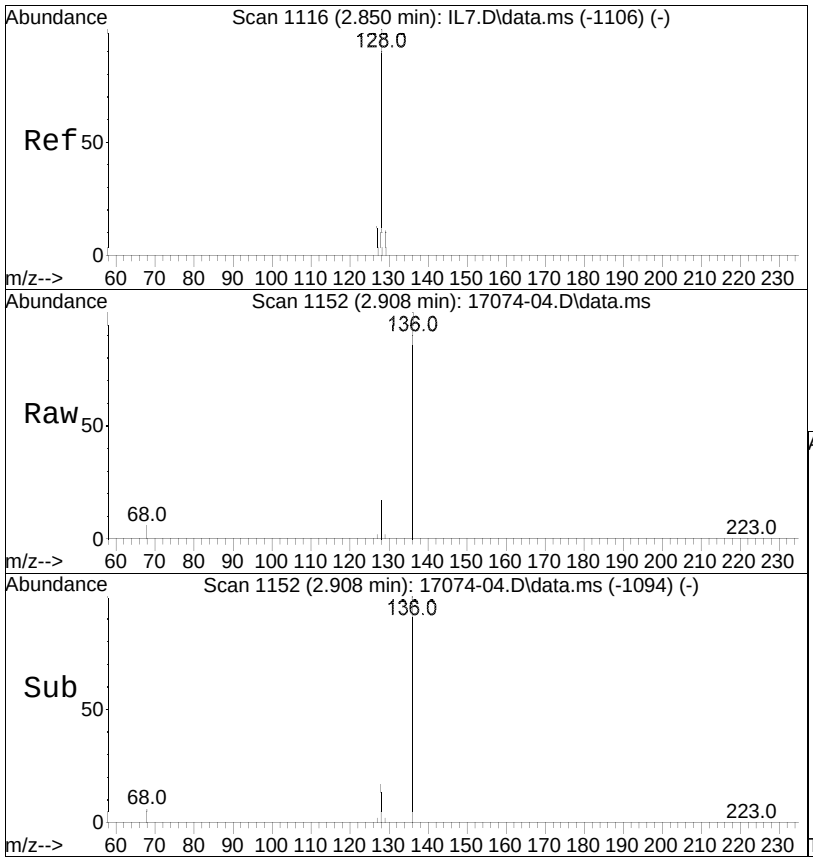
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-04.D
Acq On : 04 Apr 2024 09:24 am
Operator : sv119:jjw
Sample : L2417074-04,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 04 10:57:18 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

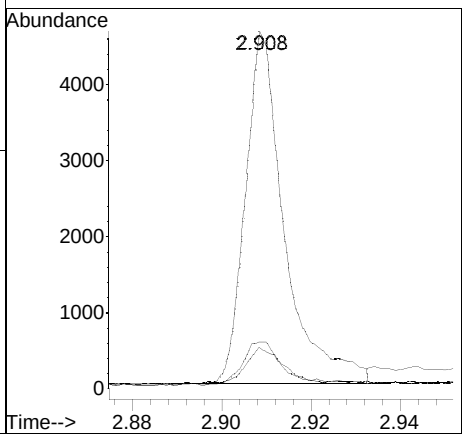


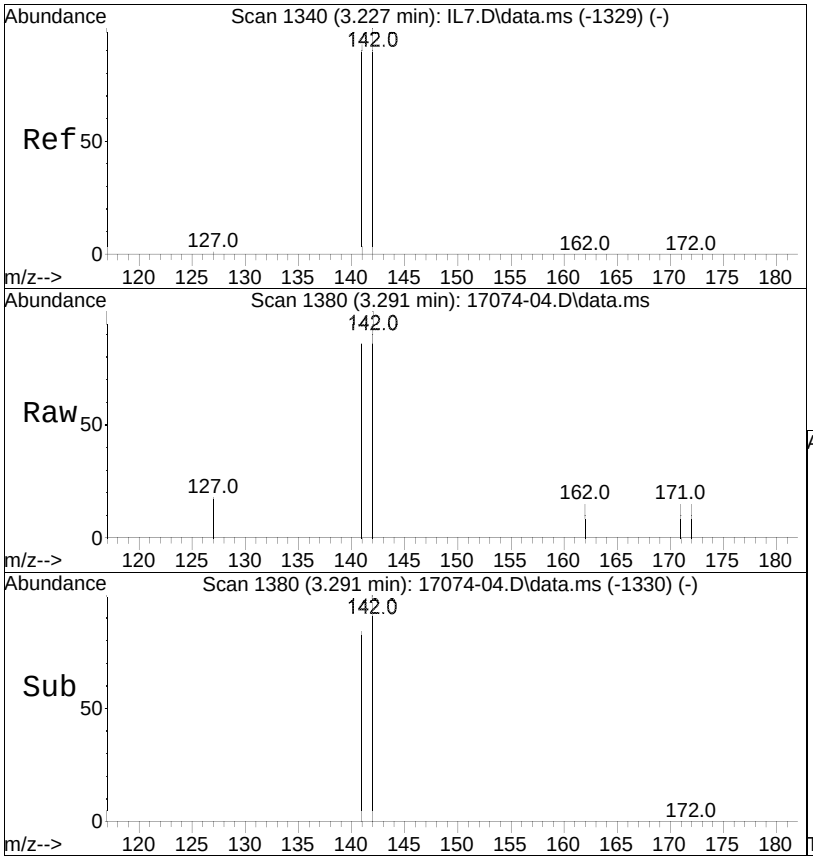


#9
Naphthalene
Concen: 85.60 ng/ml
RT: 2.908 min Scan# 1152
Delta R.T. -0.007 min
Lab File: 17074-04.D
Acq: 04 Apr 2024 09:24 am

Tgt Ion:128 Resp: 2793

Ion	Ratio	Lower	Upper
128	100		
129	10.1	8.8	13.2
127	13.1	10.6	15.8

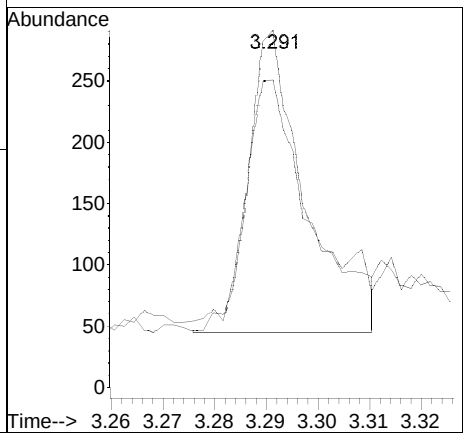


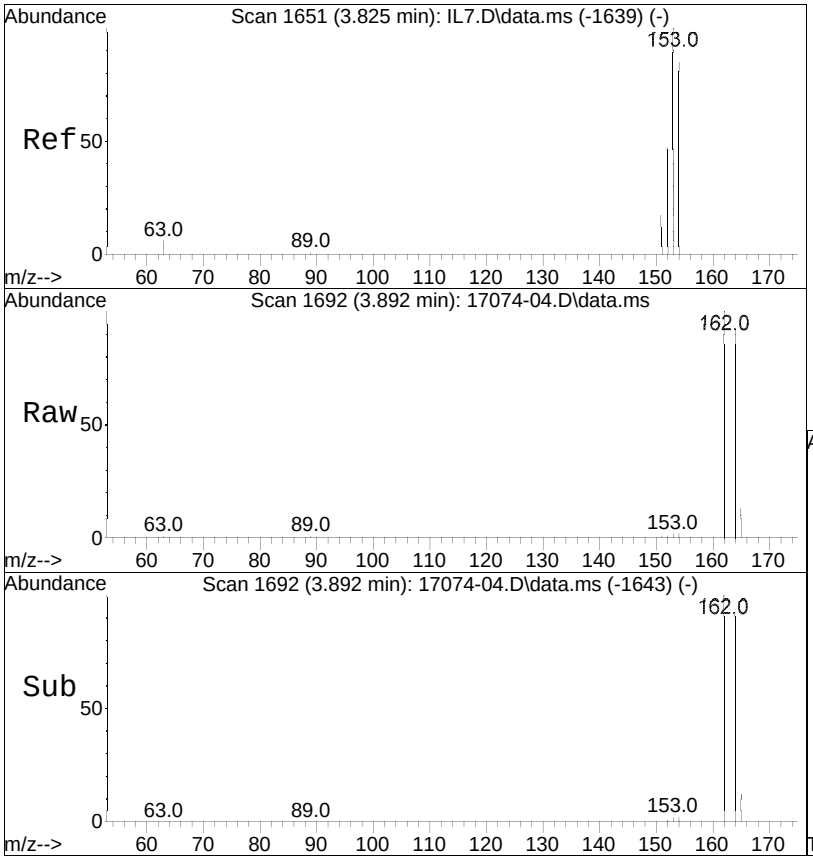


#11
2-Methylnaphthalene
Concen: 7.92 ng/ml M1
RT: 3.291 min Scan# 1380
Delta R.T. -0.004 min
Lab File: 17074-04.D
Acq: 04 Apr 2024 09:24 am

Tgt Ion:142 Resp: 191

Ion	Ratio	Lower	Upper
142	100		
141	88.5	74.1	111.1

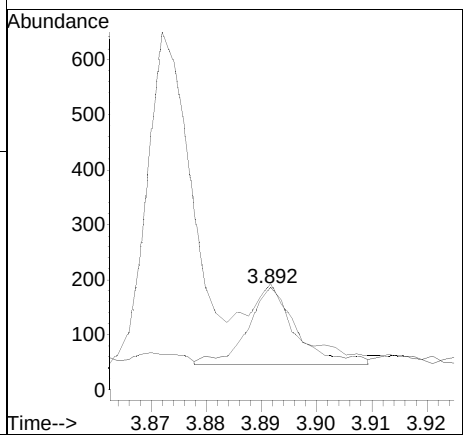


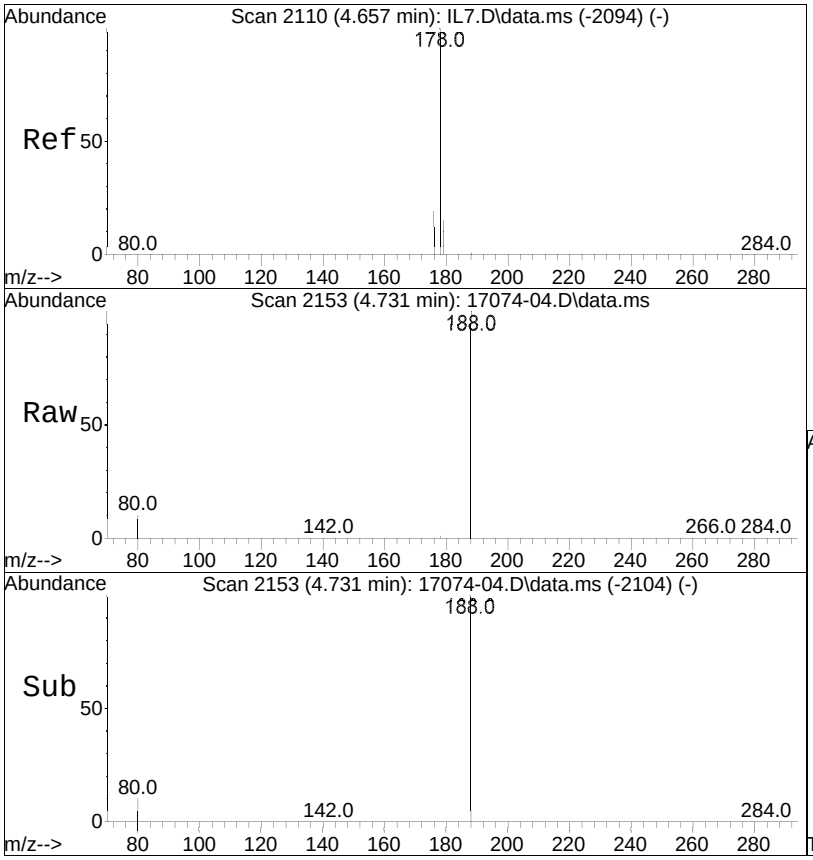


#18
Acenaphthene
Concen: 2.94 ng/ml M4
RT: 3.892 min Scan# 1692
Delta R.T. -0.004 min
Lab File: 17074-04.D
Acq: 04 Apr 2024 09:24 am

Tgt Ion:153 Resp: 84

Ion	Ratio	Lower	Upper
153	100		
154	98.8	66.9	100.3

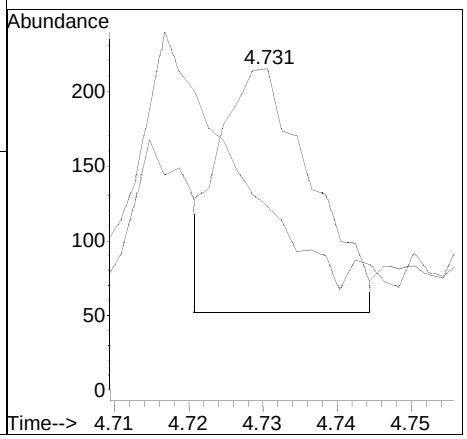




#26
Phenanthrene
Concen: 2.75 ng/ml M6
RT: 4.731 min Scan# 2153
Delta R.T. -0.004 min
Lab File: 17074-04.D
Acq: 04 Apr 2024 09:24 am

Tgt Ion:178 Resp: 141

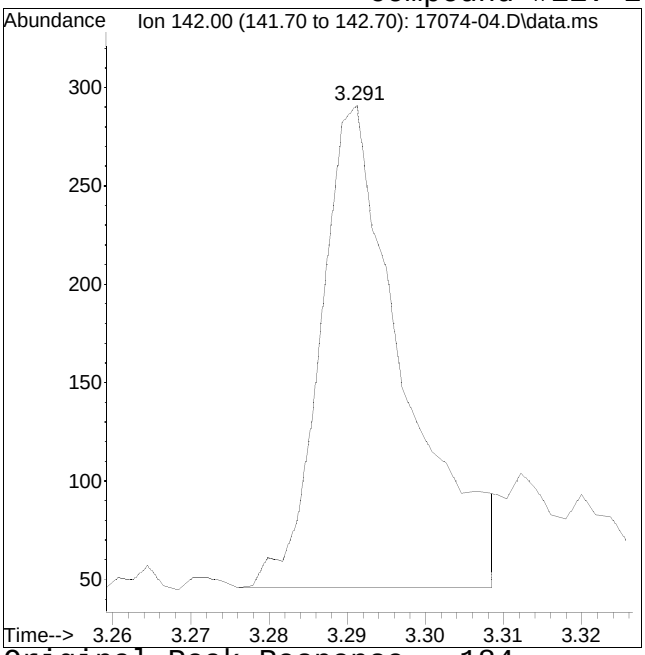
Ion	Ratio	Lower	Upper
178	100		
179	21.3	12.3	18.5#



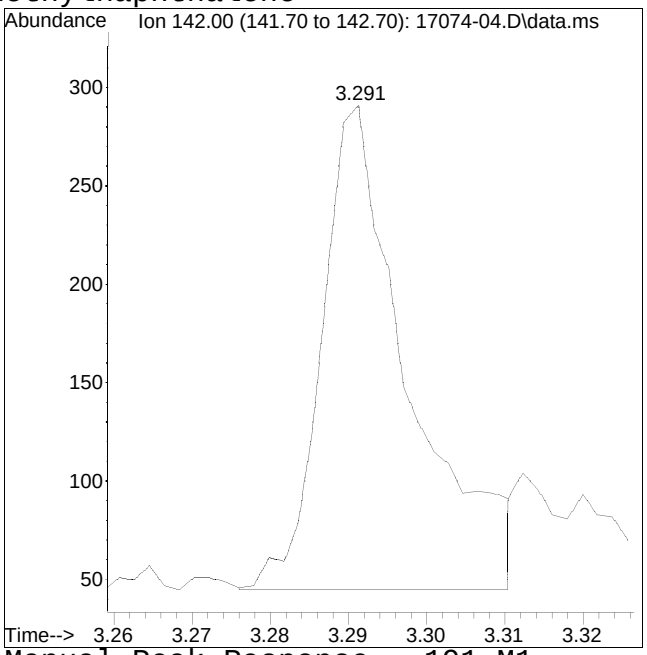
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-04.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:24 am Instrument : SV119
Sample : L2417074-04,32,,ah Quant Date : 4/4/2024 9:39 am

Compound #11: 2-Methylnaphthalene



Original Peak Response = 184



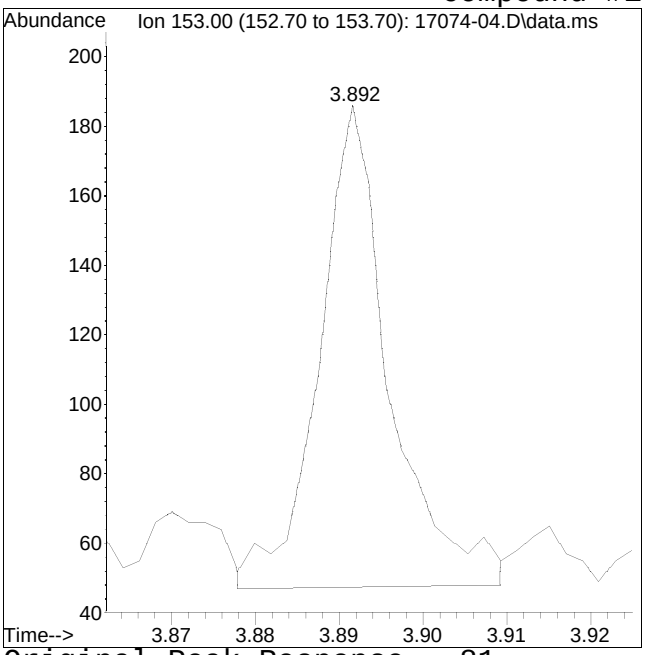
Manual Peak Response = 191 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

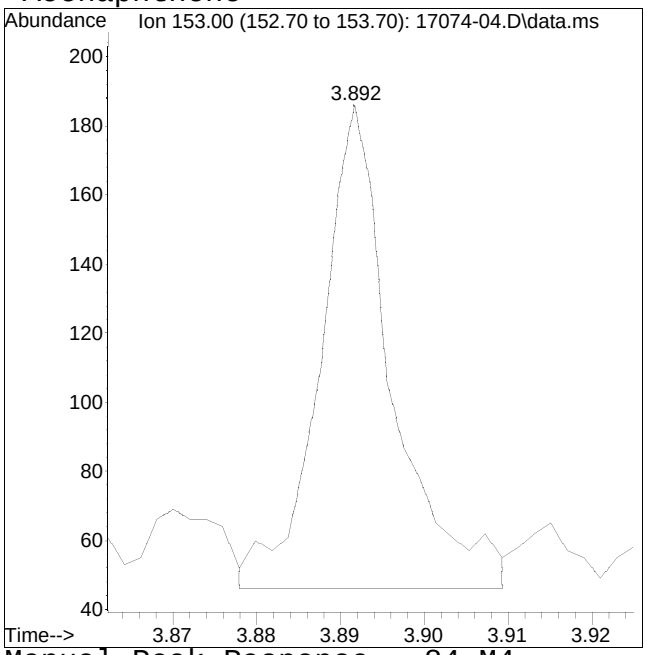
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-04.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:24 am Instrument : SV119
Sample : L2417074-04,32,,ah Quant Date : 4/4/2024 9:39 am

Compound #18: Acenaphthene



Original Peak Response = 81



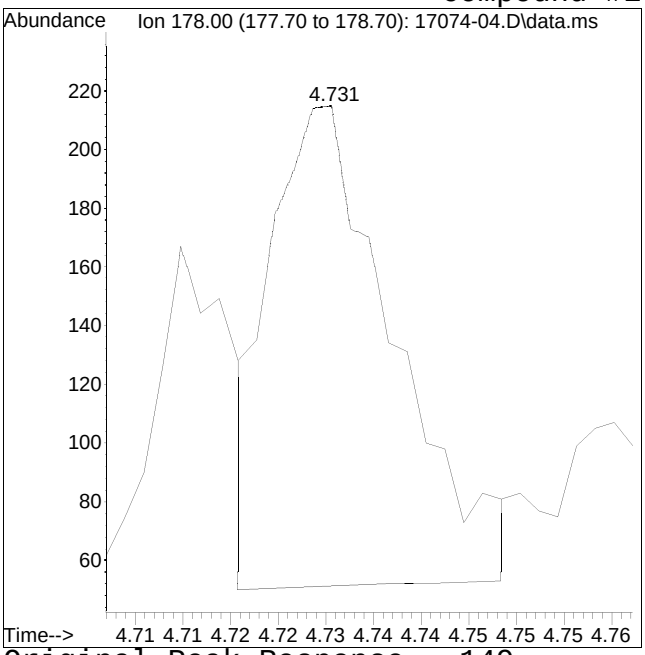
Manual Peak Response = 84 M4

M4 = Poor automated baseline construction.

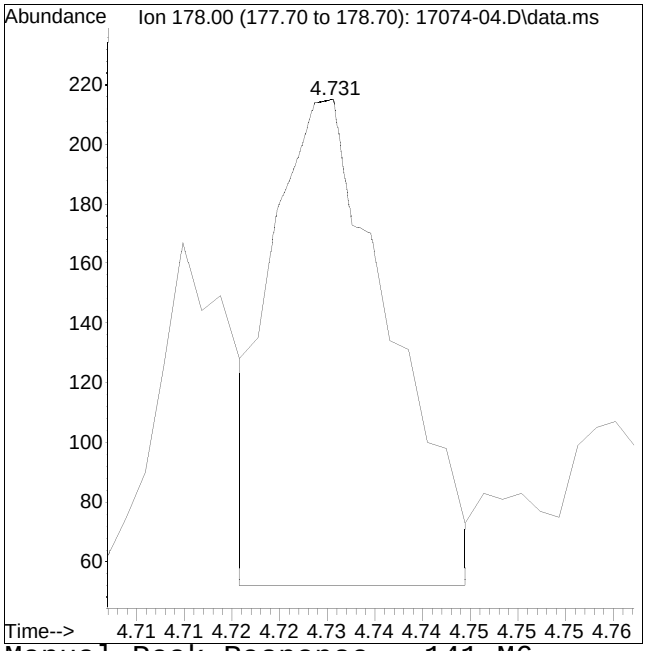
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-04.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:24 am Instrument : SV119
Sample : L2417074-04,32,,ah Quant Date : 4/4/2024 9:39 am

Compound #26: Phenanthrene



Original Peak Response = 149



Manual Peak Response = 141 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-05.D
Acq On : 04 Apr 2024 09:40 am
Operator : sv119:jjw
Sample : L2417074-05,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 04 10:59:11 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.234	152	53579	4000.000	ng/ml	0.00
Standard Area 1 = 63465			Recovery = 84.42%			
8) Naphthalene-d8	2.897	136	144860	4000.000	ng/ml	0.00
Standard Area 1 = 190169			Recovery = 76.17%			
17) Acenaphthene-d10	3.874	164	97015	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery = 88.00%			
22) Phenanthrene-d10	4.717	188	209773	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 85.72%			
31) Chrysene-d12	6.277	240	192099	4000.000	ng/ml	0.00
Standard Area 1 = 210122			Recovery = 91.42%			
36) Perylene-d12	7.484	264	198948	4000.000	ng/ml	0.00
Standard Area 1 = 221293			Recovery = 89.90%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.643	112	42068	2870.605	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 57.41%			
3) Phenol-d6	2.055	99	40092	2282.292	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 45.65%			
7) Nitrobenzene-d5	2.514	82	25833	1938.693	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 77.55%			
13) 2-Fluorobiphenyl	3.496	172	70554	2180.767	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 87.23%			
21) 2,4,6-Tribromophenol	4.323	330	27534	5147.897	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 102.96%			
30) 4-Terphenyl-d14	5.638	244	80982	1574.759	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 62.99%			
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.909	128	925	26.742	ng/ml#	96
10) Hexachlorobutadiene	0.000		0	N.D.	d	
11) 2-Methylnaphthalene	3.291	142	120	4.692	ng/ml	84
14) 2-Chloronaphthalene	0.000		0	N.D.	d	
16) Acenaphthylene	0.000		0	N.D.	d	
18) Acenaphthene	0.000		0	N.D.	d	
20) Fluorene	4.185	166	105	2.929	ng/ml	94
24) Hexachlorobenzene	0.000		0	N.D.	d	
25) Pentachlorophenol	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-05.D
Acq On : 04 Apr 2024 09:40 am
Operator : sv119:jjw
Sample : L2417074-05,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 04 10:59:11 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.729	178	260M1	4.879	ng/ml	
27) Anthracene	4.760	178	93	1.760	ng/ml#	83
28) Fluoranthene	5.414	202	179	2.549	ng/ml	96
29) Pyrene	5.545	202	151M4	2.093	ng/ml	
32) Benzo[a]anthracene	0.000		0	N.D.	d	
34) Chrysene	0.000		0	N.D.	d	
37) Benzo[b]fluoranthene	0.000		0	N.D.	d	
38) Benzo[k]fluoranthene	0.000		0	N.D.	d	
39) Benzo[a]pyrene	0.000		0	N.D.	d	
40) Indeno[1,2,3-cd]pyrene	0.000		0	N.D.	d	
41) Dibenzo[a,h]anthracene	0.000		0	N.D.	d	
42) Benzo[g,h,i]perylene	0.000		0	N.D.	d	

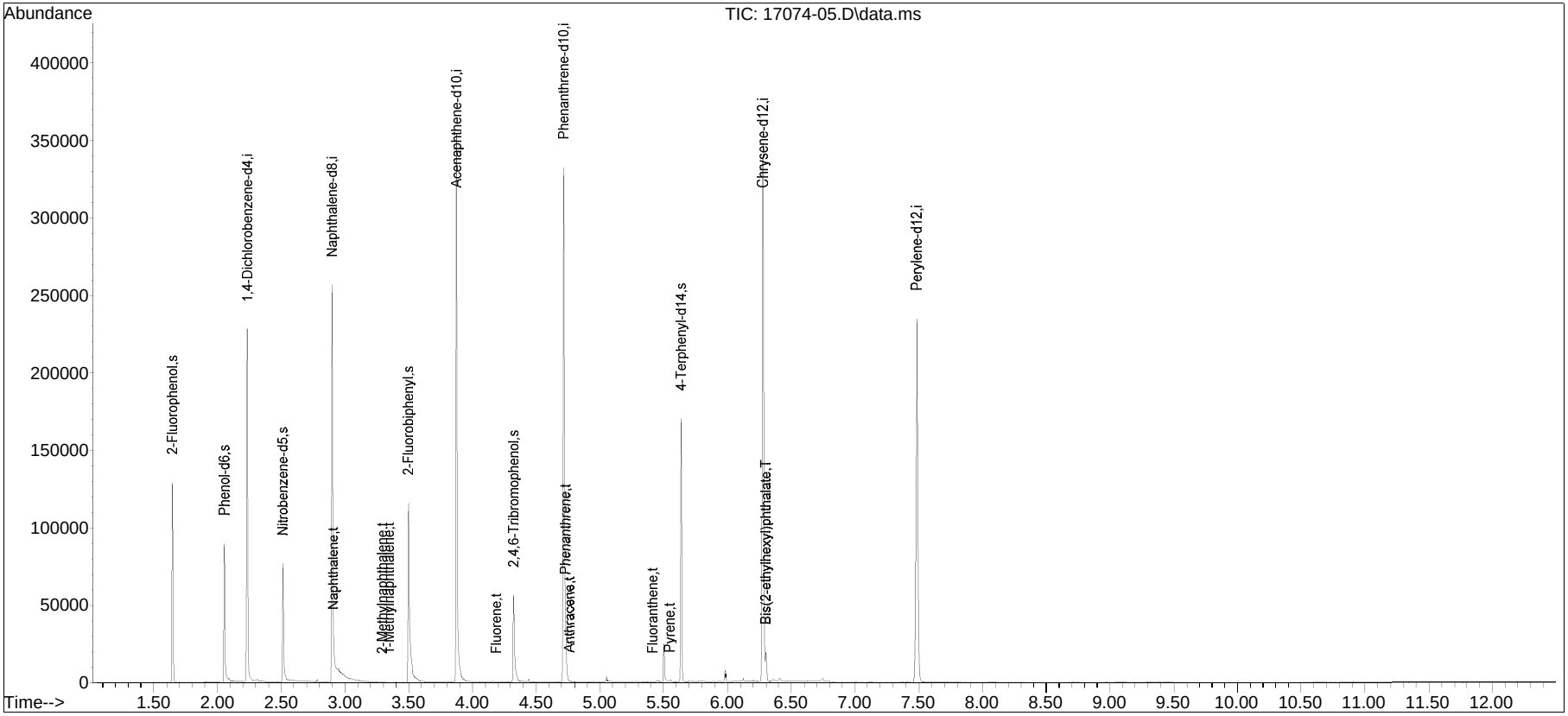
(#) = qualifier out of range (m) = manual integration (+) = signals summed

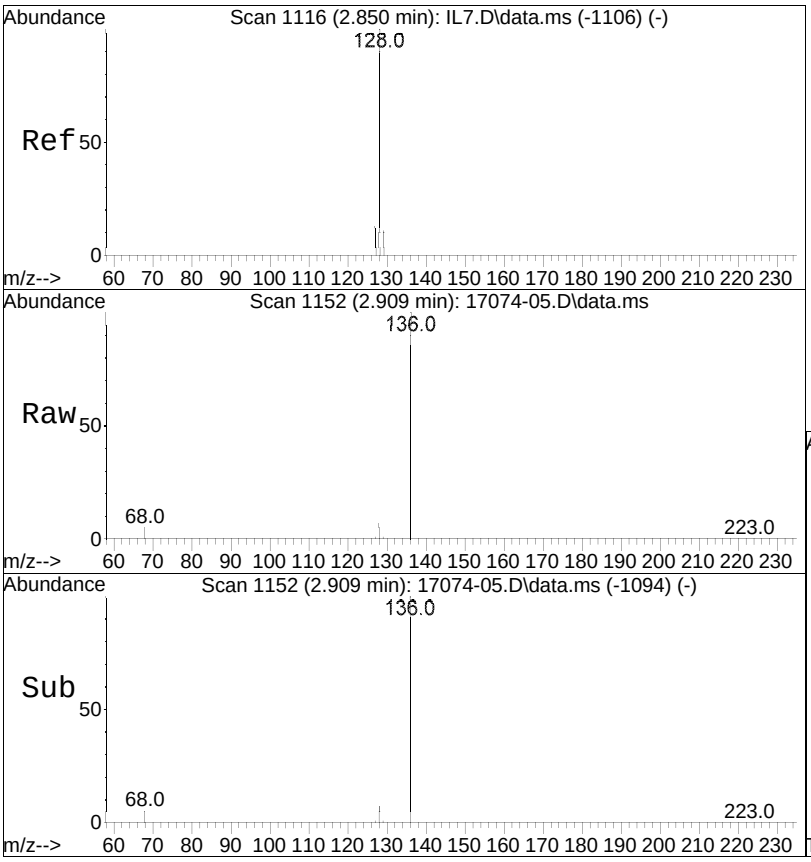
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-05.D
Acq On : 04 Apr 2024 09:40 am
Operator : sv119:jjw
Sample : L2417074-05,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 04 10:59:11 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

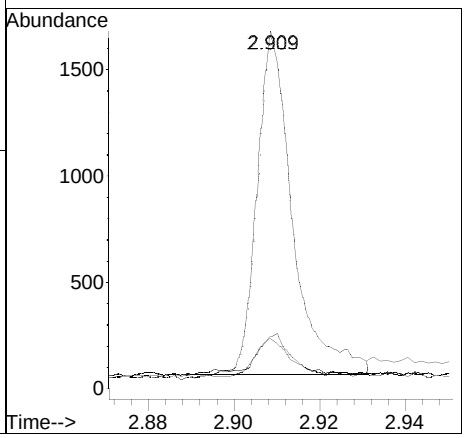


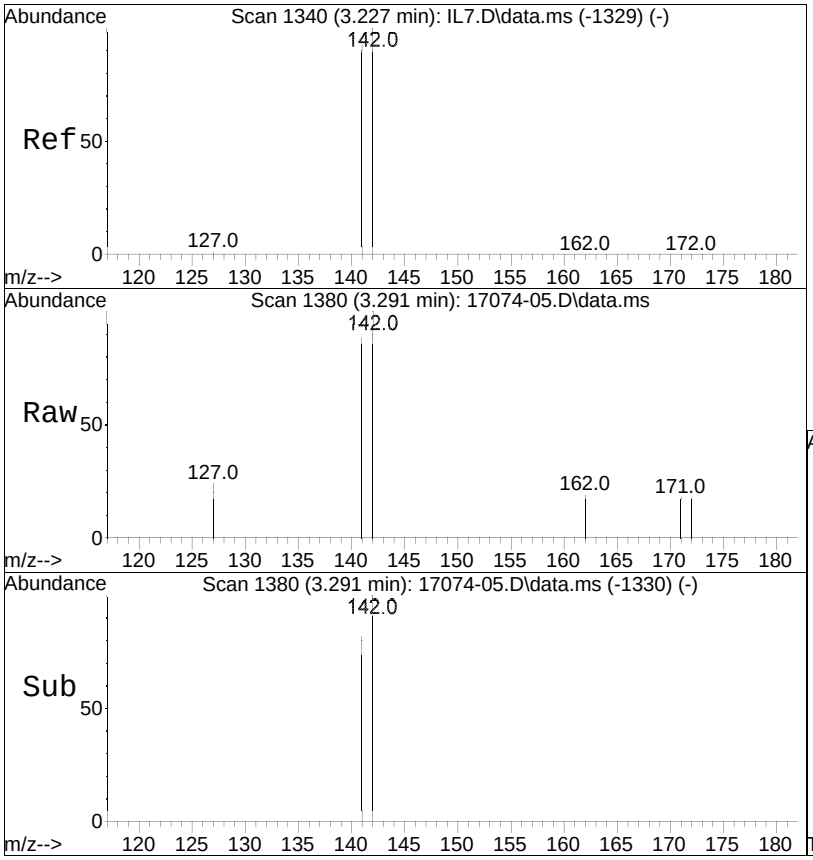


#9
Naphthalene
Concen: 26.74 ng/ml
RT: 2.909 min Scan# 1152
Delta R.T. -0.006 min
Lab File: 17074-05.D
Acq: 04 Apr 2024 09:40 am

Tgt Ion:128 Resp: 925

Ion	Ratio	Lower	Upper
128	100		
129	13.5	8.8	13.2#
127	12.6	10.6	15.8

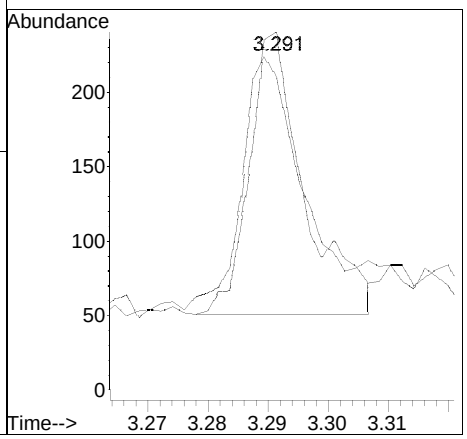


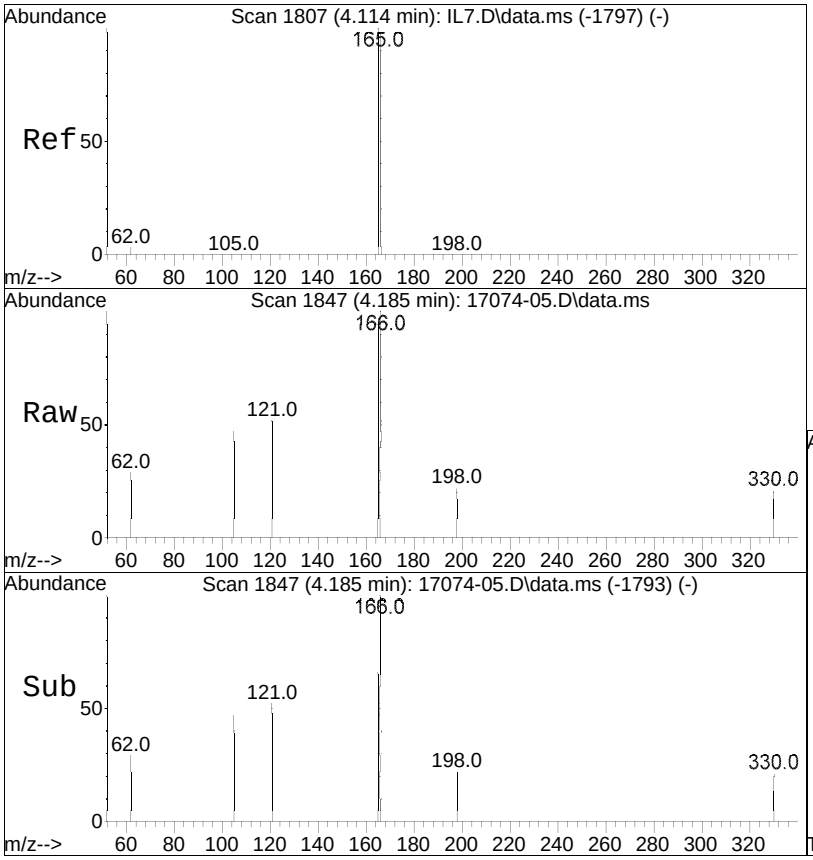


#11
2-Methylnaphthalene
Concen: 4.69 ng/ml
RT: 3.291 min Scan# 1380
Delta R.T. -0.004 min
Lab File: 17074-05.D
Acq: 04 Apr 2024 09:40 am

Tgt Ion:142 Resp: 120

Ion	Ratio	Lower	Upper
142	100		
141	108.3	74.1	111.1

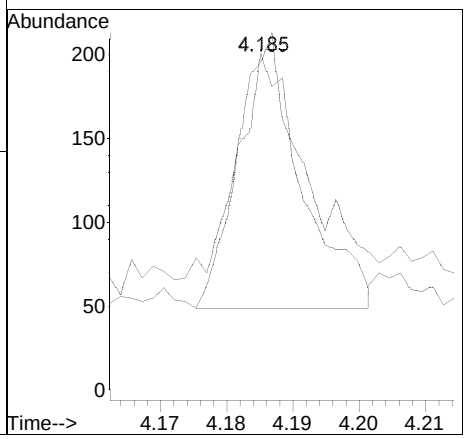


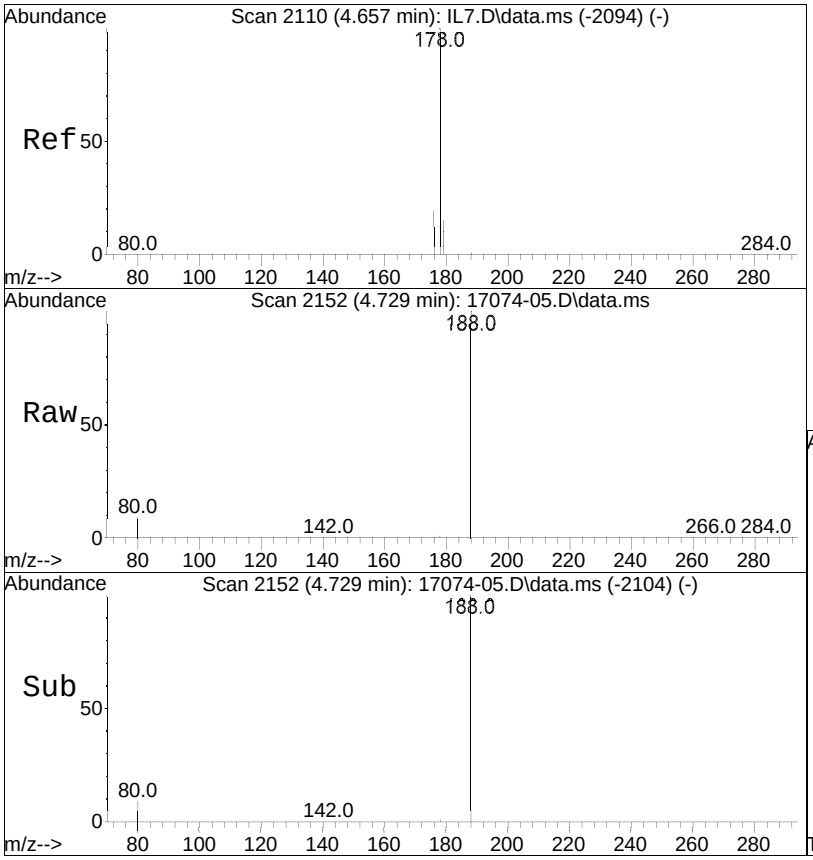


#20
Fluorene
Concen: 2.93 ng/ml
RT: 4.185 min Scan# 1847
Delta R.T. -0.005 min
Lab File: 17074-05.D
Acq: 04 Apr 2024 09:40 am

Tgt Ion:166 Resp: 105

Ion	Ratio	Lower	Upper
166	100		
165	109.5	82.9	124.3

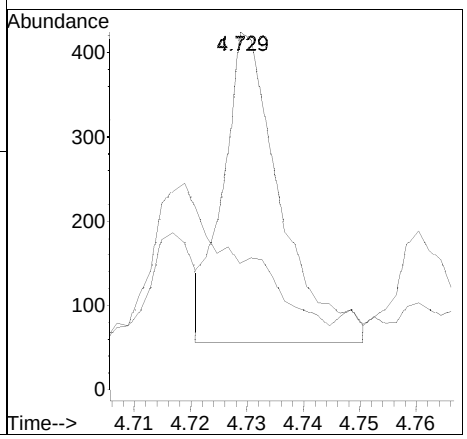


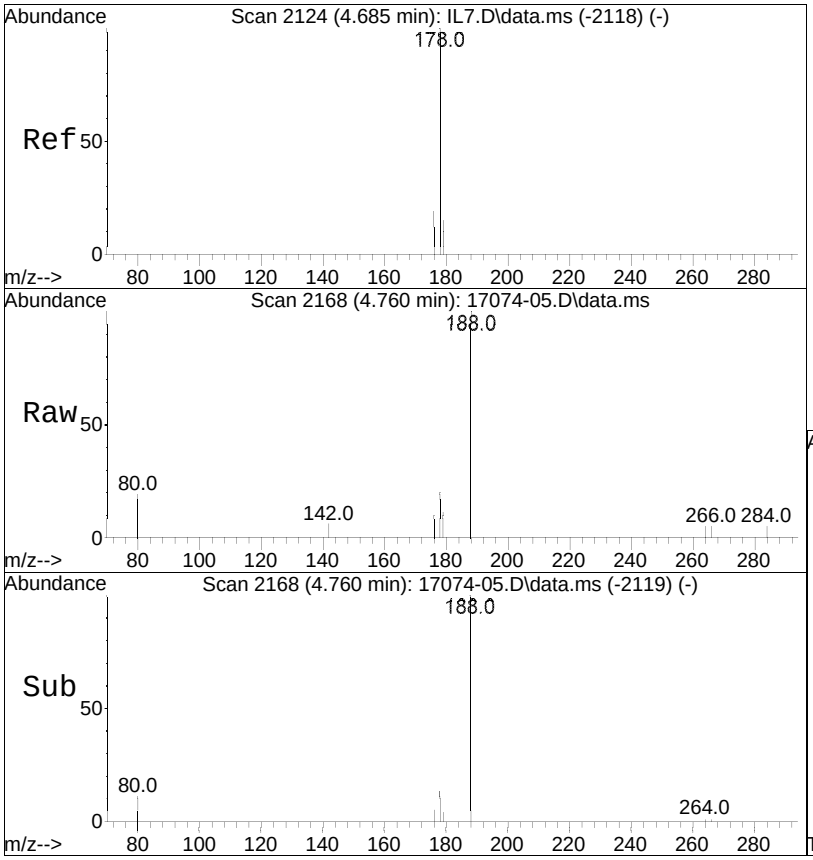


#26
Phenanthrene
Concen: 4.88 ng/ml M1
RT: 4.729 min Scan# 2152
Delta R.T. -0.006 min
Lab File: 17074-05.D
Acq: 04 Apr 2024 09:40 am

Tgt Ion:178 Resp: 260

Ion	Ratio	Lower	Upper
178	100		
179	18.8	12.3	18.5#

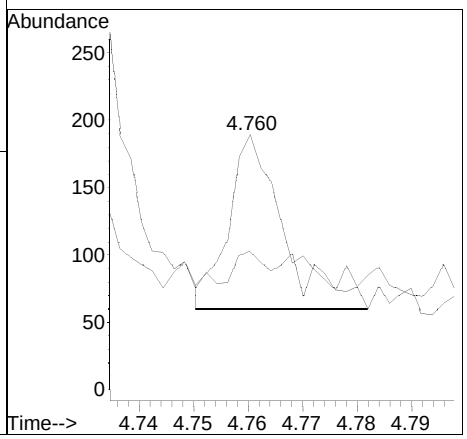


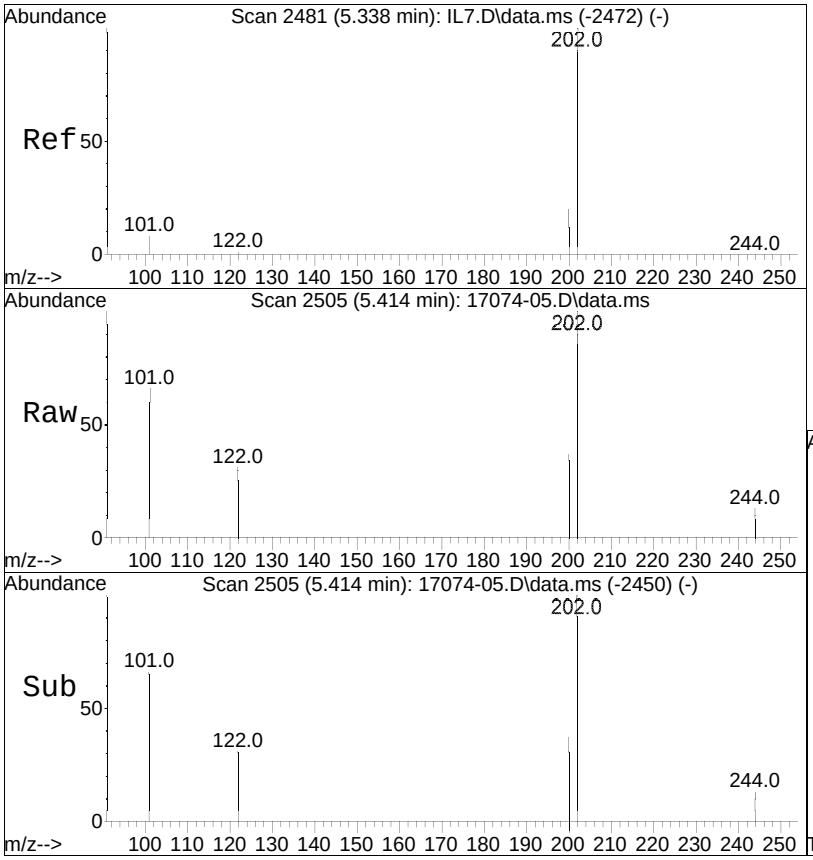


#27
Anthracene
Concen: 1.76 ng/ml
RT: 4.760 min Scan# 2168
Delta R.T. -0.004 min
Lab File: 17074-05.D
Acq: 04 Apr 2024 09:40 am

Tgt Ion:178 Resp: 93

Ion	Ratio	Lower	Upper
178	100		
179	22.6	12.2	18.4#

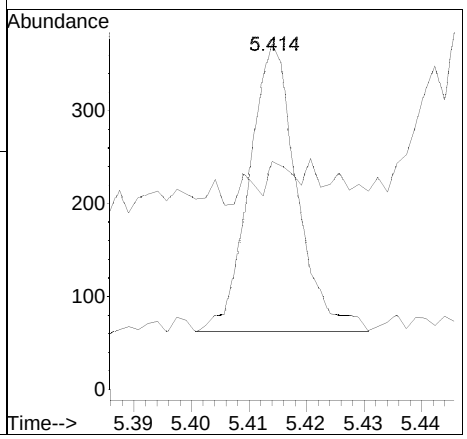


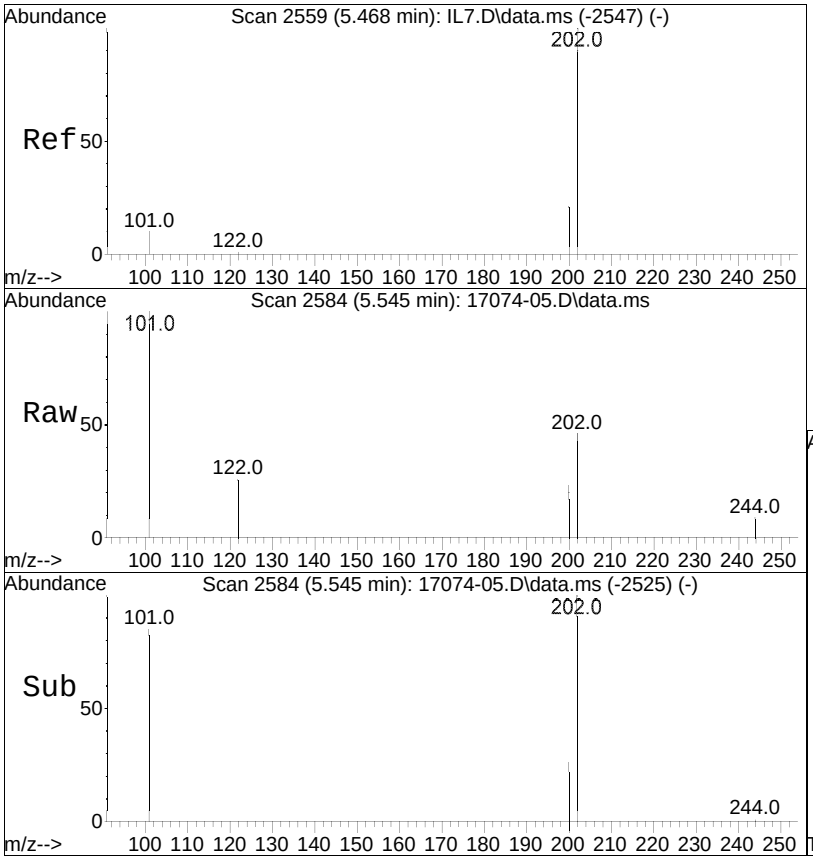


#28
Fluoranthene
Concen: 2.55 ng/ml
RT: 5.414 min Scan# 2505
Delta R.T. -0.003 min
Lab File: 17074-05.D
Acq: 04 Apr 2024 09:40 am

Tgt Ion:202 Resp: 179

Ion	Ratio	Lower	Upper
202	100		
101	11.7	8.3	12.5

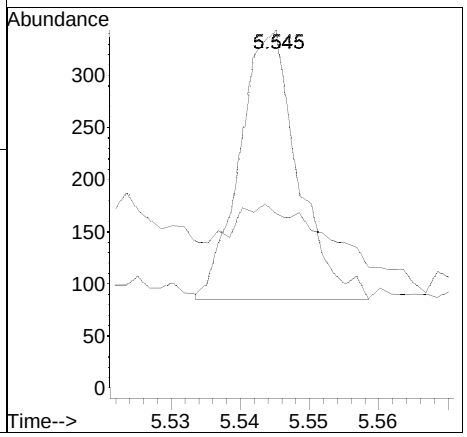




#29
Pyrene
Concen: 2.09 ng/ml M4
RT: 5.545 min Scan# 2584
Delta R.T. -0.002 min
Lab File: 17074-05.D
Acq: 04 Apr 2024 09:40 am

Tgt Ion:202 Resp: 151

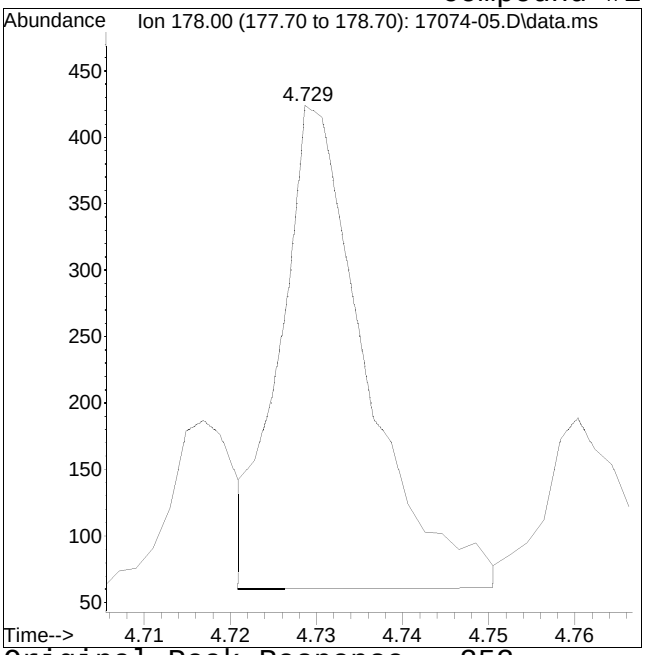
Ion	Ratio	Lower	Upper
202	100		
200	33.8	17.3	25.9#



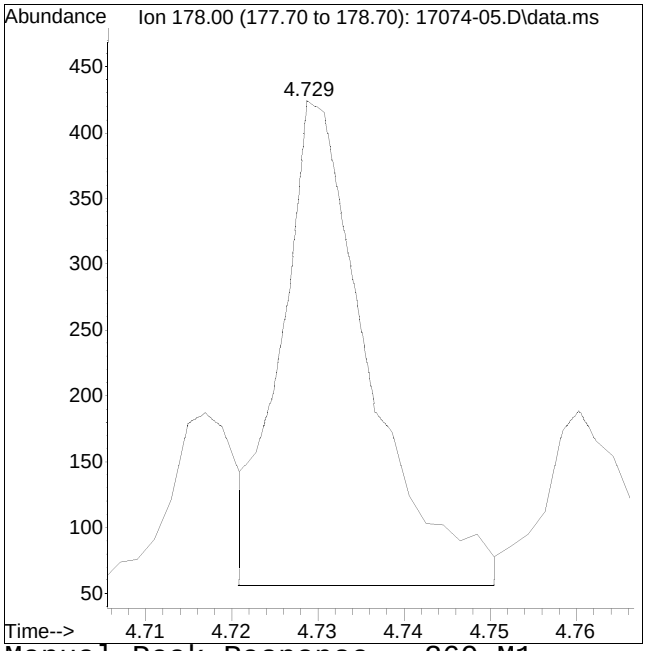
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-05.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:40 am Instrument : SV119
Sample : L2417074-05,32,,ah Quant Date : 4/4/2024 9:56 am

Compound #26: Phenanthrene



Original Peak Response = 252



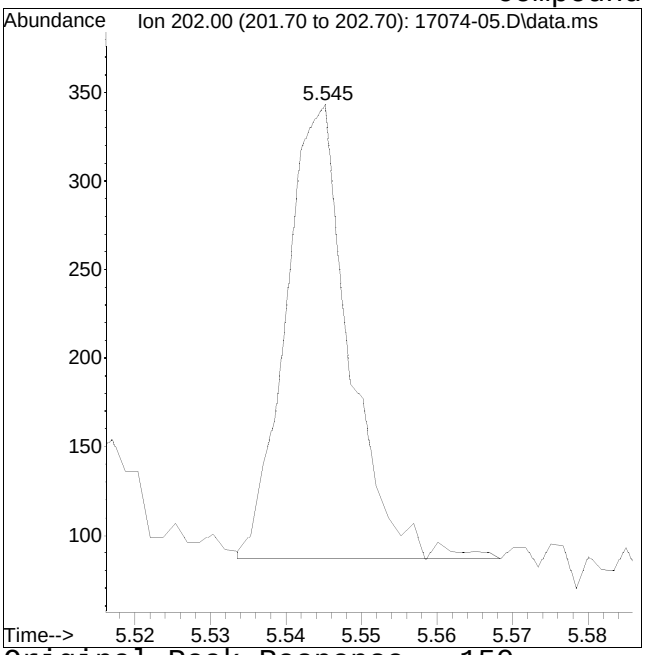
Manual Peak Response = 260 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

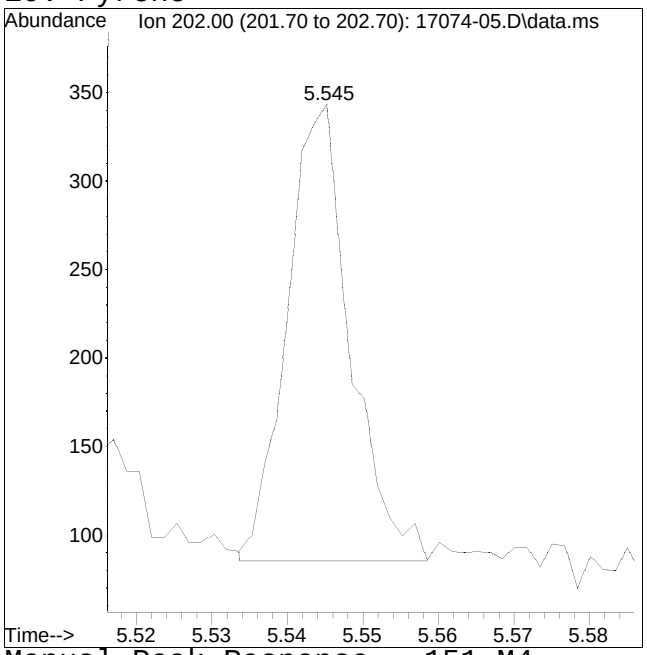
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-05.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:40 am Instrument : SV119
Sample : L2417074-05,32,,ah Quant Date : 4/4/2024 9:56 am

Compound #29: Pyrene



Original Peak Response = 150



Manual Peak Response = 151 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-06.D
Acq On : 04 Apr 2024 09:57 am
Operator : sv119:jjw
Sample : L2417074-06,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 04 11:01:57 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.234	152	55404	4000.000	ng/ml	0.00
Standard Area 1 = 63465			Recovery =	87.30%		
8) Naphthalene-d8	2.899	136	152894	4000.000	ng/ml	0.00
Standard Area 1 = 190169			Recovery =	80.40%		
17) Acenaphthene-d10	3.874	164	101035	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery =	91.65%		
22) Phenanthrene-d10	4.717	188	217413	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery =	88.84%		
31) Chrysene-d12	6.281	240	198932	4000.000	ng/ml	0.00
Standard Area 1 = 210122			Recovery =	94.67%		
36) Perylene-d12	7.486	264	204119	4000.000	ng/ml	0.00
Standard Area 1 = 221293			Recovery =	92.24%		
System Monitoring Compounds						
2) 2-Fluorophenol	1.645	112	44769	2954.286	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery =	59.09%		
3) Phenol-d6	2.058	99	44374	2442.843	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery =	48.86%		
7) Nitrobenzene-d5	2.514	82	29177	2117.524	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery =	84.70%		
13) 2-Fluorobiphenyl	3.496	172	75912	2223.085	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery =	88.92%		
21) 2,4,6-Tribromophenol	4.325	330	22012	3951.728	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery =	79.03%		
30) 4-Terphenyl-d14	5.640	244	81903	1536.702	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery =	61.47%		
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.910	128	206M4	5.643	ng/ml	
10) Hexachlorobutadiene	0.000		0	N.D.		
11) 2-Methylnaphthalene	3.289	142	79	2.927	ng/ml	96
14) 2-Chloronaphthalene	3.561	162	60M6	2.087	ng/ml	
16) Acenaphthylene	3.794	152	86	2.013	ng/ml#	85
18) Acenaphthene	3.892	153	93M6	2.977	ng/ml	
20) Fluorene	4.187	166	151M4	4.044	ng/ml	
24) Hexachlorobenzene	4.504	284	42	2.988	ng/ml#	80
25) Pentachlorophenol	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-06.D
Acq On : 04 Apr 2024 09:57 am
Operator : sv119:jjw
Sample : L2417074-06,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 04 11:01:57 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.731	178	309M1	5.595	ng/ml	
27) Anthracene	4.762	178	200M6	3.652	ng/ml	
28) Fluoranthene	5.416	202	324	4.451	ng/ml	97
29) Pyrene	5.545	202	309M1	4.132	ng/ml	
32) Benzo[a]anthracene	6.281	228	808	1.517	ng/ml#	68
34) Chrysene	6.298	228	217	3.305	ng/ml	94
37) Benzo[b]fluoranthene	7.118	252	242	3.394	ng/ml#	90
38) Benzo[k]fluoranthene	7.143	252	177M4	2.614	ng/ml	
39) Benzo[a]pyrene	7.427	252	162	2.581	ng/ml#	72
40) Indeno[1,2,3-cd]pyrene	0.000		0	N.D.	d	
41) Dibenzo[a,h]anthracene	0.000		0	N.D.	d	
42) Benzo[g,h,i]perylene	0.000		0	N.D.	d	

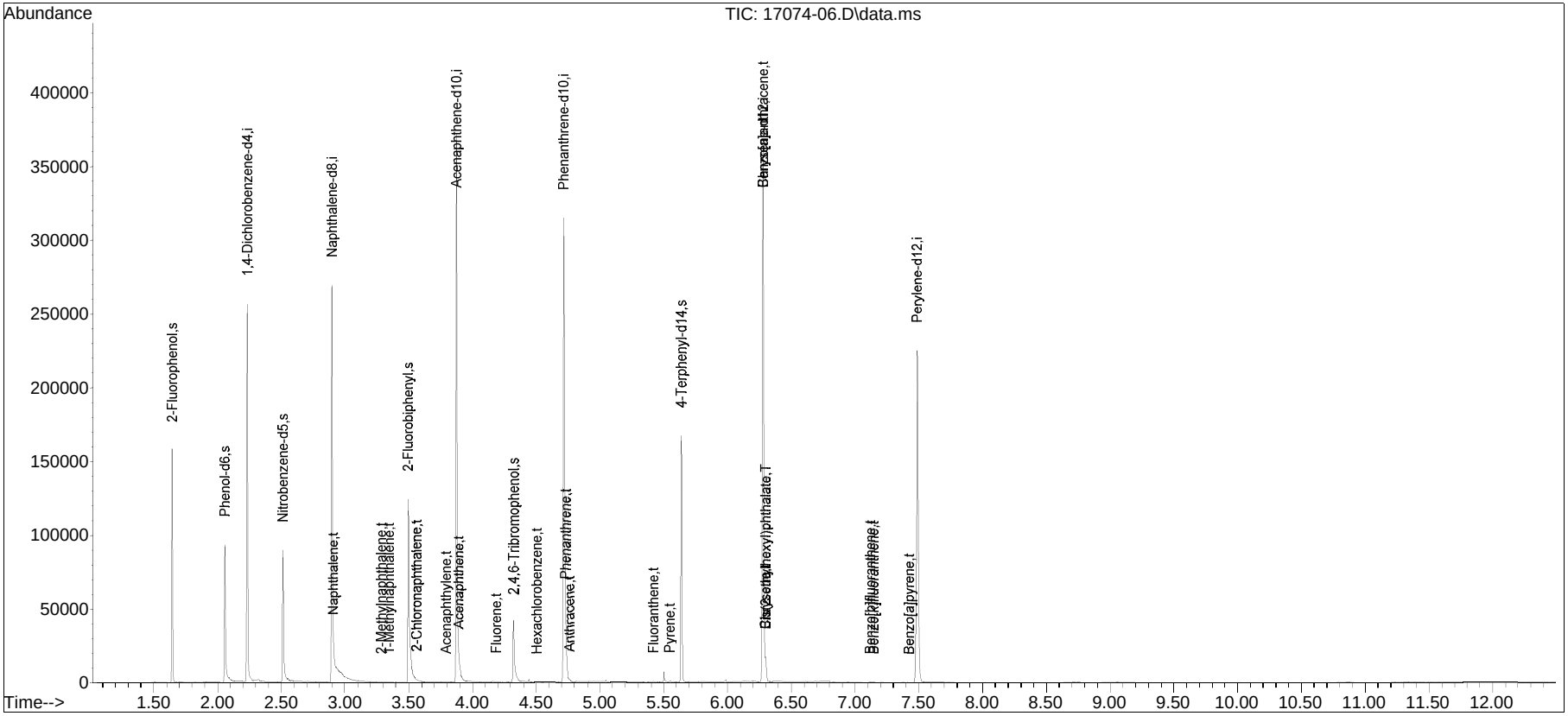
(#) = qualifier out of range (m) = manual integration (+) = signals summed

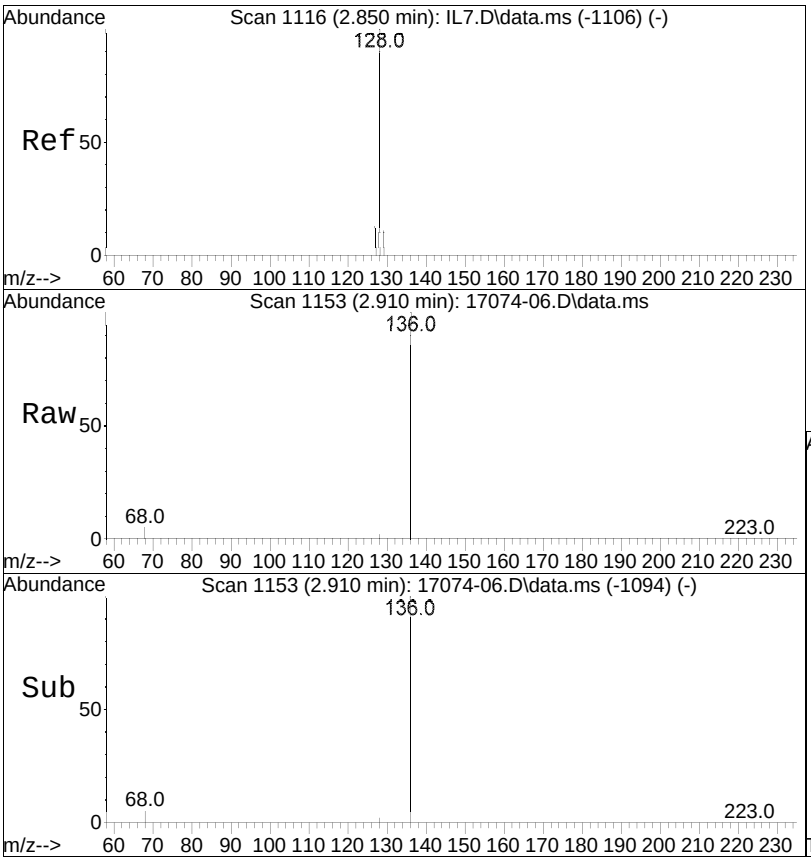
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-06.D
Acq On : 04 Apr 2024 09:57 am
Operator : sv119:jjw
Sample : L2417074-06,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 04 11:01:57 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

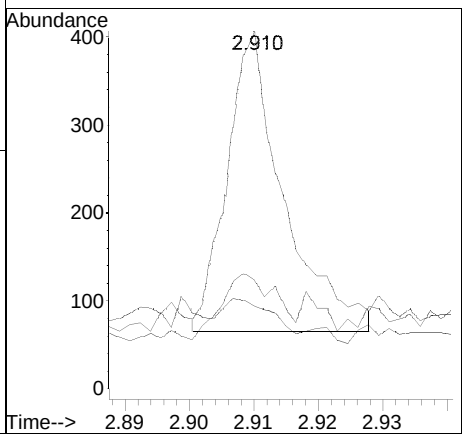


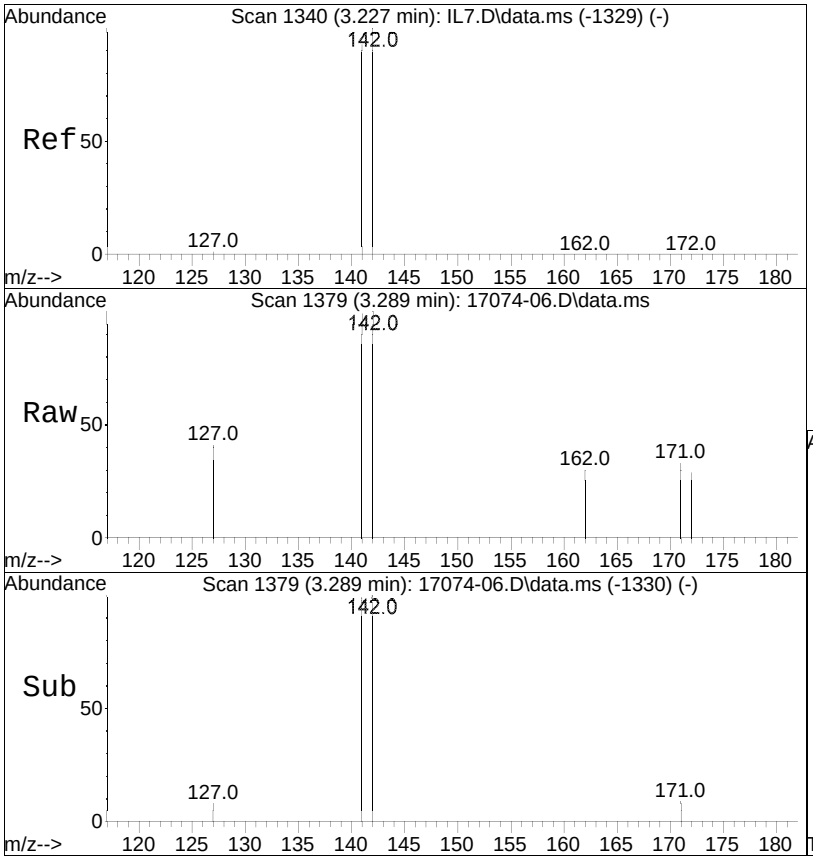


#9
Naphthalene
Concen: 5.64 ng/ml M4
RT: 2.910 min Scan# 1153
Delta R.T. -0.005 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:128 Resp: 206

Ion	Ratio	Lower	Upper
128	100		
129	9.7	8.8	13.2
127	21.4	10.6	15.8#

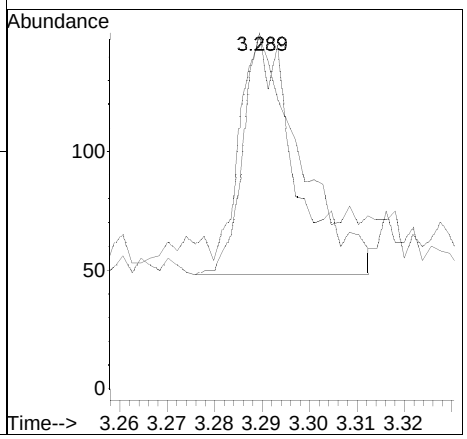


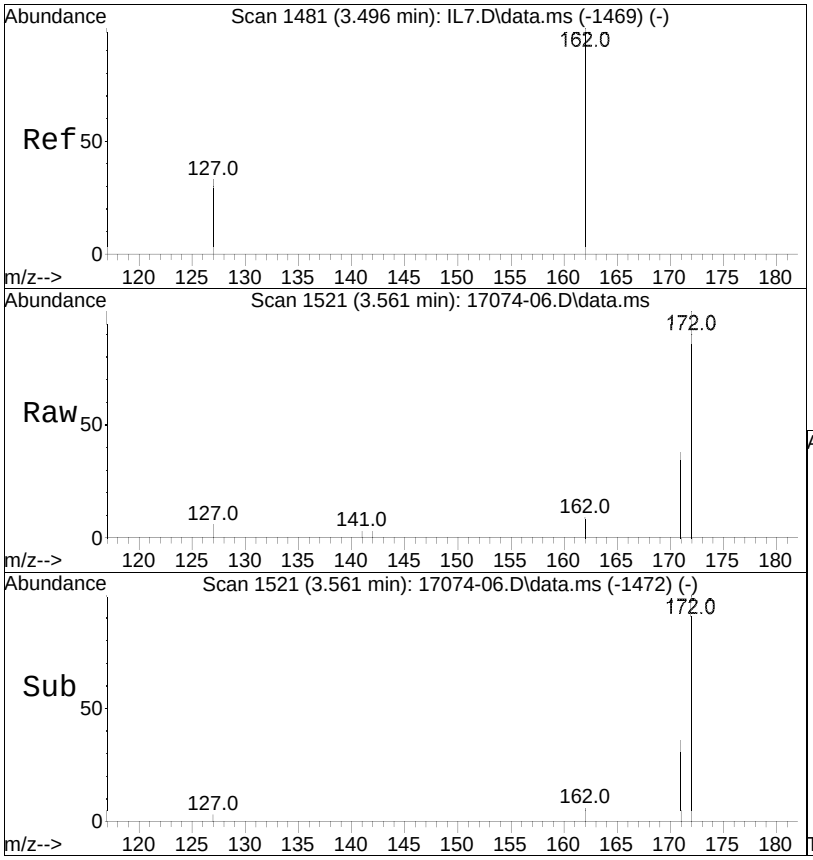


#11
2-Methylnaphthalene
Concen: 2.93 ng/ml
RT: 3.289 min Scan# 1379
Delta R.T. -0.006 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:142 Resp: 79

Ion	Ratio	Lower	Upper
142	100		
141	96.2	74.1	111.1

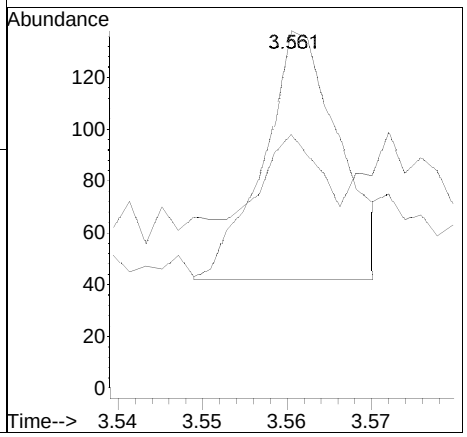


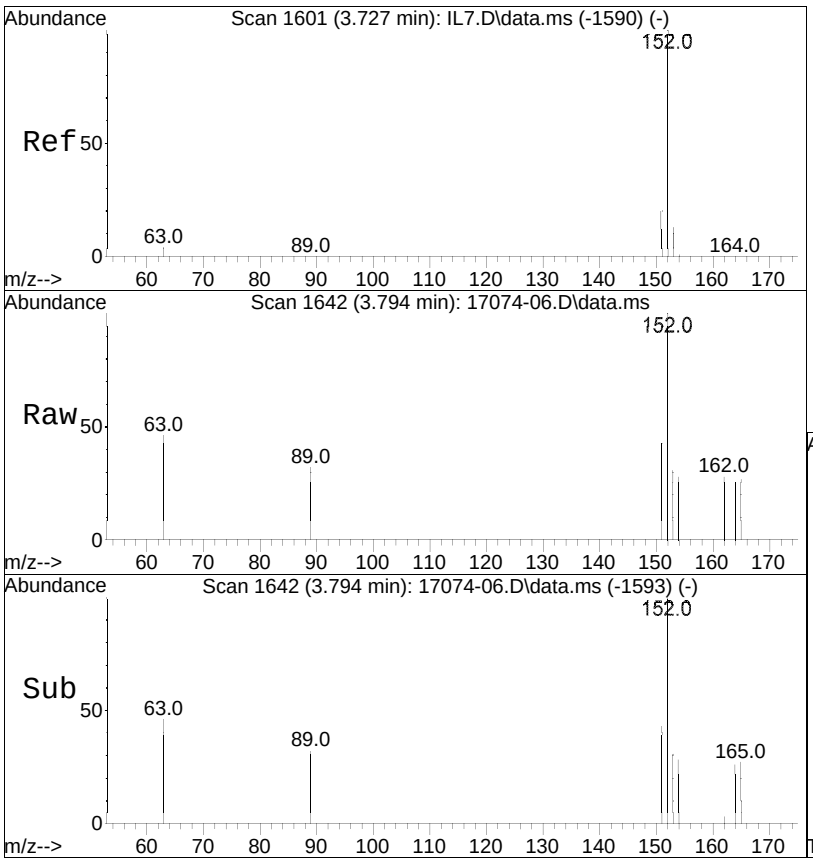


#14
2-Chloronaphthalene
Concen: 2.09 ng/ml M6
RT: 3.561 min Scan# 1521
Delta R.T. -0.006 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:162 Resp: 60

Ion	Ratio	Lower	Upper
162	100		
127	33.3	29.7	44.5

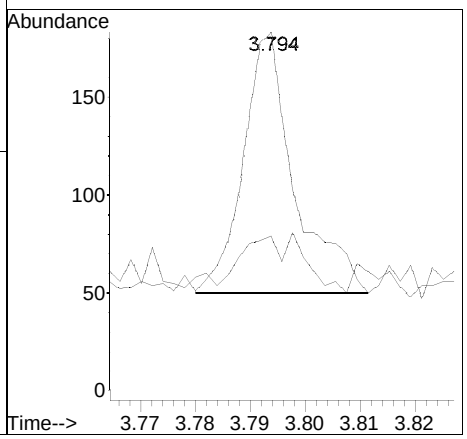


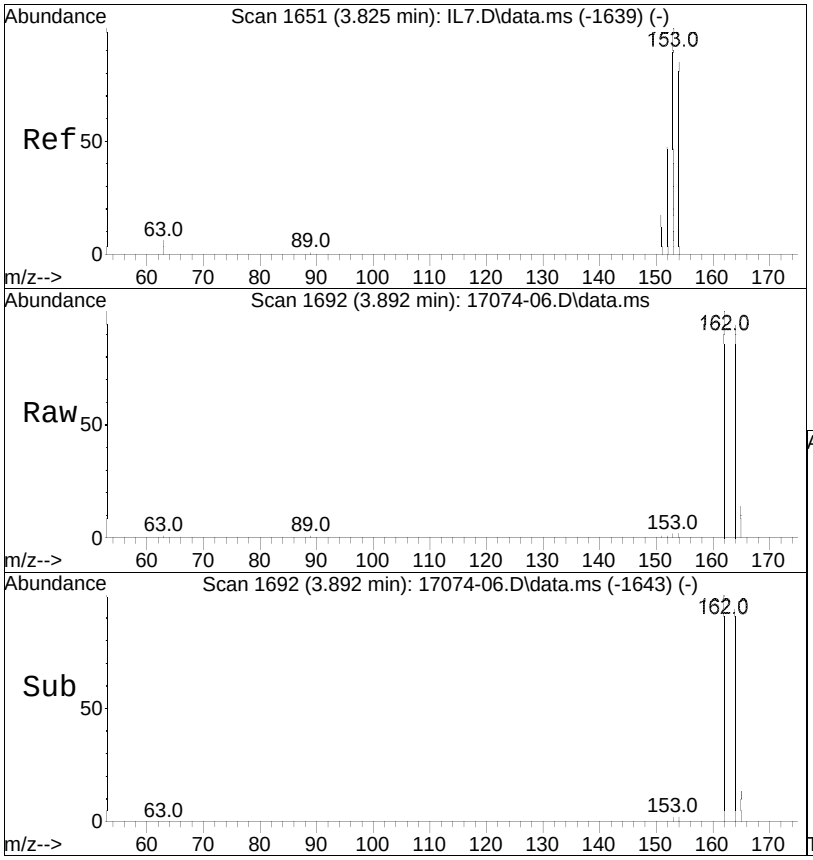


#16
Acenaphthylene
Concen: 2.01 ng/ml
RT: 3.794 min Scan# 1642
Delta R.T. -0.004 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:152 Resp: 86

Ion	Ratio	Lower	Upper
152	100		
151	26.7	16.0	24.0#

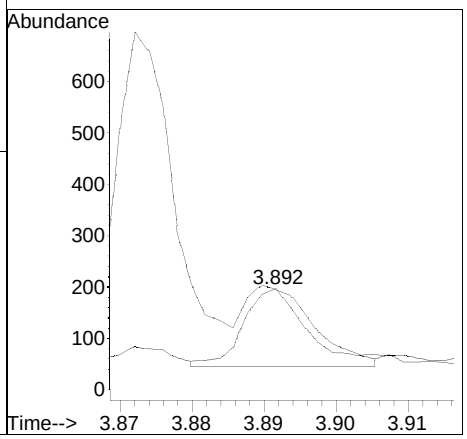


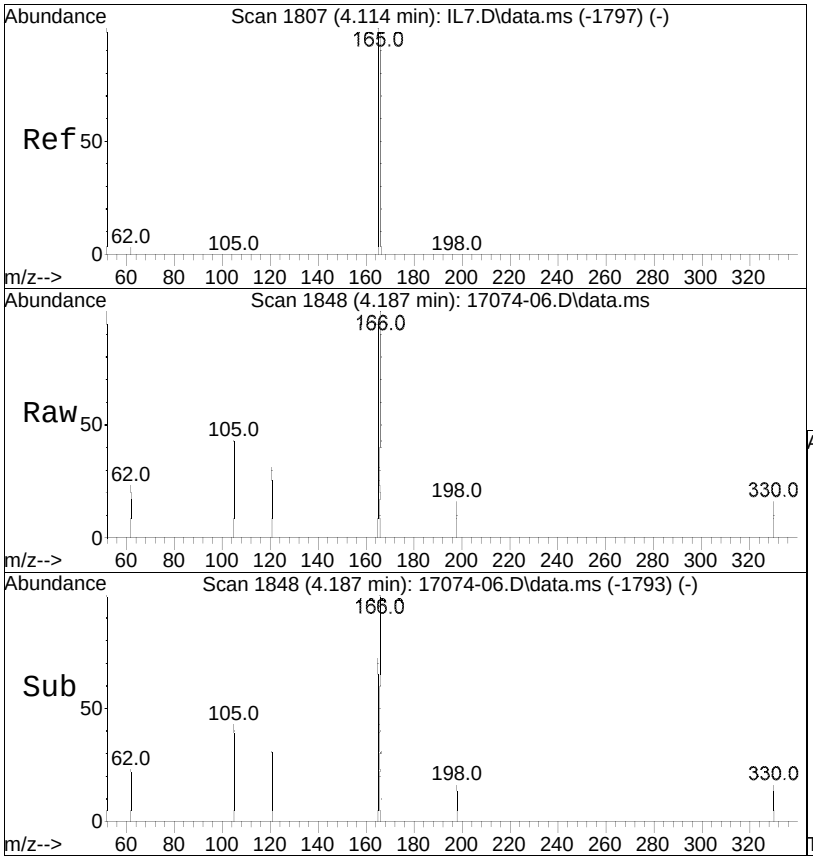


#18
Acenaphthene
Concen: 2.98 ng/ml M6
RT: 3.892 min Scan# 1692
Delta R.T. -0.004 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:153 Resp: 93

Ion	Ratio	Lower	Upper
153	100		
154	103.2	66.9	100.3#

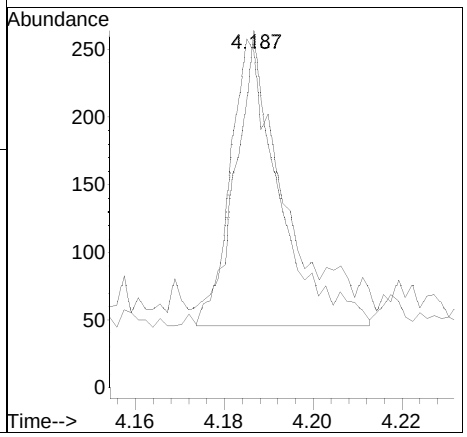


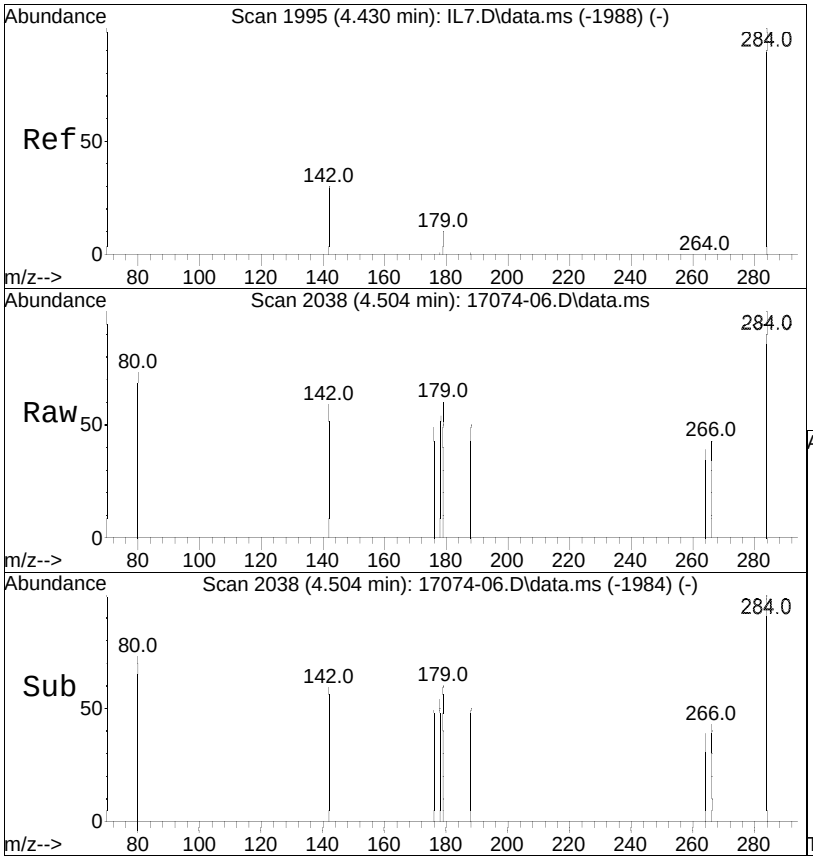


#20
Fluorene
Concen: 4.04 ng/ml M4
RT: 4.187 min Scan# 1848
Delta R.T. -0.003 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:166 Resp: 151

Ion	Ratio	Lower	Upper
166	100		
165	94.0	82.9	124.3

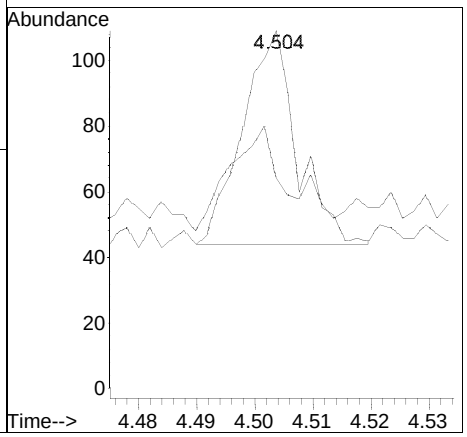


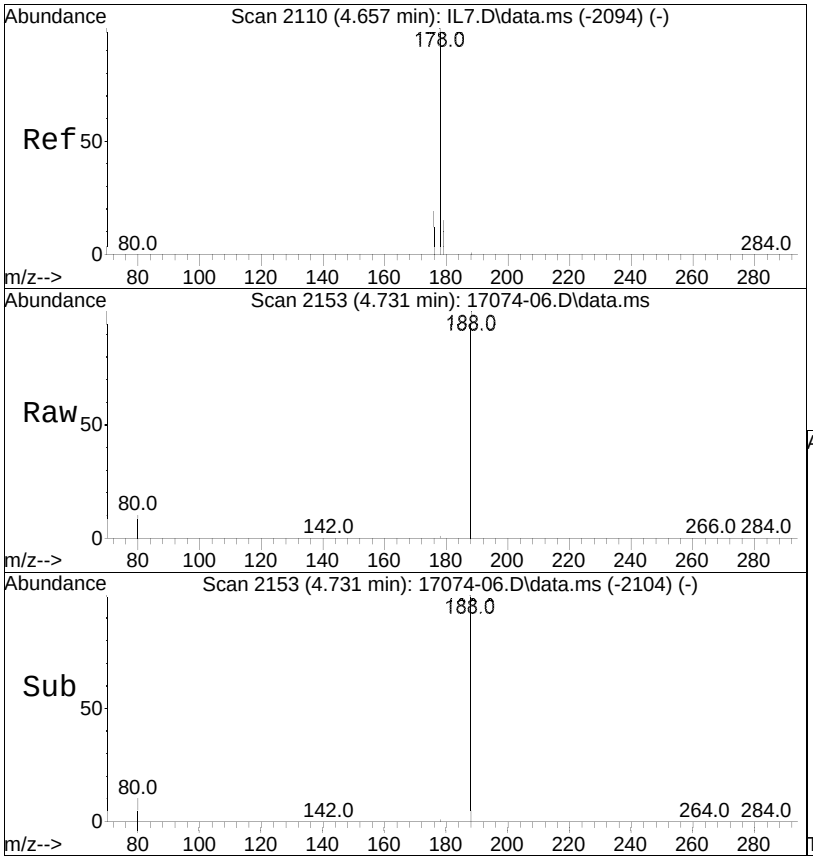


#24
Hexachlorobenzene
Concen: 2.99 ng/ml
RT: 4.504 min Scan# 2038
Delta R.T. -0.002 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:284 Resp: 42

Ion	Ratio	Lower	Upper
284	100		
142	45.2	26.9	40.3#

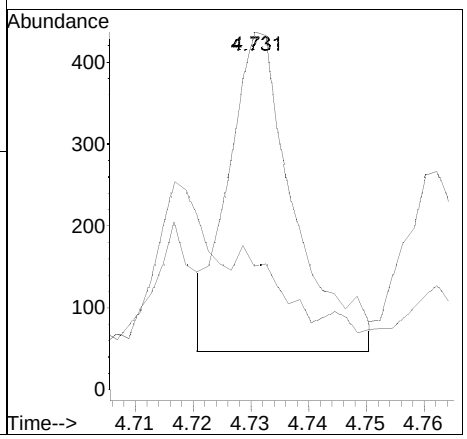


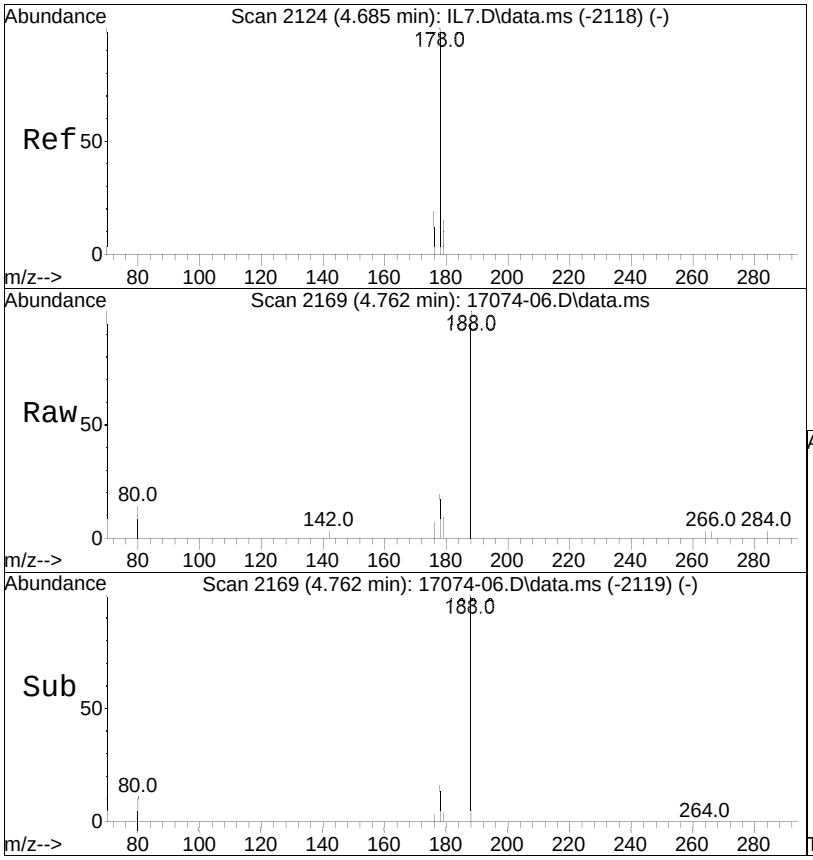


#26
Phenanthrene
Concen: 5.60 ng/ml M1
RT: 4.731 min Scan# 2153
Delta R.T. -0.004 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:178 Resp: 309

Ion	Ratio	Lower	Upper
178	100		
179	20.7	12.3	18.5#

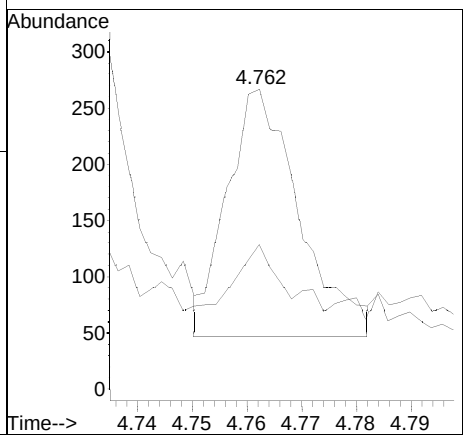


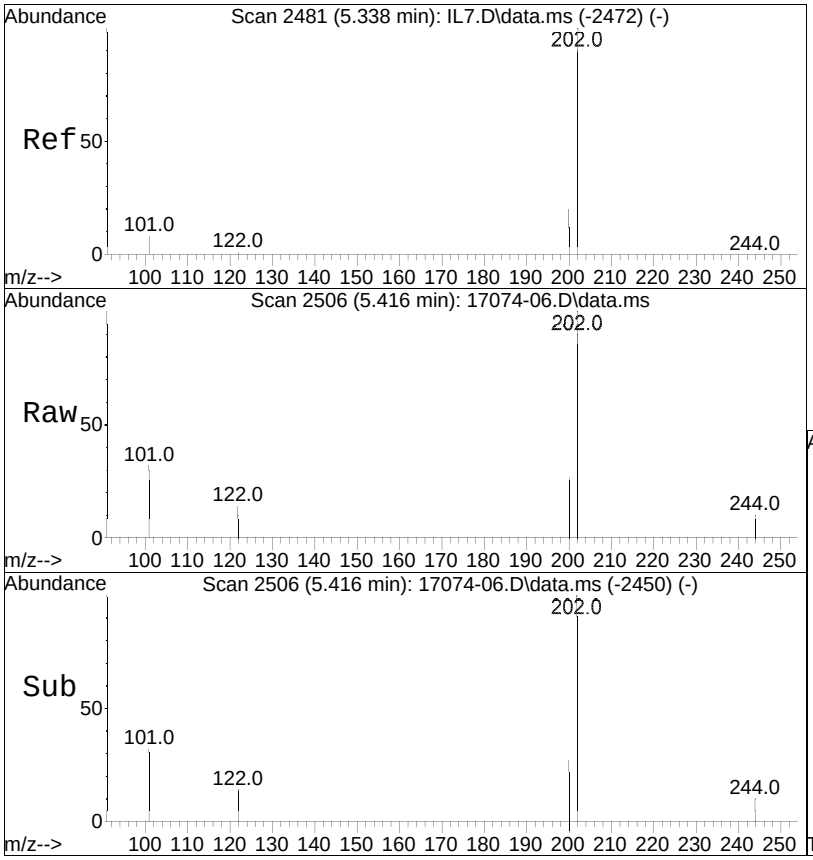


#27
Anthracene
Concen: 3.65 ng/ml M6
RT: 4.762 min Scan# 2169
Delta R.T. -0.002 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:178 Resp: 200

Ion	Ratio	Lower	Upper
178	100		
179	16.5	12.2	18.4

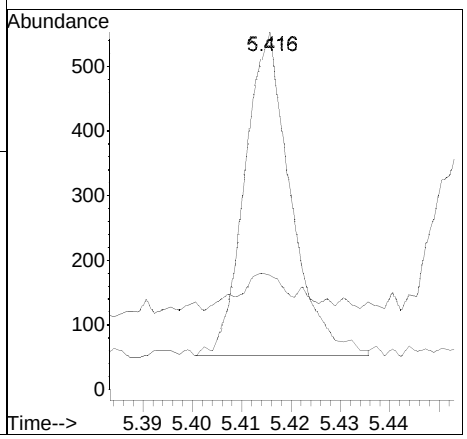


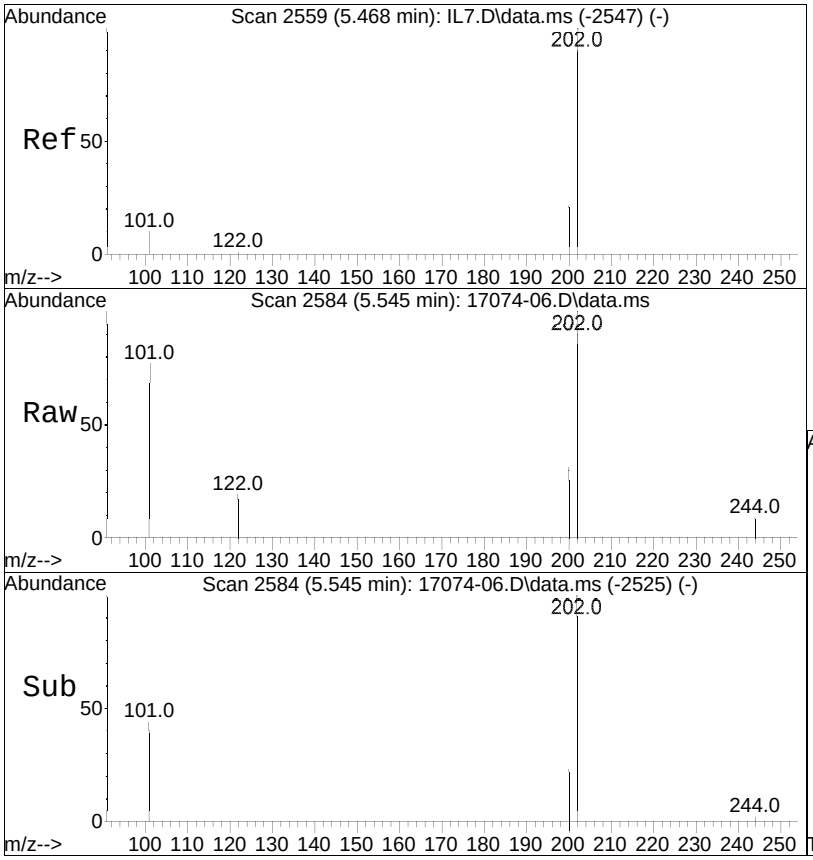


#28
Fluoranthene
Concen: 4.45 ng/ml
RT: 5.416 min Scan# 2506
Delta R.T. -0.002 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:202 Resp: 324

Ion	Ratio	Lower	Upper
202	100		
101	9.3	8.3	12.5

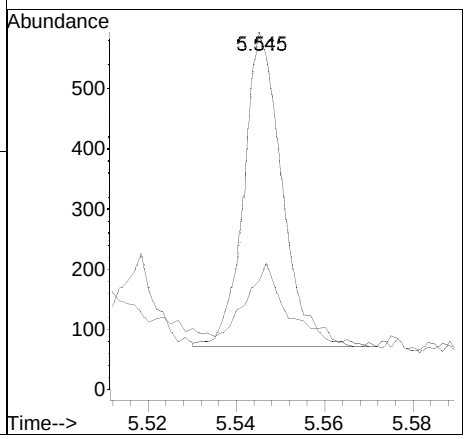


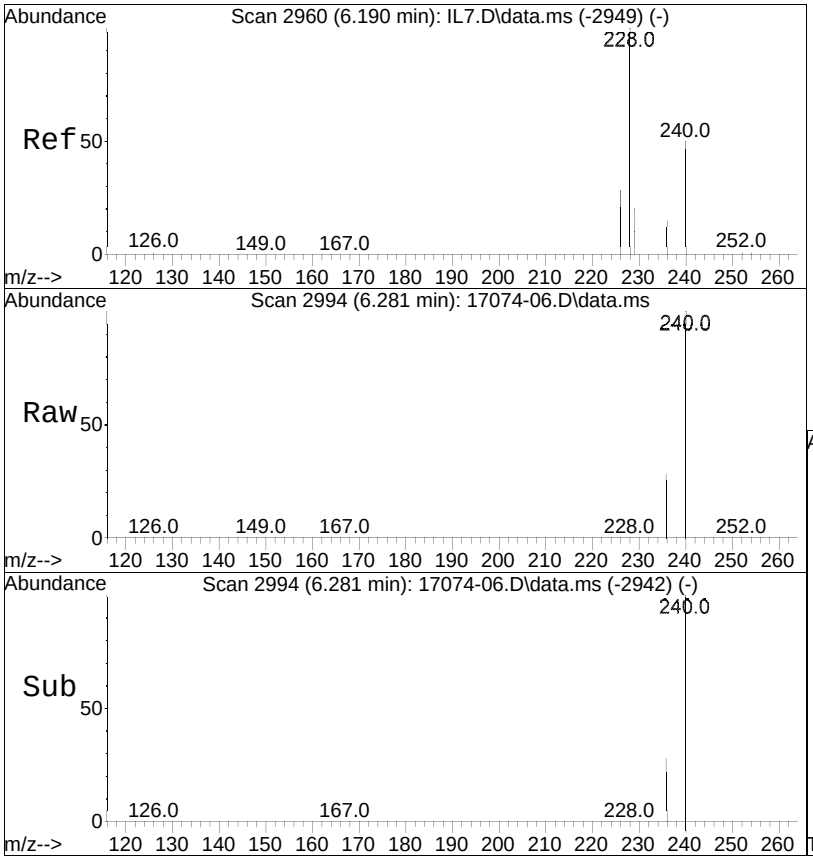


#29
Pyrene
Concen: 4.13 ng/ml M1
RT: 5.545 min Scan# 2584
Delta R.T. -0.002 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:202 Resp: 309

Ion	Ratio	Lower	Upper
202	100		
200	36.6	17.3	25.9#

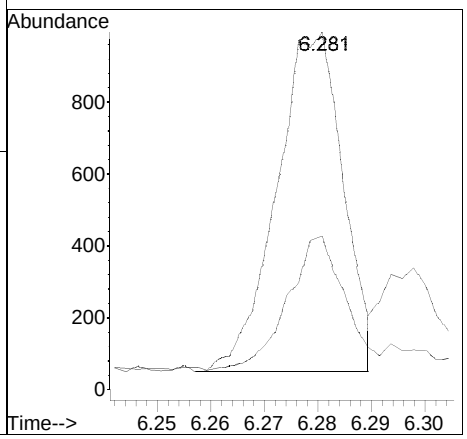


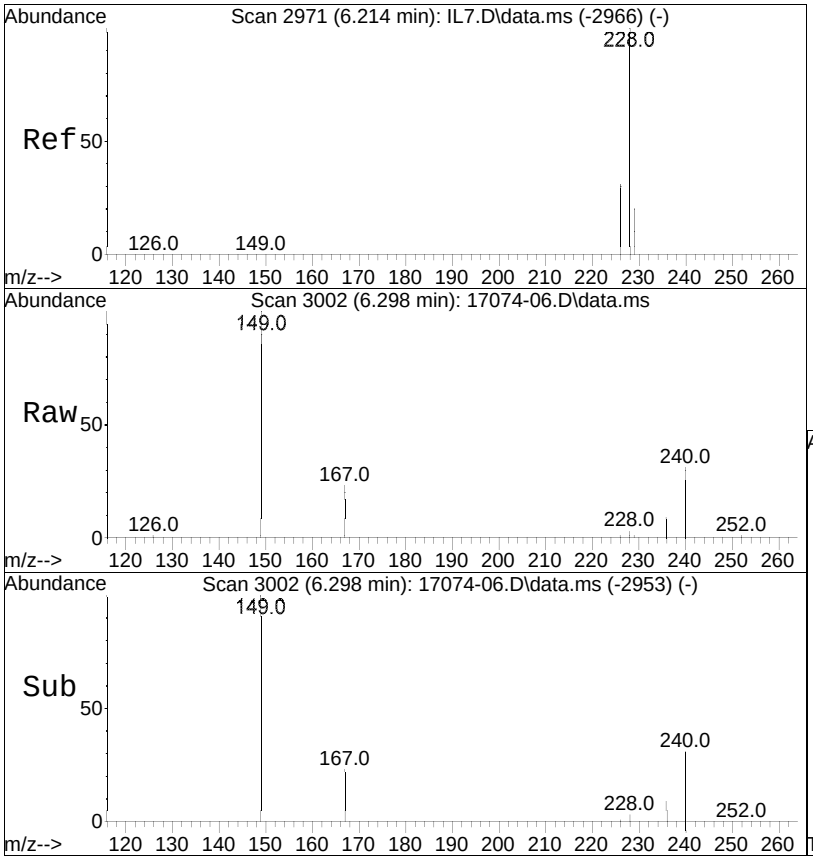


#32
Benzo[a]anthracene
Concen: 1.52 ng/ml
RT: 6.281 min Scan# 2994
Delta R.T. 0.011 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:228 Resp: 808

Ion	Ratio	Lower	Upper
228	100		
229	34.0	15.6	23.4#

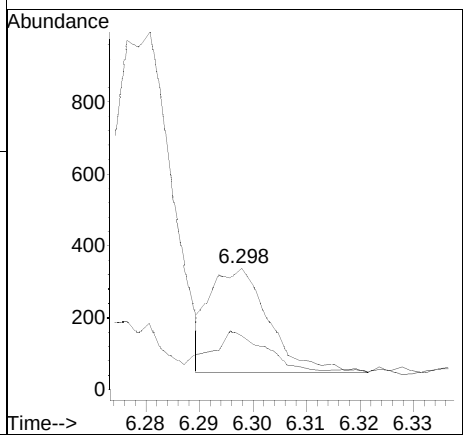


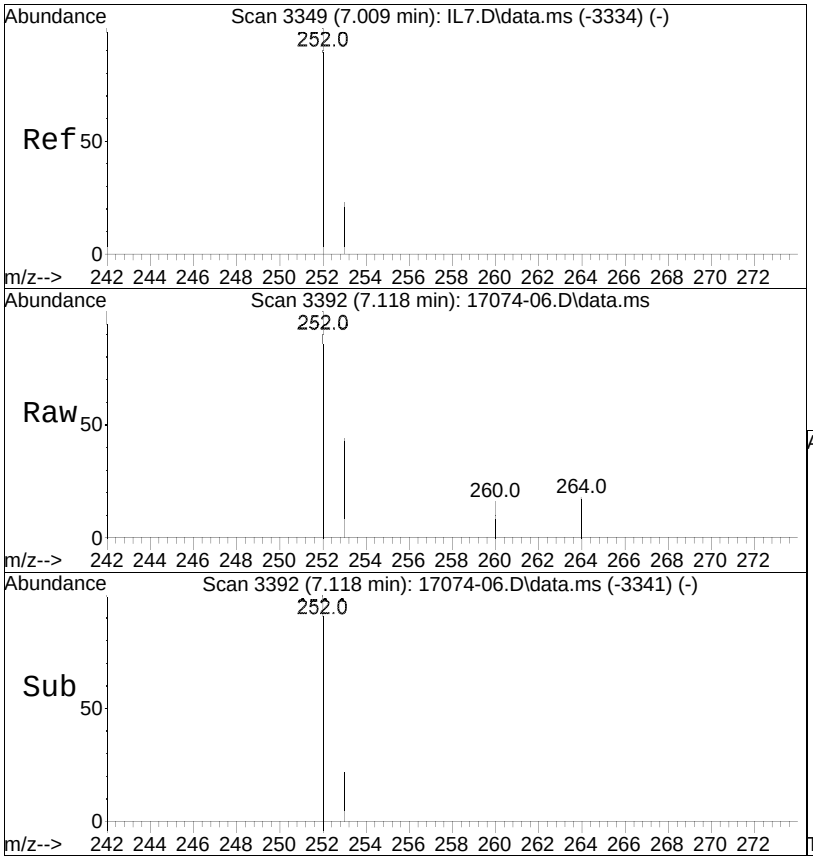


#34
Chrysene
Concen: 3.31 ng/ml
RT: 6.298 min Scan# 3002
Delta R.T. 0.004 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:228 Resp: 217

Ion	Ratio	Lower	Upper
228	100		
226	33.6	24.5	36.7

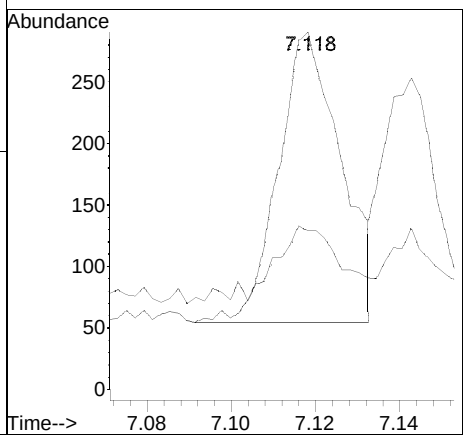


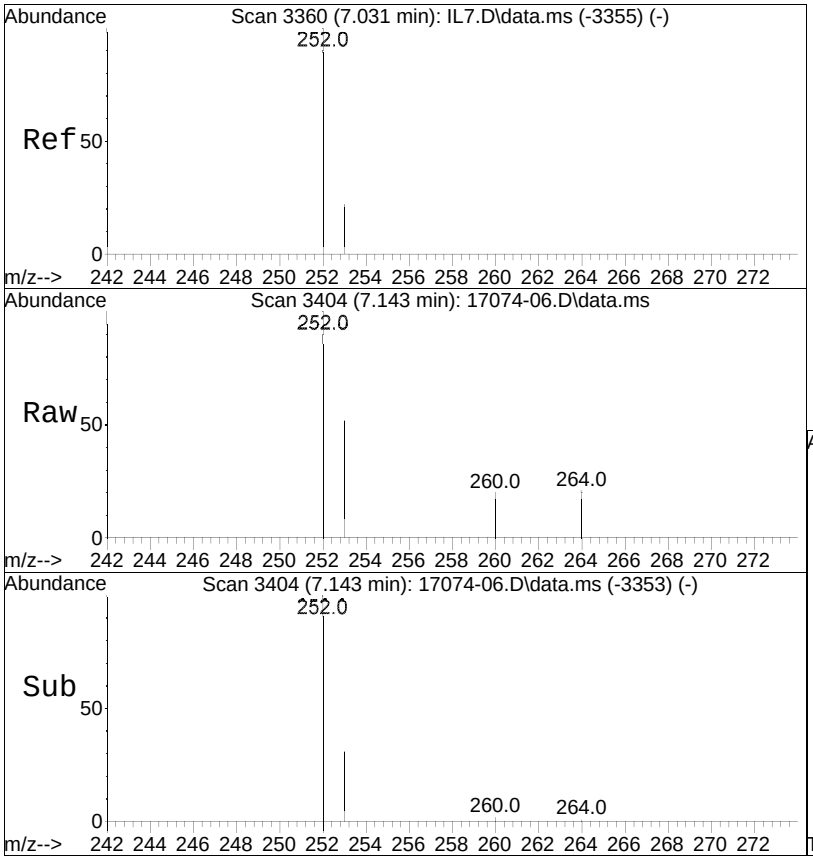


#37
Benzo[b]fluoranthene
Concen: 3.39 ng/ml
RT: 7.118 min Scan# 3392
Delta R.T. 0.004 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:252 Resp: 242

Ion	Ratio	Lower	Upper
252	100		
253	26.4	17.3	25.9#

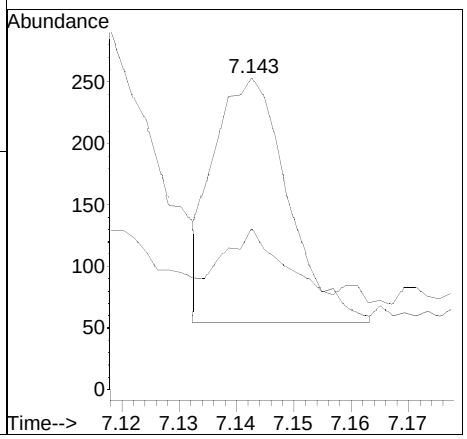


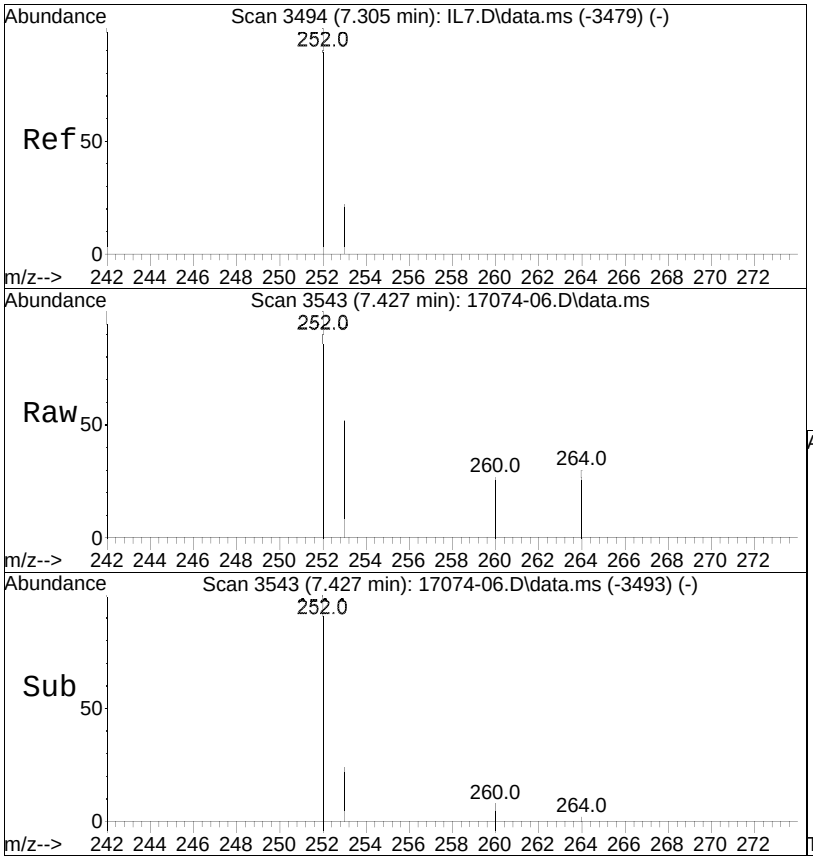


#38
Benzo[k]fluoranthene
Concen: 2.61 ng/ml M4
RT: 7.143 min Scan# 3404
Delta R.T. 0.004 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:252 Resp: 177

Ion	Ratio	Lower	Upper
252	100		
253	19.8	17.4	26.2

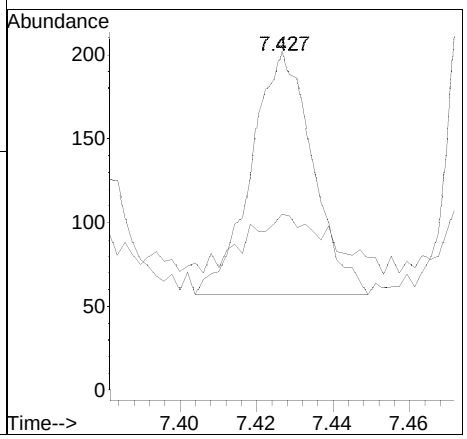




#39
Benzo[a]pyrene
Concen: 2.58 ng/ml
RT: 7.427 min Scan# 3543
Delta R.T. 0.002 min
Lab File: 17074-06.D
Acq: 04 Apr 2024 09:57 am

Tgt Ion:252 Resp: 162

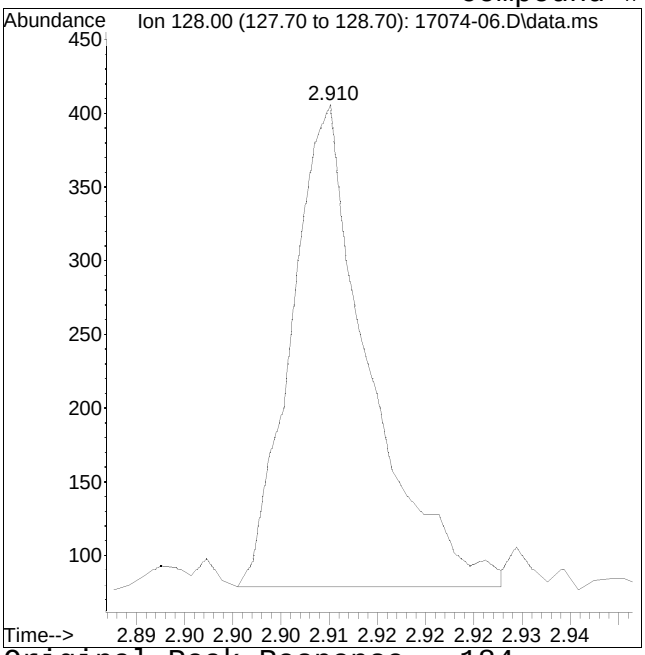
Ion	Ratio	Lower	Upper
252	100		
253	35.2	17.4	26.0#



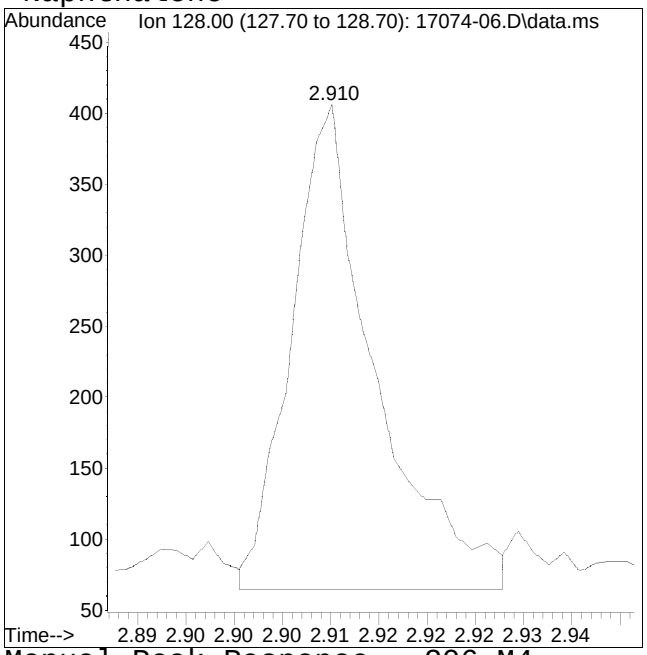
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #9: Naphthalene



Original Peak Response = 184



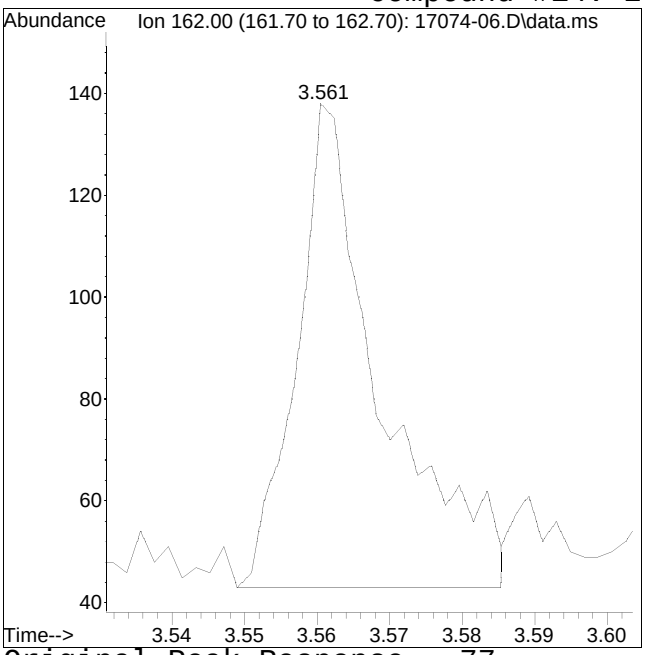
Manual Peak Response = 206 M4

M4 = Poor automated baseline construction.

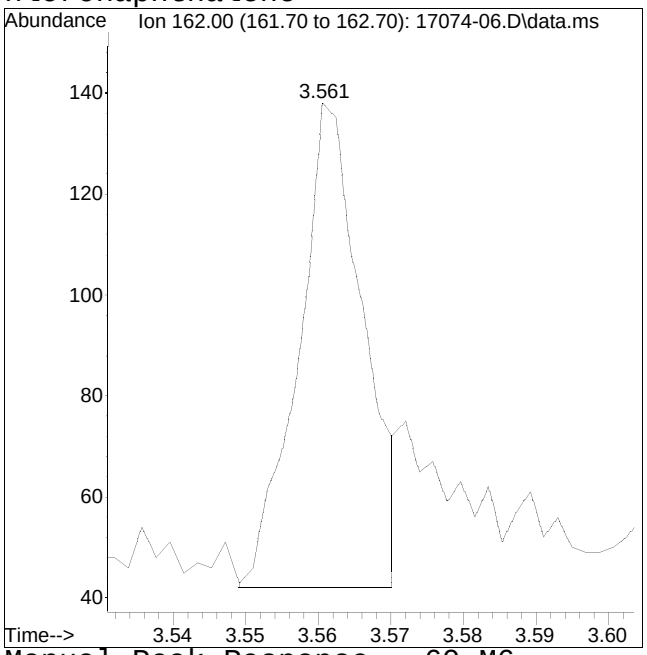
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #14: 2-Chloronaphthalene



Original Peak Response = 77



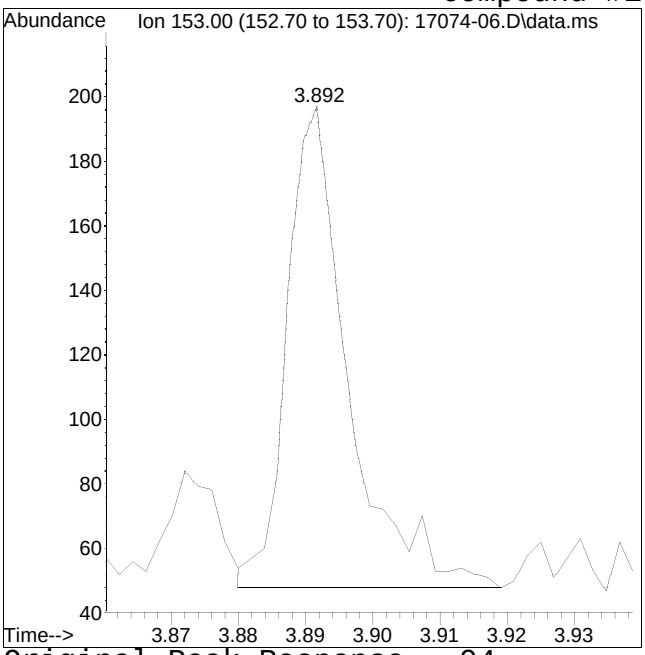
Manual Peak Response = 60 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

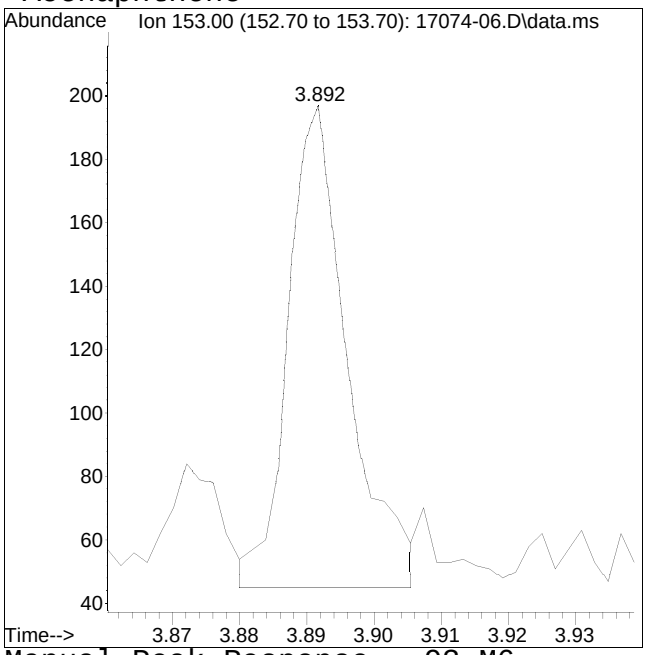
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #18: Acenaphthene



Original Peak Response = 94



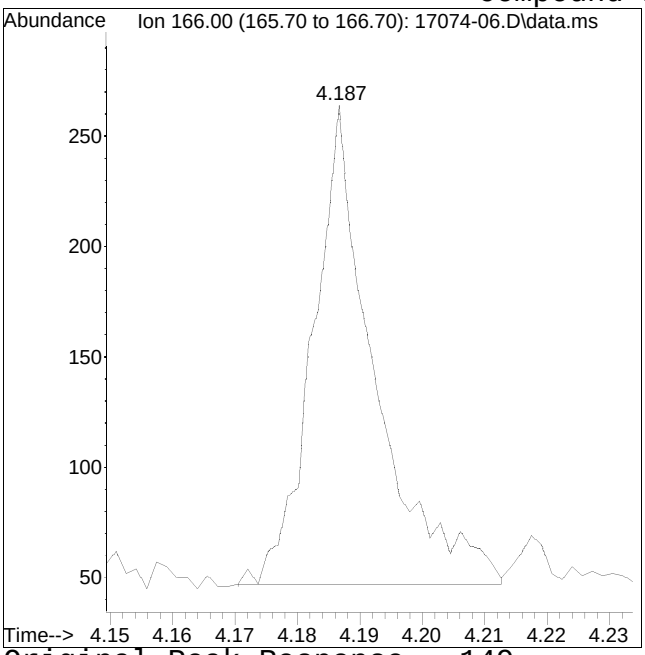
Manual Peak Response = 93 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

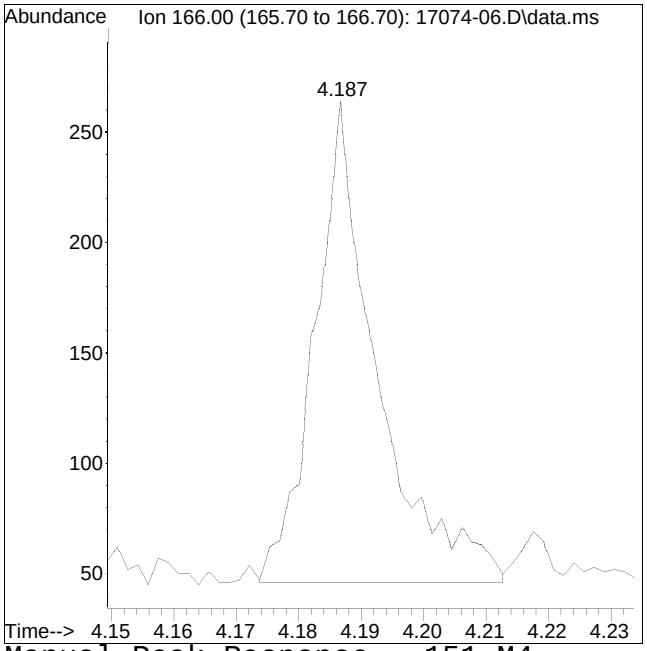
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #20: Fluorene



Original Peak Response = 149



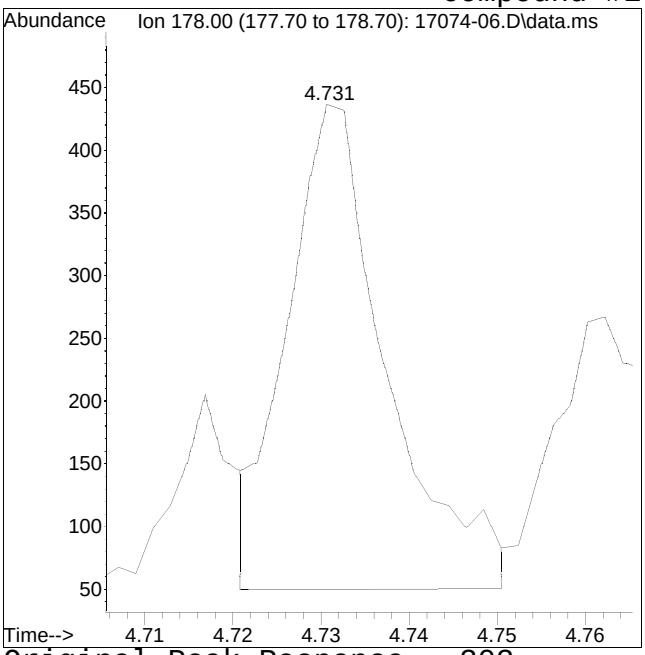
Manual Peak Response = 151 M4

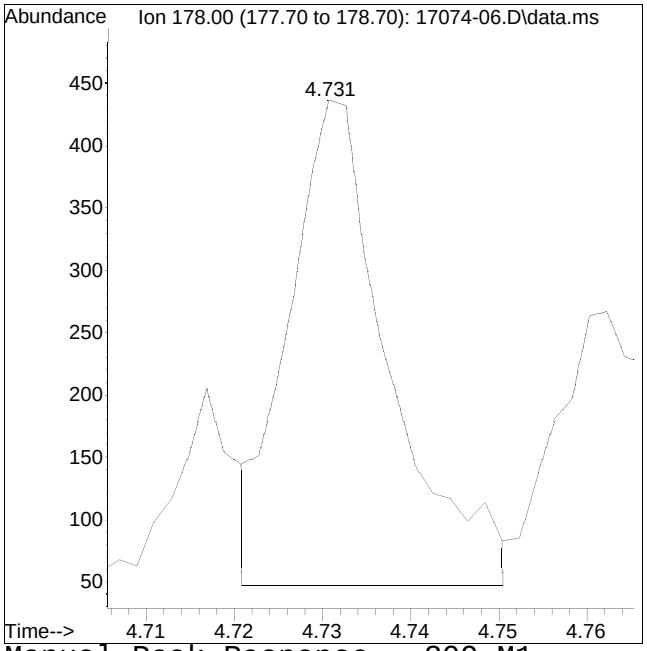
M4 = Poor automated baseline construction.

Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #26: Phenanthrene



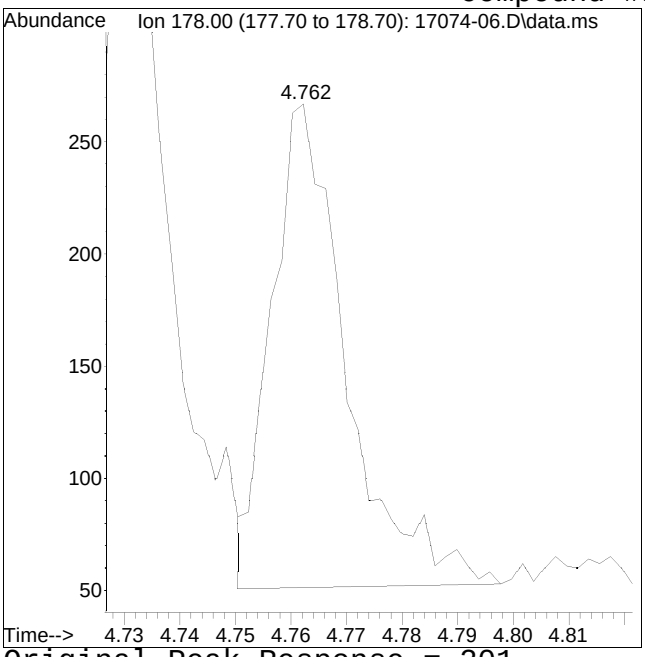


Original Peak Response = 303 Manual Peak Response = 309 M1
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

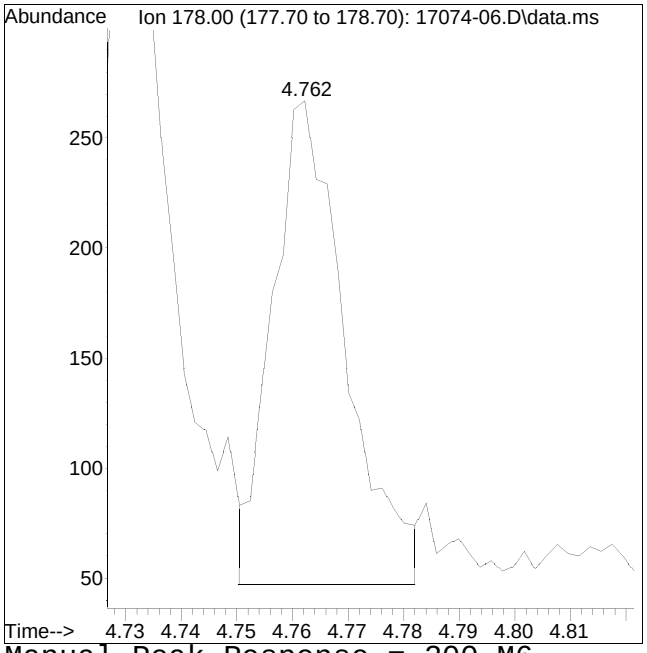
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #27: Anthracene



Original Peak Response = 201



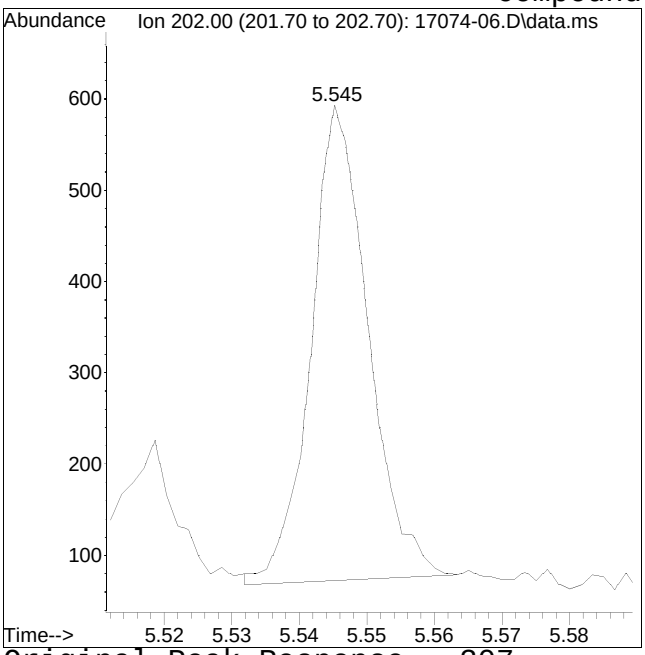
Manual Peak Response = 200 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

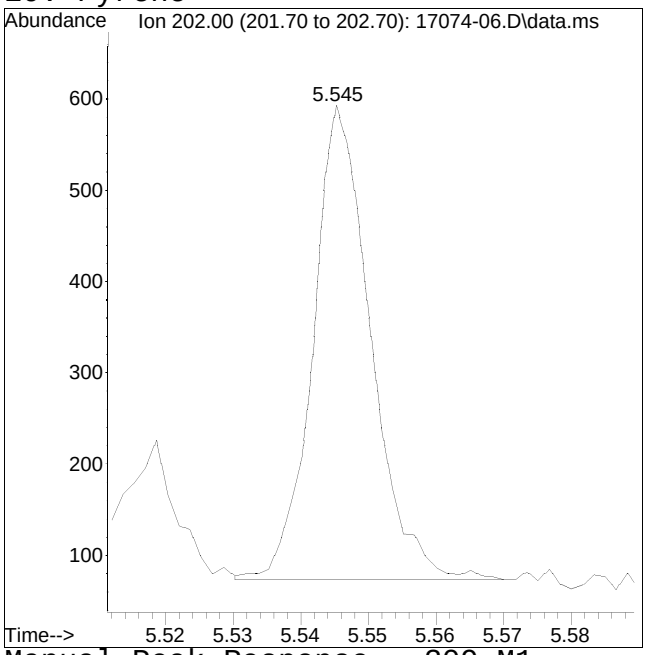
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #29: Pyrene



Original Peak Response = 307



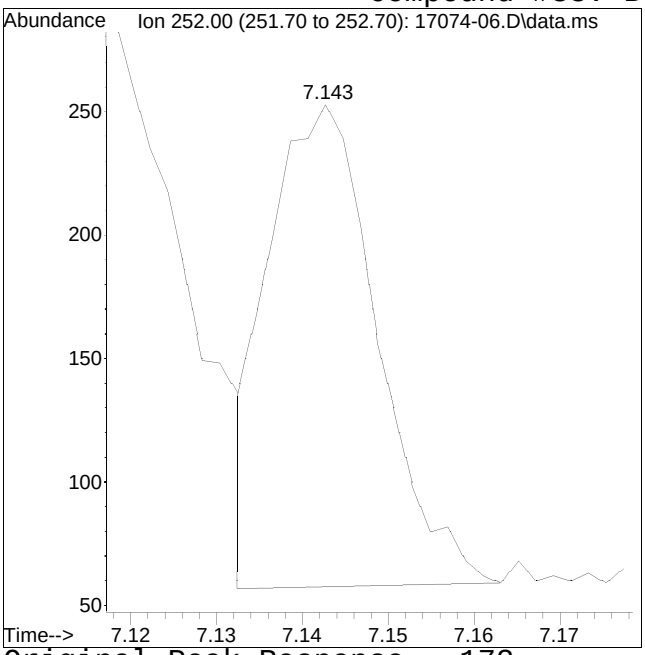
Manual Peak Response = 309 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

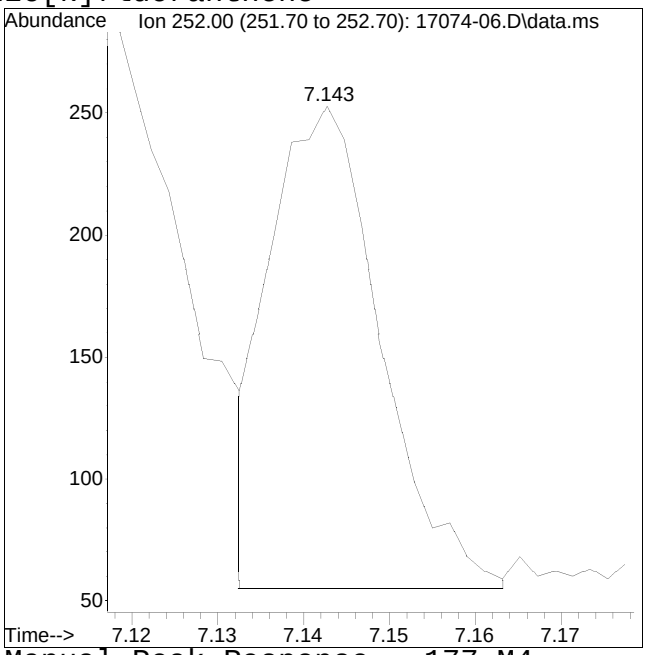
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-06.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 9:57 am Instrument : SV119
Sample : L2417074-06,32,,ah Quant Date : 4/4/2024 10:13 am

Compound #38: Benzo[k]fluoranthene



Original Peak Response = 172



Manual Peak Response = 177 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-07.D
Acq On : 04 Apr 2024 10:14 am
Operator : sv119:jjw
Sample : L2417074-07,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 04 11:04:37 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.234	152	54292	4000.000	ng/ml	0.00
Standard Area 1 = 63465			Recovery = 85.55%			
8) Naphthalene-d8	2.897	136	145011	4000.000	ng/ml	0.00
Standard Area 1 = 190169			Recovery = 76.25%			
17) Acenaphthene-d10	3.874	164	98847	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery = 89.66%			
22) Phenanthrene-d10	4.717	188	214576	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 87.68%			
31) Chrysene-d12	6.278	240	194736	4000.000	ng/ml	0.00
Standard Area 1 = 210122			Recovery = 92.68%			
36) Perylene-d12	7.483	264	195599	4000.000	ng/ml	0.00
Standard Area 1 = 221293			Recovery = 88.39%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.642	112	38576	2597.751	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 51.96%			
3) Phenol-d6	2.055	99	36544	2052.997	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 41.06%			
7) Nitrobenzene-d5	2.514	82	22061	1633.873	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 65.35%			
13) 2-Fluorobiphenyl	3.495	172	60836	1878.433	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 75.14%			
21) 2,4,6-Tribromophenol	4.323	330	22792	4182.331	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 83.65%			
30) 4-Terphenyl-d14	5.638	244	69780	1326.555	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 53.06%			
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.908	128	413M4	11.928	ng/ml	
10) Hexachlorobutadiene	0.000		0	N.D.	d	
11) 2-Methylnaphthalene	0.000		0	N.D.	d	
14) 2-Chloronaphthalene	0.000		0	N.D.	d	
16) Acenaphthylene	0.000		0	N.D.	d	
18) Acenaphthene	0.000		0	N.D.	d	
20) Fluorene	4.187	166	74	2.026	ng/ml	89
24) Hexachlorobenzene	0.000		0	N.D.	d	
25) Pentachlorophenol	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-07.D
Acq On : 04 Apr 2024 10:14 am
Operator : sv119:jjw
Sample : L2417074-07,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 04 11:04:37 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.731	178	228M1	4.183	ng/ml	
27) Anthracene	4.762	178	145M4	2.683	ng/ml	
28) Fluoranthene	5.416	202	189M4	2.631	ng/ml	
29) Pyrene	5.545	202	182M6	2.466	ng/ml	
32) Benzo[a]anthracene	0.000		0	N.D.	d	
34) Chrysene	0.000		0	N.D.	d	
37) Benzo[b]fluoranthene	0.000		0	N.D.	d	
38) Benzo[k]fluoranthene	0.000		0	N.D.	d	
39) Benzo[a]pyrene	0.000		0	N.D.	d	
40) Indeno[1,2,3-cd]pyrene	0.000		0	N.D.	d	
41) Dibenzo[a,h]anthracene	0.000		0	N.D.	d	
42) Benzo[g,h,i]perylene	0.000		0	N.D.	d	

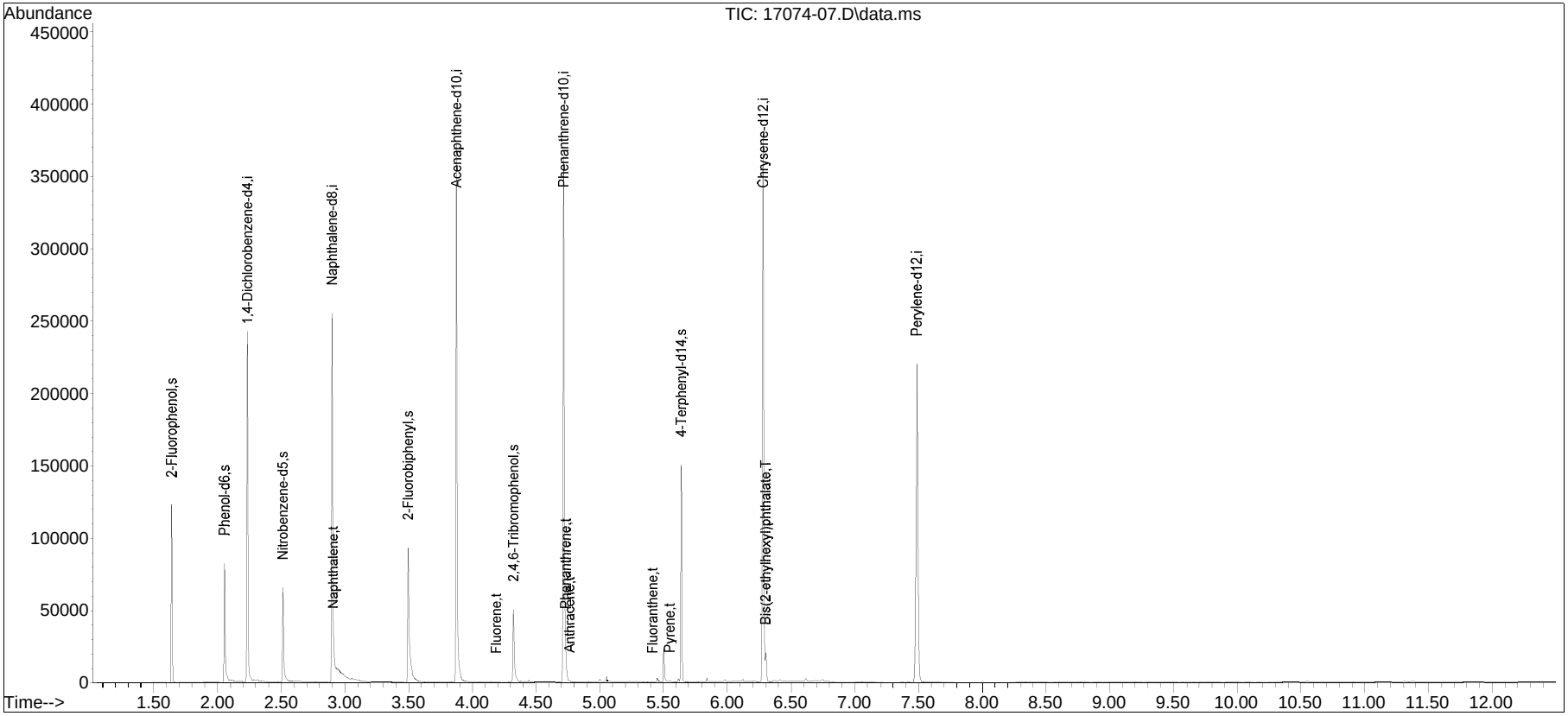
(#) = qualifier out of range (m) = manual integration (+) = signals summed

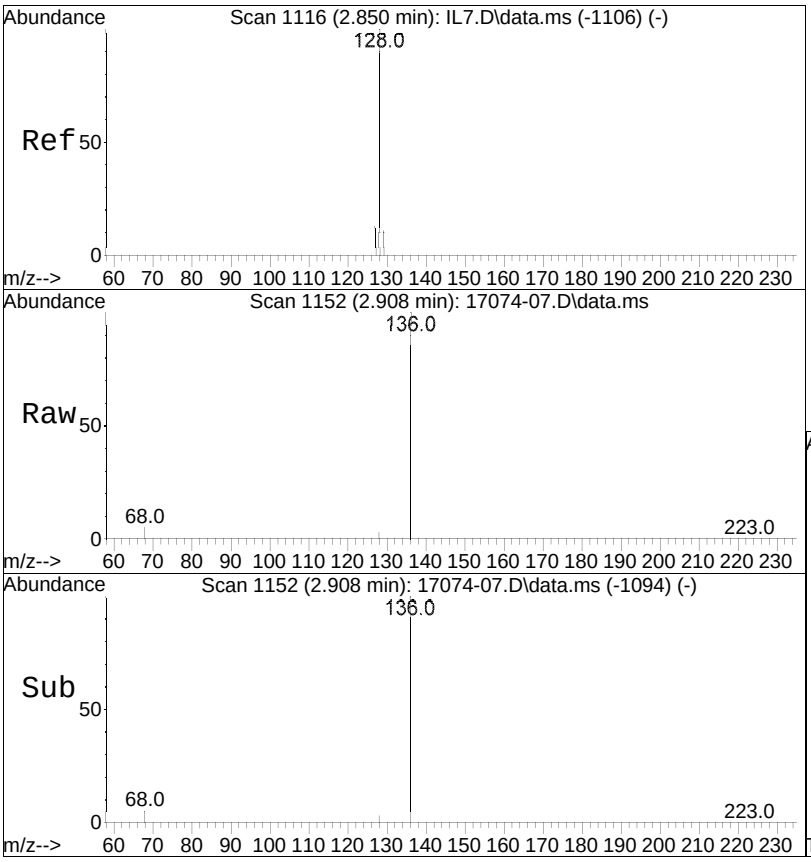
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 17074-07.D
Acq On : 04 Apr 2024 10:14 am
Operator : sv119:jjw
Sample : L2417074-07,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 04 11:04:37 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

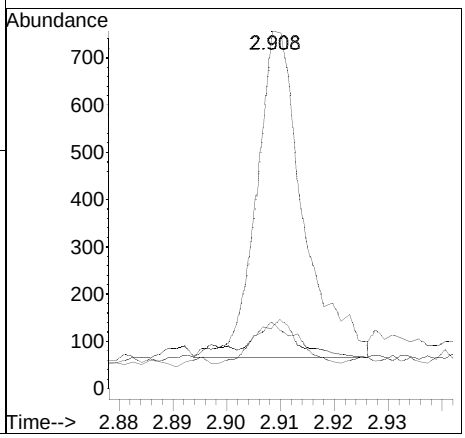


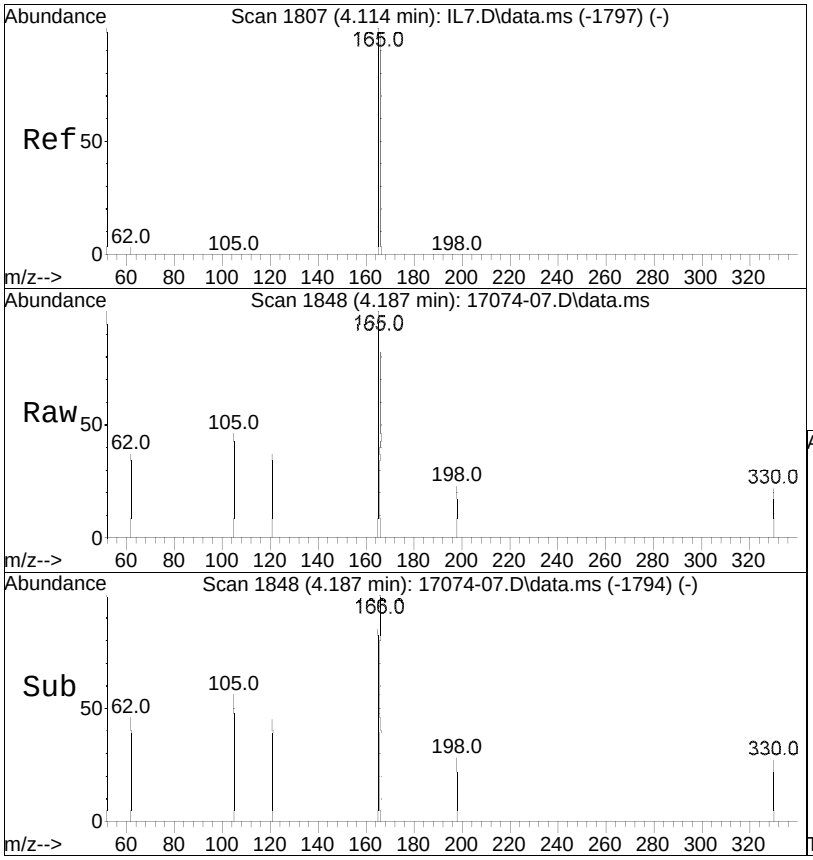


#9
Naphthalene
Concen: 11.93 ng/ml M4
RT: 2.908 min Scan# 1152
Delta R.T. -0.007 min
Lab File: 17074-07.D
Acq: 04 Apr 2024 10:14 am

Tgt Ion:128 Resp: 413

Ion	Ratio	Lower	Upper
128	100		
129	12.8	8.8	13.2
127	13.1	10.6	15.8

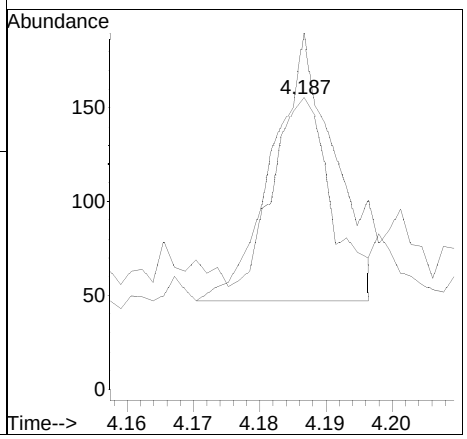


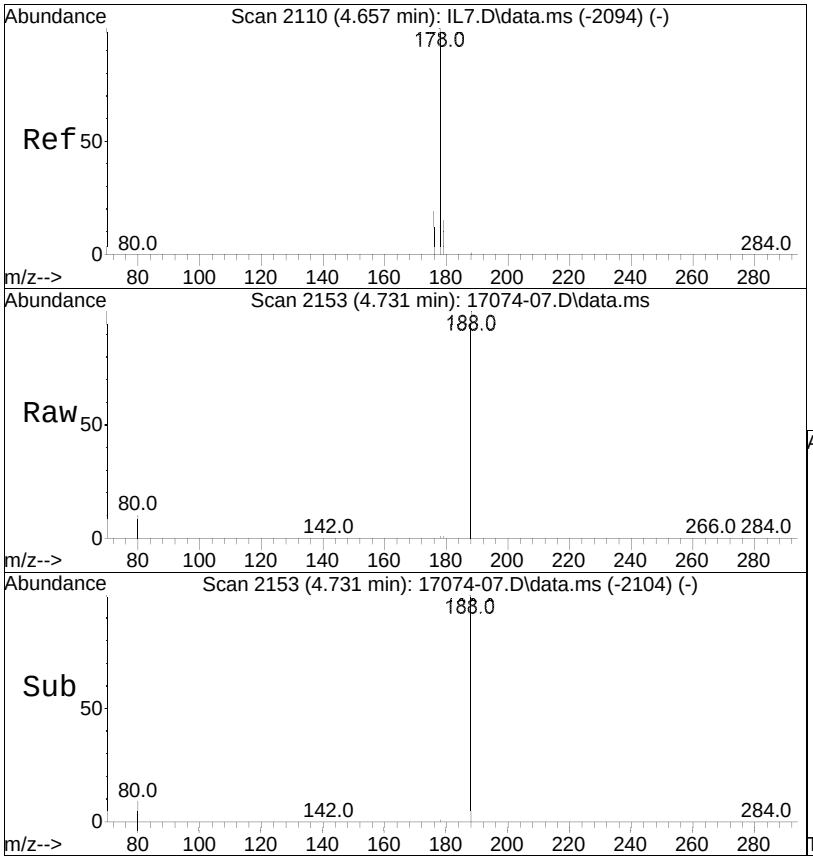


#20
Fluorene
Concen: 2.03 ng/ml
RT: 4.187 min Scan# 1848
Delta R.T. -0.003 min
Lab File: 17074-07.D
Acq: 04 Apr 2024 10:14 am

Tgt Ion:166 Resp: 74

Ion	Ratio	Lower	Upper
166	100		
165	114.9	82.9	124.3

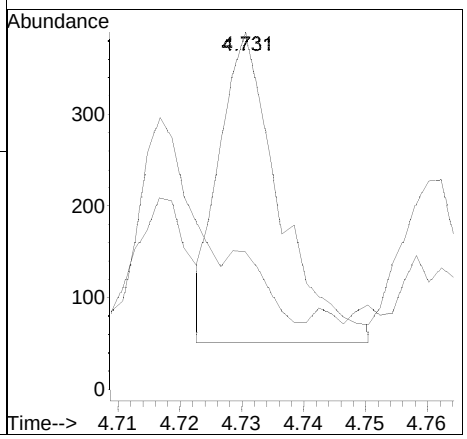


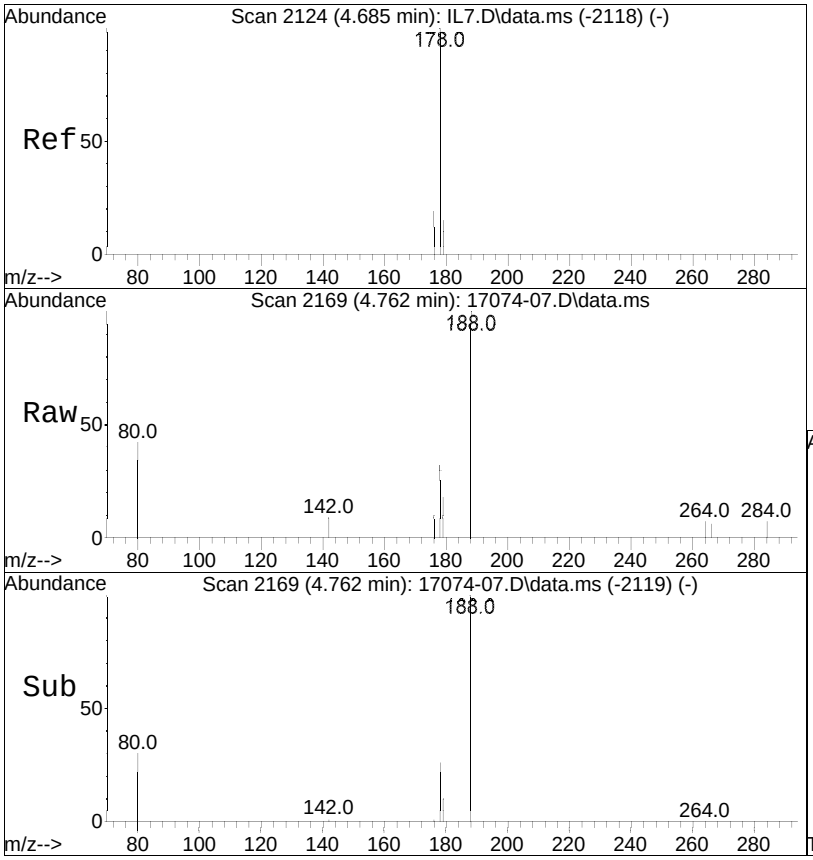


#26
Phenanthrene
Concen: 4.18 ng/ml M1
RT: 4.731 min Scan# 2153
Delta R.T. -0.004 min
Lab File: 17074-07.D
Acq: 04 Apr 2024 10:14 am

Tgt Ion:178 Resp: 228

Ion	Ratio	Lower	Upper
178	100		
179	18.0	12.3	18.5

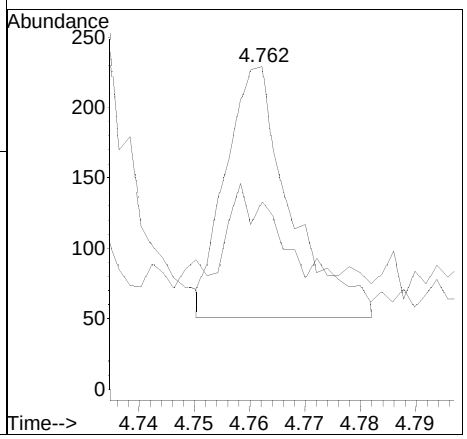


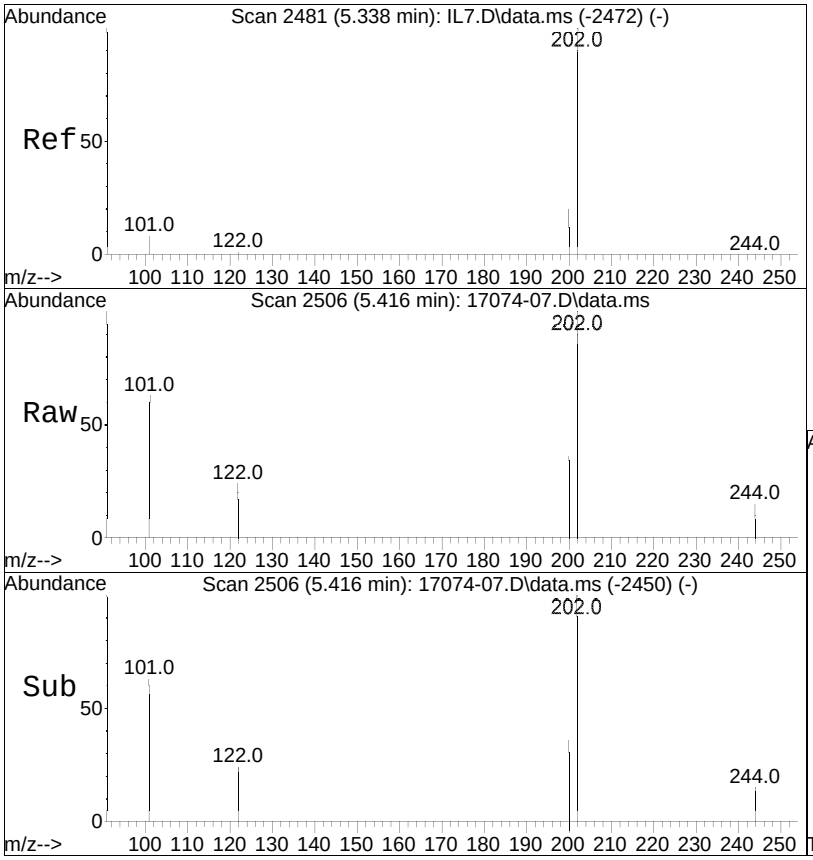


#27
Anthracene
Concen: 2.68 ng/ml M4
RT: 4.762 min Scan# 2169
Delta R.T. -0.002 min
Lab File: 17074-07.D
Acq: 04 Apr 2024 10:14 am

Tgt Ion:178 Resp: 145

Ion	Ratio	Lower	Upper
178	100		
179	35.2	12.2	18.4#

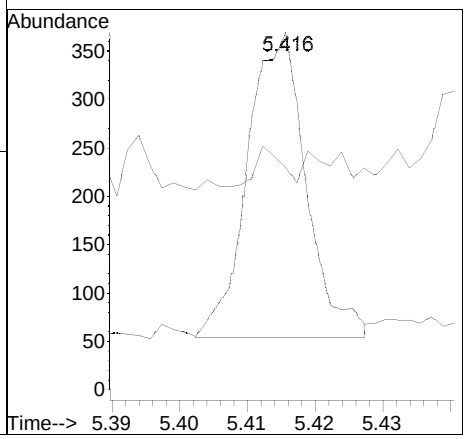


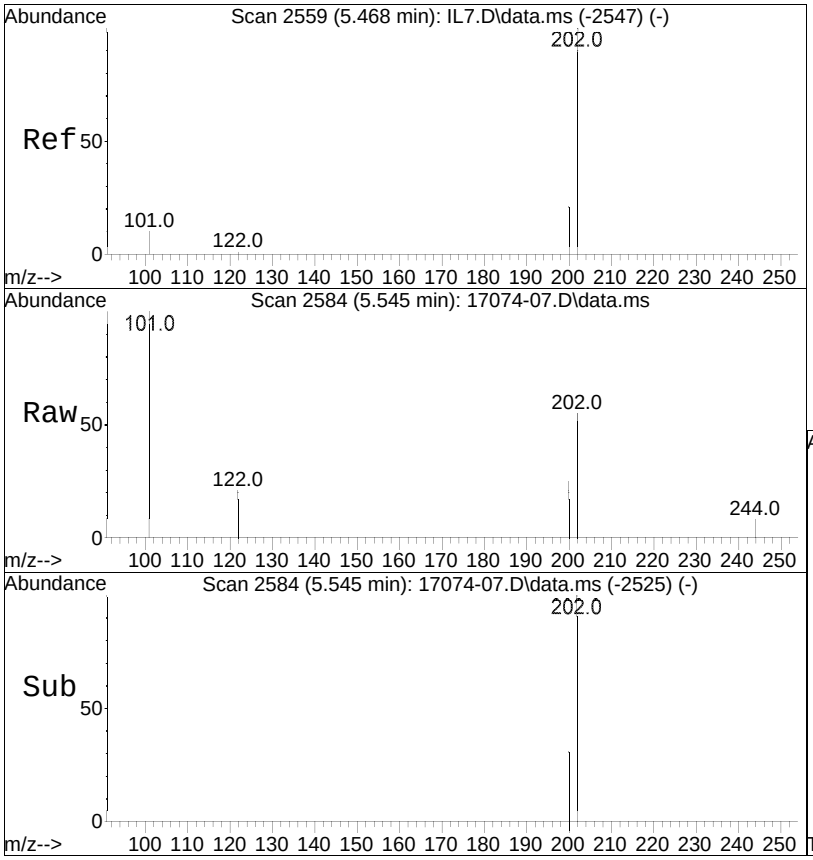


#28
Fluoranthene
Concen: 2.63 ng/ml M4
RT: 5.416 min Scan# 2506
Delta R.T. -0.002 min
Lab File: 17074-07.D
Acq: 04 Apr 2024 10:14 am

Tgt Ion:202 Resp: 189

Ion	Ratio	Lower	Upper
202	100		
101	8.5	8.3	12.5

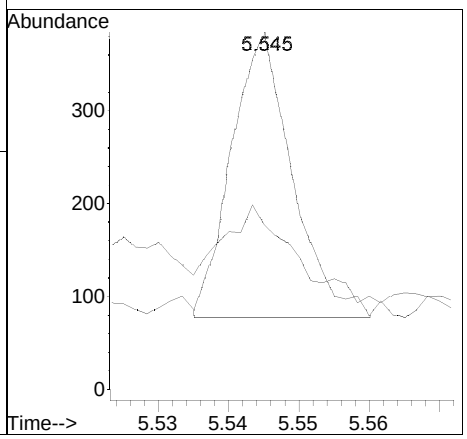




#29
Pyrene
Concen: 2.47 ng/ml M6
RT: 5.545 min Scan# 2584
Delta R.T. -0.002 min
Lab File: 17074-07.D
Acq: 04 Apr 2024 10:14 am

Tgt Ion:202 Resp: 182

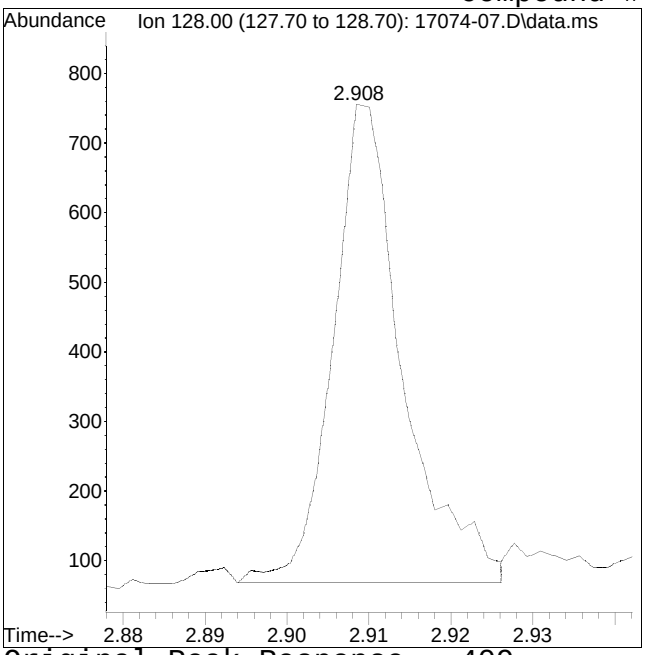
Ion	Ratio	Lower	Upper
202	100		
200	47.3	17.3	25.9#



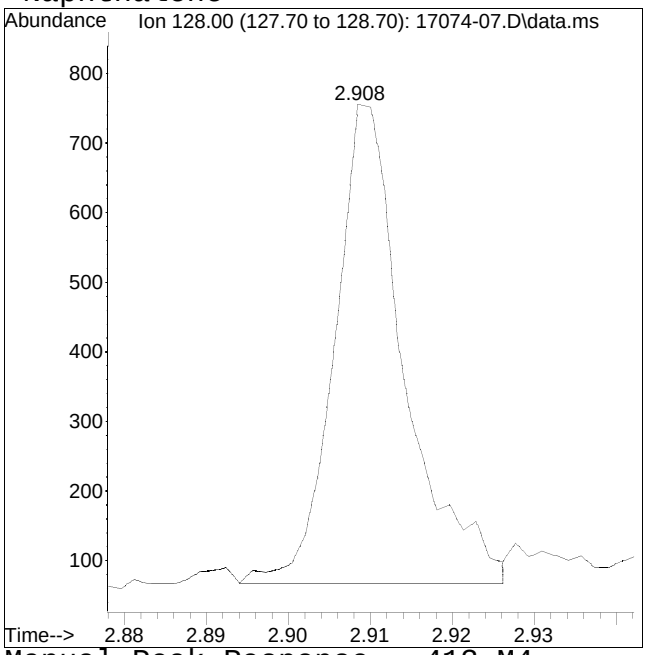
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-07.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 10:14 am Instrument : SV119
Sample : L2417074-07,32,,ah Quant Date : 4/4/2024 10:29 am

Compound #9: Naphthalene



Original Peak Response = 409



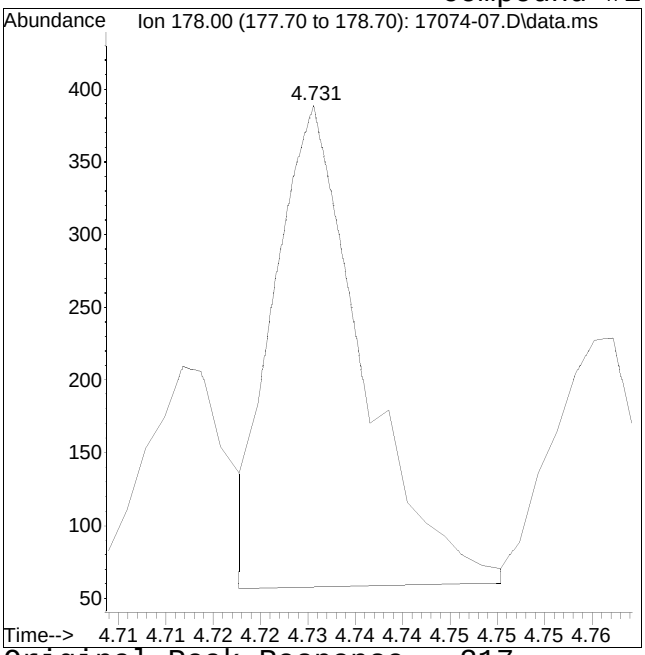
Manual Peak Response = 413 M4

M4 = Poor automated baseline construction.

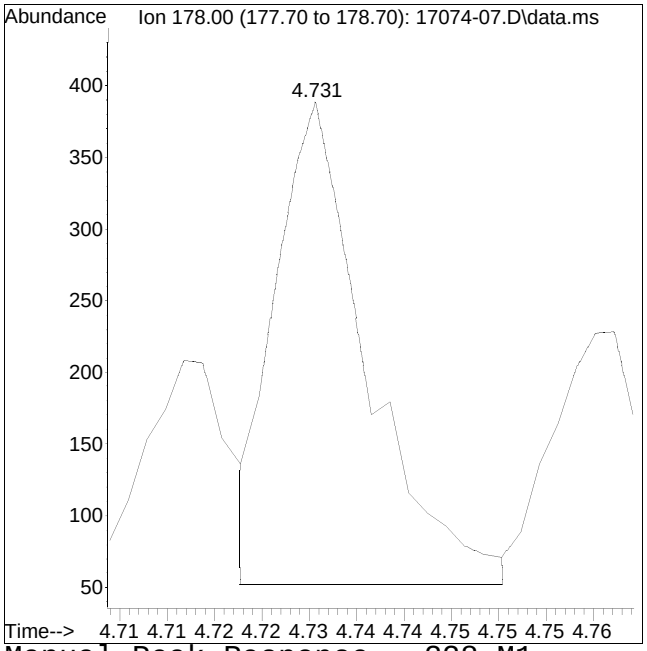
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-07.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 10:14 am Instrument : SV119
Sample : L2417074-07,32,,ah Quant Date : 4/4/2024 10:29 am

Compound #26: Phenanthrene



Original Peak Response = 217



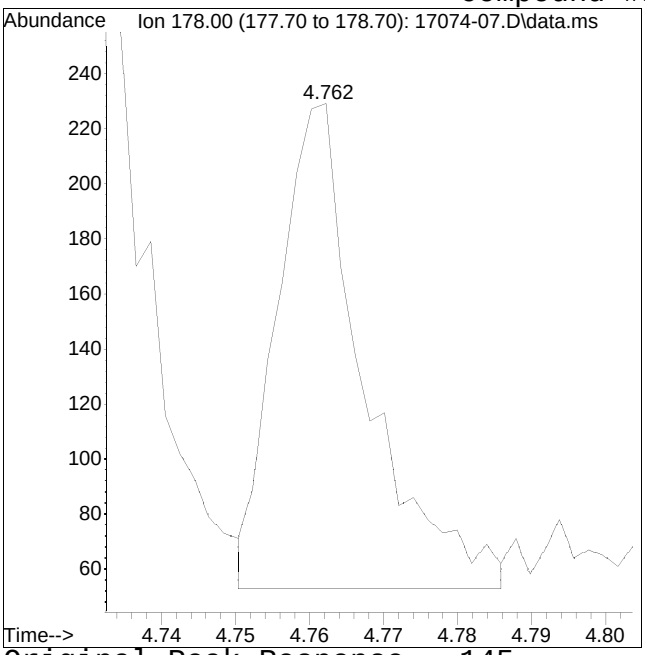
Manual Peak Response = 228 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

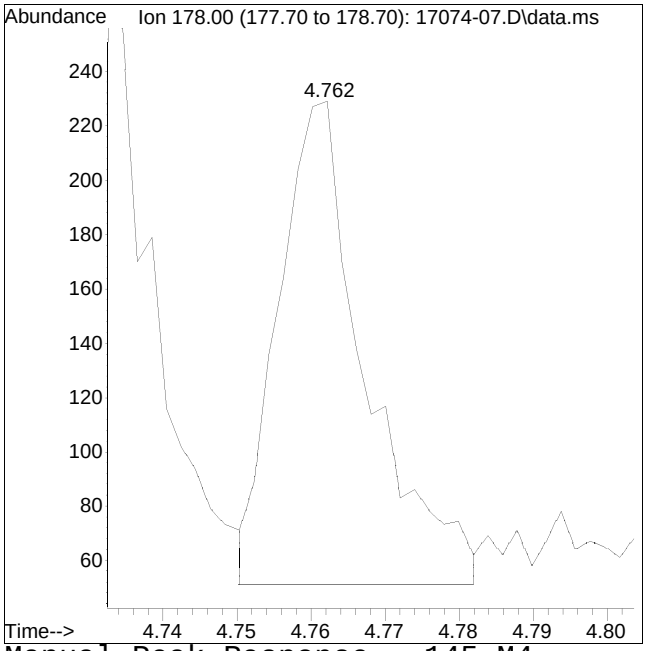
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-07.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 10:14 am Instrument : SV119
Sample : L2417074-07,32,,ah Quant Date : 4/4/2024 10:29 am

Compound #27: Anthracene



Original Peak Response = 145



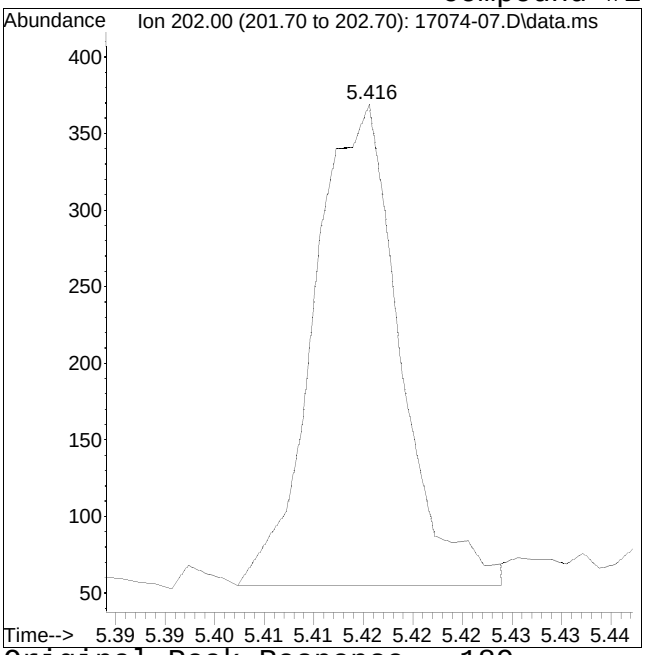
Manual Peak Response = 145 M4

M4 = Poor automated baseline construction.

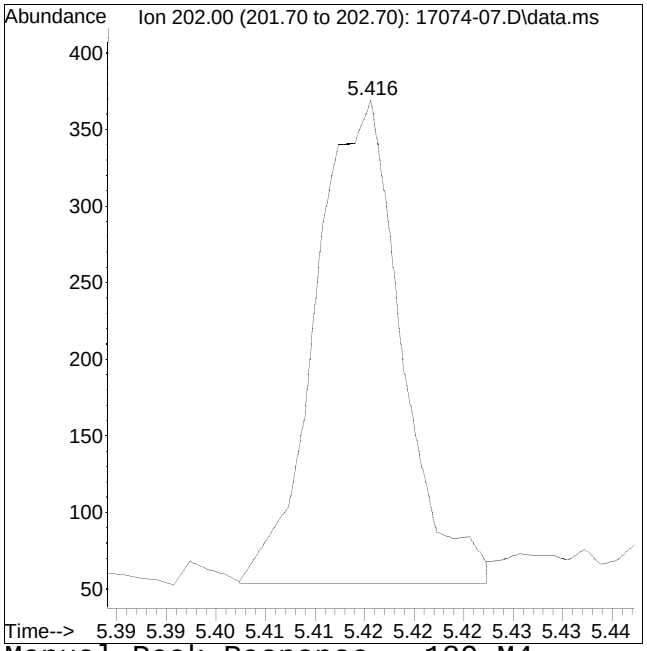
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-07.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 10:14 am Instrument : SV119
Sample : L2417074-07,32,,ah Quant Date : 4/4/2024 10:29 am

Compound #28: Fluoranthene



Original Peak Response = 189



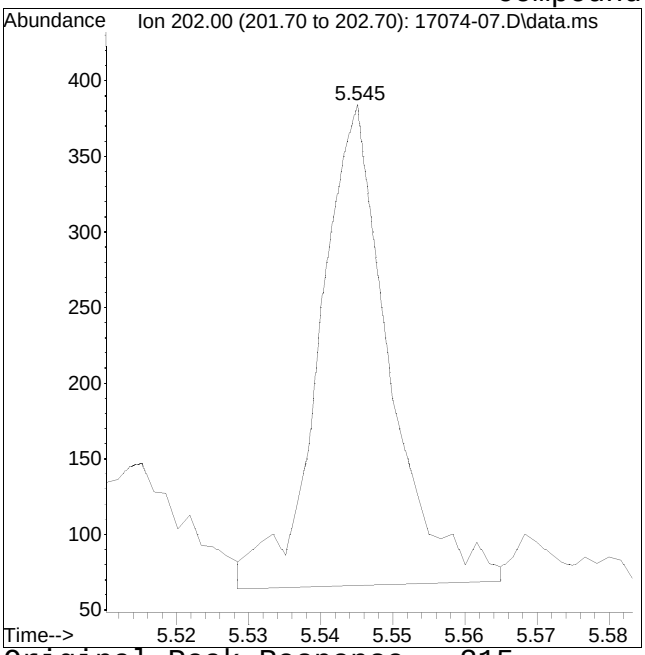
Manual Peak Response = 189 M4

M4 = Poor automated baseline construction.

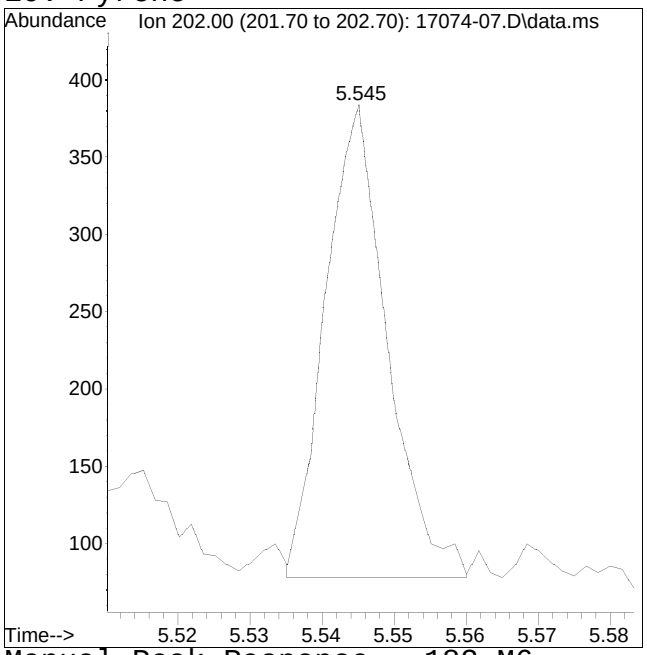
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 17074-07.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 10:14 am Instrument : SV119
Sample : L2417074-07,32,,ah Quant Date : 4/4/2024 10:29 am

Compound #29: Pyrene



Original Peak Response = 215



Manual Peak Response = 182 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Semivolatiles Standards Data

Initial Calibration

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: SV119**	**Ical Ref**	**: ICAL20642**
Calibration dates	**: 12/07/23 13:10 12/07/23 15:42**		

Calibration Files
L1 =IL1.D L2 =IL2.D L3 =IL3.D L4 =IL4.D L5 =IL5.D L6 =IL6.D L7 =IL7.D L8 =IL8.D
L9 =IL9.D L10 =IL10.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Avg	%RSD
1)	i	1,4-Dichlorobenzene-d4	ISTD											
2)	s	2-Fluorophenol	1.128	1.130	1.105	1.108	1.126	1.154	1.183	1.104	0.991	0.913	1.094	7.38
3)	s	Phenol-d6	1.431	1.310	1.266	1.271	1.295	1.318	1.344	1.361	1.291	1.227	1.311	4.35
4)	T	bis(2-Chloroethyl)ether	1.279	1.233	1.161	1.139	1.143	1.131	1.127	1.055	0.978	0.906	1.115	9.94
5)	T	n-Nitrosodi-n-propylamine	0.606	0.634	0.623	0.607	0.628	0.633	0.695	0.768	0.761	0.716	0.667	9.38
6)	t	Hexachloroethane	0.555	0.531	0.504	0.484	0.482	0.480	0.504	0.500	0.471	0.436	0.495	6.61
7)	s	Nitrobenzene-d5	0.909	1.019	0.996	0.951	0.985	1.001	1.054	1.070	1.020	0.943	0.995	5.02
8)	i	Naphthalene-d8	ISTD											
9)	t	Naphthalene	0.998	1.012	1.012	0.992	0.994	0.993	0.999	0.932	0.849	0.770	0.955	8.60
10)	t	Hexachlorobutadiene	0.221	0.210	0.218	0.218	0.216	0.214	0.217	0.199	0.181	0.164	0.206	9.28
11)	t	2-Methylnaphthalene	0.732	0.746	0.743	0.748	0.749	0.742	0.749	0.688	0.618	0.546	0.706	9.93
12)	t	1-Methylnaphthalene	0.707	0.693	0.703	0.693	0.699	0.686	0.677	0.610	0.553	0.491	0.651	11.50
13)	s	2-Fluorobiphenyl	0.988	0.971	0.984	0.978	0.990	0.959	0.936	0.808	0.713	0.607	0.893	15.29
14)	t	2-Chloronaphthalene	0.802	0.813	0.816	0.806	0.806	0.788	0.773	0.707	0.645	0.566	0.752	11.40
15)	t	2,6-Dinitrotoluene		0.164	0.169	0.162	0.166	0.164	0.174	0.190	0.182	0.159	0.170	6.08
16)	t	Acenaphthylene	1.199	1.148	1.165	1.153	1.164	1.163	1.188	1.114	1.014	0.872	1.118	9.00
17)	i	Acenaphthene-d10	ISTD											
18)	t	Acenaphthene	1.289	1.260	1.273	1.276	1.282	1.287	1.307	1.236	1.133	1.025	1.237	7.18
19)	t	2,4-Dinitrotoluene		0.323	0.315	0.326	0.331	0.350	0.402	0.450	0.431	0.390	0.369	13.78
20)	t	Fluorene	1.538	1.530	1.512	1.514	1.531	1.533	1.582	1.490	1.349	1.202	1.478	7.75
21)	s	2,4,6-Tribromophenol	0.215	0.214	0.203	0.207	0.204	0.214	0.239	0.253	0.241	0.216	0.221	7.87
22)	i	Phenanthrene-d10	ISTD											
23)	T	4,6-Dinitro-o-cresol					0.076	0.091	0.107	0.125	0.123	0.118	*L	0.9991
24)	t	Hexachlorobenzene	0.291	0.267	0.269	0.265	0.271	0.269	0.271	0.254	0.226	0.203	0.259	9.86
25)	t	Pentachlorophenol			0.121	0.128	0.132	0.135	0.156	0.176	0.171	0.161	*L	0.9984
26)	t	Phenanthrene	1.082	1.054	1.058	1.046	1.067	1.064	1.067	1.004	0.902	0.815	1.016	8.65
27)	t	Anthracene	1.043	1.060	1.044	1.030	1.045	1.043	1.068	1.015	0.912	0.815	1.008	8.01
28)	t	Fluoranthene	1.460	1.462	1.429	1.426	1.420	1.422	1.427	1.256	1.114	0.975	1.339	12.62
29)	t	Pyrene	1.523	1.533	1.507	1.491	1.466	1.461	1.439	1.248	1.108	0.982	1.376	14.11
30)	s	4-Terphenyl-d14	1.122	1.124	1.093	1.087	1.077	1.050	1.016	0.843	0.748	0.647	0.981	17.46
31)	i	Chrysene-d12	ISTD											
32)	t	Benzo[a]anthracene		2.530	1.848	1.564	1.487	1.431	1.486	1.464	1.363	1.270	*L	0.9970
33)	t	3,3'-Dichlorobenzidine				0.520	0.544	0.563	0.626	0.694	0.664	0.619	0.604	10.63
34)	t	Chrysene	1.298	1.317	1.329	1.332	1.343	1.336	1.365	1.373	1.297	1.212	1.320	3.44
35)	T	bis(2-Ethylhexyl)phthalate				0.585	0.606	0.615	0.732	0.932	0.943	0.884	*L	0.9979
36)	i	Perylene-d12	ISTD											

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: Alpha Geoscience**	**Lab Number**	**: L2417074**
Project Name	**: RANCO SAND & GRAVEL**	**Project Number**	**: 12123**
Instrument ID	**: SV119**	**Ical Ref**	**: ICAL20642**
Calibration dates	**: 12/07/23 13:10 12/07/23 15:42**		

Calibration Files
L1 =IL1.D L2 =IL2.D L3 =IL3.D L4 =IL4.D L5 =IL5.D L6 =IL6.D L7 =IL7.D L8 =IL8.D
L9 =IL9.D L10 =IL10.D

	Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Avg	%RSD
37) t	Benzo[b]fluoranthene	1.513	1.472	1.474	1.420	1.462	1.457	1.506	1.366	1.213	1.091	1.397	9.93
38) t	Benzo[k]fluoranthene	1.429	1.404	1.420	1.430	1.443	1.413	1.377	1.233	1.133	0.987	1.327	11.80
39) t	Benzo[a]pyrene	1.272	1.281	1.279	1.262	1.288	1.281	1.306	1.222	1.105	1.003	1.230	7.99
40) t	Indeno[1,2,3-cd]pyrene	1.404	1.377	1.411	1.365	1.409	1.420	1.423	1.301	1.150	1.109	1.337	8.64
41) t	Dibenzo[a,h]anthracene	1.309	1.337	1.331	1.339	1.363	1.351	1.311	1.143	0.997	0.957	1.244	12.38
42) t	Benzo[g,h,i]perylene	1.473	1.463	1.458	1.432	1.450	1.466	1.429	1.255	1.107	1.065	1.360	11.61

Response Factor Report SV119

Method Path : I:\8270SIM\sv119\231207nLVIical\
Method File : SIM-LVI_231207n_sv119.M
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Fri Dec 08 13:55:26 2023
Response Via : Initial Calibration

Calibration Files
L1 =IL1.D L2 =IL2.D L3 =IL3.D L4 =IL4.D L5 =IL5.D L6 =IL6.D L7 =IL7.D L8 =IL8.D
L9 =IL9.D L10 =IL10.D

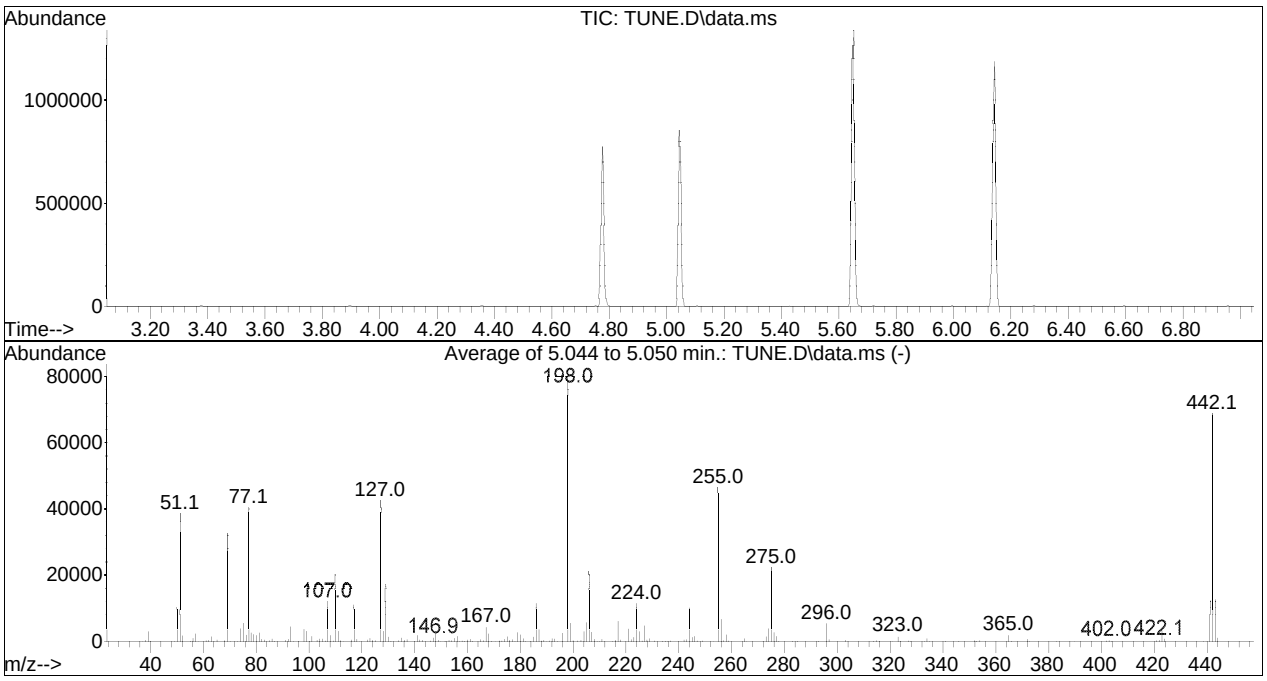
		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Avg	%RSD
1)	i	1,4-Dichlorobenzene-d4	ISTD											
2)	s	2-Fluorophenol	1.128	1.130	1.105	1.108	1.126	1.154	1.183	1.104	0.991	0.913	1.094	7.38
3)	s	Phenol-d6	1.431	1.310	1.266	1.271	1.295	1.318	1.344	1.361	1.291	1.227	1.311	4.35
4)	T	bis(2-Chloroethyl)ether	1.279	1.233	1.161	1.139	1.143	1.131	1.127	1.055	0.978	0.906	1.115	9.94
5)	T	n-Nitrosodi-n-propylamine	0.606	0.634	0.623	0.607	0.628	0.633	0.695	0.768	0.761	0.716	0.667	9.38
6)	t	Hexachloroethane	0.555	0.531	0.504	0.484	0.482	0.480	0.504	0.500	0.471	0.436	0.495	6.61
7)	s	Nitrobenzene-d5	0.909	1.019	0.996	0.951	0.985	1.001	1.054	1.070	1.020	0.943	0.995	5.02
8)	i	Naphthalene-d8	ISTD											
9)	t	Naphthalene	0.998	1.012	1.012	0.992	0.994	0.993	0.999	0.932	0.849	0.770	0.955	8.60
10)	t	Hexachlorobutadiene	0.221	0.210	0.218	0.218	0.216	0.214	0.217	0.199	0.181	0.164	0.206	9.28
11)	t	2-Methylnaphthalene	0.732	0.746	0.743	0.748	0.749	0.742	0.749	0.688	0.618	0.546	0.706	9.93
12)	t	1-Methylnaphthalene	0.707	0.693	0.703	0.693	0.699	0.686	0.677	0.610	0.553	0.491	0.651	11.50
13)	s	2-Fluorobiphenyl	0.988	0.971	0.984	0.978	0.990	0.959	0.936	0.808	0.713	0.607	0.893	15.29
14)	t	2-Chloronaphthalene	0.802	0.813	0.816	0.806	0.806	0.788	0.773	0.707	0.645	0.566	0.752	11.40
15)	t	2,6-Dinitrotoluene		0.164	0.169	0.162	0.166	0.164	0.174	0.190	0.182	0.159	0.170	6.08
16)	t	Acenaphthylene	1.199	1.148	1.165	1.153	1.164	1.163	1.188	1.114	1.014	0.872	1.118	9.00
17)	i	Acenaphthene-d10	ISTD											
18)	t	Acenaphthene	1.289	1.260	1.273	1.276	1.282	1.287	1.307	1.236	1.133	1.025	1.237	7.18
19)	t	2,4-Dinitrotoluene		0.323	0.315	0.326	0.331	0.350	0.402	0.450	0.431	0.390	0.369	13.78
20)	t	Fluorene	1.538	1.530	1.512	1.514	1.531	1.533	1.582	1.490	1.349	1.202	1.478	7.75
21)	s	2,4,6-Tribromophenol	0.215	0.214	0.203	0.207	0.204	0.214	0.239	0.253	0.241	0.216	0.221	7.87
22)	i	Phenanthrene-d10	ISTD											
23)	T	4,6-Dinitro-o-cresol						0.076	0.091	0.107	0.125	0.123	0.118	*L 0.9991
24)	t	Hexachlorobenzene	0.291	0.267	0.269	0.265	0.271	0.269	0.271	0.254	0.226	0.203	0.259	9.86
25)	t	Pentachlorophenol			0.121	0.128	0.132	0.135	0.156	0.176	0.171	0.161		*L 0.9984
26)	t	Phenanthrene	1.082	1.054	1.058	1.046	1.067	1.064	1.067	1.004	0.902	0.815	1.016	8.65
27)	t	Anthracene	1.043	1.060	1.044	1.030	1.045	1.043	1.068	1.015	0.912	0.815	1.008	8.01
28)	t	Fluoranthene	1.460	1.462	1.429	1.426	1.420	1.422	1.427	1.256	1.114	0.975	1.339	12.62
29)	t	Pyrene	1.523	1.533	1.507	1.491	1.466	1.461	1.439	1.248	1.108	0.982	1.376	14.11
30)	s	4-Terphenyl-d14	1.122	1.124	1.093	1.087	1.077	1.050	1.016	0.843	0.748	0.647	0.981	17.46
31)	i	Chrysene-d12	ISTD											
32)	t	Benzo[a]anthracene		2.530	1.848	1.564	1.487	1.431	1.486	1.464	1.363	1.270		*L 0.9970
33)	t	3,3'-Dichlorobenzidine				0.520	0.544	0.563	0.626	0.694	0.664	0.619	0.604	10.63
34)	t	Chrysene	1.298	1.317	1.329	1.332	1.343	1.336	1.365	1.373	1.297	1.212	1.320	3.44
35)	T	bis(2-Ethylhexyl)phthalate				0.585	0.606	0.615	0.732	0.932	0.943	0.884		*L 0.9979
36)	i	Perylene-d12	ISTD											
37)	t	Benzo[b]fluora...	1.513	1.472	1.474	1.420	1.462	1.457	1.506	1.366	1.213	1.091	1.397	9.93
38)	t	Benzo[k]fluora...	1.429	1.404	1.420	1.430	1.443	1.413	1.377	1.233	1.133	0.987	1.327	11.80
39)	t	Benzo[a]pyrene	1.272	1.281	1.279	1.262	1.288	1.281	1.306	1.222	1.105	1.003	1.230	7.99
40)	t	Indeno[1,2,3-c...	1.404	1.377	1.411	1.365	1.409	1.420	1.423	1.301	1.150	1.109	1.337	8.64
41)	t	Dibenzo[a,h]anthracene	1.309	1.337	1.331	1.339	1.363	1.351	1.311	1.143	0.997	0.957	1.244	12.38
42)	t	Benzo[g,h,i]pe...	1.473	1.463	1.458	1.432	1.450	1.466	1.429	1.255	1.107	1.065	1.360	11.61

(#) = Out of Range

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : TUNE.D
Acq On : 07 Dec 2023 12:42 pm
Operator : sv119:dv
Sample : TUNE
Misc : WG1861379,,ical
ALS Vial : 48 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_230307n_sv119.M
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Fri Dec 08 07:57:42 2023



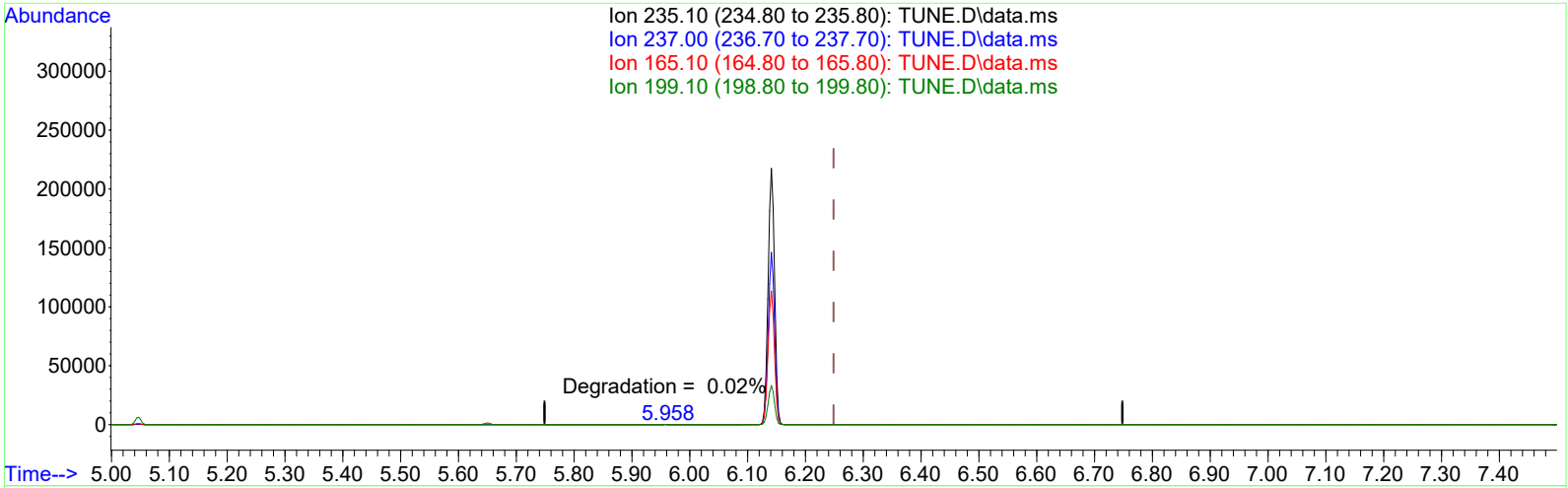
Spectrum Information: Average of 5.044 to 5.050 min.

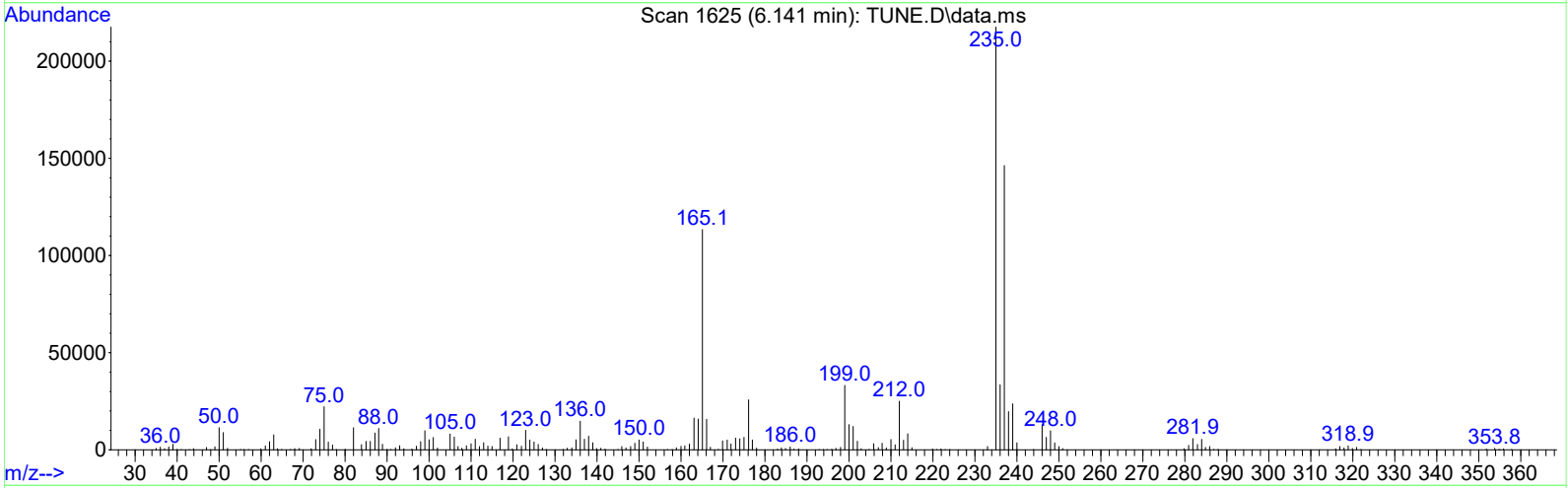
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	48.2	38435	PASS
68	69	0.00	2	1.5	504	PASS
69	69	100	100	100.0	32517	PASS
70	69	0.00	2	0.6	181	PASS
127	198	10	80	53.2	42363	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	79693	PASS
199	198	5	9	6.8	5457	PASS
275	198	10	60	27.9	22269	PASS
365	198	1	100	2.5	2011	PASS
441	442	0.01	24	18.2	12511	PASS
442	198	50	100	86.2	68669	PASS
443	442	15	24	18.7	12813	PASS

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : TUNE.D
Acq On : 07 Dec 2023 12:42 pm
Operator : sv119:dv
Sample : TUNE
Misc : WG1861379,,ical
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Dec 07 17:48:24 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Oct 22 21:59:55 2023
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D





TIC: TUNE.D\data.ms

(6) ddt (T)

6.141min (-0.108) 27.69

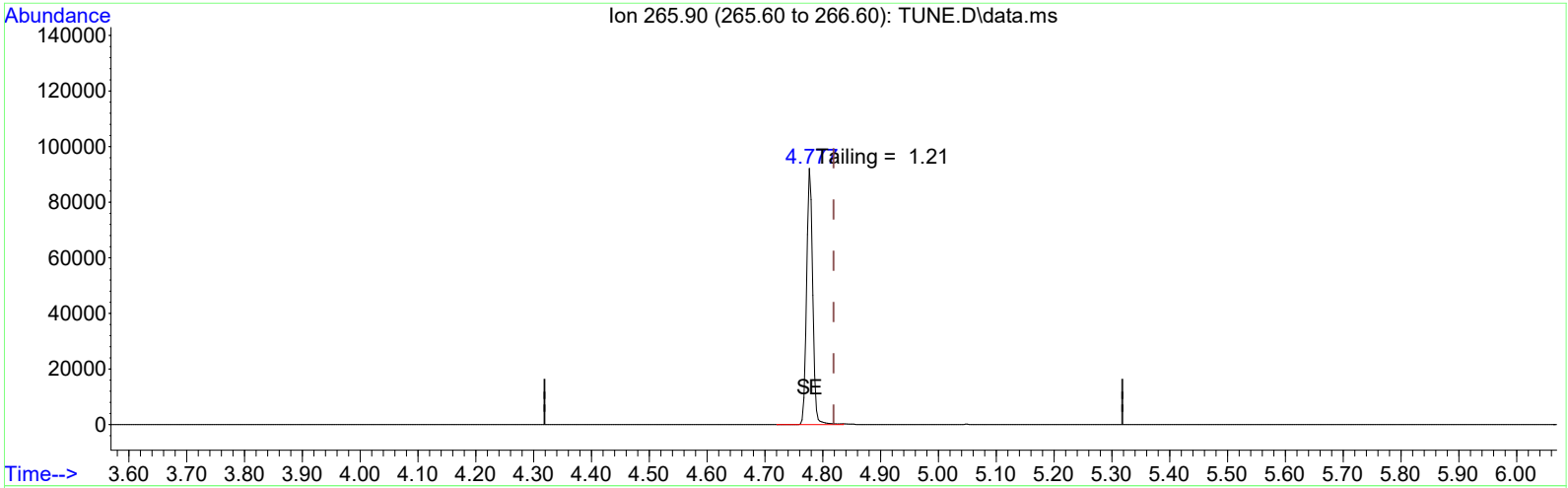
response 168780

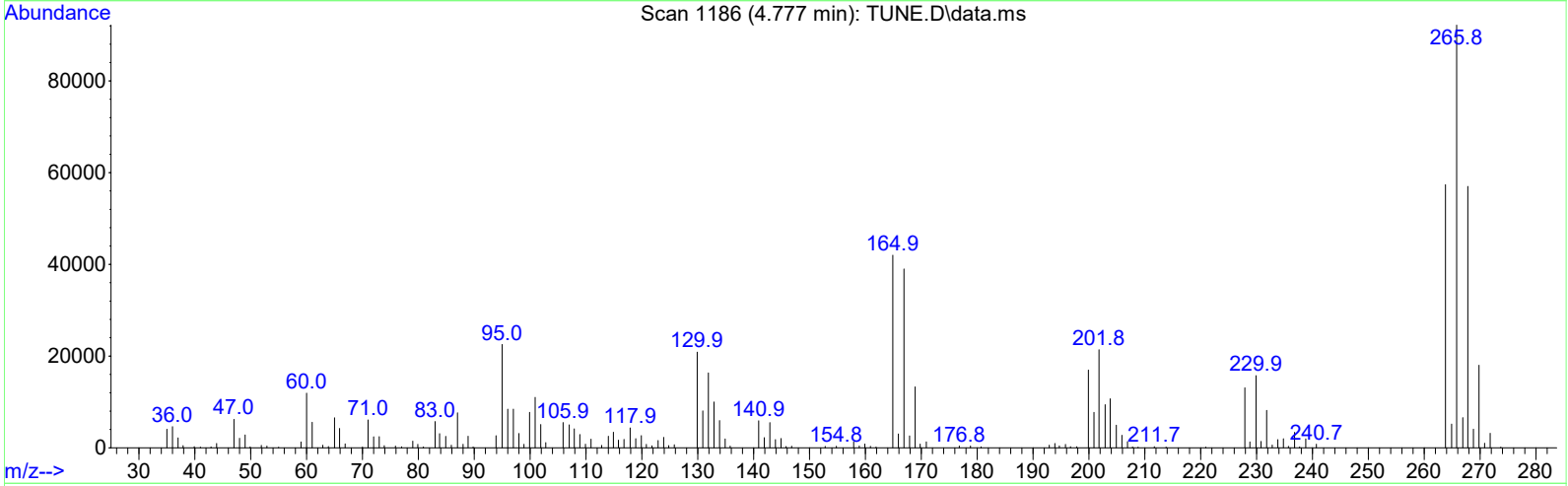
Ion	Exp%	Act%
235.10	100.00	100.00
237.00	65.60	66.10
165.10	53.30	51.32
199.10	17.10	14.92

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : TUNE.D
Acq On : 07 Dec 2023 12:42 pm
Operator : sv119:dv
Sample : TUNE
Misc : WG1861379,,ical
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Dec 07 17:48:24 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Oct 22 21:59:55 2023
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D





TIC: TUNE.D\data.ms

(1) pentachlorophenol (T)

4.777min (-0.042) 32.19

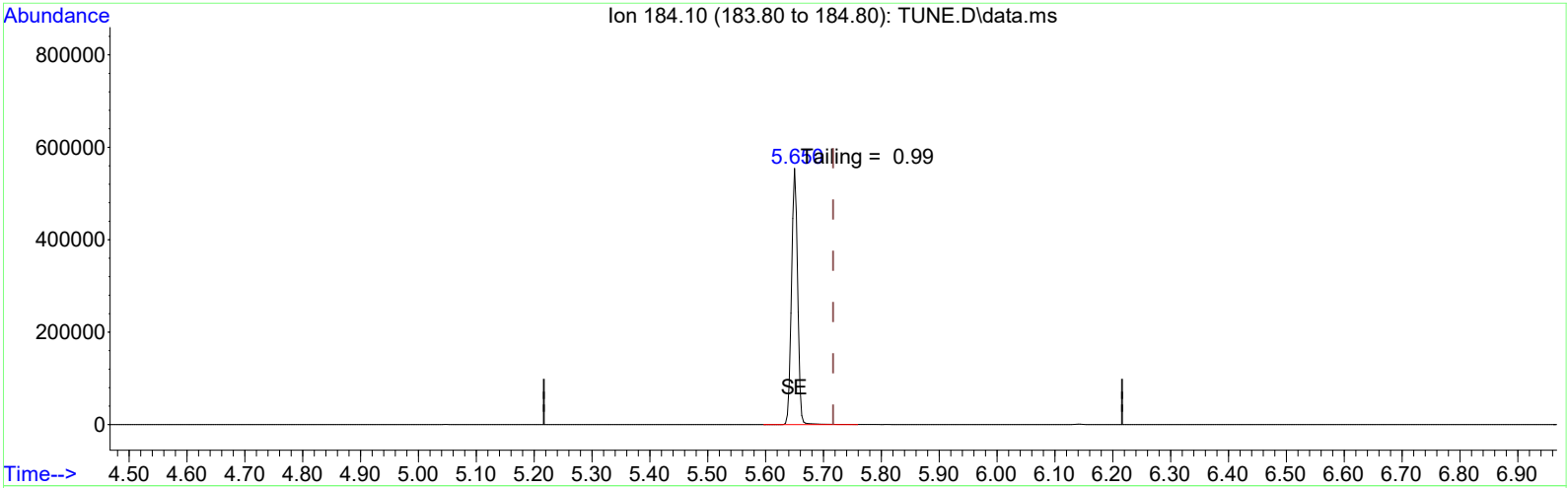
response 67620

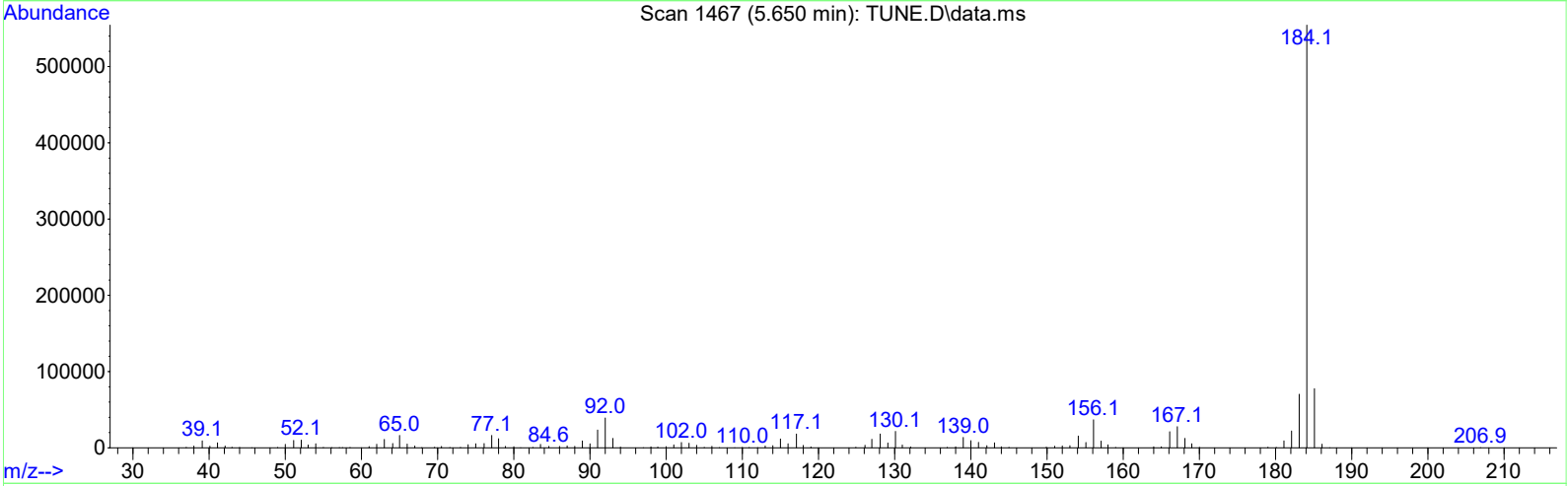
Ion	Exp%	Act%
265.90	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : TUNE.D
Acq On : 07 Dec 2023 12:42 pm
Operator : sv119:dv
Sample : TUNE
Misc : WG1861379,,ical
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Dec 07 17:48:24 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Sun Oct 22 21:59:55 2023
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D





TIC: TUNE.D\data.ms

(3) benzidine (T)

5.650min (-0.067) 40.09

response 408109

Ion	Exp%	Act%
184.10	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL10.D
Acq On : 07 Dec 2023 01:10 pm
Operator : sv119:dv
Sample : IL10,32,,20 Lot#10186
Misc : WG1861379,,ical
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:08:01 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:32:05 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.169	152	40861	4000.000	ng/ml	#-0.01
Standard Area 1 = 44131			Recovery = 92.59%			
8) Naphthalene-d8	2.832	136	155973	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 100.81%			
17) Acenaphthene-d10	3.809	164	85515	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 96.31%			
22) Phenanthrene-d10	4.651	188	190707	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 95.65%			
31) Chrysene-d12	6.265	240	152241	4000.000	ng/ml	0.07
Standard Area 1 = 198085			Recovery = 76.86%			
36) Perylene-d12	7.440	264	191579	4000.000	ng/ml	0.07
Standard Area 1 = 214743			Recovery = 89.21%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.567	112	186491	16686.494	ng/ml	-0.02
Spiked Amount 5000.000	Range 15 - 110		Recovery = 333.73%#			
3) Phenol-d6	1.980	99	250730	18715.673	ng/ml	-0.01
Spiked Amount 5000.000	Range 15 - 110		Recovery = 374.31%#			
7) Nitrobenzene-d5	2.450	82	192700	18962.762	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 758.51%#			
13) 2-Fluorobiphenyl	3.431	172	473158	13582.911	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 543.32%#			
21) 2,4,6-Tribromophenol	4.257	330	92508	19621.690	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 392.43%#			
30) 4-Terphenyl-d14	5.604	244	617330	13204.624	ng/ml	0.04
Spiked Amount 2500.000	Range 30 - 130		Recovery = 528.18%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.032	93	185151	16251.060	ng/ml	95
5) n-nitrosodi-n-propylamine	2.372	70	146273	21466.364	ng/ml#	89
6) Hexachloroethane	2.428	117	89168	17640.327	ng/ml	93
9) Naphthalene	2.845	128	600216	16116.112	ng/ml	99
10) Hexachlorobutadiene	2.919	225	127793	15933.038	ng/ml	100

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL10.D
Acq On : 07 Dec 2023 01:10 pm
Operator : sv119:dv
Sample : IL10,32,,20 Lot#10186
Misc : WG1861379,,ical
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:08:01 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:32:05 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
11) 2-Methylnaphthalene	3.225	142	425843	15464.273	ng/ml	95
12) 1-Methylnaphthalene	3.280	142	382653	15068.836	ng/ml	95
14) 2-Chloronaphthalene	3.496	162	441476	15050.592	ng/ml	98
15) 2,6-Dinitrotoluene	3.694	165	124084M4	18733.772	ng/ml	
16) Acenaphthylene	3.729	152	680215	15604.767	ng/ml	100
18) Acenaphthene	3.829	153	438420	16583.890	ng/ml	95
19) 2,4-Dinitrotoluene	3.921	165	166968	21183.449	ng/ml#	78
20) Fluorene	4.121	166	514064	16267.952	ng/ml	94
23) 4,6-Dinitro-o-cresol	4.153	198	112715	19617.410	ng/ml	93
24) Hexachlorobenzene	4.438	284	193903	15727.699	ng/ml	100
25) Pentachlorophenol	4.546	266	153186	19424.139	ng/ml	99
26) Phenanthrene	4.667	178	777282	16045.326	ng/ml	97
27) Anthracene	4.696	178	776770	16169.550	ng/ml	97
28) Fluoranthene	5.365	202	929267M6	14550.037	ng/ml	
29) Pyrene	5.501	202	936284	14274.318	ng/ml	100
32) Benzo[a]anthracene	6.259	228	966512	19121.130	ng/ml	97
33) 3,3'-Dichlorobenzidine	6.250	252	470850	20471.402	ng/ml	98
34) Chrysene	6.285	228	922604	18362.002	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.295	149	673097	19560.689	ng/ml	94
37) Benzo[b]fluoranthene	7.091	252	1045462	15620.402	ng/ml	96
38) Benzo[k]fluoranthene	7.117	252	945582M3	14878.547	ng/ml	
39) Benzo[a]pyrene	7.389	252	960572	16305.121	ng/ml	96
40) Indeno[1,2,3-cd]pyrene	8.629	276	1062548	16595.151	ng/ml	97
41) Dibenzo[a,h]anthracene	8.665	278	916705M6	15388.442	ng/ml	
42) Benzo[g,h,i]perylene	8.961	276	1020547	15670.008	ng/ml	95

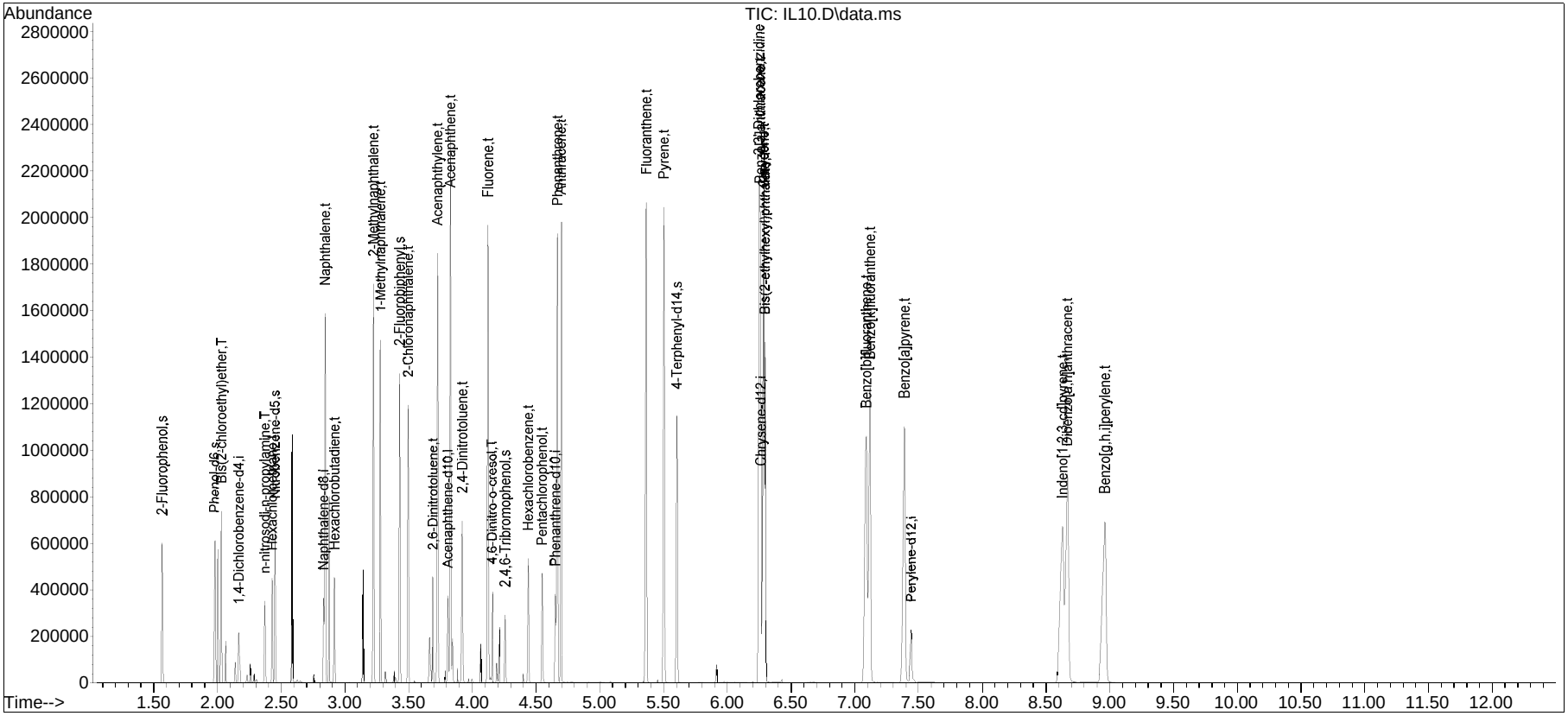
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL10.D
Acq On : 07 Dec 2023 01:10 pm
Operator : sv119:dv
Sample : IL10,32,,20 Lot#10186
Misc : WG1861379,,ical
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:08:01 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:32:05 2023
Response via : Initial Calibration

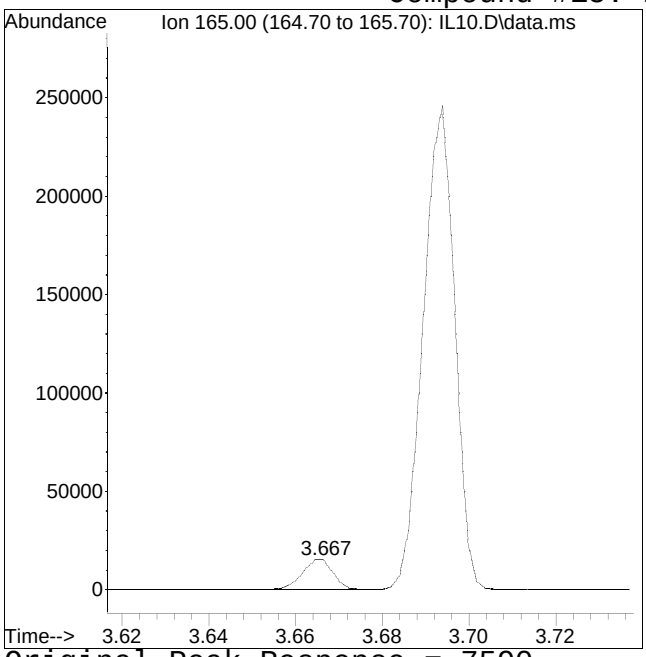
Sub List : Default - All compounds listedIical\IL7.D•



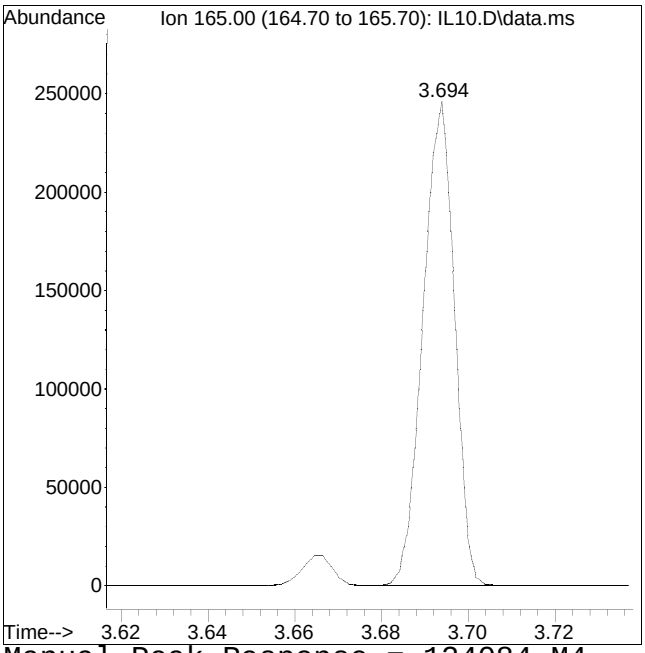
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL10.D Operator : sv119:dv
Date Inj'd : 12/7/2023 1:10 pm Instrument : SV119
Sample : IL10,32,,20 Lot#10186 Quant Date : 12/8/2023 1:32 pm

Compound #15: 2,6-Dinitrotoluene



Original Peak Response = 7590



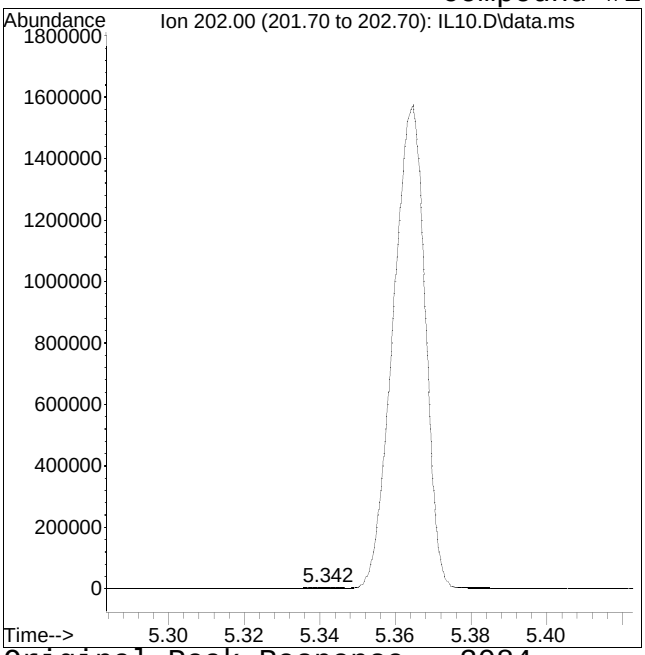
Manual Peak Response = 124084 M4

M4 = Poor automated baseline construction.

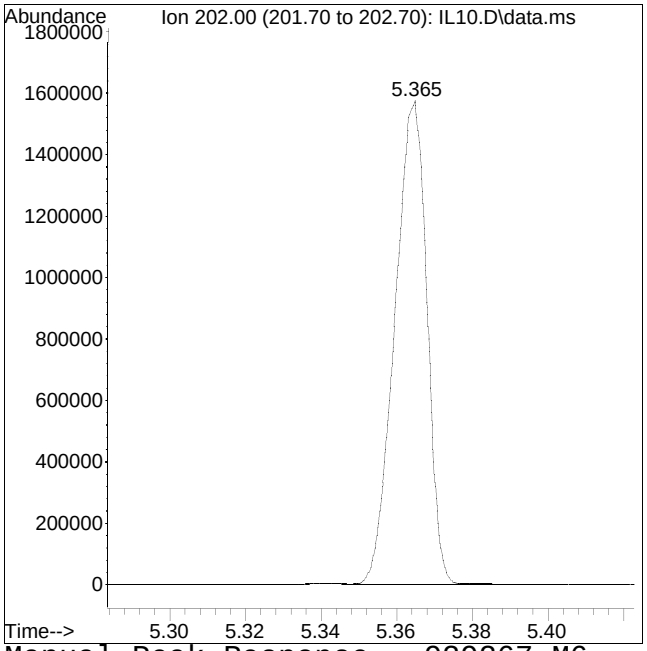
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL10.D Operator : sv119:dv
Date Inj'd : 12/7/2023 1:10 pm Instrument : SV119
Sample : IL10,32,,20 Lot#10186 Quant Date : 12/8/2023 1:32 pm

Compound #28: Fluoranthene



Original Peak Response = 3084



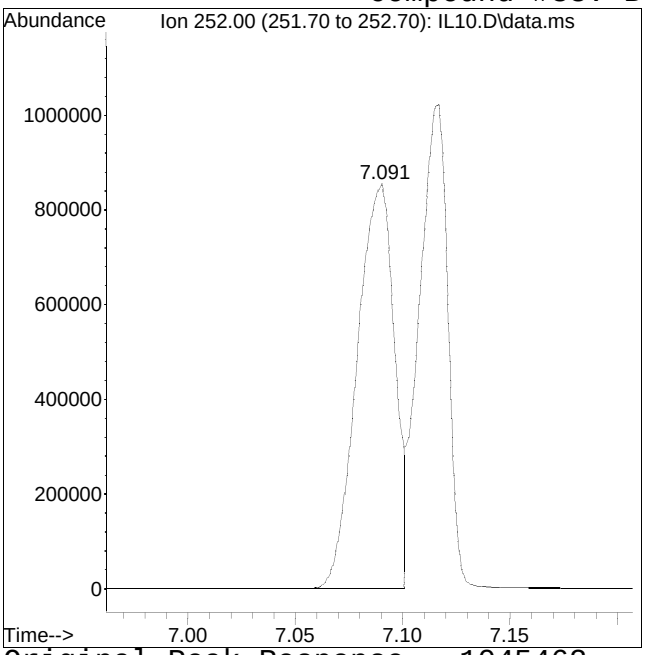
Manual Peak Response = 929267 M6

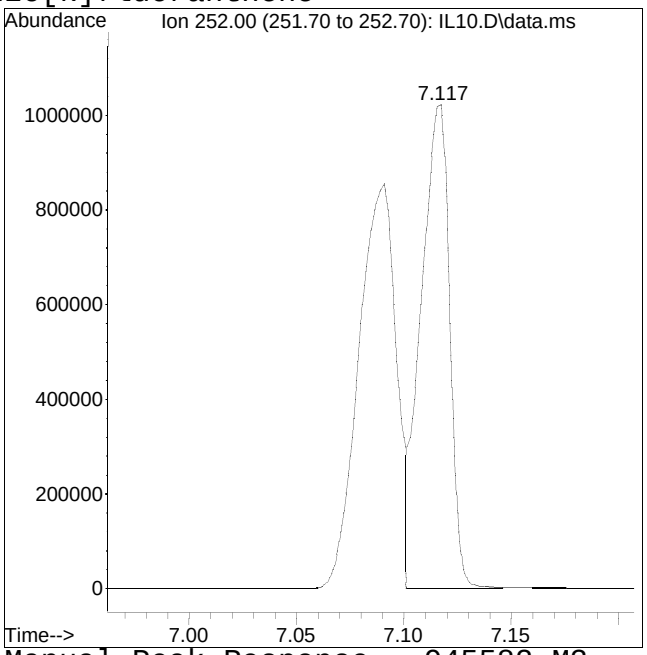
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL10.D Operator : sv119:dv
Date Inj'd : 12/7/2023 1:10 pm Instrument : SV119
Sample : IL10,32,,20 Lot#10186 Quant Date : 12/8/2023 1:32 pm

Compound #38: Benzo[k]fluoranthene



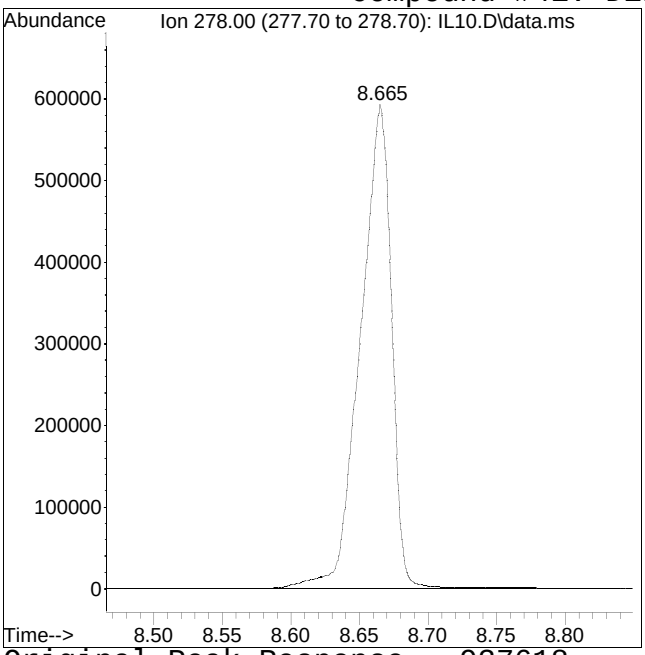


Original Peak Response = 1045462 Manual Peak Response = 945582 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

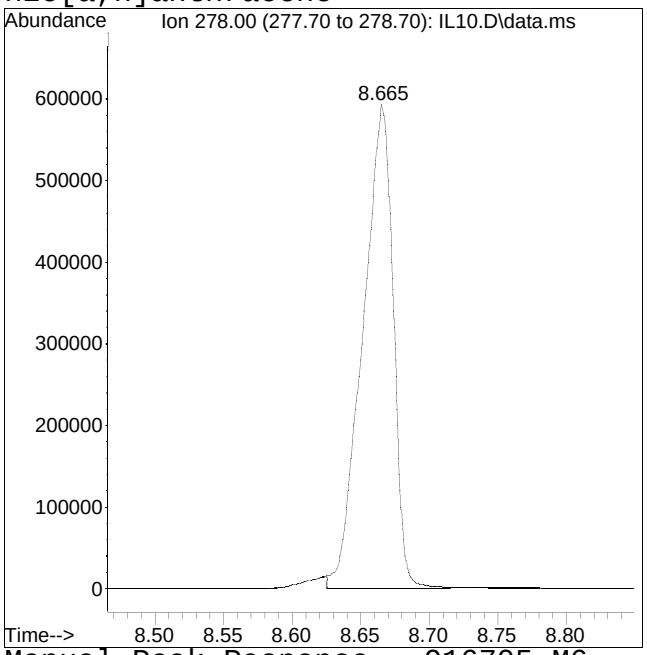
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL10.D Operator : sv119:dv
Date Inj'd : 12/7/2023 1:10 pm Instrument : SV119
Sample : IL10,32,,20 Lot#10186 Quant Date : 12/8/2023 1:32 pm

Compound #41: Dibenzo[a,h]anthracene



Original Peak Response = 937618



Manual Peak Response = 916705 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL9.D
Acq On : 07 Dec 2023 01:27 pm
Operator : sv119:dv
Sample : IL9,32,,10 Lot#10227
Misc : WG1861379,,ical
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 08 13:36:23 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:36:28 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.181	152	43469	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 98.50%			
8) Naphthalene-d8	2.841	136	167563	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 108.30%			
17) Acenaphthene-d10	3.810	164	95878	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 107.98%			
22) Phenanthrene-d10	4.648	188	219561	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 110.12%			
31) Chrysene-d12	6.211	240	183655	4000.000	ng/ml	0.01
Standard Area 1 = 198085			Recovery = 92.72%			
36) Perylene-d12	7.380	264	212358	4000.000	ng/ml	0.01
Standard Area 1 = 214743			Recovery = 98.89%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.583	112	107742	9061.949	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 181.24%#			
3) Phenol-d6	1.991	99	140242	9840.260	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 196.81%#			
7) Nitrobenzene-d5	2.459	82	110881	10256.669	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 410.27%#			
13) 2-Fluorobiphenyl	3.433	172	298612	7979.308	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 319.17%#			
21) 2,4,6-Tribromophenol	4.255	330	57671	10910.331	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 218.21%#			
30) 4-Terphenyl-d14	5.573	244	410542	7627.421	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 305.10%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.043	93	106309	8771.119	ng/ml	96
5) n-nitrosodi-n-propylamine	2.380	70	82666	11403.826	ng/ml#	89
6) Hexachloroethane	2.438	117	51193	9520.013	ng/ml	92
9) Naphthalene	2.851	128	355672	8889.425	ng/ml	99
10) Hexachlorobutadiene	2.926	225	75668	8781.629	ng/ml	100
11) 2-Methylnaphthalene	3.229	142	258724	8745.568	ng/ml	96
12) 1-Methylnaphthalene	3.283	142	231827	8497.866	ng/ml	96
14) 2-Chloronaphthalene	3.498	162	270055	8569.787	ng/ml	97
15) 2,6-Dinitrotoluene	3.693	165	76081	10691.951	ng/ml#	77

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL9.D
Acq On : 07 Dec 2023 01:27 pm
Operator : sv119:dv
Sample : IL9,32,,10 Lot#10227
Misc : WG1861379,,ical
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 08 13:36:23 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:36:28 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
16) Acenaphthylene	3.730	152	424720	9069.536 ng/ml	100
18) Acenaphthene	3.828	153	271474	9158.991 ng/ml	96
19) 2,4-Dinitrotoluene	3.920	165	103349	11694.806 ng/ml#	78
20) Fluorene	4.118	166	323294	9125.080 ng/ml	95
23) 4,6-Dinitro-o-cresol	4.149	198	67527	10230.031 ng/ml	91
24) Hexachlorobenzene	4.435	284	123915	8730.035 ng/ml	99
25) Pentachlorophenol	4.543	266	93745	10330.247 ng/ml	99
26) Phenanthrene	4.662	178	495220	8879.317 ng/ml	98
27) Anthracene	4.689	178	500661	9052.337 ng/ml	98
28) Fluoranthene	5.344	202	611510	8316.461 ng/ml	96
29) Pyrene	5.475	202	608403	8056.577 ng/ml	99
32) Benzo[a]anthracene	6.205	228	625915	10259.834 ng/ml	98
33) 3,3'-Dichlorobenzidine	6.194	252	304841	10986.700 ng/ml	99
34) Chrysene	6.228	228	595338	9821.938 ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.239	149	433194	10450.769 ng/ml	96
37) Benzo[b]fluoranthene	7.027	252	644077	8681.625 ng/ml	96
38) Benzo[k]fluoranthene	7.053	252	601617	8540.056 ng/ml	99
39) Benzo[a]pyrene	7.325	252	586685	8984.178 ng/ml	97
40) Indeno[1,2,3-cd]pyrene	8.561	276	610407	8600.653 ng/ml	96
41) Dibenzo[a,h]anthracene	8.597	278	529204M6	8014.334 ng/ml	
42) Benzo[g,h,i]perylene	8.891	276	587668	8140.433 ng/ml	94

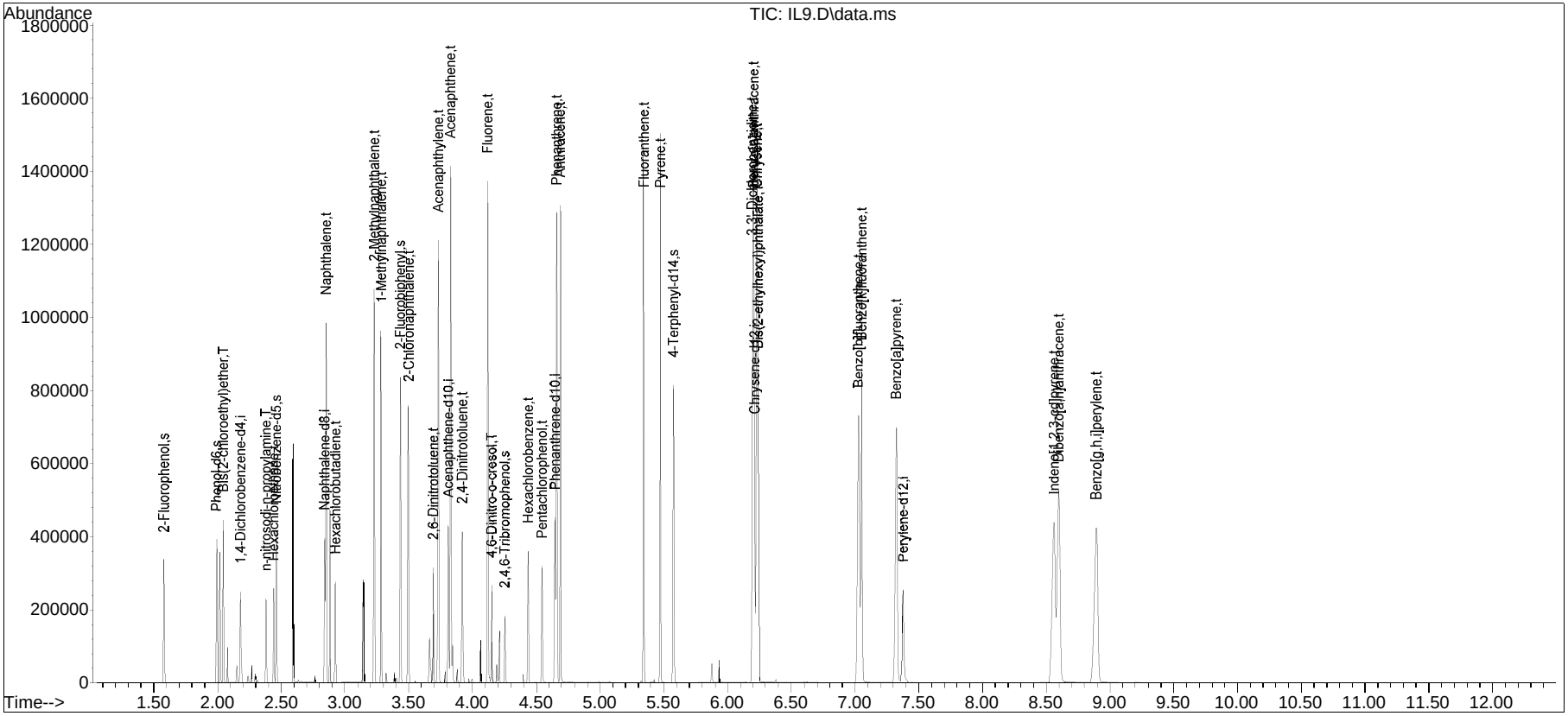
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL9.D
Acq On : 07 Dec 2023 01:27 pm
Operator : sv119:dv
Sample : IL9,32,,10 Lot#10227
Misc : WG1861379,,ical
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 08 13:36:23 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:36:28 2023
Response via : Initial Calibration

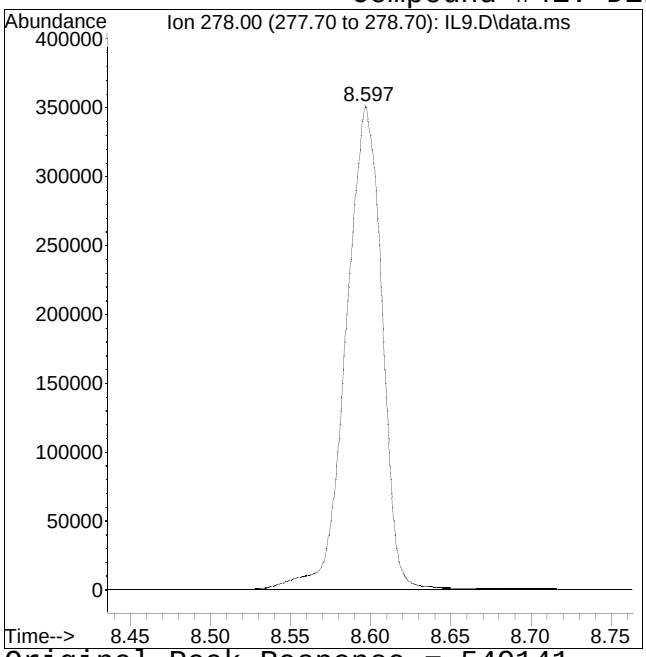
Sub List : Default - All compounds listedIical\IL7.D•



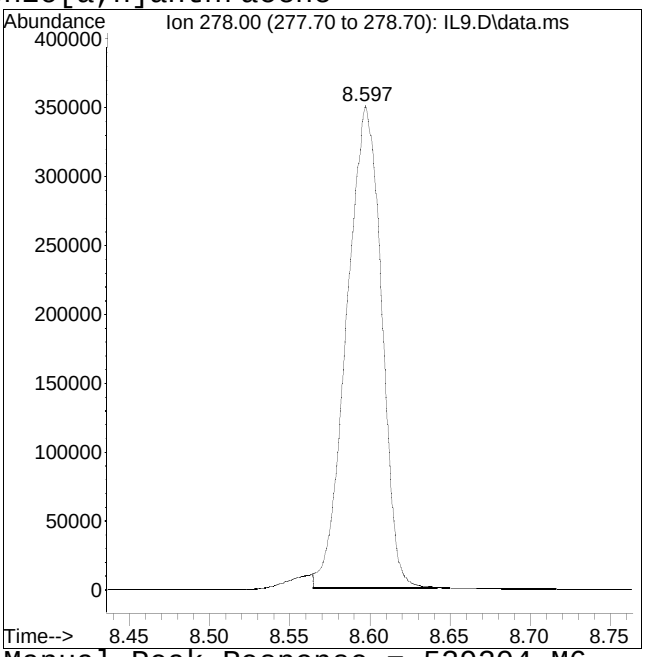
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL9.D Operator : sv119:dv
Date Inj'd : 12/7/2023 1:27 pm Instrument : SV119
Sample : IL9,32,,10 Lot#10227 Quant Date : 12/8/2023 1:36 pm

Compound #41: Dibenzo[a,h]anthracene



Original Peak Response = 549141



Manual Peak Response = 529204 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL8.D
Acq On : 07 Dec 2023 01:46 pm
Operator : sv119:dv
Sample : IL8,32,,5 Lot#10228
Misc : WG1861379,,ical
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 13:36:06 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:36:12 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.175	152	45223	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 102.47%			
8) Naphthalene-d8	2.834	136	168691	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 109.03%			
17) Acenaphthene-d10	3.807	164	96018	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 108.14%			
22) Phenanthrene-d10	4.645	188	214713	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 107.69%			
31) Chrysene-d12	6.222	240	183329	4000.000	ng/ml	0.02
Standard Area 1 = 198085			Recovery = 92.55%			
36) Perylene-d12	7.391	264	211224	4000.000	ng/ml	0.02
Standard Area 1 = 214743			Recovery = 98.36%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.575	112	62387	5043.720	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 100.87%			
3) Phenol-d6	1.982	99	76953	5190.083	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 103.80%			
7) Nitrobenzene-d5	2.452	82	60459	5375.644	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 215.03%#			
13) 2-Fluorobiphenyl	3.431	172	170356	4521.699	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 180.87%#			
21) 2,4,6-Tribromophenol	4.250	330	30337	5730.855	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 114.62%#			
30) 4-Terphenyl-d14	5.579	244	226214	4297.703	ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 130		Recovery = 171.91%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.037	93	59640	4729.801	ng/ml	96
5) n-nitrosodi-n-propylamine	2.373	70	43424	5758.028	ng/ml#	89
6) Hexachloroethane	2.433	117	28289	5056.673	ng/ml	91
9) Naphthalene	2.845	128	196627	4881.501	ng/ml	100
10) Hexachlorobutadiene	2.921	225	41895	4829.601	ng/ml	100
11) 2-Methylnaphthalene	3.224	142	145094	4871.772	ng/ml	97
12) 1-Methylnaphthalene	3.280	142	128641	4683.942	ng/ml	97
14) 2-Chloronaphthalene	3.494	162	148988	4696.294	ng/ml	96
15) 2,6-Dinitrotoluene	3.688	165	40127	5601.491	ng/ml#	76
16) Acenaphthylene	3.727	152	234925	4983.080	ng/ml	100
18) Acenaphthene	3.825	153	148307	4996.287	ng/ml	96

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL8.D
Acq On : 07 Dec 2023 01:46 pm
Operator : sv119:dv
Sample : IL8,32,,5 Lot#10228
Misc : WG1861379,,ical
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 13:36:06 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:36:12 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.915	165	53966	6097.802	ng/ml#	78
20) Fluorene	4.114	166	178798	5039.274	ng/ml	97
23) 4,6-Dinitro-o-cresol	4.143	198	33622	5230.937	ng/ml	91
24) Hexachlorobenzene	4.432	284	68110	4906.817	ng/ml	98
25) Pentachlorophenol	4.542	266	47244	5329.229	ng/ml	100
26) Phenanthrene	4.659	178	269467	4940.647	ng/ml	99
27) Anthracene	4.686	178	272423	5036.833	ng/ml	99
28) Fluoranthene	5.345	202	337208	4689.535	ng/ml	96
29) Pyrene	5.479	202	335005	4536.358	ng/ml	99
32) Benzo[a]anthracene	6.216	228	335541	5504.916	ng/ml	99
33) 3,3'-Dichlorobenzidine	6.205	252	159144	5745.869	ng/ml	99
34) Chrysene	6.240	228	314746	5201.941	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.252	149	213688	5180.811	ng/ml	97
37) Benzo[b]fluoranthene	7.040	252	360629	4887.078	ng/ml	98
38) Benzo[k]fluoranthene	7.062	252	325647	4647.432	ng/ml	98
39) Benzo[a]pyrene	7.336	252	322721	4968.508	ng/ml	99
40) Indeno[1,2,3-cd]pyrene	8.568	276	343512	4866.080	ng/ml	95
41) Dibenzo[a,h]anthracene	8.606	278	301778	4594.701	ng/ml	96
42) Benzo[g,h,i]perylene	8.899	276	331306	4613.921	ng/ml	94

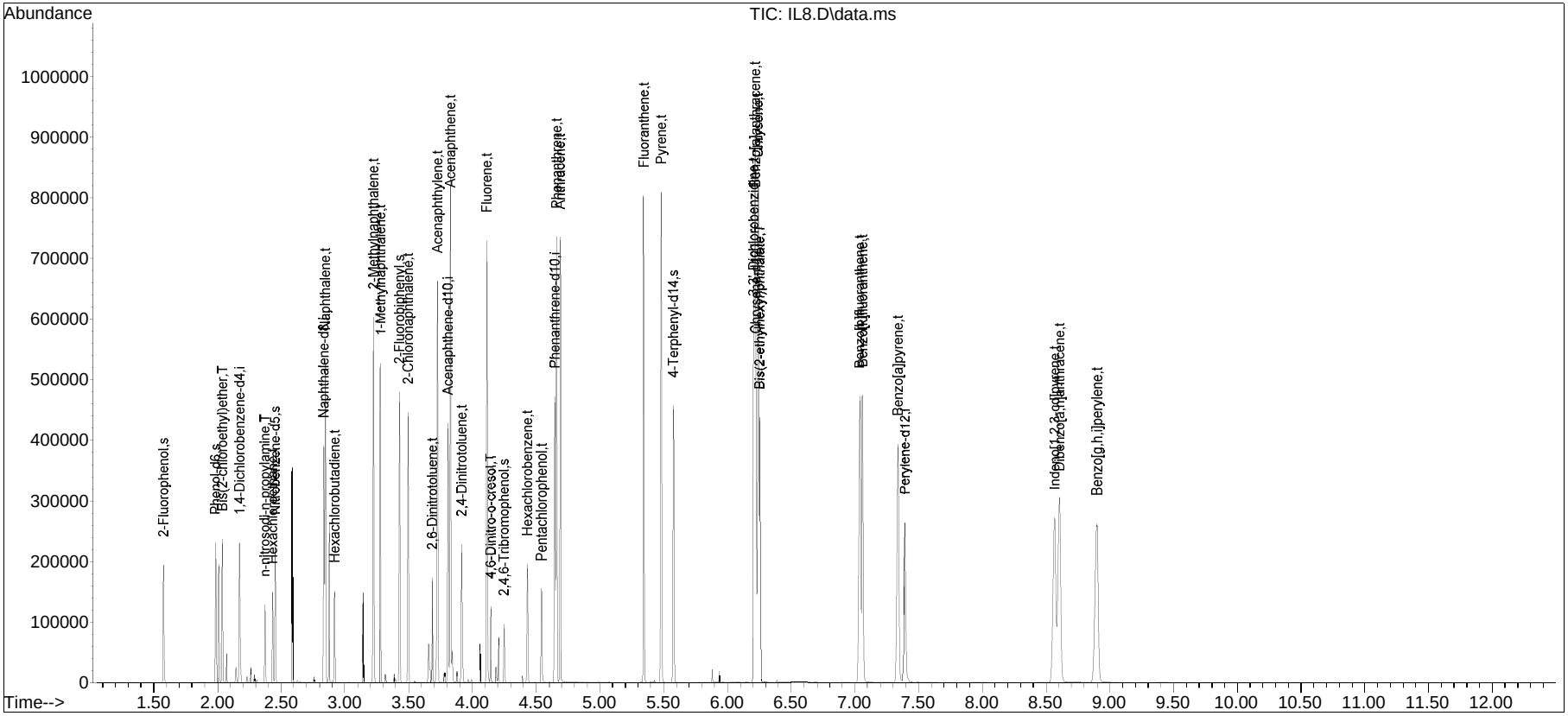
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL8.D
Acq On : 07 Dec 2023 01:46 pm
Operator : sv119:dv
Sample : IL8,32,,5 Lot#10228
Misc : WG1861379,,ical
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 13:36:06 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:36:12 2023
Response via : Initial Calibration

Sub List : Default - All compounds listedIical\IL7.D•



Manual Integration Report

Data Path	: I:\8270SIM\sv119\231207nLVQ	Method	: SIM-LVI_231207n_sv119.M
Data File	: IL8.D	Operator	: sv119:dv
Date Inj'd	: 12/7/2023 1:46 pm	Instrument	: SV119
Sample	: IL8,32,,5 Lot#10228	Quant Date	: 12/8/2023 1:36 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL7.D
Acq On : 07 Dec 2023 02:03 pm
Operator : sv119:dv
Sample : IL7,32,,1 Lot#10229
Misc : WG1861379,,ical
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 08 13:35:39 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:35:44 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.180	152	44131	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 100.00%			
8) Naphthalene-d8	2.839	136	154719	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 100.00%			
17) Acenaphthene-d10	3.808	164	88793	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 100.00%			
22) Phenanthrene-d10	4.643	188	199383	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 100.00%			
31) Chrysene-d12	6.199	240	198085	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 100.00%			
36) Perylene-d12	7.367	264	214743	4000.000	ng/ml	0.00
Standard Area 1 = 214743			Recovery = 100.00%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.584	112	13052	1081.308	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 21.63%			
3) Phenol-d6	1.991	99	14828	1024.818	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 20.50%			
7) Nitrobenzene-d5	2.459	82	11630	1059.656	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 42.39%			
13) 2-Fluorobiphenyl	3.433	172	36191	1047.353	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 41.89%			
21) 2,4,6-Tribromophenol	4.251	330	5316	1085.940	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 21.72%			
30) 4-Terphenyl-d14	5.566	244	50636	1035.969	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 41.44%			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.046	93	12434	1010.489	ng/ml	96
5) n-nitrosodi-n-propylamine	2.380	70	7670	1042.209	ng/ml#	90
6) Hexachloroethane	2.439	117	5556	1017.712	ng/ml	90
9) Naphthalene	2.850	128	38622	1045.426	ng/ml	100
10) Hexachlorobutadiene	2.924	225	8393	1054.908	ng/ml	100
11) 2-Methylnaphthalene	3.227	142	28982	1060.997	ng/ml	99
12) 1-Methylnaphthalene	3.282	142	26185	1039.520	ng/ml	99
14) 2-Chloronaphthalene	3.496	162	29915	1028.114	ng/ml	97
15) 2,6-Dinitrotoluene	3.688	165	6741	1025.982	ng/ml#	79
16) Acenaphthylene	3.727	152	45948	1062.633	ng/ml	100
18) Acenaphthene	3.825	153	29003	1056.580	ng/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL7.D
Acq On : 07 Dec 2023 02:03 pm
Operator : sv119:dv
Sample : IL7,32,,1 Lot#10229
Misc : WG1861379,,ical
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 08 13:35:39 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:35:44 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.915	165	8924	1090.402	ng/ml#	79
20) Fluorene	4.114	166	35110	1070.065	ng/ml	99
23) 4,6-Dinitro-o-cresol	4.142	198	5322	929.435	ng/ml	93
24) Hexachlorobenzene	4.430	284	13522	1049.059	ng/ml	97
25) Pentachlorophenol	4.540	266	7782	954.860	ng/ml	100
26) Phenanthrene	4.657	178	53179	1049.998	ng/ml	100
27) Anthracene	4.685	178	53215	1059.542	ng/ml	100
28) Fluoranthene	5.338	202	71129	1065.243	ng/ml	95
29) Pyrene	5.468	202	71713	1045.741	ng/ml	99
32) Benzo[a]anthracene	6.190	228	73568	1108.505	ng/ml	100
33) 3,3'-Dichlorobenzidine	6.180	252	30996	1035.740	ng/ml	99
34) Chrysene	6.214	228	67585	1033.797	ng/ml	99
35) Bis(2-ethylhexyl)phtha...	6.229	149	36273	841.310	ng/ml	97
37) Benzo[b]fluoranthene	7.009	252	80852	1077.714	ng/ml	99
38) Benzo[k]fluoranthene	7.031	252	73945	1038.004	ng/ml	100
39) Benzo[a]pyrene	7.305	252	70119	1061.839	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.538	276	76383	1064.286	ng/ml	95
41) Dibenzo[a,h]anthracene	8.574	278	70388M6	1054.126	ng/ml	
42) Benzo[g,h,i]perylene	8.861	276	76727	1051.026	ng/ml	94

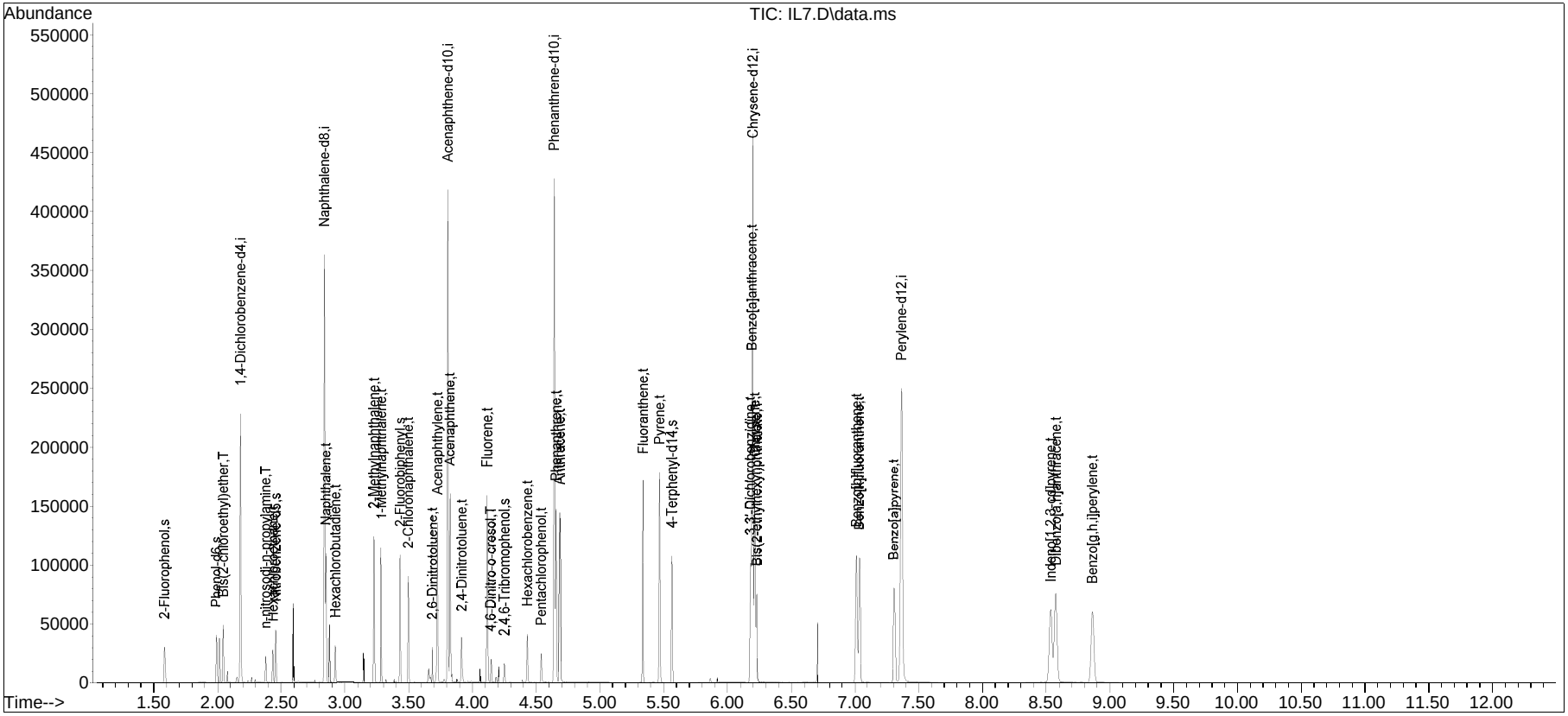
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL7.D
Acq On : 07 Dec 2023 02:03 pm
Operator : sv119:dv
Sample : IL7,32,,1 Lot#10229
Misc : WG1861379,,ical
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 08 13:35:39 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:35:44 2023
Response via : Initial Calibration

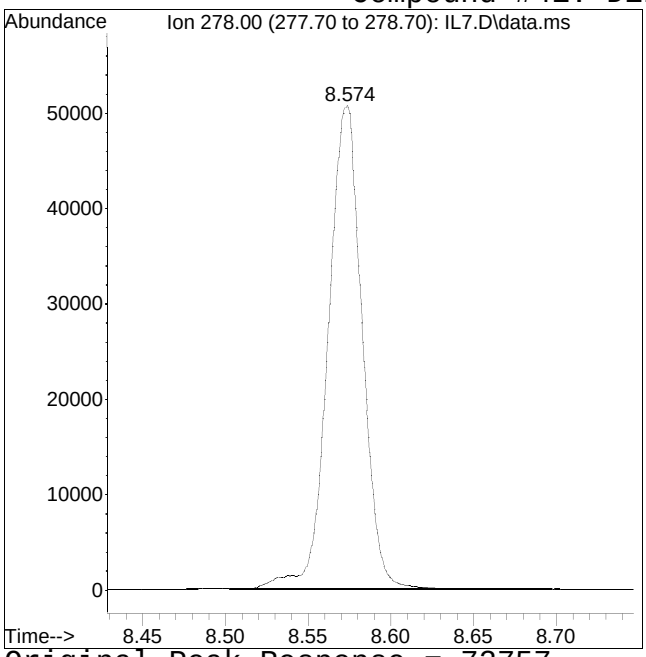
Sub List : Default - All compounds listedIical\IL7.D•



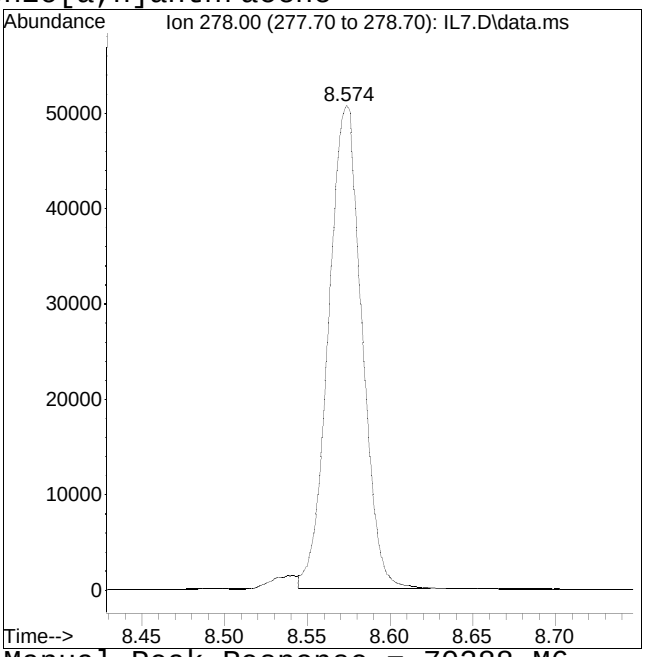
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL7.D Operator : sv119:dv
Date Inj'd : 12/7/2023 2:03 pm Instrument : SV119
Sample : IL7,32,,1 Lot#10229 Quant Date : 12/8/2023 1:35 pm

Compound #41: Dibenzo[a,h]anthracene



Original Peak Response = 72757



Manual Peak Response = 70388 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL6.D
Acq On : 07 Dec 2023 02:20 pm
Operator : sv119:dv
Sample : IL6,32,,0.25 Lot#10230
Misc : WG1861379,,ical
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 08 13:35:27 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:35:32 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.183	152	44082	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 99.89%			
8) Naphthalene-d8	2.839	136	149961	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 96.92%			
17) Acenaphthene-d10	3.807	164	86556	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 97.48%			
22) Phenanthrene-d10	4.643	188	191611	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 96.10%			
31) Chrysene-d12	6.197	240	198571	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 100.25%			
36) Perylene-d12	7.367	264	212398	4000.000	ng/ml	0.00
Standard Area 1 = 214743			Recovery = 98.91%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.588	112	3179	263.661	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 5.27%#			
3) Phenol-d6	1.991	99	3632	251.300	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 5.03%#			
7) Nitrobenzene-d5	2.460	82	2758	251.572	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 10.06%#			
13) 2-Fluorobiphenyl	3.433	172	8986	268.302	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 10.73%#			
21) 2,4,6-Tribromophenol	4.251	330	1156	242.248	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 4.84%#			
30) 4-Terphenyl-d14	5.566	244	12569	267.581	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 10.70%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.048	93	3117	253.595	ng/ml	95
5) n-nitrosodi-n-propylamine	2.383	70	1743	237.104	ng/ml#	89
6) Hexachloroethane	2.441	117	1323	242.608	ng/ml	90
9) Naphthalene	2.850	128	9306	259.888	ng/ml	100
10) Hexachlorobutadiene	2.925	225	2010	260.651	ng/ml	99
11) 2-Methylnaphthalene	3.229	142	6950	262.504	ng/ml	100
12) 1-Methylnaphthalene	3.282	142	6433	263.487	ng/ml	99
14) 2-Chloronaphthalene	3.496	162	7386	261.895	ng/ml	97
15) 2,6-Dinitrotoluene	3.688	165	1533	240.726	ng/ml#	80
16) Acenaphthylene	3.725	152	10901	260.105	ng/ml	100
18) Acenaphthene	3.825	153	6960	260.106	ng/ml	100

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL6.D
Acq On : 07 Dec 2023 02:20 pm
Operator : sv119:dv
Sample : IL6,32,,0.25 Lot#10230
Misc : WG1861379,,ical
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 08 13:35:27 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:35:32 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.913	165	1896	237.655	ng/ml#	78
20) Fluorene	4.114	166	8295	259.345	ng/ml	99
23) 4,6-Dinitro-o-cresol	4.142	198	1088	233.562	ng/ml	89
24) Hexachlorobenzene	4.430	284	3216	259.623	ng/ml	99
25) Pentachlorophenol	4.540	266	1613	215.040	ng/ml	100
26) Phenanthrene	4.657	178	12748	261.914	ng/ml	99
27) Anthracene	4.684	178	12492	258.812	ng/ml	100
28) Fluoranthene	5.337	202	17035	265.468	ng/ml	96
29) Pyrene	5.468	202	17494	265.450	ng/ml	99
32) Benzo[a]anthracene	6.191	228	17754	258.716	ng/ml	99
33) 3,3'-Dichlorobenzidine	6.180	252	6990	233.001	ng/ml	99
34) Chrysene	6.212	228	16577	252.945	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.227	149	7628	202.170	ng/ml	98
37) Benzo[b]fluoranthene	7.007	252	19335	260.571	ng/ml	98
38) Benzo[k]fluoranthene	7.032	252	18759	266.237	ng/ml	98
39) Benzo[a]pyrene	7.306	252	17009	260.418	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.534	276	18848	265.519	ng/ml	94
41) Dibenzo[a,h]anthracene	8.570	278	17933	271.529	ng/ml	95
42) Benzo[g,h,i]perylene	8.861	276	19460	269.511	ng/ml	93

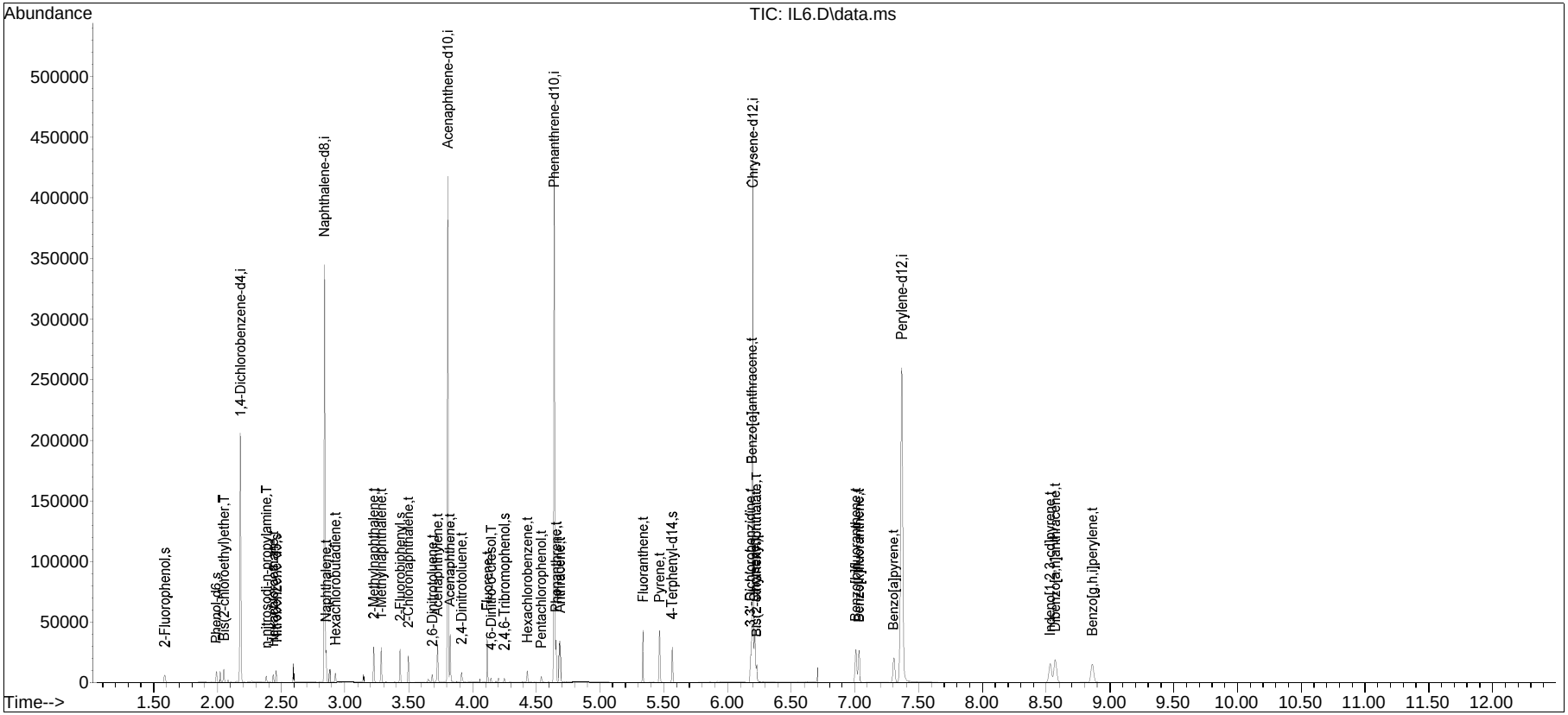
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL6.D
Acq On : 07 Dec 2023 02:20 pm
Operator : sv119:dv
Sample : IL6,32,,0.25 Lot#10230
Misc : WG1861379,,ical
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 08 13:35:27 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:35:32 2023
Response via : Initial Calibration

Sub List : Default - All compounds listedIical\IL7.D•



Manual Integration Report

Data Path	: I:\8270SIM\sv119\231207nLVQ	Method	: SIM-LVI_231207n_sv119.M
Data File	: IL6.D	Operator	: sv119:dv
Date Inj'd	: 12/7/2023 2:20 pm	Instrument	: SV119
Sample	: IL6,32,,0.25 Lot#10230	Quant Date	: 12/8/2023 1:35 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL5.D
Acq On : 07 Dec 2023 02:36 pm
Operator : sv119:dv
Sample : IL5,32,,0.1 Lot#10231
Misc : WG1861379,,ical
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 08 13:34:32 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:34:38 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.183	152	47445	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 107.51%			
8) Naphthalene-d8	2.840	136	160378	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 103.66%			
17) Acenaphthene-d10	3.808	164	93545	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 105.35%			
22) Phenanthrene-d10	4.643	188	206792	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 103.72%			
31) Chrysene-d12	6.193	240	213684	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 107.87%			
36) Perylene-d12	7.360	264	220747	4000.000	ng/ml	0.00
Standard Area 1 = 214743			Recovery = 102.80%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.592	112	1335	102.874	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 2.06%#			
3) Phenol-d6	1.994	99	1536	98.744	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 1.97%#			
7) Nitrobenzene-d5	2.462	82	1168	98.988	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 3.96%#			
13) 2-Fluorobiphenyl	3.433	172	3971	110.864	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 4.43%#			
21) 2,4,6-Tribromophenol	4.251	330	478	92.684	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 1.85%#			
30) 4-Terphenyl-d14	5.564	244	5567	109.815	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 4.39%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.051	93	1356	102.502	ng/ml	95
5) n-nitrosodi-n-propylamine	2.385	70	745	94.161	ng/ml#	90
6) Hexachloroethane	2.442	117	572	97.457	ng/ml	92
9) Naphthalene	2.852	128	3987	104.113	ng/ml	99
10) Hexachlorobutadiene	2.925	225	867	105.127	ng/ml	98
11) 2-Methylnaphthalene	3.229	142	3004	106.092	ng/ml	100
12) 1-Methylnaphthalene	3.284	142	2803	107.350	ng/ml	99
14) 2-Chloronaphthalene	3.496	162	3232	107.157	ng/ml	98
15) 2,6-Dinitrotoluene	3.688	165	664	97.495	ng/ml#	85
16) Acenaphthylene	3.727	152	4667	104.125	ng/ml	100
18) Acenaphthene	3.825	153	2997	103.635	ng/ml	100

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL5.D
Acq On : 07 Dec 2023 02:36 pm
Operator : sv119:dv
Sample : IL5,32,,0.1 Lot#10231
Misc : WG1861379,,ical
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 08 13:34:32 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:34:38 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.915	165	773	89.653	ng/ml#	79
20) Fluorene	4.114	166	3580	103.567	ng/ml	100
23) 4,6-Dinitro-o-cresol	4.142	198	394	108.626	ng/ml	89
24) Hexachlorobenzene	4.430	284	1400	104.723	ng/ml	99
25) Pentachlorophenol	4.540	266	682	91.300	ng/ml	95
26) Phenanthrene	4.655	178	5518	105.047	ng/ml	96
27) Anthracene	4.685	178	5405	103.761	ng/ml	100
28) Fluoranthene	5.337	202	7343	106.030	ng/ml	96
29) Pyrene	5.466	202	7578	106.546	ng/ml	99
32) Benzo[a]anthracene	6.184	228	7943	101.296	ng/ml	97
33) 3,3'-Dichlorobenzidine	6.173	252	2907	90.047	ng/ml	99
34) Chrysene	6.208	228	7172	101.696	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.220	149	3238	99.428	ng/ml	98
37) Benzo[b]fluoranthene	7.003	252	8069	104.630	ng/ml	98
38) Benzo[k]fluoranthene	7.025	252	7961	108.713	ng/ml	98
39) Benzo[a]pyrene	7.299	252	7107	104.697	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.530	276	7775	105.387	ng/ml	94
41) Dibenzo[a,h]anthracene	8.567	278	7523	109.600	ng/ml	94
42) Benzo[g,h,i]perylene	8.855	276	8003	106.645	ng/ml	93

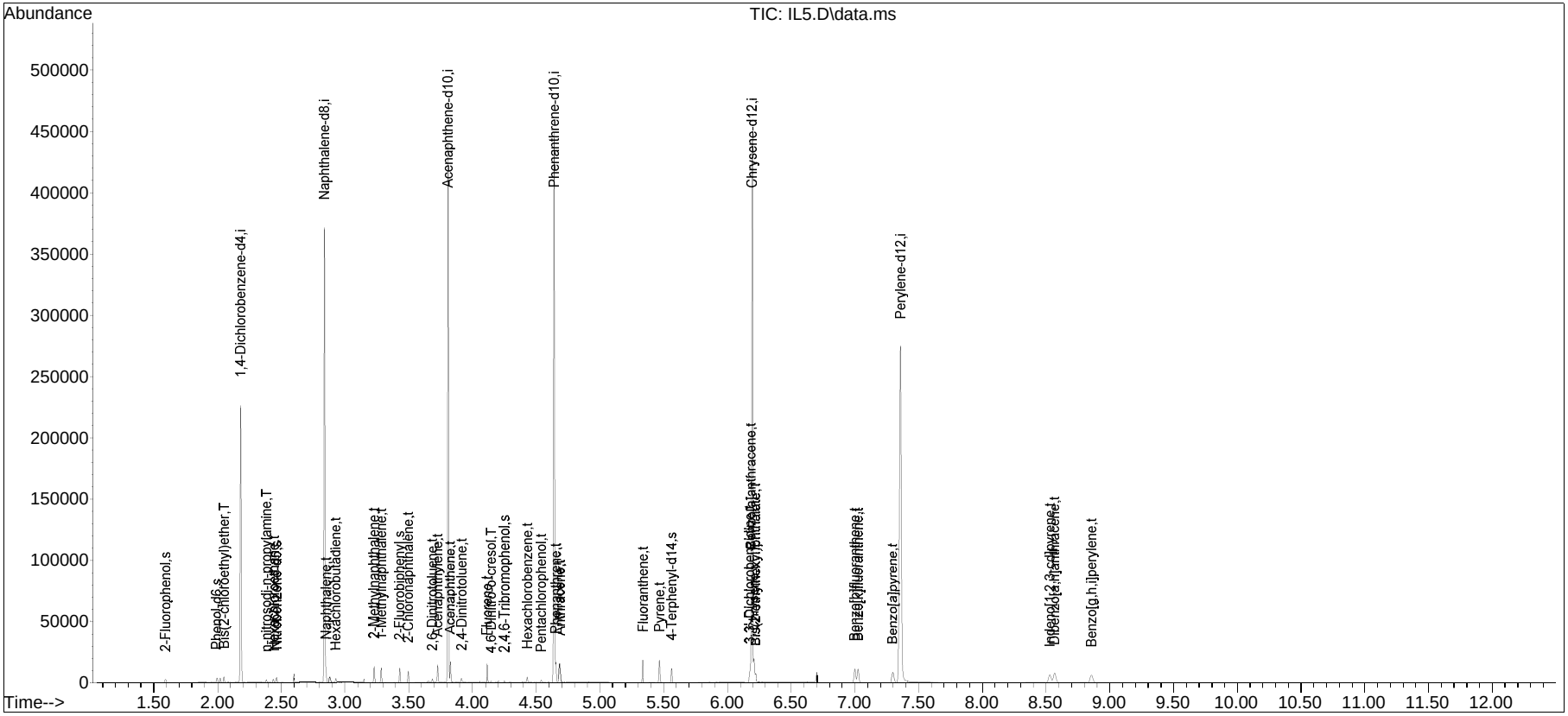
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL5.D
Acq On : 07 Dec 2023 02:36 pm
Operator : sv119:dv
Sample : IL5,32,,0.1 Lot#10231
Misc : WG1861379,,ical
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 08 13:34:32 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:34:38 2023
Response via : Initial Calibration

Sub List : Default - All compounds listedIical\IL7.D•



Manual Integration Report

Data Path	: I:\8270SIM\sv119\231207nLVQ	Method	: SIM-LVI_231207n_sv119.M
Data File	: IL5.D	Operator	: sv119:dv
Date Inj'd	: 12/7/2023 2:36 pm	Instrument	: SV119
Sample	: IL5,32,,0.1 Lot#10231	Quant Date	: 12/8/2023 1:34 pm

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL4.D
Acq On : 07 Dec 2023 02:53 pm
Operator : sv119:dv
Sample : IL4,32,,0.05 Lot#10232
Misc : WG1861379,,ical
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 08 13:34:06 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:34:10 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.183	152	45995	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 104.22%			
8) Naphthalene-d8	2.840	136	154289	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 99.72%			
17) Acenaphthene-d10	3.807	164	90453	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 101.87%			
22) Phenanthrene-d10	4.643	188	199932	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 100.28%			
31) Chrysene-d12	6.192	240	216027	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 109.06%			
36) Perylene-d12	7.358	264	222689	4000.000	ng/ml	0.00
Standard Area 1 = 214743			Recovery = 103.70%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.590	112	637	50.634	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 1.01%#			
3) Phenol-d6	1.993	99	731	48.475	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.97%#			
7) Nitrobenzene-d5	2.462	82	547	47.820	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 1.91%#			
13) 2-Fluorobiphenyl	3.433	172	1886	54.732	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 2.19%#			
21) 2,4,6-Tribromophenol	4.249	330	234	46.924	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.94%#			
30) 4-Terphenyl-d14	5.562	244	2716	55.414	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 2.22%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.051	93	655	51.073	ng/ml	94
5) n-nitrosodi-n-propylamine	2.385	70	349	45.501	ng/ml#	91
6) Hexachloroethane	2.441	117	278	48.859	ng/ml	90
9) Naphthalene	2.852	128	1914	51.953	ng/ml	99
10) Hexachlorobutadiene	2.925	225	420	52.937	ng/ml	96
11) 2-Methylnaphthalene	3.229	142	1443	52.974	ng/ml	98
12) 1-Methylnaphthalene	3.282	142	1336	53.186	ng/ml	100
14) 2-Chloronaphthalene	3.496	162	1555	53.591	ng/ml	96
15) 2,6-Dinitrotoluene	3.688	165	312M6	47.619	ng/ml	
16) Acenaphthylene	3.727	152	2223	51.554	ng/ml	99
18) Acenaphthene	3.825	153	1443	51.604	ng/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL4.D
Acq On : 07 Dec 2023 02:53 pm
Operator : sv119:dv
Sample : IL4,32,,0.05 Lot#10232
Misc : WG1861379,,ical
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 08 13:34:06 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:34:10 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.915	165	369	44.260	ng/ml#	79
20) Fluorene	4.114	166	1712	51.220	ng/ml	99
23) 4,6-Dinitro-o-cresol	4.144	198	141	68.886	ng/ml	98
24) Hexachlorobenzene	4.430	284	663	51.295	ng/ml	96
25) Pentachlorophenol	4.538	266	320	50.277	ng/ml	97
26) Phenanthrene	4.655	178	2614M6	51.471	ng/ml	
27) Anthracene	4.684	178	2575	51.129	ng/ml	100
28) Fluoranthene	5.335	202	3564	53.229	ng/ml	96
29) Pyrene	5.466	202	3726	54.184	ng/ml	99
32) Benzo[a]anthracene	6.184	228	4223	48.187	ng/ml	95
33) 3,3'-Dichlorobenzidine	6.173	252	1404	43.019	ng/ml	100
34) Chrysene	6.207	228	3596	50.437	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.222	149	1581	64.823	ng/ml	99
37) Benzo[b]fluoranthene	7.001	252	3954	50.824	ng/ml	100
38) Benzo[k]fluoranthene	7.025	252	3980	53.876	ng/ml	100
39) Benzo[a]pyrene	7.299	252	3513	51.300	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.529	276	3799	51.045	ng/ml	95
41) Dibenzo[a,h]anthracene	8.567	278	3727	53.824	ng/ml	94
42) Benzo[g,h,i]perylene	8.855	276	3986	52.653	ng/ml	94

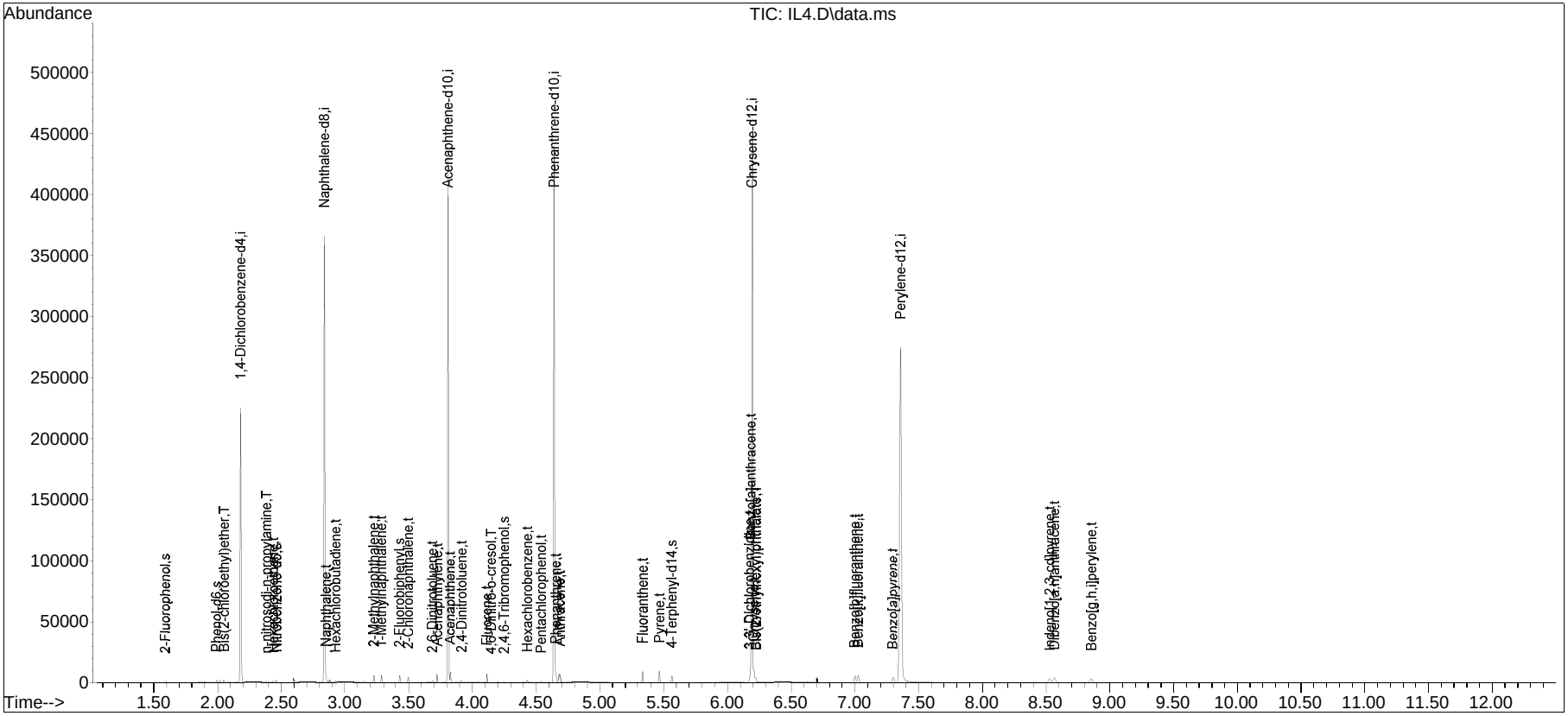
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL4.D
Acq On : 07 Dec 2023 02:53 pm
Operator : sv119:dv
Sample : IL4,32,,0.05 Lot#10232
Misc : WG1861379,,ical
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 08 13:34:06 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:34:10 2023
Response via : Initial Calibration

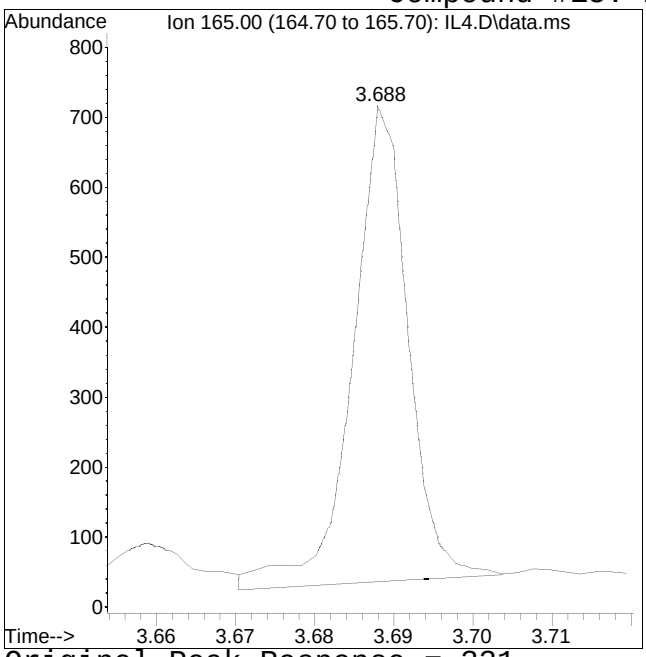
Sub List : Default - All compounds listedIical\IL7.D•



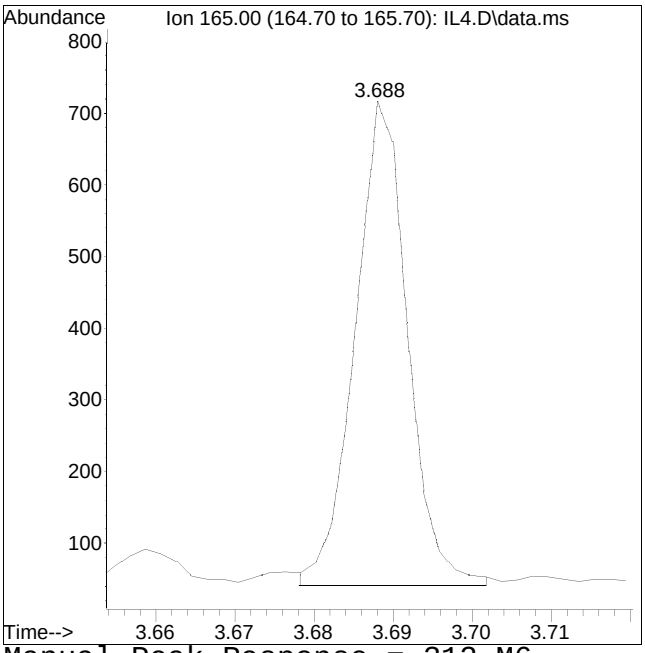
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL4.D Operator : sv119:dv
Date Inj'd : 12/7/2023 2:53 pm Instrument : SV119
Sample : IL4,32,,0.05 Lot#10232 Quant Date : 12/8/2023 1:34 pm

Compound #15: 2,6-Dinitrotoluene



Original Peak Response = 331



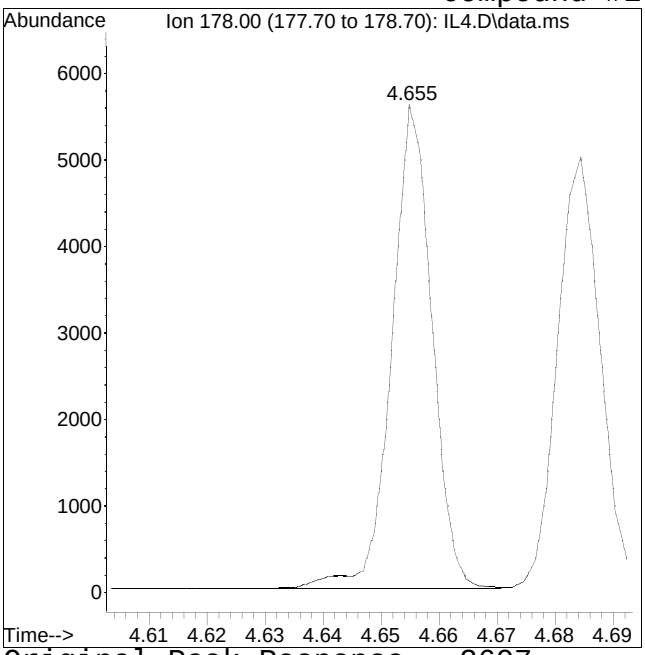
Manual Peak Response = 312 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

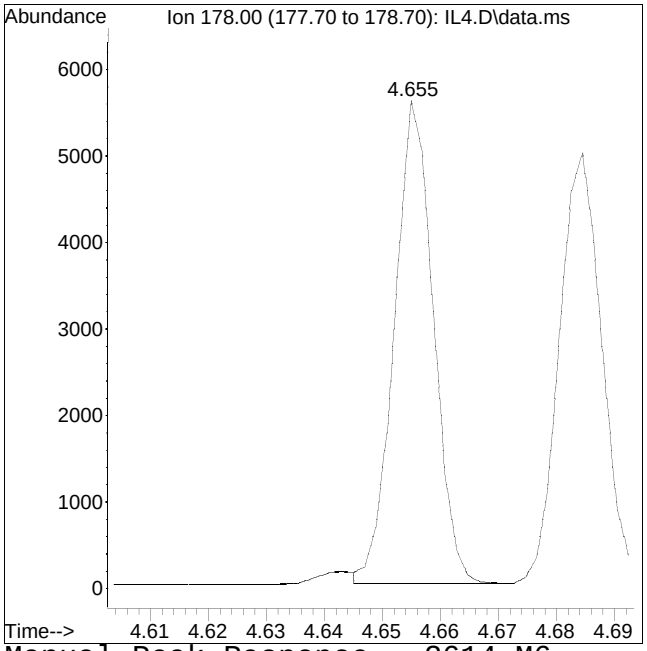
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL4.D Operator : sv119:dv
Date Inj'd : 12/7/2023 2:53 pm Instrument : SV119
Sample : IL4,32,,0.05 Lot#10232 Quant Date : 12/8/2023 1:34 pm

Compound #26: Phenanthrene



Original Peak Response = 2697



Manual Peak Response = 2614 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL3.D
Acq On : 07 Dec 2023 03:09 pm
Operator : sv119:dv
Sample : IL3,32,,0.025 Lot#10233
Misc : WG1861379,,ical
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 13:33:15 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:33:19 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.183	152	48524	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 109.95%			
8) Naphthalene-d8	2.840	136	162915	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 105.30%			
17) Acenaphthene-d10	3.808	164	95545	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 107.60%			
22) Phenanthrene-d10	4.643	188	212473	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 106.57%			
31) Chrysene-d12	6.193	240	225835	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 114.01%			
36) Perylene-d12	7.360	264	232095	4000.000	ng/ml	0.00
Standard Area 1 = 214743			Recovery = 108.08%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.592	112	335	25.241	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.50%#			
3) Phenol-d6	1.996	99	384	24.137	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.48%#			
7) Nitrobenzene-d5	2.463	82	302	25.025	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 1.00%#			
13) 2-Fluorobiphenyl	3.433	172	1002	27.539	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 1.10%#			
21) 2,4,6-Tribromophenol	4.251	330	121	22.971	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.46%#			
30) 4-Terphenyl-d14	5.562	244	1452	27.876	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 1.12%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.051	93	352	26.017	ng/ml	94
5) n-nitrosodi-n-propylamine	2.386	70	189	23.357	ng/ml#	86
6) Hexachloroethane	2.442	117	153	25.488	ng/ml	97
9) Naphthalene	2.852	128	1030	26.478	ng/ml	98
10) Hexachlorobutadiene	2.927	225	222	26.499	ng/ml	100
11) 2-Methylnaphthalene	3.229	142	757	26.319	ng/ml	99
12) 1-Methylnaphthalene	3.282	142	716	26.995	ng/ml	99
14) 2-Chloronaphthalene	3.496	162	831	27.123	ng/ml	98
15) 2,6-Dinitrotoluene	3.688	165	172	24.861	ng/ml#	75
16) Acenaphthylene	3.727	152	1186	26.049	ng/ml	100
18) Acenaphthene	3.825	153	760	25.730	ng/ml	100

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL3.D
Acq On : 07 Dec 2023 03:09 pm
Operator : sv119:dv
Sample : IL3,32,,0.025 Lot#10233
Misc : WG1861379,,ical
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 13:33:15 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:33:19 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.915	165	188	21.348	ng/ml#	79
20) Fluorene	4.114	166	903	25.576	ng/ml	100
23) 4,6-Dinitro-o-cresol	4.145	198	55	54.105	ng/ml	97
24) Hexachlorobenzene	4.430	284	357	25.990	ng/ml	98
25) Pentachlorophenol	4.540	266	161	29.909	ng/ml	95
26) Phenanthrene	4.655	178	1405M6	26.032	ng/ml	
27) Anthracene	4.685	178	1387	25.915	ng/ml	100
28) Fluoranthene	5.337	202	1897	26.660	ng/ml	95
29) Pyrene	5.466	202	2001	27.382	ng/ml	99
32) Benzo[a]anthracene	6.186	228	2608	24.078	ng/ml	92
33) 3,3'-Dichlorobenzidine	6.173	252	733	21.484	ng/ml	98
34) Chrysene	6.208	228	1876	25.170	ng/ml	99
35) Bis(2-ethylhexyl)phtha...	6.223	149	843	48.985	ng/ml	96
37) Benzo[b]fluoranthene	7.003	252	2138	26.368	ng/ml	100
38) Benzo[k]fluoranthene	7.025	252	2060	26.755	ng/ml	99
39) Benzo[a]pyrene	7.301	252	1856	26.005	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.527	276	2047	26.390	ng/ml	93
41) Dibenzo[a,h]anthracene	8.567	278	1931	26.757	ng/ml	95
42) Benzo[g,h,i]perylene	8.854	276	2115	26.806	ng/ml	93

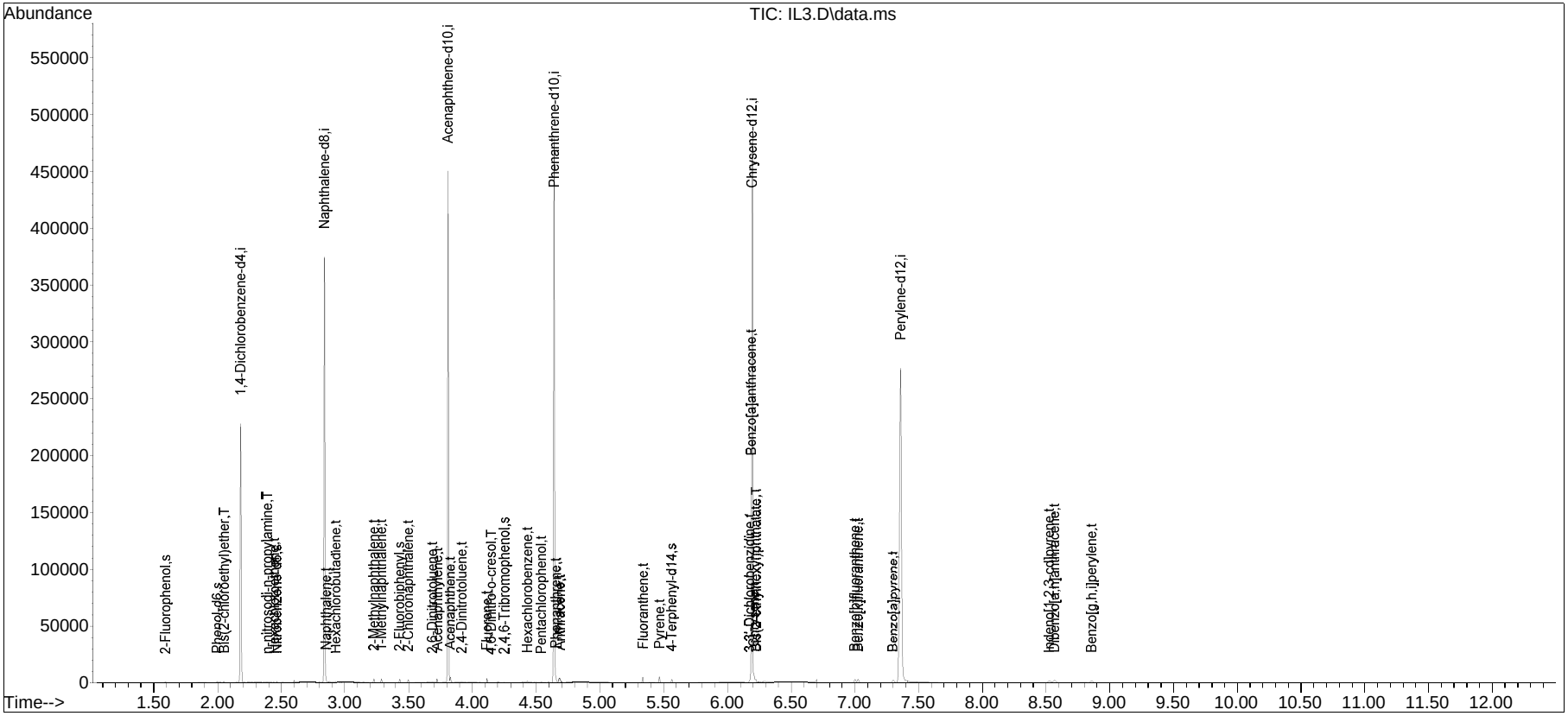
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL3.D
Acq On : 07 Dec 2023 03:09 pm
Operator : sv119:dv
Sample : IL3,32,,0.025 Lot#10233
Misc : WG1861379,,ical
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 13:33:15 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:33:19 2023
Response via : Initial Calibration

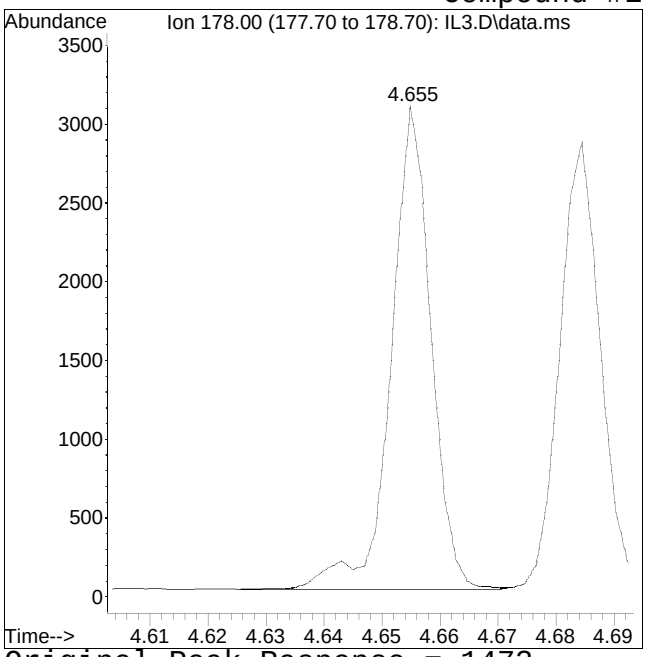
Sub List : Default - All compounds listedIical\IL7.D•



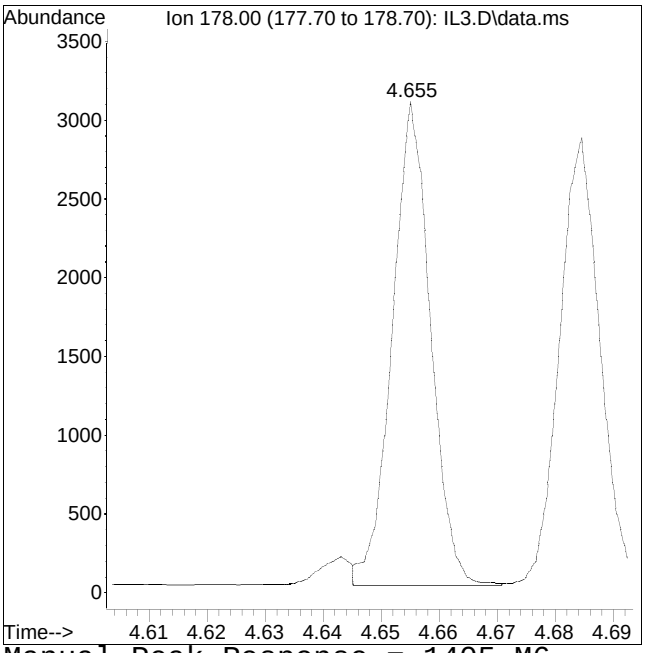
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL3.D Operator : sv119:dv
Date Inj'd : 12/7/2023 3:09 pm Instrument : SV119
Sample : IL3,32,,0.025 Lot#10233 Quant Date : 12/8/2023 1:33 pm

Compound #26: Phenanthrene



Original Peak Response = 1473



Manual Peak Response = 1405 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL2.D
Acq On : 07 Dec 2023 03:26 pm
Operator : sv119:dv
Sample : IL2,32,,0.01 Lot#10234
Misc : WG1861379,,ical
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 08 13:33:00 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:33:04 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.183	152	46716	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 105.86%			
8) Naphthalene-d8	2.839	136	156475	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 101.13%			
17) Acenaphthene-d10	3.808	164	91742	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 103.32%			
22) Phenanthrene-d10	4.641	188	202200	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 101.41%			
31) Chrysene-d12	6.195	240	221653	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 111.90%			
36) Perylene-d12	7.360	264	229421	4000.000	ng/ml	0.00
Standard Area 1 = 214743			Recovery = 106.84%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.591	112	132	10.331	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.21%#			
3) Phenol-d6	1.994	99	153	9.989	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.20%#			
7) Nitrobenzene-d5	2.462	82	119	10.243	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 0.41%#			
13) 2-Fluorobiphenyl	3.431	172	380	10.874	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 0.43%#			
21) 2,4,6-Tribromophenol	4.249	330	49M6	9.688	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.19%#			
30) 4-Terphenyl-d14	5.564	244	568	11.459	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 0.46%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.048	93	144	11.055	ng/ml	89
5) n-nitrosodi-n-propylamine	2.383	70	74	9.499	ng/ml	97
6) Hexachloroethane	2.441	117	62	10.728	ng/ml	95
9) Naphthalene	2.850	128	396	10.599	ng/ml#	95
10) Hexachlorobutadiene	2.924	225	82	10.191	ng/ml	93
11) 2-Methylnaphthalene	3.227	142	292	10.570	ng/ml	100
12) 1-Methylnaphthalene	3.282	142	271	10.638	ng/ml	97
14) 2-Chloronaphthalene	3.494	162	318	10.806	ng/ml	96
15) 2,6-Dinitrotoluene	3.686	165	64M6	9.631	ng/ml	
16) Acenaphthylene	3.725	152	449	10.267	ng/ml	98

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL2.D
Acq On : 07 Dec 2023 03:26 pm
Operator : sv119:dv
Sample : IL2,32,,0.01 Lot#10234
Misc : WG1861379,,ical
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 08 13:33:00 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:33:04 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
18) Acenaphthene	3.825	153	289	10.190	ng/ml	98
19) 2,4-Dinitrotoluene	3.913	165	74M6	8.751	ng/ml	
20) Fluorene	4.113	166	351	10.354	ng/ml	99
23) 4,6-Dinitro-o-cresol	0.000		0	N.D.	d	
24) Hexachlorobenzene	4.428	284	135	10.328	ng/ml	97
25) Pentachlorophenol	0.000		0	N.D.	d	
26) Phenanthrene	4.655	178	533	10.377	ng/ml	99
27) Anthracene	4.685	178	536	10.523	ng/ml	100
28) Fluoranthene	5.335	202	739	10.913	ng/ml	97
29) Pyrene	5.466	202	775	11.144	ng/ml	99
32) Benzo[a]anthracene	6.188	228	1402	8.338	ng/ml#	86
33) 3,3'-Dichlorobenzidine	6.178	252	290	8.660	ng/ml	99
34) Chrysene	6.212	228	730	9.979	ng/ml	95
35) Bis(2-ethylhexyl)phtha...	6.225	149	378	40.030	ng/ml	97
37) Benzo[b]fluoranthene	7.005	252	844	10.530	ng/ml	99
38) Benzo[k]fluoranthene	7.031	252	805	10.577	ng/ml	97
39) Benzo[a]pyrene	7.303	252	735	10.418	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.530	276	790	10.303	ng/ml	93
41) Dibenzo[a,h]anthracene	8.568	278	767	10.752	ng/ml#	92
42) Benzo[g,h,i]perylene	8.859	276	839	10.758	ng/ml	93

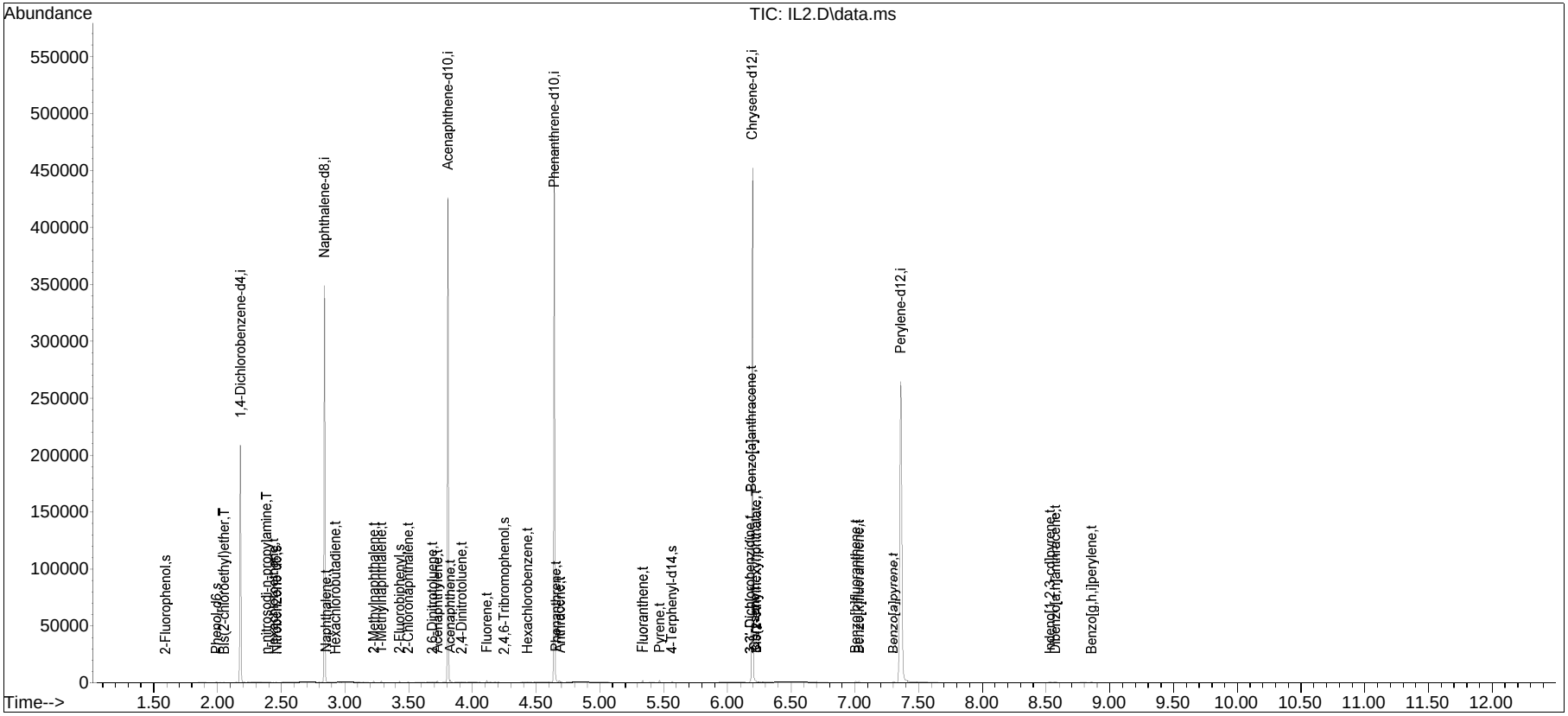
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL2.D
Acq On : 07 Dec 2023 03:26 pm
Operator : sv119:dv
Sample : IL2,32,,0.01 Lot#10234
Misc : WG1861379,,ical
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 08 13:33:00 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:33:04 2023
Response via : Initial Calibration

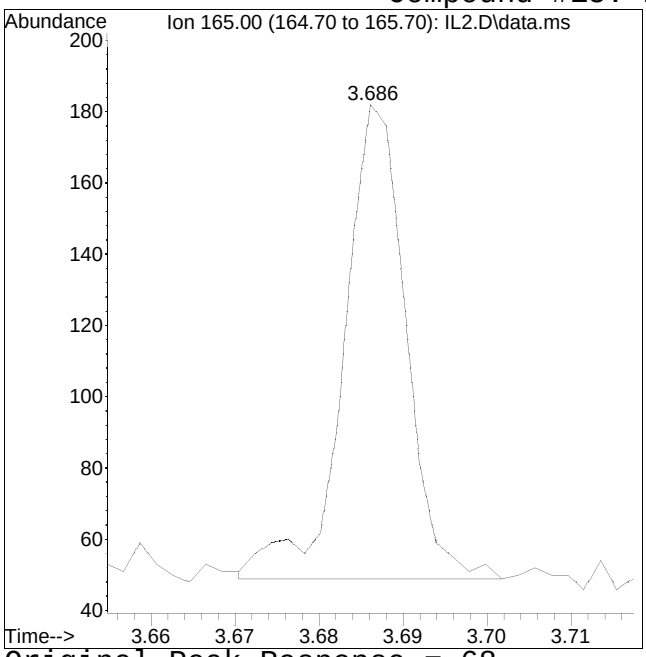
Sub List : Default - All compounds listedIical\IL7.D•



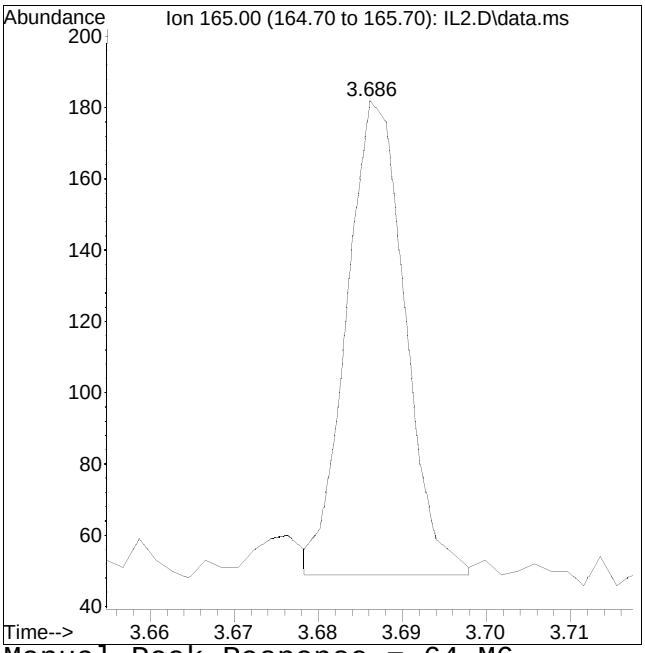
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL2.D Operator : sv119:dv
Date Inj'd : 12/7/2023 3:26 pm Instrument : SV119
Sample : IL2,32,,0.01 Lot#10234 Quant Date : 12/8/2023 1:33 pm

Compound #15: 2,6-Dinitrotoluene



Original Peak Response = 68



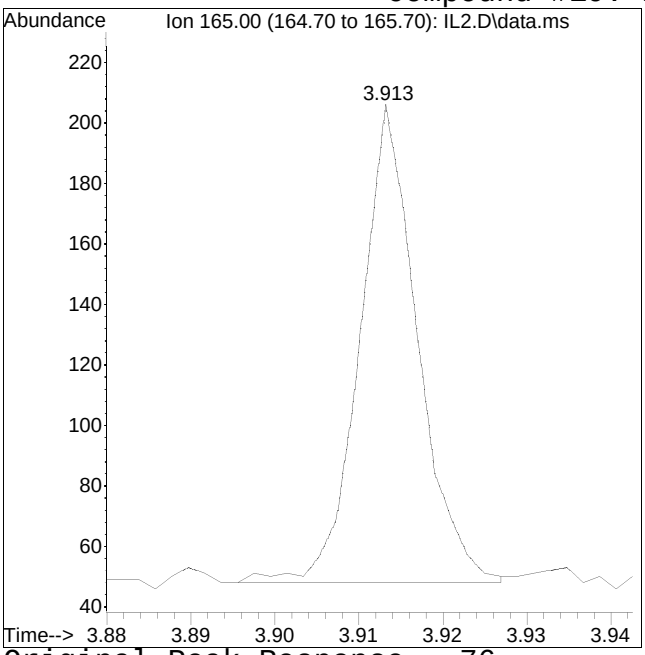
Manual Peak Response = 64 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

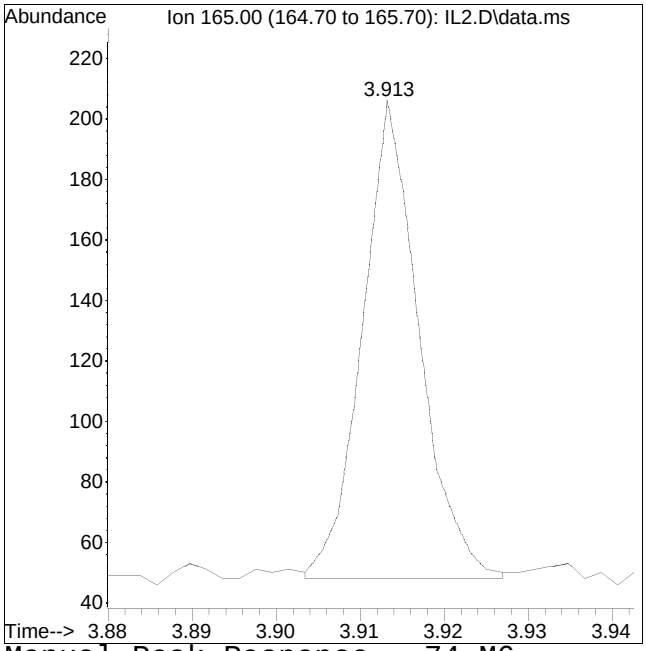
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL2.D Operator : sv119:dv
Date Inj'd : 12/7/2023 3:26 pm Instrument : SV119
Sample : IL2,32,,0.01 Lot#10234 Quant Date : 12/8/2023 1:33 pm

Compound #19: 2,4-Dinitrotoluene



Original Peak Response = 76



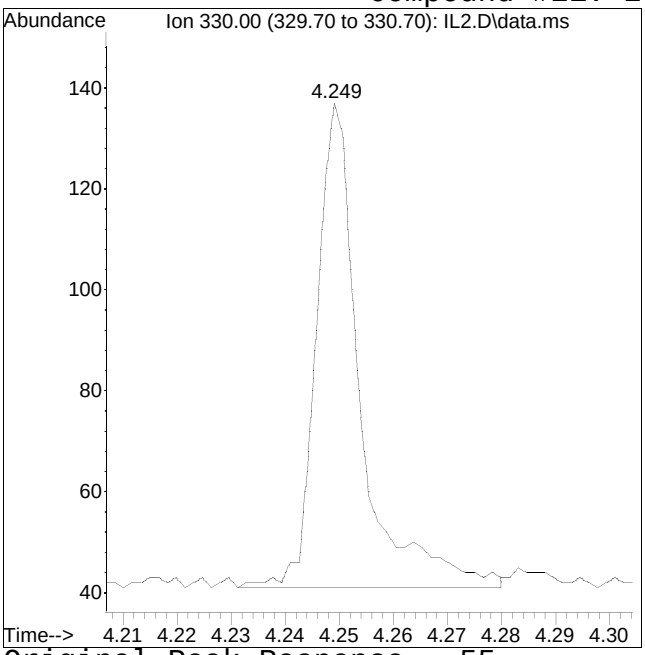
Manual Peak Response = 74 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

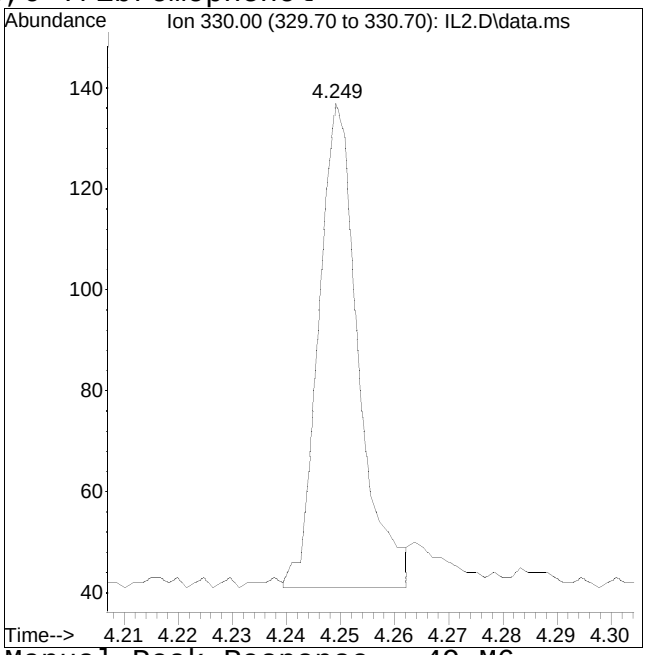
Manual Integration Report

Data Path : I:\8270SIM\sv119\231207nLVQMethod : SIM-LVI_231207n_sv119.M
Data File : IL2.D Operator : sv119:dv
Date Inj'd : 12/7/2023 3:26 pm Instrument : SV119
Sample : IL2,32,,0.01 Lot#10234 Quant Date : 12/8/2023 1:33 pm

Compound #21: 2,4,6-Tribromophenol



Original Peak Response = 55



Manual Peak Response = 49 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL1.D
Acq On : 07 Dec 2023 03:42 pm
Operator : sv119:dv
Sample : IL1,32,, 0.005 Lot#10235
Misc : WG1861379,,ical
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 08 13:31:26 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:31:30 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.183	152	47534	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 107.71%			
8) Naphthalene-d8	2.841	136	159531	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 103.11%			
17) Acenaphthene-d10	3.808	164	93128	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 104.88%			
22) Phenanthrene-d10	4.641	188	203282	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 101.96%			
31) Chrysene-d12	6.191	240	211989	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 107.02%			
36) Perylene-d12	7.359	264	218868	4000.000	ng/ml	0.00
Standard Area 1 = 214743			Recovery = 101.92%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.591	112	67	5.153	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.10%#			
3) Phenol-d6	1.996	99	85	5.454	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.11%#			
7) Nitrobenzene-d5	2.463	82	54	4.568	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 0.18%#			
13) 2-Fluorobiphenyl	3.433	172	197	5.529	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 0.22%#			
21) 2,4,6-Tribromophenol	4.249	330	25	4.869	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 0.10%#			
30) 4-Terphenyl-d14	5.563	244	285	5.719	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 0.23%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.051	93	76	5.734	ng/ml	83
5) n-nitrosodi-n-propylamine	2.385	70	36	4.542	ng/ml	99
6) Hexachloroethane	2.443	117	33	5.612	ng/ml	92
9) Naphthalene	2.852	128	199	5.224	ng/ml	99
10) Hexachlorobutadiene	2.926	225	44	5.364	ng/ml	93
11) 2-Methylnaphthalene	3.229	142	146	5.184	ng/ml	97
12) 1-Methylnaphthalene	3.282	142	141	5.429	ng/ml	100
14) 2-Chloronaphthalene	3.496	162	160	5.333	ng/ml	99
15) 2,6-Dinitrotoluene	0.000		0	N.D. d		
16) Acenaphthylene	3.727	152	239	5.361	ng/ml	99
18) Acenaphthene	3.825	153	150	5.210	ng/ml	97

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL1.D
Acq On : 07 Dec 2023 03:42 pm
Operator : sv119:dv
Sample : IL1,32,, 0.005 Lot#10235
Misc : WG1861379,,ical
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 08 13:31:26 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:31:30 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	0.000		0	N.D.	d	
20) Fluorene	4.115	166	179	5.202	ng/ml	99
23) 4,6-Dinitro-o-cresol	0.000		0	N.D.	d	
24) Hexachlorobenzene	4.430	284	74	5.631	ng/ml	100
25) Pentachlorophenol	0.000		0	N.D.	d	
26) Phenanthrene	4.655	178	275	5.326	ng/ml	97
27) Anthracene	4.683	178	265	5.175	ng/ml	98
28) Fluoranthene	5.333	202	371	5.450	ng/ml	99
29) Pyrene	5.466	202	387	5.535	ng/ml	98
32) Benzo[a]anthracene	6.188	228	998	3.464	ng/ml#	81
33) 3,3'-Dichlorobenzidine	0.000		0	N.D.	d	
34) Chrysene	6.208	228	344	4.917	ng/ml	96
35) Bis(2-ethylhexyl)phtha...	6.223	149	189	36.436	ng/ml	97
37) Benzo[b]fluoranthene	7.003	252	414	5.414	ng/ml	100
38) Benzo[k]fluoranthene	7.026	252	391	5.385	ng/ml	100
39) Benzo[a]pyrene	7.299	252	348	5.171	ng/ml	97
40) Indeno[1,2,3-cd]pyrene	8.530	276	384	5.250	ng/ml	92
41) Dibenzo[a,h]anthracene	8.567	278	358	5.260	ng/ml	96
42) Benzo[g,h,i]perylene	8.854	276	403	5.416	ng/ml	93

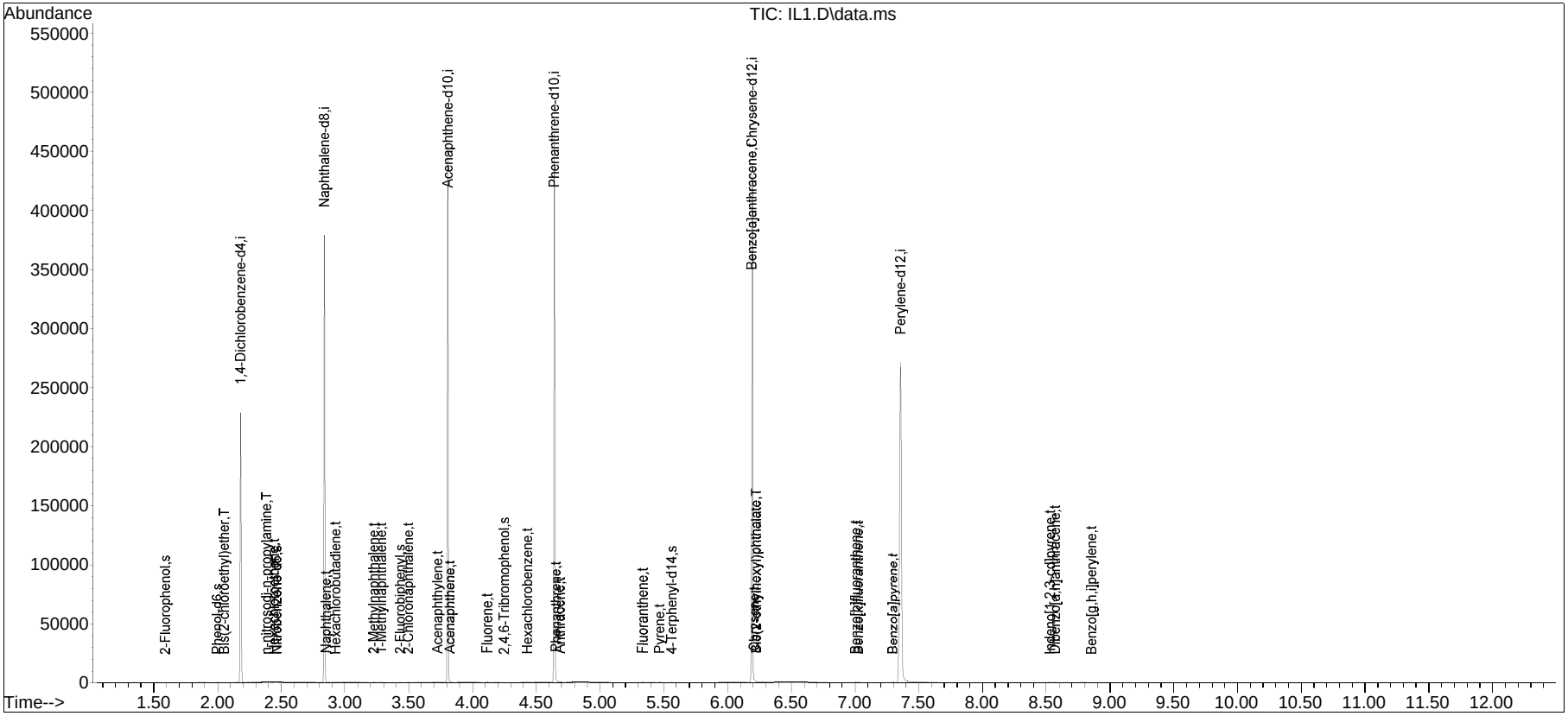
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : IL1.D
Acq On : 07 Dec 2023 03:42 pm
Operator : sv119:dv
Sample : IL1,32,, 0.005 Lot#10235
Misc : WG1861379,,ical
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 08 13:31:26 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 13:31:30 2023
Response via : Initial Calibration

Sub List : Default - All compounds listedIical\IL7.D•



Manual Integration Report

Data Path	: I:\8270SIM\sv119\231207nLVQ	Method	: SIM-LVI_231207n_sv119.M
Data File	: IL1.D	Operator	: sv119:dv
Date Inj'd	: 12/7/2023 3:42 pm	Instrument	: SV119
Sample	: IL1,32,, 0.005 Lot#10235	Quant Date	: 12/8/2023 1:31 pm

There are no manual integrations or false positives in this file.

Evaluate Continuing Calibration Report

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : ICV.D
Acq On : 07 Dec 2023 03:59 pm
Operator : sv119:dv
Sample : CQICV,32,,1.0 Lot#10193
Misc : WG1861379,,ical
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 08 14:09:48 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 14:09:54 2023
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	i	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00
2	s	2-Fluorophenol	1.094	1.204	-10.1	104	0.00
3	s	Phenol-d6	1.311	1.360	-3.7	103	0.00
4	T	Bis(2-chloroethyl)ether	1.115	1.161	-4.1	105	0.00
5	T	n-nitrosodi-n-propylamine	0.667	0.690	-3.4	101	0.00
6	t	Hexachloroethane	0.495	0.510	-3.0	103	0.00
7	s	Nitrobenzene-d5	0.995	1.007	-1.2	97	0.00
8	i	Naphthalene-d8	1.000	1.000	0.0	102	0.00
9	t	Naphthalene	0.955	1.016	-6.4	104	0.00
10	t	Hexachlorobutadiene	0.206	0.217	-5.3	102	0.00
11	t	2-Methylnaphthalene	0.706	0.746	-5.7	102	0.00
12	t	1-Methylnaphthalene	0.651	0.710	-9.1	107	0.00
13	s	2-Fluorobiphenyl	0.893	0.924	-3.5	101	0.00
14	t	2-Chloronaphthalene	0.752	0.794	-5.6	105	0.00
15	t	2,6-Dinitrotoluene	0.170	0.177	-4.1	103	0.00
16	t	Acenaphthylene	1.118	1.235	-10.5	106	0.00
17	i	Acenaphthene-d10	1.000	1.000	0.0	103	0.00
18	t	Acenaphthene	1.237	1.321	-6.8	104	0.00
19	t	2,4-Dinitrotoluene	0.369	0.399	-8.1	102	0.00
20	t	Fluorene	1.478	1.659	-12.2	108	0.00
21	s	2,4,6-Tribromophenol	0.221	0.241	-9.0	103	0.00
22	i	Phenanthrene-d10	1.000	1.000	0.0	105	0.00
23	T	4,6-Dinitro-o-cresol	*1000.000	868.947	13.1	97	0.00
24	t	Hexachlorobenzene	0.259	0.277	-6.9	107	0.00
25	t	Pentachlorophenol	*1000.000	905.878	9.4	99	0.00
26	t	Phenanthrene	1.016	1.101	-8.4	108	0.00
27	t	Anthracene	1.008	1.097	-8.8	107	0.00
28	t	Fluoranthene	1.339	1.474	-10.1	108	0.00
29	t	Pyrene	1.376	1.494	-8.6	109	0.00
30	s	4-Terphenyl-d14	0.981	0.966	1.5	100	0.00
31	i	Chrysene-d12	1.000	1.000	0.0	103	0.00
32	t	Benzo[a]anthracene	*1000.000	1130.168	-13.0	105	0.00
33	t	3,3'-Dichlorobenzidine	0.604	0.620	-2.6	102	0.00
34	t	Chrysene	1.320	1.400	-6.1	106	0.00
35	T	Bis(2-ethylhexyl)phthalate	*1000.000	813.981	18.6	100	0.00

Evaluate Continuing Calibration Report

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : ICV.D
Acq On : 07 Dec 2023 03:59 pm
Operator : sv119:dv
Sample : CQICV,32,,1.0 Lot#10193
Misc : WG1861379,,ical
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 08 14:09:48 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 14:09:54 2023
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
36	i	Perylene-d12	1.000	1.000	0.0	104	-0.01
37	t	Benzo[b]fluoranthene	1.397	1.544	-10.5	107	0.00
38	t	Benzo[k]fluoranthene	1.327	1.356	-2.2	102	0.00
39	t	Benzo[a]pyrene	1.230	1.276	-3.7	102	0.00
40	t	Indeno[1,2,3-cd]pyrene	1.337	1.484	-11.0	109	-0.01
41	t	Dibenzo[a,h]anthracene	1.244	1.369	-10.0	109	-0.01
42	t	Benzo[g,h,i]perylene	1.360	1.500	-10.3	109	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : ICV.D
Acq On : 07 Dec 2023 03:59 pm
Operator : sv119:dv
Sample : CQICV,32,,1.0 Lot#10193
Misc : WG1861379,,ical
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 08 14:09:48 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 14:09:54 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.184	152	44993	4000.000	ng/ml	0.00
Standard Area 1 = 44131			Recovery = 101.95%			
8) Naphthalene-d8	2.840	136	157864	4000.000	ng/ml	0.00
Standard Area 1 = 154719			Recovery = 102.03%			
17) Acenaphthene-d10	3.807	164	91173	4000.000	ng/ml	0.00
Standard Area 1 = 88793			Recovery = 102.68%			
22) Phenanthrene-d10	4.641	188	208520	4000.000	ng/ml	0.00
Standard Area 1 = 199383			Recovery = 104.58%			
31) Chrysene-d12	6.190	240	204628	4000.000	ng/ml	0.00
Standard Area 1 = 198085			Recovery = 103.30%			
36) Perylene-d12	7.356	264	223430	4000.000	ng/ml	-0.01
Standard Area 1 = 214743			Recovery = 104.05%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.590	112	13546	1100.734	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 22.01%			
3) Phenol-d6	1.995	99	15299	1037.113	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 20.74%			
7) Nitrobenzene-d5	2.461	82	11327	1012.276	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 40.49%			
13) 2-Fluorobiphenyl	3.432	172	36449	1033.805	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 41.35%			
21) 2,4,6-Tribromophenol	4.249	330	5485	1091.214	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 21.82%			
30) 4-Terphenyl-d14	5.562	244	50383	985.625	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 39.42%			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.050	93	13057	1040.790	ng/ml	95
5) n-nitrosodi-n-propylamine	2.383	70	7758	1033.970	ng/ml#	91
6) Hexachloroethane	2.442	117	5737	1030.734	ng/ml	91
9) Naphthalene	2.851	128	40083	1063.357	ng/ml	100
10) Hexachlorobutadiene	2.925	225	8550	1053.232	ng/ml	100
11) 2-Methylnaphthalene	3.228	142	29423	1055.682	ng/ml	99
12) 1-Methylnaphthalene	3.281	142	28038	1090.908	ng/ml	99
14) 2-Chloronaphthalene	3.495	162	31353	1056.068	ng/ml	96
15) 2,6-Dinitrotoluene	3.687	165	6970	1039.701	ng/ml#	79
16) Acenaphthylene	3.727	152	48743	1104.815	ng/ml	100
18) Acenaphthene	3.825	153	30119	1068.594	ng/ml	98

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : ICV.D
Acq On : 07 Dec 2023 03:59 pm
Operator : sv119:dv
Sample : CQICV,32,,1.0 Lot#10193
Misc : WG1861379,,ical
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 08 14:09:48 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 14:09:54 2023
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270SIM\sv119\231207nLVIical\IL7.D
Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.913	165	9094	1082.167	ng/ml#	79
20) Fluorene	4.114	166	37806	1122.154	ng/ml	98
23) 4,6-Dinitro-o-cresol	4.140	198	5185	868.947	ng/ml	90
24) Hexachlorobenzene	4.428	284	14437	1070.968	ng/ml	98
25) Pentachlorophenol	4.538	266	7716	905.878	ng/ml	100
26) Phenanthrene	4.655	178	57399	1083.660	ng/ml	100
27) Anthracene	4.682	178	57179	1088.582	ng/ml	100
28) Fluoranthene	5.335	202	76831	1100.585	ng/ml	95
29) Pyrene	5.465	202	77872	1085.795	ng/ml	99
32) Benzo[a]anthracene	6.184	228	77469	1130.168	ng/ml	100
33) 3,3'-Dichlorobenzidine	6.173	252	31712	1025.782	ng/ml	100
34) Chrysene	6.208	228	71624	1060.547	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.220	149	36205	813.981	ng/ml	98
37) Benzo[b]fluoranthene	7.001	252	86223	1104.621	ng/ml	99
38) Benzo[k]fluoranthene	7.025	252	75734	1021.783	ng/ml	100
39) Benzo[a]pyrene	7.297	252	71277	1037.409	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.527	276	82912	1110.341	ng/ml	95
41) Dibenzo[a,h]anthracene	8.563	278	76479	1100.813	ng/ml	96
42) Benzo[g,h,i]perylene	8.854	276	83784	1103.053	ng/ml	94

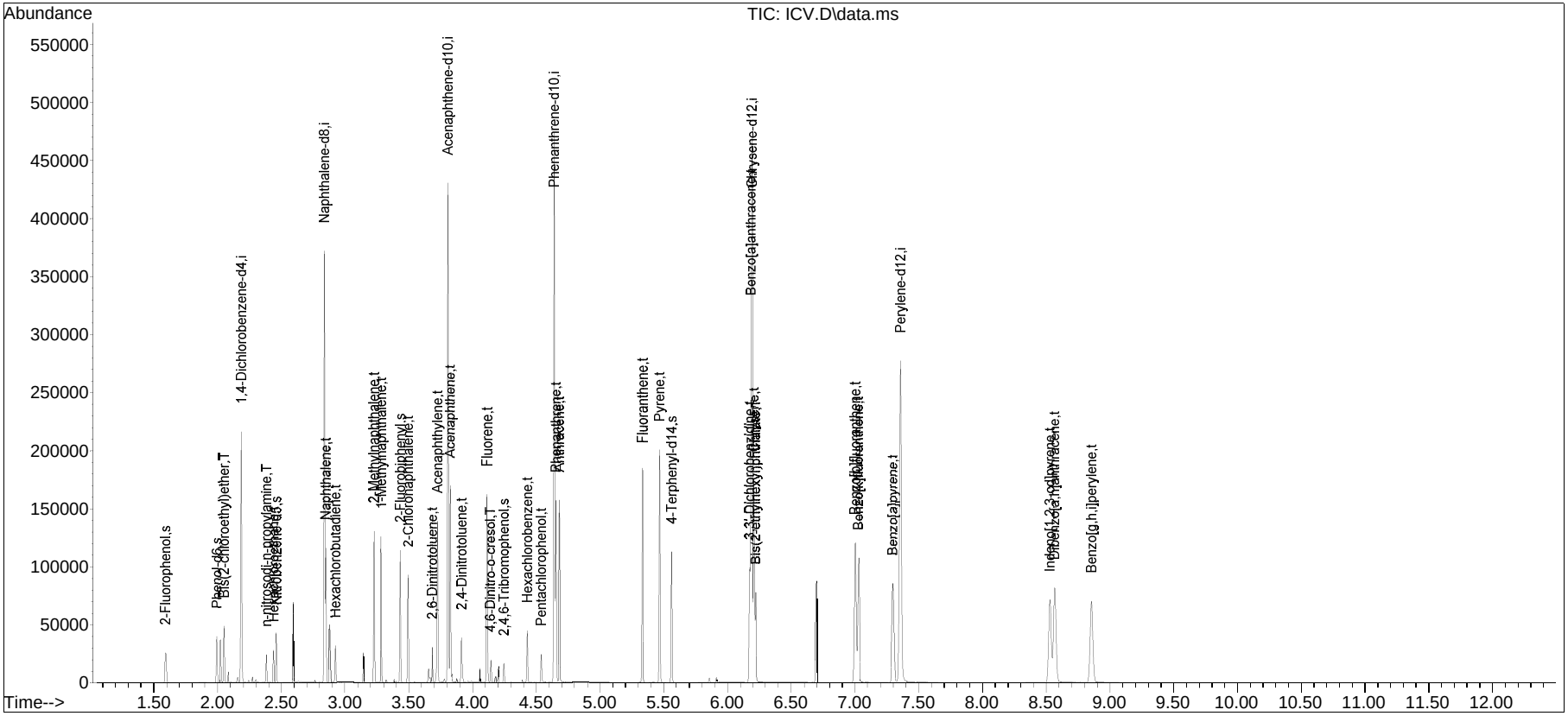
(#) = qualifier out of range (m) = manual integration (+) = signals summed

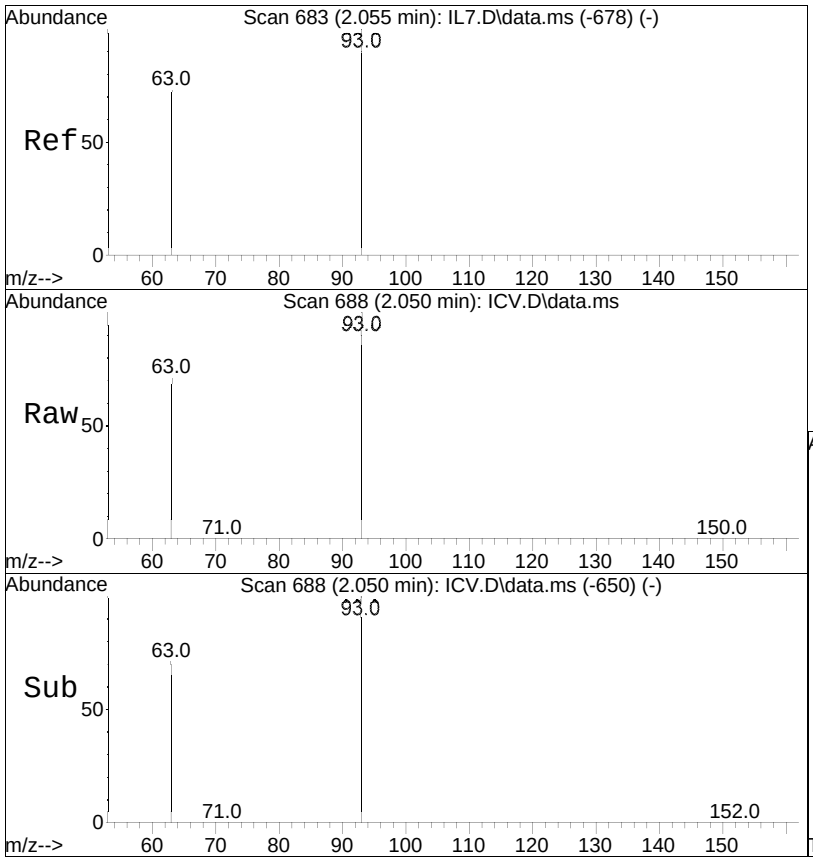
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\231207nLVIical\
Data File : ICV.D
Acq On : 07 Dec 2023 03:59 pm
Operator : sv119:dv
Sample : CQICV,32,,1.0 Lot#10193
Misc : WG1861379,,ical
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 08 14:09:48 2023
Quant Method : I:\8270SIM\sv119\231207nLVIical\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Fri Dec 08 14:09:54 2023
Response via : Initial Calibration

Sub List : Default - All compounds listedIical\IL7.D•

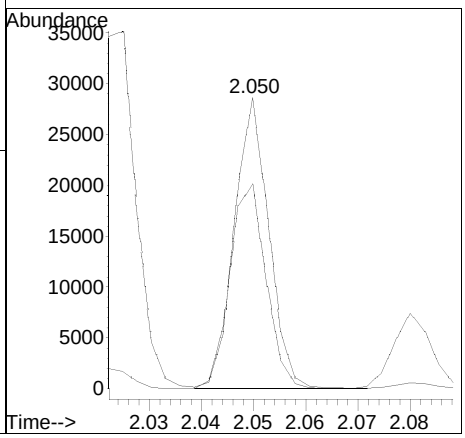


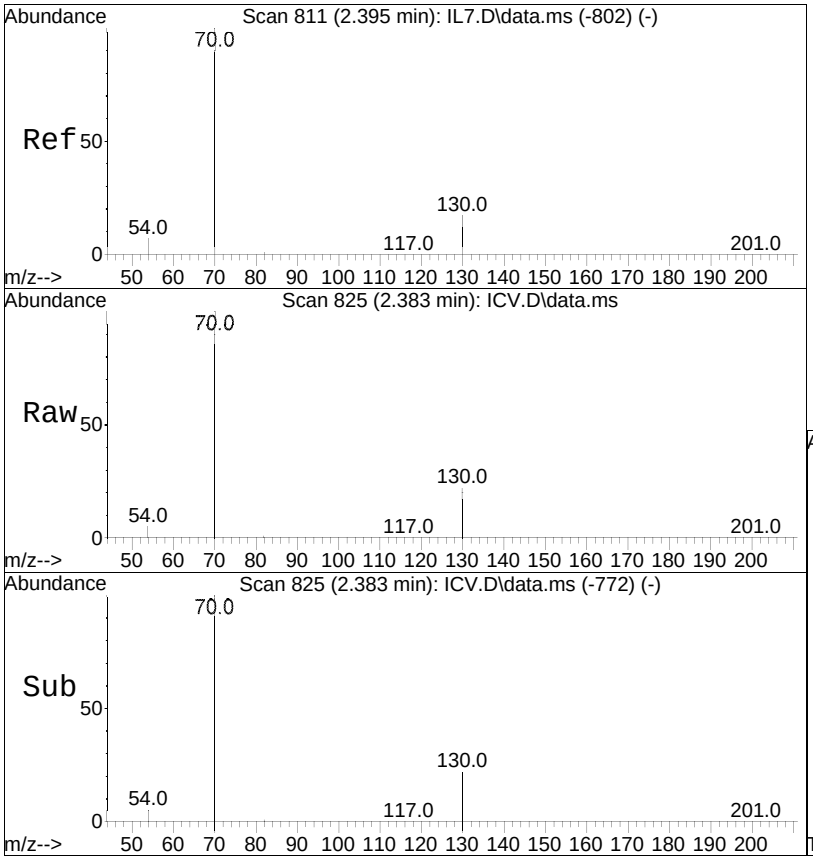


#4
Bis(2-chloroethyl)ether
Concen: 1040.79 ng/ml
RT: 2.050 min Scan# 688
Delta R.T. 0.004 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion: 93 Resp: 13057

Ion	Ratio	Lower	Upper
93	100		
63	74.2	62.6	94.0

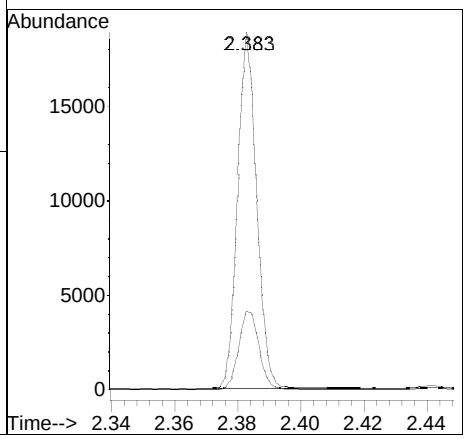


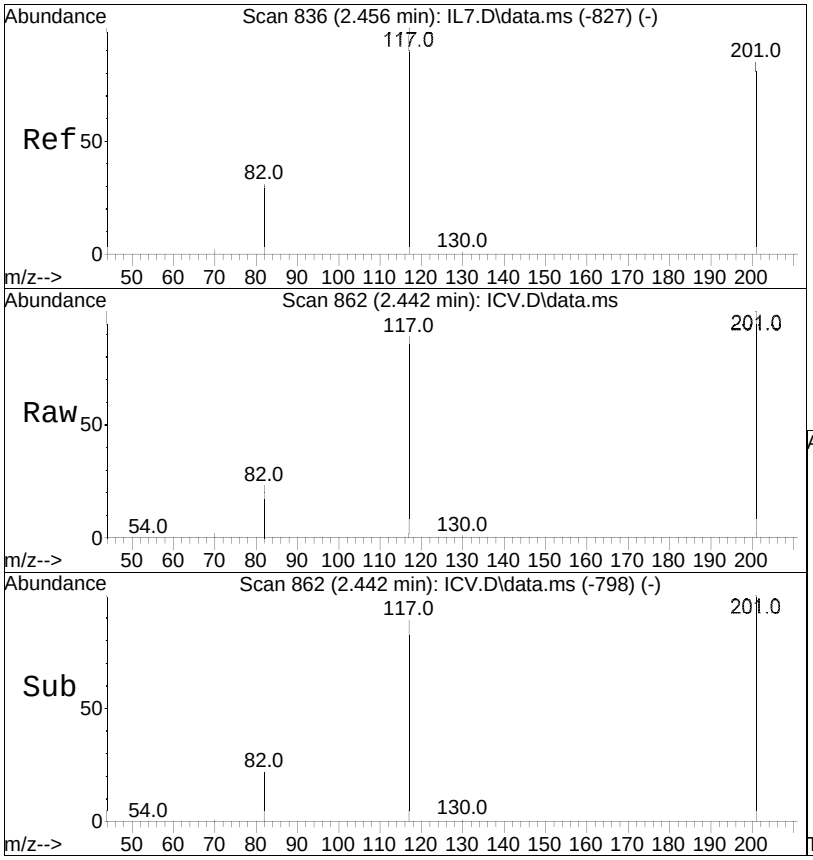


#5
n-nitrosodi-n-propylamine
Concen: 1033.97 ng/ml
RT: 2.383 min Scan# 825
Delta R.T. 0.003 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion: 70 Resp: 7758

Ion	Ratio	Lower	Upper
70	100		
130	22.9	15.0	22.6#

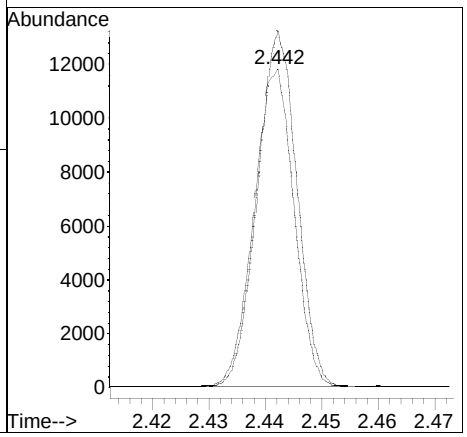


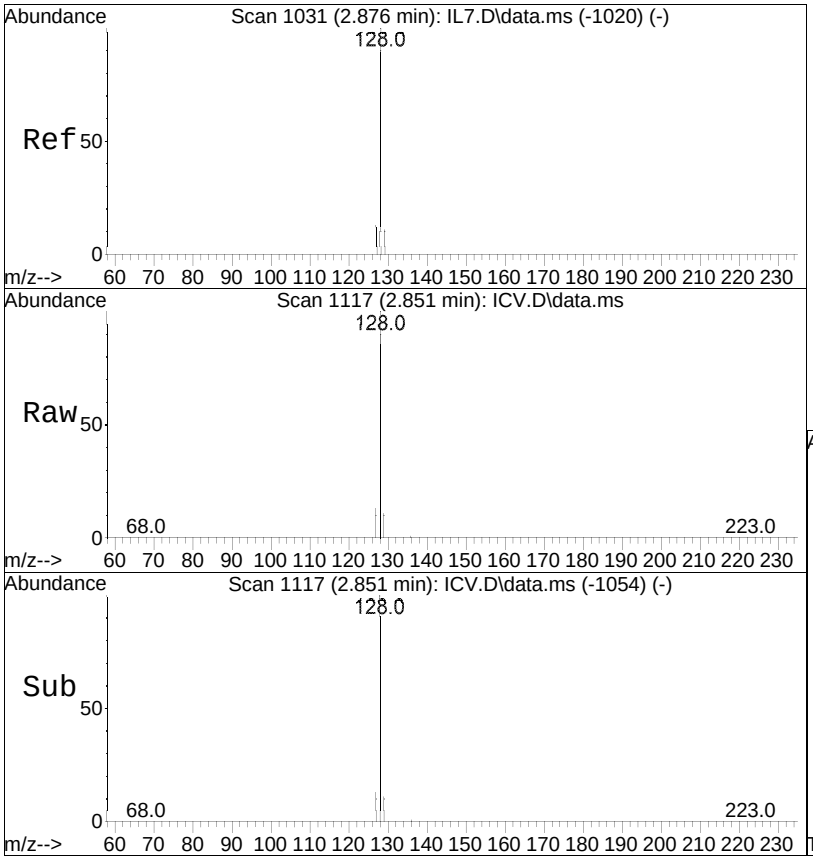


#6
Hexachloroethane
Concen: 1030.73 ng/ml
RT: 2.442 min Scan# 862
Delta R.T. 0.003 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:117 Resp: 5737

Ion	Ratio	Lower	Upper
117	100		
201	110.8	81.5	122.3

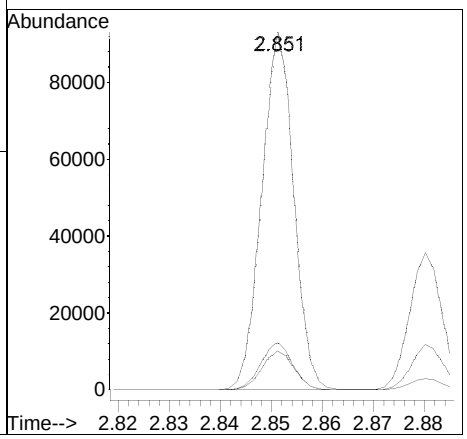


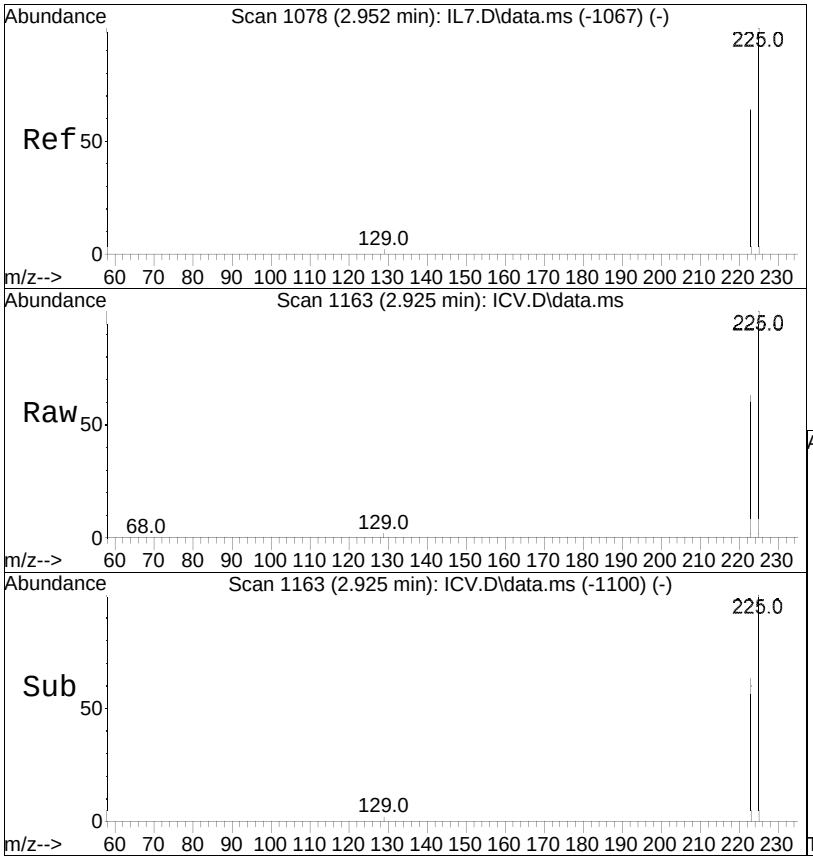


#9
Naphthalene
Concen: 1063.36 ng/ml
RT: 2.851 min Scan# 1117
Delta R.T. 0.001 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:128 Resp: 40083

Ion	Ratio	Lower	Upper
128	100		
129	11.1	8.8	13.2
127	13.1	10.6	15.8

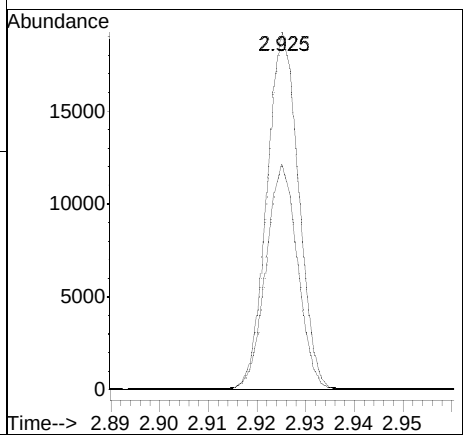


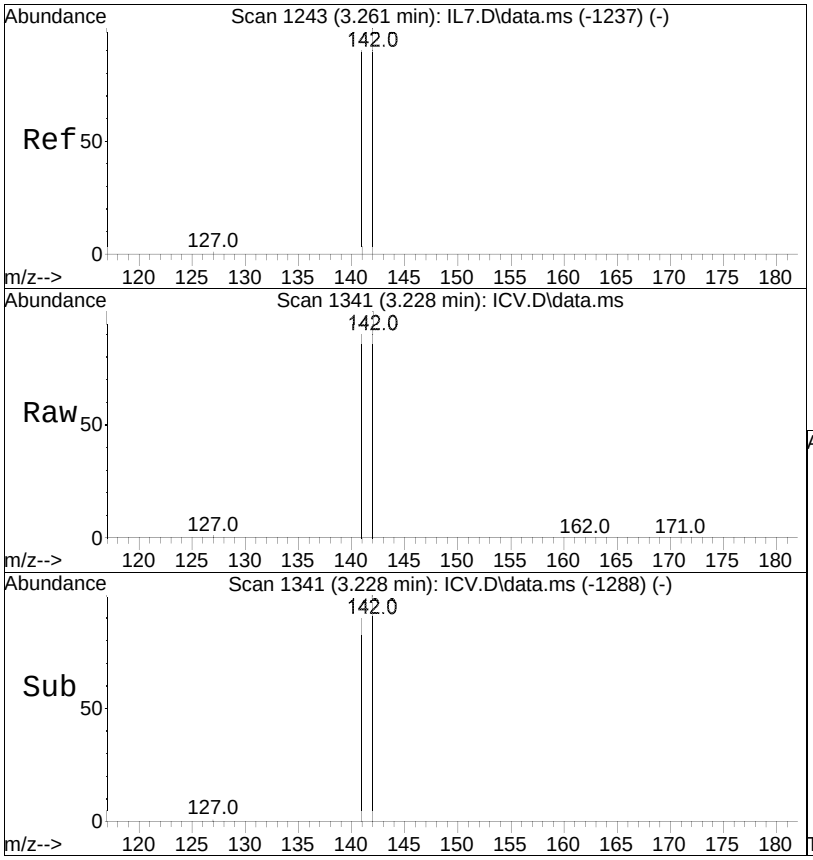


#10
Hexachlorobutadiene
Concen: 1053.23 ng/ml
RT: 2.925 min Scan# 1163
Delta R.T. 0.001 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:225 Resp: 8550

Ion	Ratio	Lower	Upper
225	100		
223	62.7	50.1	75.1

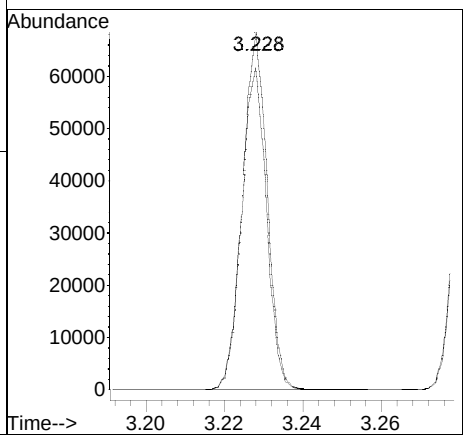


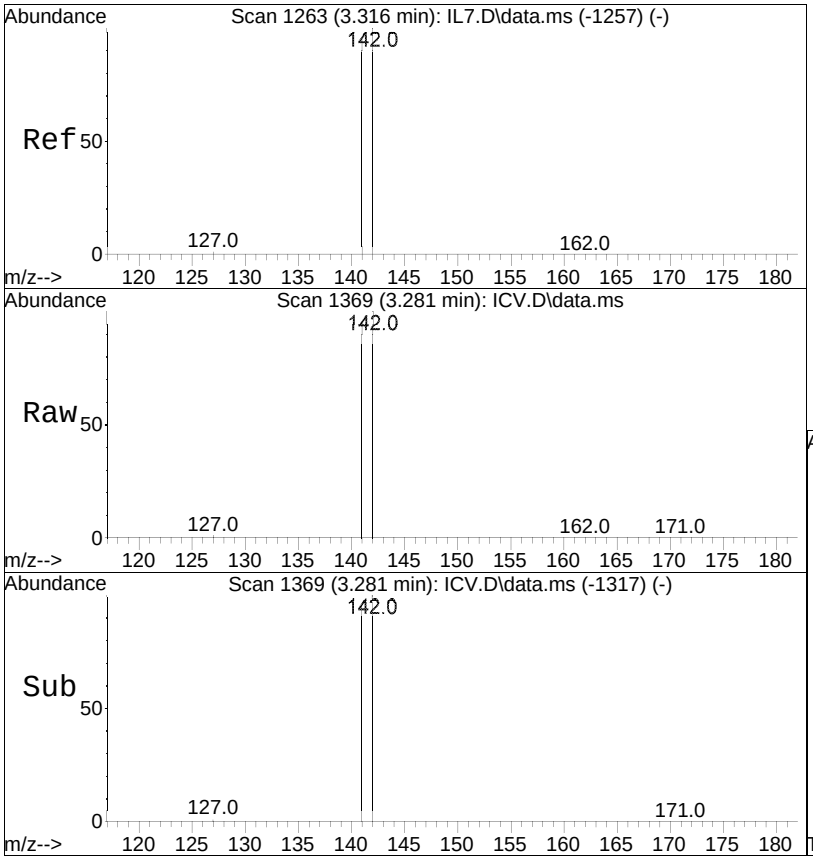


#11
2-Methylnaphthalene
Concen: 1055.68 ng/ml
RT: 3.228 min Scan# 1341
Delta R.T. 0.001 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:142 Resp: 29423

Ion	Ratio	Lower	Upper
142	100		
141	91.8	74.1	111.1

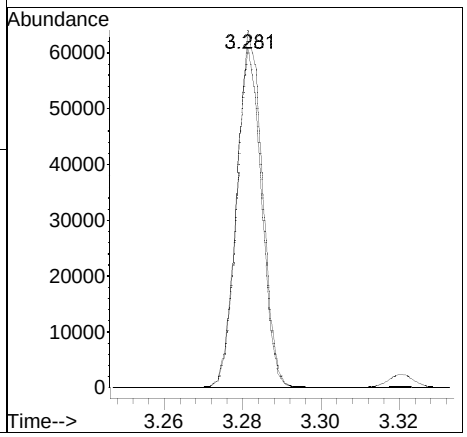


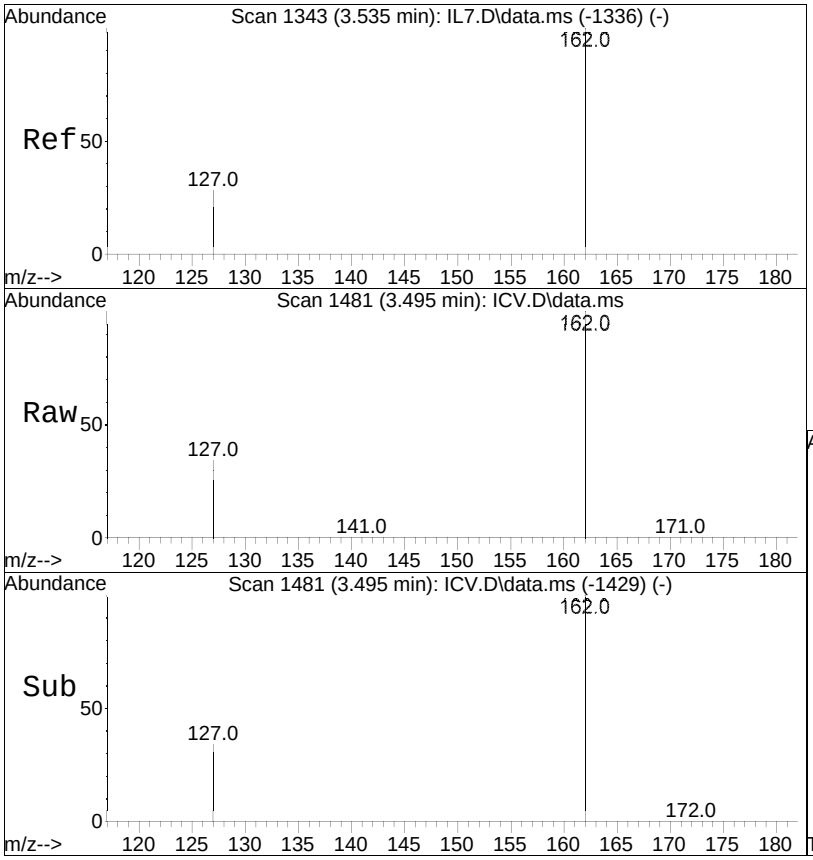


#12
1-Methylnaphthalene
Concen: 1090.91 ng/ml
RT: 3.281 min Scan# 1369
Delta R.T. -0.001 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:142 Resp: 28038

Ion	Ratio	Lower	Upper
142	100		
141	94.7	76.6	114.8

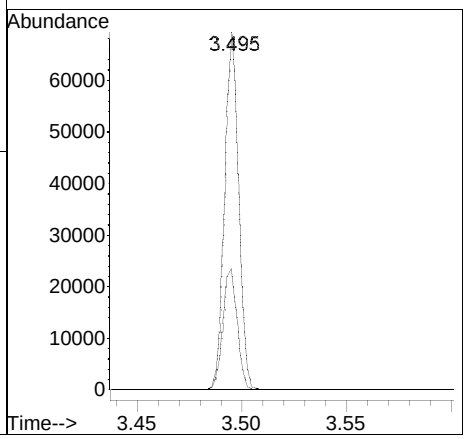


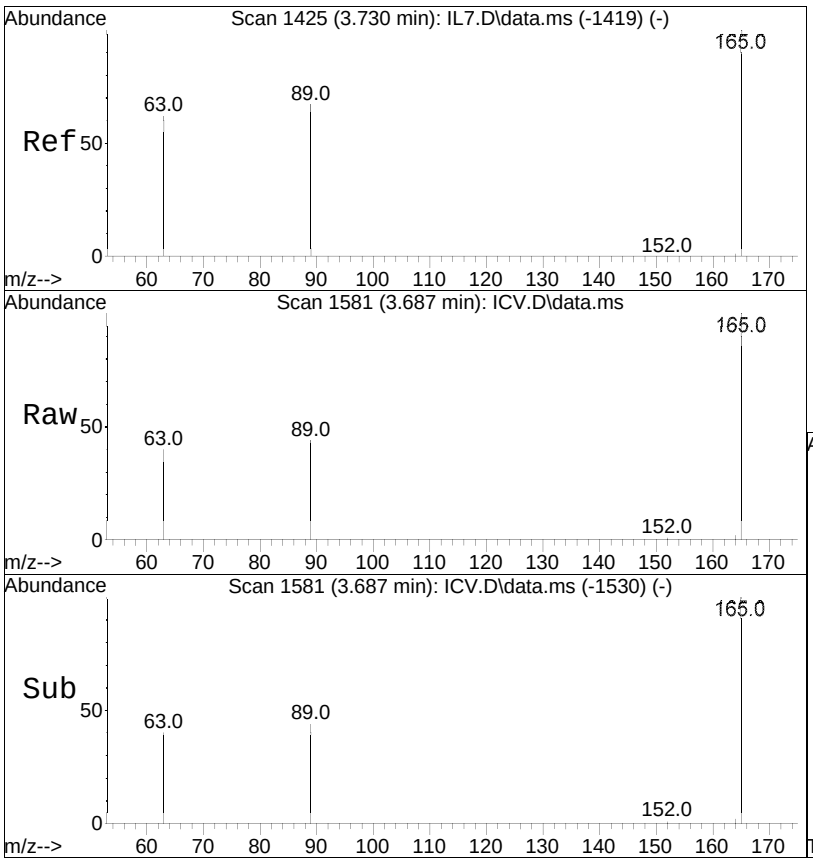


#14
2-Chloronaphthalene
Concen: 1056.07 ng/ml
RT: 3.495 min Scan# 1481
Delta R.T. -0.001 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:162 Resp: 31353

Ion	Ratio	Lower	Upper
162	100		
127	34.7	29.7	44.5

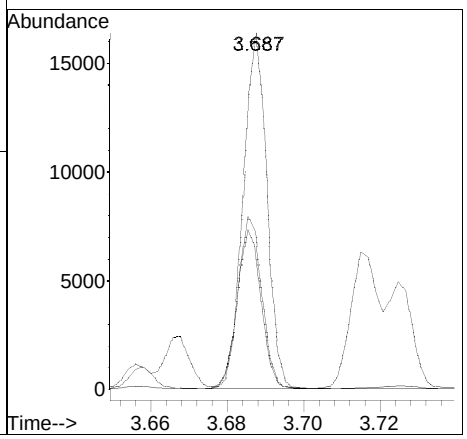


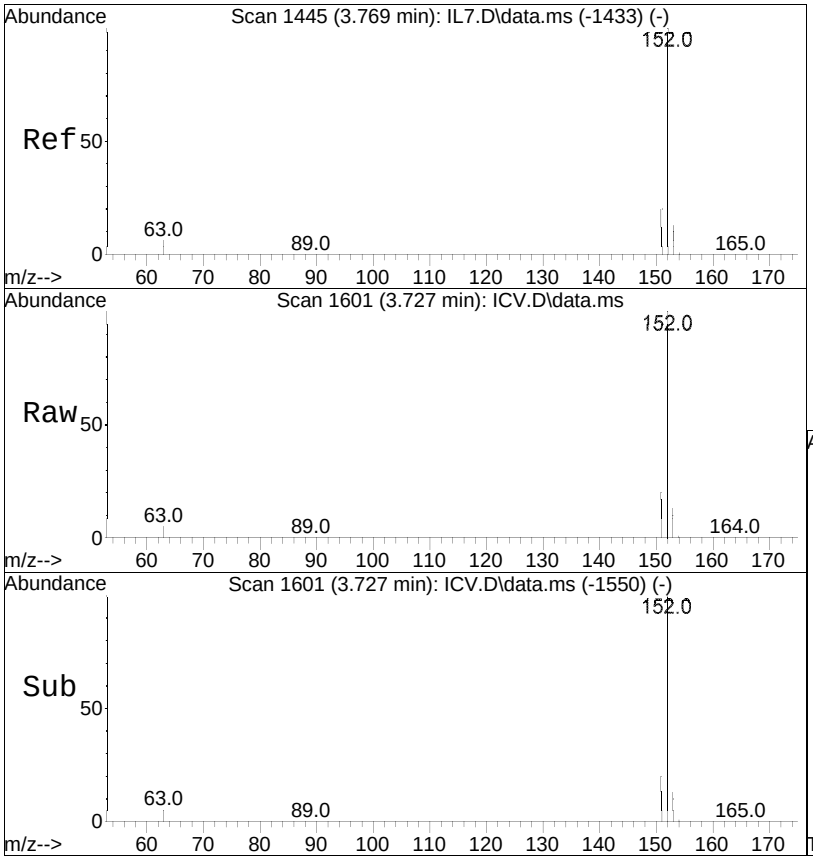


#15
2,6-Dinitrotoluene
Concen: 1039.70 ng/ml
RT: 3.687 min Scan# 1581
Delta R.T. -0.001 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:165 Resp: 6970

Ion	Ratio	Lower	Upper
165	100		
89	50.2	52.8	79.2#
63	46.2	50.9	76.3#

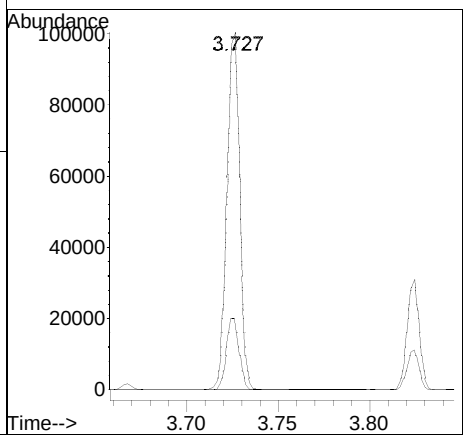


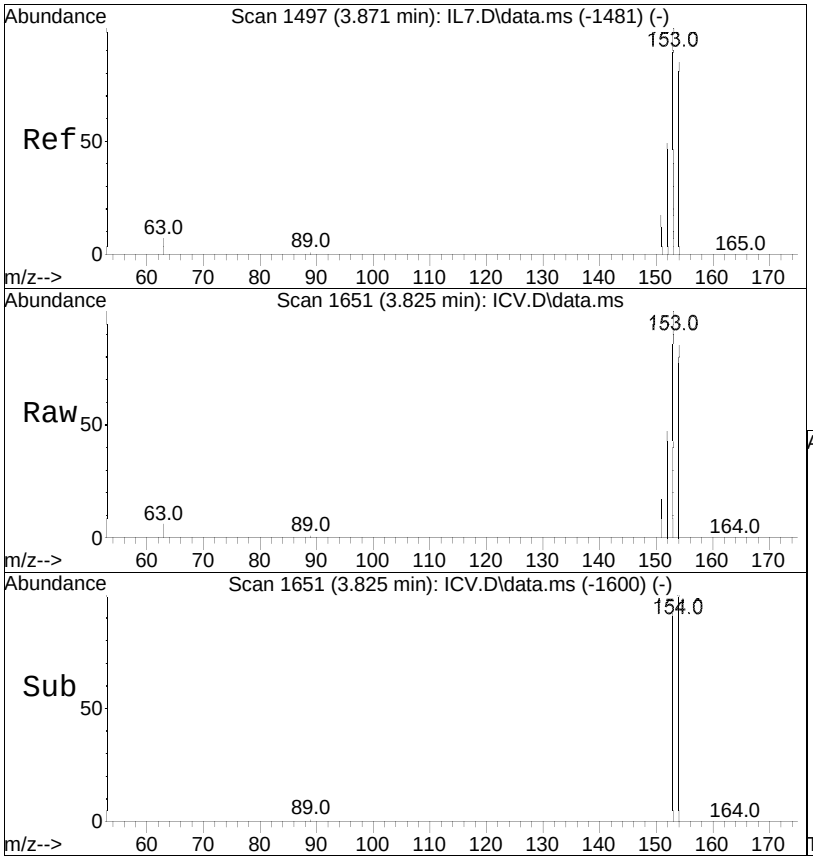


#16
Acenaphthylene
Concen: 1104.82 ng/ml
RT: 3.727 min Scan# 1601
Delta R.T. -0.000 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:152 Resp: 48743

Ion	Ratio	Lower	Upper
152	100		
151	20.0	16.0	24.0

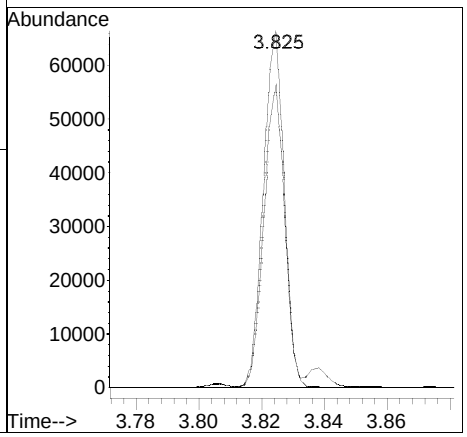


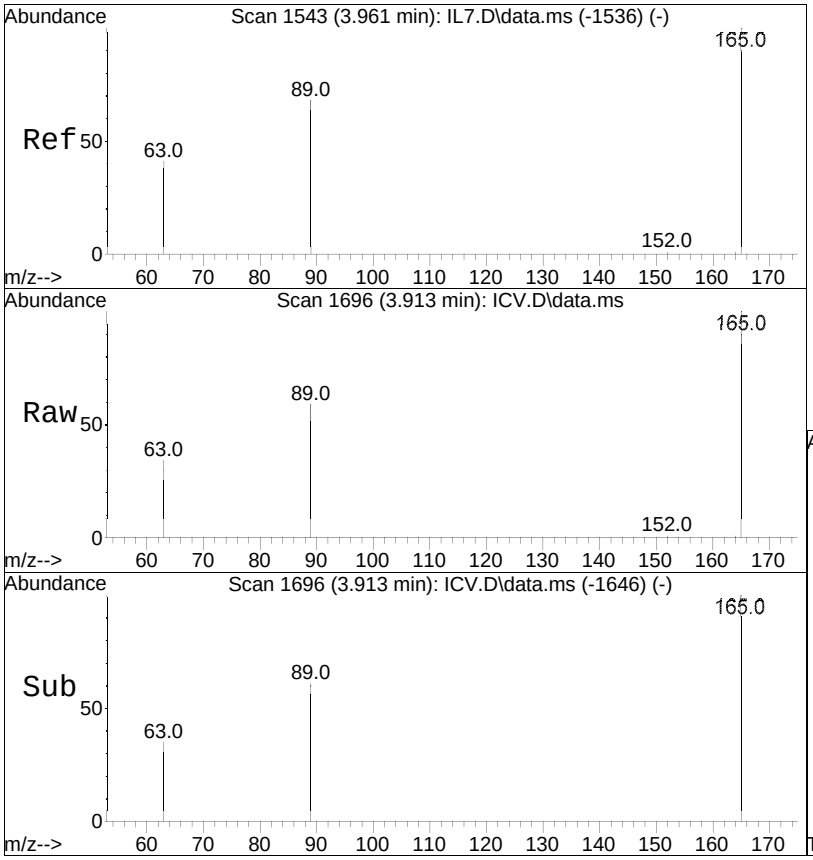


#18
Acenaphthene
Concen: 1068.59 ng/ml
RT: 3.825 min Scan# 1651
Delta R.T. -0.000 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:153 Resp: 30119

Ion	Ratio	Lower	Upper
153	100		
154	85.1	66.9	100.3

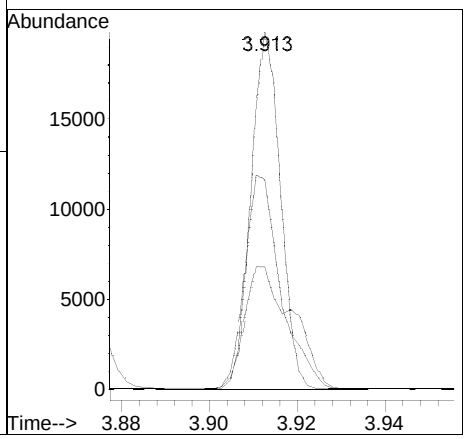


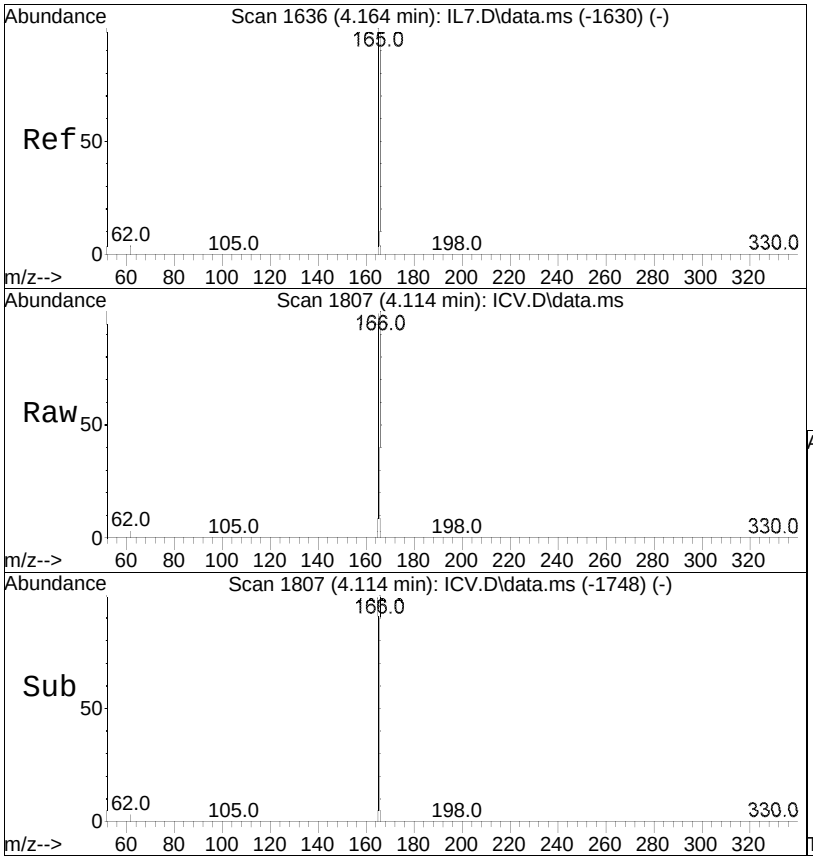


#19
2,4-Dinitrotoluene
Concen: 1082.17 ng/ml
RT: 3.913 min Scan# 1696
Delta R.T. -0.002 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:165 Resp: 9094

Ion	Ratio	Lower	Upper
165	100		
89	73.0	80.1	120.1#
63	55.0	38.9	58.3

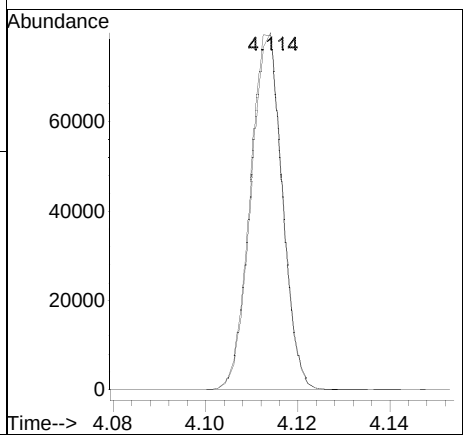


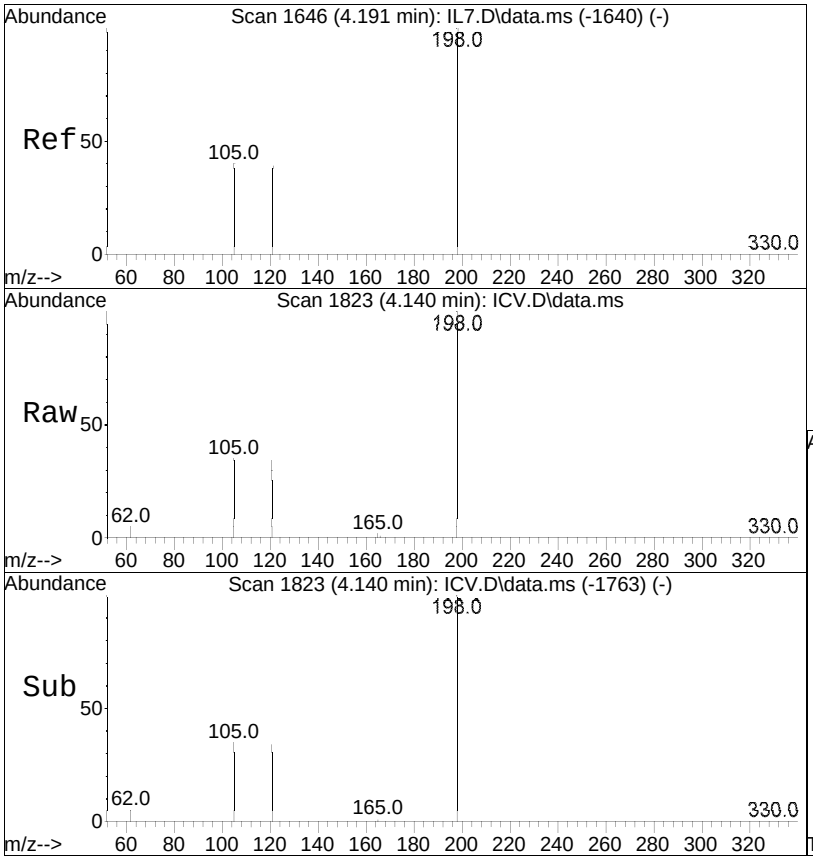


#20
Fluorene
Concen: 1122.15 ng/ml
RT: 4.114 min Scan# 1807
Delta R.T. 0.000 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:166 Resp: 37806

Ion	Ratio	Lower	Upper
166	100		
165	101.7	82.9	124.3

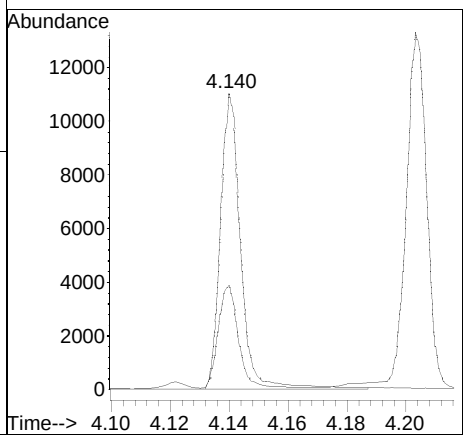


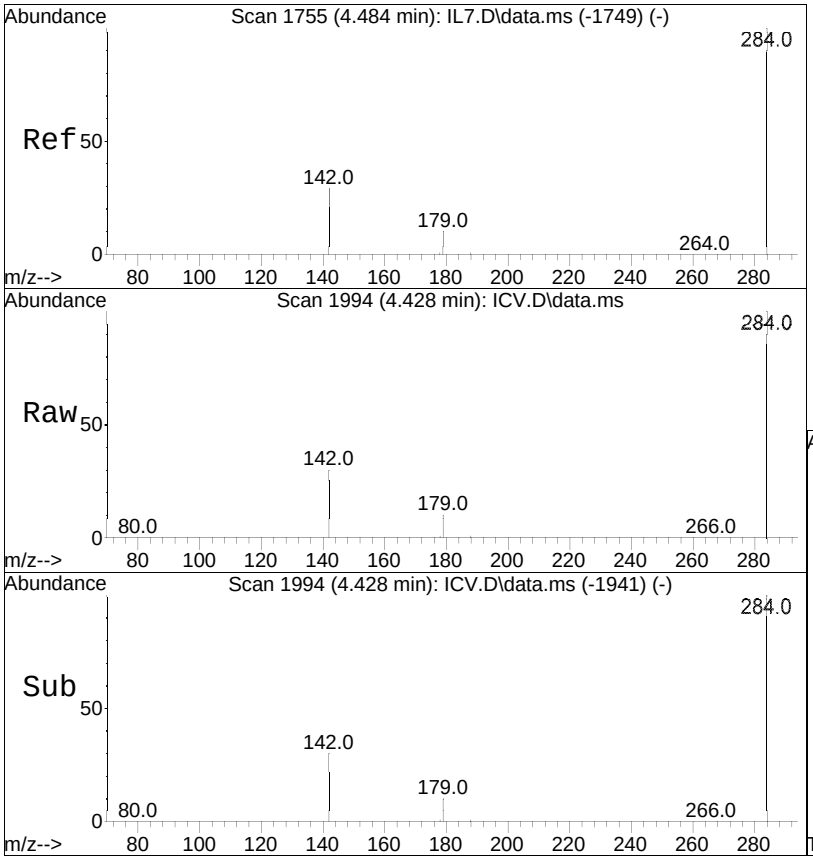


#23
4,6-Dinitro-o-cresol
Concen: 868.95 ng/ml
RT: 4.140 min Scan# 1823
Delta R.T. -0.002 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:198 Resp: 5185

Ion	Ratio	Lower	Upper
198	100		
105	34.4	32.2	48.4

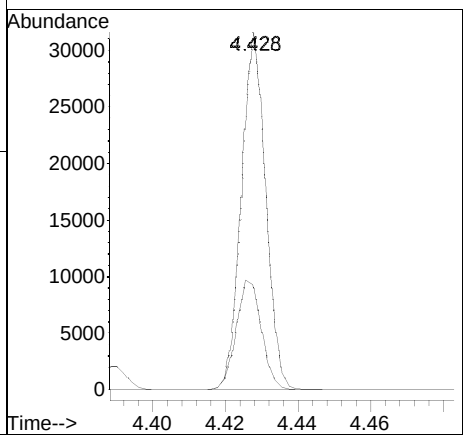


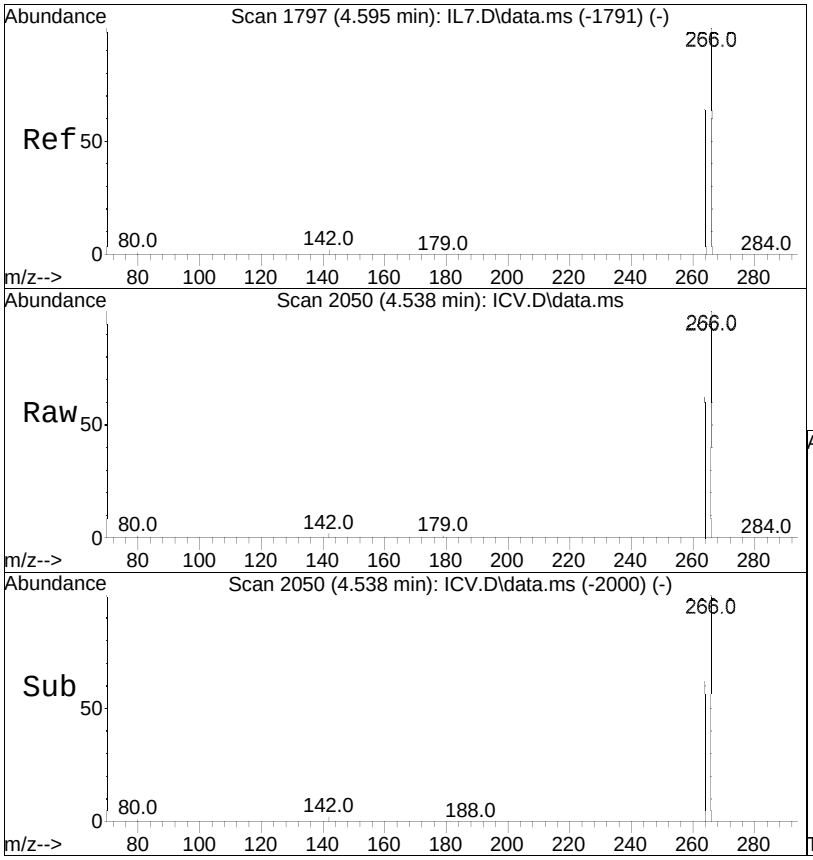


#24
Hexachlorobenzene
Concen: 1070.97 ng/ml
RT: 4.428 min Scan# 1994
Delta R.T. -0.002 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:284 Resp: 14437

Ion	Ratio	Lower	Upper
284	100		
142	32.2	26.9	40.3

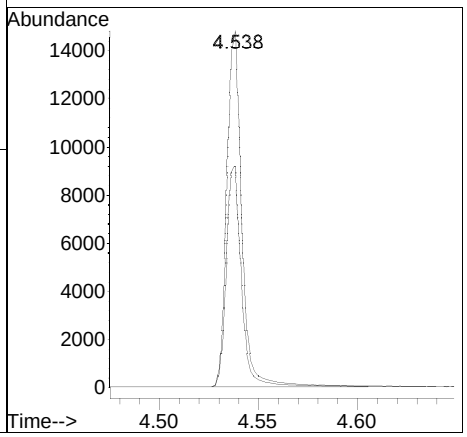


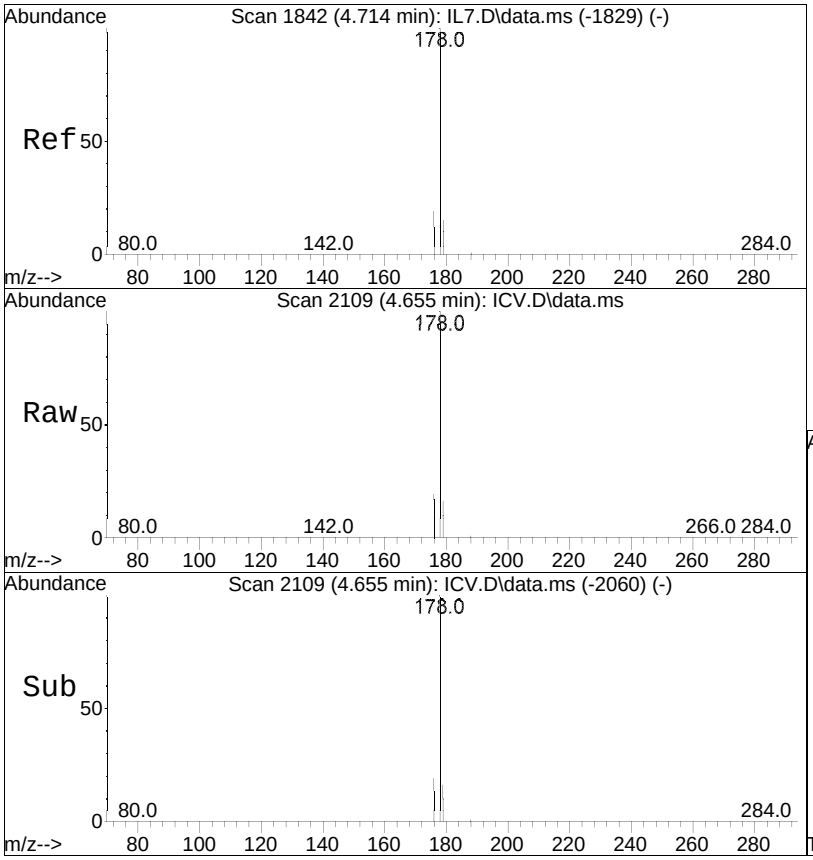


#25
Pentachlorophenol
Concen: 905.88 ng/ml
RT: 4.538 min Scan# 2050
Delta R.T. -0.002 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:266 Resp: 7716

Ion	Ratio	Lower	Upper
266	100		
264	63.2	50.7	76.1

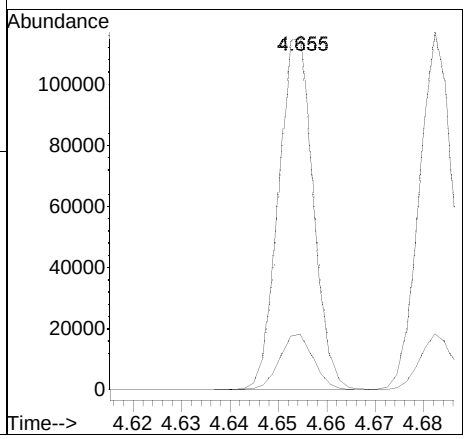


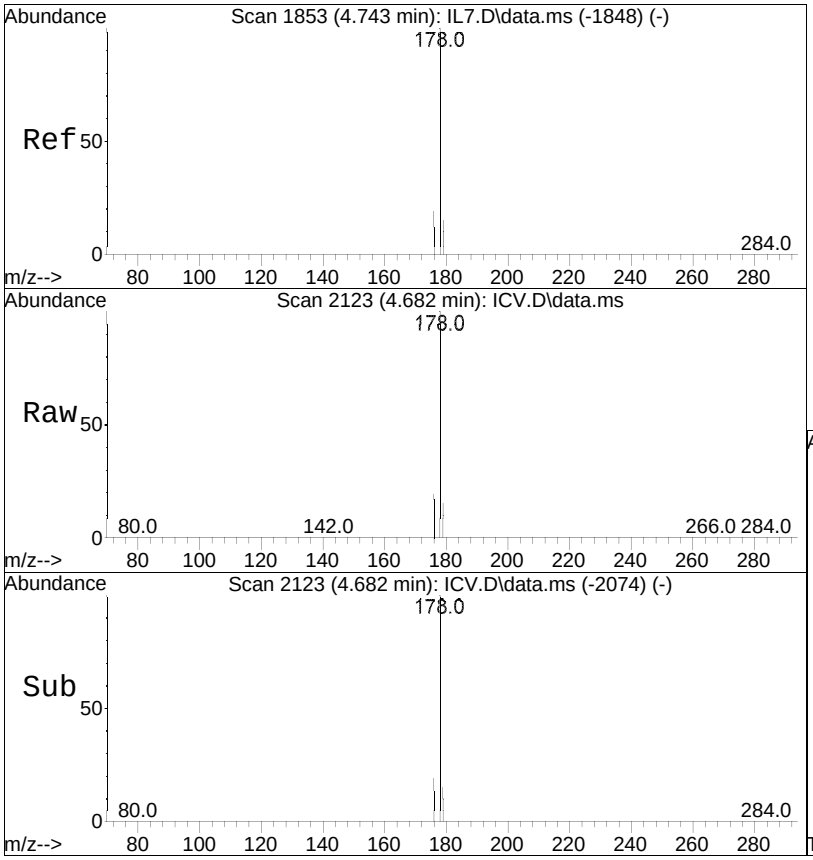


#26
Phenanthrene
Concen: 1083.66 ng/ml
RT: 4.655 min Scan# 2109
Delta R.T. -0.002 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:178 Resp: 57399

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.3	18.5

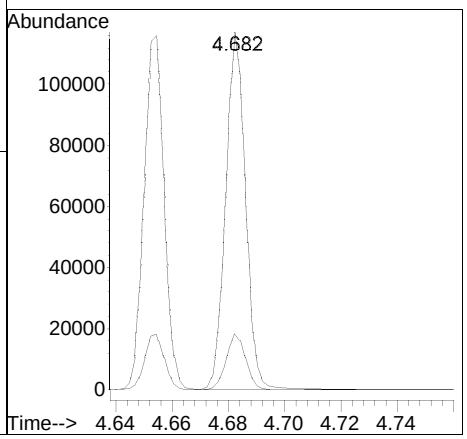


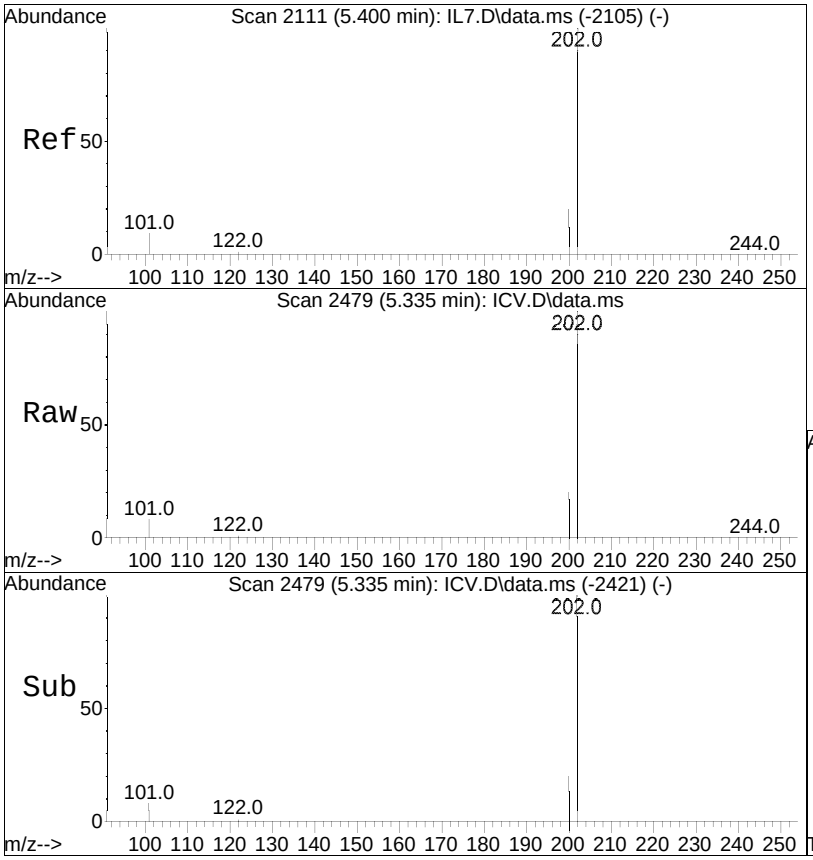


#27
Anthracene
Concen: 1088.58 ng/ml
RT: 4.682 min Scan# 2123
Delta R.T. -0.003 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:178 Resp: 57179

Ion	Ratio	Lower	Upper
178	100		
179	15.3	12.2	18.4

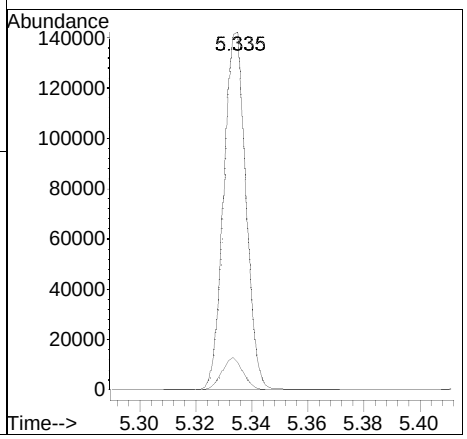


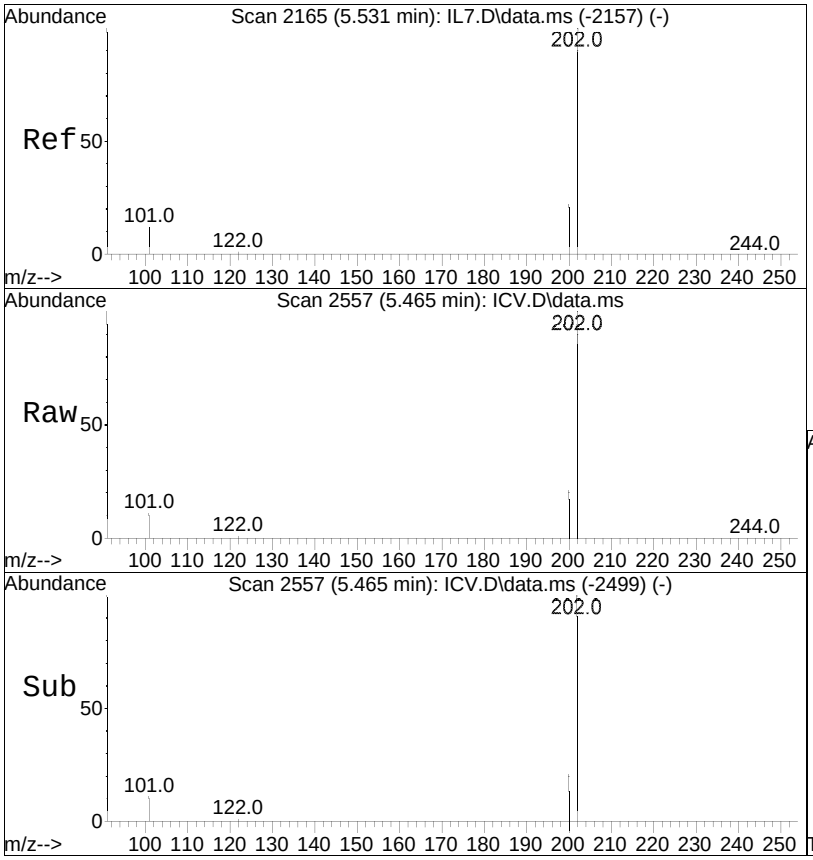


#28
Fluoranthene
Concen: 1100.58 ng/ml
RT: 5.335 min Scan# 2479
Delta R.T. -0.003 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:202 Resp: 76831

Ion	Ratio	Lower	Upper
202	100		
101	8.6	8.3	12.5

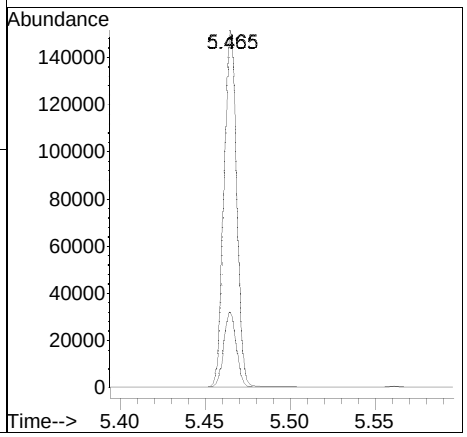


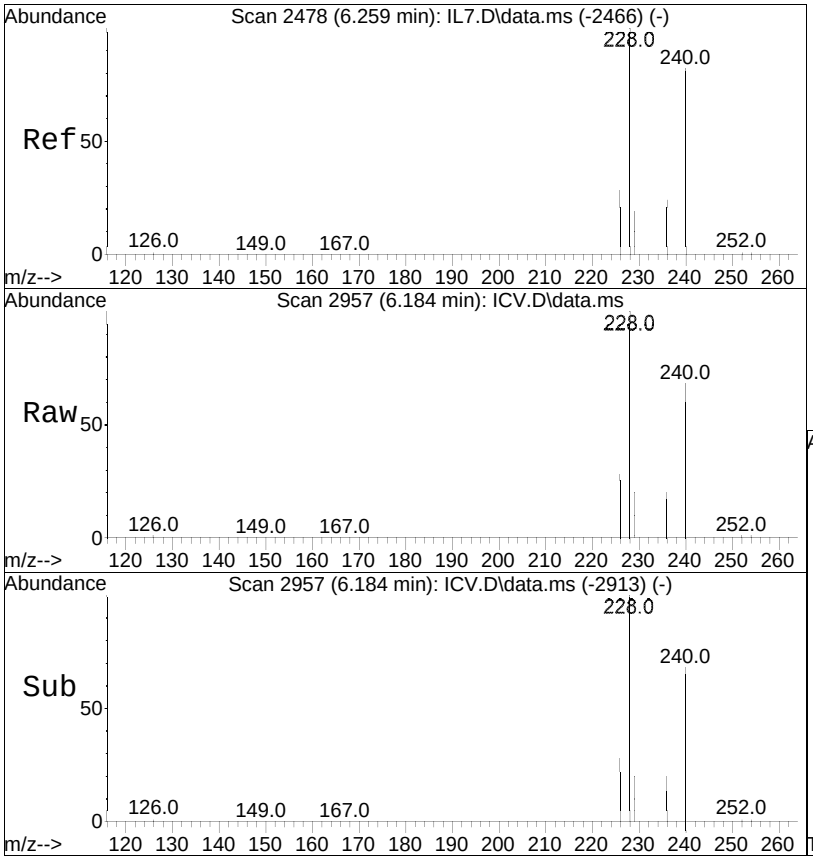


#29
Pyrene
Concen: 1085.80 ng/ml
RT: 5.465 min Scan# 2557
Delta R.T. -0.003 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:202 Resp: 77872

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

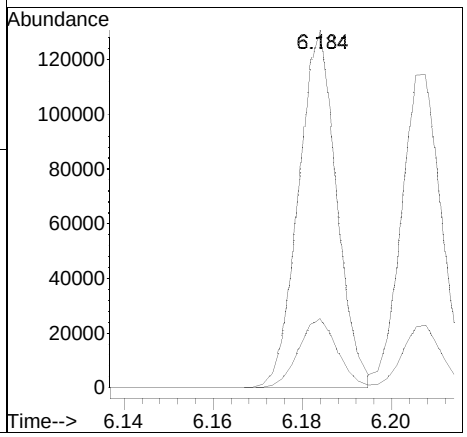


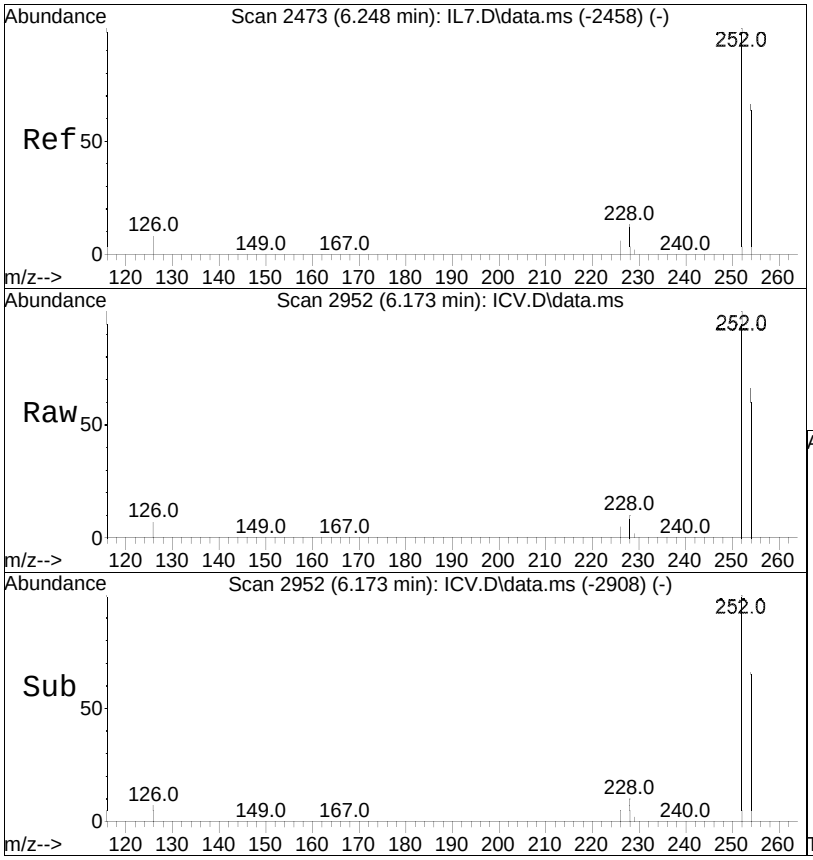


#32
Benzo[a]anthracene
Concen: 1130.17 ng/ml
RT: 6.184 min Scan# 2957
Delta R.T. -0.006 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:228 Resp: 77469

Ion	Ratio	Lower	Upper
228	100		
229	19.7	15.6	23.4

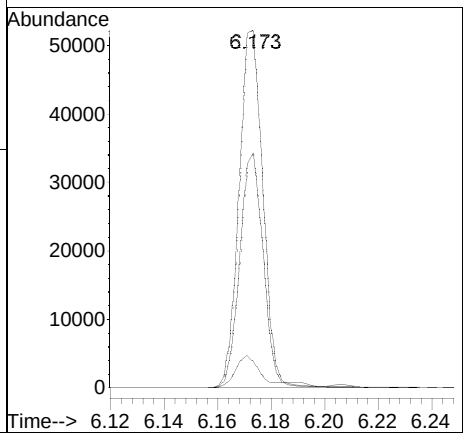


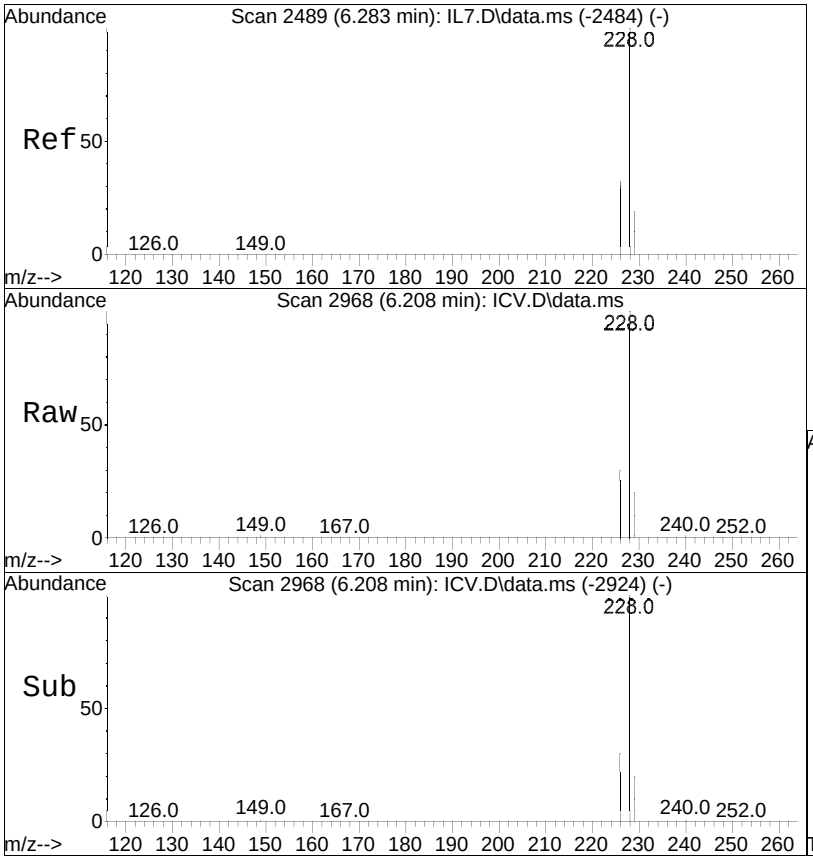


#33
3,3'-Dichlorobenzidine
Concen: 1025.78 ng/ml
RT: 6.173 min Scan# 2952
Delta R.T. -0.007 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:252 Resp: 31712

Ion	Ratio	Lower	Upper
252	100		
126	8.9	7.7	11.5
254	64.8	52.0	78.0

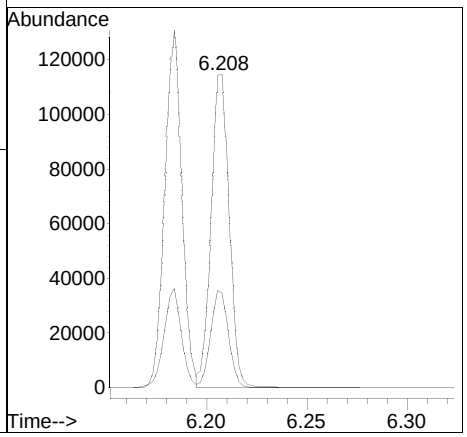


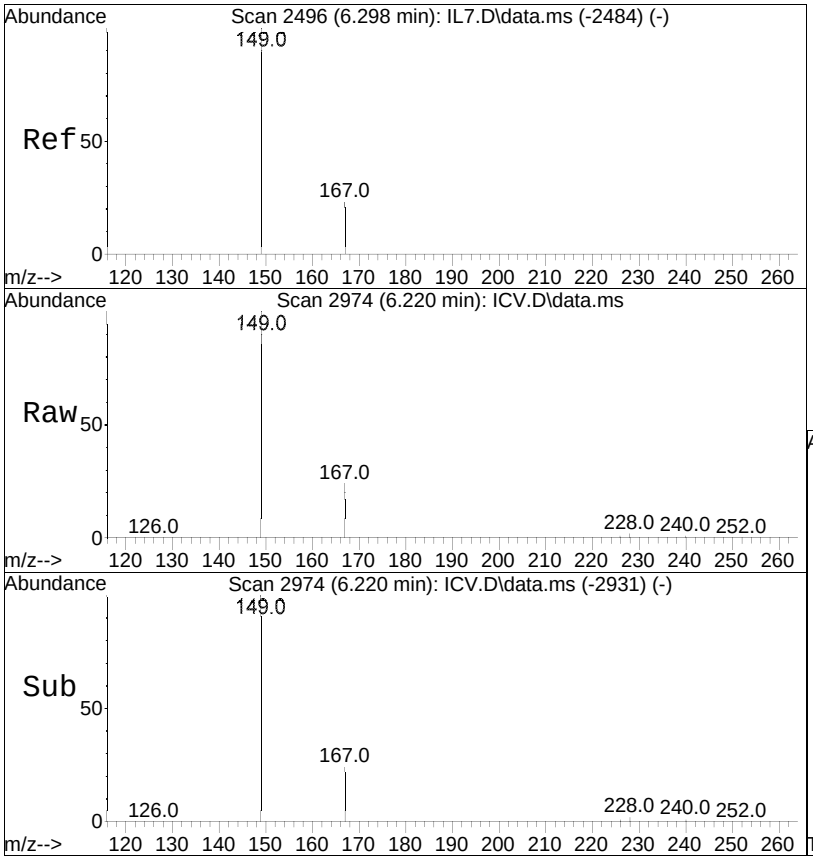


#34
Chrysene
Concen: 1060.55 ng/ml
RT: 6.208 min Scan# 2968
Delta R.T. -0.006 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:228 Resp: 71624

Ion	Ratio	Lower	Upper
228	100		
226	30.7	24.5	36.7

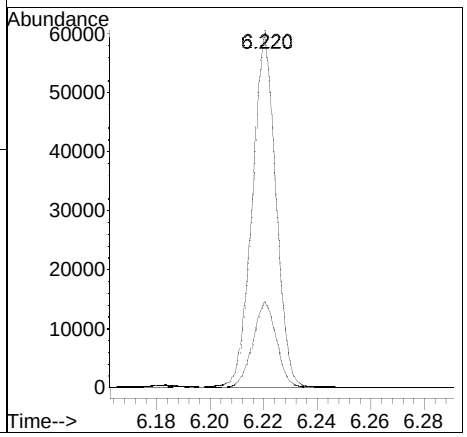


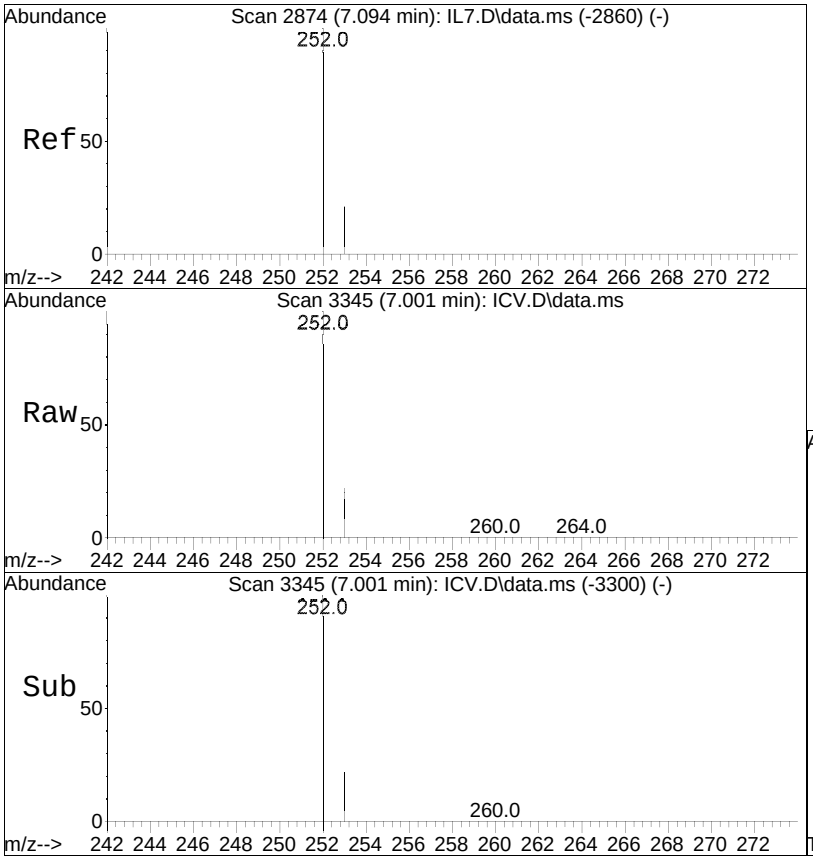


#35
Bis(2-ethylhexyl)phthalate
Concen: 813.98 ng/ml
RT: 6.220 min Scan# 2974
Delta R.T. -0.009 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:149 Resp: 36205

Ion	Ratio	Lower	Upper
149	100		
167	24.2	18.5	27.7

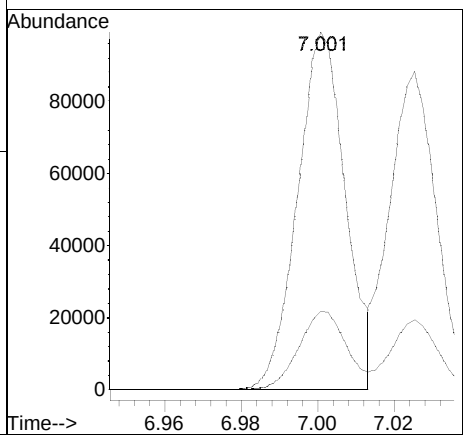


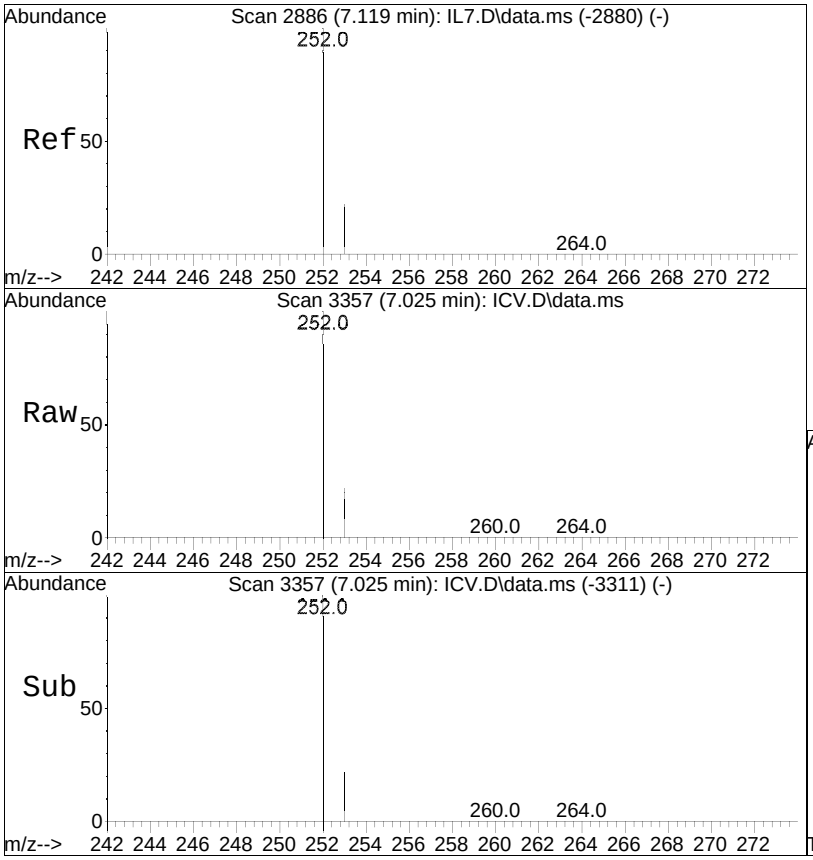


#37
Benzo[b]fluoranthene
Concen: 1104.62 ng/ml
RT: 7.001 min Scan# 3345
Delta R.T. -0.008 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:252 Resp: 86223

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.3	25.9

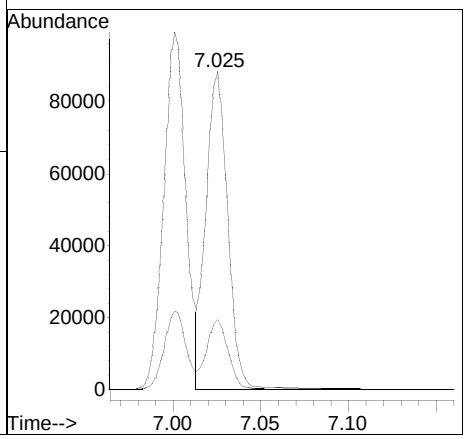


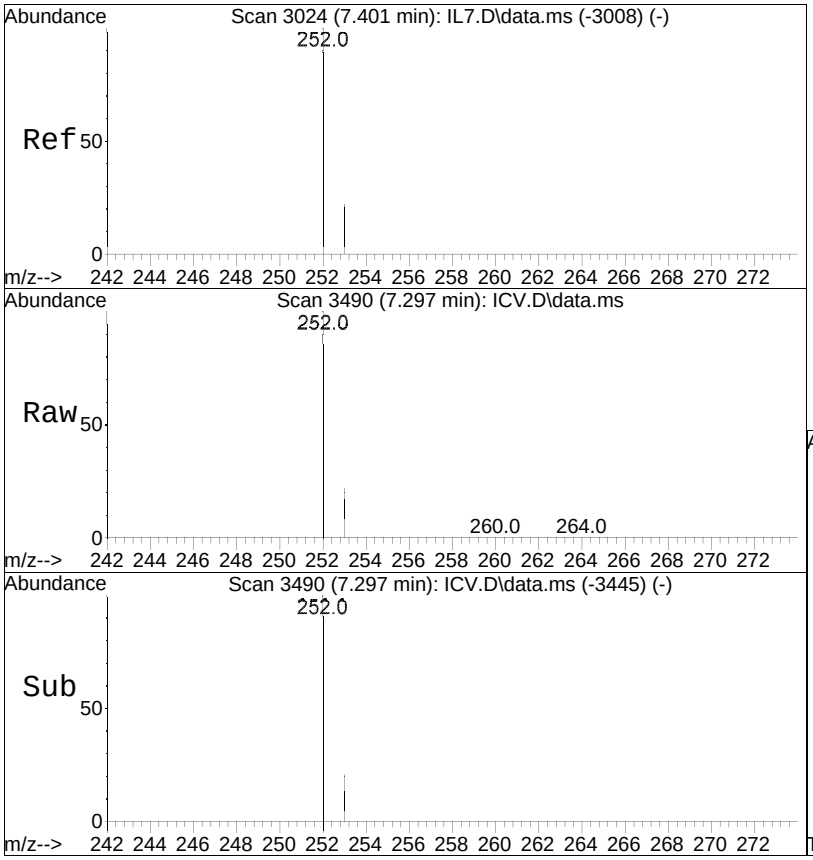


#38
Benzo[k]fluoranthene
Concen: 1021.78 ng/ml
RT: 7.025 min Scan# 3357
Delta R.T. -0.006 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:252 Resp: 75734

Ion	Ratio	Lower	Upper
252	100		
253	22.0	17.4	26.2

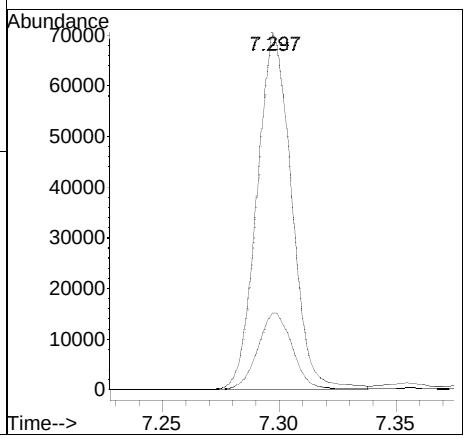


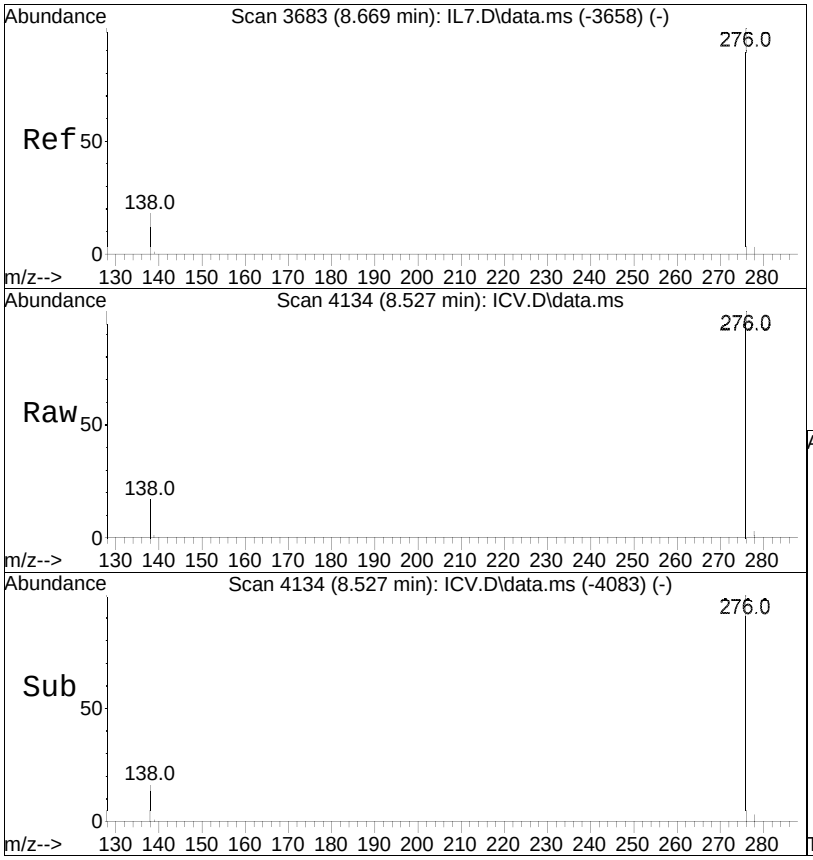


#39
Benzo[a]pyrene
Concen: 1037.41 ng/ml
RT: 7.297 min Scan# 3490
Delta R.T. -0.008 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:252 Resp: 71277

Ion	Ratio	Lower	Upper
252	100		
253	21.7	17.4	26.0

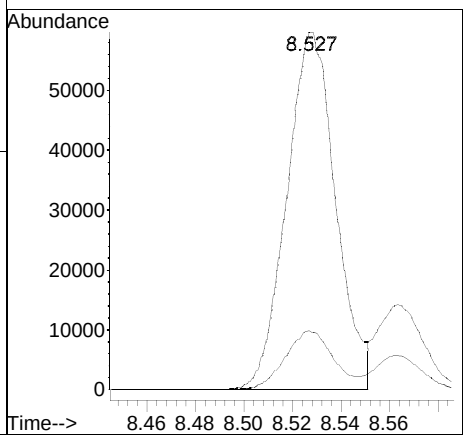


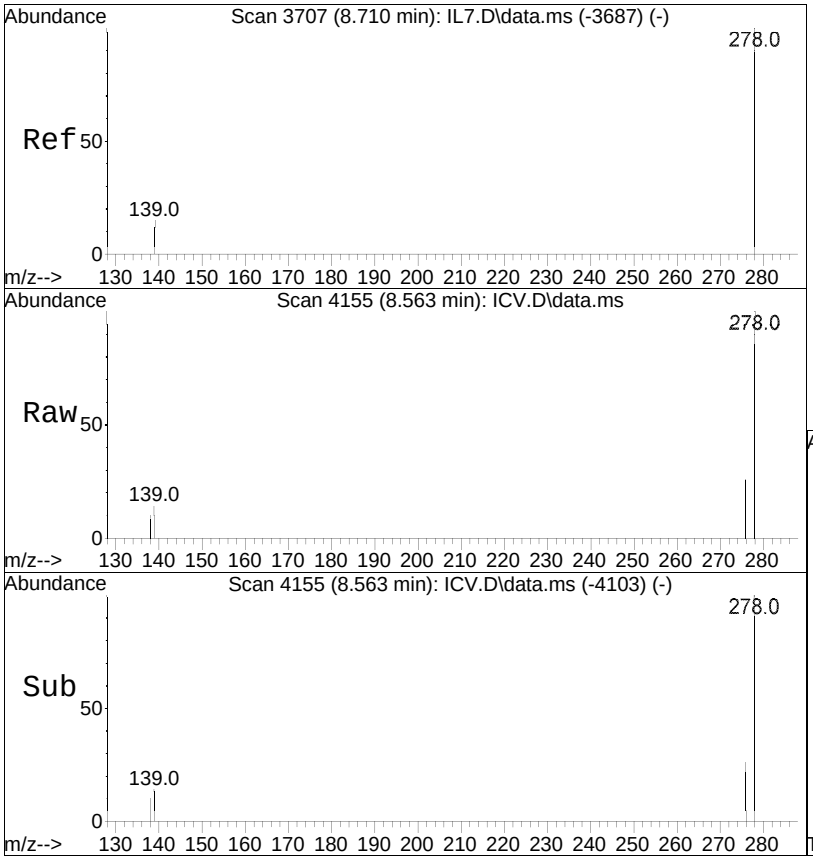


#40
Indeno[1,2,3-cd]pyrene
Concen: 1110.34 ng/ml
RT: 8.527 min Scan# 4134
Delta R.T. -0.011 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:276 Resp: 82912

Ion	Ratio	Lower	Upper
276	100		
138	16.1	14.8	22.2

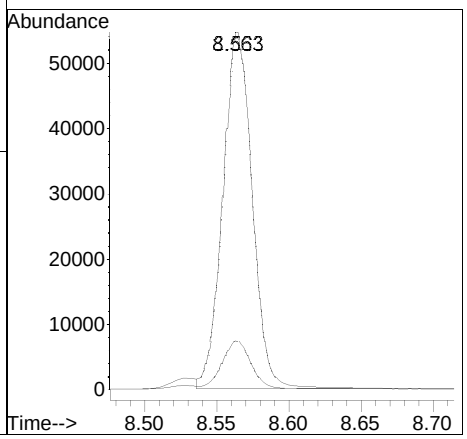


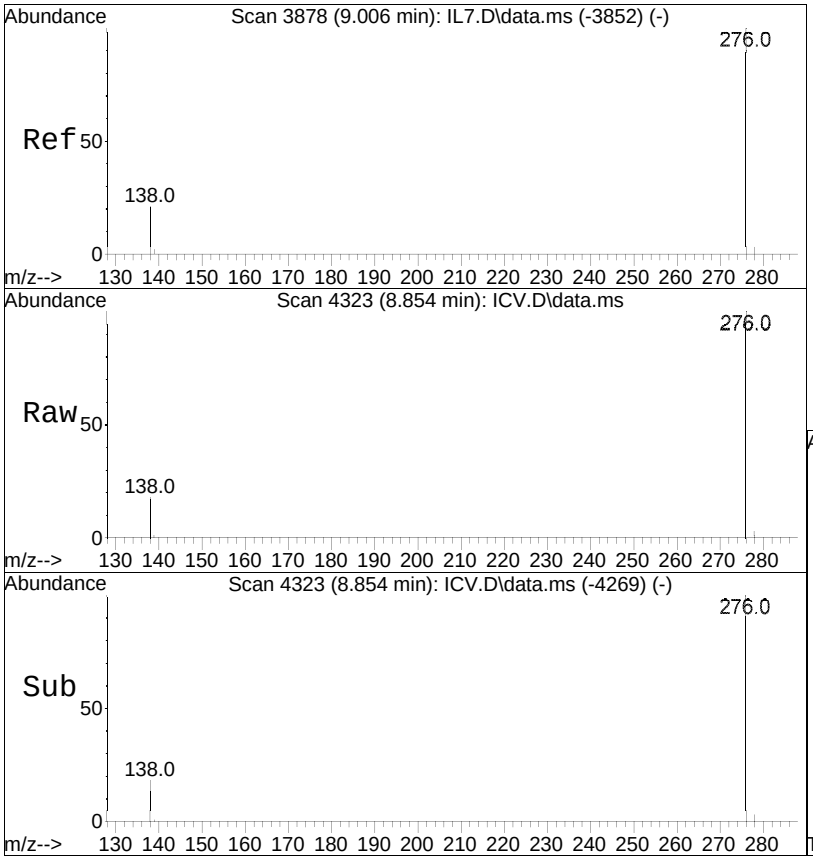


#41
Dibenzo[a,h]anthracene
Concen: 1100.81 ng/ml
RT: 8.563 min Scan# 4155
Delta R.T. -0.011 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:278 Resp: 76479

Ion	Ratio	Lower	Upper
278	100		
139	13.4	12.2	18.4

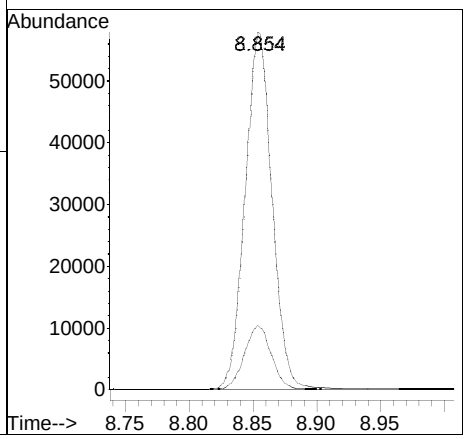




#42
Benzo[g,h,i]perylene
Concen: 1103.05 ng/ml
RT: 8.854 min Scan# 4323
Delta R.T. -0.007 min
Lab File: ICV.D
Acq: 07 Dec 2023 03:59 pm

Tgt Ion:276 Resp: 83784

Ion	Ratio	Lower	Upper
276	100		
138	18.1	16.8	25.2



Manual Integration Report

Data Path	: I:\8270SIM\sv119\231207n	LVQMethod	: SIM-LVI_231207n_sv119.M
Data File	: ICV.D	Operator	: sv119:dv
Date Inj'd	: 12/7/2023 3:59 pm	Instrument	: SV119
Sample	: CQICV,32,,1.0 Lot#10193	Quant Date	: 12/8/2023 2:09 pm

There are no manual integrations or false positives in this file.

Continuing Calibration

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: SV119	**Calibration Date**	: 04/03/24 06:40		
Lab File ID	: CCV0403	**Init. Calib. Date(s)**	: 12/07/23	12/07/23	
Sample No	: WG1904170-3	**Init. Calib. Times**	: 13:10	15:42	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene-d4	1	1	.05	0	20	122	0
2-Fluorophenol	1.094	1.261	.05	-15.3	20	130	0
Phenol-d6	1.311	1.449	.05	-10.5	20	132	0
Bis(2-chloroethyl)ether	1.115	1.188	.05	-6.5	20	129	0
n-nitrosodi-n-propylamine	0.667	0.771	.05	-15.6	20	135	0
Hexachloroethane	0.495	0.565	.05	-14.1	20	137	0
Nitrobenzene-d5	0.995	1.192	.05	-19.8	20	138	0
Naphthalene-d8	1	1	.05	0	20	112	0
Naphthalene	0.955	1.066	.05	-11.6	20	120	0
Hexachlorobutadiene	0.206	0.25	.05	-21.4*	20	129	0
2-Methylnaphthalene	0.706	0.749	.05	-6.1	20	112	0
1-Methylnaphthalene	0.651	0.673	.05	-3.4	20	112	0
2-Fluorobiphenyl	0.893	0.849	.05	4.9	20	102	0
2-Chloronaphthalene	0.752	0.765	.05	-1.7	20	111	0
2,6-Dinitrotoluene	0.17	0.184	.05	-8.2	20	118	0
Acenaphthylene	1.118	1.142	.05	-2.1	20	108	0
Acenaphthene-d10	1	1	.05	0	20	98	0
Acenaphthene	1.237	1.424	.05	-15.1	20	107	0
2,4-Dinitrotoluene	0.369	0.491	.05	-33.1*	20	120	0
Fluorene	1.478	1.636	.05	-10.7	20	102	0
2,4,6-Tribromophenol	0.221	0.285	.05	-29*	20	117	0
Phenanthrene-d10	1	1	.05	0	20	91	0
4,6-Dinitro-o-cresol	1000	1037.663	.05	-3.8	20	102	0
Hexachlorobenzene	0.259	0.326	.05	-25.9*	20	109	0
Pentachlorophenol	1000	740.343	.05	26*	20	70	0
Phenanthrene	1.016	1.153	.05	-13.5	20	98	0
Anthracene	1.008	1.147	.05	-13.8	20	97	0
Fluoranthene	1.339	1.386	.05	-3.5	20	88	0
Pyrene	1.376	1.432	.05	-4.1	20	90	0
4-Terphenyl-d14	0.981	0.723	.05	26.3*	20	65	0
Chrysene-d12	1	1	.05	0	20	76	0
Benzo[a]anthracene	1000	1190.656	.05	-19.1	20	81	0
3,3'-Dichlorobenzidine	0.604	0.719	.05	-19	20	87	0
Chrysene	1.32	1.483	.05	-12.3	20	82	0
Bis(2-ethylhexyl)phthalate	1000	1261.504	.05	-26.2*	20	115	0
Perylene-d12	1	1	.05	0	20	79	0
Benzo[b]fluoranthene	1.397	1.508	.05	-7.9	20	79	0
Benzo[k]fluoranthene	1.327	1.434	.05	-8.1	20	83	0
Benzo[a]pyrene	1.23	1.412	.05	-14.8	20	86	0
Indeno[1,2,3-cd]pyrene	1.337	1.554	.05	-16.2	20	87	0
Dibenzo[a,h]anthracene	1.244	1.353	.05	-8.8	20	82	0
Benzo[g,h,i]perylene	1.36	1.482	.05	-9	20	82	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: SV119	**Calibration Date**	: 04/04/24 06:58		
Lab File ID	: CCV0404	**Init. Calib. Date(s)**	: 12/07/23	12/07/23	
Sample No	: WG1904665-3	**Init. Calib. Times**	: 13:10	15:42	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene-d4	1	1	.05	0	20	144	0
2-Fluorophenol	1.094	1.217	.05	-11.2	20	148	0
Phenol-d6	1.311	1.382	.05	-5.4	20	148	0
Bis(2-chloroethyl)ether	1.115	1.226	.05	-10	20	156	0
n-nitrosodi-n-propylamine	0.667	0.691	.05	-3.6	20	143	0
Hexachloroethane	0.495	0.552	.05	-11.5	20	158	0
Nitrobenzene-d5	0.995	1.176	.05	-18.2	20	160	0
Naphthalene-d8	1	1	.05	0	20	123	0
Naphthalene	0.955	1.046	.05	-9.5	20	129	0
Hexachlorobutadiene	0.206	0.261	.05	-26.7*	20	148	0
2-Methylnaphthalene	0.706	0.794	.05	-12.5	20	130	0
1-Methylnaphthalene	0.651	0.758	.05	-16.4	20	138	0
2-Fluorobiphenyl	0.893	0.97	.05	-8.6	20	127	0
2-Chloronaphthalene	0.752	0.875	.05	-16.4	20	139	0
2,6-Dinitrotoluene	0.17	0.223	.05	-31.2*	20	157	0
Acenaphthylene	1.118	1.328	.05	-18.8	20	137	0
Acenaphthene-d10	1	1	.05	0	20	124	0
Acenaphthene	1.237	1.41	.05	-14	20	134	0
2,4-Dinitrotoluene	0.369	0.535	.05	-45*	20	165	0
Fluorene	1.478	1.686	.05	-14.1	20	132	0
2,4,6-Tribromophenol	0.221	0.317	.05	-43.4*	20	164	0
Phenanthrene-d10	1	1	.05	0	20	123	0
4,6-Dinitro-o-cresol	1000	1021.047	.05	-2.1	20	135	0
Hexachlorobenzene	0.259	0.326	.05	-25.9*	20	148	0
Pentachlorophenol	1000	655.102	.05	34.5*	20	84	0
Phenanthrene	1.016	1.103	.05	-8.6	20	127	0
Anthracene	1.008	1.174	.05	-16.5	20	135	0
Fluoranthene	1.339	1.447	.05	-8.1	20	124	0
Pyrene	1.376	1.48	.05	-7.6	20	126	0
4-Terphenyl-d14	0.981	0.778	.05	20.7*	20	94	0
Chrysene-d12	1	1	.05	0	20	106	0
Benzo[a]anthracene	1000	1196.63	.05	-19.7	20	114	0
3,3'-Dichlorobenzidine	0.604	0.715	.05	-18.4	20	121	0
Chrysene	1.32	1.474	.05	-11.7	20	115	0
Bis(2-ethylhexyl)phthalate	1000	1348.638	.05	-34.9*	20	173	0
Perylene-d12	1	1	.05	0	20	103	0
Benzo[b]fluoranthene	1.397	1.54	.05	-10.2	20	105	0
Benzo[k]fluoranthene	1.327	1.479	.05	-11.5	20	111	0
Benzo[a]pyrene	1.23	1.416	.05	-15.1	20	112	0
Indeno[1,2,3-cd]pyrene	1.337	1.488	.05	-11.3	20	108	0
Dibenzo[a,h]anthracene	1.244	1.28	.05	-2.9	20	101	0
Benzo[g,h,i]perylene	1.36	1.385	.05	-1.8	20	100	0

*** Value outside of QC limits.**

Evaluate Continuing Calibration Report

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : ccv0403.D
Acq On : 03 Apr 2024 06:40 am
Operator : sv119:ah
Sample : WG1904170-3,32,, ICV 10475 (0401)
Misc : WG1904170,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 03 06:56:02 2024
Quant Method : I:\8270SIM\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:05 2024
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	i	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	122	0.00
2	s	2-Fluorophenol	1.094	1.261	-15.3	130	0.00
3	s	Phenol-d6	1.311	1.449	-10.5	132	0.00
4	T	Bis(2-chloroethyl)ether	1.115	1.188	-6.5	129	0.00
5	T	n-nitrosodi-n-propylamine	0.667	0.771	-15.6	135	0.00
6	t	Hexachloroethane	0.495	0.565	-14.1	137	0.00
7	s	Nitrobenzene-d5	0.995	1.192	-19.8	138	0.00
8	i	Naphthalene-d8	1.000	1.000	0.0	112	0.00
9	t	Naphthalene	0.955	1.066	-11.6	120	0.00
10	t	Hexachlorobutadiene	0.206	0.250	-21.4#	129	0.00
11	t	2-Methylnaphthalene	0.706	0.749	-6.1	112	0.00
12	t	1-Methylnaphthalene	0.651	0.673	-3.4	112	0.00
13	s	2-Fluorobiphenyl	0.893	0.849	4.9	102	0.00
14	t	2-Chloronaphthalene	0.752	0.765	-1.7	111	0.00
15	t	2,6-Dinitrotoluene	0.170	0.184	-8.2	118	0.00
16	t	Acenaphthylene	1.118	1.142	-2.1	108	0.00
17	i	Acenaphthene-d10	1.000	1.000	0.0	98	0.00
18	t	Acenaphthene	1.237	1.424	-15.1	107	0.00
19	t	2,4-Dinitrotoluene	0.369	0.491	-33.1#	120	0.00
20	t	Fluorene	1.478	1.636	-10.7	102	0.00
21	s	2,4,6-Tribromophenol	0.221	0.285	-29.0#	117	0.00
22	i	Phenanthrene-d10	1.000	1.000	0.0	91	0.00
23	T	4,6-Dinitro-o-cresol	*1000.000	1037.663	-3.8	102	0.00
24	t	Hexachlorobenzene	0.259	0.326	-25.9#	109	0.00
25	t	Pentachlorophenol	*1000.000	740.343	26.0#	70	0.00
26	t	Phenanthrene	1.016	1.153	-13.5	98	0.00
27	t	Anthracene	1.008	1.147	-13.8	97	0.00
28	t	Fluoranthene	1.339	1.386	-3.5	88	0.00
29	t	Pyrene	1.376	1.432	-4.1	90	0.00
30	s	4-Terphenyl-d14	0.981	0.723	26.3#	65	0.00
31	i	Chrysene-d12	1.000	1.000	0.0	76	0.00
32	t	Benzo[a]anthracene	*1000.000	1190.656	-19.1	81	0.00
33	t	3,3'-Dichlorobenzidine	0.604	0.719	-19.0	87	0.00
34	t	Chrysene	1.320	1.483	-12.3	82	0.00
35	T	Bis(2-ethylhexyl)phthalate	*1000.000	1261.504	-26.2#	115	0.00

Evaluate Continuing Calibration Report

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : ccv0403.D
Acq On : 03 Apr 2024 06:40 am
Operator : sv119:ah
Sample : WG1904170-3,32,, ICV 10475 (0401)
Misc : WG1904170,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 03 06:56:02 2024
Quant Method : I:\8270SIM\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:05 2024
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
36	i	Perylene-d12	1.000	1.000	0.0	79	0.00
37	t	Benzo[b]fluoranthene	1.397	1.508	-7.9	79	0.00
38	t	Benzo[k]fluoranthene	1.327	1.434	-8.1	83	0.00
39	t	Benzo[a]pyrene	1.230	1.412	-14.8	86	0.00
40	t	Indeno[1,2,3-cd]pyrene	1.337	1.554	-16.2	87	0.00
41	t	Dibenzo[a,h]anthracene	1.244	1.353	-8.8	82	0.00
42	t	Benzo[g,h,i]perylene	1.360	1.482	-9.0	82	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : ccv0403.D
Acq On : 03 Apr 2024 06:40 am
Operator : sv119:ah
Sample : WG1904170-3,32,, ICV 10475 (0401)
Misc : WG1904170,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 03 06:56:02 2024
Quant Method : I:\8270SIM\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:05 2024
Response via : Initial Calibration

Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.228	152	53851	4000.000	ng/ml	0.00
8) Naphthalene-d8	2.897	136	173620	4000.000	ng/ml	0.00
17) Acenaphthene-d10	3.878	164	87313	4000.000	ng/ml	0.00
22) Phenanthrene-d10	4.719	188	180904	4000.000	ng/ml	0.00
31) Chrysene-d12	6.289	240	149911	4000.000	ng/ml	0.00
36) Perylene-d12	7.502	264	170346	4000.000	ng/ml	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	1.626	112	16973	1152.341	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 23.05%			
3) Phenol-d6	2.044	99	19509	1104.967	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 22.10%			
7) Nitrobenzene-d5	2.511	82	16047	1198.199	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 47.93%			
13) 2-Fluorobiphenyl	3.499	172	36834	949.916	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 38.00%			
21) 2,4,6-Tribromophenol	4.326	330	6227	1293.598	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 25.87%			
30) 4-Terphenyl-d14	5.645	244	32689	737.104	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 29.48%#			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.088	93	15993	1065.126	ng/ml#	79
5) n-nitrosodi-n-propylamine	2.429	70	10385	1156.421	ng/ml	98
6) Hexachloroethane	2.492	117	7602	1141.145	ng/ml	91
9) Naphthalene	2.909	128	46271	1116.121	ng/ml	100
10) Hexachlorobutadiene	2.984	225	10867	1217.169	ng/ml	100
11) 2-Methylnaphthalene	3.291	142	32531	1061.273	ng/ml	97
12) 1-Methylnaphthalene	3.347	142	29230	1034.077	ng/ml	98
14) 2-Chloronaphthalene	3.564	162	33201	1016.828	ng/ml	99
15) 2,6-Dinitrotoluene	3.756	165	7987	1083.285	ng/ml	91
16) Acenaphthylene	3.798	152	49587	1021.948	ng/ml	100
18) Acenaphthene	3.895	153	31075	1151.252	ng/ml	99
19) 2,4-Dinitrotoluene	3.986	165	10709	1330.686	ng/ml#	76
20) Fluorene	4.188	166	35712	1106.861	ng/ml	98
23) 4,6-Dinitro-o-cresol	4.216	198	5420	1037.663	ng/ml	94
24) Hexachlorobenzene	4.506	284	14724	1258.998	ng/ml	99
25) Pentachlorophenol	4.618	266	5455	740.343	ng/ml	99
26) Phenanthrene	4.733	178	52150	1134.861	ng/ml	100
27) Anthracene	4.762	178	51884	1138.564	ng/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : ccv0403.D
Acq On : 03 Apr 2024 06:40 am
Operator : sv119:ah
Sample : WG1904170-3,32,, ICV 10475 (0401)
Misc : WG1904170,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 03 06:56:02 2024
Quant Method : I:\8270SIM\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:05 2024
Response via : Initial Calibration

Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
28) Fluoranthene	5.417	202	62668	1034.743	ng/ml	99
29) Pyrene	5.548	202	64762	1040.846	ng/ml	99
32) Benzo[a]anthracene	6.280	228	59763	1190.656	ng/ml	100
33) 3,3'-Dichlorobenzidine	6.269	252	26963	1190.505	ng/ml#	98
34) Chrysene	6.306	228	55577	1123.306	ng/ml	99
35) Bis(2-ethylhexyl)phtha...	6.314	149	41713	1261.504	ng/ml	99
37) Benzo[b]fluoranthene	7.130	252	64232	1079.323	ng/ml	100
38) Benzo[k]fluoranthene	7.154	252	61088	1081.019	ng/ml	100
39) Benzo[a]pyrene	7.440	252	60124	1147.778	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.724	276	66164	1162.172	ng/ml#	84
41) Dibenzo[a,h]anthracene	8.762	278	57624	1087.889	ng/ml#	87
42) Benzo[g,h,i]perylene	9.063	276	63133	1090.188	ng/ml#	86

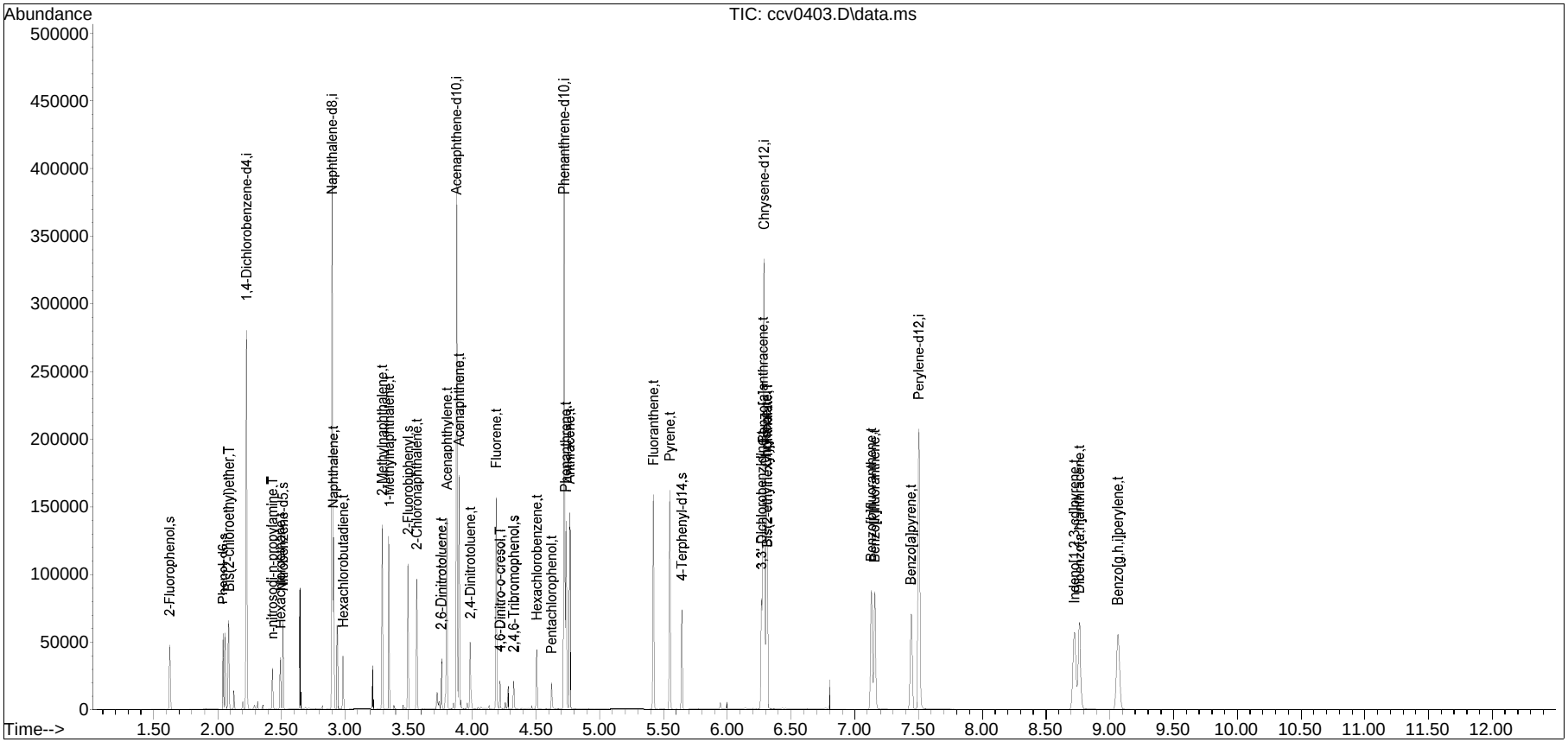
(#) = qualifier out of range (m) = manual integration (+) = signals summed

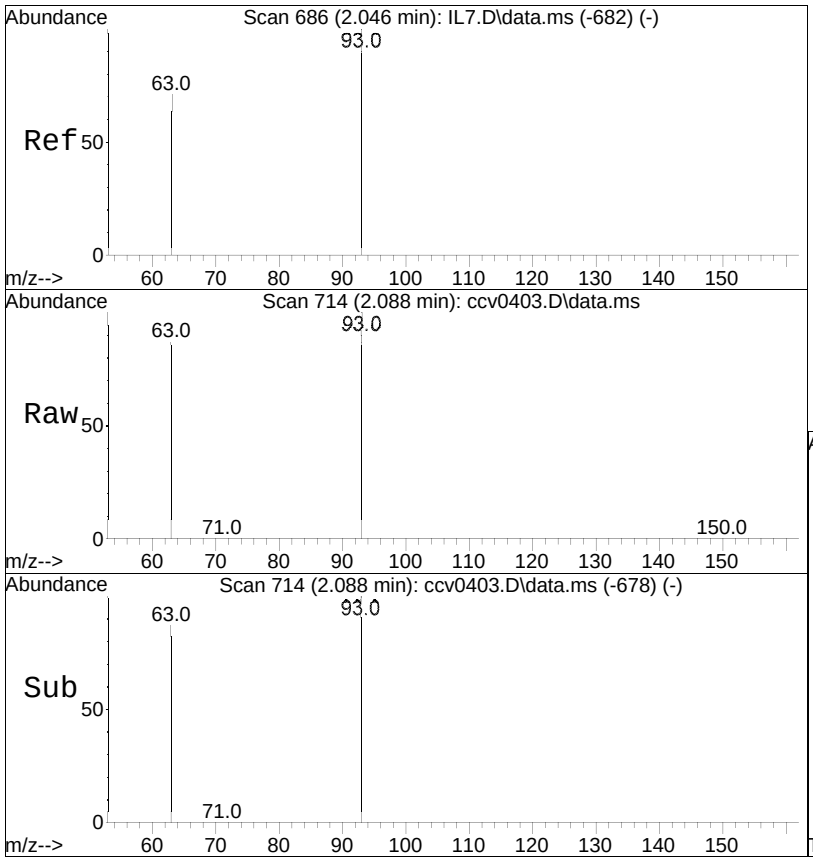
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : ccv0403.D
Acq On : 03 Apr 2024 06:40 am
Operator : sv119:ah
Sample : WG1904170-3,32,, ICV 10475 (0401)
Misc : WG1904170,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 03 06:56:02 2024
Quant Method : I:\8270SIM\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:05 2024
Response via : Initial Calibration

Sub List : Default - All compounds listed

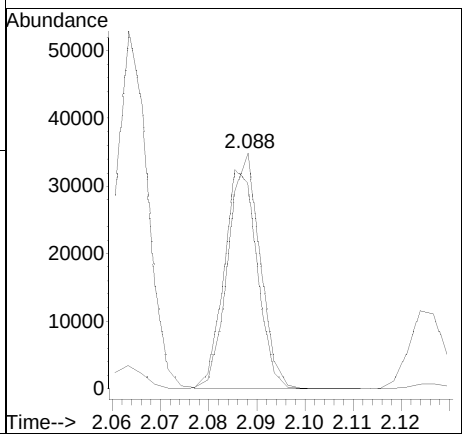


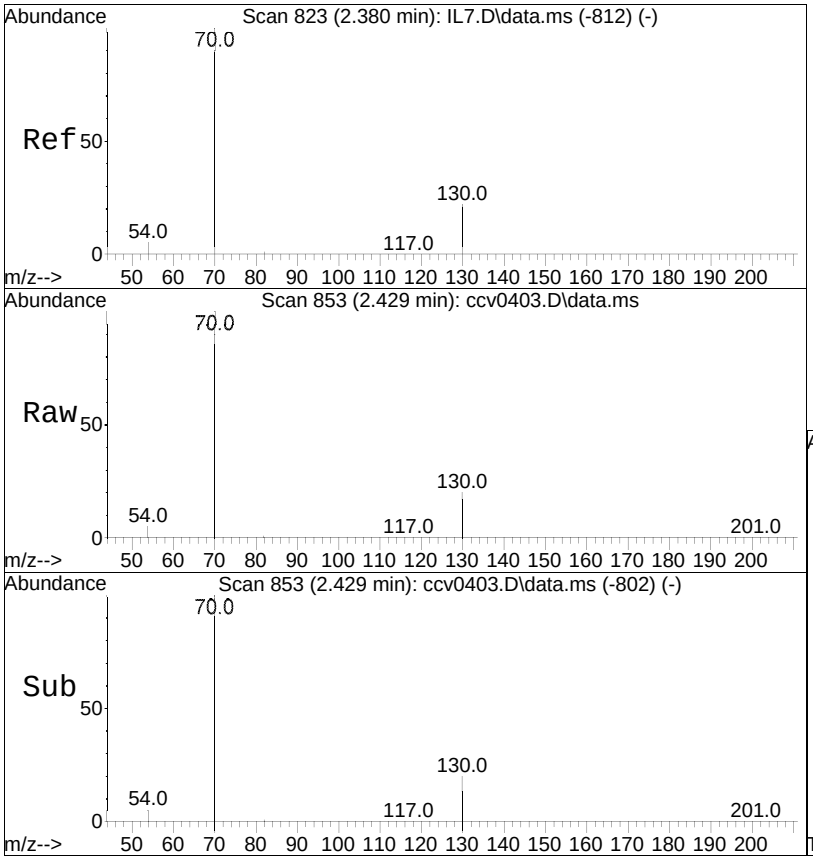


#4
Bis(2-chloroethyl)ether
Concen: 1065.13 ng/ml
RT: 2.088 min Scan# 714
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion: 93 Resp: 15993

Ion	Ratio	Lower	Upper
93	100		
63	96.7	62.6	94.0#

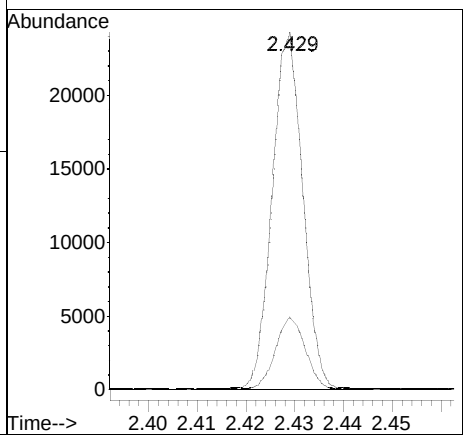


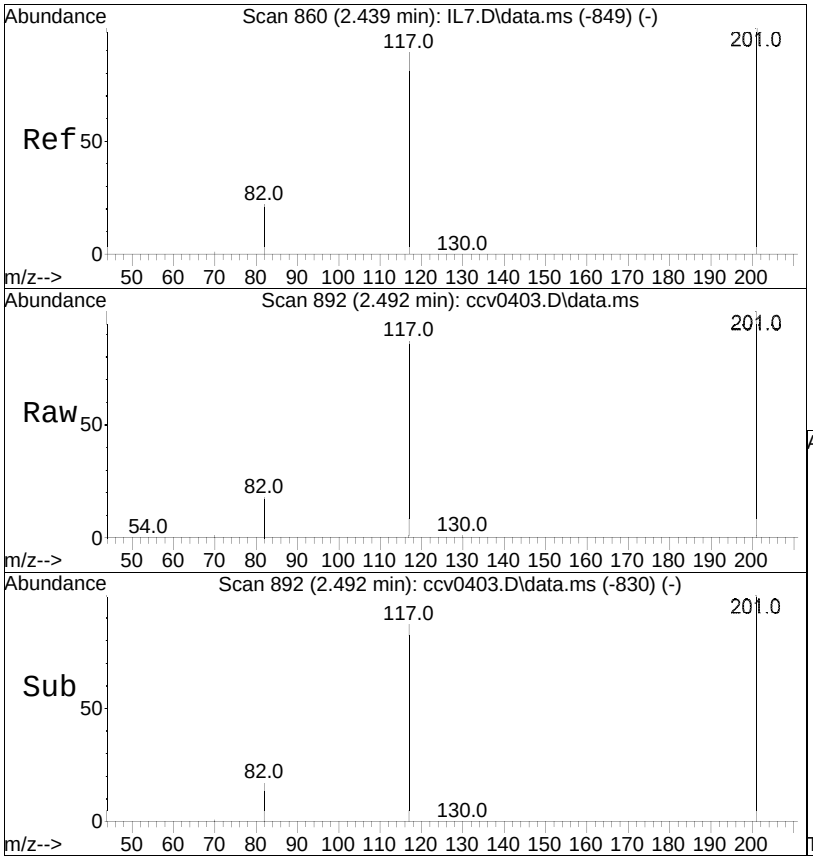


#5
n-nitrosodi-n-propylamine
Concen: 1156.42 ng/ml
RT: 2.429 min Scan# 853
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion: 70 Resp: 10385

Ion	Ratio	Lower	Upper
70	100		
130	19.9	15.0	22.6

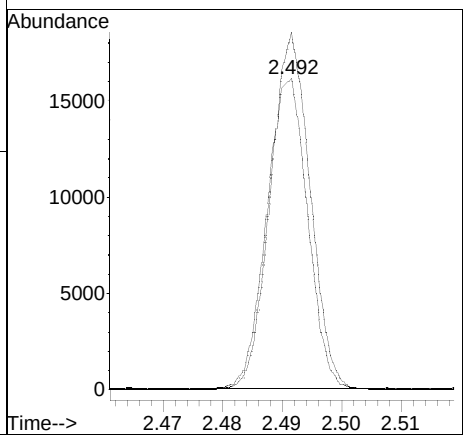


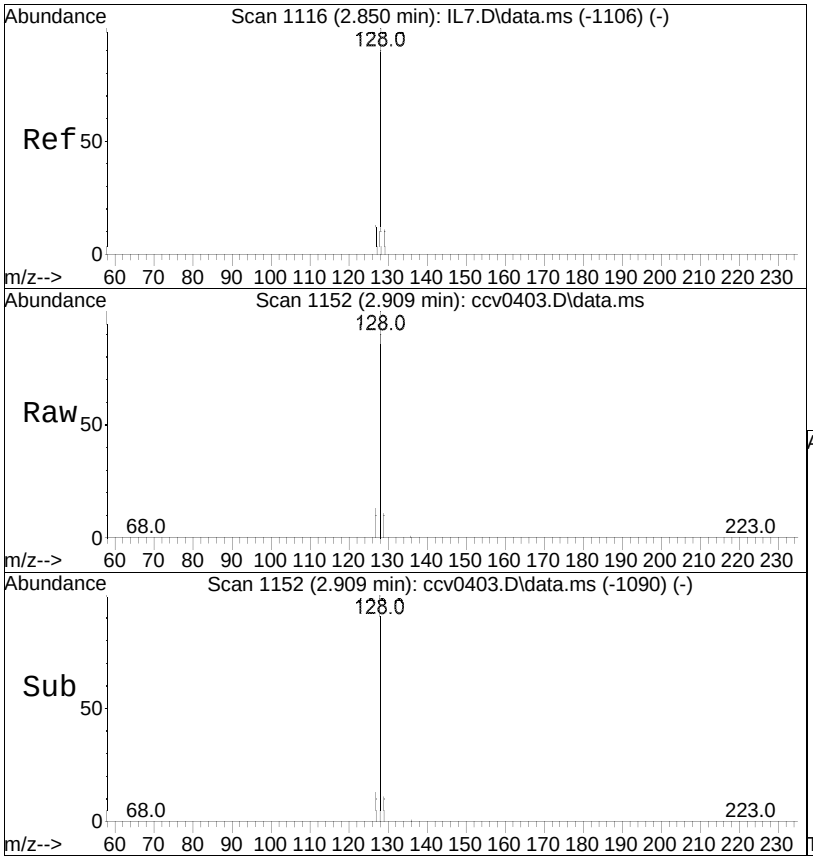


#6
Hexachloroethane
Concen: 1141.14 ng/ml
RT: 2.492 min Scan# 892
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:117 Resp: 7602

Ion	Ratio	Lower	Upper
117	100		
201	111.0	81.5	122.3

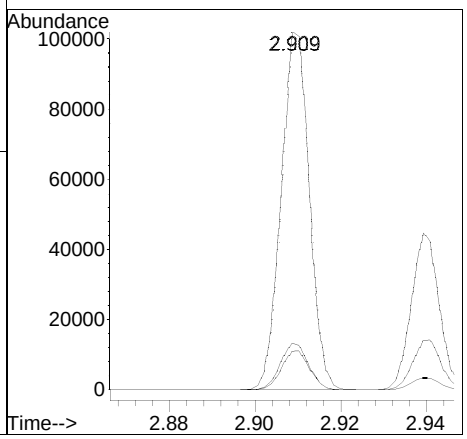


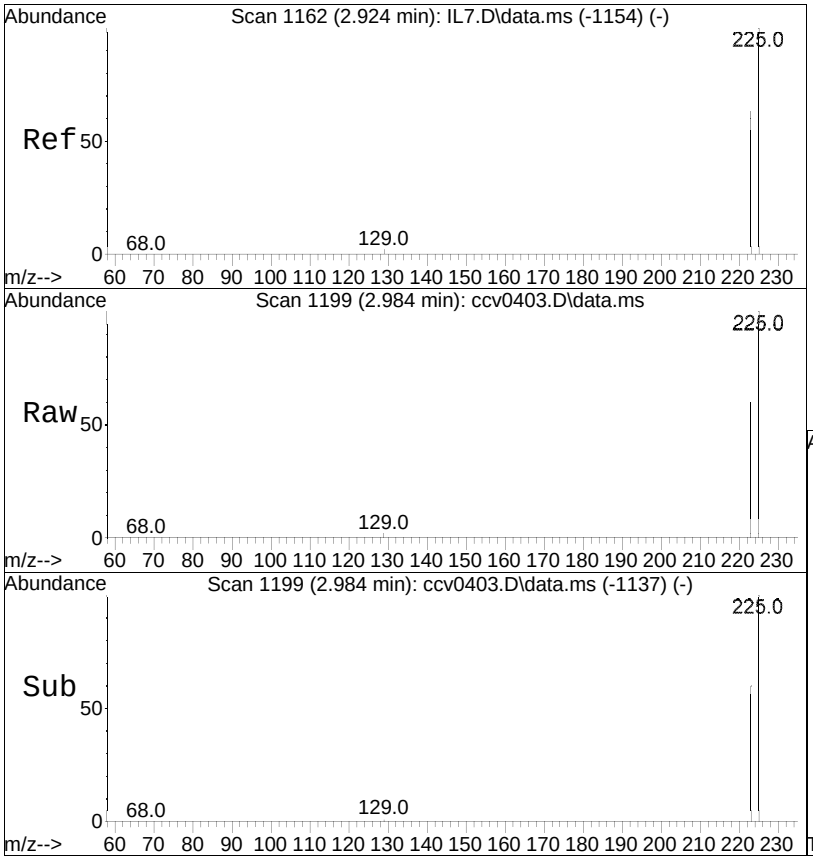


#9
Naphthalene
Concen: 1116.12 ng/ml
RT: 2.909 min Scan# 1152
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:128 Resp: 46271

Ion	Ratio	Lower	Upper
128	100		
129	10.9	8.8	13.2
127	13.0	10.6	15.8

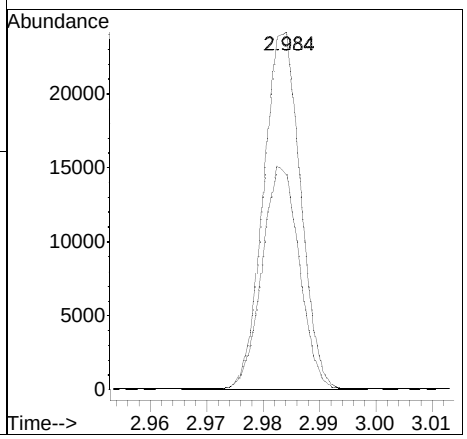


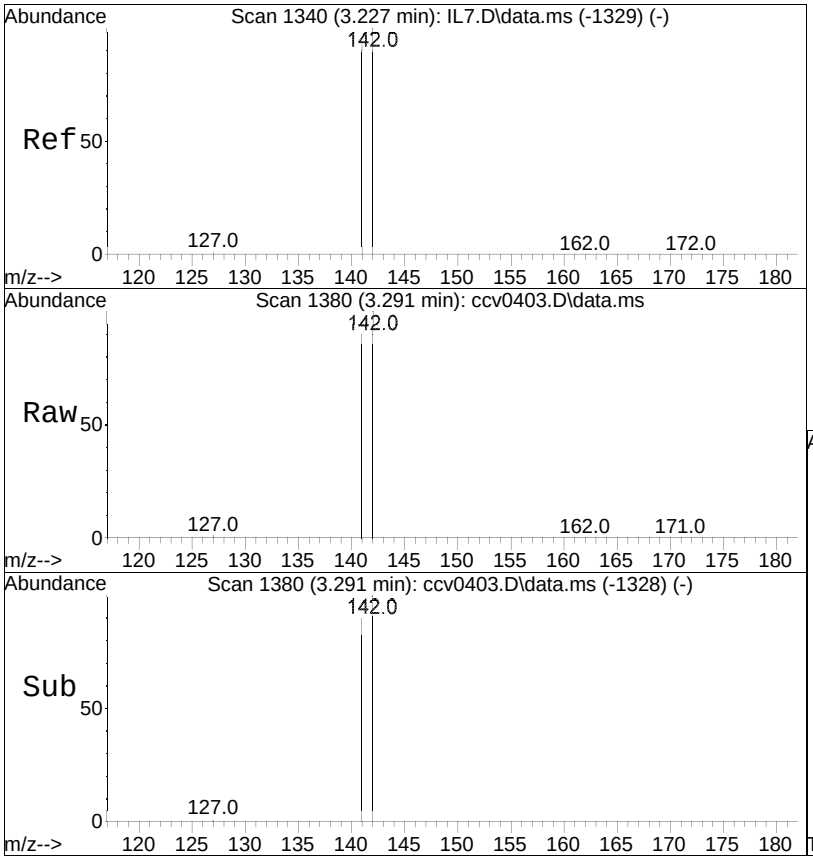


#10
Hexachlorobutadiene
Concen: 1217.17 ng/ml
RT: 2.984 min Scan# 1199
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:225 Resp: 10867

Ion	Ratio	Lower	Upper
225	100		
223	62.9	50.1	75.1

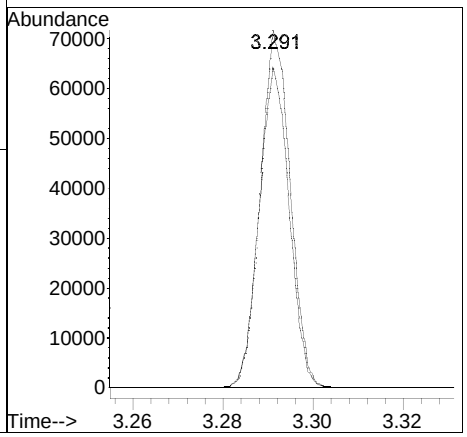


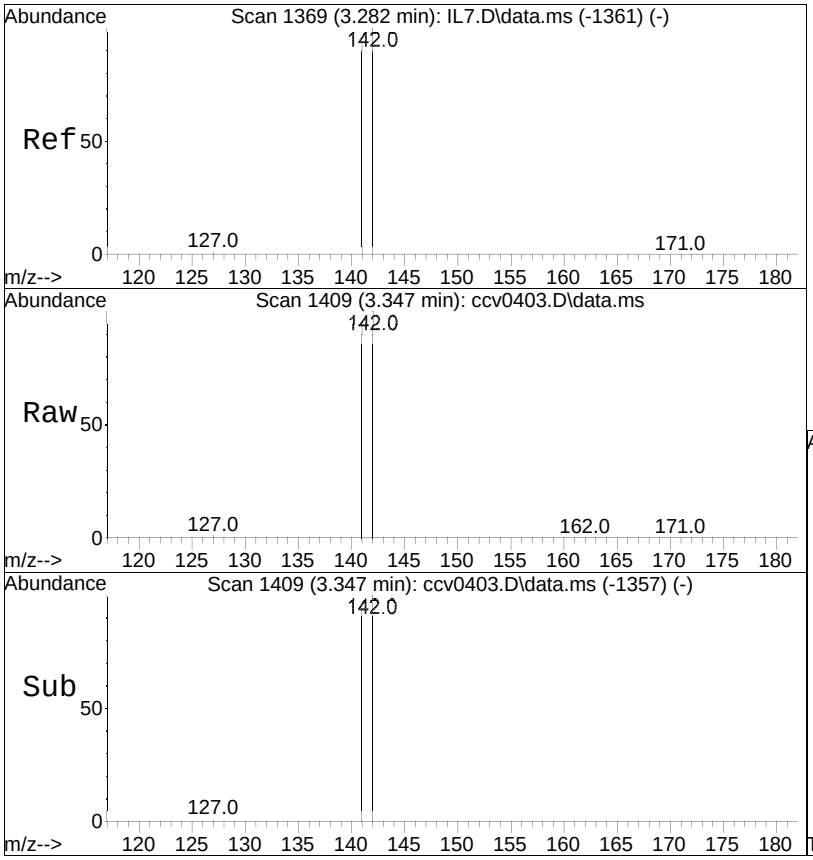


#11
2-Methylnaphthalene
Concen: 1061.27 ng/ml
RT: 3.291 min Scan# 1380
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:142 Resp: 32531

Ion	Ratio	Lower	Upper
142	100		
141	90.0	74.1	111.1

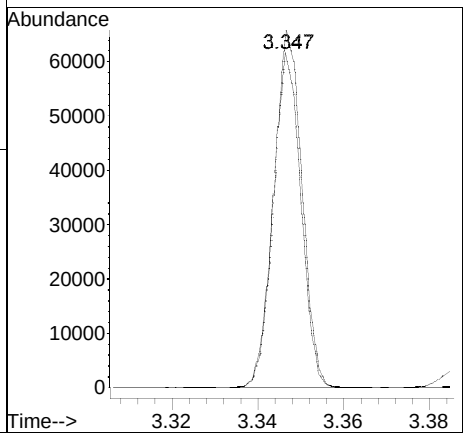


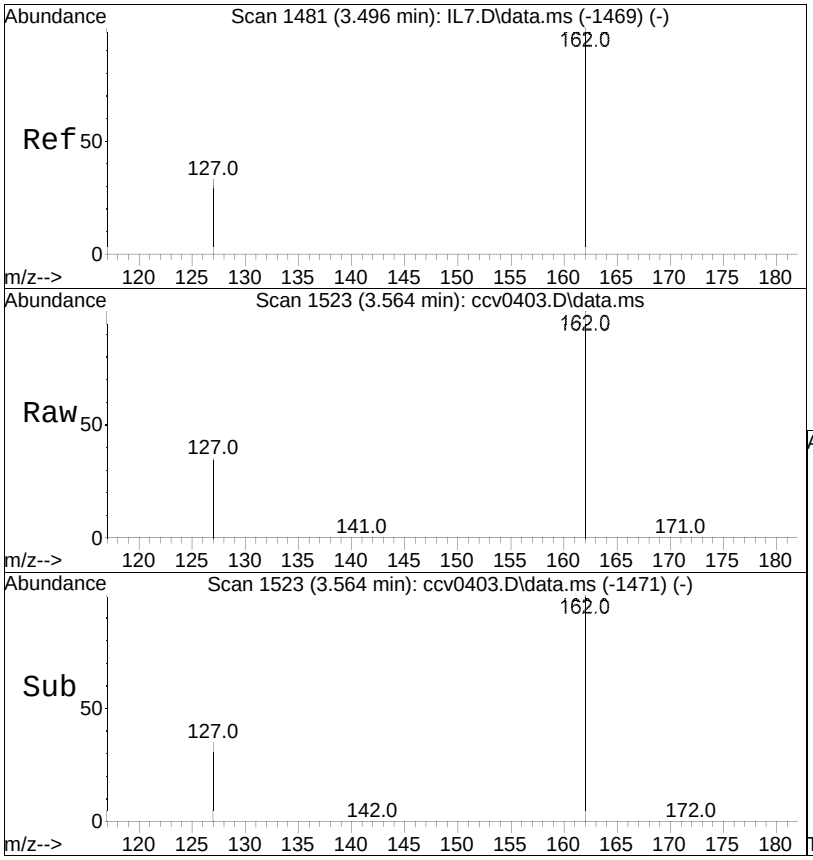


#12
1-Methylnaphthalene
Concen: 1034.08 ng/ml
RT: 3.347 min Scan# 1409
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:142 Resp: 29230

Ion	Ratio	Lower	Upper
142	100		
141	93.4	76.6	114.8

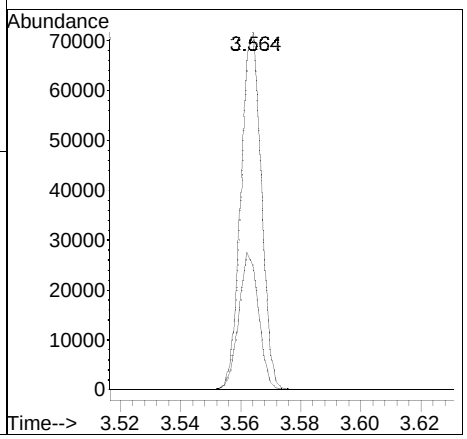


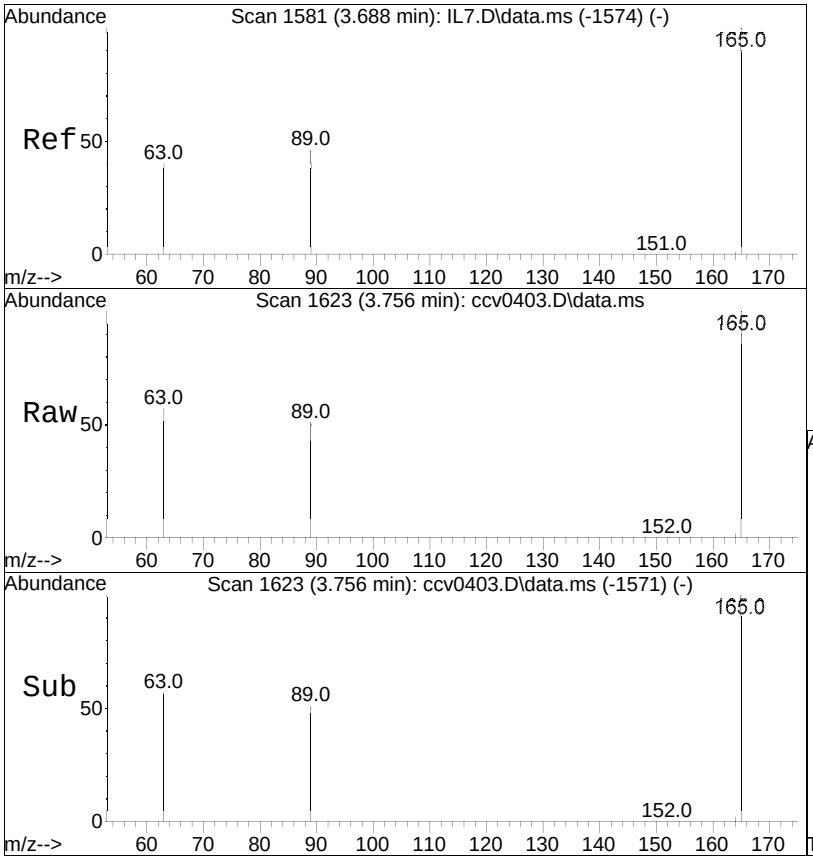


#14
2-Chloronaphthalene
Concen: 1016.83 ng/ml
RT: 3.564 min Scan# 1523
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:162 Resp: 33201

Ion	Ratio	Lower	Upper
162	100		
127	37.7	29.7	44.5

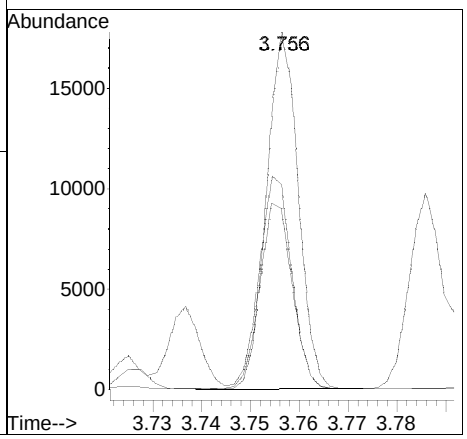


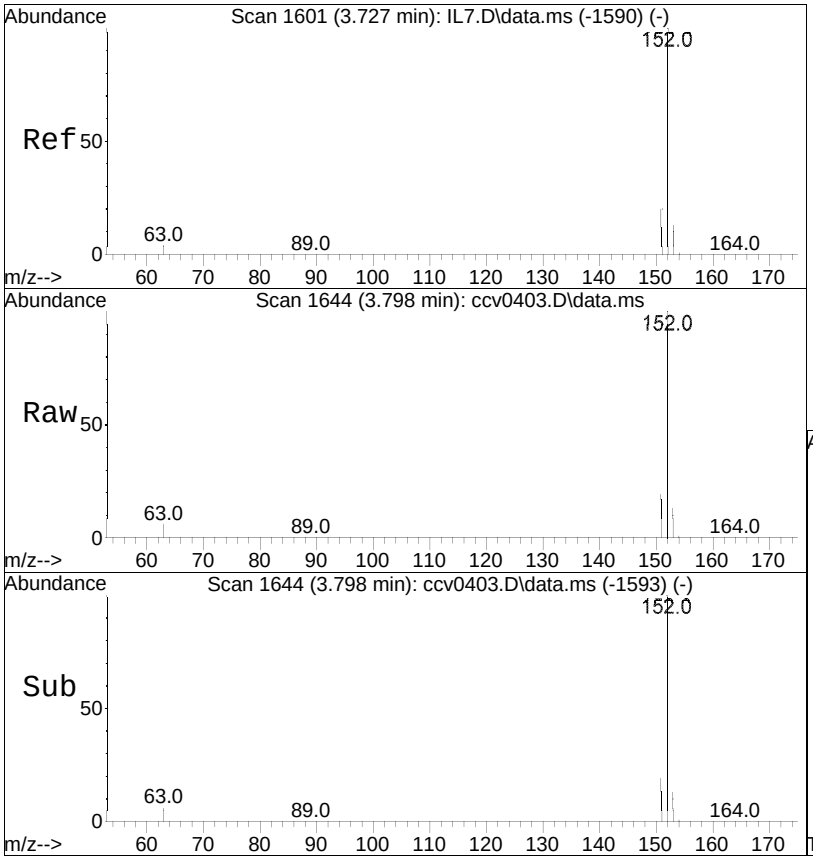


#15
2,6-Dinitrotoluene
Concen: 1083.29 ng/ml
RT: 3.756 min Scan# 1623
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:165 Resp: 7987

Ion	Ratio	Lower	Upper
165	100		
89	54.6	52.8	79.2
63	61.7	50.9	76.3

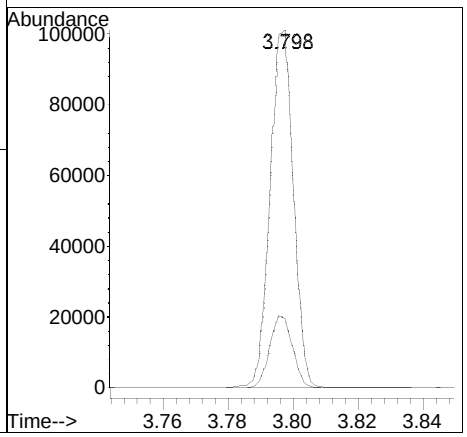


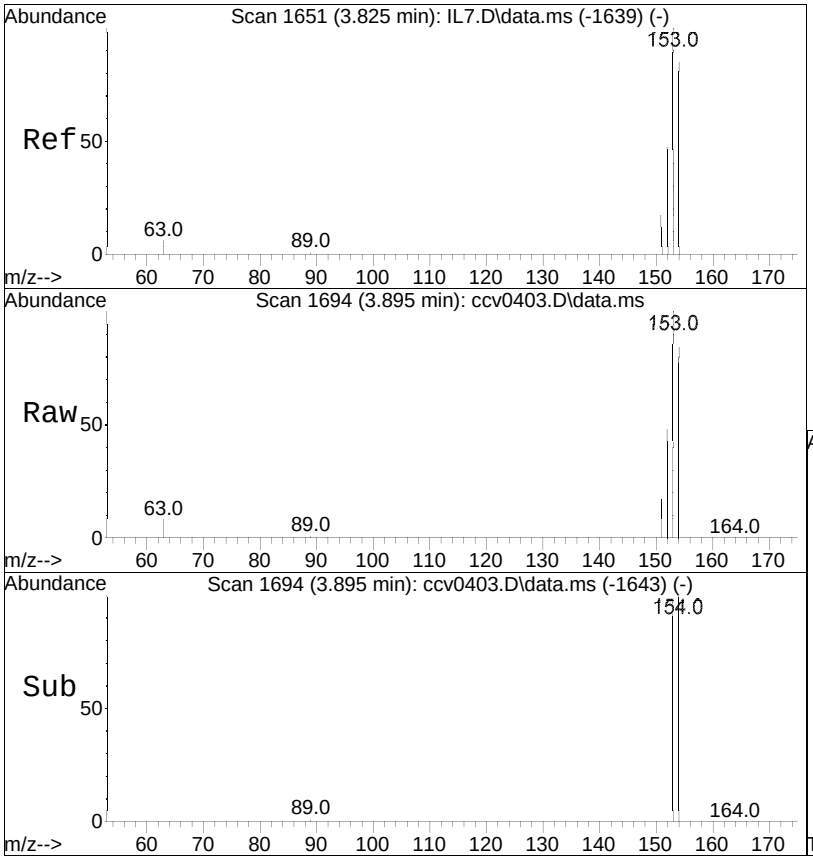


#16
Acenaphthylene
Concen: 1021.95 ng/ml
RT: 3.798 min Scan# 1644
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:152 Resp: 49587

Ion	Ratio	Lower	Upper
152	100		
151	19.8	16.0	24.0

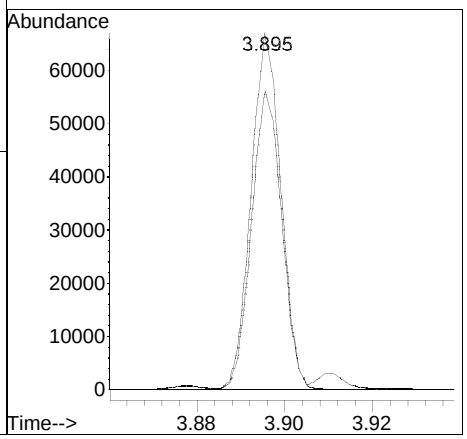


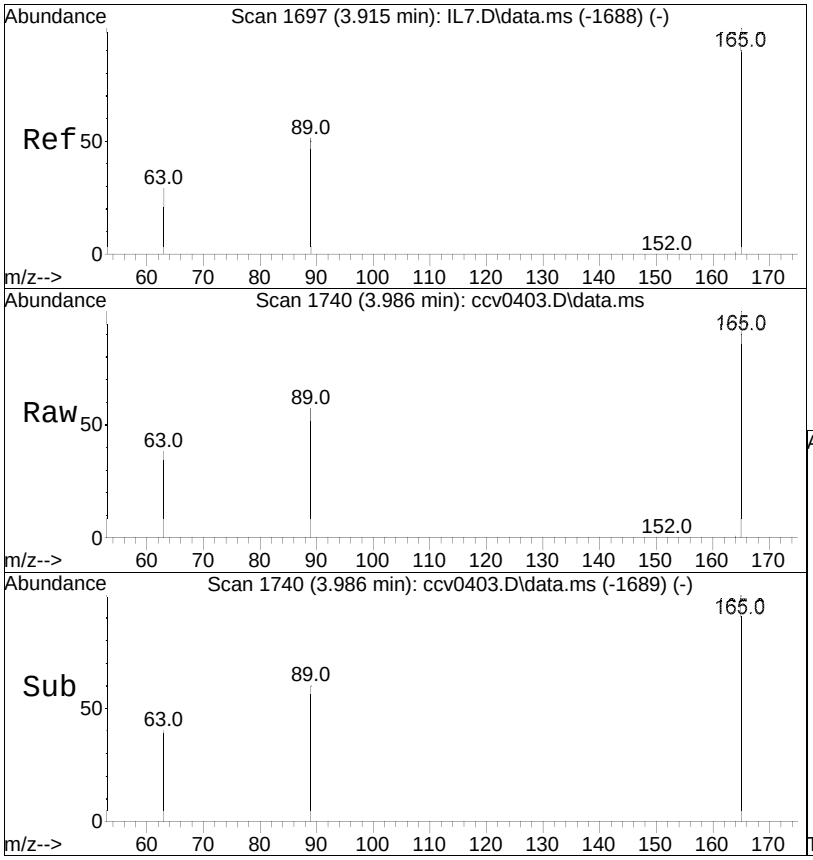


#18
Acenaphthene
Concen: 1151.25 ng/ml
RT: 3.895 min Scan# 1694
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:153 Resp: 31075

Ion	Ratio	Lower	Upper
153	100		
154	84.7	66.9	100.3

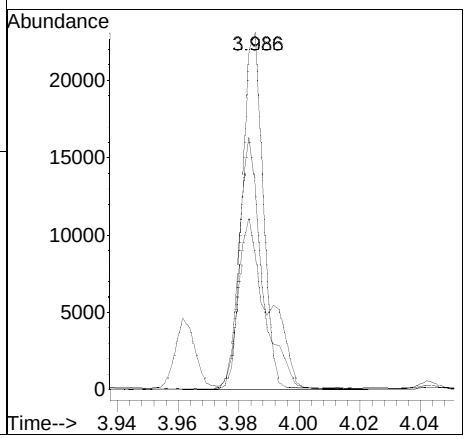


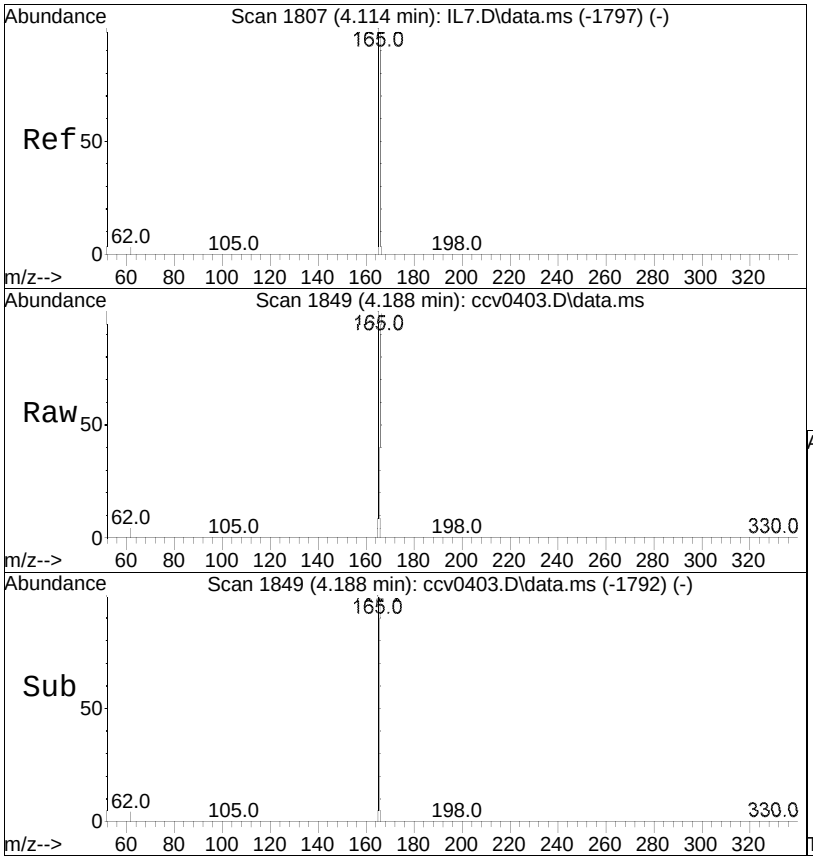


#19
2,4-Dinitrotoluene
Concen: 1330.69 ng/ml
RT: 3.986 min Scan# 1740
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:165 Resp: 10709

Ion	Ratio	Lower	Upper
165	100		
89	79.2	80.1	120.1#
63	69.0	38.9	58.3#

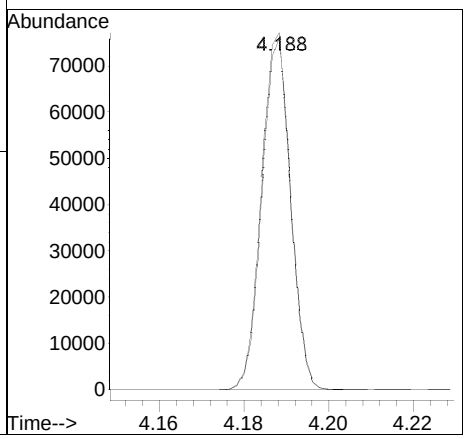


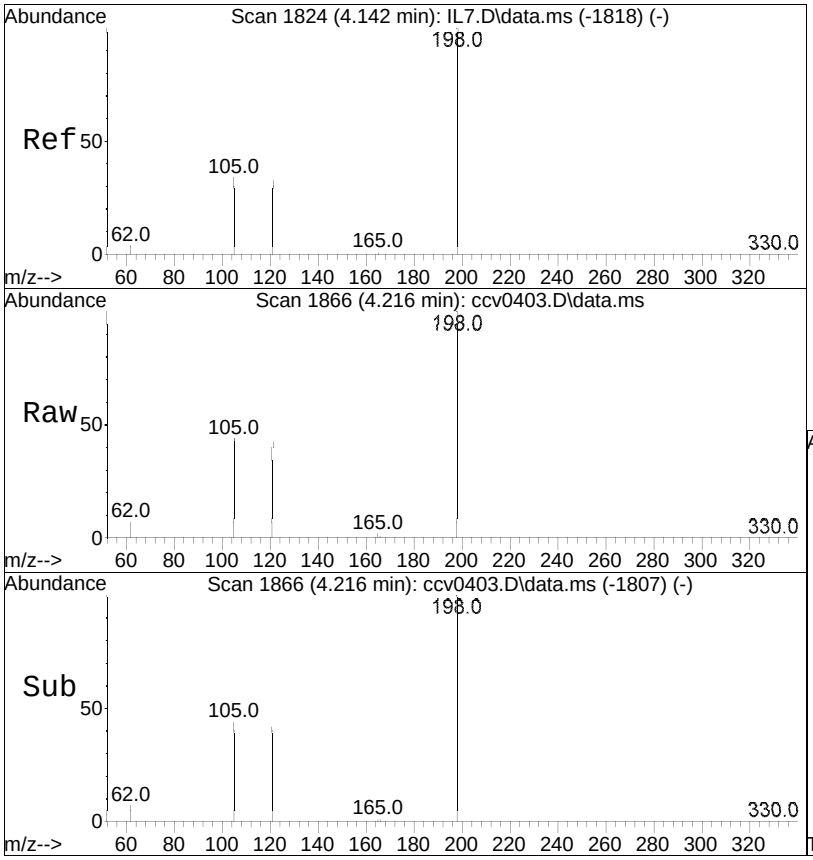


#20
Fluorene
Concen: 1106.86 ng/ml
RT: 4.188 min Scan# 1849
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:166 Resp: 35712

Ion	Ratio	Lower	Upper
166	100		
165	101.7	82.9	124.3

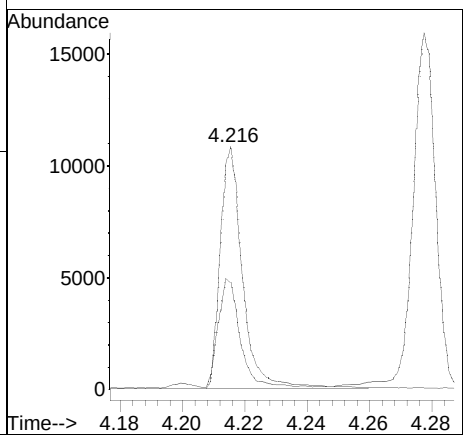


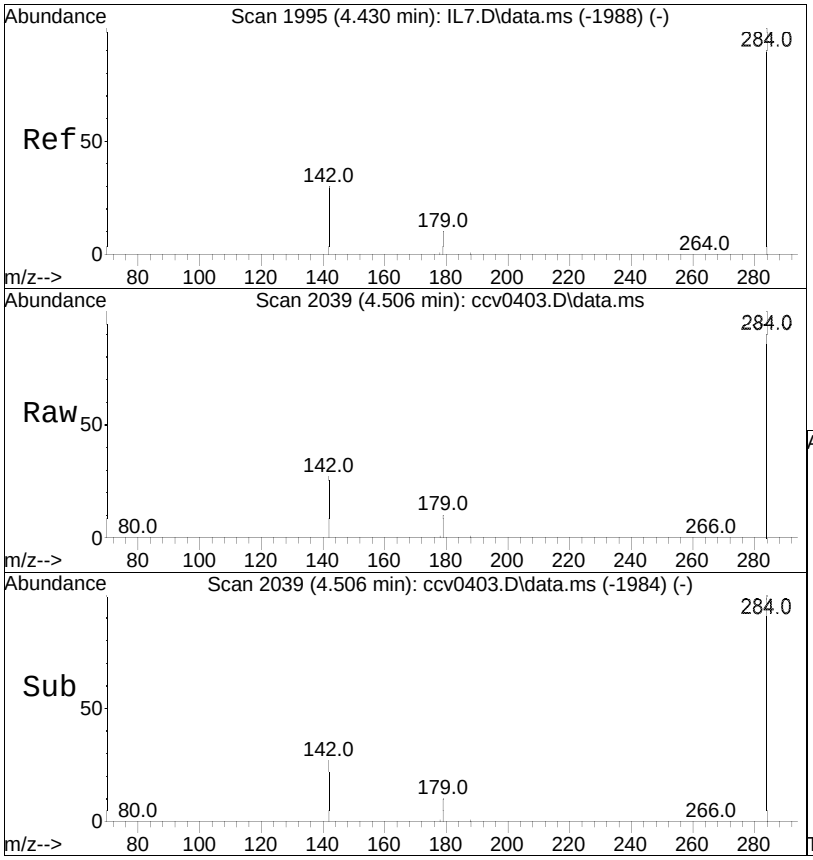


#23
4,6-Dinitro-o-cresol
Concen: 1037.66 ng/ml
RT: 4.216 min Scan# 1866
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:198 Resp: 5420

Ion	Ratio	Lower	Upper
198	100		
105	44.1	32.2	48.4

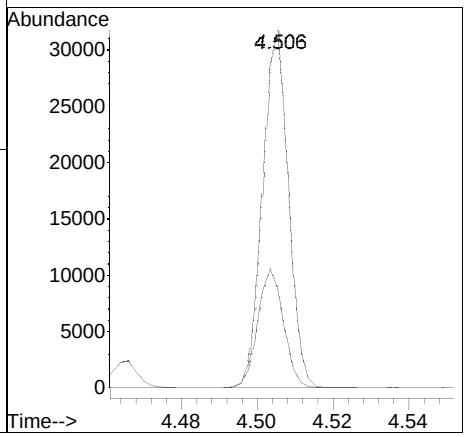


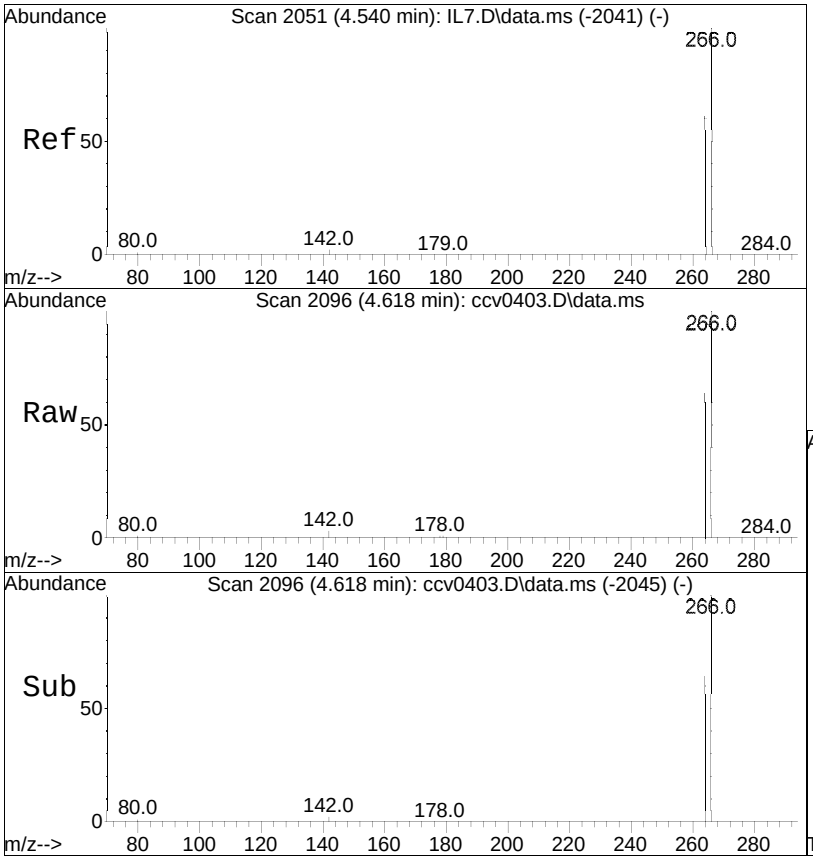


#24
Hexachlorobenzene
Concen: 1259.00 ng/ml
RT: 4.506 min Scan# 2039
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:284 Resp: 14724

Ion	Ratio	Lower	Upper
284	100		
142	33.3	26.9	40.3

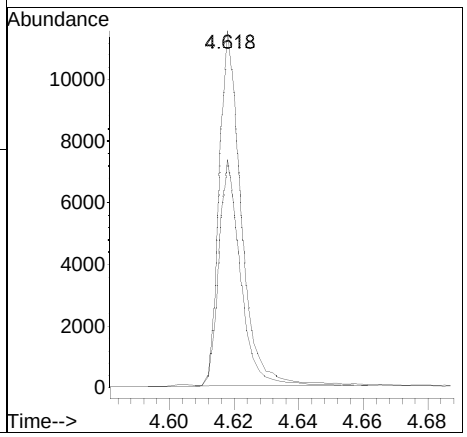


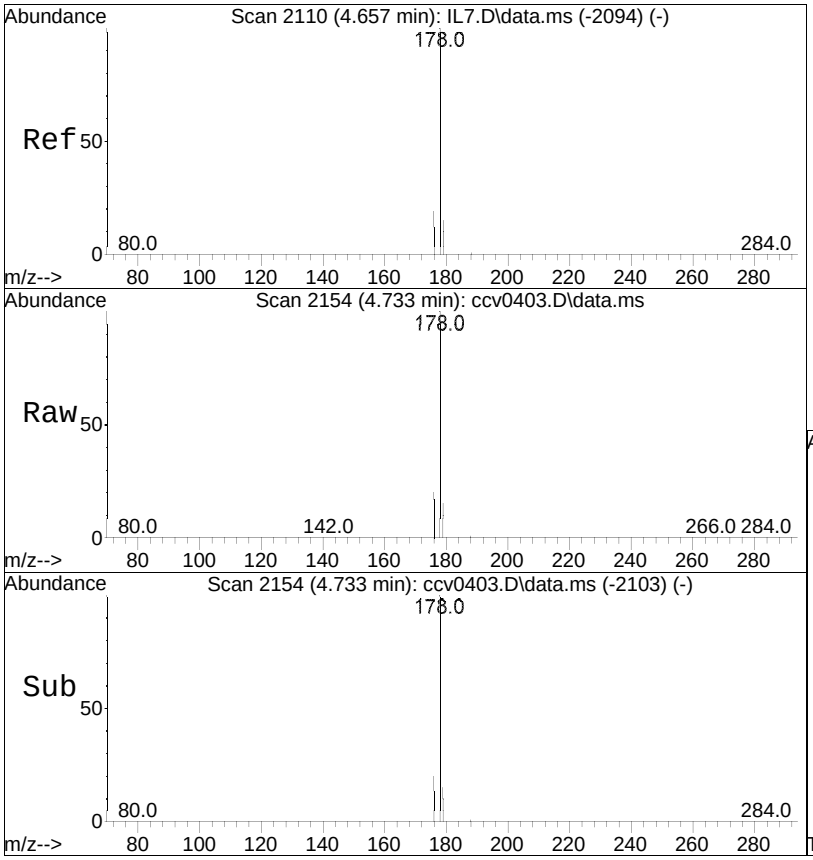


#25
Pentachlorophenol
Concen: 740.34 ng/ml
RT: 4.618 min Scan# 2096
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:266 Resp: 5455

Ion	Ratio	Lower	Upper
266	100		
264	64.0	50.7	76.1

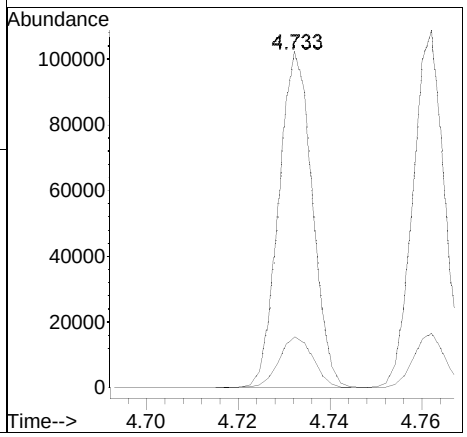


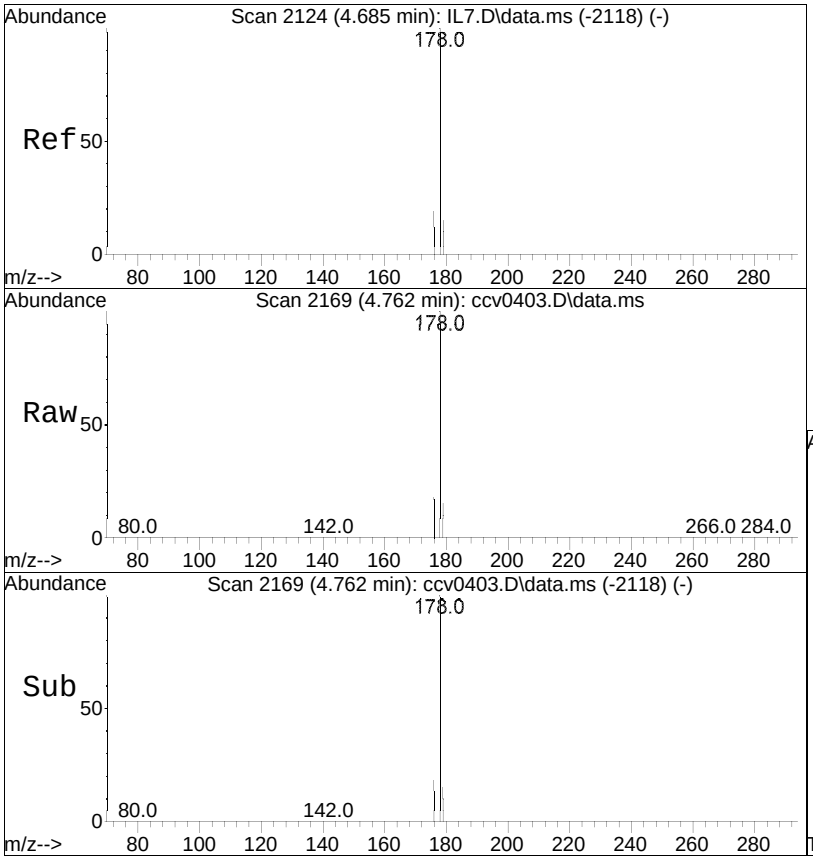


#26
Phenanthrene
Concen: 1134.86 ng/ml
RT: 4.733 min Scan# 2154
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:178 Resp: 52150

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.3	18.5

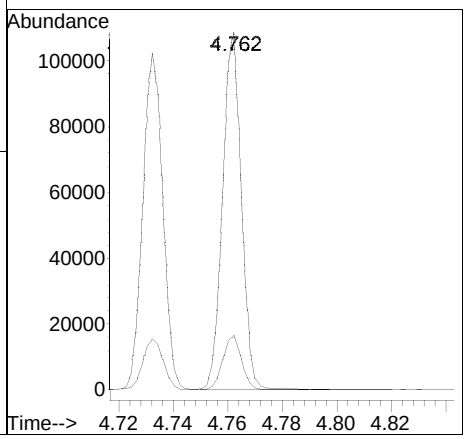


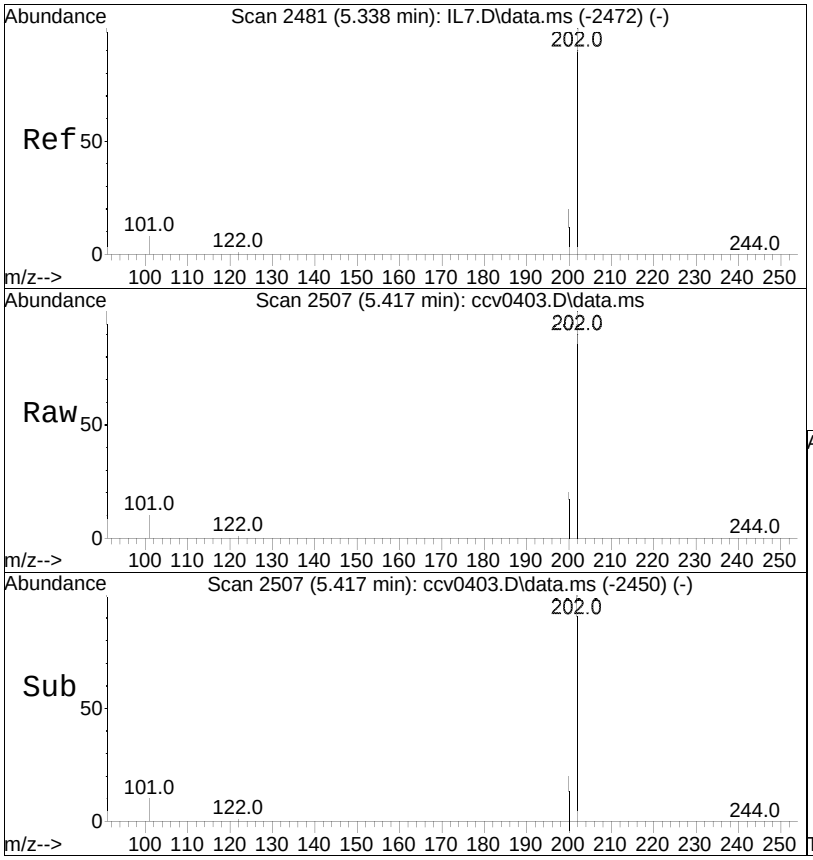


#27
Anthracene
Concen: 1138.56 ng/ml
RT: 4.762 min Scan# 2169
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:178 Resp: 51884

Ion	Ratio	Lower	Upper
178	100		
179	15.1	12.2	18.4

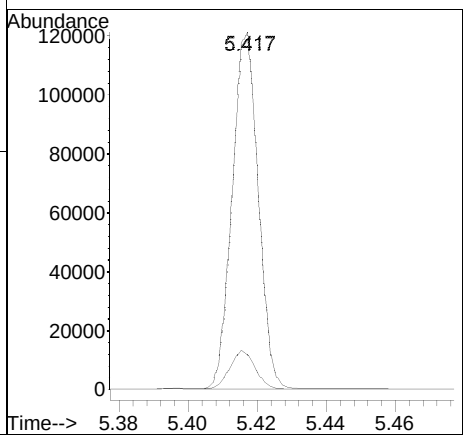


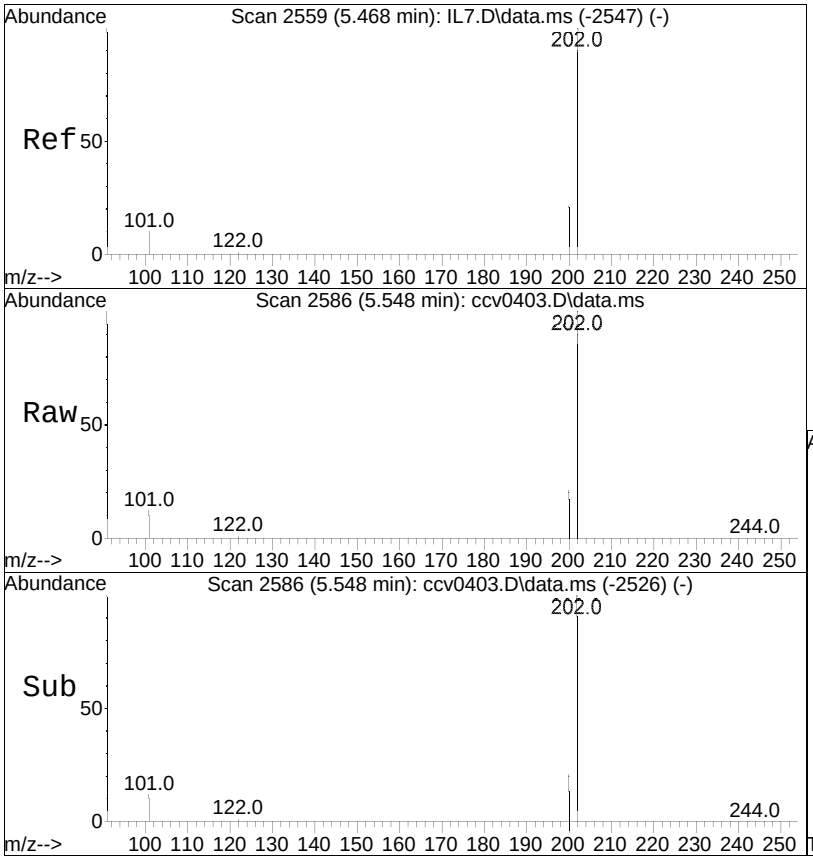


#28
Fluoranthene
Concen: 1034.74 ng/ml
RT: 5.417 min Scan# 2507
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:202 Resp: 62668

Ion	Ratio	Lower	Upper
202	100		
101	10.8	8.3	12.5

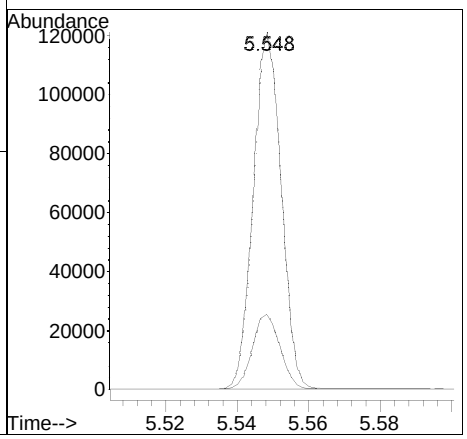


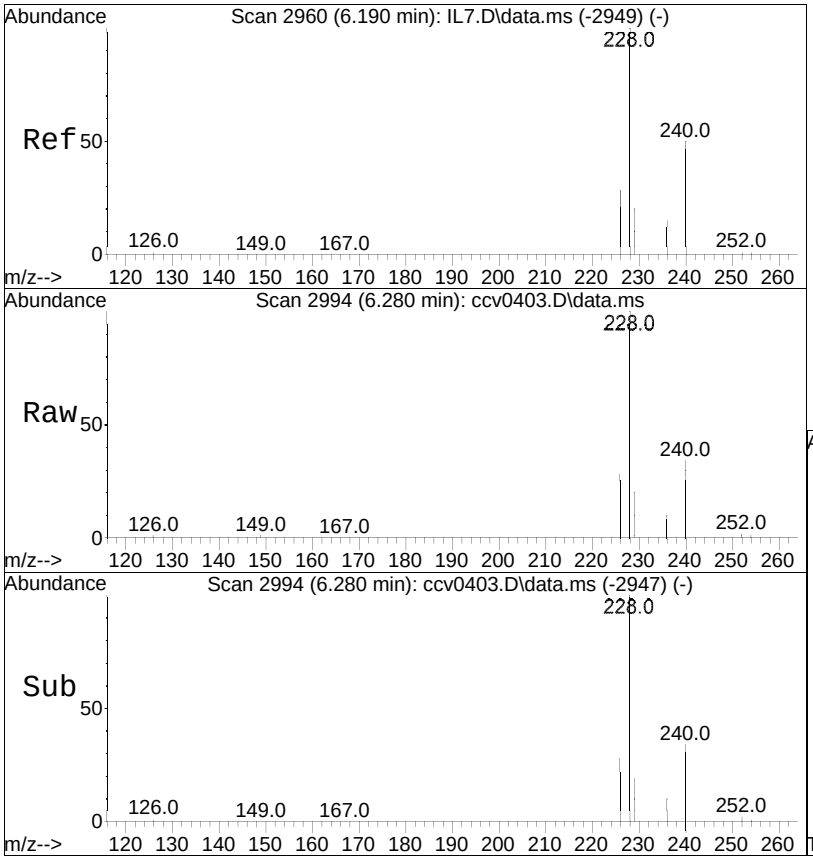


#29
Pyrene
Concen: 1040.85 ng/ml
RT: 5.548 min Scan# 2586
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:202 Resp: 64762

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

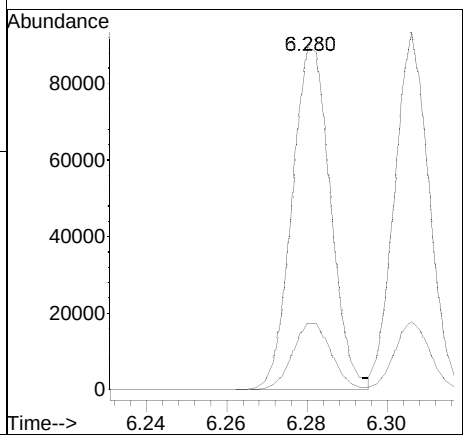


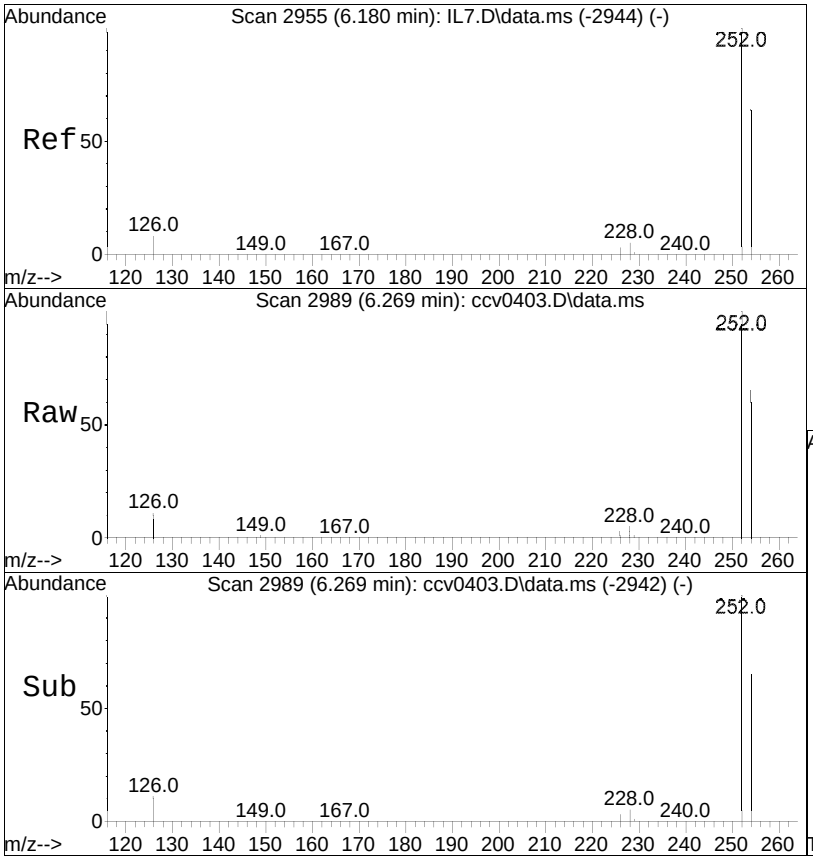


#32
Benzo[a]anthracene
Concen: 1190.66 ng/ml
RT: 6.280 min Scan# 2994
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:228 Resp: 59763

Ion	Ratio	Lower	Upper
228	100		
229	19.4	15.6	23.4

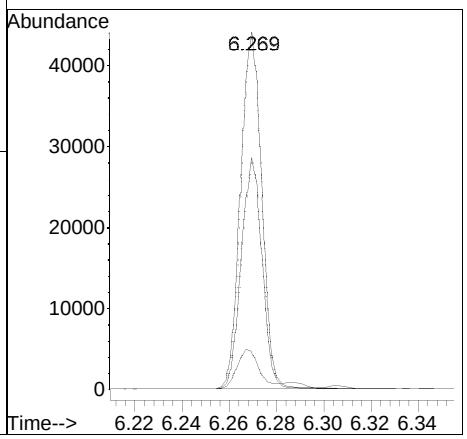


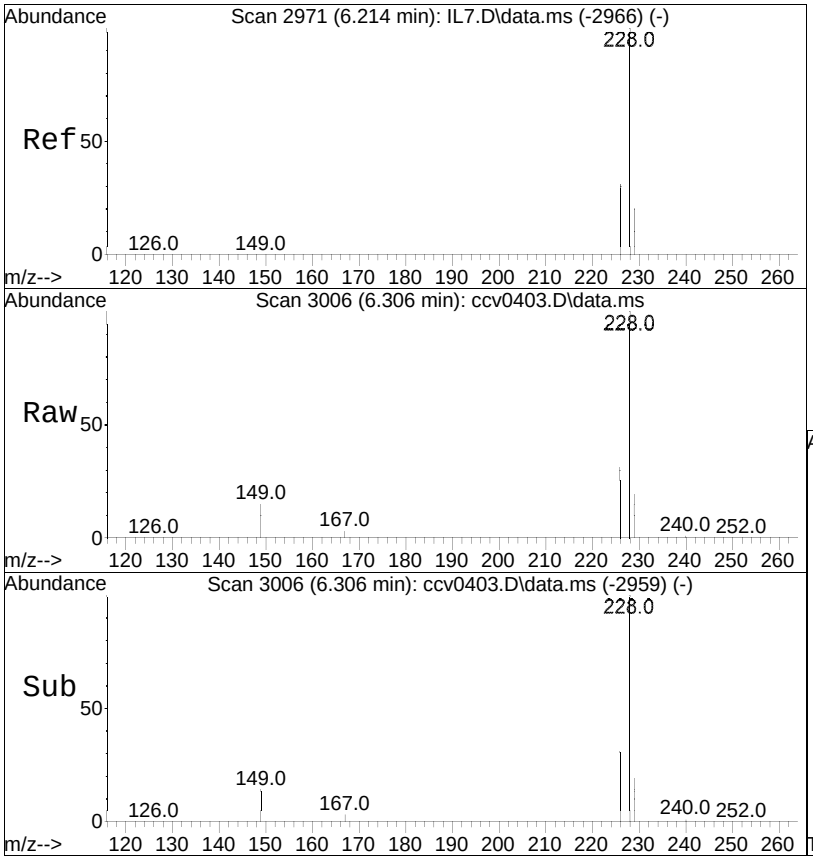


#33
3,3'-Dichlorobenzidine
Concen: 1190.51 ng/ml
RT: 6.269 min Scan# 2989
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:252 Resp: 26963

Ion	Ratio	Lower	Upper
252	100		
126	12.0	7.7	11.5#
254	64.0	52.0	78.0

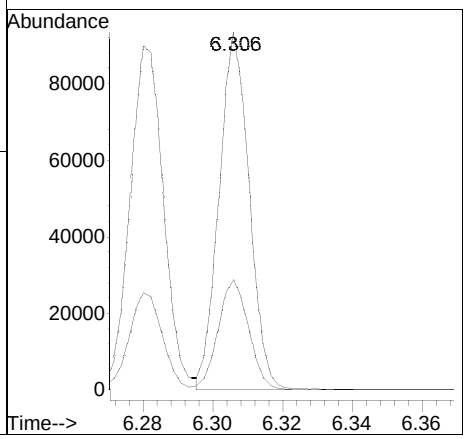


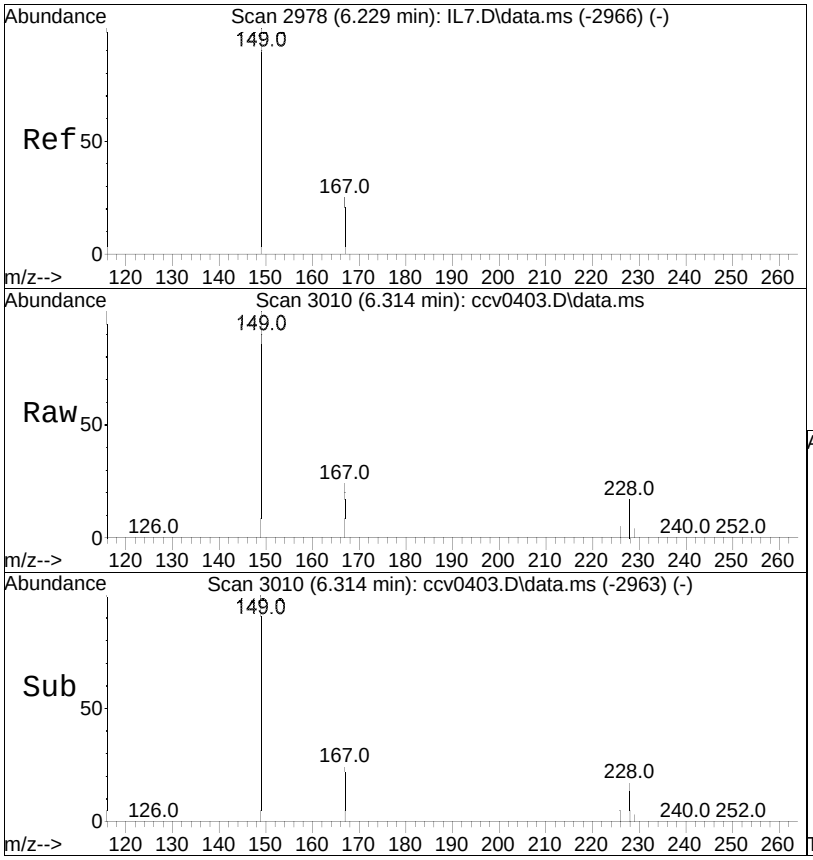


#34
Chrysene
Concen: 1123.31 ng/ml
RT: 6.306 min Scan# 3006
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:228 Resp: 55577

Ion	Ratio	Lower	Upper
228	100		
226	31.3	24.5	36.7

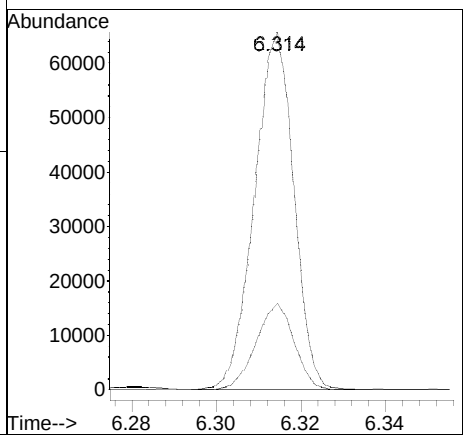


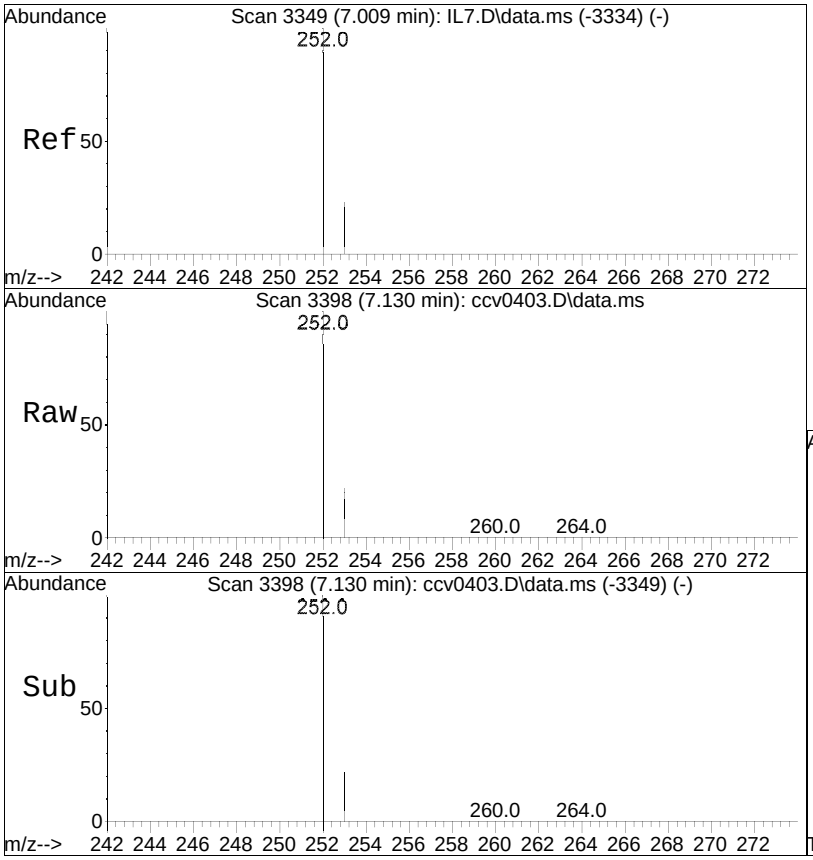


#35
Bis(2-ethylhexyl)phthalate
Concen: 1261.50 ng/ml
RT: 6.314 min Scan# 3010
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:149 Resp: 41713

Ion	Ratio	Lower	Upper
149	100		
167	23.4	18.5	27.7

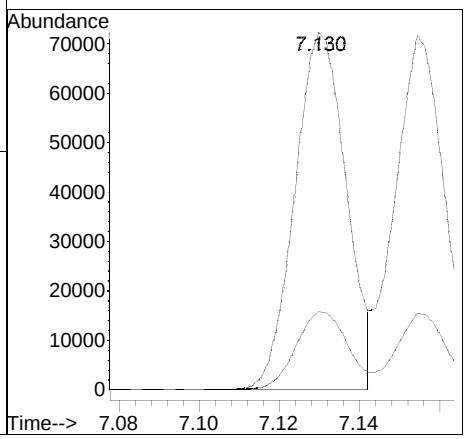


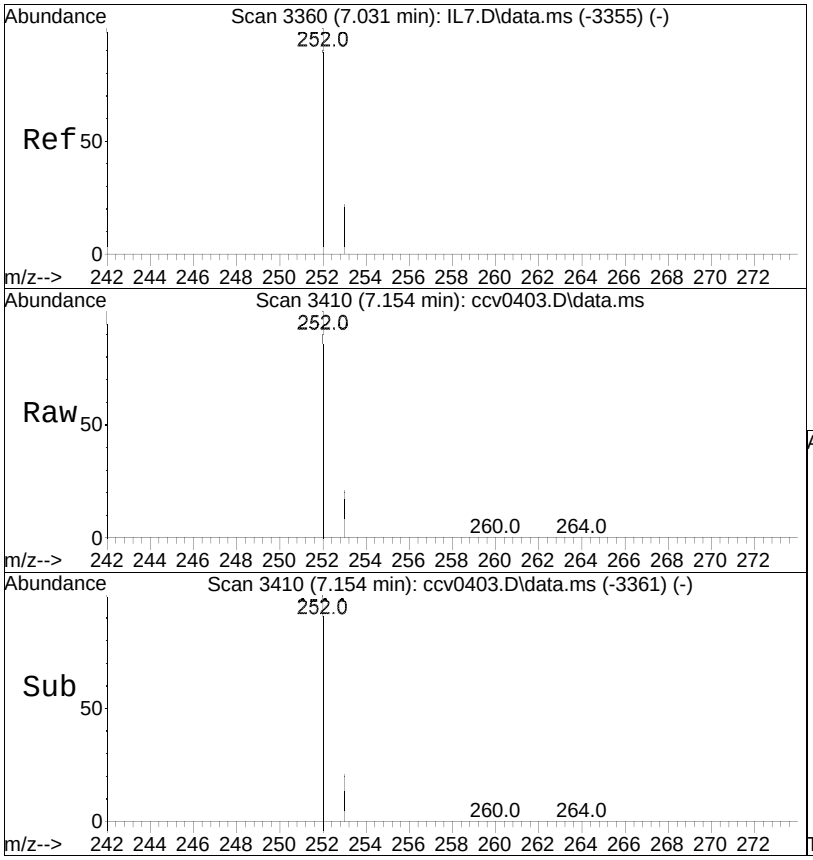


#37
Benzo[b]fluoranthene
Concen: 1079.32 ng/ml
RT: 7.130 min Scan# 3398
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:252 Resp: 64232

Ion	Ratio	Lower	Upper
252	100		
253	21.7	17.3	25.9

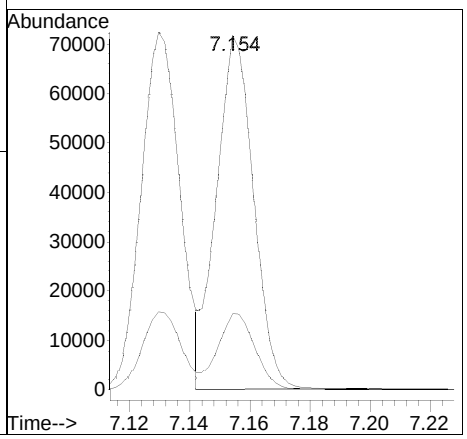


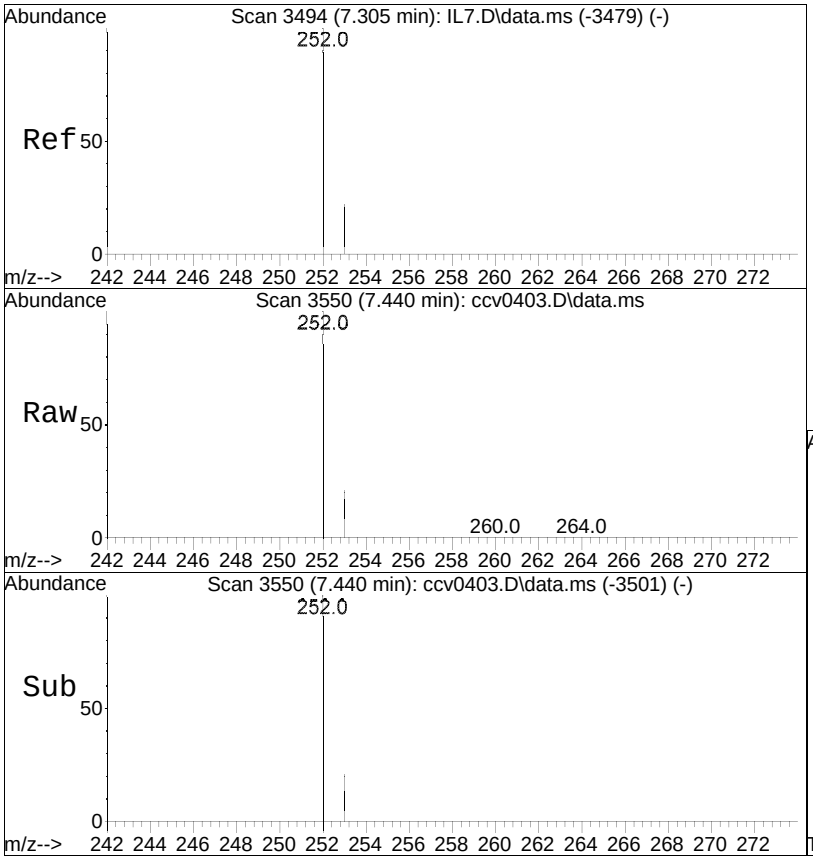


#38
Benzo[k]fluoranthene
Concen: 1081.02 ng/ml
RT: 7.154 min Scan# 3410
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:252 Resp: 61088

Ion	Ratio	Lower	Upper
252	100		
253	21.9	17.4	26.2

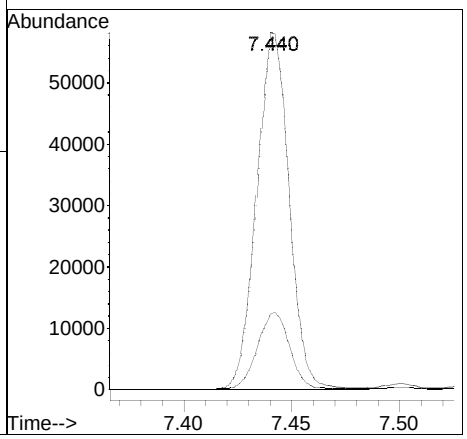


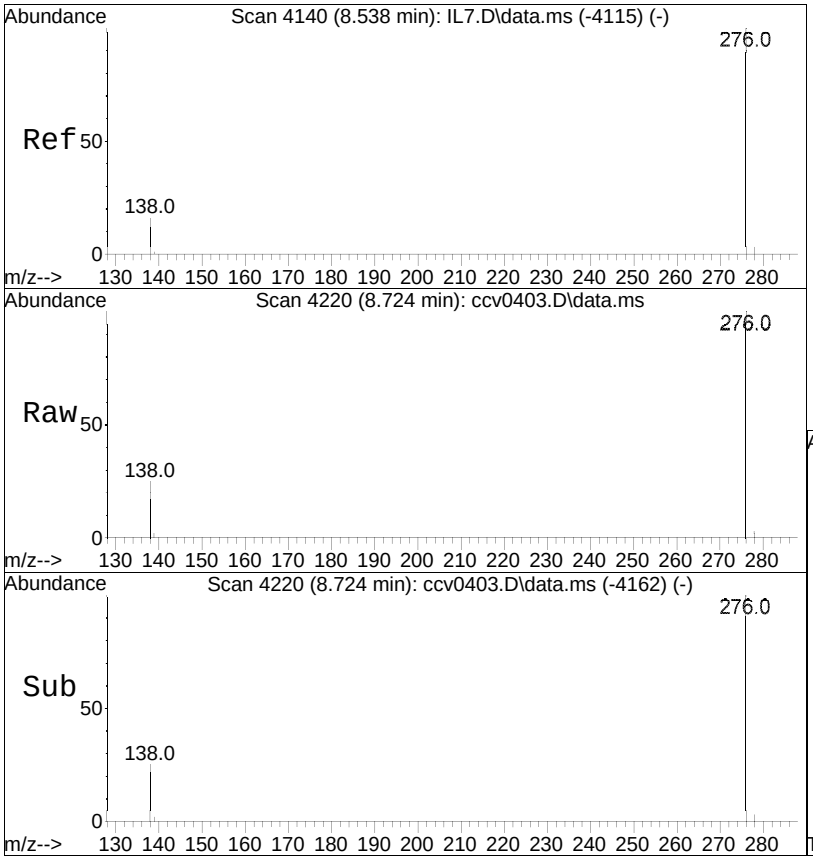


#39
Benzo[a]pyrene
Concen: 1147.78 ng/ml
RT: 7.440 min Scan# 3550
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:252 Resp: 60124

Ion	Ratio	Lower	Upper
252	100		
253	21.5	17.4	26.0

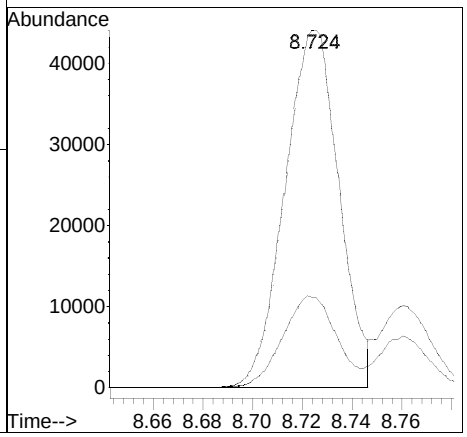


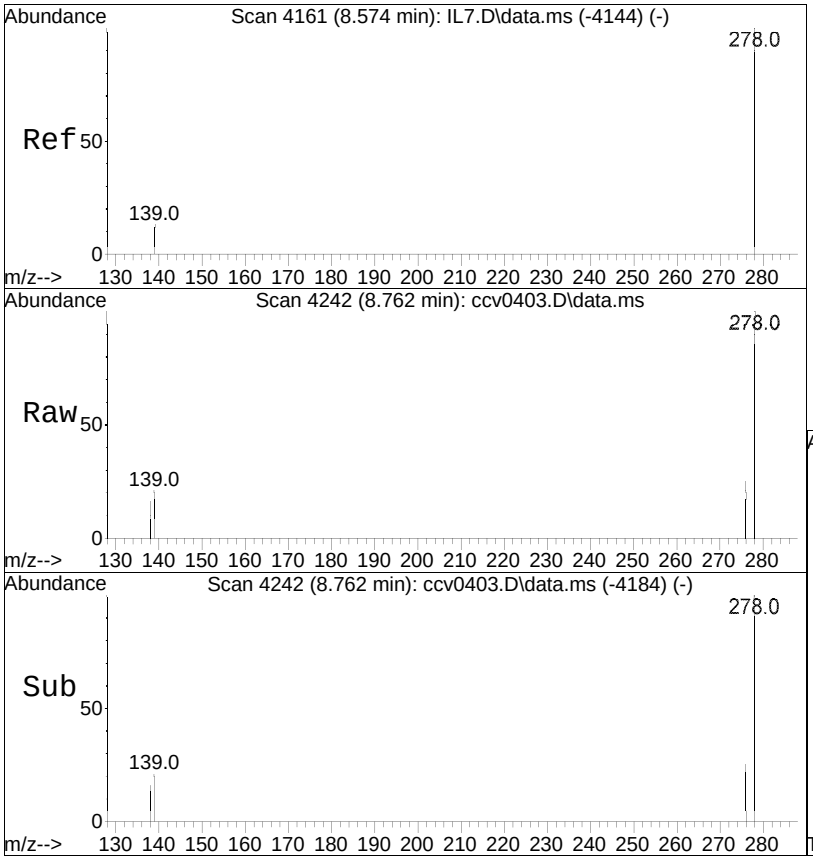


#40
Indeno[1,2,3-cd]pyrene
Concen: 1162.17 ng/ml
RT: 8.724 min Scan# 4220
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:276 Resp: 66164

Ion	Ratio	Lower	Upper
276	100		
138	25.7	14.8	22.2#

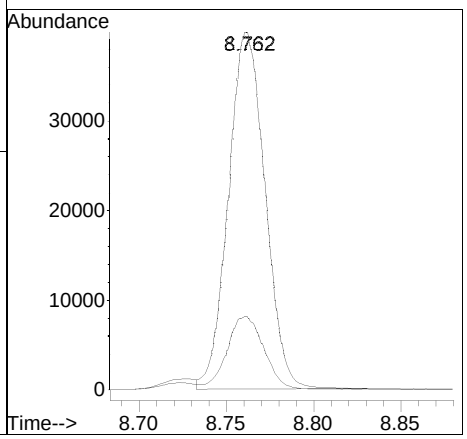


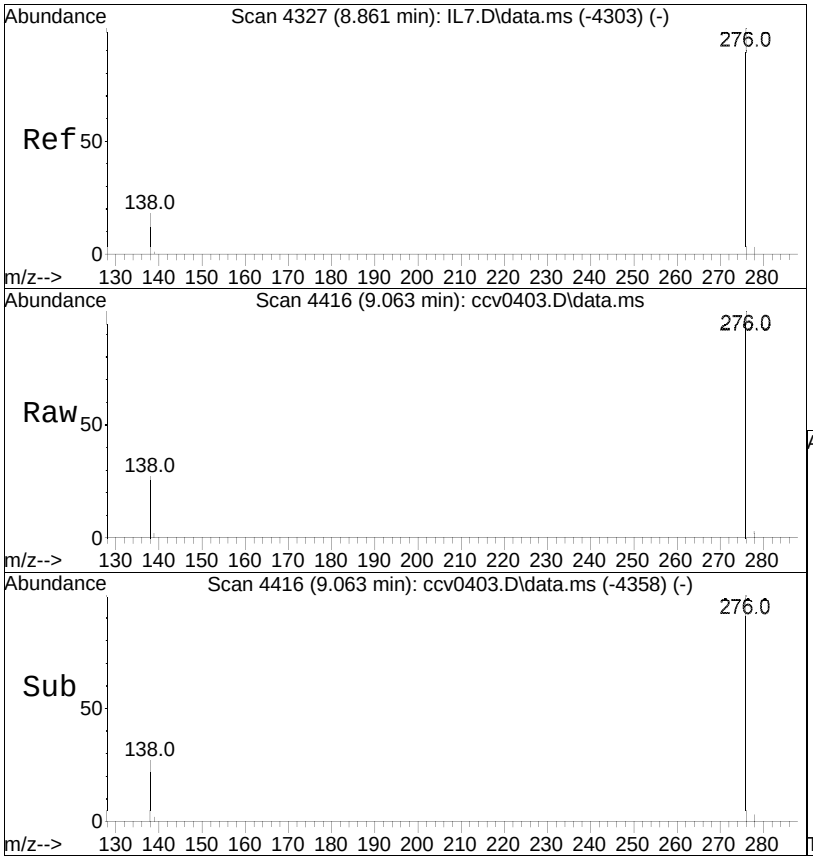


#41
Dibenzo[a,h]anthracene
Concen: 1087.89 ng/ml
RT: 8.762 min Scan# 4242
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:278 Resp: 57624

Ion	Ratio	Lower	Upper
278	100		
139	20.6	12.2	18.4#

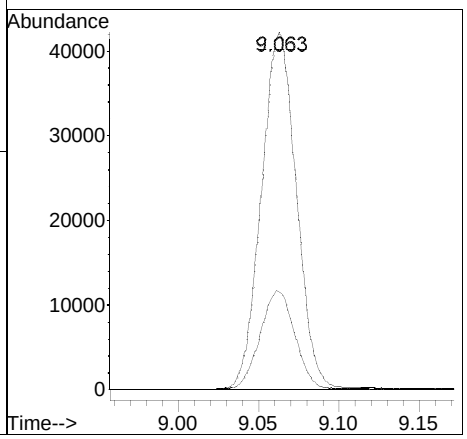




#42
Benzo[g,h,i]perylene
Concen: 1090.19 ng/ml
RT: 9.063 min Scan# 4416
Delta R.T. 0.000 min
Lab File: ccv0403.D
Acq: 03 Apr 2024 06:40 am

Tgt Ion:276 Resp: 63133

Ion	Ratio	Lower	Upper
276	100		
138	27.7	16.8	25.2#



Manual Integration Report

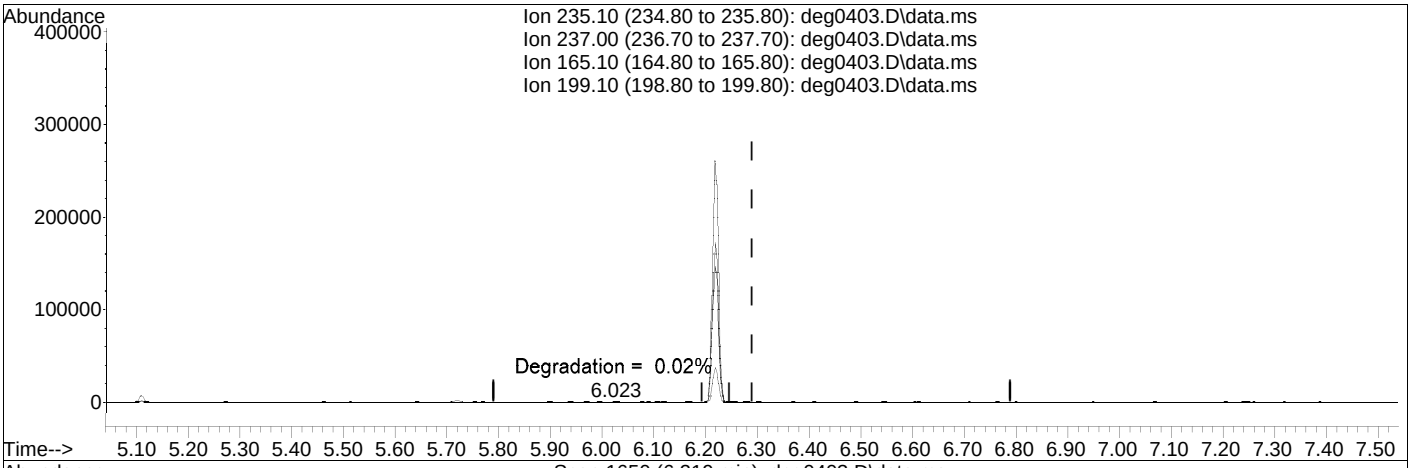
Data Path	: I:\8270SIM\sv119\240403LVI	Method	: SIM-LVI_231207n_sv119.M
Data File	: ccv0403.D	Operator	: sv119:ah
Date Inj'd	: 4/3/2024 6:40 am	Instrument	: SV119
Sample	: WG1904170-3,32,, ICV 10475	Quant Date	: 4/3/2024 6:56 am

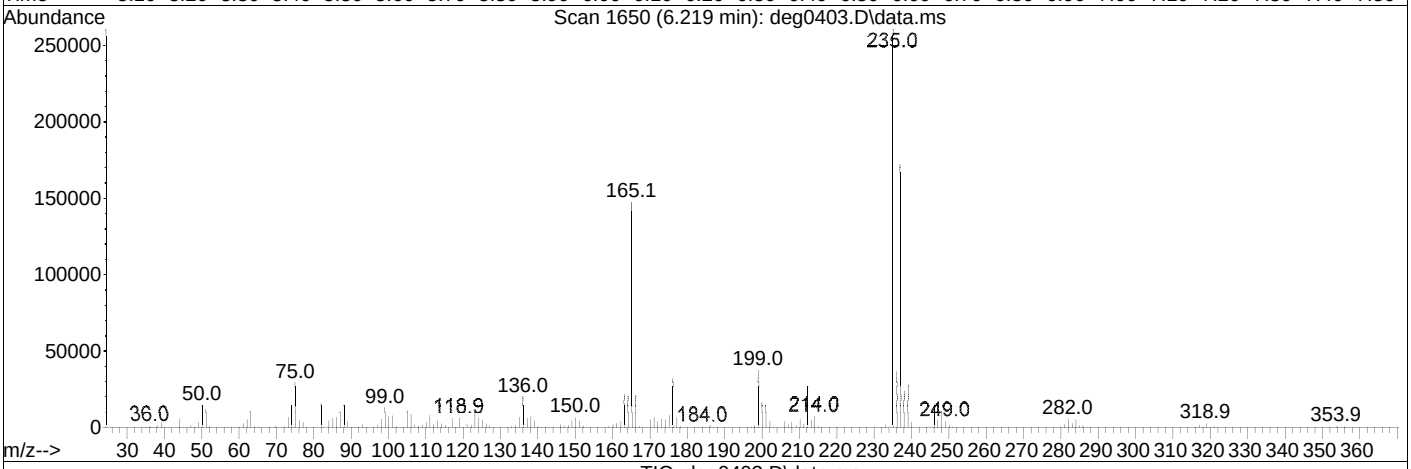
There are no manual integrations or false positives in this file.

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : deg0403.D
Acq On : 03 Apr 2024 06:21 am
Operator : sv119:ah
Sample : WG1904170-2,32,,dftppsv119
Misc : WG1904170,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 03 06:37:46 2024
Quant Method : I:\8270SIM\sv119\240403LVI\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Apr 02 14:11:37 2024
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D





TIC: deg0403.D\data.ms

(6) ddt (T)

6.219min (-0.071) 33.15

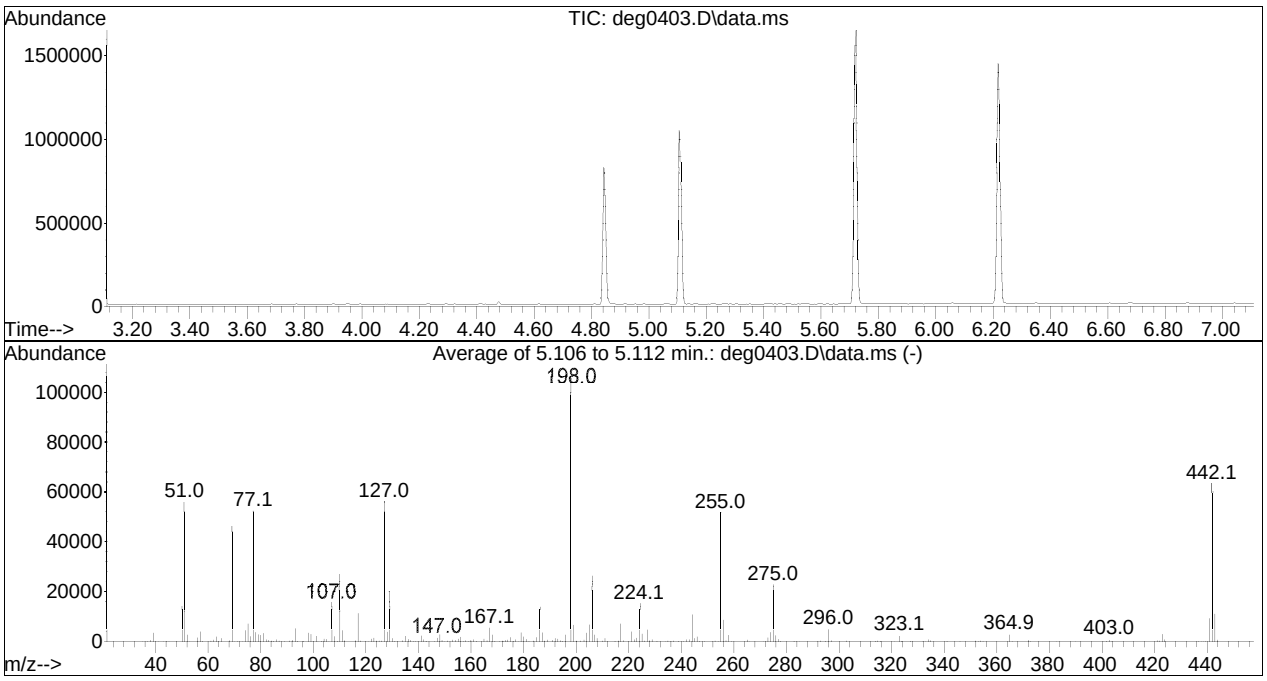
response 202069

Ion	Exp%	Act%
235.10	100.00	100.00
237.00	65.60	66.15
165.10	53.30	57.00
199.10	17.10	14.29

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : deg0403.D
Acq On : 03 Apr 2024 06:21 am
Operator : sv119:ah
Sample : WG1904170-1,32,,dftppsv119
Misc : WG1904170,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\8270SIM\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Wed Apr 03 06:56:03 2024



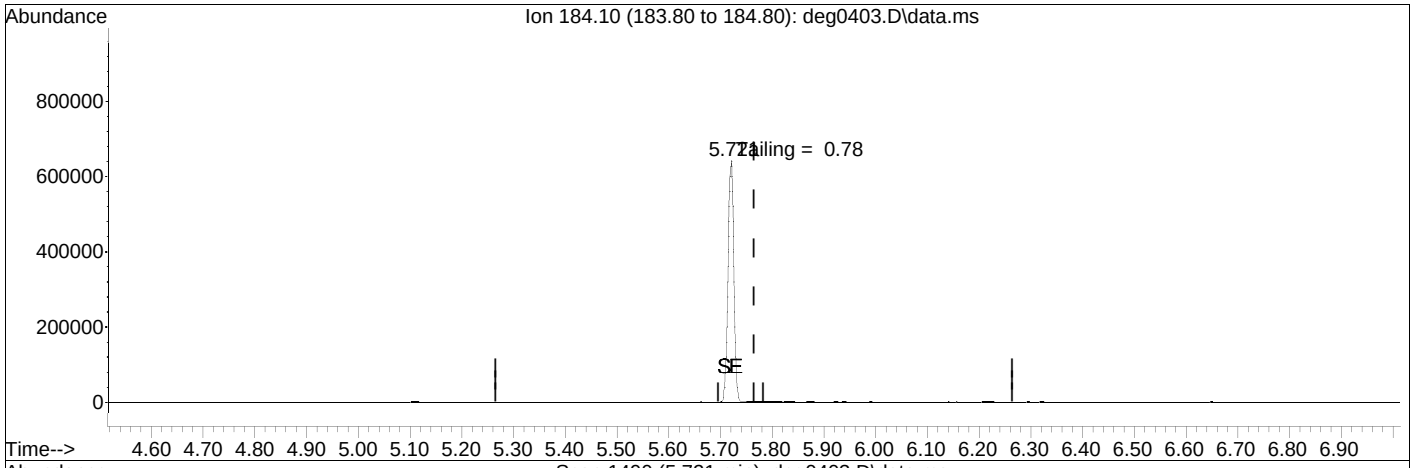
Spectrum Information: Average of 5.106 to 5.112 min.

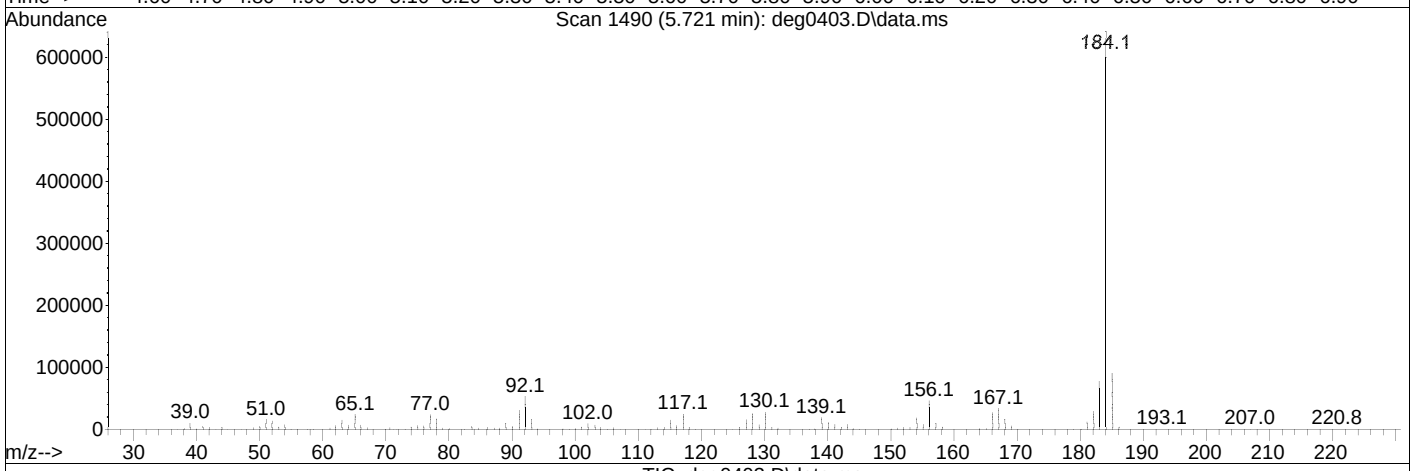
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	52.8	55821	PASS
68	69	0.00	2	1.5	692	PASS
69	69	100	100	100.0	46195	PASS
70	69	0.00	2	0.3	145	PASS
127	198	10	80	53.0	56112	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	105811	PASS
199	198	5	9	6.2	6556	PASS
275	198	10	60	21.3	22517	PASS
365	198	1	100	2.6	2786	PASS
441	442	0.01	24	14.6	9248	PASS
442	198	50	100	59.8	63323	PASS
443	442	15	24	17.1	10857	PASS

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : deg0403.D
Acq On : 03 Apr 2024 06:21 am
Operator : sv119:ah
Sample : WG1904170-4,32,,dftppsv119
Misc : WG1904170,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 03 06:37:46 2024
Quant Method : I:\8270SIM\sv119\240403LVI\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Apr 02 14:11:37 2024
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D





TIC: deg0403.D\data.ms

(3) benzidine (T)

5.721min (-0.044) 46.64

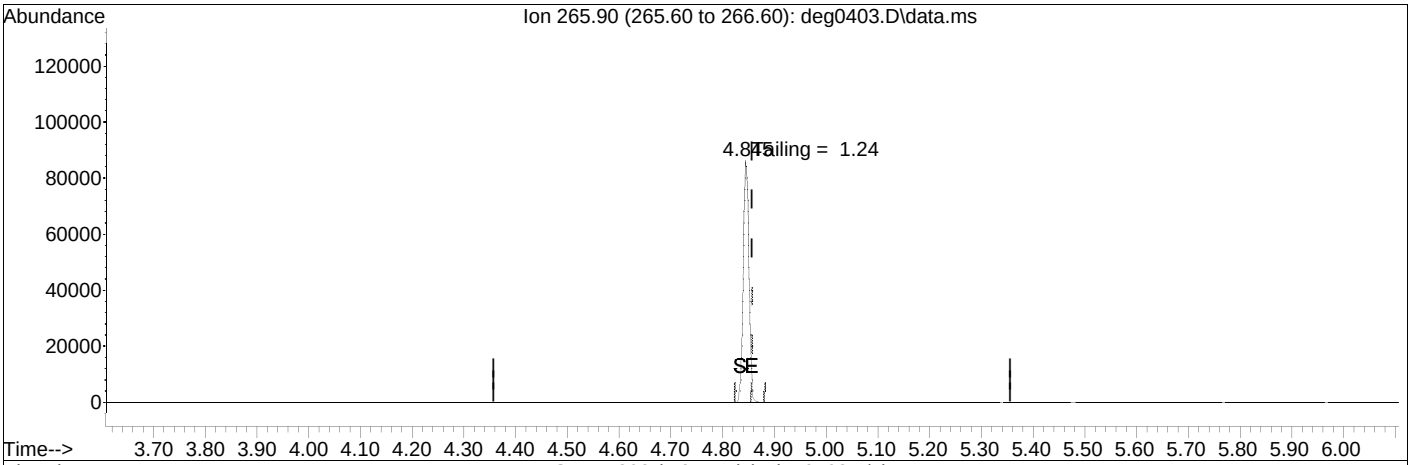
response 474763

Ion	Exp%	Act%
184.10	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : deg0403.D
Acq On : 03 Apr 2024 06:21 am
Operator : sv119:ah
Sample : WG1904170-5,32,,dftppsv119
Misc : WG1904170,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 03 06:37:46 2024
Quant Method : I:\8270SIM\sv119\240403LVI\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Apr 02 14:11:37 2024
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D



TIC: deg0403.D\data.ms

(1) pentachlorophenol (T)

4.845min (-0.012) 29.76

response 62512

Ion	Exp%	Act%
265.90	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: SV119	**Calibration Date**	: 04/03/24 06:40		
Lab File ID	: CCV0403	**Init. Calib. Date(s)**	: 12/07/23	12/07/23	
Sample No	: WG1904170-3	**Init. Calib. Times**	: 13:10	15:42	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene-d4	1	1	.05	0	20	122	0
2-Fluorophenol	1.094	1.261	.05	-15.3	20	130	0
Phenol-d6	1.311	1.449	.05	-10.5	20	132	0
Bis(2-chloroethyl)ether	1.115	1.188	.05	-6.5	20	129	0
n-nitrosodi-n-propylamine	0.667	0.771	.05	-15.6	20	135	0
Hexachloroethane	0.495	0.565	.05	-14.1	20	137	0
Nitrobenzene-d5	0.995	1.192	.05	-19.8	20	138	0
Naphthalene-d8	1	1	.05	0	20	112	0
Naphthalene	0.955	1.066	.05	-11.6	20	120	0
Hexachlorobutadiene	0.206	0.25	.05	-21.4*	20	129	0
2-Methylnaphthalene	0.706	0.749	.05	-6.1	20	112	0
1-Methylnaphthalene	0.651	0.673	.05	-3.4	20	112	0
2-Fluorobiphenyl	0.893	0.849	.05	4.9	20	102	0
2-Chloronaphthalene	0.752	0.765	.05	-1.7	20	111	0
2,6-Dinitrotoluene	0.17	0.184	.05	-8.2	20	118	0
Acenaphthylene	1.118	1.142	.05	-2.1	20	108	0
Acenaphthene-d10	1	1	.05	0	20	98	0
Acenaphthene	1.237	1.424	.05	-15.1	20	107	0
2,4-Dinitrotoluene	0.369	0.491	.05	-33.1*	20	120	0
Fluorene	1.478	1.636	.05	-10.7	20	102	0
2,4,6-Tribromophenol	0.221	0.285	.05	-29*	20	117	0
Phenanthrene-d10	1	1	.05	0	20	91	0
4,6-Dinitro-o-cresol	1000	1037.663	.05	-3.8	20	102	0
Hexachlorobenzene	0.259	0.326	.05	-25.9*	20	109	0
Pentachlorophenol	1000	740.343	.05	26*	20	70	0
Phenanthrene	1.016	1.153	.05	-13.5	20	98	0
Anthracene	1.008	1.147	.05	-13.8	20	97	0
Fluoranthene	1.339	1.386	.05	-3.5	20	88	0
Pyrene	1.376	1.432	.05	-4.1	20	90	0
4-Terphenyl-d14	0.981	0.723	.05	26.3*	20	65	0
Chrysene-d12	1	1	.05	0	20	76	0
Benzo[a]anthracene	1000	1190.656	.05	-19.1	20	81	0
3,3'-Dichlorobenzidine	0.604	0.719	.05	-19	20	87	0
Chrysene	1.32	1.483	.05	-12.3	20	82	0
Bis(2-ethylhexyl)phthalate	1000	1261.504	.05	-26.2*	20	115	0
Perylene-d12	1	1	.05	0	20	79	0
Benzo[b]fluoranthene	1.397	1.508	.05	-7.9	20	79	0
Benzo[k]fluoranthene	1.327	1.434	.05	-8.1	20	83	0
Benzo[a]pyrene	1.23	1.412	.05	-14.8	20	86	0
Indeno[1,2,3-cd]pyrene	1.337	1.554	.05	-16.2	20	87	0
Dibenzo[a,h]anthracene	1.244	1.353	.05	-8.8	20	82	0
Benzo[g,h,i]perylene	1.36	1.482	.05	-9	20	82	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Semivolatiles

Client	: Alpha Geoscience	**Lab Number**	: L2417074		
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123		
Instrument ID	: SV119	**Calibration Date**	: 04/04/24 06:58		
Lab File ID	: CCV0404	**Init. Calib. Date(s)**	: 12/07/23	12/07/23	
Sample No	: WG1904665-3	**Init. Calib. Times**	: 13:10	15:42	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene-d4	1	1	.05	0	20	144	0
2-Fluorophenol	1.094	1.217	.05	-11.2	20	148	0
Phenol-d6	1.311	1.382	.05	-5.4	20	148	0
Bis(2-chloroethyl)ether	1.115	1.226	.05	-10	20	156	0
n-nitrosodi-n-propylamine	0.667	0.691	.05	-3.6	20	143	0
Hexachloroethane	0.495	0.552	.05	-11.5	20	158	0
Nitrobenzene-d5	0.995	1.176	.05	-18.2	20	160	0
Naphthalene-d8	1	1	.05	0	20	123	0
Naphthalene	0.955	1.046	.05	-9.5	20	129	0
Hexachlorobutadiene	0.206	0.261	.05	-26.7*	20	148	0
2-Methylnaphthalene	0.706	0.794	.05	-12.5	20	130	0
1-Methylnaphthalene	0.651	0.758	.05	-16.4	20	138	0
2-Fluorobiphenyl	0.893	0.97	.05	-8.6	20	127	0
2-Chloronaphthalene	0.752	0.875	.05	-16.4	20	139	0
2,6-Dinitrotoluene	0.17	0.223	.05	-31.2*	20	157	0
Acenaphthylene	1.118	1.328	.05	-18.8	20	137	0
Acenaphthene-d10	1	1	.05	0	20	124	0
Acenaphthene	1.237	1.41	.05	-14	20	134	0
2,4-Dinitrotoluene	0.369	0.535	.05	-45*	20	165	0
Fluorene	1.478	1.686	.05	-14.1	20	132	0
2,4,6-Tribromophenol	0.221	0.317	.05	-43.4*	20	164	0
Phenanthrene-d10	1	1	.05	0	20	123	0
4,6-Dinitro-o-cresol	1000	1021.047	.05	-2.1	20	135	0
Hexachlorobenzene	0.259	0.326	.05	-25.9*	20	148	0
Pentachlorophenol	1000	655.102	.05	34.5*	20	84	0
Phenanthrene	1.016	1.103	.05	-8.6	20	127	0
Anthracene	1.008	1.174	.05	-16.5	20	135	0
Fluoranthene	1.339	1.447	.05	-8.1	20	124	0
Pyrene	1.376	1.48	.05	-7.6	20	126	0
4-Terphenyl-d14	0.981	0.778	.05	20.7*	20	94	0
Chrysene-d12	1	1	.05	0	20	106	0
Benzo[a]anthracene	1000	1196.63	.05	-19.7	20	114	0
3,3'-Dichlorobenzidine	0.604	0.715	.05	-18.4	20	121	0
Chrysene	1.32	1.474	.05	-11.7	20	115	0
Bis(2-ethylhexyl)phthalate	1000	1348.638	.05	-34.9*	20	173	0
Perylene-d12	1	1	.05	0	20	103	0
Benzo[b]fluoranthene	1.397	1.54	.05	-10.2	20	105	0
Benzo[k]fluoranthene	1.327	1.479	.05	-11.5	20	111	0
Benzo[a]pyrene	1.23	1.416	.05	-15.1	20	112	0
Indeno[1,2,3-cd]pyrene	1.337	1.488	.05	-11.3	20	108	0
Dibenzo[a,h]anthracene	1.244	1.28	.05	-2.9	20	101	0
Benzo[g,h,i]perylene	1.36	1.385	.05	-1.8	20	100	0

*** Value outside of QC limits.**

Evaluate Continuing Calibration Report

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : ccv0404.D
Acq On : 04 Apr 2024 06:58 am
Operator : sv119:jjw
Sample : WG1904665-3,32,, ICV 10475 (0401)
Misc : WG1904665,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 04 07:17:36 2024
Quant Method : I:\8270SIM\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:39 2024
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	i	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	144	0.00
2	s	2-Fluorophenol	1.094	1.217	-11.2	148	0.00
3	s	Phenol-d6	1.311	1.382	-5.4	148	0.00
4	T	Bis(2-chloroethyl)ether	1.115	1.226	-10.0	156	0.00
5	T	n-nitrosodi-n-propylamine	0.667	0.691	-3.6	143	0.00
6	t	Hexachloroethane	0.495	0.552	-11.5	158	0.00
7	s	Nitrobenzene-d5	0.995	1.176	-18.2	160	0.00
8	i	Naphthalene-d8	1.000	1.000	0.0	123	0.00
9	t	Naphthalene	0.955	1.046	-9.5	129	0.00
10	t	Hexachlorobutadiene	0.206	0.261	-26.7#	148	0.00
11	t	2-Methylnaphthalene	0.706	0.794	-12.5	130	0.00
12	t	1-Methylnaphthalene	0.651	0.758	-16.4	138	0.00
13	s	2-Fluorobiphenyl	0.893	0.970	-8.6	127	0.00
14	t	2-Chloronaphthalene	0.752	0.875	-16.4	139	0.00
15	t	2,6-Dinitrotoluene	0.170	0.223	-31.2#	157	0.00
16	t	Acenaphthylene	1.118	1.328	-18.8	137	0.00
17	i	Acenaphthene-d10	1.000	1.000	0.0	124	0.00
18	t	Acenaphthene	1.237	1.410	-14.0	134	0.00
19	t	2,4-Dinitrotoluene	0.369	0.535	-45.0#	165	0.00
20	t	Fluorene	1.478	1.686	-14.1	132	0.00
21	s	2,4,6-Tribromophenol	0.221	0.317	-43.4#	164	0.00
22	i	Phenanthrene-d10	1.000	1.000	0.0	123	0.00
23	T	4,6-Dinitro-o-cresol	*1000.000	1021.047	-2.1	135	0.00
24	t	Hexachlorobenzene	0.259	0.326	-25.9#	148	0.00
25	t	Pentachlorophenol	*1000.000	655.102	34.5#	84	0.00
26	t	Phenanthrene	1.016	1.103	-8.6	127	0.00
27	t	Anthracene	1.008	1.174	-16.5	135	0.00
28	t	Fluoranthene	1.339	1.447	-8.1	124	0.00
29	t	Pyrene	1.376	1.480	-7.6	126	0.00
30	s	4-Terphenyl-d14	0.981	0.778	20.7#	94	0.00
31	i	Chrysene-d12	1.000	1.000	0.0	106	0.00
32	t	Benzo[a]anthracene	*1000.000	1196.630	-19.7	114	0.00
33	t	3,3'-Dichlorobenzidine	0.604	0.715	-18.4	121	0.00
34	t	Chrysene	1.320	1.474	-11.7	115	0.00
35	T	Bis(2-ethylhexyl)phthalate	*1000.000	1348.638	-34.9#	173	0.00

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : ccv0404.D
Acq On : 04 Apr 2024 06:58 am
Operator : sv119:jjw
Sample : WG1904665-3,32,, ICV 10475 (0401)
Misc : WG1904665,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 04 07:17:36 2024
Quant Method : I:\8270SIM\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:39 2024
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
36	i	Perylene-d12	1.000	1.000	0.0	103	0.00
37	t	Benzo[b]fluoranthene	1.397	1.540	-10.2	105	0.00
38	t	Benzo[k]fluoranthene	1.327	1.479	-11.5	111	0.00
39	t	Benzo[a]pyrene	1.230	1.416	-15.1	112	0.00
40	t	Indeno[1,2,3-cd]pyrene	1.337	1.488	-11.3	108	0.00
41	t	Dibenzo[a,h]anthracene	1.244	1.280	-2.9	101	0.00
42	t	Benzo[g,h,i]perylene	1.360	1.385	-1.8	100	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : ccv0404.D
Acq On : 04 Apr 2024 06:58 am
Operator : sv119:jjw
Sample : WG1904665-3,32,, ICV 10475 (0401)
Misc : WG1904665,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 04 07:17:36 2024
Quant Method : I:\8270SIM\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:39 2024
Response via : Initial Calibration

Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.239	152	63465	4000.000	ng/ml	0.00
8) Naphthalene-d8	2.904	136	190169	4000.000	ng/ml	0.00
17) Acenaphthene-d10	3.880	164	110246	4000.000	ng/ml	0.00
22) Phenanthrene-d10	4.721	188	244714	4000.000	ng/ml	0.00
31) Chrysene-d12	6.277	240	210122	4000.000	ng/ml	0.00
36) Perylene-d12	7.486	264	221293	4000.000	ng/ml	0.00
System Monitoring Compounds						
2) 2-Fluorophenol	1.648	112	19317	1112.812	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 22.26%			
3) Phenol-d6	2.061	99	21920	1053.451	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 21.07%			
7) Nitrobenzene-d5	2.520	82	18663	1182.432	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 47.30%			
13) 2-Fluorobiphenyl	3.501	172	46093	1085.254	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 43.41%			
21) 2,4,6-Tribromophenol	4.328	330	8725	1435.496	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 28.71%			
30) 4-Terphenyl-d14	5.642	244	47617	793.740	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 31.75%			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.102	93	19449	1099.076	ng/ml	85
5) n-nitrosodi-n-propylamine	2.439	70	10958	1035.381	ng/ml	98
6) Hexachloroethane	2.500	117	8763	1116.157	ng/ml	90
9) Naphthalene	2.915	128	49722	1094.992	ng/ml	100
10) Hexachlorobutadiene	2.987	225	12410	1269.033	ng/ml	100
11) 2-Methylnaphthalene	3.295	142	37744	1124.185	ng/ml	99
12) 1-Methylnaphthalene	3.351	142	36021	1163.429	ng/ml	95
14) 2-Chloronaphthalene	3.566	162	41578	1162.572	ng/ml	99
15) 2,6-Dinitrotoluene	3.759	165	10611	1313.940	ng/ml	90
16) Acenaphthylene	3.798	152	63121	1187.667	ng/ml	99
18) Acenaphthene	3.896	153	38852	1139.958	ng/ml	98
19) 2,4-Dinitrotoluene	3.988	165	14741	1450.674	ng/ml#	73
20) Fluorene	4.190	166	46459	1140.420	ng/ml	98
23) 4,6-Dinitro-o-cresol	4.218	198	7209	1021.047	ng/ml	93
24) Hexachlorobenzene	4.506	284	19971	1262.375	ng/ml	99
25) Pentachlorophenol	4.620	266	6516	655.102	ng/ml	100
26) Phenanthrene	4.735	178	67461	1085.252	ng/ml	100
27) Anthracene	4.764	178	71849	1165.558	ng/ml	100

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : ccv0404.D
Acq On : 04 Apr 2024 06:58 am
Operator : sv119:jjw
Sample : WG1904665-3,32,, ICV 10475 (0401)
Misc : WG1904665,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 04 07:17:36 2024
Quant Method : I:\8270SIM\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:39 2024
Response via : Initial Calibration

Sub List : Default - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
28) Fluoranthene	5.417	202	88555	1080.908	ng/ml	100
29) Pyrene	5.547	202	90529	1075.581	ng/ml	99
32) Benzo[a]anthracene	6.270	228	84183	1196.630	ng/ml	100
33) 3,3'-Dichlorobenzidine	6.260	252	37554	1182.991	ng/ml#	98
34) Chrysene	6.294	228	77453	1116.871	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.296	149	62612	1348.638	ng/ml	98
37) Benzo[b]fluoranthene	7.114	252	85180	1101.798	ng/ml	100
38) Benzo[k]fluoranthene	7.139	252	81826	1114.635	ng/ml	100
39) Benzo[a]pyrene	7.425	252	78329	1151.057	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.711	276	82301	1112.802	ng/ml#	87
41) Dibenzo[a,h]anthracene	8.747	278	70807	1029.014	ng/ml#	89
42) Benzo[g,h,i]perylene	9.051	276	76638	1018.717	ng/ml#	88

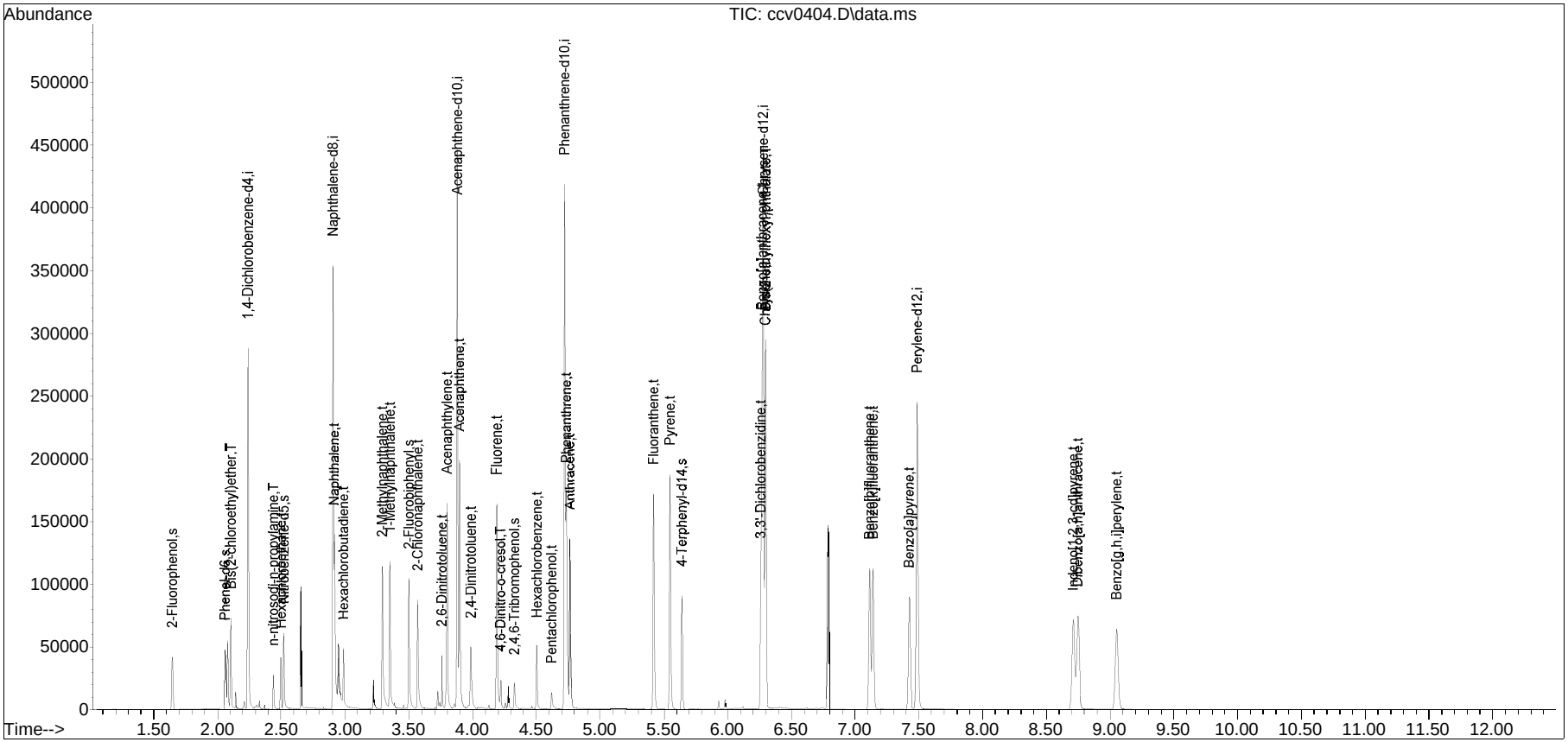
(#) = qualifier out of range (m) = manual integration (+) = signals summed

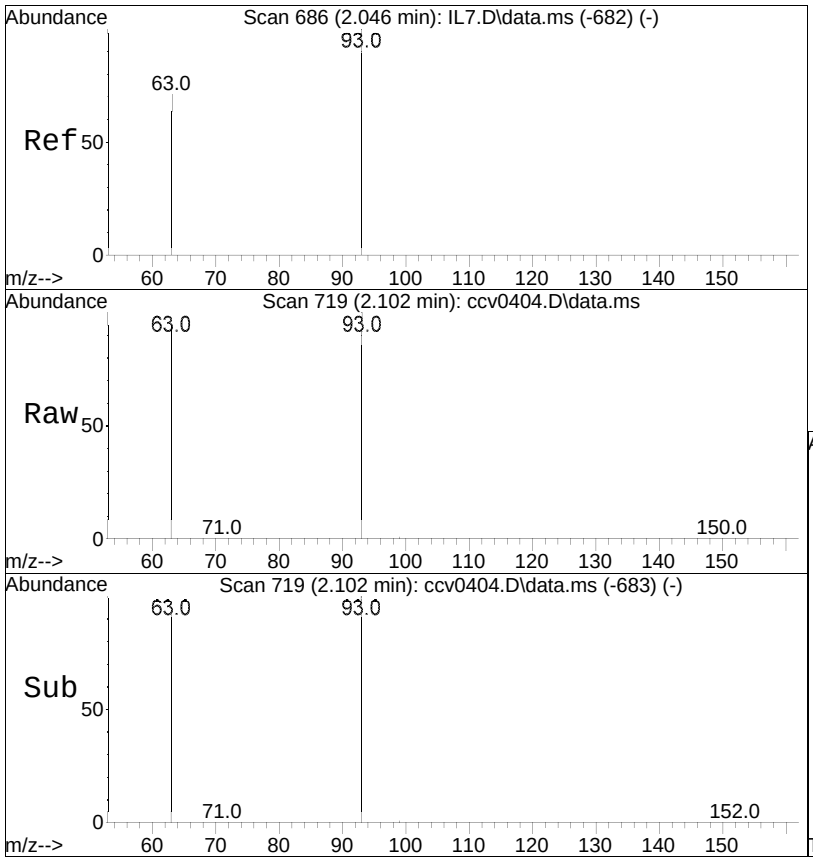
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : ccv0404.D
Acq On : 04 Apr 2024 06:58 am
Operator : sv119:jjw
Sample : WG1904665-3,32,, ICV 10475 (0401)
Misc : WG1904665,,ical20642
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 04 07:17:36 2024
Quant Method : I:\8270SIM\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:39 2024
Response via : Initial Calibration

Sub List : Default - All compounds listed

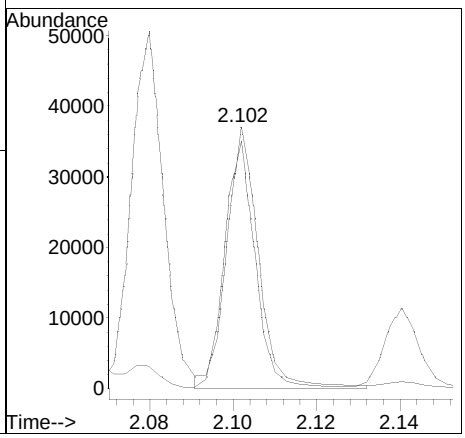


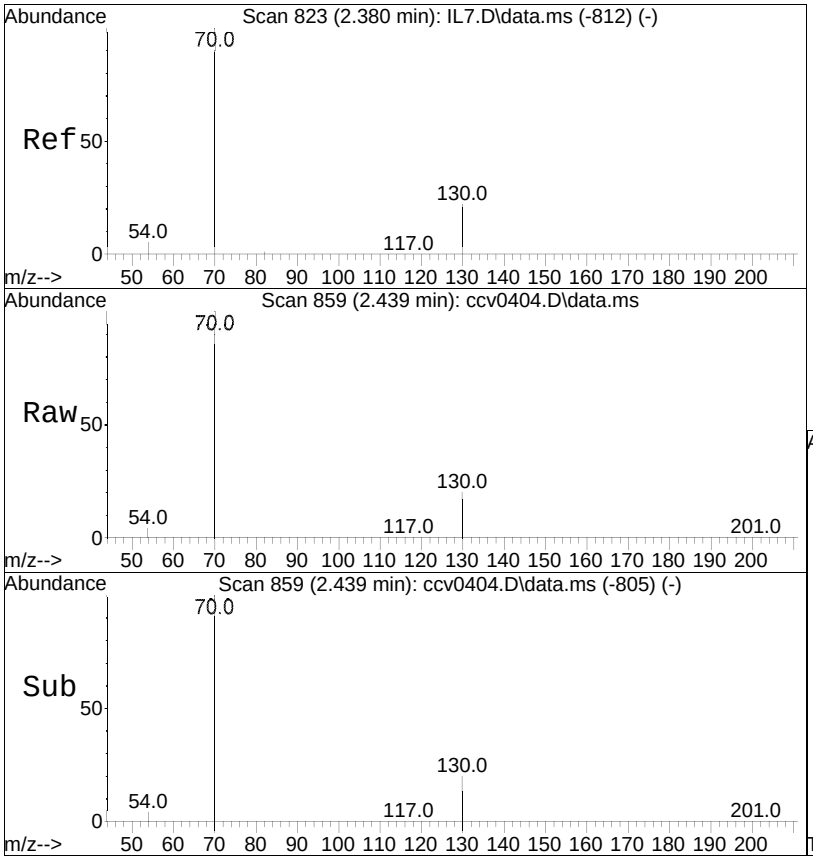


#4
Bis(2-chloroethyl)ether
Concen: 1099.08 ng/ml
RT: 2.102 min Scan# 719
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion: 93 Resp: 19449

Ion	Ratio	Lower	Upper
93	100		
63	91.1	62.6	94.0

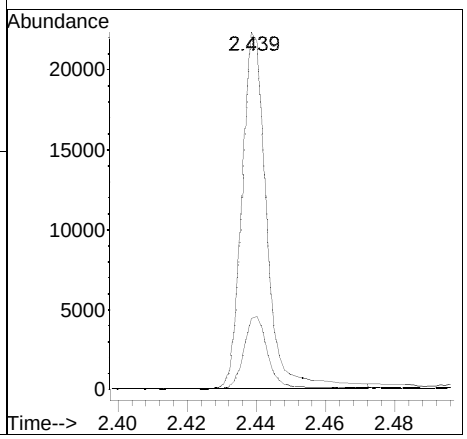


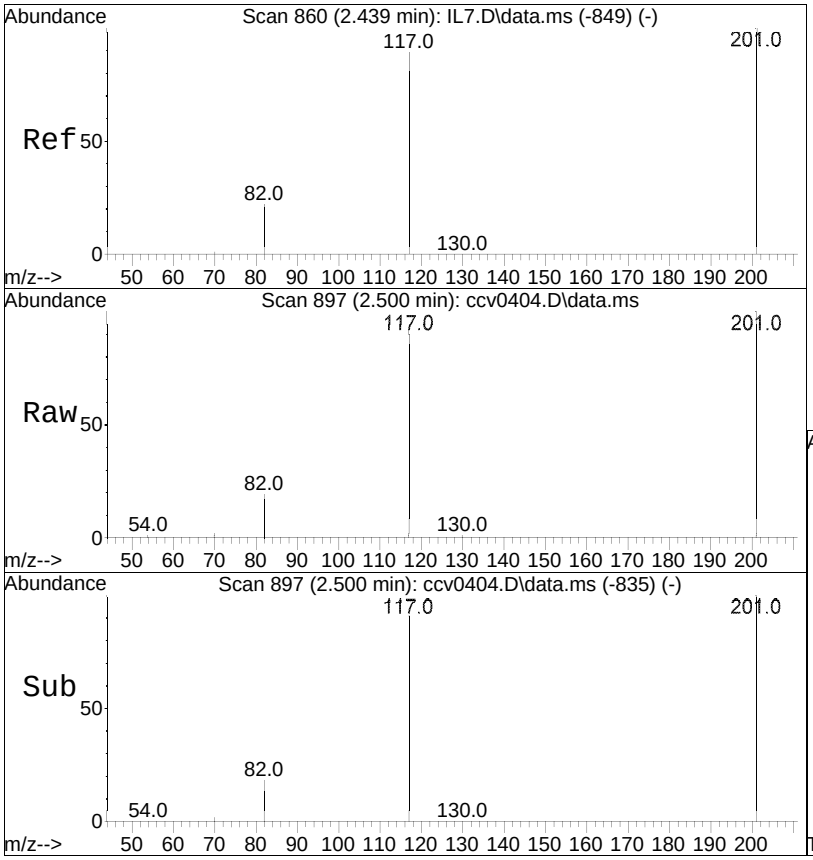


#5
n-nitrosodi-n-propylamine
Concen: 1035.38 ng/ml
RT: 2.439 min Scan# 859
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion: 70 Resp: 10958

Ion	Ratio	Lower	Upper
70	100		
130	19.9	15.0	22.6

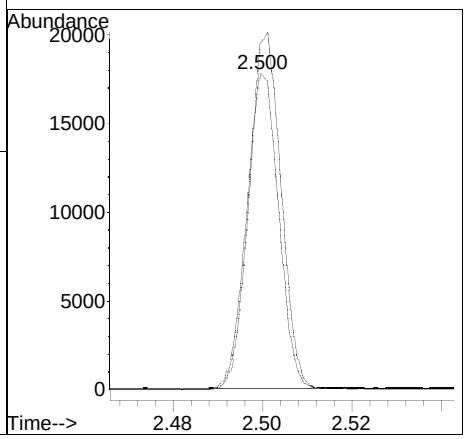


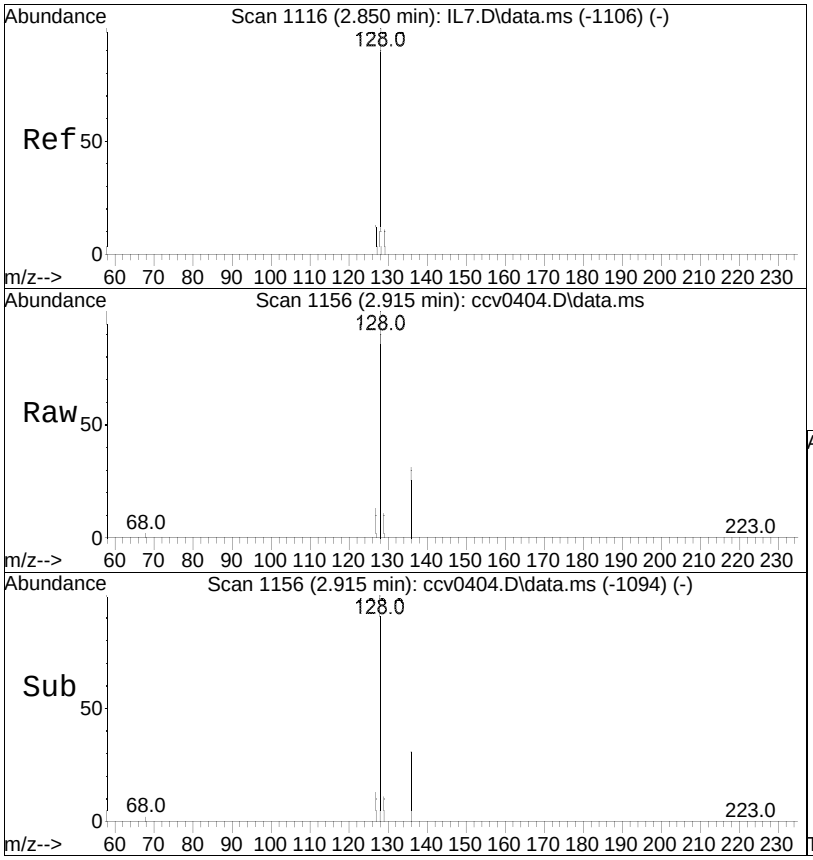


#6
Hexachloroethane
Concen: 1116.16 ng/ml
RT: 2.500 min Scan# 897
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:117 Resp: 8763

Ion	Ratio	Lower	Upper
117	100		
201	112.3	81.5	122.3

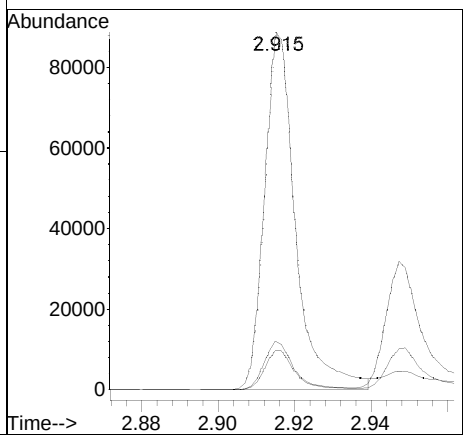


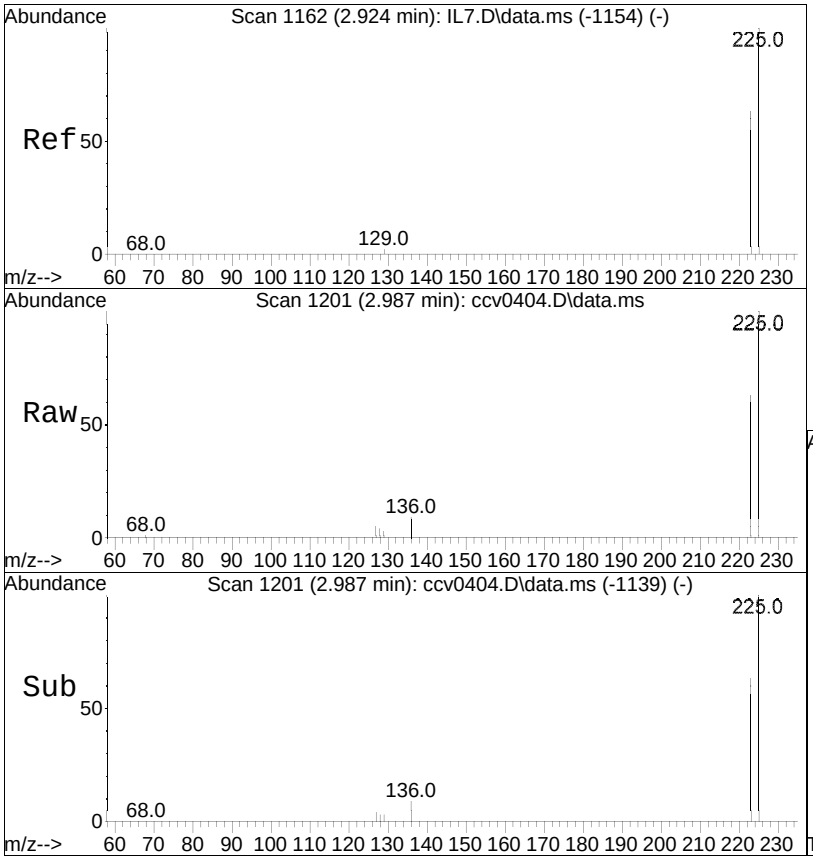


#9
Naphthalene
Concen: 1094.99 ng/ml
RT: 2.915 min Scan# 1156
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:128 Resp: 49722

Ion	Ratio	Lower	Upper
128	100		
129	10.9	8.8	13.2
127	13.1	10.6	15.8

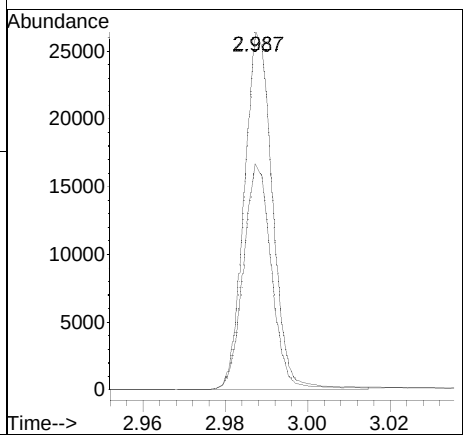


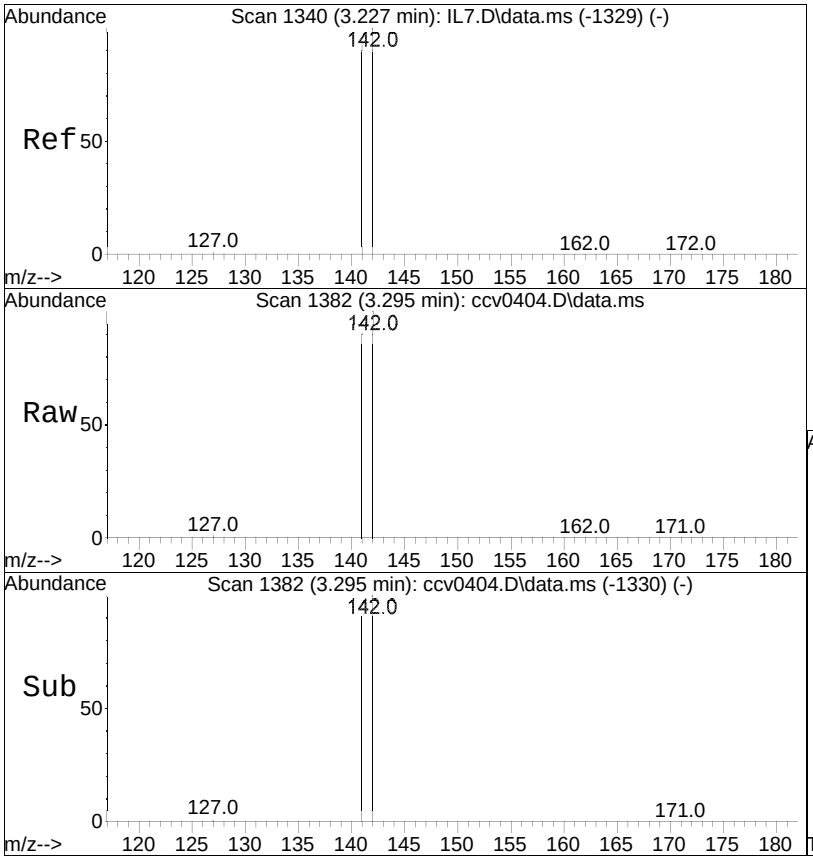


#10
Hexachlorobutadiene
Concen: 1269.03 ng/ml
RT: 2.987 min Scan# 1201
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:225 Resp: 12410

Ion	Ratio	Lower	Upper
225	100		
223	62.7	50.1	75.1

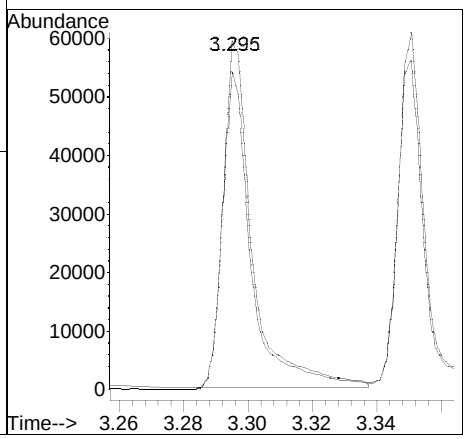


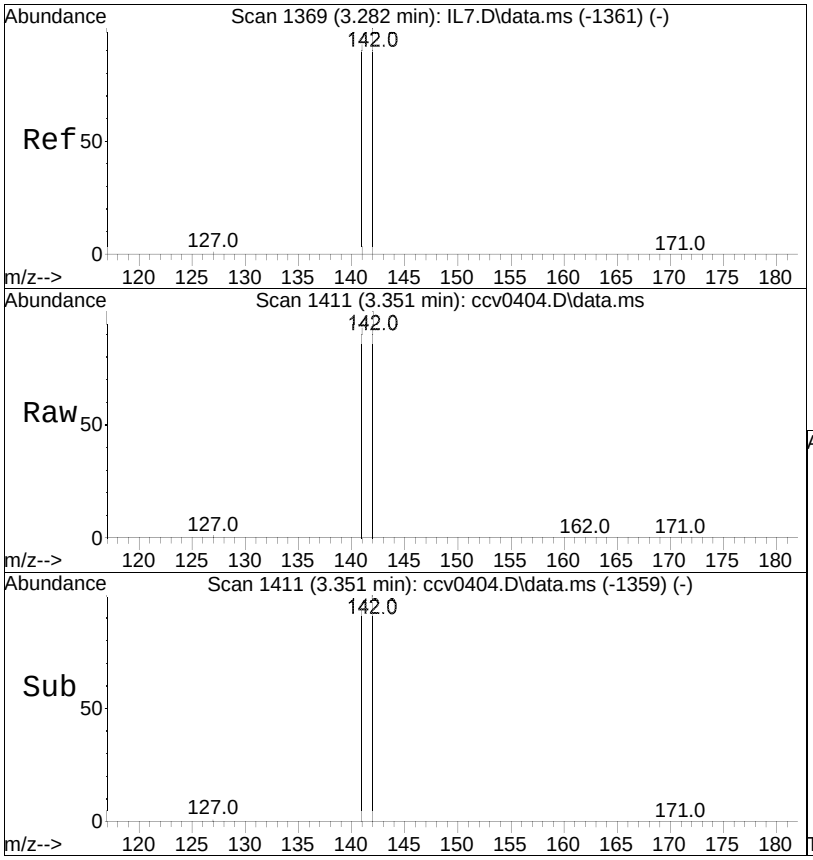


#11
2-Methylnaphthalene
Concen: 1124.18 ng/ml
RT: 3.295 min Scan# 1382
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:142 Resp: 37744

Ion	Ratio	Lower	Upper
142	100		
141	91.8	74.1	111.1

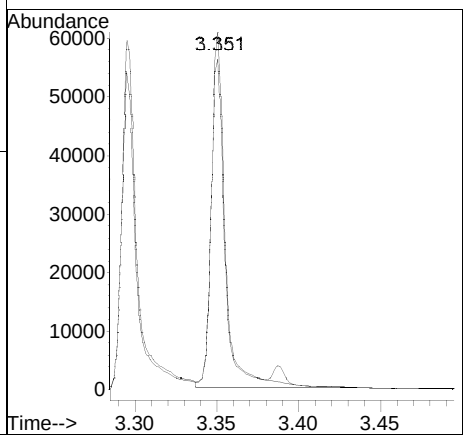


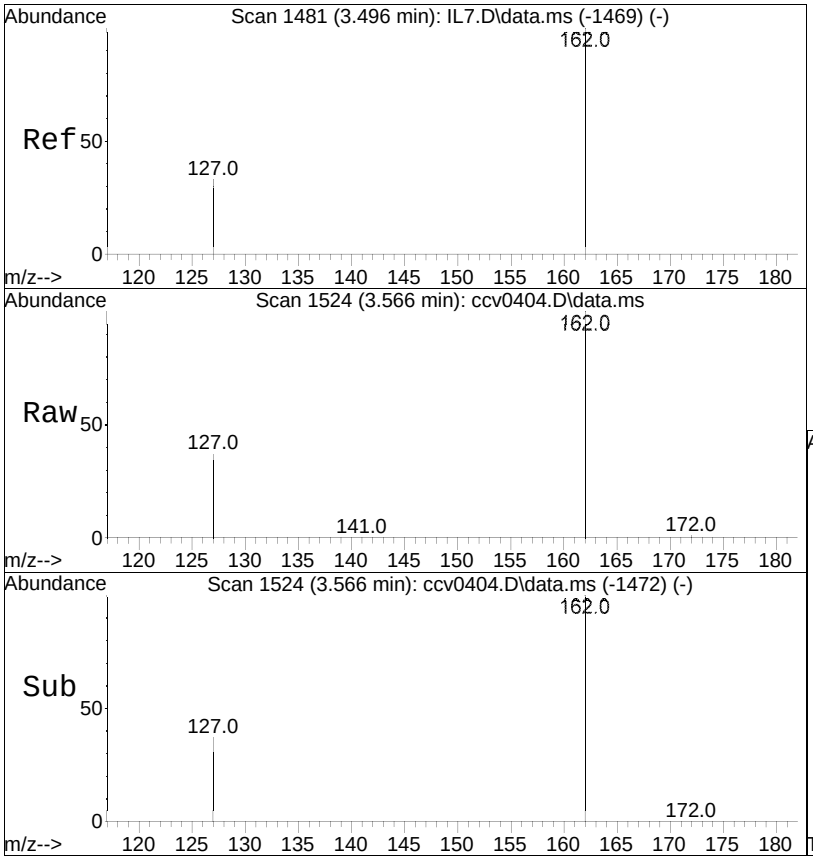


#12
1-Methylnaphthalene
Concen: 1163.43 ng/ml
RT: 3.351 min Scan# 1411
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:142 Resp: 36021

Ion	Ratio	Lower	Upper
142	100		
141	90.6	76.6	114.8

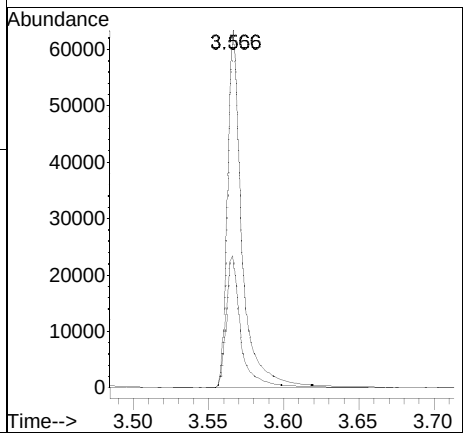


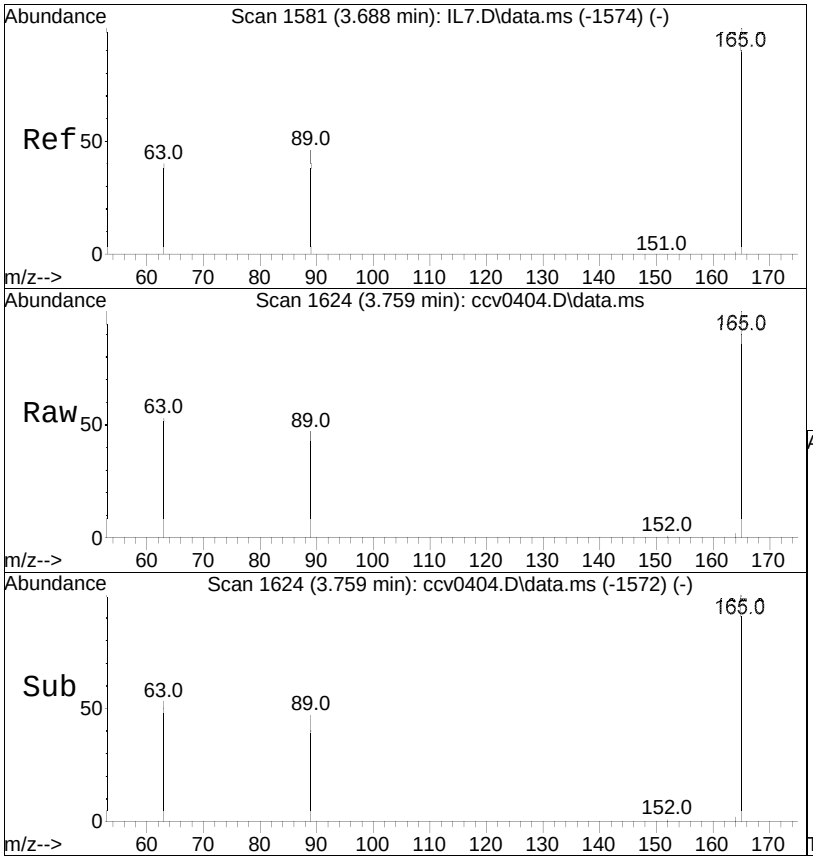


#14
2-Chloronaphthalene
Concen: 1162.57 ng/ml
RT: 3.566 min Scan# 1524
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:162 Resp: 41578

Ion	Ratio	Lower	Upper
162	100		
127	37.4	29.7	44.5

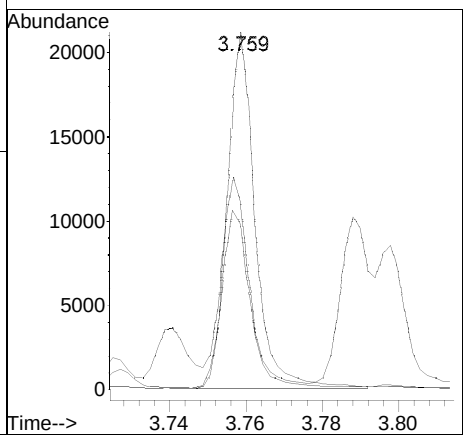


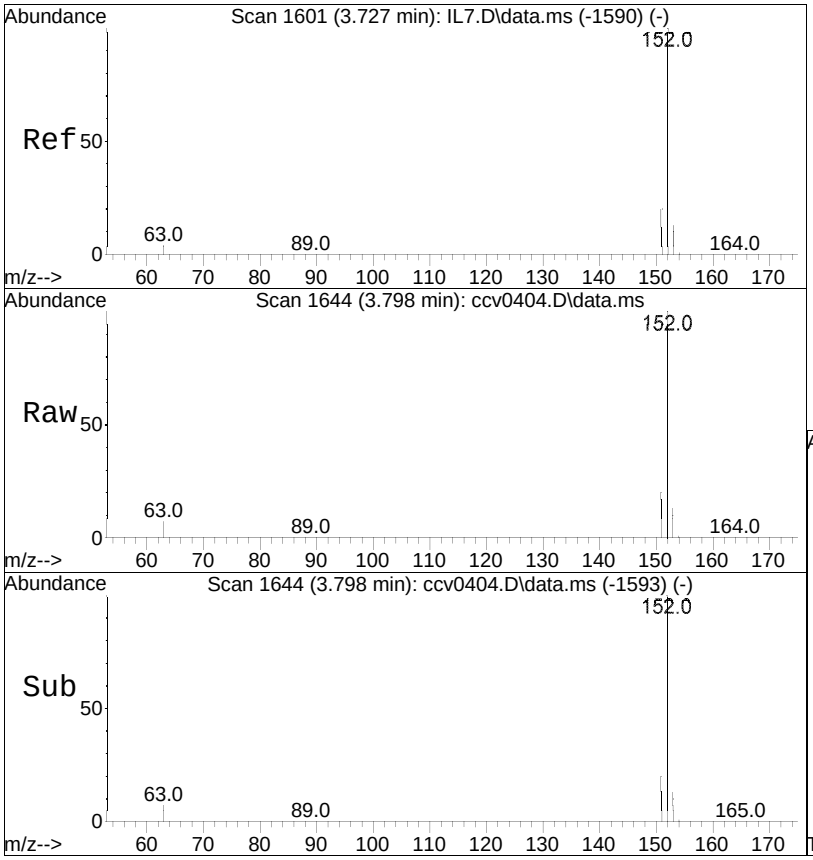


#15
2,6-Dinitrotoluene
Concen: 1313.94 ng/ml
RT: 3.759 min Scan# 1624
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:165 Resp: 10611

Ion	Ratio	Lower	Upper
165	100		
89	52.9	52.8	79.2
63	61.2	50.9	76.3

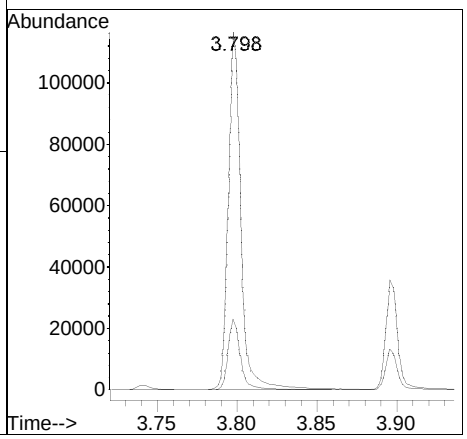


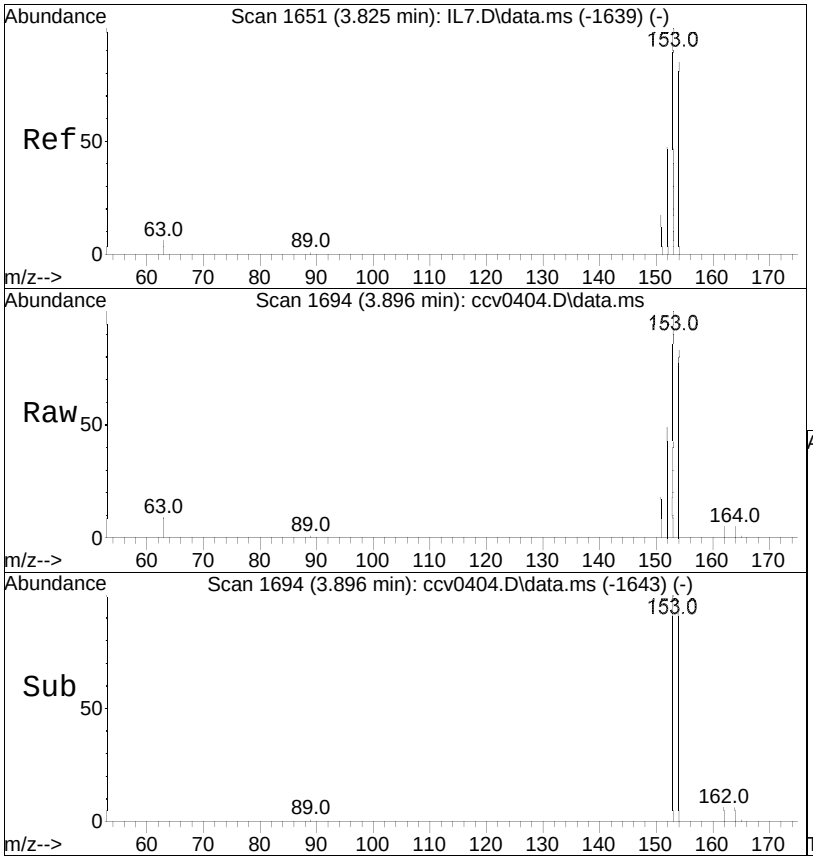


#16
Acenaphthylene
Concen: 1187.67 ng/ml
RT: 3.798 min Scan# 1644
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:152 Resp: 63121

Ion	Ratio	Lower	Upper
152	100		
151	19.5	16.0	24.0

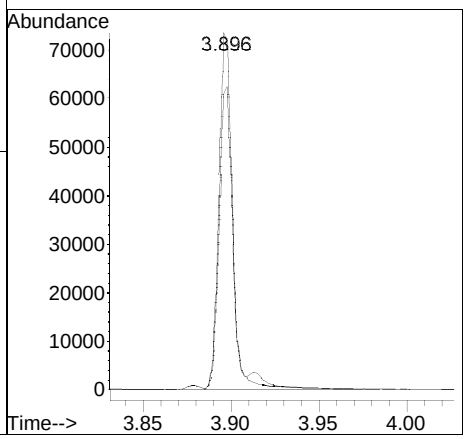


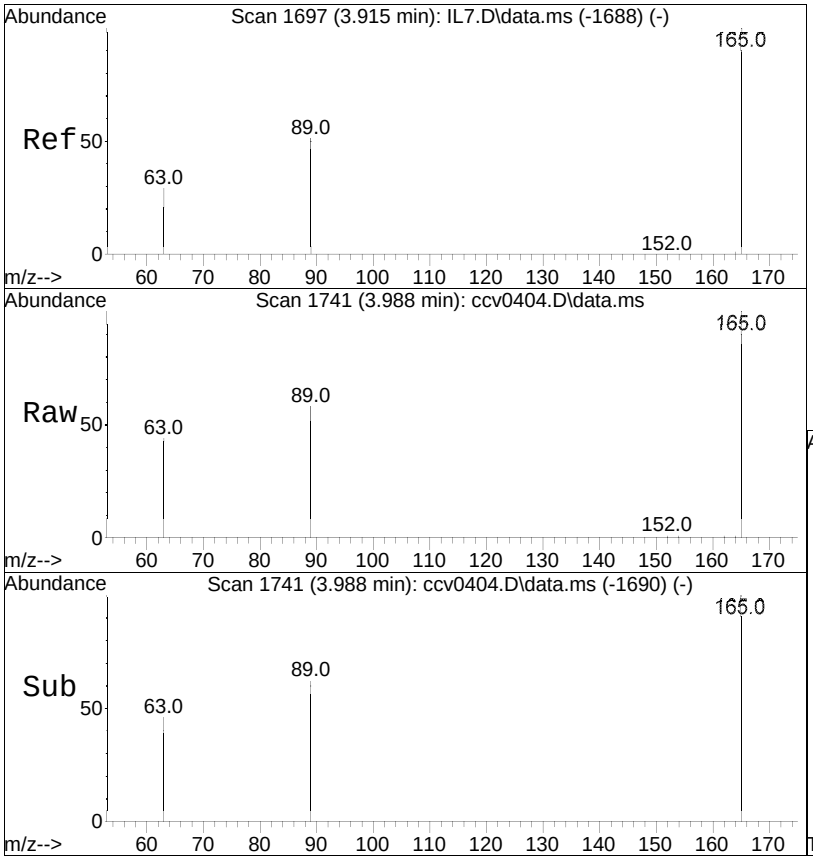


#18
Acenaphthene
Concen: 1139.96 ng/ml
RT: 3.896 min Scan# 1694
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:153 Resp: 38852

Ion	Ratio	Lower	Upper
153	100		
154	82.0	66.9	100.3

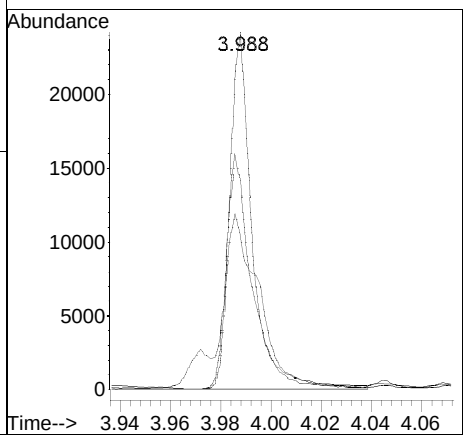


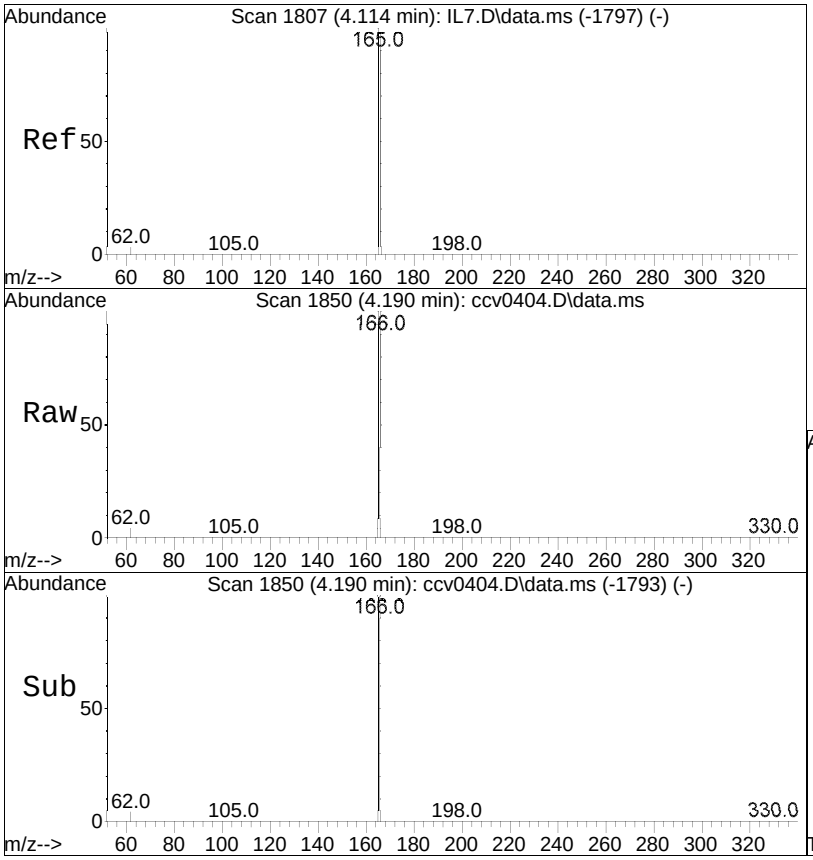


#19
2,4-Dinitrotoluene
Concen: 1450.67 ng/ml
RT: 3.988 min Scan# 1741
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:165 Resp: 14741

Ion	Ratio	Lower	Upper
165	100		
89	75.8	80.1	120.1#
63	71.7	38.9	58.3#

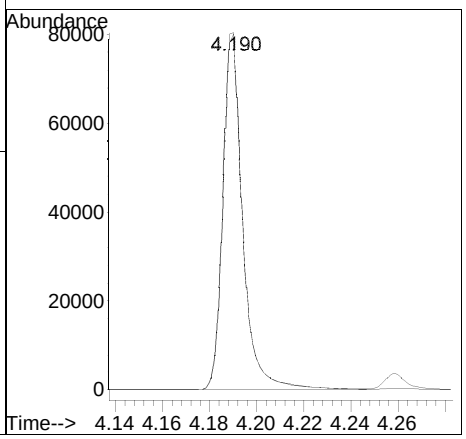


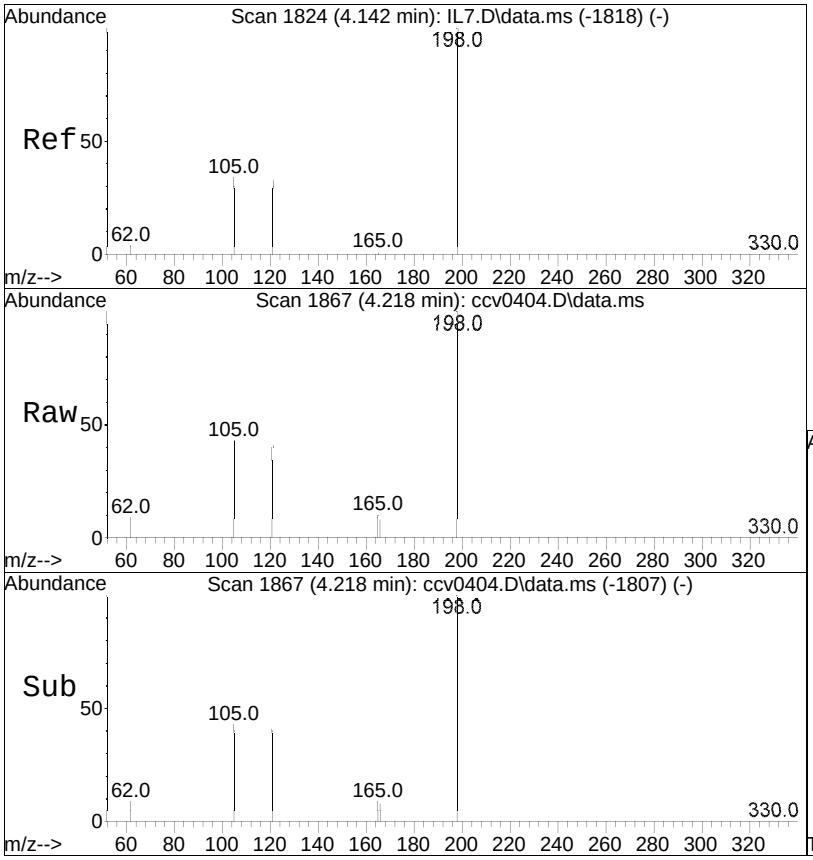


#20
Fluorene
Concen: 1140.42 ng/ml
RT: 4.190 min Scan# 1850
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:166 Resp: 46459

Ion	Ratio	Lower	Upper
166	100		
165	101.8	82.9	124.3

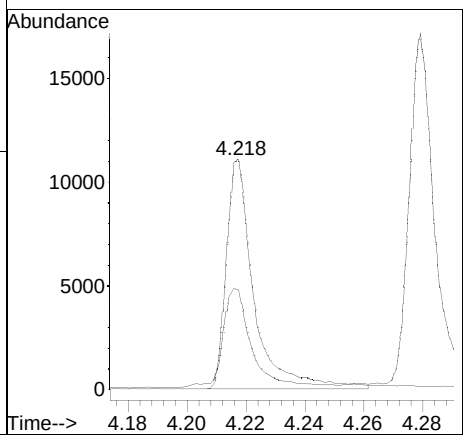


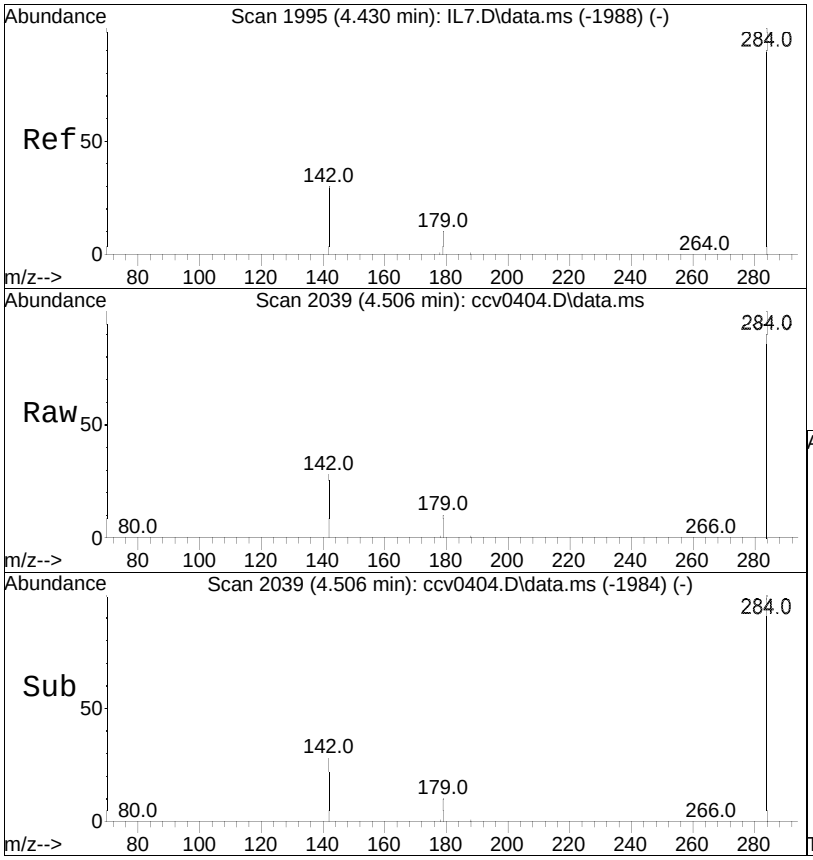


#23
4,6-Dinitro-o-cresol
Concen: 1021.05 ng/ml
RT: 4.218 min Scan# 1867
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:198 Resp: 7209

Ion	Ratio	Lower	Upper
198	100		
105	44.5	32.2	48.4

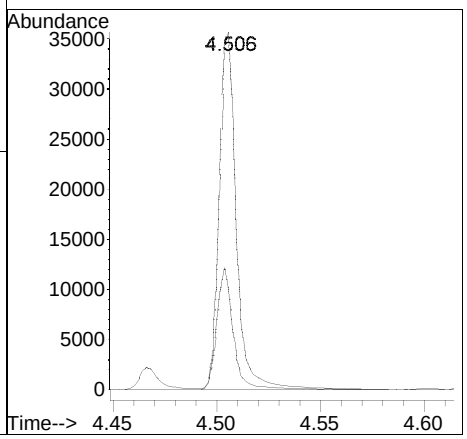


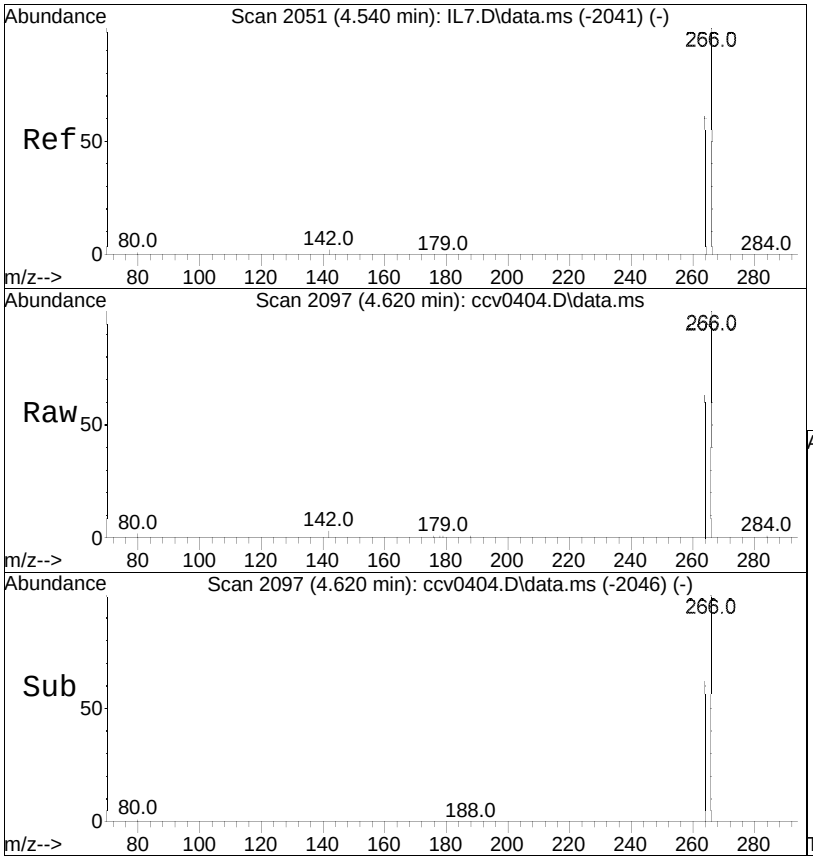


#24
Hexachlorobenzene
Concen: 1262.37 ng/ml
RT: 4.506 min Scan# 2039
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:284 Resp: 19971

Ion	Ratio	Lower	Upper
284	100		
142	33.0	26.9	40.3

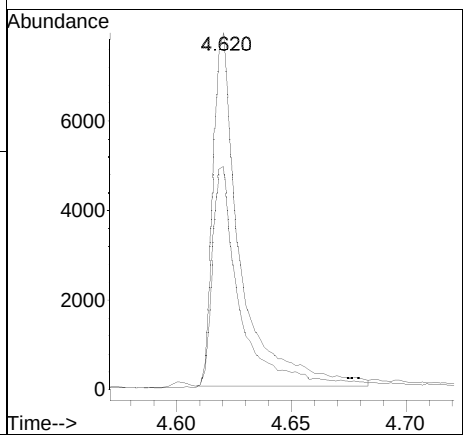


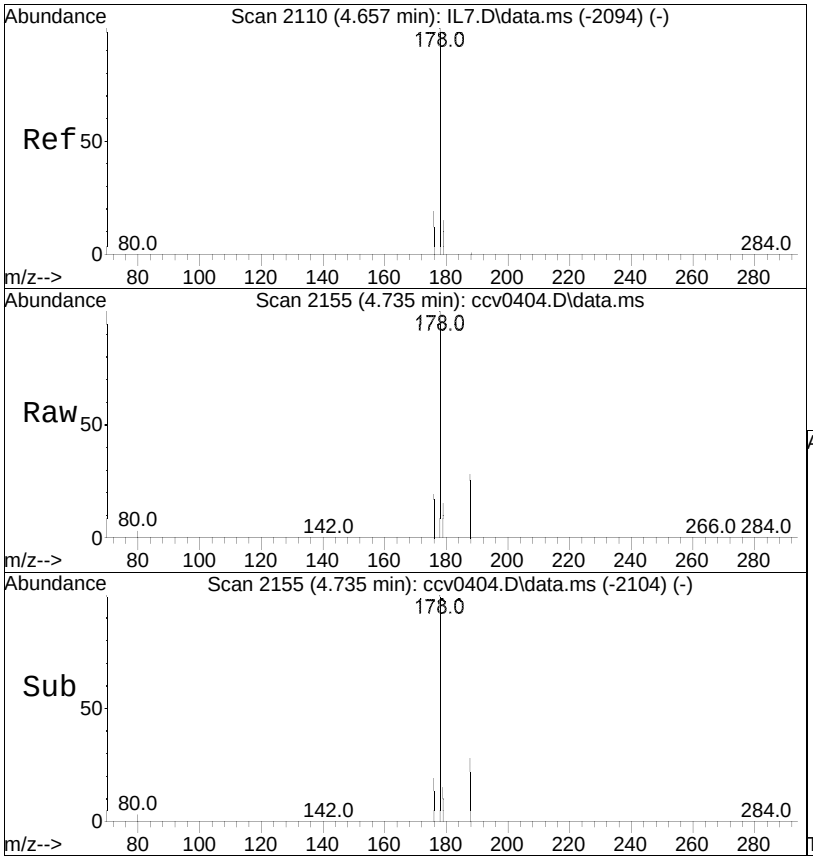


#25
Pentachlorophenol
Concen: 655.10 ng/ml
RT: 4.620 min Scan# 2097
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:266 Resp: 6516

Ion	Ratio	Lower	Upper
266	100		
264	63.4	50.7	76.1

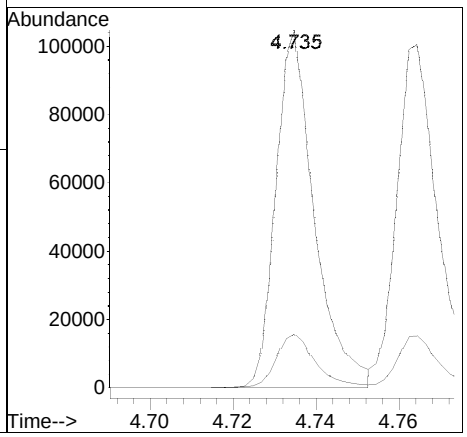


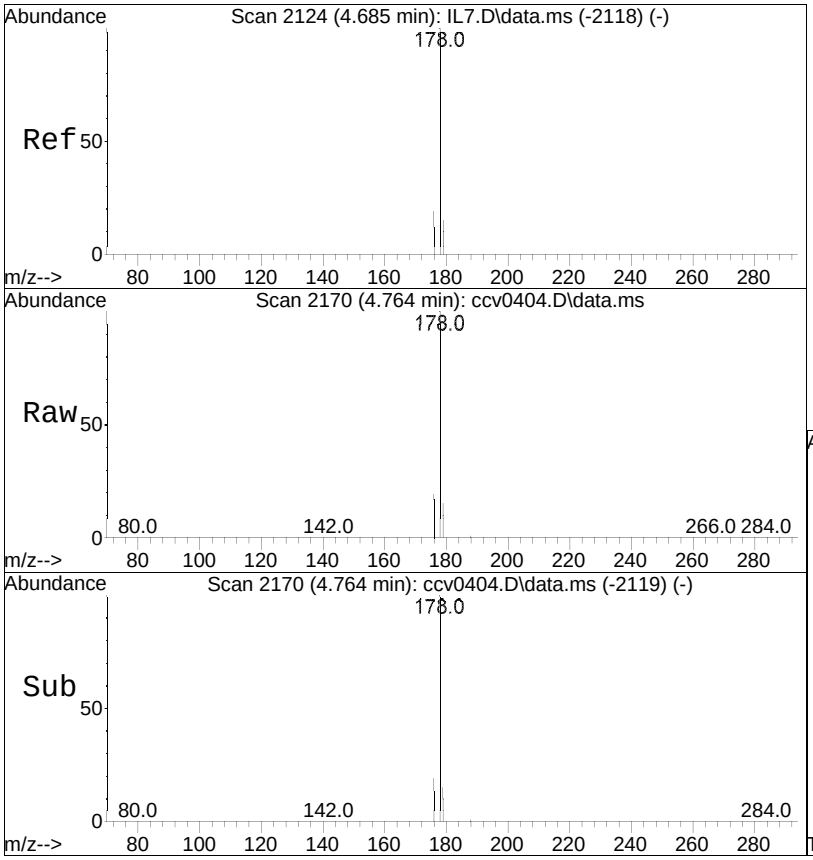


#26
Phenanthrene
Concen: 1085.25 ng/ml
RT: 4.735 min Scan# 2155
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:178 Resp: 67461

Ion	Ratio	Lower	Upper
178	100		
179	15.3	12.3	18.5

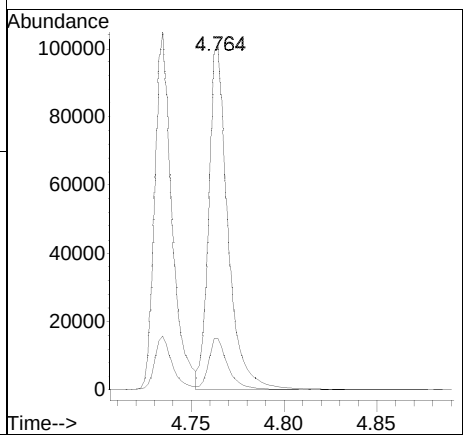


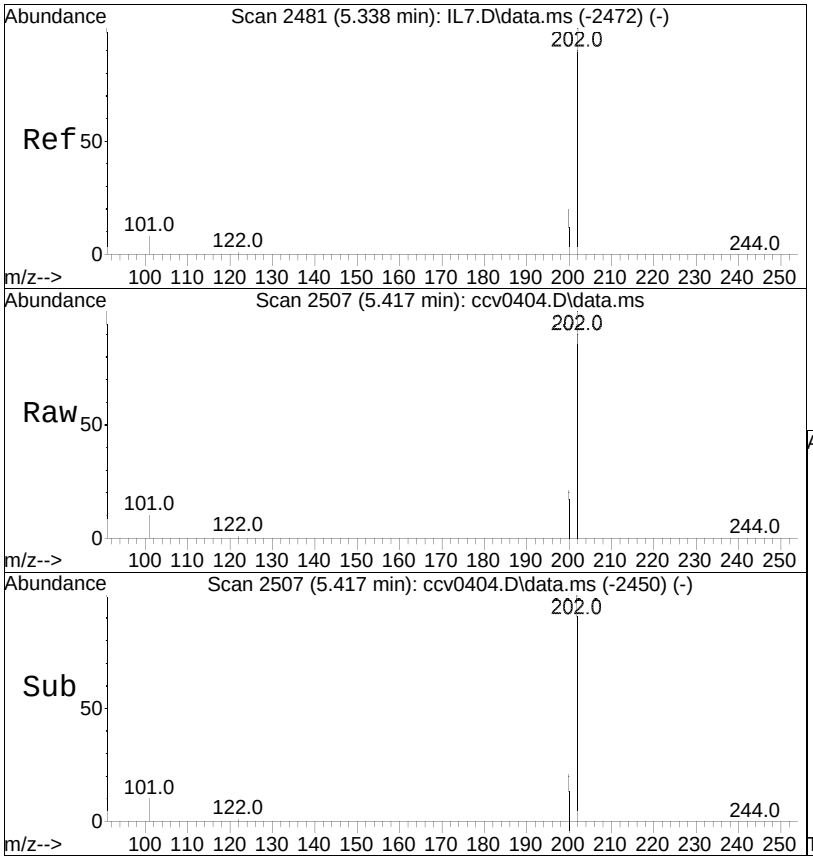


#27
Anthracene
Concen: 1165.56 ng/ml
RT: 4.764 min Scan# 2170
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:178 Resp: 71849

Ion	Ratio	Lower	Upper
178	100		
179	15.1	12.2	18.4

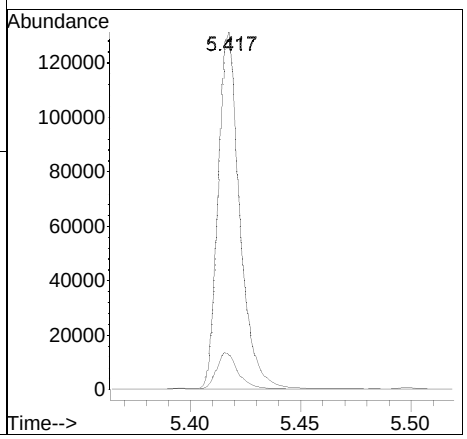


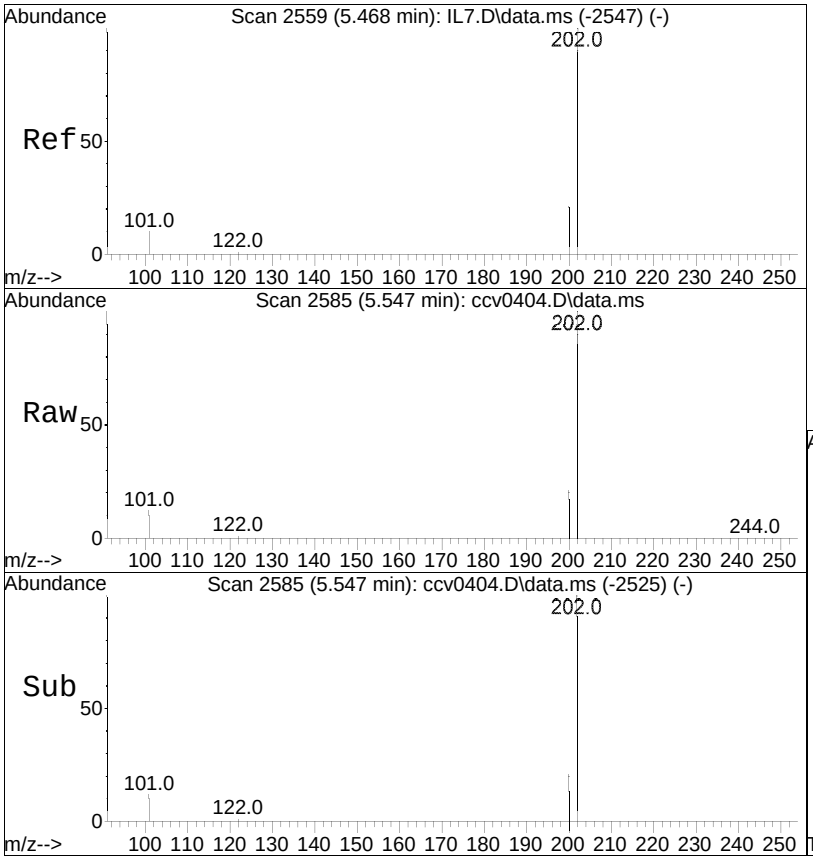


#28
Fluoranthene
Concen: 1080.91 ng/ml
RT: 5.417 min Scan# 2507
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:202 Resp: 88555

Ion	Ratio	Lower	Upper
202	100		
101	10.4	8.3	12.5

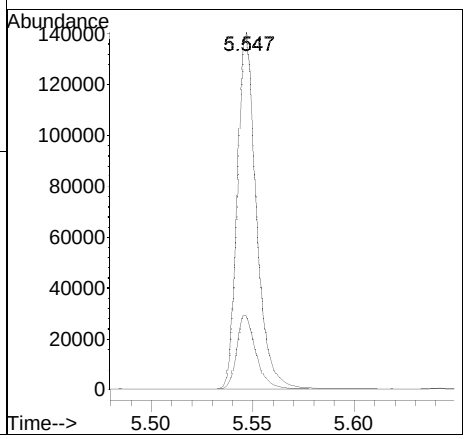


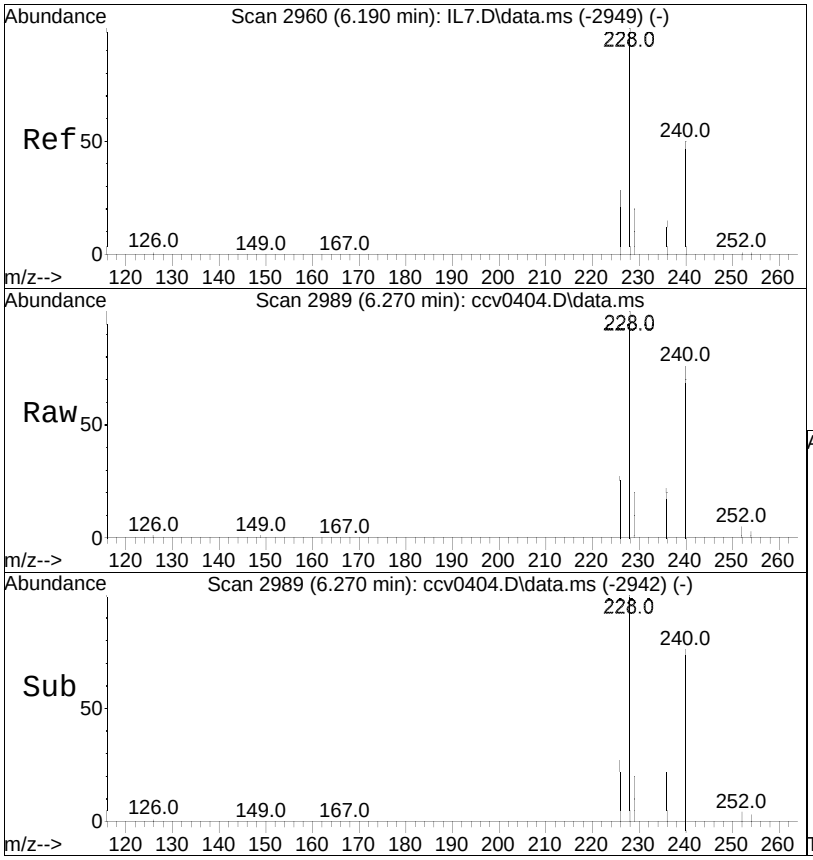


#29
Pyrene
Concen: 1075.58 ng/ml
RT: 5.547 min Scan# 2585
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:202 Resp: 90529

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

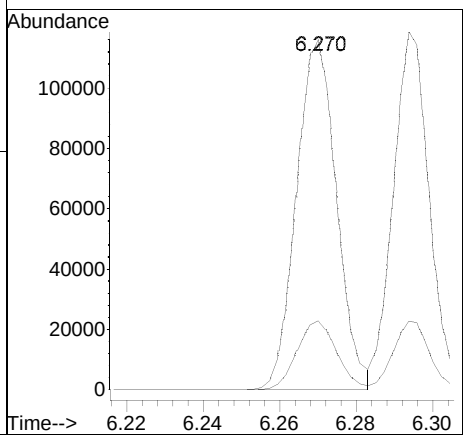


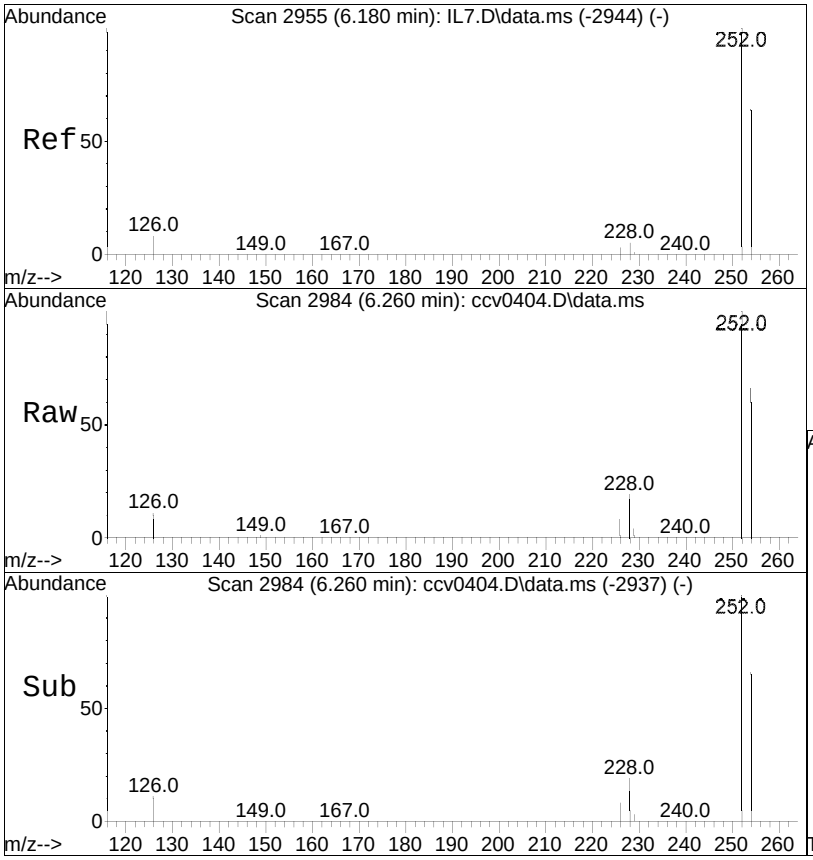


#32
Benzo[a]anthracene
Concen: 1196.63 ng/ml
RT: 6.270 min Scan# 2989
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:228 Resp: 84183

Ion	Ratio	Lower	Upper
228	100		
229	19.5	15.6	23.4

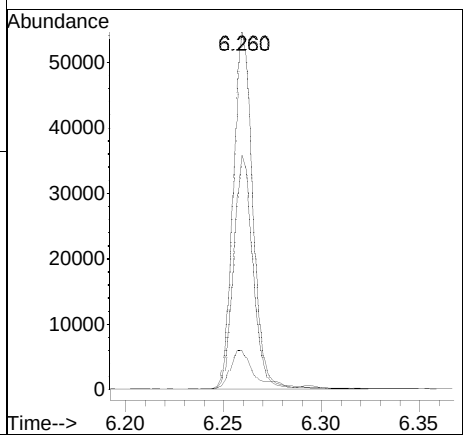


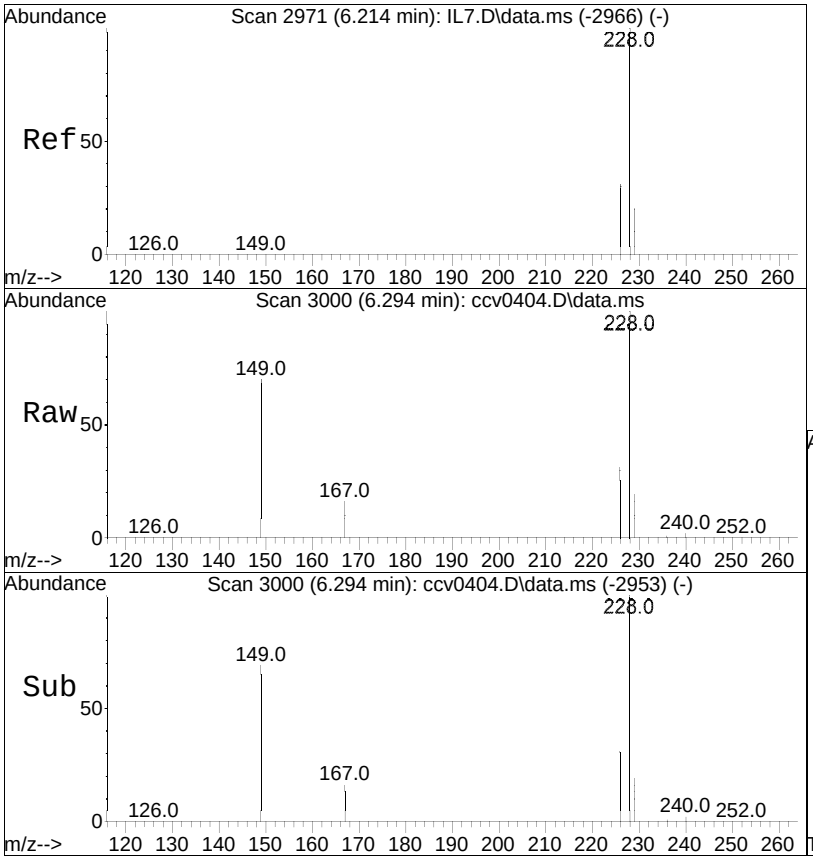


#33
3,3'-Dichlorobenzidine
Concen: 1182.99 ng/ml
RT: 6.260 min Scan# 2984
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:252 Resp: 37554

Ion	Ratio	Lower	Upper
252	100		
126	13.6	7.7	11.5#
254	64.8	52.0	78.0

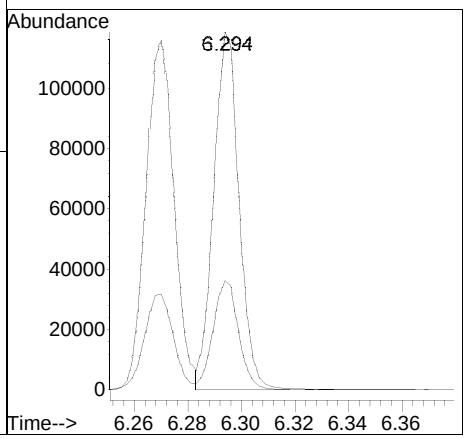


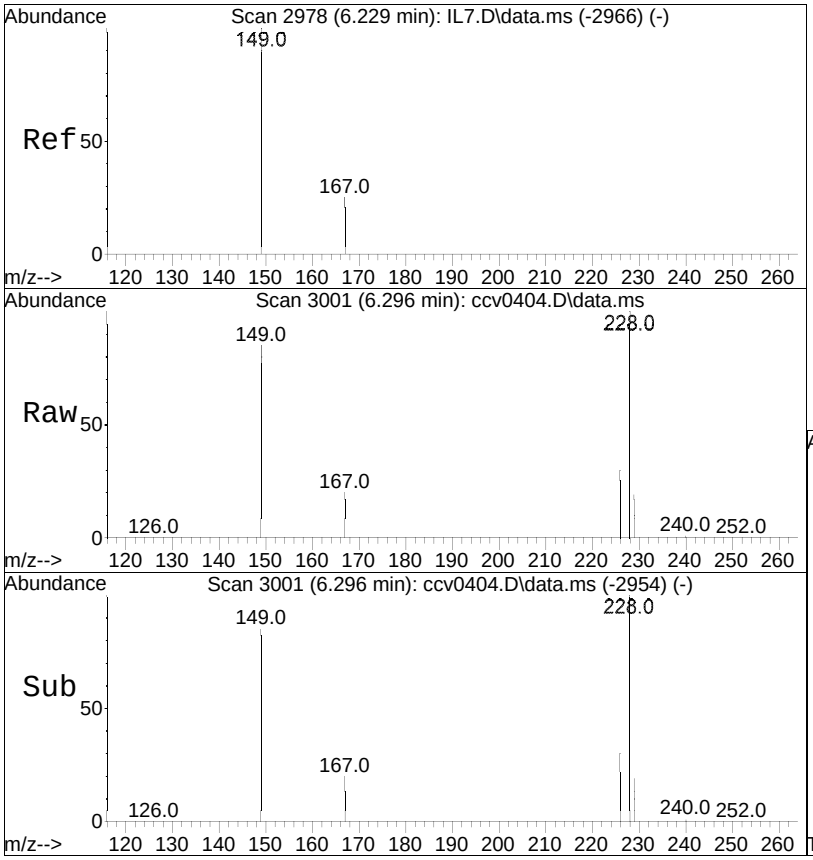


#34
Chrysene
Concen: 1116.87 ng/ml
RT: 6.294 min Scan# 3000
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:228 Resp: 77453

Ion	Ratio	Lower	Upper
228	100		
226	30.8	24.5	36.7

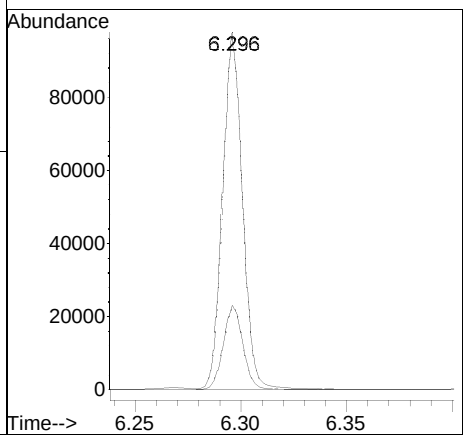


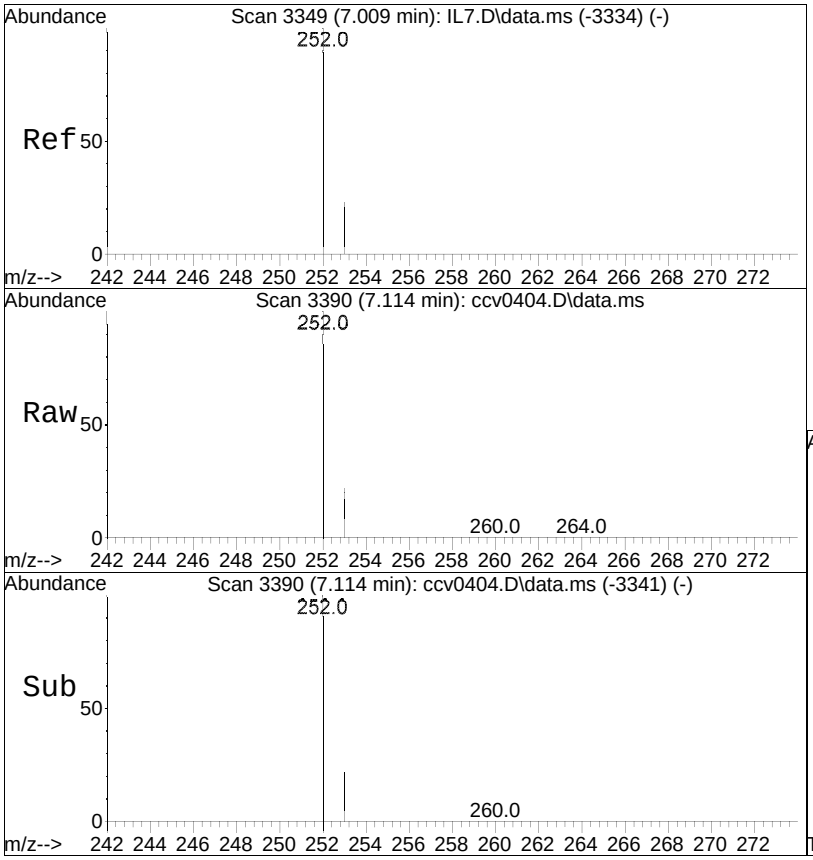


#35
Bis(2-ethylhexyl)phthalate
Concen: 1348.64 ng/ml
RT: 6.296 min Scan# 3001
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:149 Resp: 62612

Ion	Ratio	Lower	Upper
149	100		
167	23.8	18.5	27.7

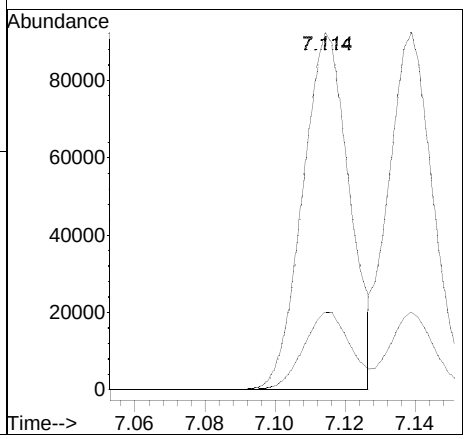


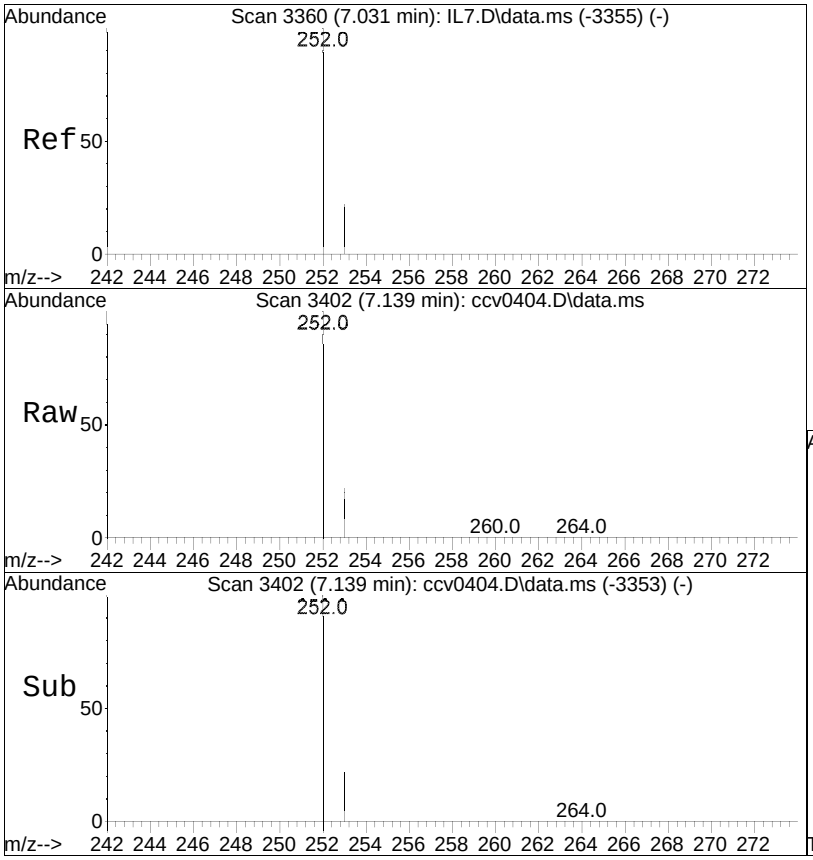


#37
Benzo[b]fluoranthene
Concen: 1101.80 ng/ml
RT: 7.114 min Scan# 3390
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:252 Resp: 85180

Ion	Ratio	Lower	Upper
252	100		
253	21.7	17.3	25.9

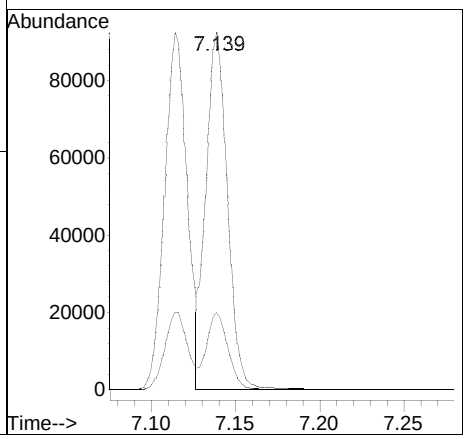


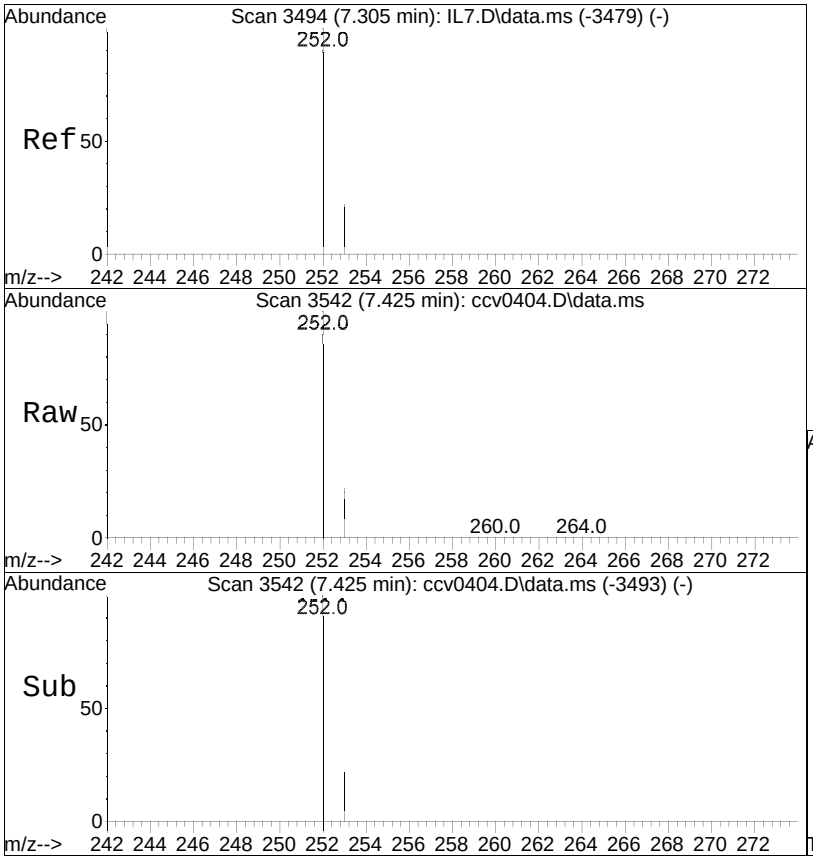


#38
Benzo[k]fluoranthene
Concen: 1114.64 ng/ml
RT: 7.139 min Scan# 3402
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:252 Resp: 81826

Ion	Ratio	Lower	Upper
252	100		
253	21.6	17.4	26.2

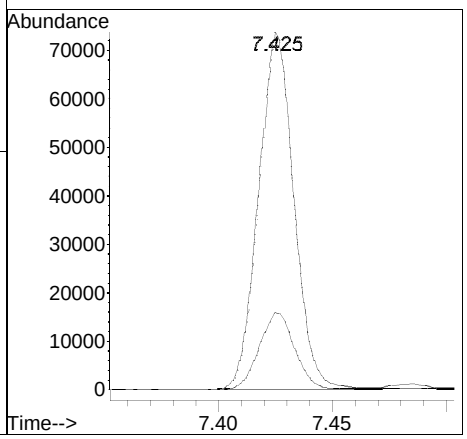


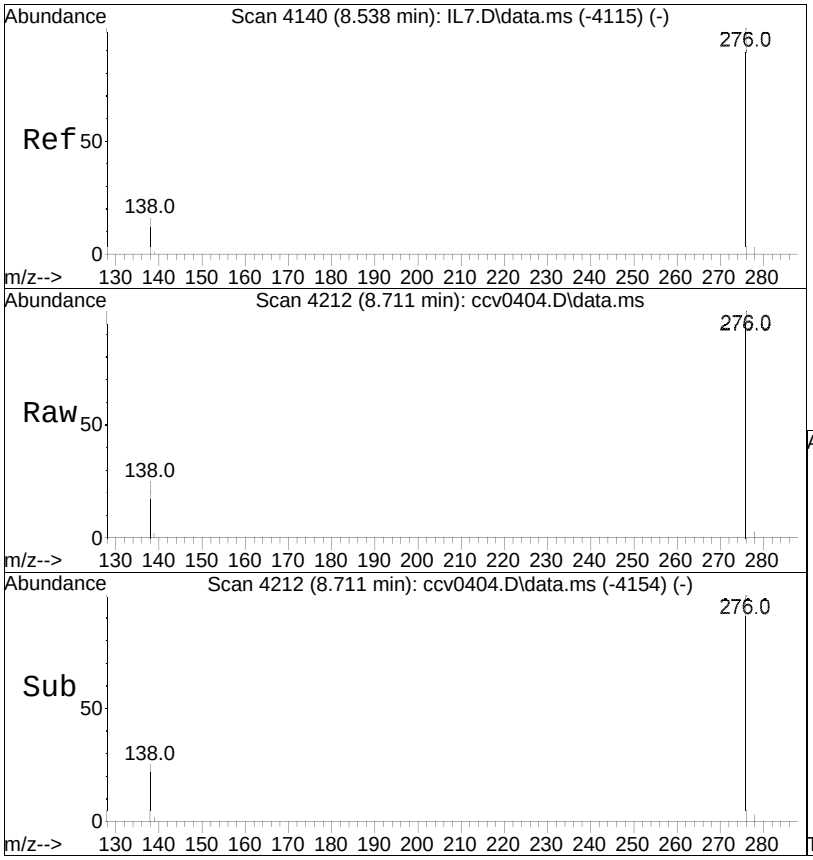


#39
Benzo[a]pyrene
Concen: 1151.06 ng/ml
RT: 7.425 min Scan# 3542
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:252 Resp: 78329

Ion	Ratio	Lower	Upper
252	100		
253	21.7	17.4	26.0

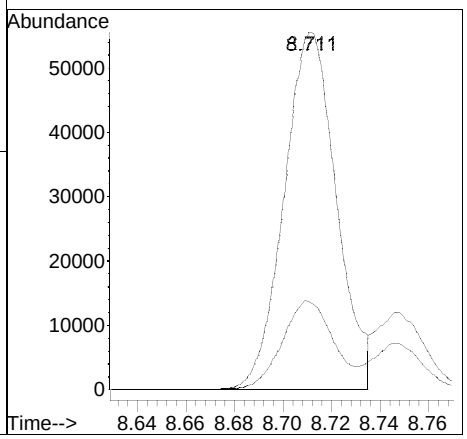


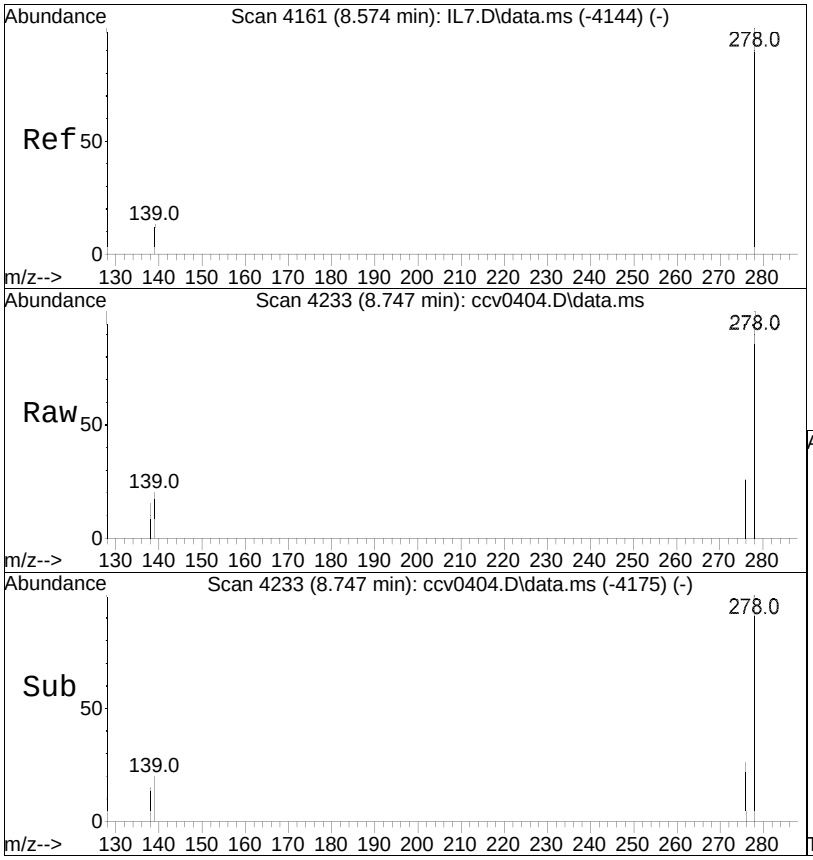


#40
Indeno[1,2,3-cd]pyrene
Concen: 1112.80 ng/ml
RT: 8.711 min Scan# 4212
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:276 Resp: 82301

Ion	Ratio	Lower	Upper
276	100		
138	24.4	14.8	22.2#

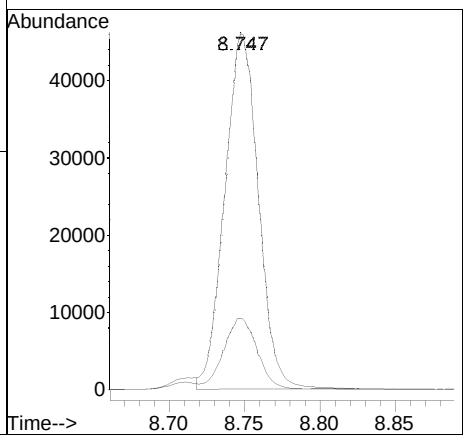


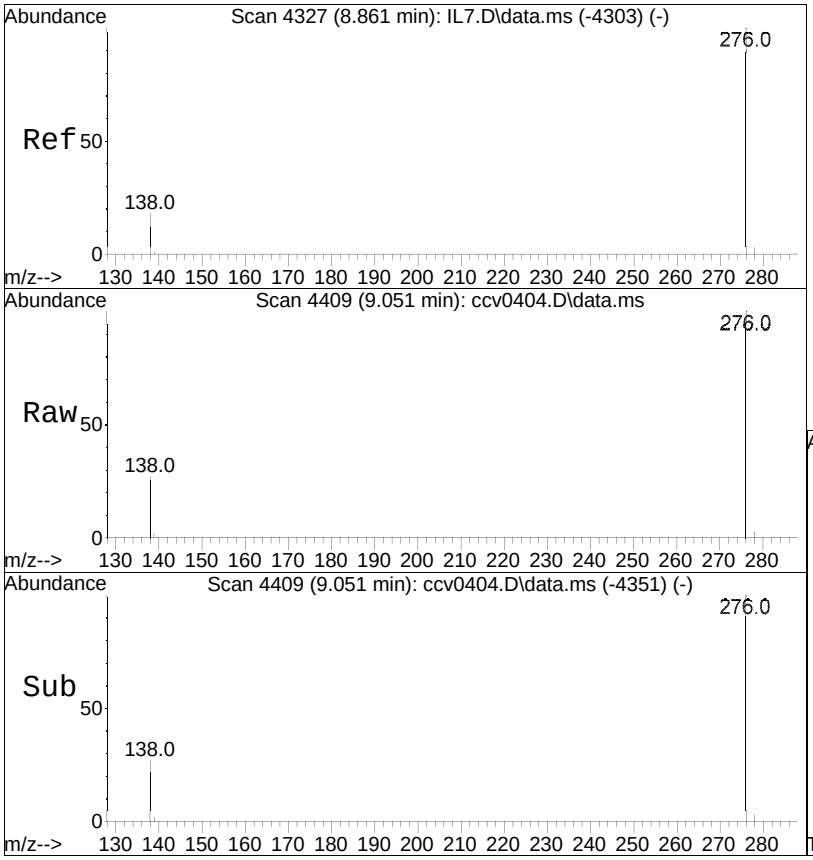


#41
Dibenzo[a,h]anthracene
Concen: 1029.01 ng/ml
RT: 8.747 min Scan# 4233
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:278 Resp: 70807

Ion	Ratio	Lower	Upper
278	100		
139	19.9	12.2	18.4#

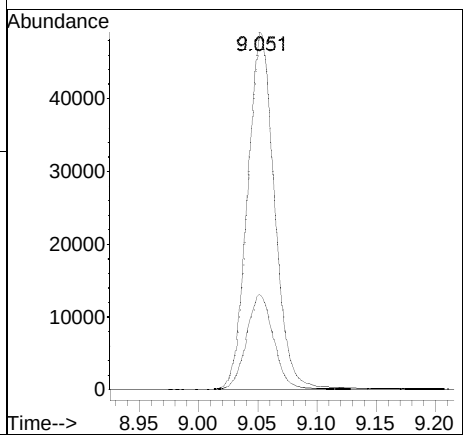




#42
Benzo[g,h,i]perylene
Concen: 1018.72 ng/ml
RT: 9.051 min Scan# 4409
Delta R.T. 0.000 min
Lab File: ccv0404.D
Acq: 04 Apr 2024 06:58 am

Tgt Ion:276 Resp: 76638

Ion	Ratio	Lower	Upper
276	100		
138	26.7	16.8	25.2#



Manual Integration Report

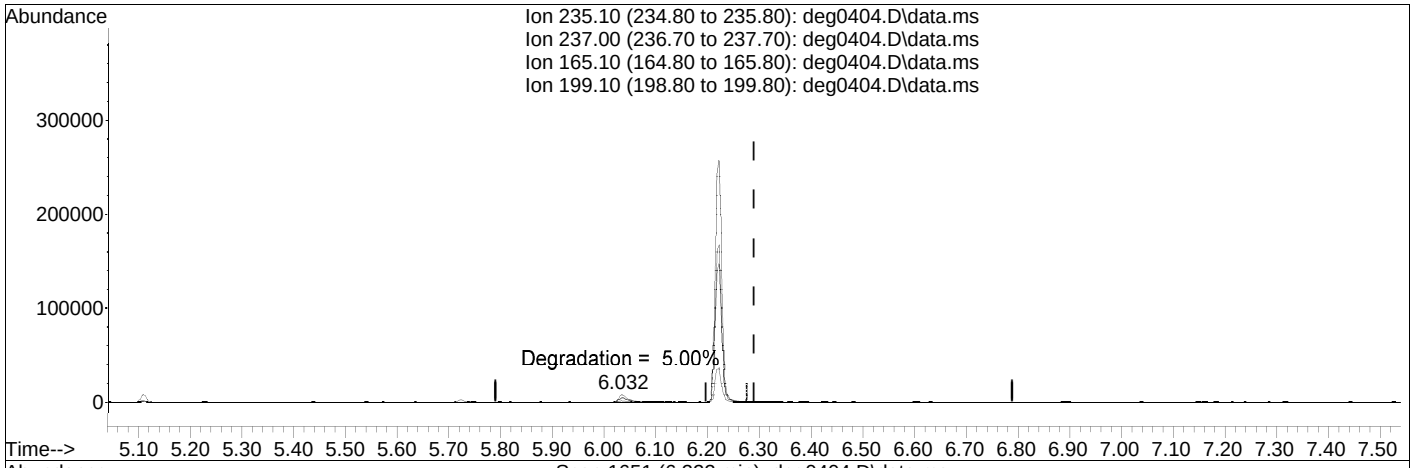
Data Path	: I:\8270SIM\sv119\240404LVI	Method	: SIM-LVI_231207n_sv119.M
Data File	: ccv0404.D	Operator	: sv119:jjw
Date Inj'd	: 4/4/2024 6:58 am	Instrument	: SV119
Sample	: WG1904665-3,32,, ICV 10475	Quant Date	: 4/4/2024 7:17 am

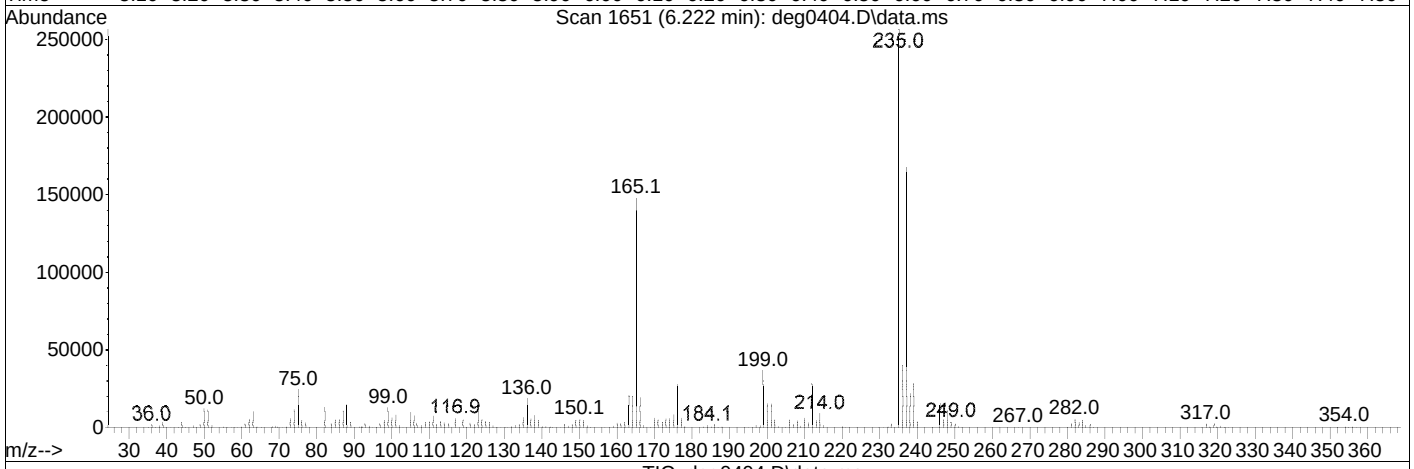
There are no manual integrations or false positives in this file.

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : deg0404.D
Acq On : 04 Apr 2024 06:41 am
Operator : sv119:jjw
Sample : WG1904665-2,32,,dftppsv119
Misc : WG1904665,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 04 06:54:56 2024
Quant Method : I:\8270SIM\sv119\240404LVI\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Apr 02 14:11:37 2024
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D





TIC: deg0404.D\data.ms

(6) ddt (T)

6.222min (-0.068) 35.96

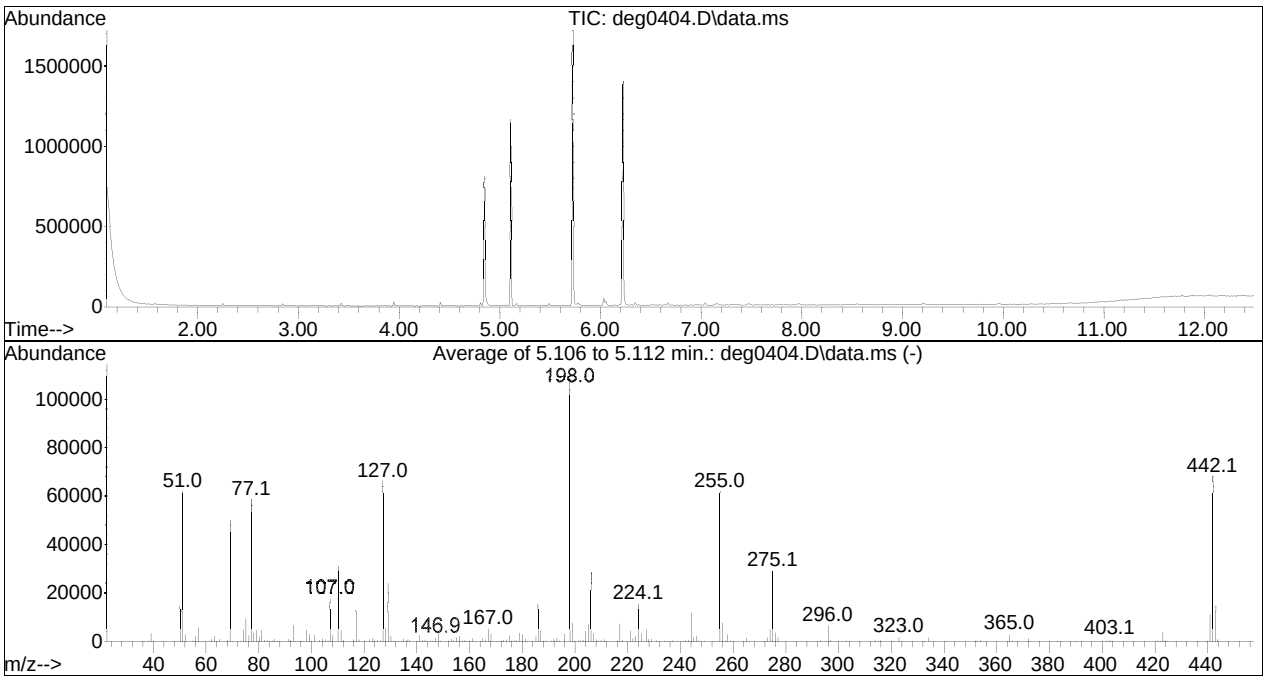
response 219202

Ion	Exp%	Act%
235.10	100.00	100.00
237.00	65.60	65.87
165.10	53.30	57.22
199.10	17.10	14.63

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : deg0404.D
Acq On : 04 Apr 2024 06:41 am
Operator : sv119:jjw
Sample : WG1904665-1,32,,dftppsv119
Misc : WG1904665,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\8270SIM\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Title : Semivolatiles by GC/MS by modified 8270
Last Update : Thu Apr 04 07:17:37 2024



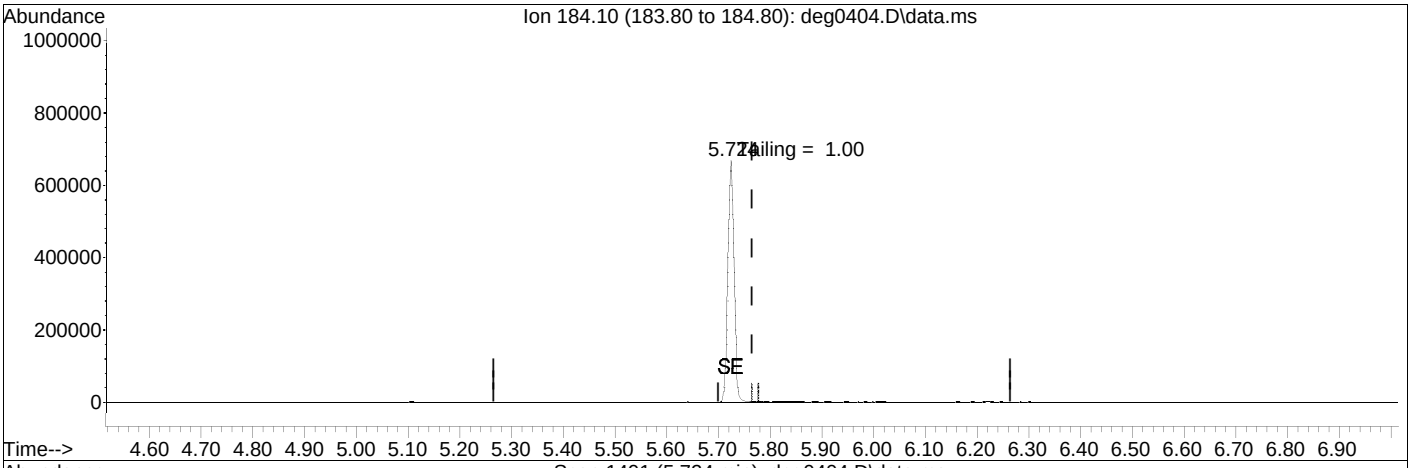
Spectrum Information: Average of 5.106 to 5.112 min.

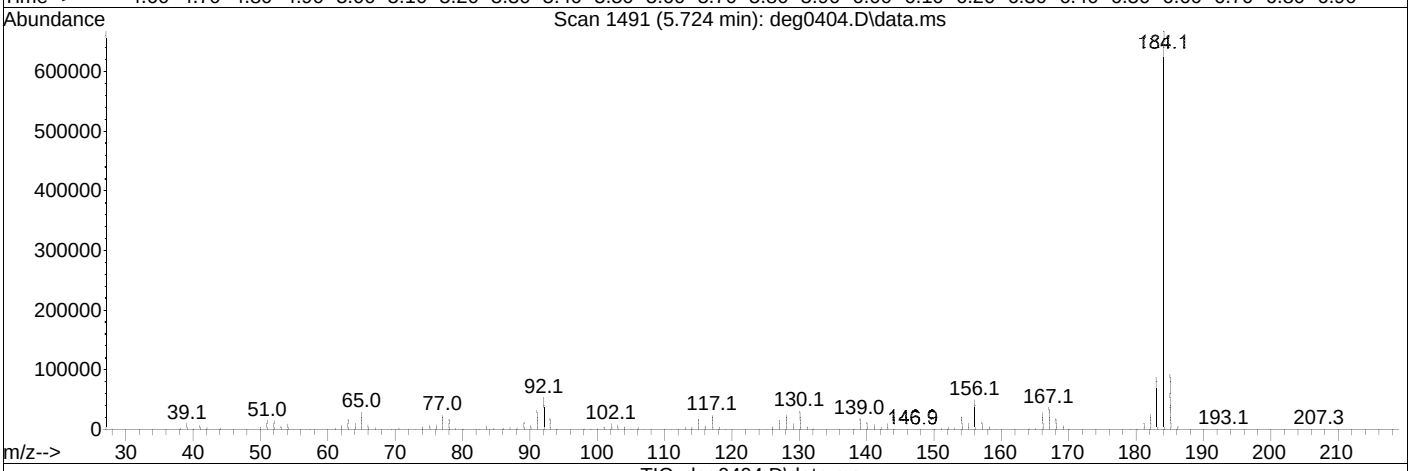
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	56.8	61812	PASS
68	69	0.00	2	1.7	840	PASS
69	69	100	100	100.0	49736	PASS
70	69	0.00	2	0.8	386	PASS
127	198	10	80	60.5	65861	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	108899	PASS
199	198	5	9	7.0	7639	PASS
275	198	10	60	26.7	29077	PASS
365	198	1	100	2.6	2808	PASS
441	442	0.01	24	16.0	10859	PASS
442	198	50	100	62.5	68064	PASS
443	442	15	24	21.2	14435	PASS

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : deg0404.D
Acq On : 04 Apr 2024 06:41 am
Operator : sv119:jjw
Sample : WG1904665-4,32,,dftppsv119
Misc : WG1904665,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 04 06:54:56 2024
Quant Method : I:\8270SIM\sv119\240404LVI\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Apr 02 14:11:37 2024
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D





TIC: deg0404.D\data.ms

(3) benzidine (T)

5.724min (-0.041) 52.33

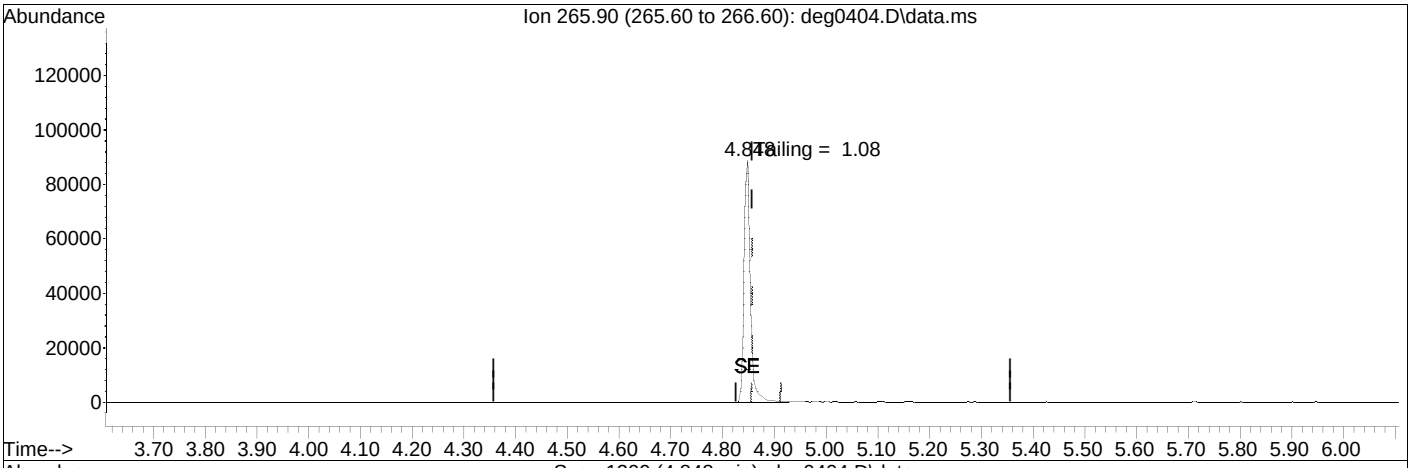
response 532751

Ion	Exp%	Act%
184.10	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : deg0404.D
Acq On : 04 Apr 2024 06:41 am
Operator : sv119:jjw
Sample : WG1904665-5,32,,dftppsv119
Misc : WG1904665,,ical20642
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 04 06:54:56 2024
Quant Method : I:\8270SIM\sv119\240404LVI\dftppsv119.m
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Tue Apr 02 14:11:37 2024
Response via : Continuing Cal File: C:\ENVDEMO\BNADATA\DLWB002.D



TIC: deg0404.D\data.ms

(1) pentachlorophenol (T)

4.848min (-0.009) 34.49

response 72439

Ion	Exp%	Act%
265.90	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Semivolatiles Raw QC Data

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-1.D
Acq On : 03 Apr 2024 07:27 am
Operator : sv119:ah
Sample : WG1903964-1,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 03 07:51:44 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.217	152	57802	4000.000	ng/ml	-0.01
Standard Area 1 = 53851			Recovery = 107.34%			
8) Naphthalene-d8	2.889	136	185304	4000.000	ng/ml	0.00
Standard Area 1 = 173620			Recovery = 106.73%			
17) Acenaphthene-d10	3.872	164	94282	4000.000	ng/ml	0.00
Standard Area 1 = 87313			Recovery = 107.98%			
22) Phenanthrene-d10	4.719	188	188485	4000.000	ng/ml	0.00
Standard Area 1 = 180904			Recovery = 104.19%			
31) Chrysene-d12	6.339	240	152967	4000.000	ng/ml	0.05
Standard Area 1 = 149911			Recovery = 102.04%			
36) Perylene-d12	7.557	264	154601	4000.000	ng/ml	0.06
Standard Area 1 = 170346			Recovery = 90.76%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.618	112	33194	2099.582	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 41.99%			
3) Phenol-d6	2.033	99	31612	1668.081	ng/ml	-0.01
Spiked Amount 5000.000	Range 15 - 110		Recovery = 33.36%			
7) Nitrobenzene-d5	2.499	82	21547	1498.901	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 130		Recovery = 59.96%			
13) 2-Fluorobiphenyl	3.492	172	52159	1260.319	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 50.41%			
21) 2,4,6-Tribromophenol	4.323	330	18342	3528.721	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 70.57%			
30) 4-Terphenyl-d14	5.671	244	52518	1136.597	ng/ml	0.03
Spiked Amount 2500.000	Range 30 - 130		Recovery = 45.46%			
Target Compounds						Qvalue
6) Hexachloroethane	0.000		0	N.D.	d	
9) Naphthalene	2.900	128	558M4	12.611	ng/ml	
10) Hexachlorobutadiene	0.000		0	N.D.		
11) 2-Methylnaphthalene	3.284	142	82	2.506	ng/ml	95
14) 2-Chloronaphthalene	0.000		0	N.D.	d	
16) Acenaphthylene	0.000		0	N.D.	d	
18) Acenaphthene	0.000		0	N.D.	d	
20) Fluorene	0.000		0	N.D.	d	
24) Hexachlorobenzene	0.000		0	N.D.	d	
25) Pentachlorophenol	0.000		0	N.D.	d	

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-1.D
Acq On : 03 Apr 2024 07:27 am
Operator : sv119:ah
Sample : WG1903964-1,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 03 07:51:44 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.733	178	140M7	2.924	ng/ml	
27) Anthracene	0.000		0	N.D.	d	
28) Fluoranthene	0.000		0	N.D.	d	
29) Pyrene	0.000		0	N.D.	d	
32) Benzo[a]anthracene	0.000		0	N.D.	d	
34) Chrysene	0.000		0	N.D.	d	
37) Benzo[b]fluoranthene	0.000		0	N.D.	d	
38) Benzo[k]fluoranthene	0.000		0	N.D.	d	
39) Benzo[a]pyrene	0.000		0	N.D.	d	
40) Indeno[1,2,3-cd]pyrene	0.000		0	N.D.	d	
41) Dibenzo[a,h]anthracene	0.000		0	N.D.	d	
42) Benzo[g,h,i]perylene	0.000		0	N.D.	d	

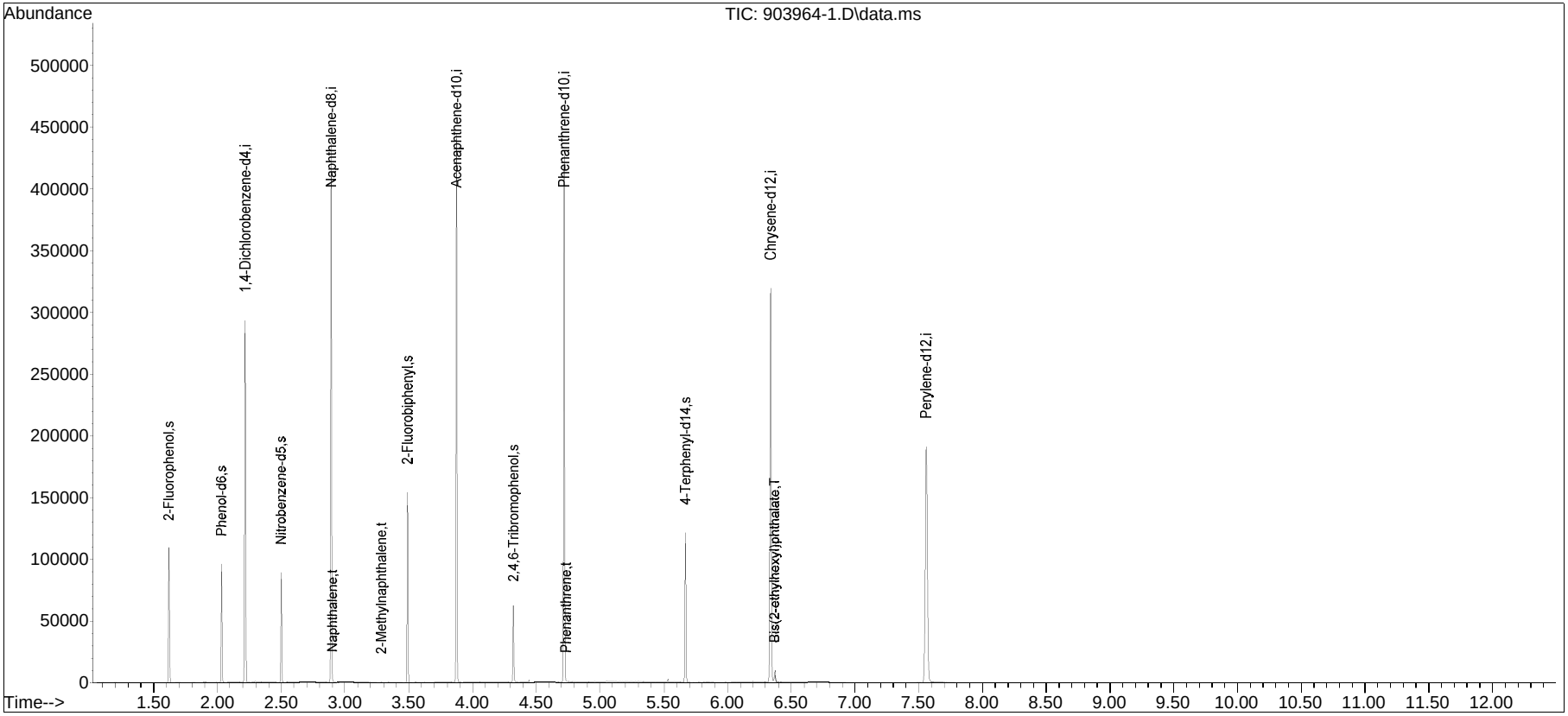
(#) = qualifier out of range (m) = manual integration (+) = signals summed

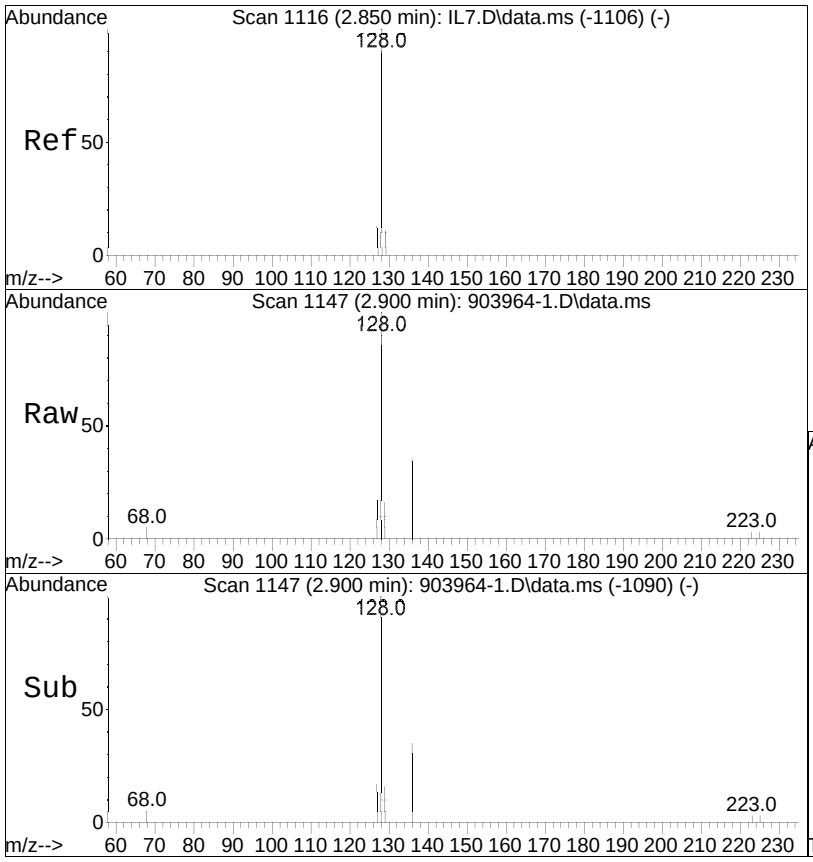
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-1.D
Acq On : 03 Apr 2024 07:27 am
Operator : sv119:ah
Sample : WG1903964-1,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 03 07:51:44 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0403.D•

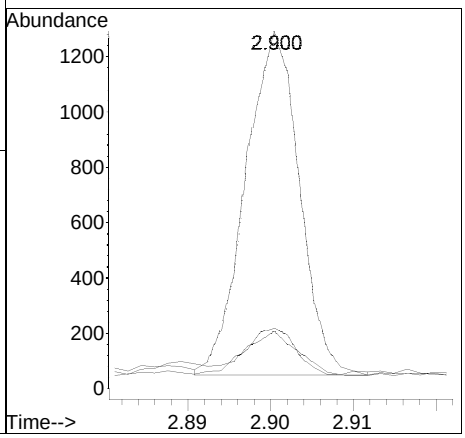


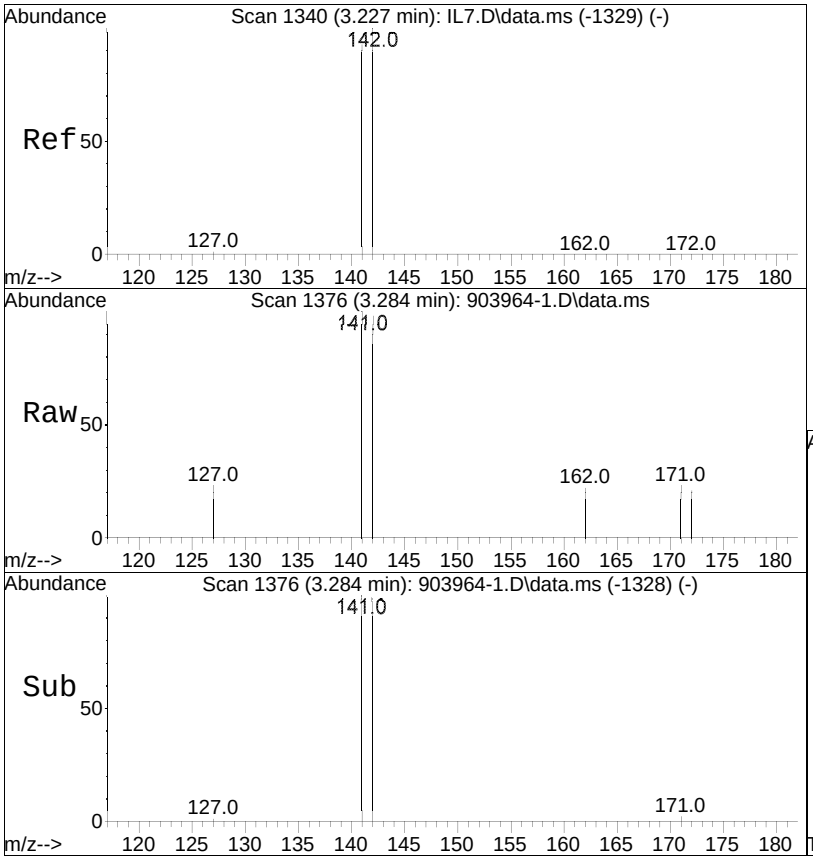


#9
Naphthalene
Concen: 12.61 ng/ml M4
RT: 2.900 min Scan# 1147
Delta R.T. -0.008 min
Lab File: 903964-1.D
Acq: 03 Apr 2024 07:27 am

Tgt Ion:128 Resp: 558

Ion	Ratio	Lower	Upper
128	100		
129	12.2	8.8	13.2
127	13.3	10.6	15.8

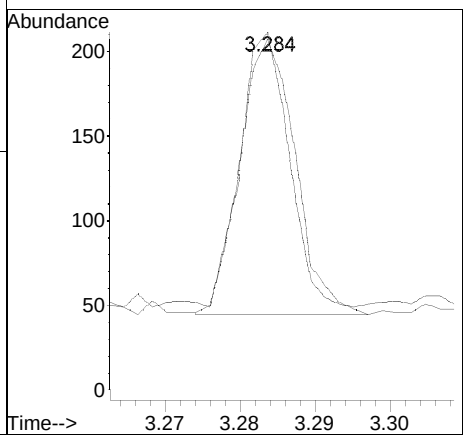


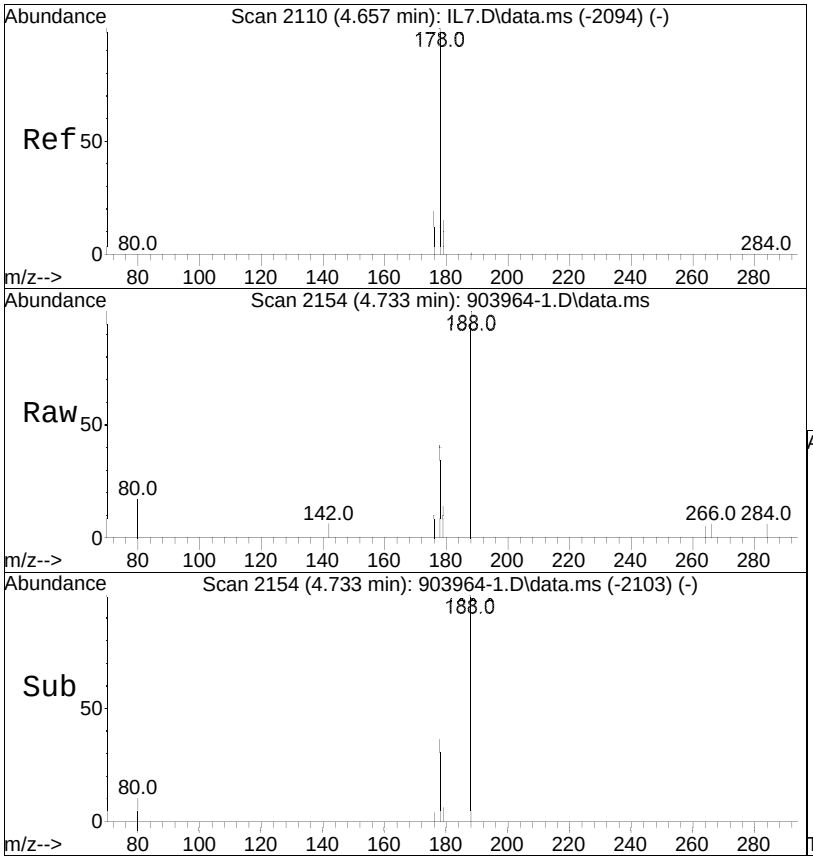


#11
2-Methylnaphthalene
Concen: 2.51 ng/ml
RT: 3.284 min Scan# 1376
Delta R.T. -0.008 min
Lab File: 903964-1.D
Acq: 03 Apr 2024 07:27 am

Tgt Ion:142 Resp: 82

Ion	Ratio	Lower	Upper
142	100		
141	87.8	74.1	111.1

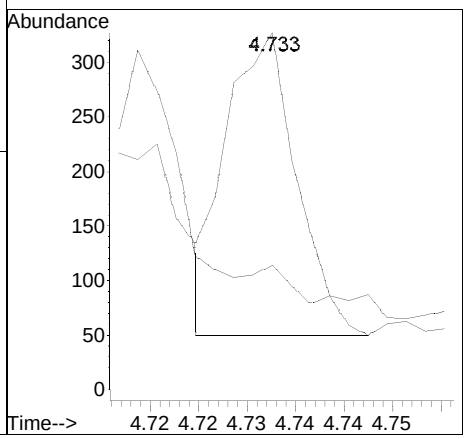




#26
Phenanthrene
Concen: 2.92 ng/ml M7
RT: 4.733 min Scan# 2154
Delta R.T. 0.000 min
Lab File: 903964-1.D
Acq: 03 Apr 2024 07:27 am

Tgt Ion:178 Resp: 140

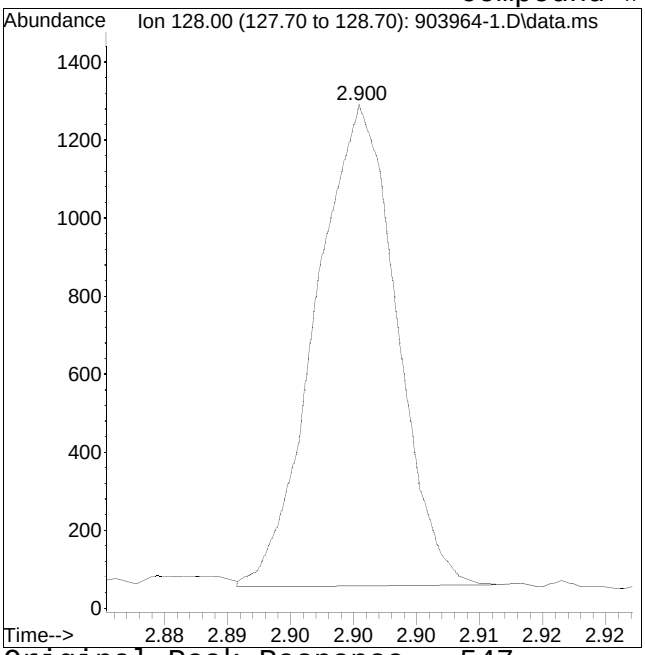
Ion	Ratio	Lower	Upper
178	100		
179	18.6	12.3	18.5#



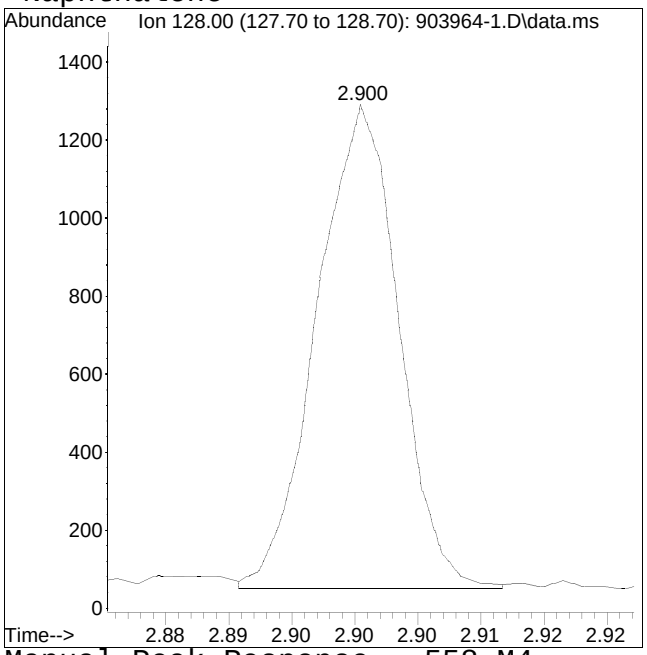
Manual Integration Report

Data Path : I:\8270SIM\sv119\240403LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 903964-1.D Operator : sv119:ah
Date Inj'd : 4/3/2024 7:27 am Instrument : SV119
Sample : WG1903964-1,32,,ah Quant Date : 4/3/2024 7:41 am

Compound #9: Naphthalene



Original Peak Response = 547



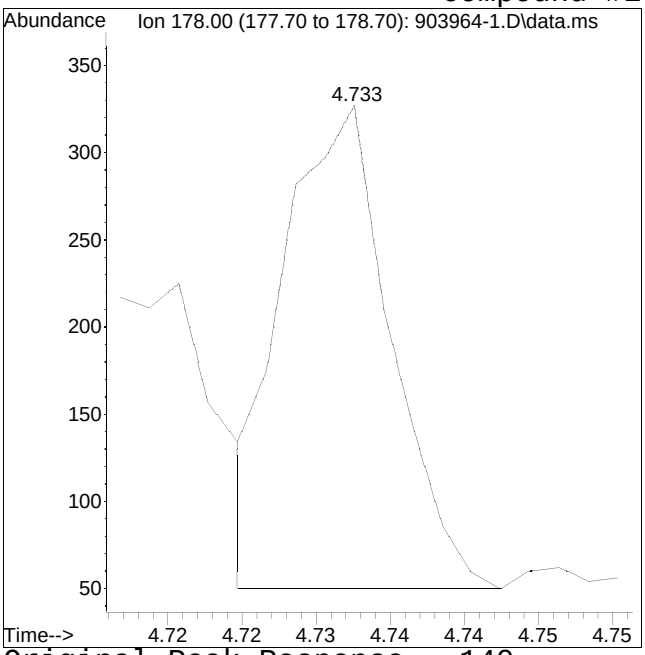
Manual Peak Response = 558 M4

M4 = Poor automated baseline construction.

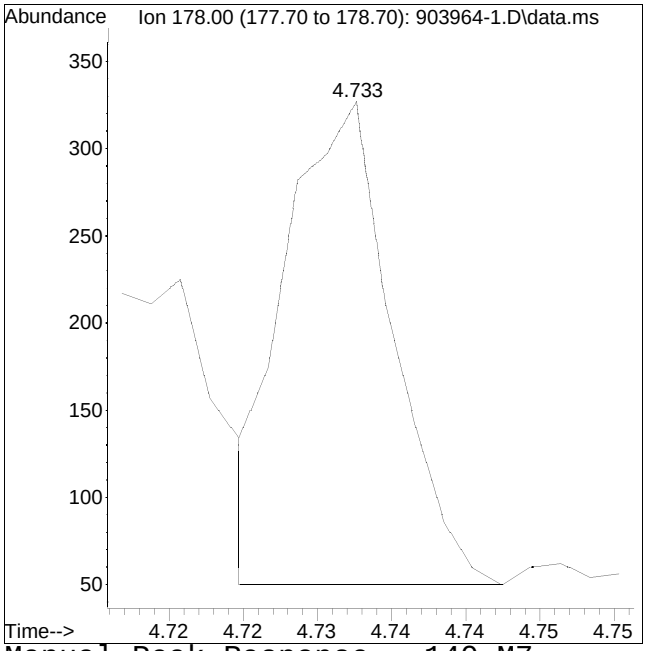
Manual Integration Report

Data Path : I:\8270SIM\sv119\240403LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 903964-1.D Operator : sv119:ah
Date Inj'd : 4/3/2024 7:27 am Instrument : SV119
Sample : WG1903964-1,32,,ah Quant Date : 4/3/2024 7:41 am

Compound #26: Phenanthrene



Original Peak Response = 140



Manual Peak Response = 140 M7

M7 = A qualifier ion was manually integrated (only for GC/MS data).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-2.D
Acq On : 03 Apr 2024 07:43 am
Operator : sv119:ah
Sample : WG1903964-2,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 03 07:58:47 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.225	152	59038	4000.000	ng/ml	0.00
Standard Area 1 = 53851			Recovery = 109.63%			
8) Naphthalene-d8	2.894	136	197307	4000.000	ng/ml	0.00
Standard Area 1 = 173620			Recovery = 113.64%			
17) Acenaphthene-d10	3.874	164	97755	4000.000	ng/ml	0.00
Standard Area 1 = 87313			Recovery = 111.96%			
22) Phenanthrene-d10	4.717	188	200181	4000.000	ng/ml	0.00
Standard Area 1 = 180904			Recovery = 110.66%			
31) Chrysene-d12	6.287	240	142595	4000.000	ng/ml	0.00
Standard Area 1 = 149911			Recovery = 95.12%			
36) Perylene-d12	7.498	264	144309	4000.000	ng/ml	0.00
Standard Area 1 = 170346			Recovery = 84.72%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.628	112	39401	2440.011	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 48.80%			
3) Phenol-d6	2.044	99	41649	2151.697	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 43.03%			
7) Nitrobenzene-d5	2.507	82	21640	1473.854	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 58.95%			
13) 2-Fluorobiphenyl	3.496	172	53959	1224.496	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 48.98%			
21) 2,4,6-Tribromophenol	4.323	330	21157	3925.677	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 78.51%			
30) 4-Terphenyl-d14	5.641	244	51495	1049.343	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 41.97%			
Target Compounds						Qvalue
6) Hexachloroethane	2.488	117	17603	2410.248	ng/ml	89
9) Naphthalene	2.905	128	121296	2574.578	ng/ml	100
10) Hexachlorobutadiene	2.979	225	26560	2617.740	ng/ml	100
11) 2-Methylnaphthalene	3.288	142	87567	2513.781	ng/ml	97
14) 2-Chloronaphthalene	3.561	162	92492	2492.629	ng/ml	93
16) Acenaphthylene	3.794	152	138712	2515.545	ng/ml	100
18) Acenaphthene	3.892	153	87719	2902.639	ng/ml	97
20) Fluorene	4.185	166	105851	2930.313	ng/ml	97
24) Hexachlorobenzene	4.502	284	45084	3483.749	ng/ml	99
25) Pentachlorophenol	4.616	266	26125	3165.609	ng/ml	100

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-2.D
Acq On : 03 Apr 2024 07:43 am
Operator : sv119:ah
Sample : WG1903964-2,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 03 07:58:47 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.731	178	160074	3147.998	ng/ml	100
27) Anthracene	4.758	178	161789	3208.472	ng/ml	100
28) Fluoranthene	5.414	202	192367	2870.400	ng/ml	99
29) Pyrene	5.547	202	194068	2818.678	ng/ml	99
32) Benzo[a]anthracene	6.279	228	167314	3525.253	ng/ml	100
34) Chrysene	6.304	228	152422	3238.767	ng/ml	100
37) Benzo[b]fluoranthene	7.130	252	157816	3130.325	ng/ml	98
38) Benzo[k]fluoranthene	7.153	252	147535	3081.846	ng/ml	99
39) Benzo[a]pyrene	7.439	252	129596	2920.386	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.721	276	148538	3079.816	ng/ml#	85
41) Dibenzo[a,h]anthracene	8.757	278	126578	2820.836	ng/ml#	87
42) Benzo[g,h,i]perylene	9.062	276	137377	2800.254	ng/ml#	86

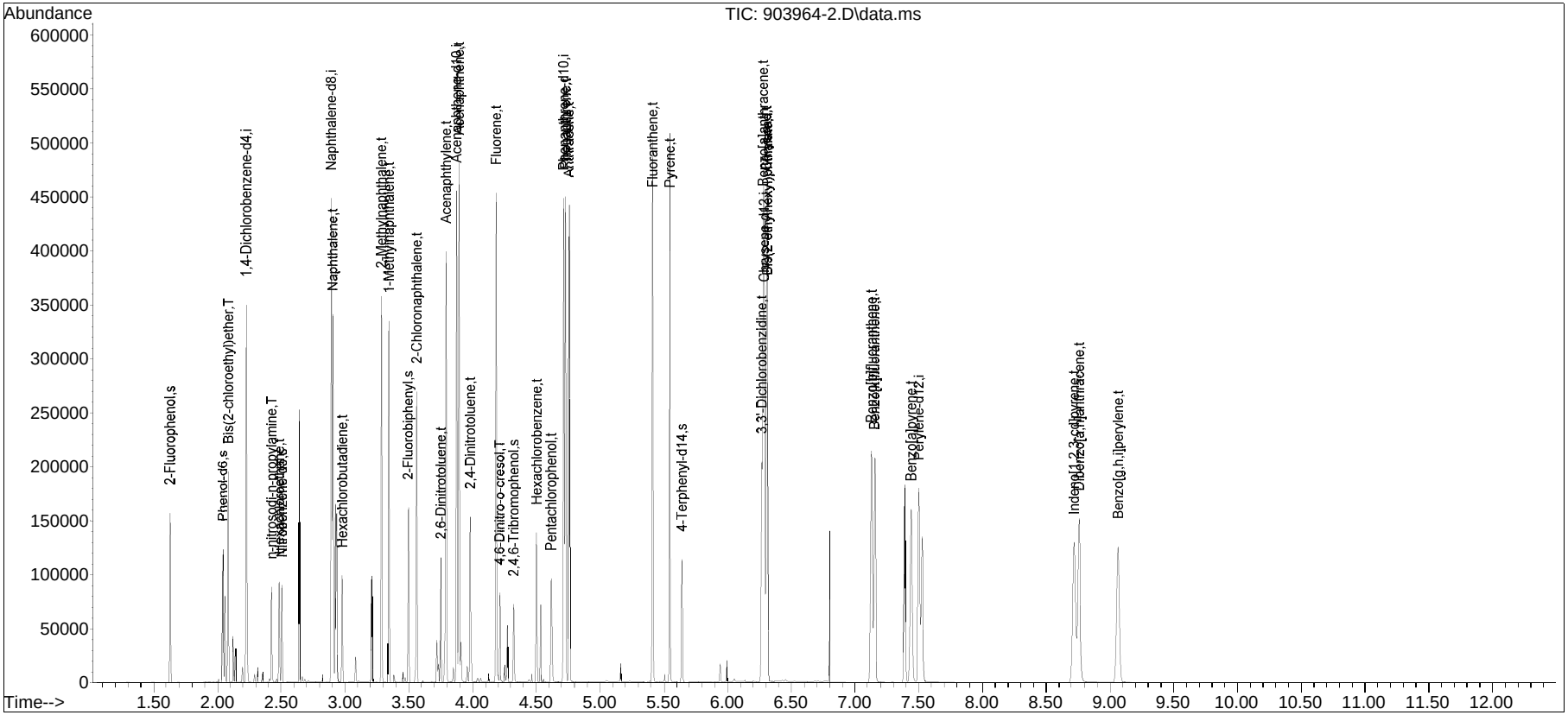
(#) = qualifier out of range (m) = manual integration (+) = signals summed

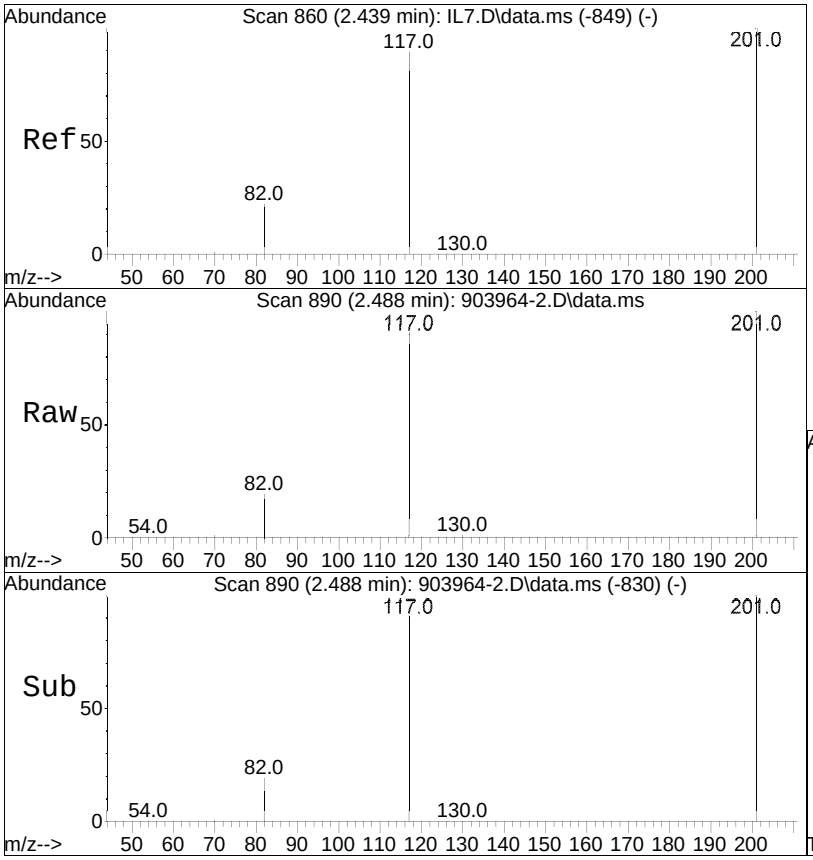
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-2.D
Acq On : 03 Apr 2024 07:43 am
Operator : sv119:ah
Sample : WG1903964-2,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 03 07:58:47 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0403.D•

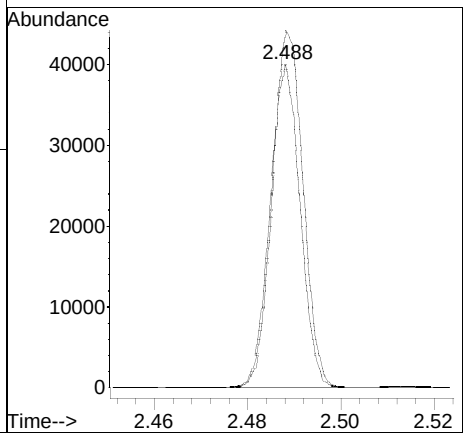


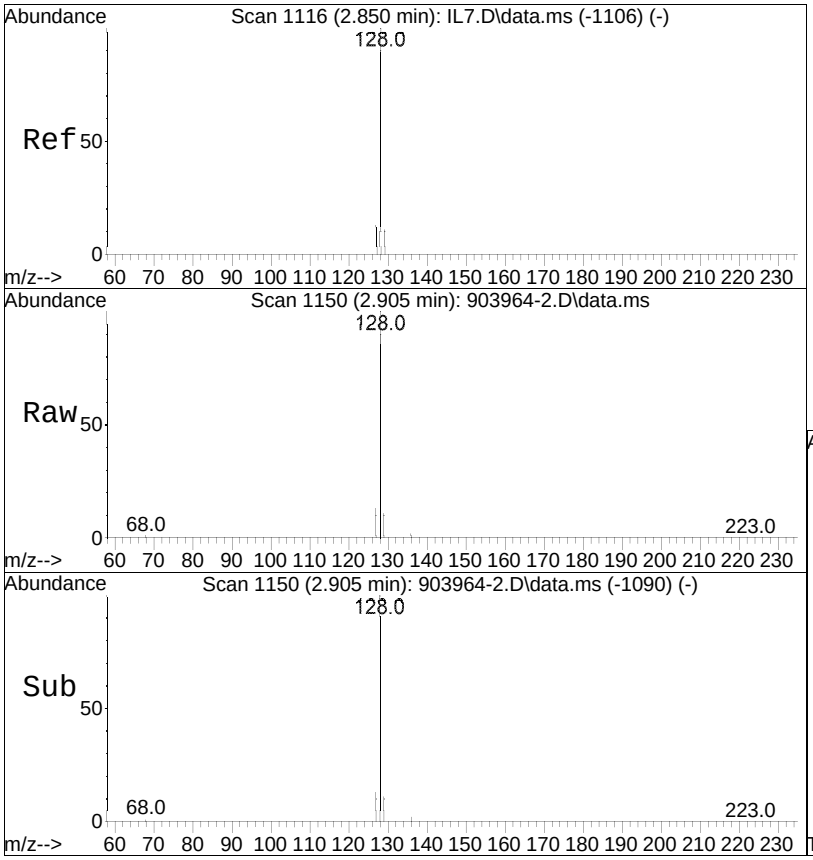


#6
Hexachloroethane
Concen: 2410.25 ng/ml
RT: 2.488 min Scan# 890
Delta R.T. -0.003 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:117 Resp: 17603

Ion	Ratio	Lower	Upper
117	100		
201	112.7	81.5	122.3

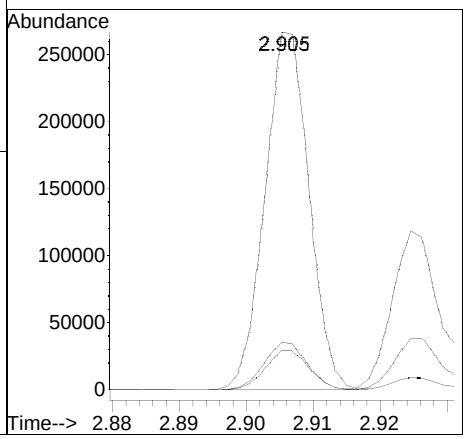


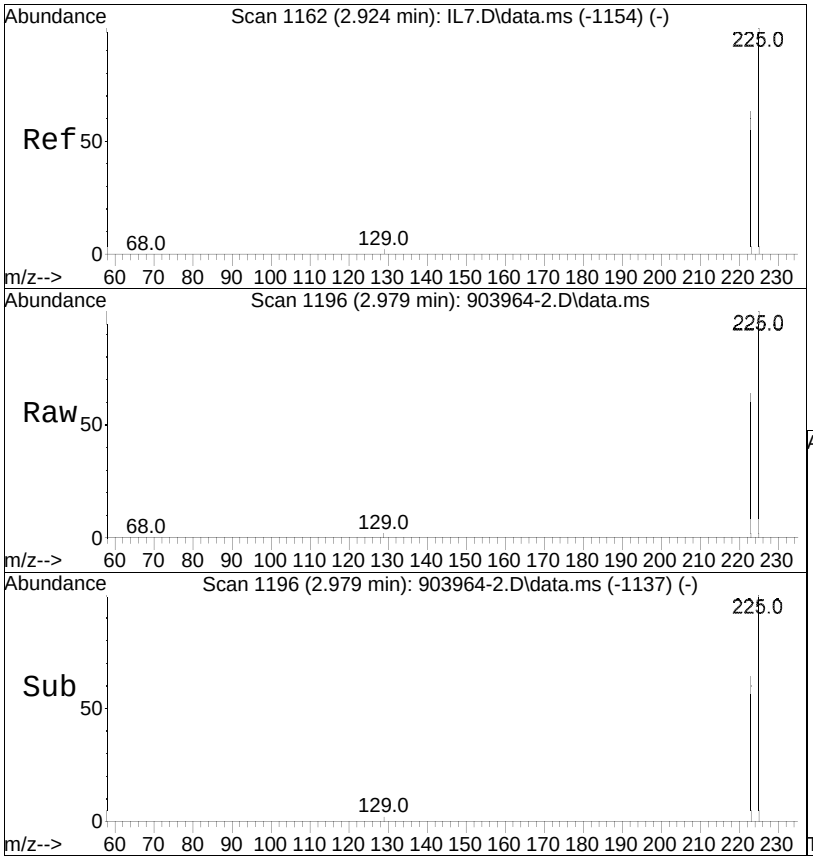


#9
Naphthalene
Concen: 2574.58 ng/ml
RT: 2.905 min Scan# 1150
Delta R.T. -0.003 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:128 Resp: 121296

Ion	Ratio	Lower	Upper
128	100		
129	11.1	8.8	13.2
127	13.1	10.6	15.8

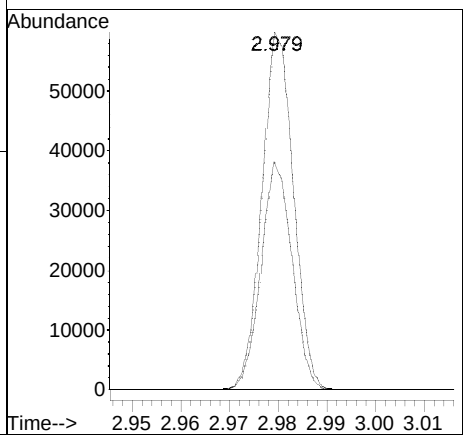


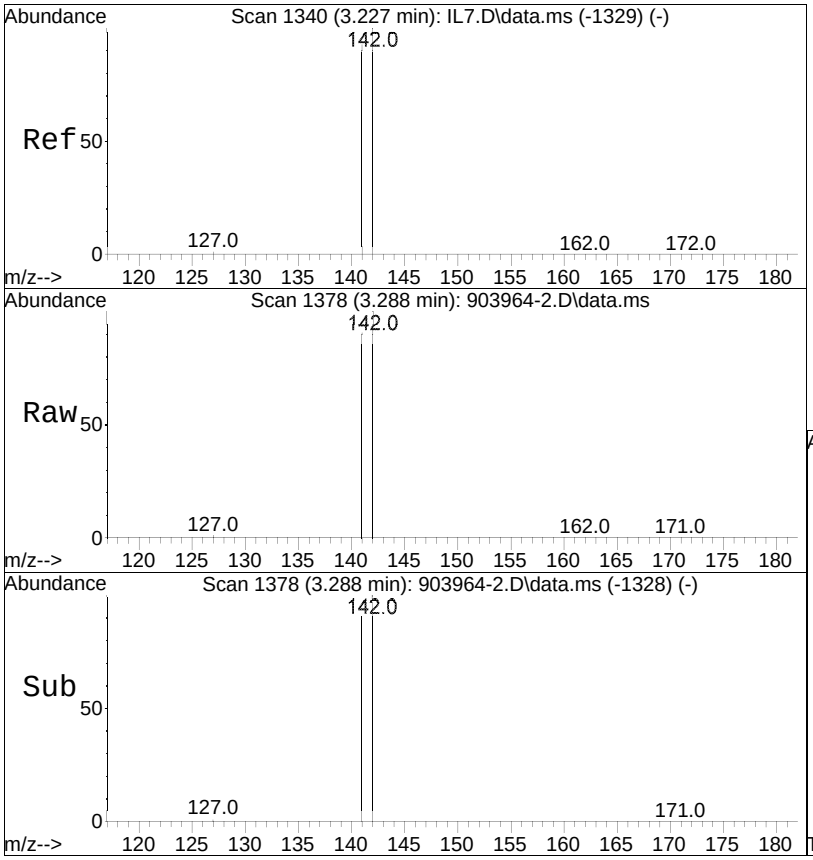


#10
Hexachlorobutadiene
Concen: 2617.74 ng/ml
RT: 2.979 min Scan# 1196
Delta R.T. -0.005 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:225 Resp: 26560

Ion	Ratio	Lower	Upper
225	100		
223	62.9	50.1	75.1

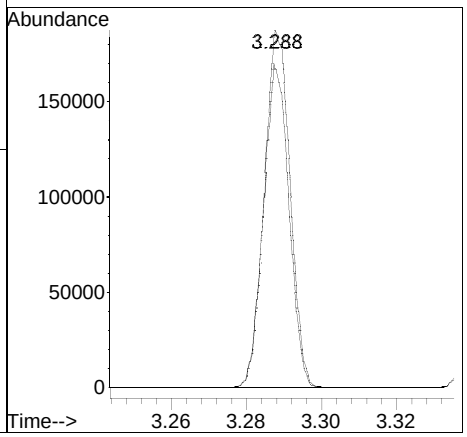


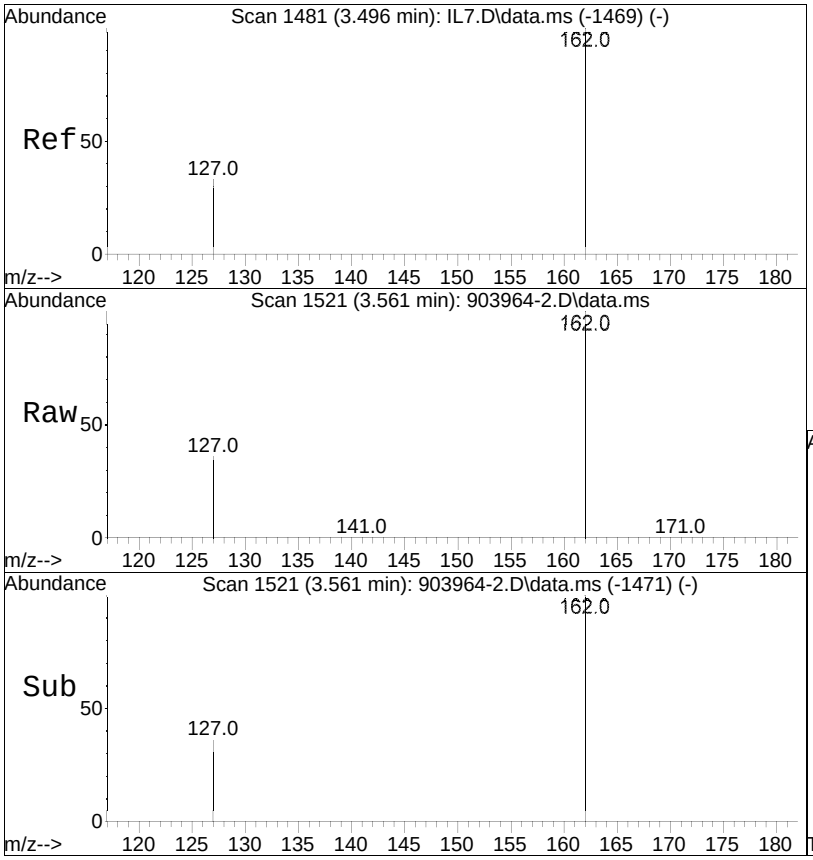


#11
2-Methylnaphthalene
Concen: 2513.78 ng/ml
RT: 3.288 min Scan# 1378
Delta R.T. -0.004 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:142 Resp: 87567

Ion	Ratio	Lower	Upper
142	100		
141	89.6	74.1	111.1

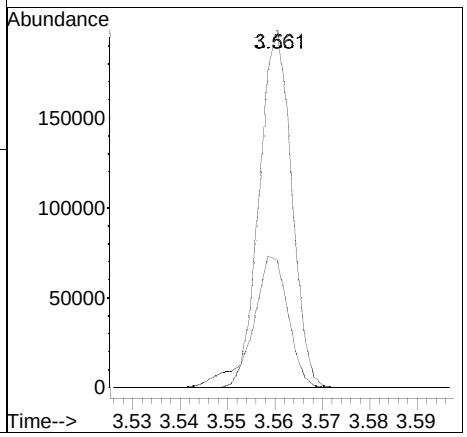


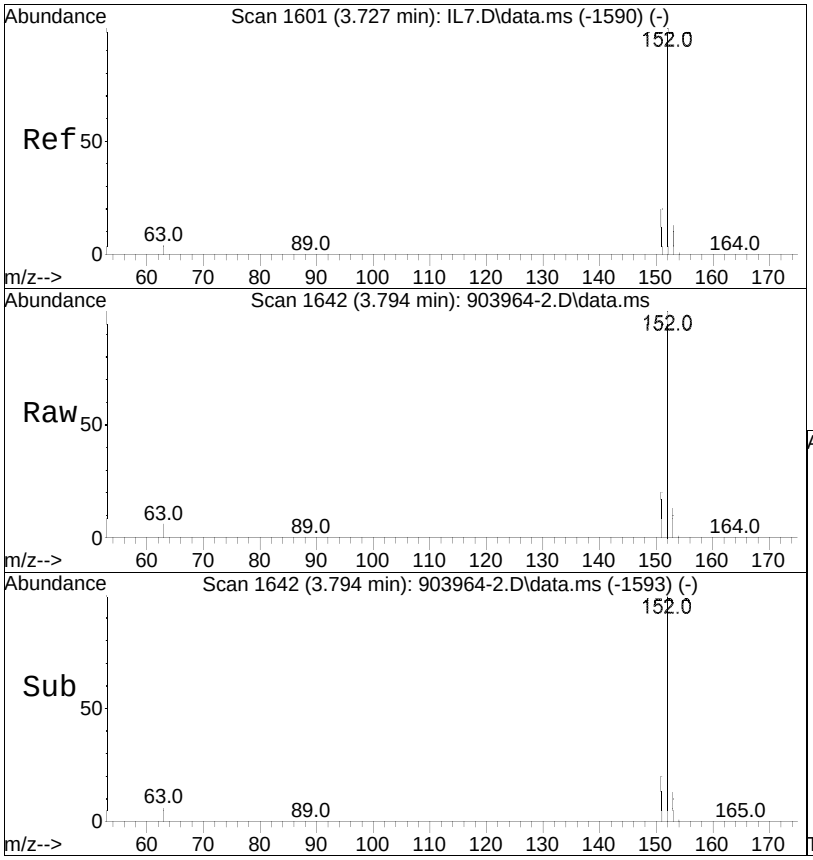


#14
2-Chloronaphthalene
Concen: 2492.63 ng/ml
RT: 3.561 min Scan# 1521
Delta R.T. -0.004 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:162 Resp: 92492

Ion	Ratio	Lower	Upper
162	100		
127	41.5	29.7	44.5

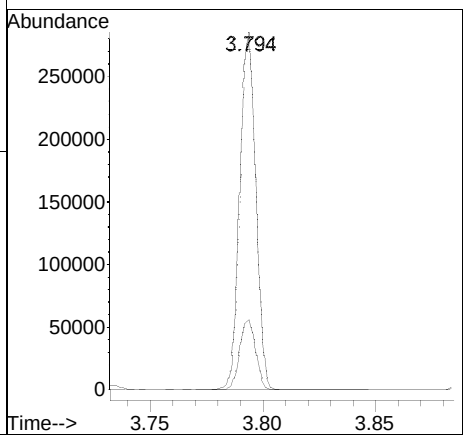


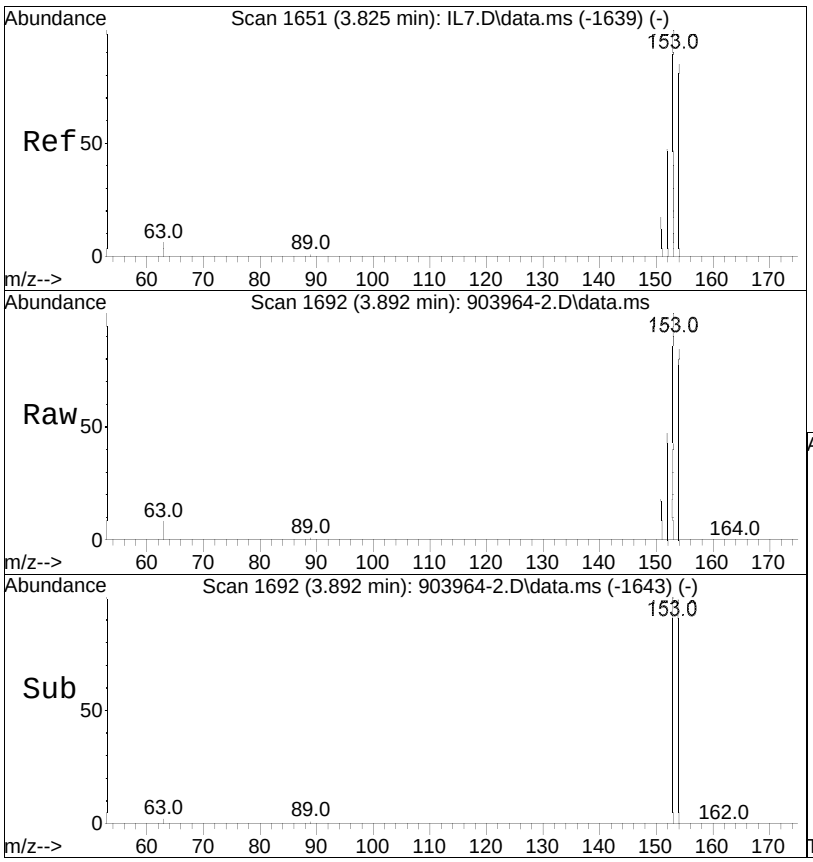


#16
Acenaphthylene
Concen: 2515.54 ng/ml
RT: 3.794 min Scan# 1642
Delta R.T. -0.004 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:152 Resp: 138712

Ion	Ratio	Lower	Upper
152	100		
151	19.9	16.0	24.0

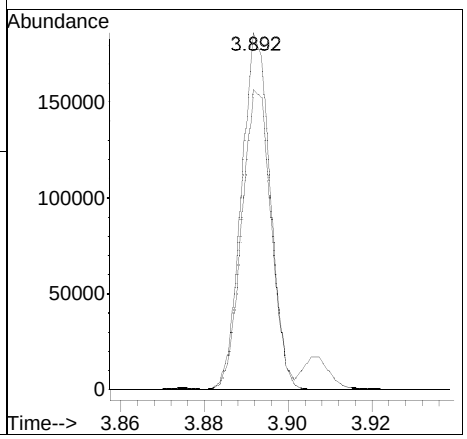


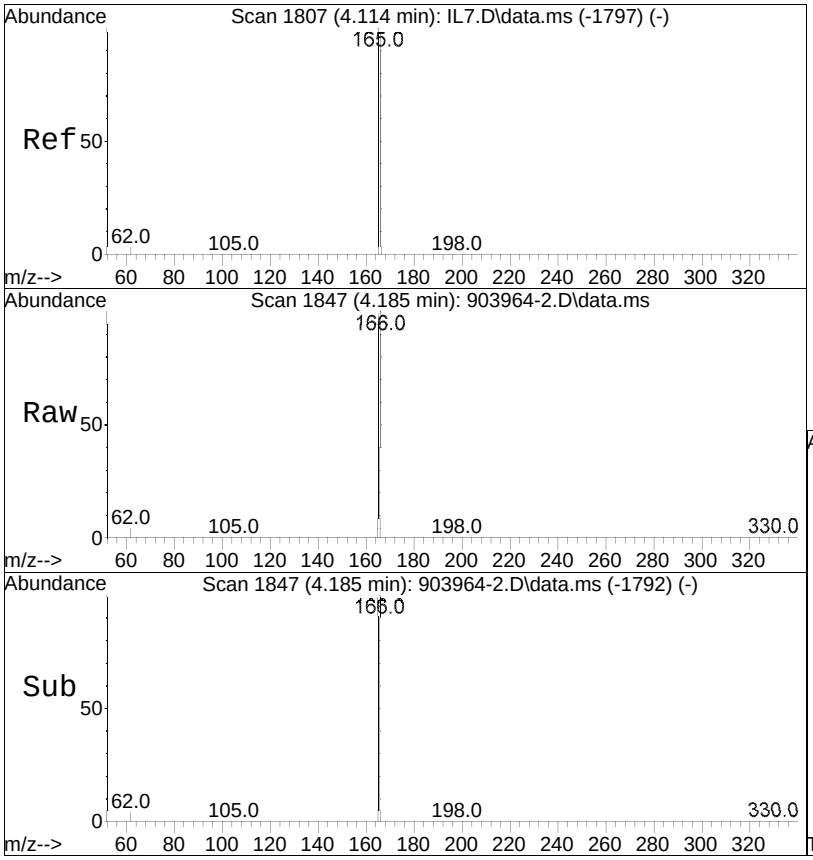


#18
Acenaphthene
Concen: 2902.64 ng/ml
RT: 3.892 min Scan# 1692
Delta R.T. -0.004 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:153 Resp: 87719

Ion	Ratio	Lower	Upper
153	100		
154	85.9	66.9	100.3

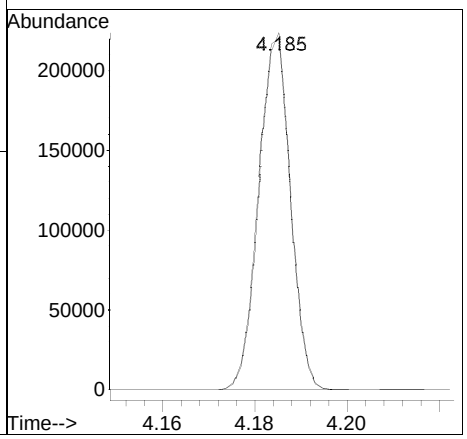


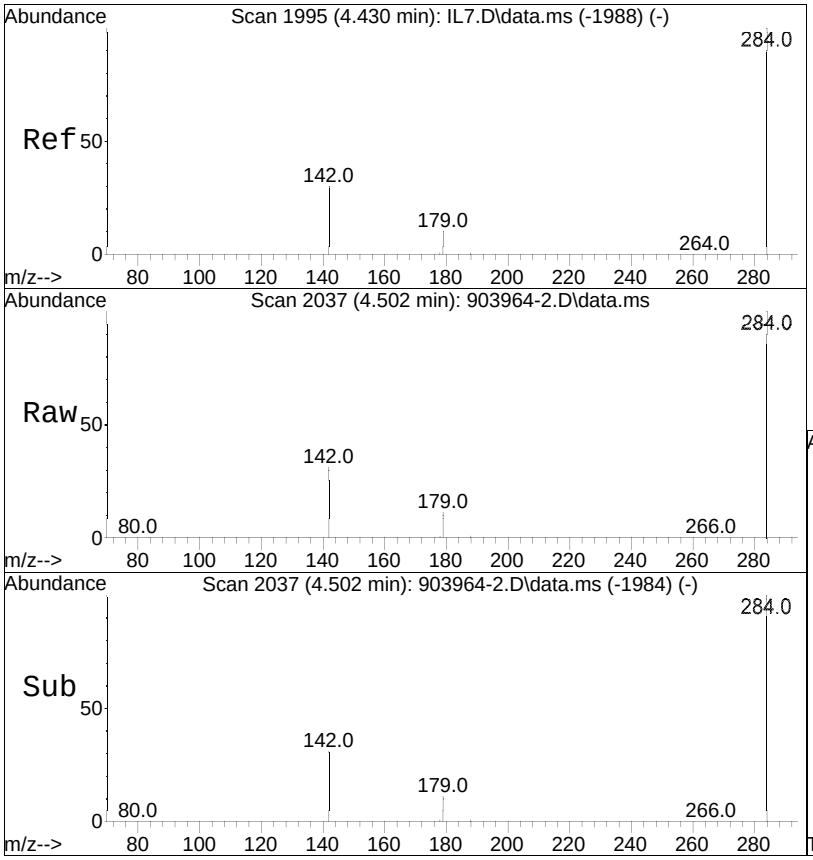


#20
Fluorene
Concen: 2930.31 ng/ml
RT: 4.185 min Scan# 1847
Delta R.T. -0.003 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:166 Resp: 105851

Ion	Ratio	Lower	Upper
166	100		
165	100.5	82.9	124.3

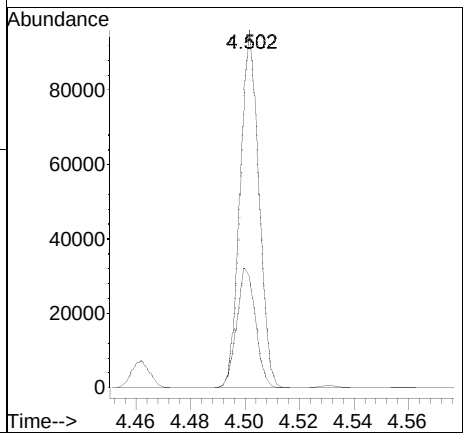


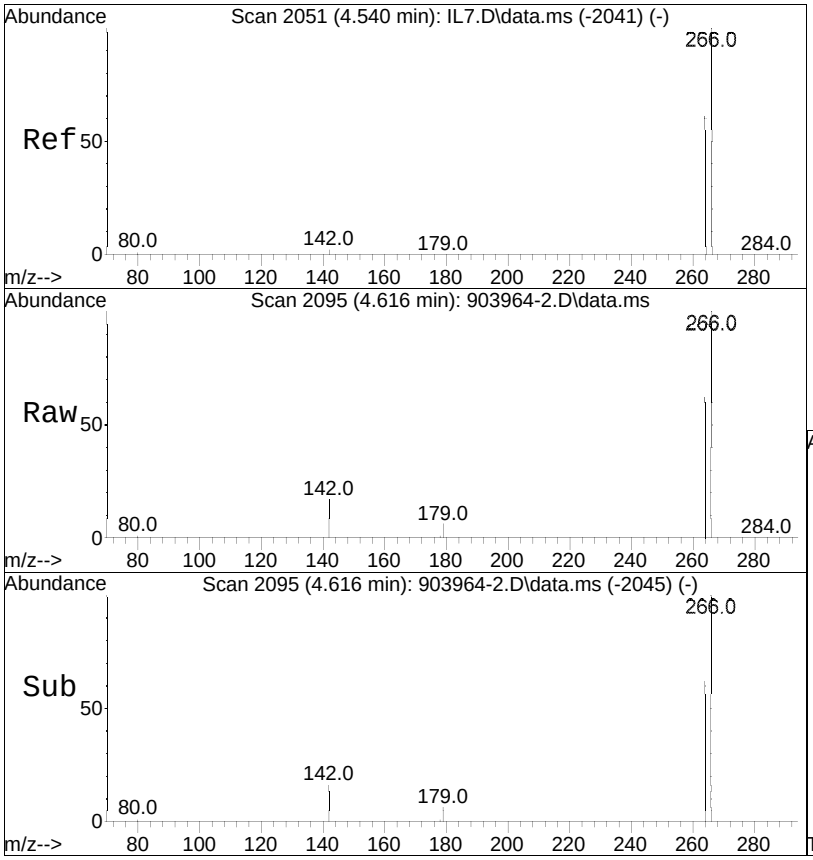


#24
Hexachlorobenzene
Concen: 3483.75 ng/ml
RT: 4.502 min Scan# 2037
Delta R.T. -0.004 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:284 Resp: 45084

Ion	Ratio	Lower	Upper
284	100		
142	33.9	26.9	40.3

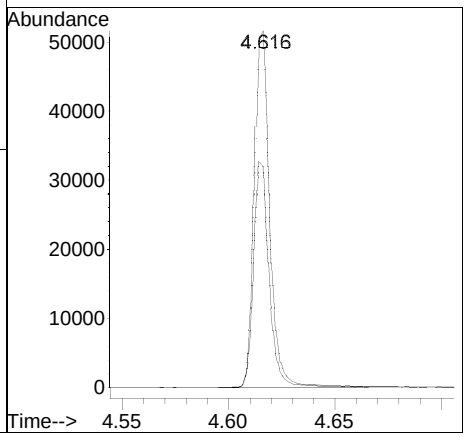


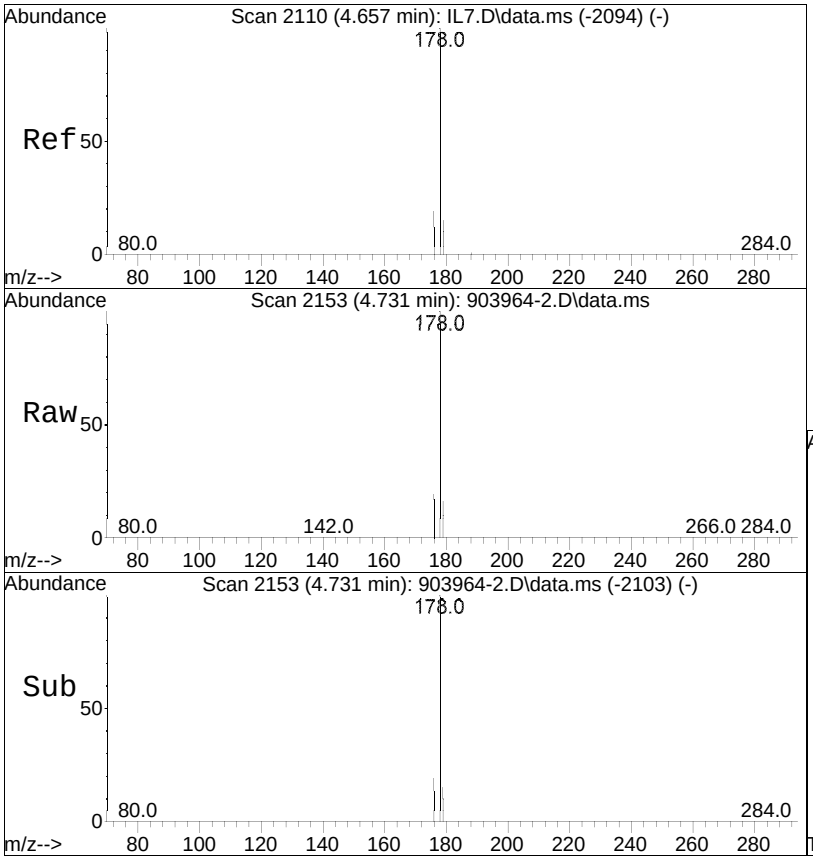


#25
Pentachlorophenol
Concen: 3165.61 ng/ml
RT: 4.616 min Scan# 2095
Delta R.T. -0.002 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:266 Resp: 26125

Ion	Ratio	Lower	Upper
266	100		
264	63.2	50.7	76.1

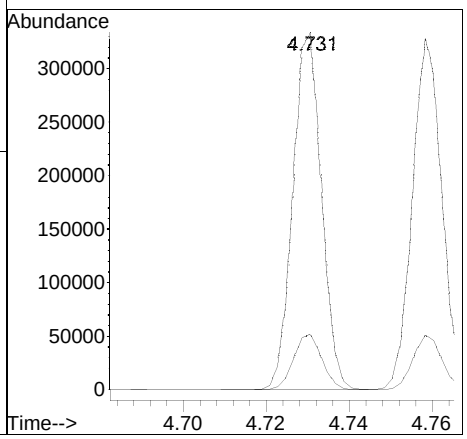


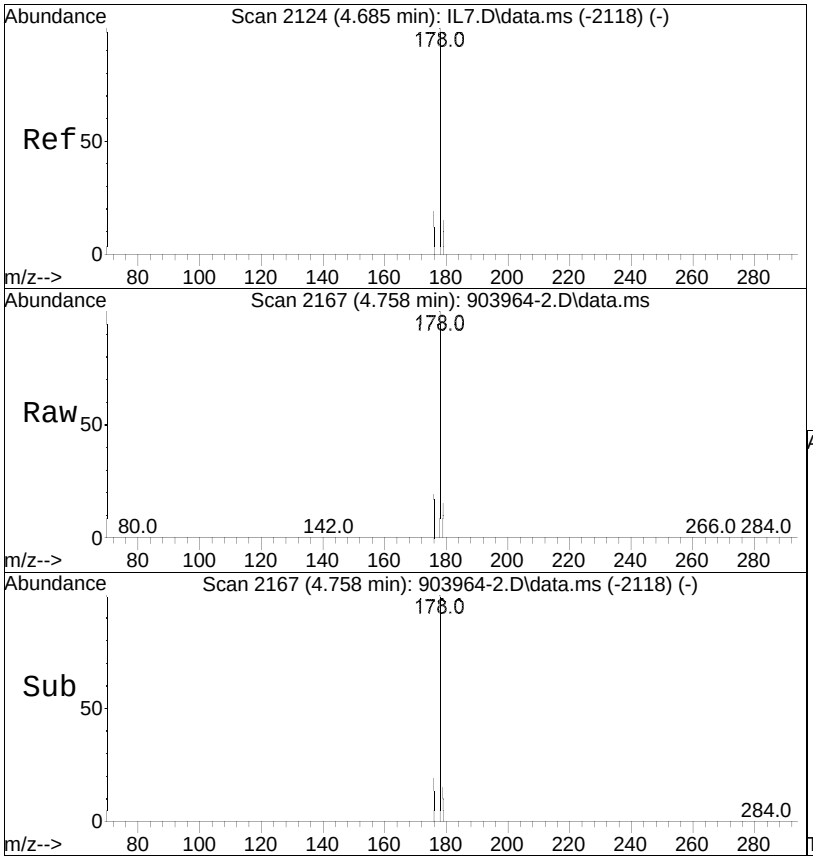


#26
Phenanthrene
Concen: 3148.00 ng/ml
RT: 4.731 min Scan# 2153
Delta R.T. -0.002 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:178 Resp: 160074

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.3	18.5

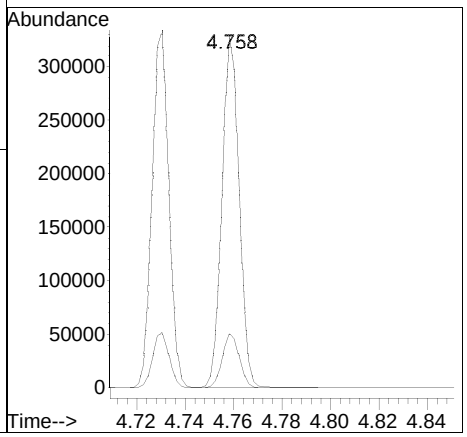


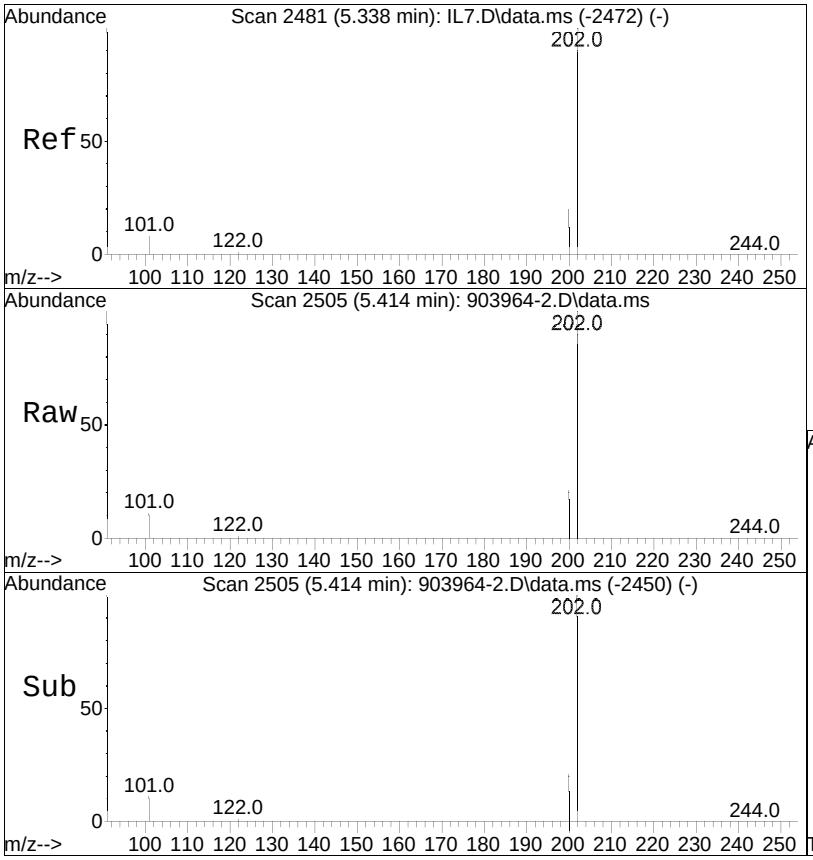


#27
Anthracene
Concen: 3208.47 ng/ml
RT: 4.758 min Scan# 2167
Delta R.T. -0.004 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:178 Resp: 161789

Ion	Ratio	Lower	Upper
178	100		
179	15.3	12.2	18.4

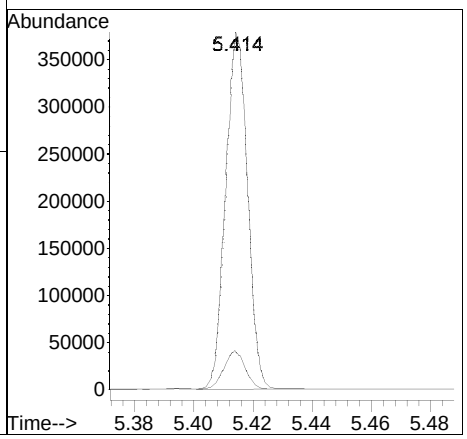


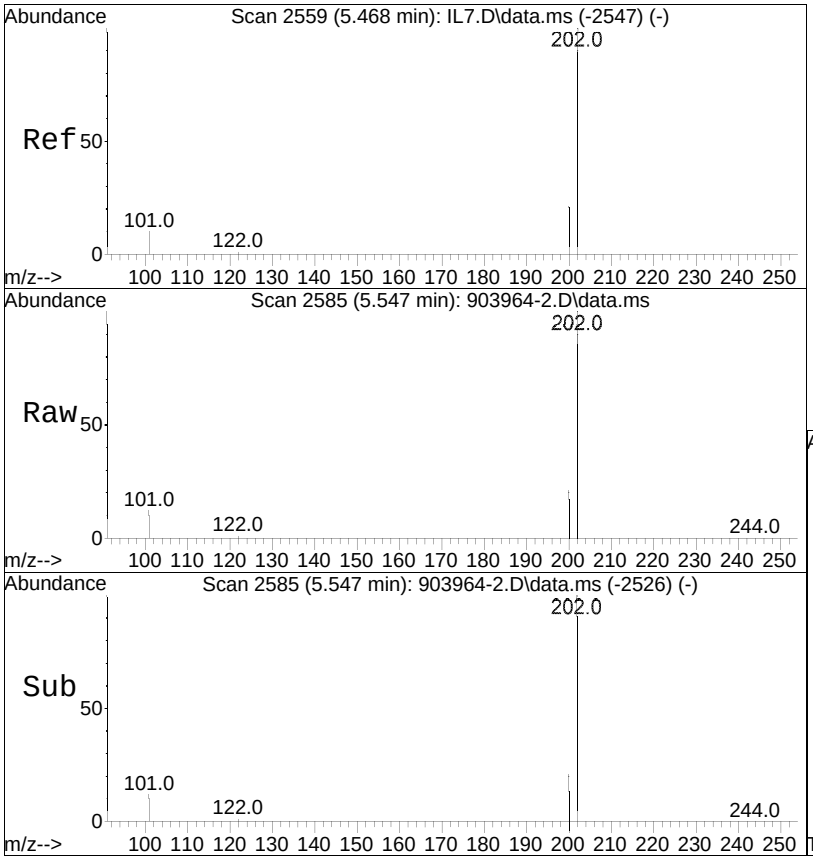


#28
Fluoranthene
Concen: 2870.40 ng/ml
RT: 5.414 min Scan# 2505
Delta R.T. -0.003 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:202 Resp: 192367

Ion	Ratio	Lower	Upper
202	100		
101	10.7	8.3	12.5

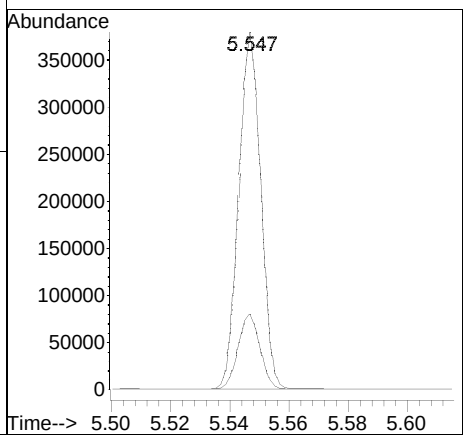


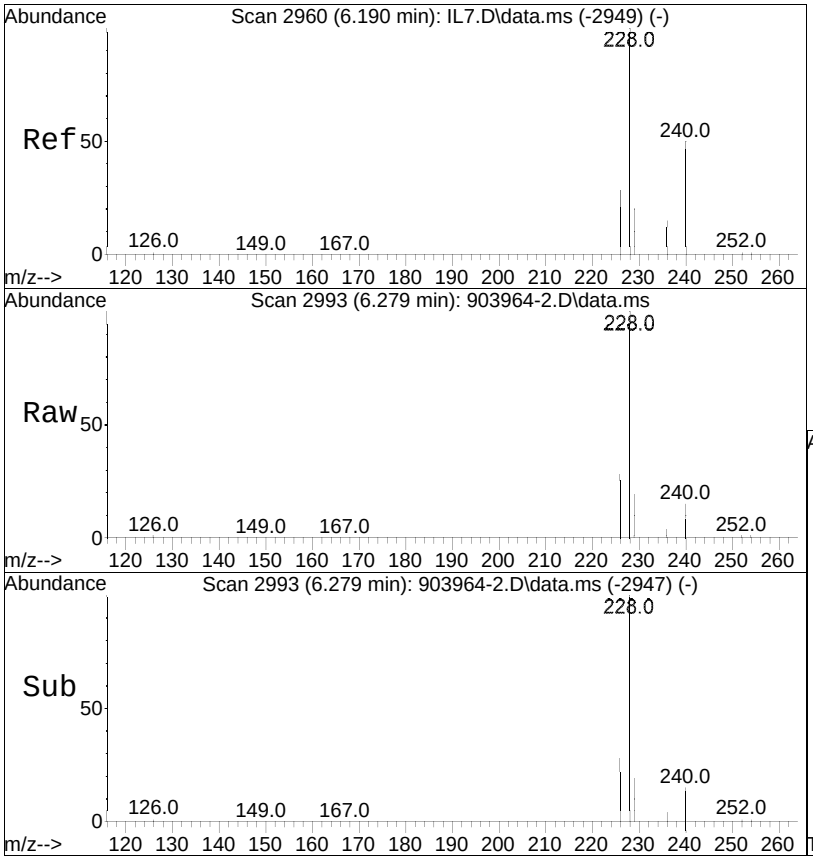


#29
Pyrene
Concen: 2818.68 ng/ml
RT: 5.547 min Scan# 2585
Delta R.T. -0.002 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:202 Resp: 194068

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

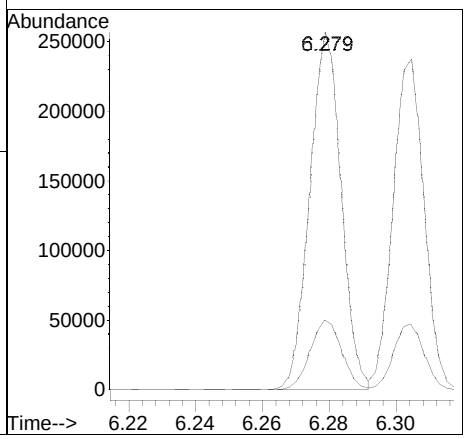


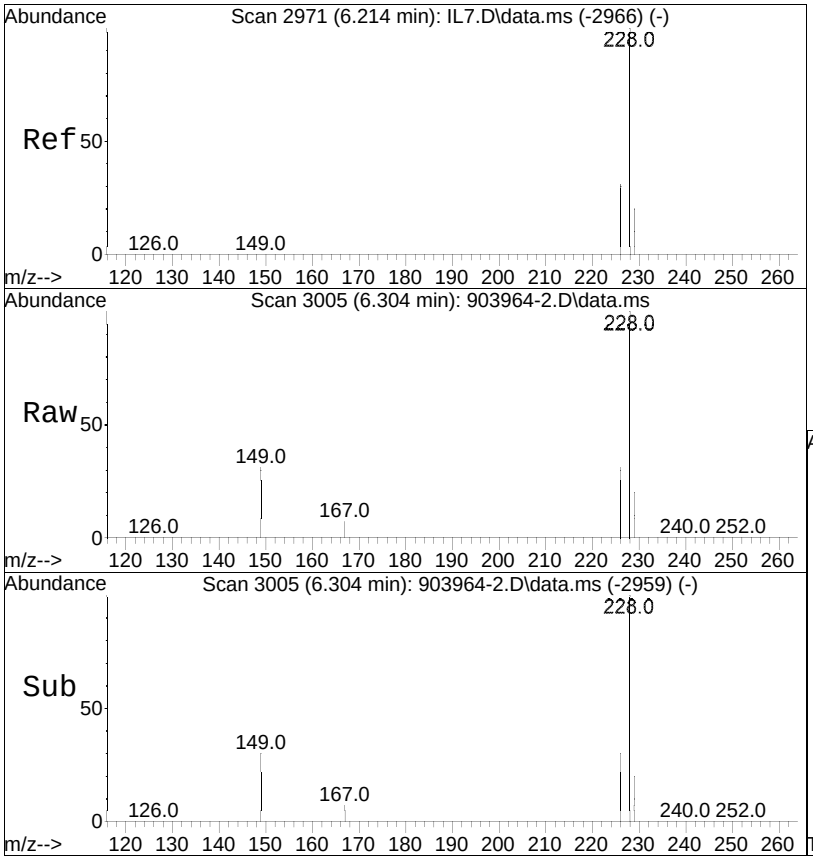


#32
Benzo[a]anthracene
Concen: 3525.25 ng/ml
RT: 6.279 min Scan# 2993
Delta R.T. -0.002 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:228 Resp: 167314

Ion	Ratio	Lower	Upper
228	100		
229	19.5	15.6	23.4

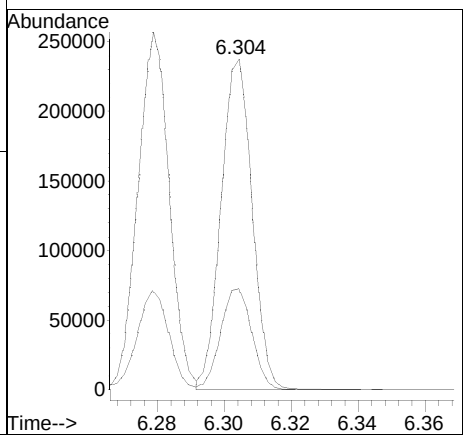


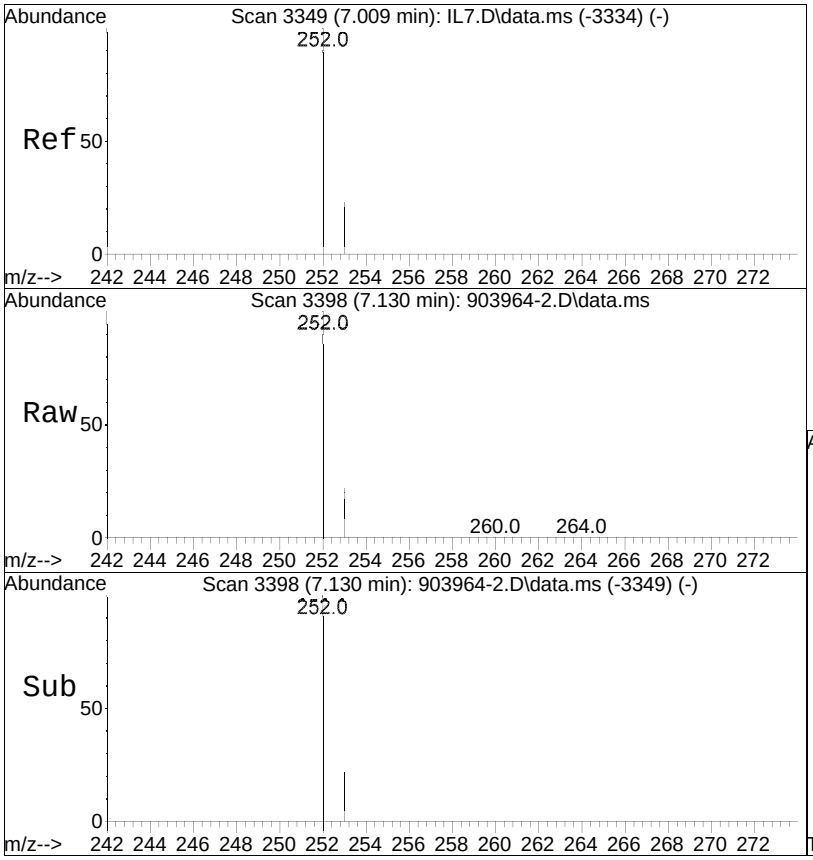


#34
Chrysene
Concen: 3238.77 ng/ml
RT: 6.304 min Scan# 3005
Delta R.T. -0.002 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:228 Resp: 152422

Ion	Ratio	Lower	Upper
228	100		
226	30.8	24.5	36.7

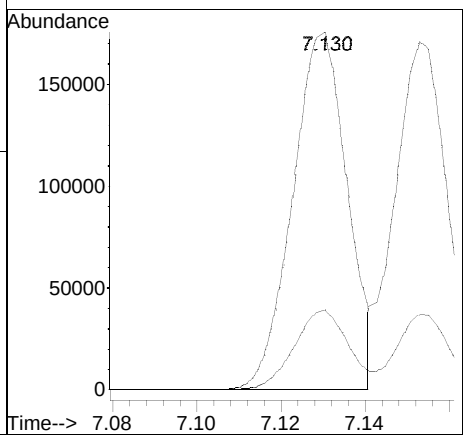


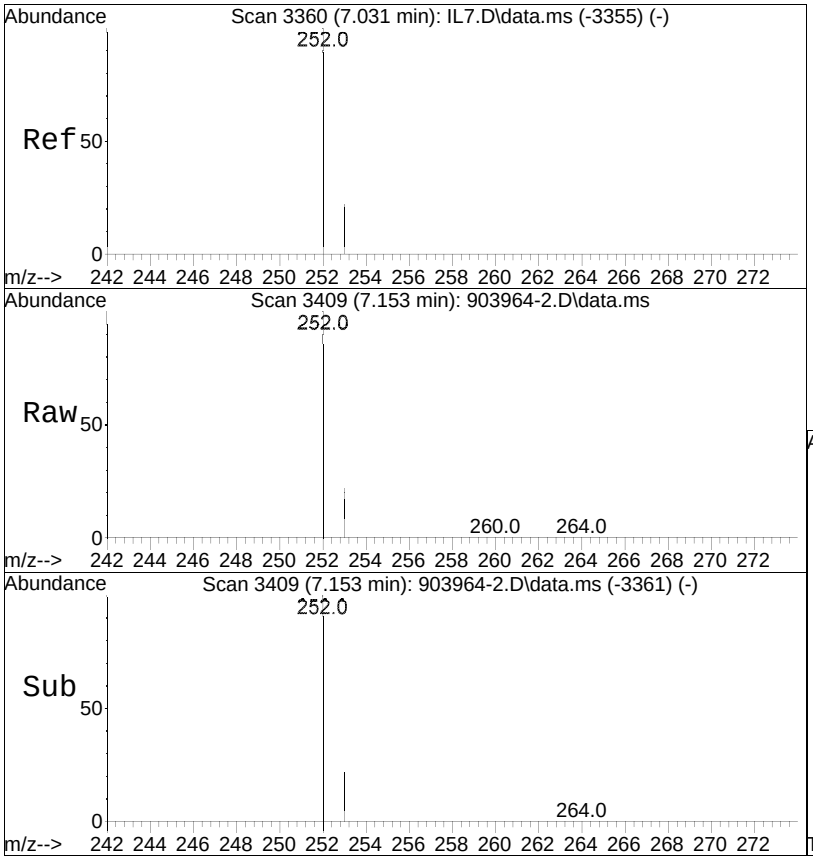


#37
Benzo[b]fluoranthene
Concen: 3130.33 ng/ml
RT: 7.130 min Scan# 3398
Delta R.T. 0.001 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:252 Resp: 157816

Ion	Ratio	Lower	Upper
252	100		
253	22.6	17.3	25.9

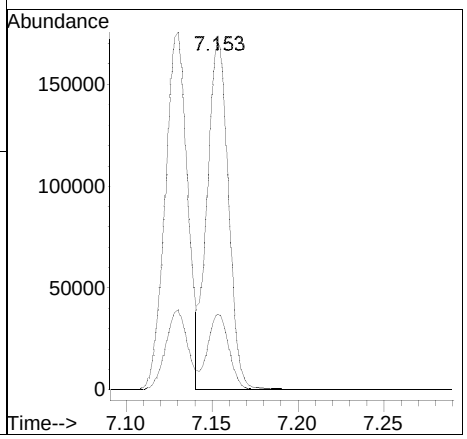


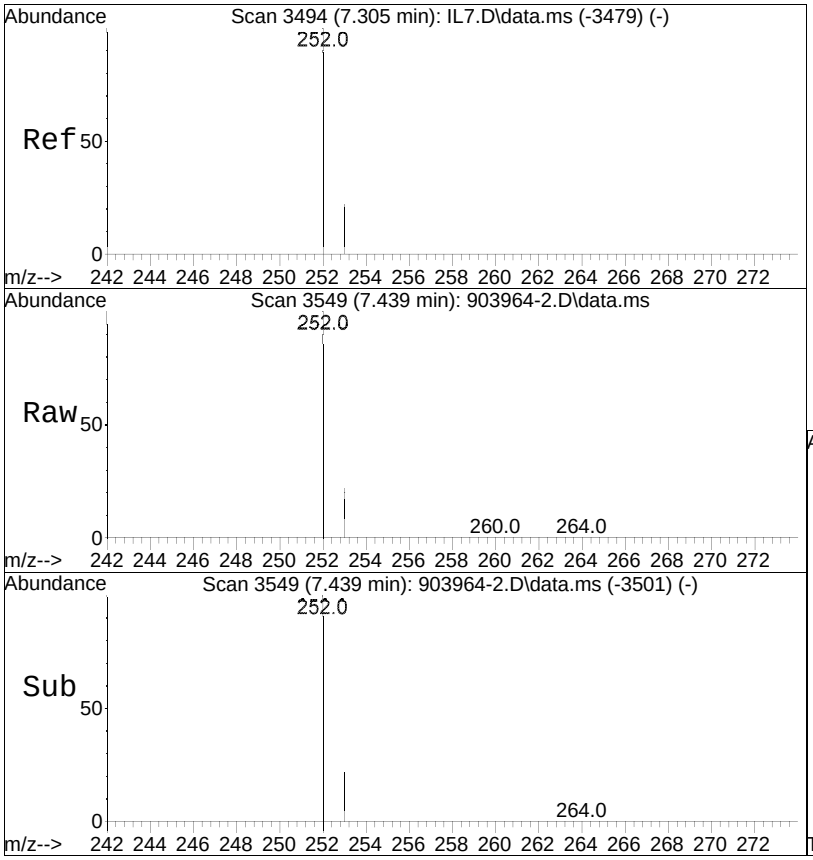


#38
Benzo[k]fluoranthene
Concen: 3081.85 ng/ml
RT: 7.153 min Scan# 3409
Delta R.T. -0.001 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:252 Resp: 147535

Ion	Ratio	Lower	Upper
252	100		
253	21.1	17.4	26.2

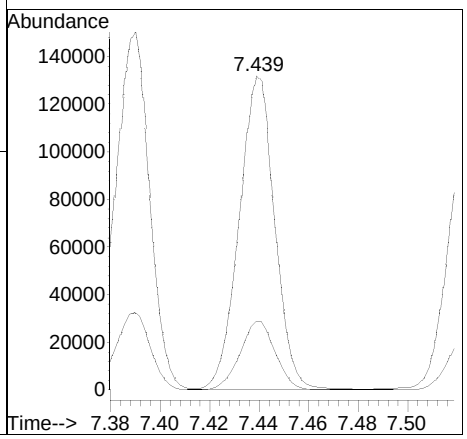


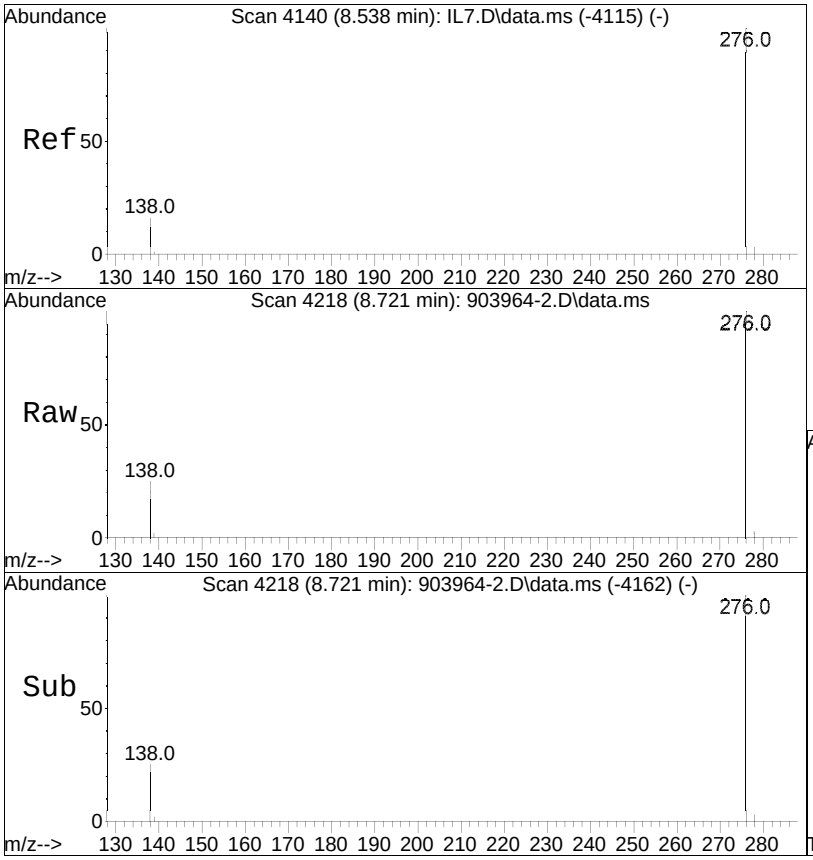


#39
Benzo[a]pyrene
Concen: 2920.39 ng/ml
RT: 7.439 min Scan# 3549
Delta R.T. -0.001 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:252 Resp: 129596

Ion	Ratio	Lower	Upper
252	100		
253	21.7	17.4	26.0

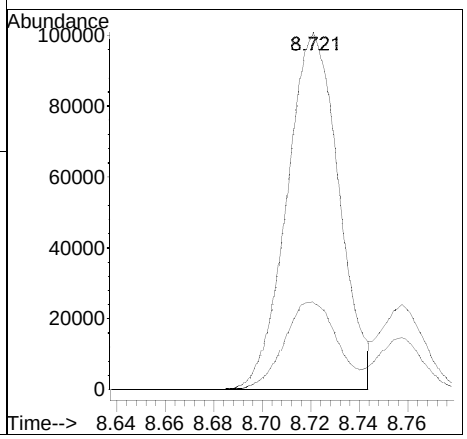


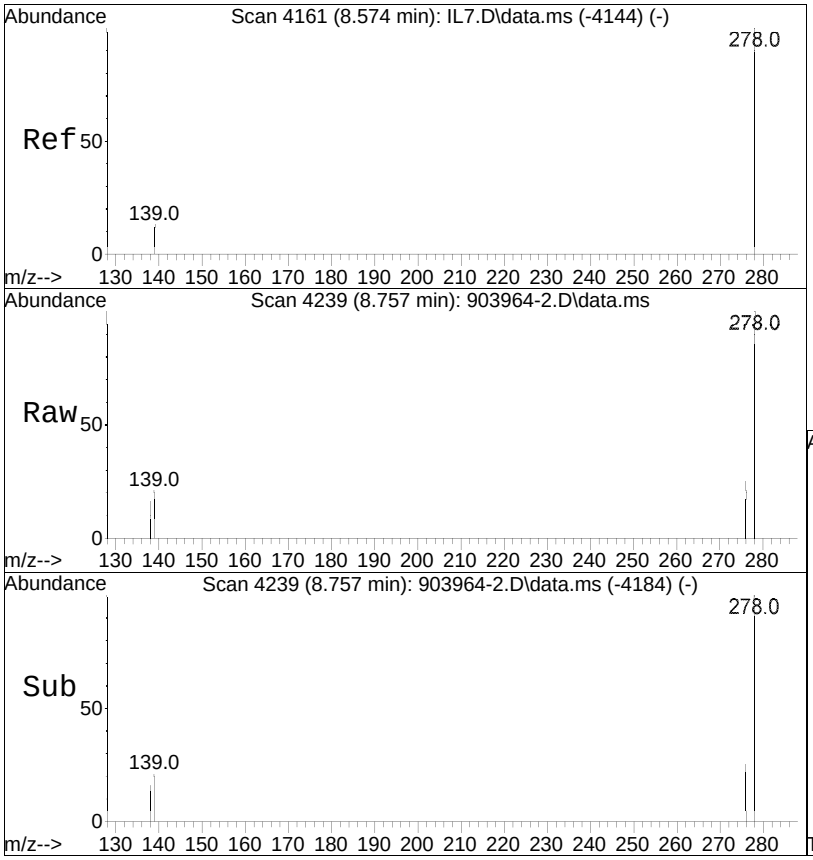


#40
Indeno[1,2,3-cd]pyrene
Concen: 3079.82 ng/ml
RT: 8.721 min Scan# 4218
Delta R.T. -0.003 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:276 Resp: 148538

Ion	Ratio	Lower	Upper
276	100		
138	25.1	14.8	22.2#

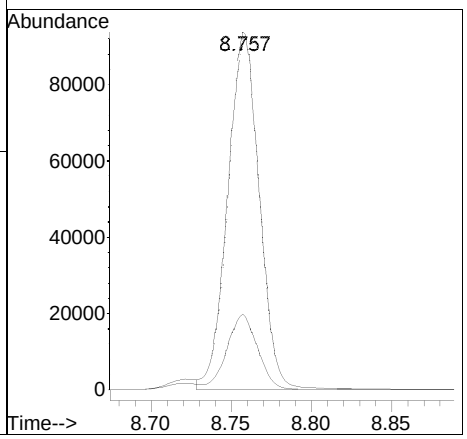


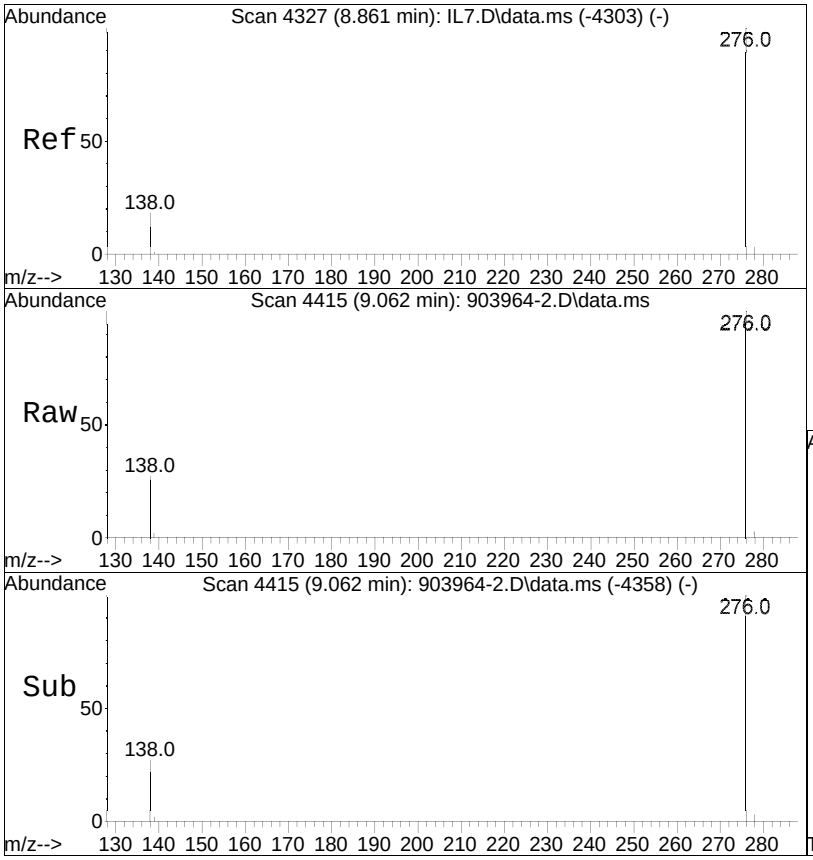


#41
Dibenzo[a,h]anthracene
Concen: 2820.84 ng/ml
RT: 8.757 min Scan# 4239
Delta R.T. -0.005 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:278 Resp: 126578

Ion	Ratio	Lower	Upper
278	100		
139	20.6	12.2	18.4#

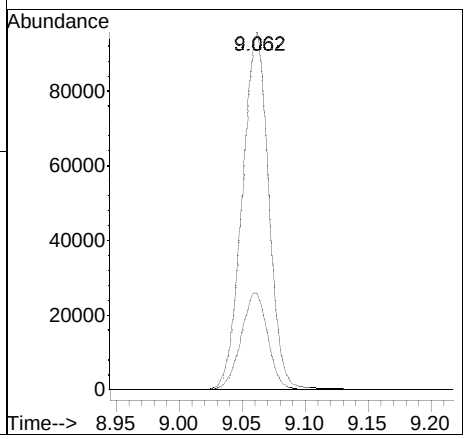




#42
Benzo[g,h,i]perylene
Concen: 2800.25 ng/ml
RT: 9.062 min Scan# 4415
Delta R.T. -0.001 min
Lab File: 903964-2.D
Acq: 03 Apr 2024 07:43 am

Tgt Ion:276 Resp: 137377

Ion	Ratio	Lower	Upper
276	100		
138	27.4	16.8	25.2#



Manual Integration Report

Data Path	: I:\8270SIM\sv119\240403LVI	QMethod	: SIM-LVI_231207n_sv119.M
Data File	: 903964-2.D	Operator	: sv119:ah
Date Inj'd	: 4/3/2024 7:43 am	Instrument	: SV119
Sample	: WG1903964-2,32,,ah	Quant Date	: 4/3/2024 7:59 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-3.D
Acq On : 03 Apr 2024 08:00 am
Operator : sv119:ah
Sample : WG1903964-3,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 03 08:16:54 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.228	152	57305	4000.000	ng/ml	0.00
Standard Area 1 = 53851			Recovery = 106.41%			
8) Naphthalene-d8	2.896	136	189107	4000.000	ng/ml	0.00
Standard Area 1 = 173620			Recovery = 108.92%			
17) Acenaphthene-d10	3.876	164	93371	4000.000	ng/ml	0.00
Standard Area 1 = 87313			Recovery = 106.94%			
22) Phenanthrene-d10	4.717	188	191708	4000.000	ng/ml	0.00
Standard Area 1 = 180904			Recovery = 105.97%			
31) Chrysene-d12	6.281	240	144653	4000.000	ng/ml	0.00
Standard Area 1 = 149911			Recovery = 96.49%			
36) Perylene-d12	7.494	264	154565	4000.000	ng/ml	0.00
Standard Area 1 = 170346			Recovery = 90.74%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.630	112	45561	2906.812	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 58.14%			
3) Phenol-d6	2.044	99	48928	2604.193	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 52.08%			
7) Nitrobenzene-d5	2.508	82	24592	1725.561	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 69.02%			
13) 2-Fluorobiphenyl	3.496	172	57997	1373.201	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 54.93%			
21) 2,4,6-Tribromophenol	4.323	330	21121	4103.004	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 82.06%			
30) 4-Terphenyl-d14	5.638	244	51171	1088.827	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 43.55%			
Target Compounds						Qvalue
6) Hexachloroethane	2.490	117	19971	2817.175	ng/ml	90
9) Naphthalene	2.907	128	166236	3681.456	ng/ml	100
10) Hexachlorobutadiene	2.981	225	29435	3026.895	ng/ml	100
11) 2-Methylnaphthalene	3.290	142	98539	2951.413	ng/ml	96
14) 2-Chloronaphthalene	3.561	162	101592	2856.589	ng/ml	92
16) Acenaphthylene	3.794	152	151000	2857.129	ng/ml	100
18) Acenaphthene	3.894	153	94686	3280.289	ng/ml	98
20) Fluorene	4.185	166	111952	3244.725	ng/ml	97
24) Hexachlorobenzene	4.502	284	46009	3712.358	ng/ml	100
25) Pentachlorophenol	4.614	266	26266	3322.783	ng/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-3.D
Acq On : 03 Apr 2024 08:00 am
Operator : sv119:ah
Sample : WG1903964-3,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 03 08:16:54 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.729	178	162819	3343.501	ng/ml	100
27) Anthracene	4.758	178	162946	3374.237	ng/ml	100
28) Fluoranthene	5.413	202	192359	2997.139	ng/ml	99
29) Pyrene	5.545	202	195550	2965.732	ng/ml	99
32) Benzo[a]anthracene	6.272	228	181689	3774.422	ng/ml	100
34) Chrysene	6.298	228	166179	3480.848	ng/ml	100
37) Benzo[b]fluoranthene	7.122	252	179341	3321.240	ng/ml	99
38) Benzo[k]fluoranthene	7.147	252	162691	3172.938	ng/ml	100
39) Benzo[a]pyrene	7.433	252	147454	3102.326	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.716	276	172343	3336.284	ng/ml#	86
41) Dibenzo[a,h]anthracene	8.752	278	144831	3013.445	ng/ml#	88
42) Benzo[g,h,i]perylene	9.057	276	158005	3007.022	ng/ml#	87

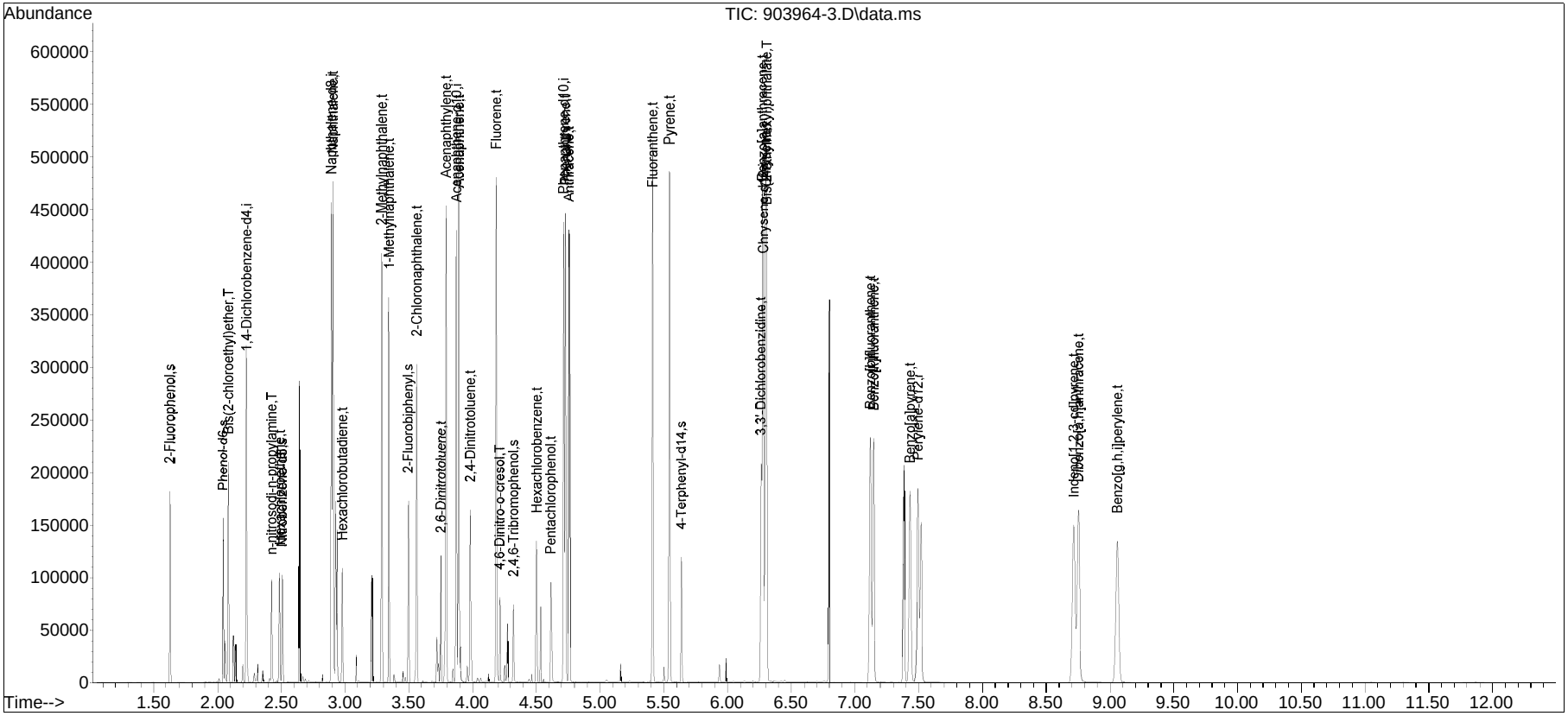
(#) = qualifier out of range (m) = manual integration (+) = signals summed

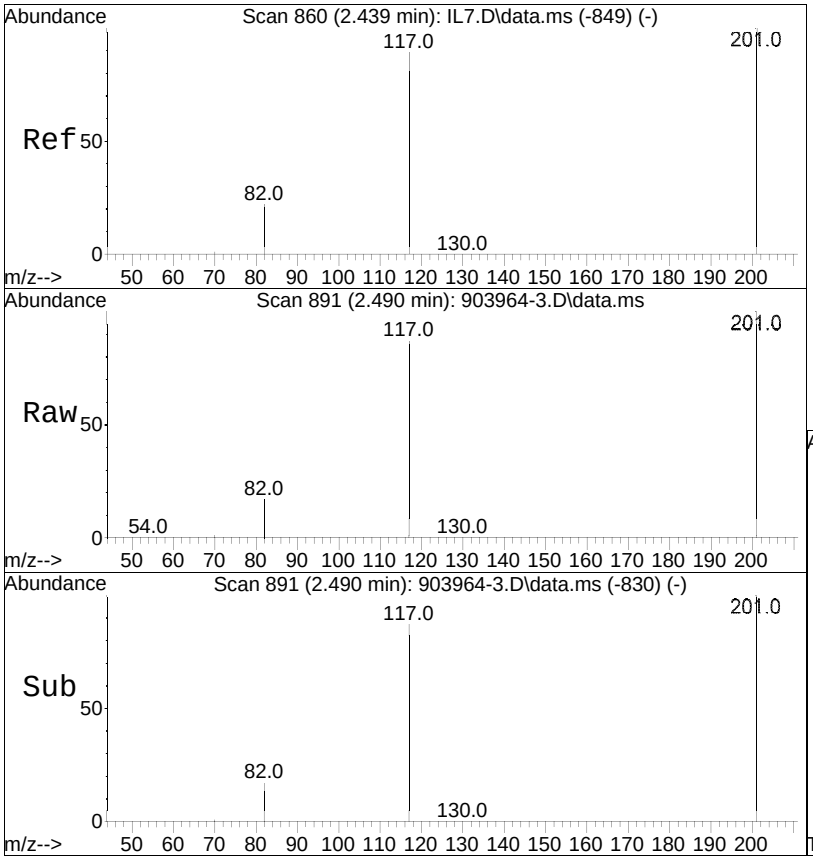
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-3.D
Acq On : 03 Apr 2024 08:00 am
Operator : sv119:ah
Sample : WG1903964-3,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 03 08:16:54 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0403.D•

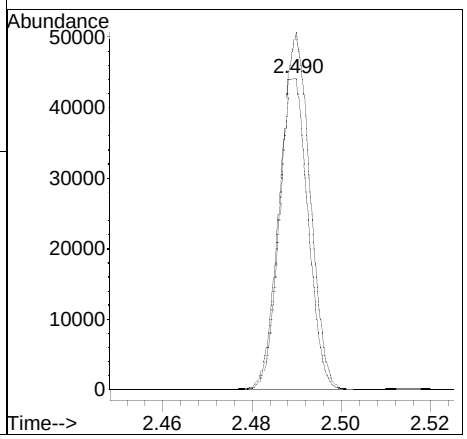


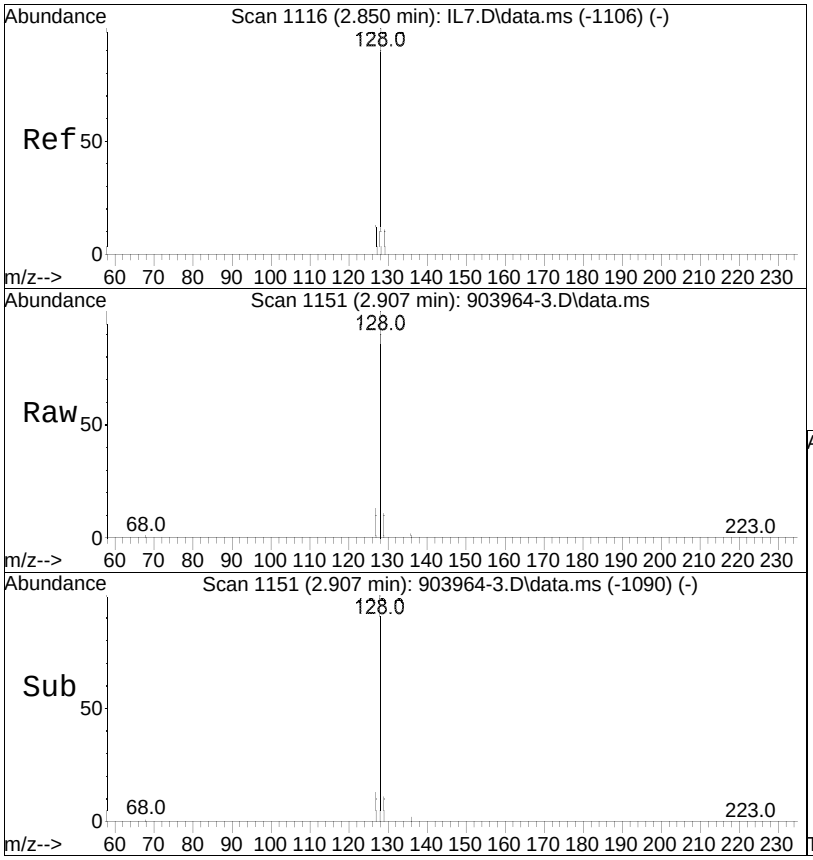


#6
Hexachloroethane
Concen: 2817.18 ng/ml
RT: 2.490 min Scan# 891
Delta R.T. -0.002 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:117 Resp: 19971

Ion	Ratio	Lower	Upper
117	100		
201	111.8	81.5	122.3

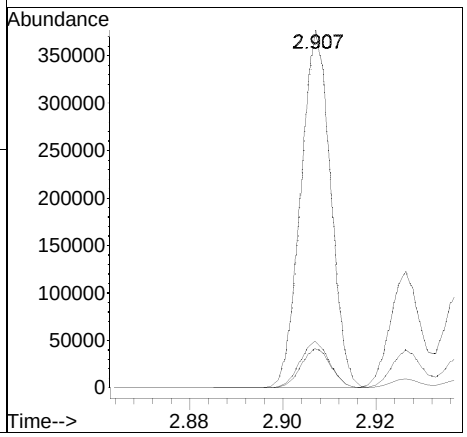


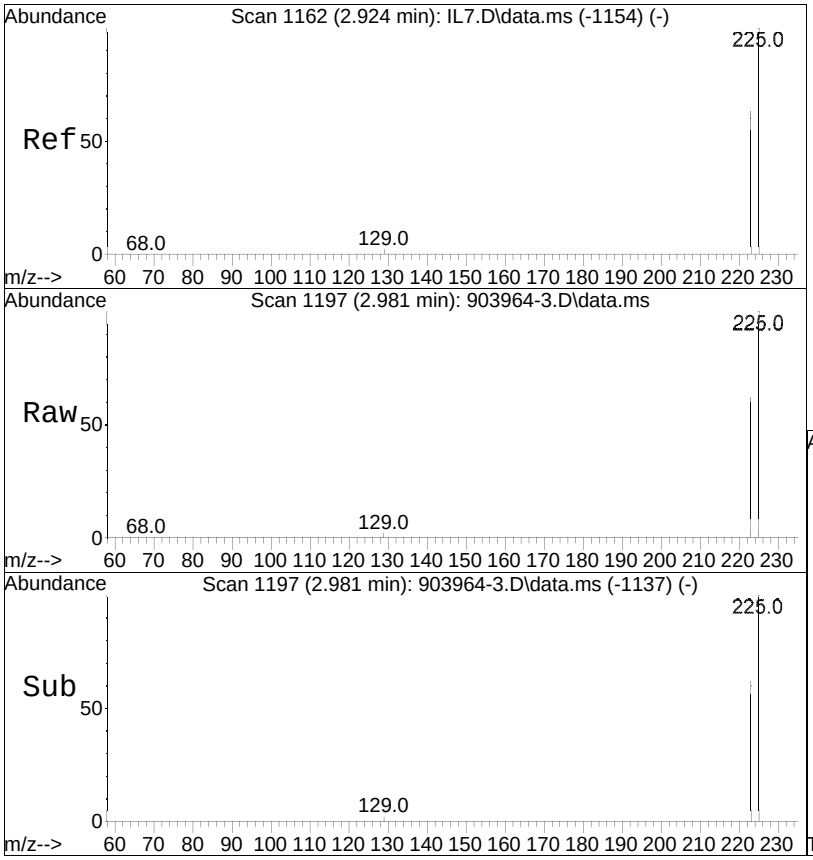


#9
Naphthalene
Concen: 3681.46 ng/ml
RT: 2.907 min Scan# 1151
Delta R.T. -0.002 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:128 Resp: 166236

Ion	Ratio	Lower	Upper
128	100		
129	11.1	8.8	13.2
127	13.0	10.6	15.8

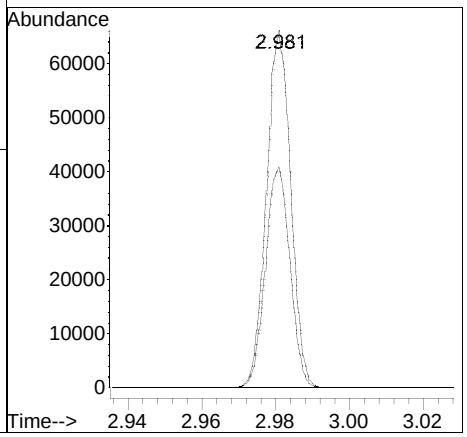


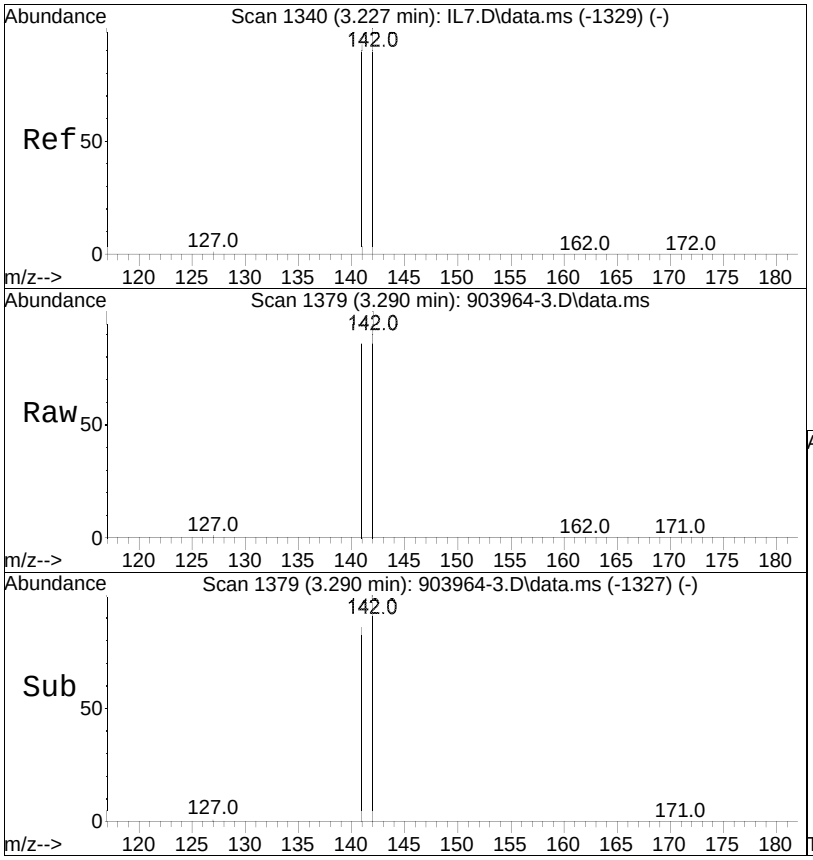


#10
Hexachlorobutadiene
Concen: 3026.90 ng/ml
RT: 2.981 min Scan# 1197
Delta R.T. -0.003 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:225 Resp: 29435

Ion	Ratio	Lower	Upper
225	100		
223	62.6	50.1	75.1

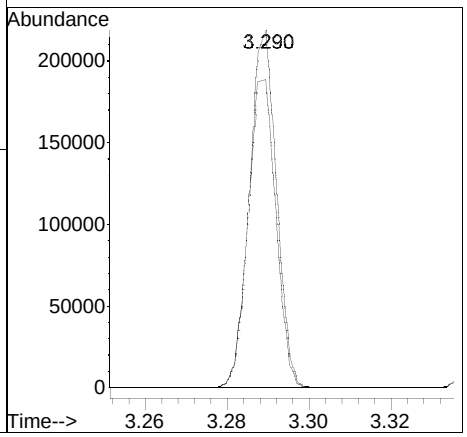


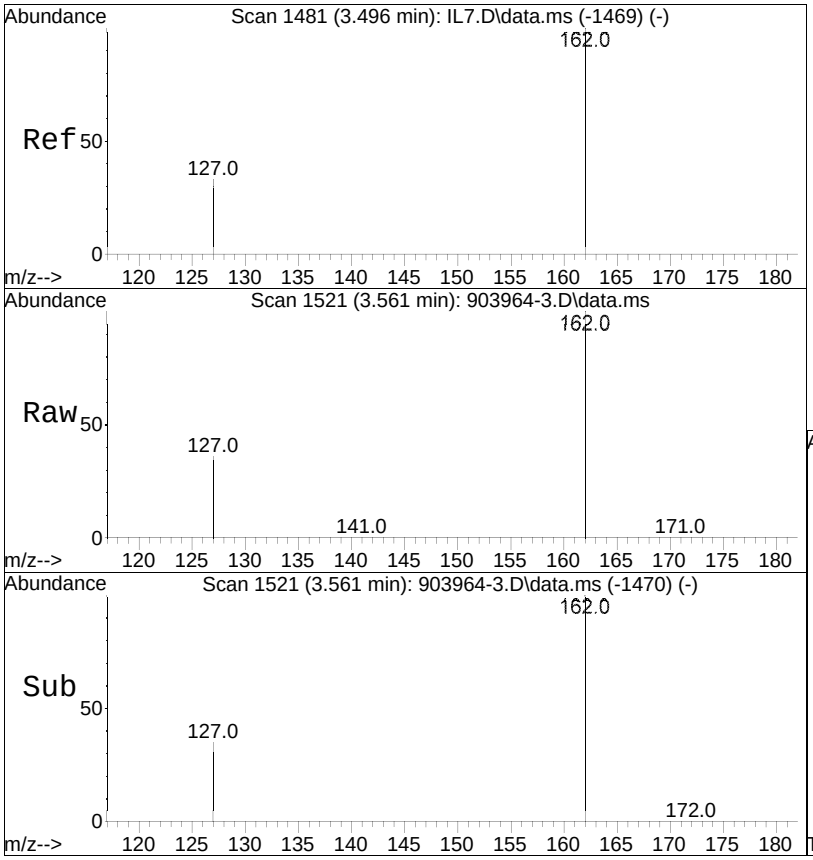


#11
2-Methylnaphthalene
Concen: 2951.41 ng/ml
RT: 3.290 min Scan# 1379
Delta R.T. -0.002 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:142 Resp: 98539

Ion	Ratio	Lower	Upper
142	100		
141	89.1	74.1	111.1

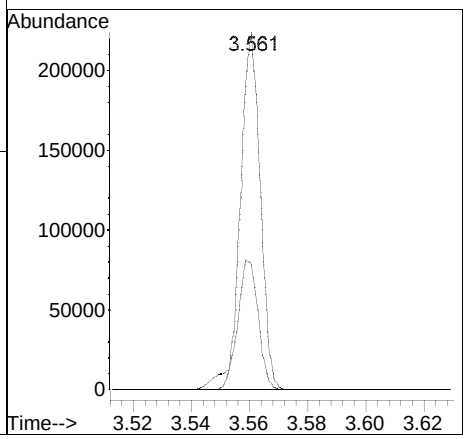


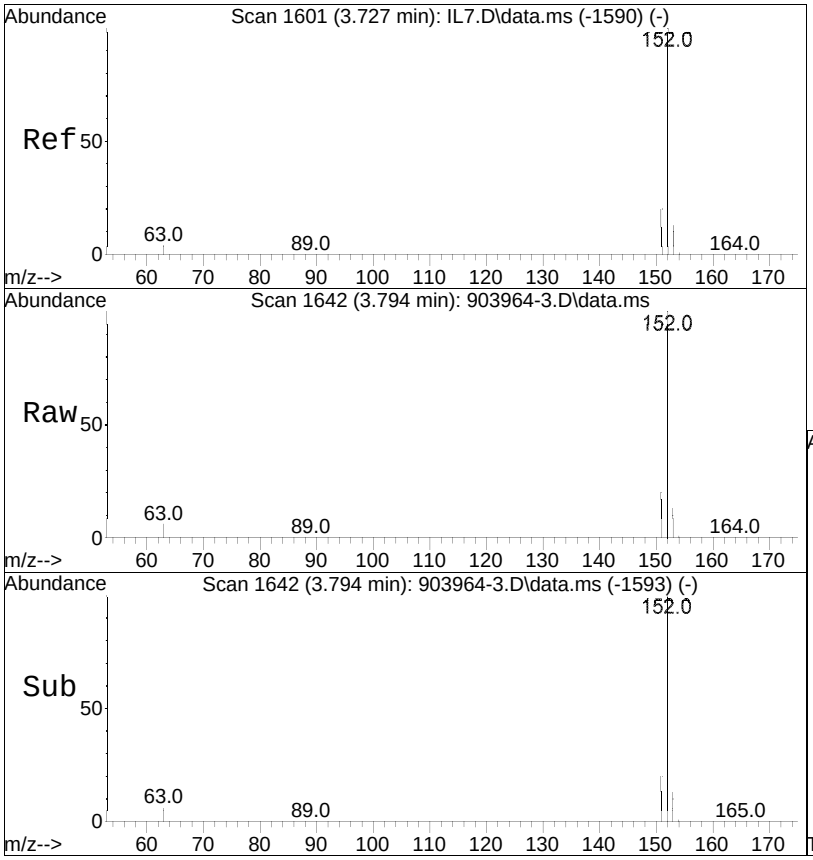


#14
2-Chloronaphthalene
Concen: 2856.59 ng/ml
RT: 3.561 min Scan# 1521
Delta R.T. -0.004 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:162 Resp: 101592

Ion	Ratio	Lower	Upper
162	100		
127	41.7	29.7	44.5

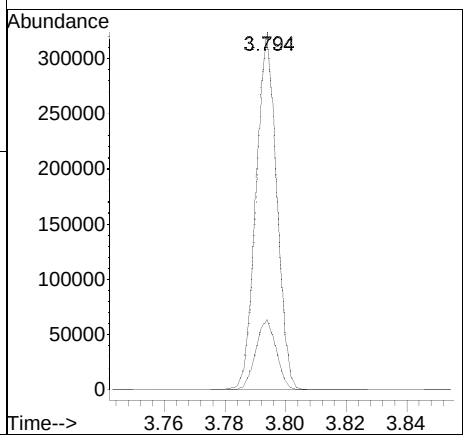


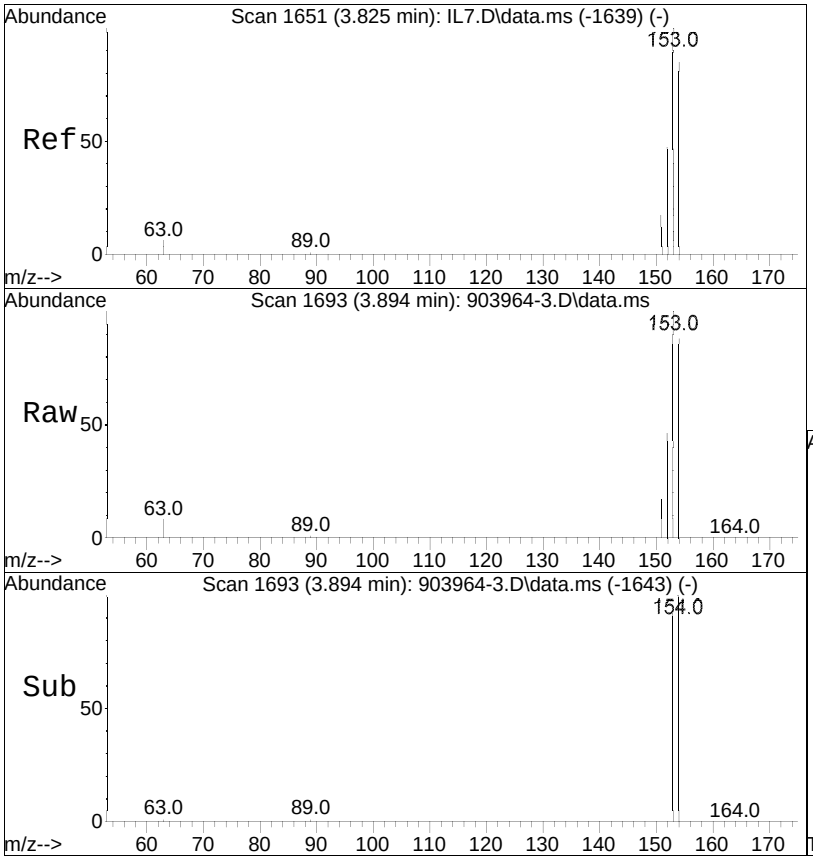


#16
Acenaphthylene
Concen: 2857.13 ng/ml
RT: 3.794 min Scan# 1642
Delta R.T. -0.004 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:152 Resp: 151000

Ion	Ratio	Lower	Upper
152	100		
151	19.8	16.0	24.0

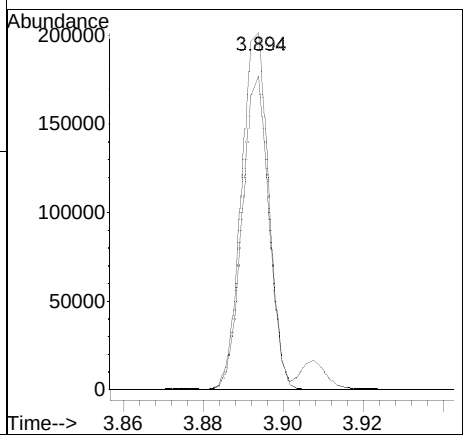


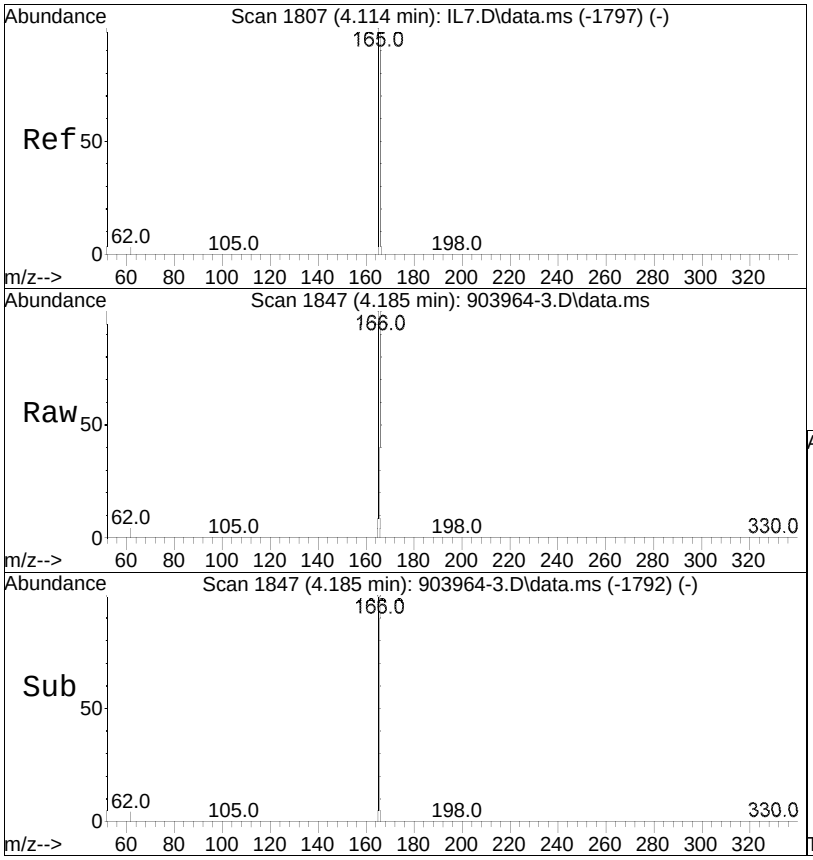


#18
Acenaphthene
Concen: 3280.29 ng/ml
RT: 3.894 min Scan# 1693
Delta R.T. -0.002 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:153 Resp: 94686

Ion	Ratio	Lower	Upper
153	100		
154	85.7	66.9	100.3

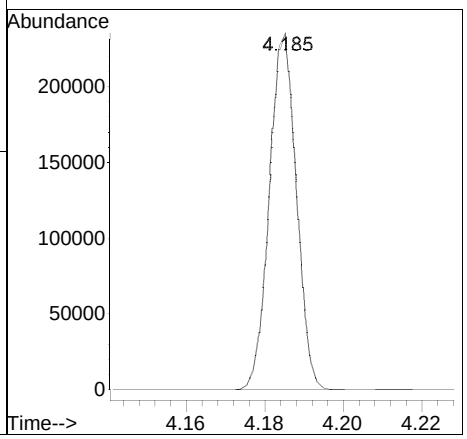


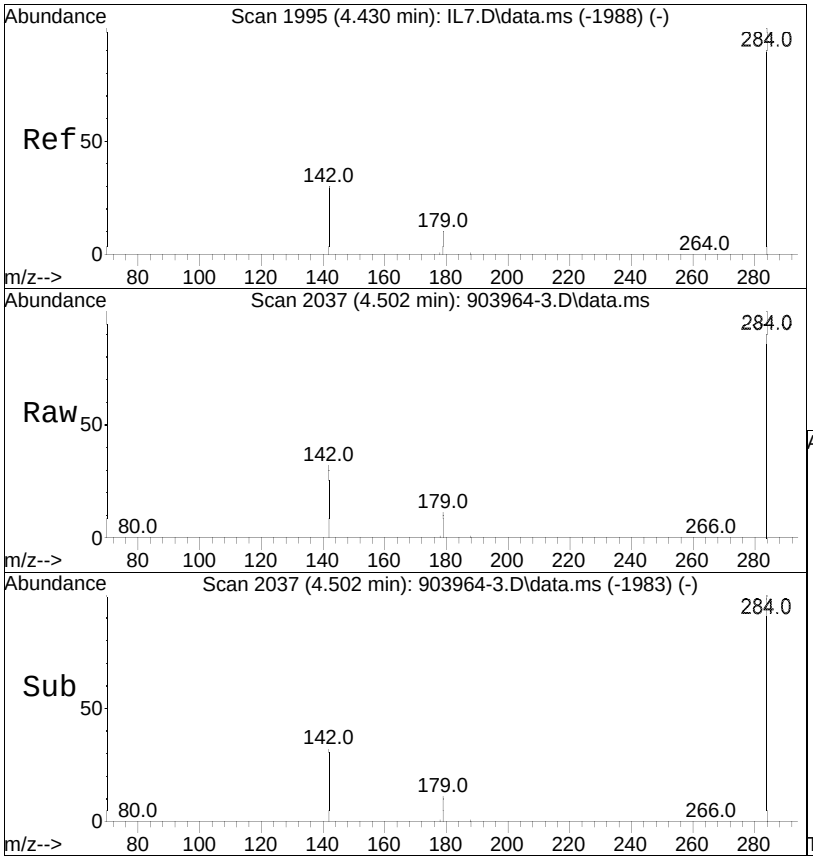


#20
Fluorene
Concen: 3244.72 ng/ml
RT: 4.185 min Scan# 1847
Delta R.T. -0.003 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:166 Resp: 111952

Ion	Ratio	Lower	Upper
166	100		
165	100.2	82.9	124.3

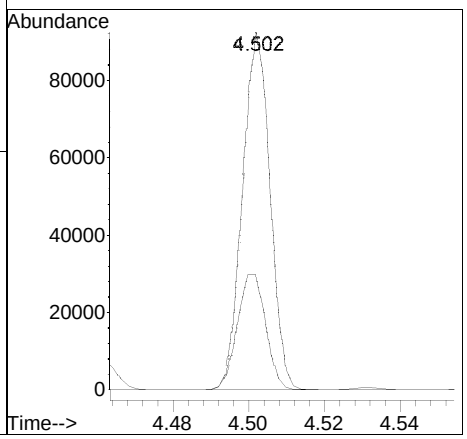


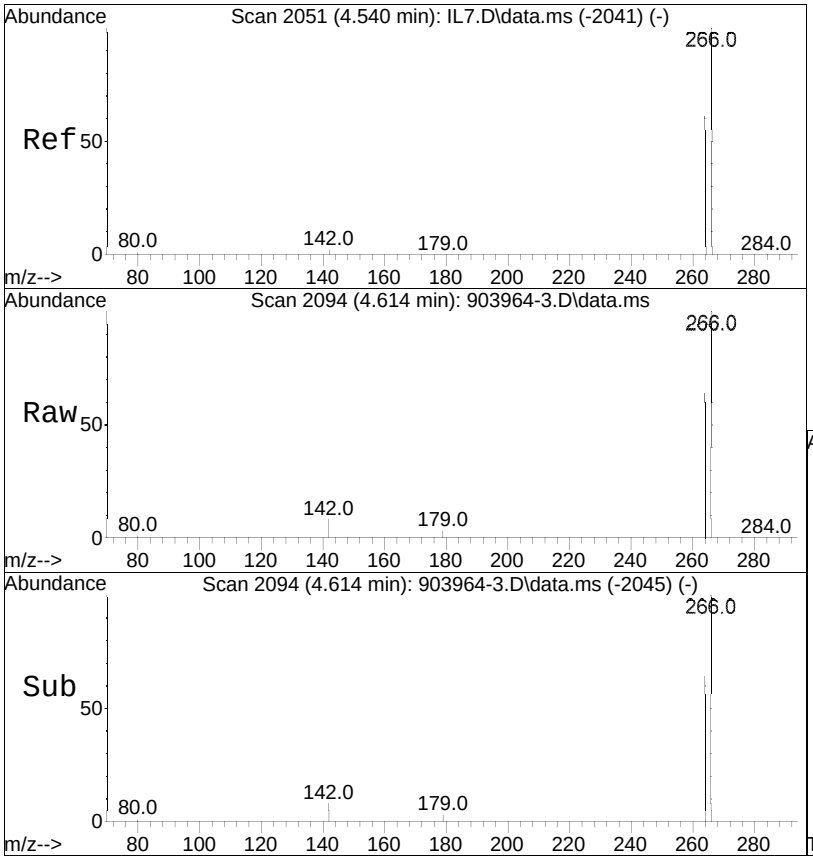


#24
Hexachlorobenzene
Concen: 3712.36 ng/ml
RT: 4.502 min Scan# 2037
Delta R.T. -0.004 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:284 Resp: 46009

Ion	Ratio	Lower	Upper
284	100		
142	33.6	26.9	40.3

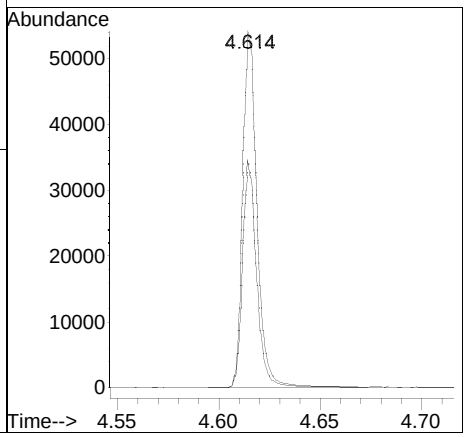


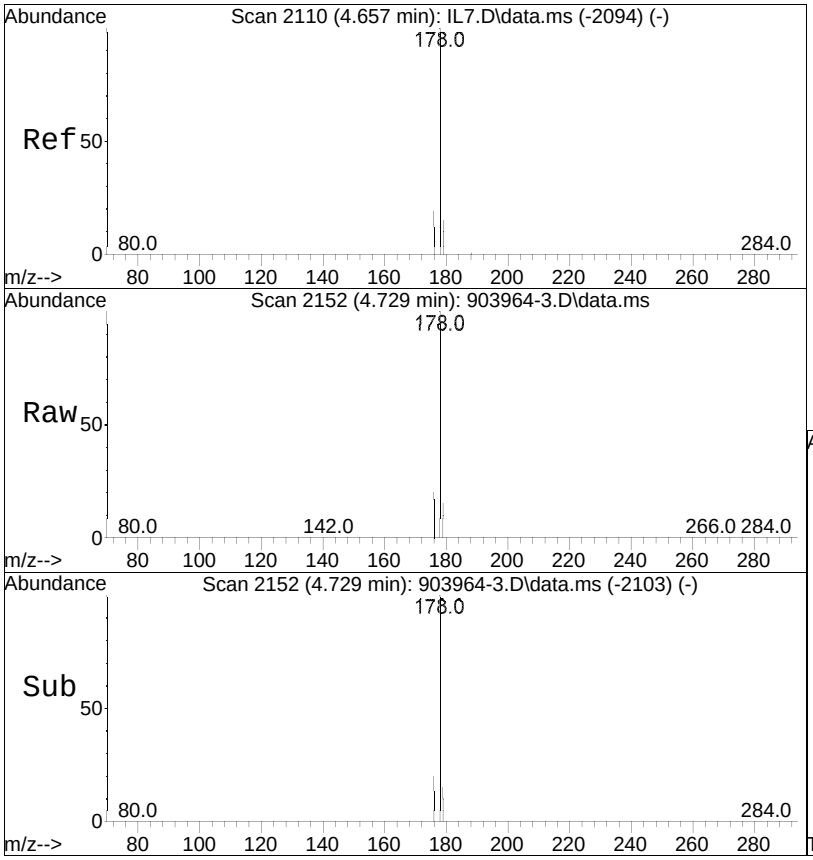


#25
Pentachlorophenol
Concen: 3322.78 ng/ml
RT: 4.614 min Scan# 2094
Delta R.T. -0.004 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:266 Resp: 26266

Ion	Ratio	Lower	Upper
266	100		
264	63.0	50.7	76.1

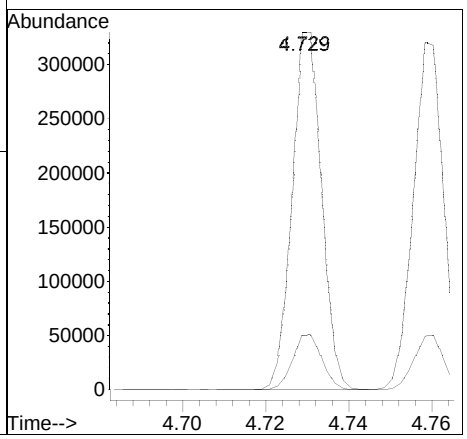


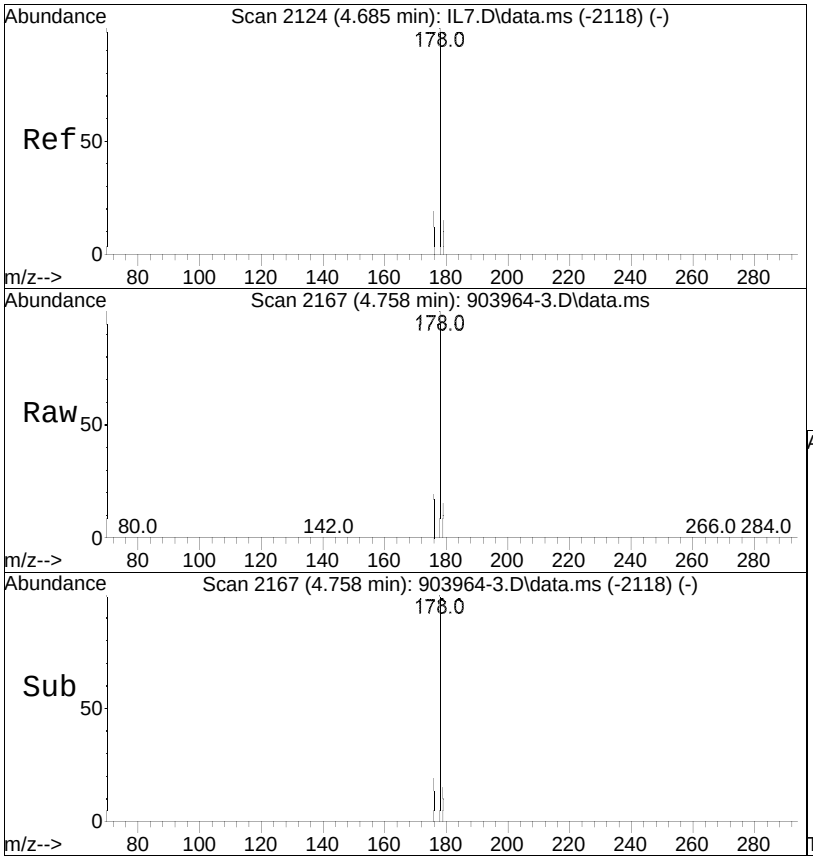


#26
Phenanthrene
Concen: 3343.50 ng/ml
RT: 4.729 min Scan# 2152
Delta R.T. -0.004 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:178 Resp: 162819

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.3	18.5

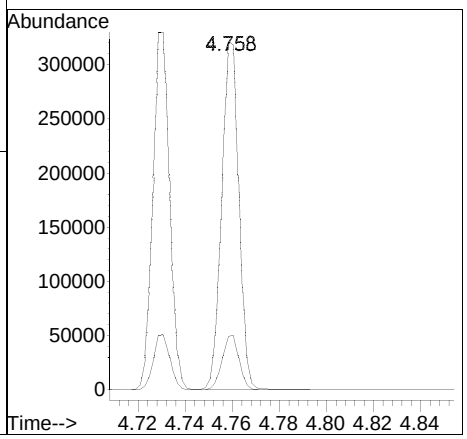


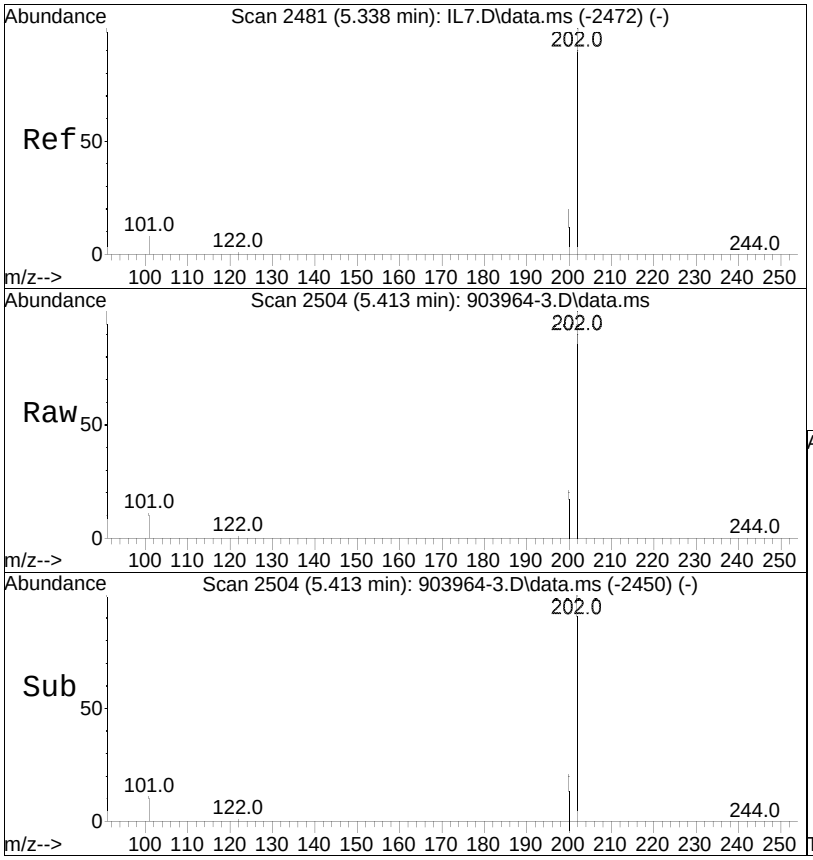


#27
Anthracene
Concen: 3374.24 ng/ml
RT: 4.758 min Scan# 2167
Delta R.T. -0.004 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:178 Resp: 162946

Ion	Ratio	Lower	Upper
178	100		
179	15.3	12.2	18.4

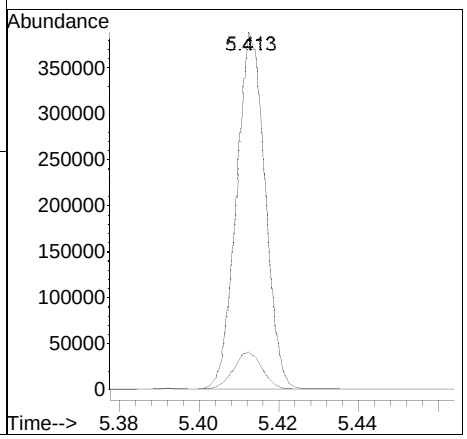


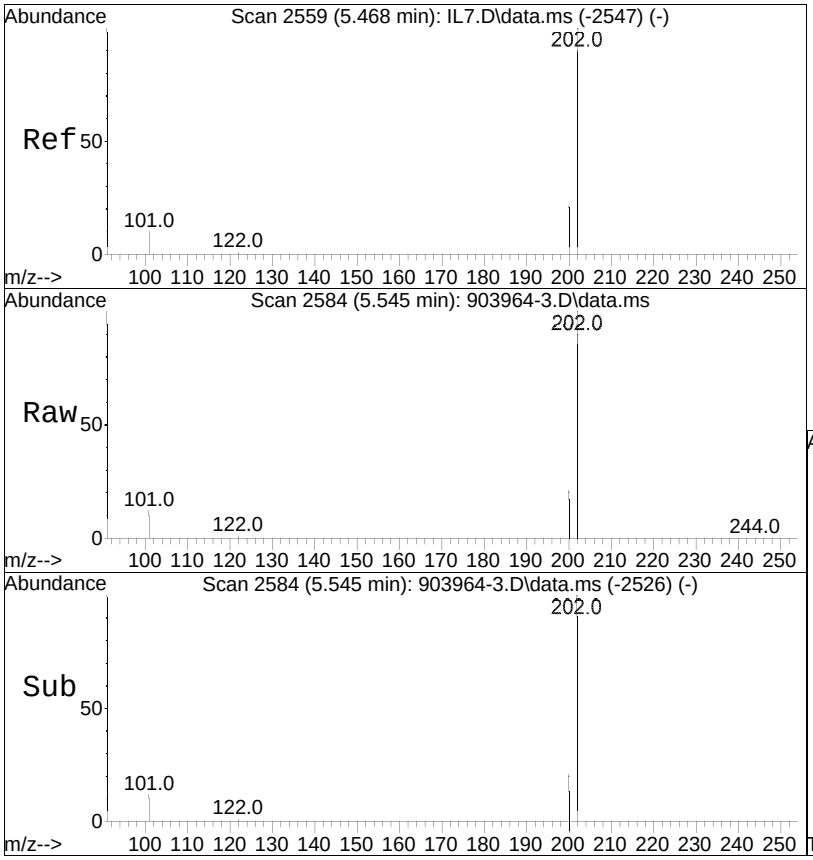


#28
Fluoranthene
Concen: 2997.14 ng/ml
RT: 5.413 min Scan# 2504
Delta R.T. -0.005 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:202 Resp: 192359

Ion	Ratio	Lower	Upper
202	100		
101	10.7	8.3	12.5

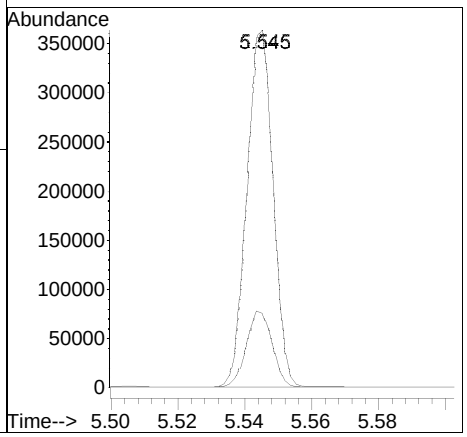


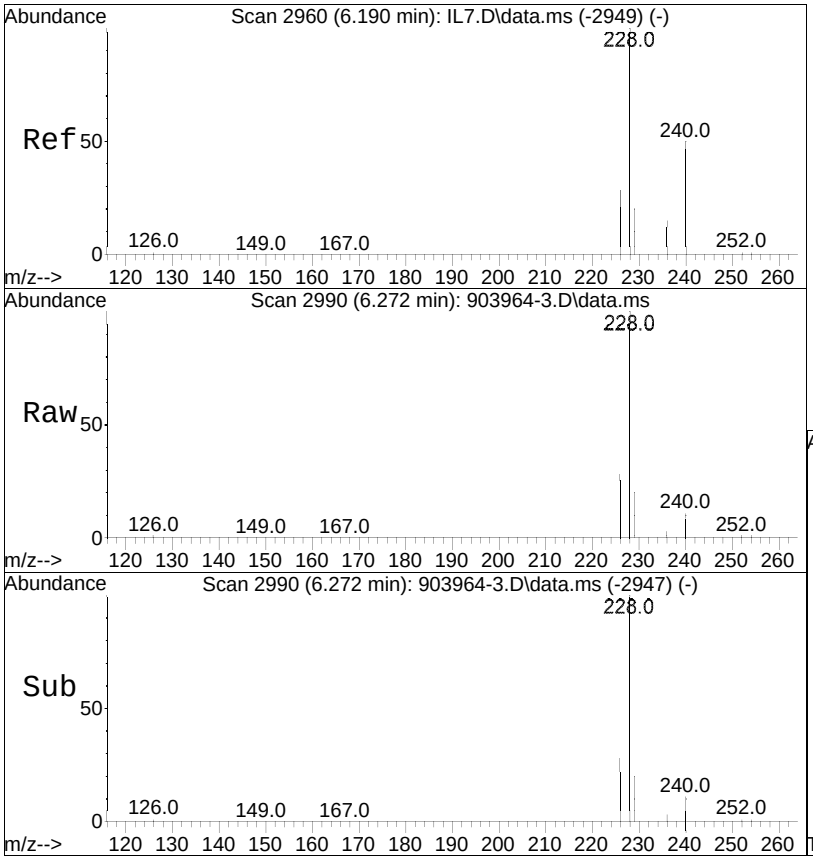


#29
Pyrene
Concen: 2965.73 ng/ml
RT: 5.545 min Scan# 2584
Delta R.T. -0.003 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:202 Resp: 195550

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

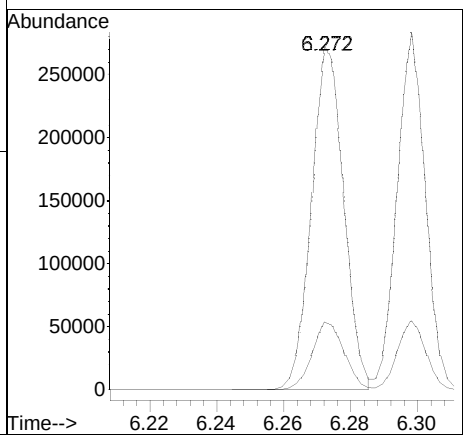


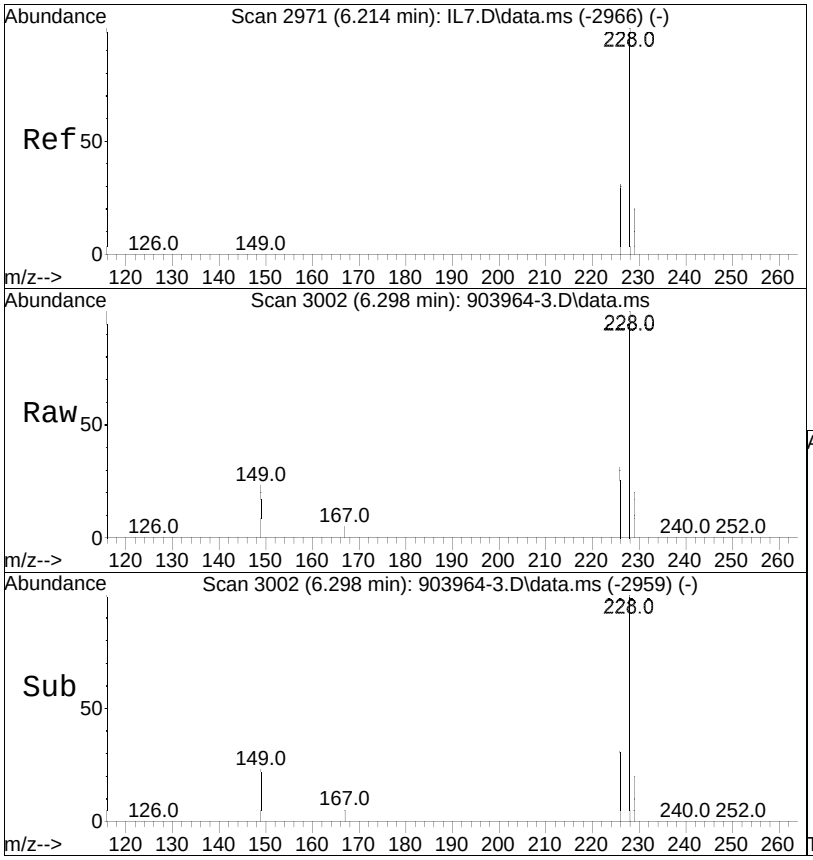


#32
Benzo[a]anthracene
Concen: 3774.42 ng/ml
RT: 6.272 min Scan# 2990
Delta R.T. -0.008 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:228 Resp: 181689

Ion	Ratio	Lower	Upper
228	100		
229	19.6	15.6	23.4

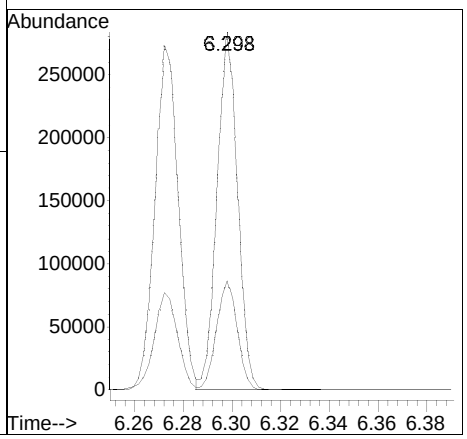


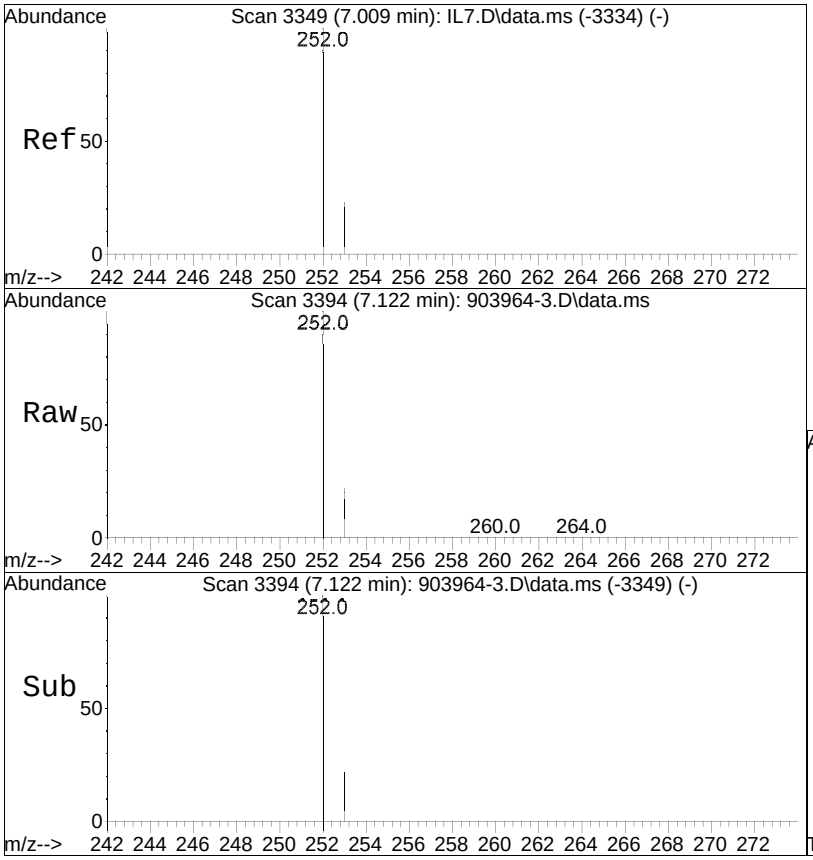


#34
Chrysene
Concen: 3480.85 ng/ml
RT: 6.298 min Scan# 3002
Delta R.T. -0.008 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:228 Resp: 166179

Ion	Ratio	Lower	Upper
228	100		
226	30.8	24.5	36.7

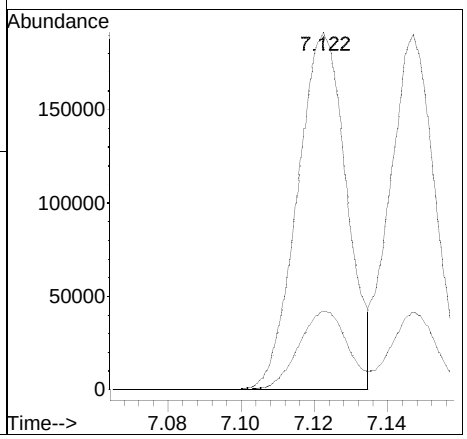


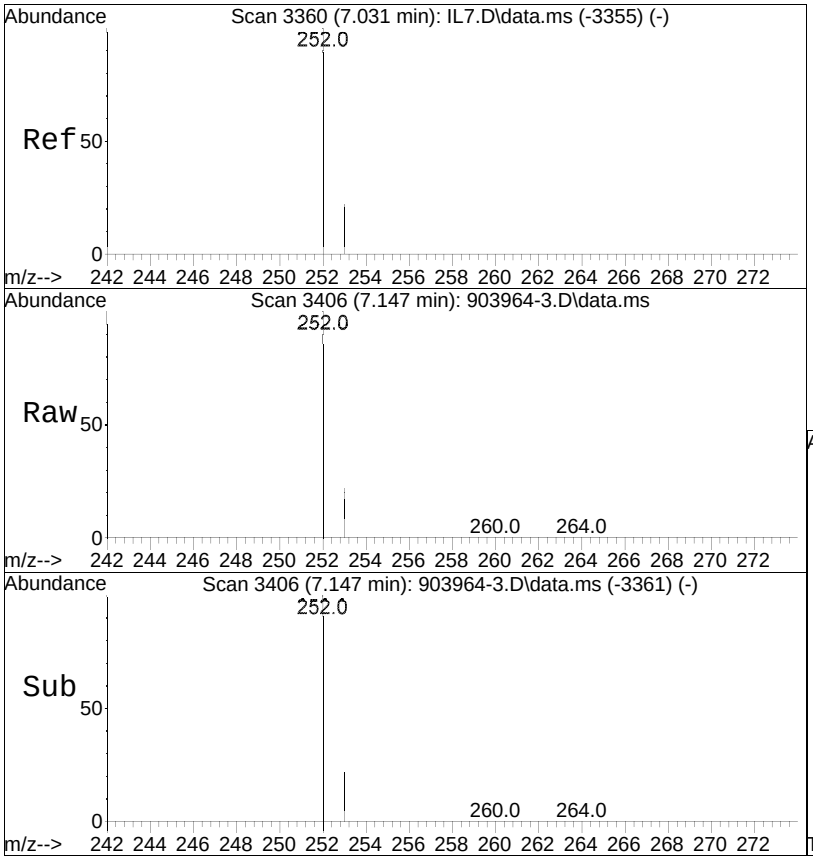


#37
Benzo[b]fluoranthene
Concen: 3321.24 ng/ml
RT: 7.122 min Scan# 3394
Delta R.T. -0.007 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:252 Resp: 179341

Ion	Ratio	Lower	Upper
252	100		
253	21.9	17.3	25.9

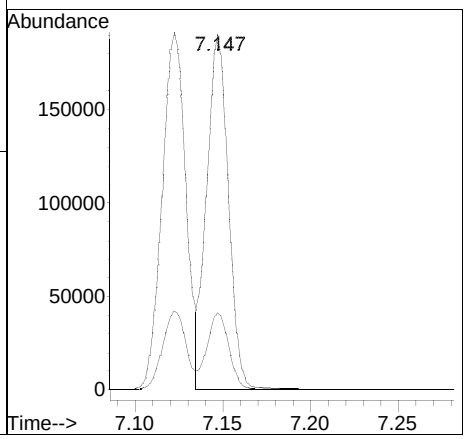


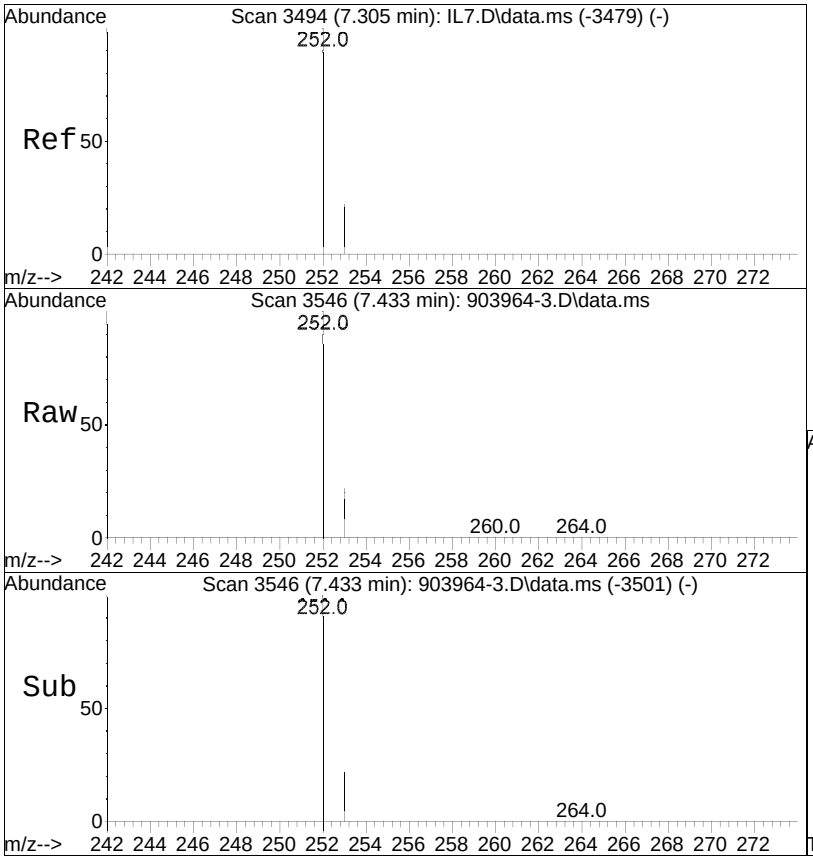


#38
Benzo[k]fluoranthene
Concen: 3172.94 ng/ml
RT: 7.147 min Scan# 3406
Delta R.T. -0.007 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:252 Resp: 162691

Ion	Ratio	Lower	Upper
252	100		
253	22.0	17.4	26.2

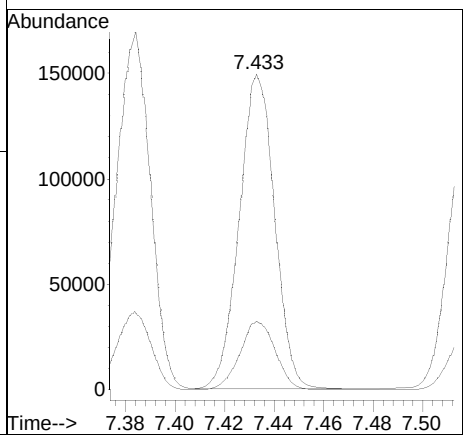


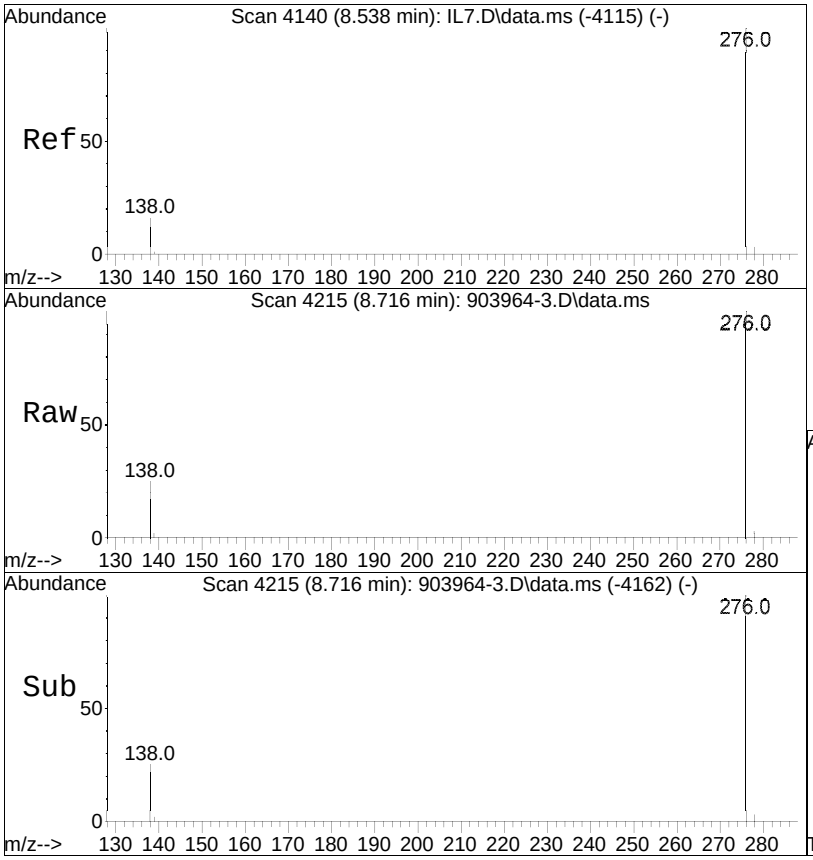


#39
Benzo[a]pyrene
Concen: 3102.33 ng/ml
RT: 7.433 min Scan# 3546
Delta R.T. -0.007 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:252 Resp: 147454

Ion	Ratio	Lower	Upper
252	100		
253	21.7	17.4	26.0

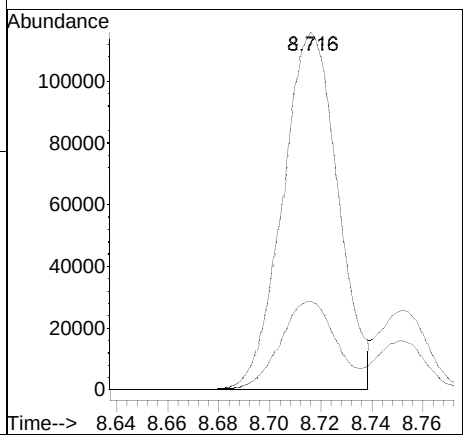


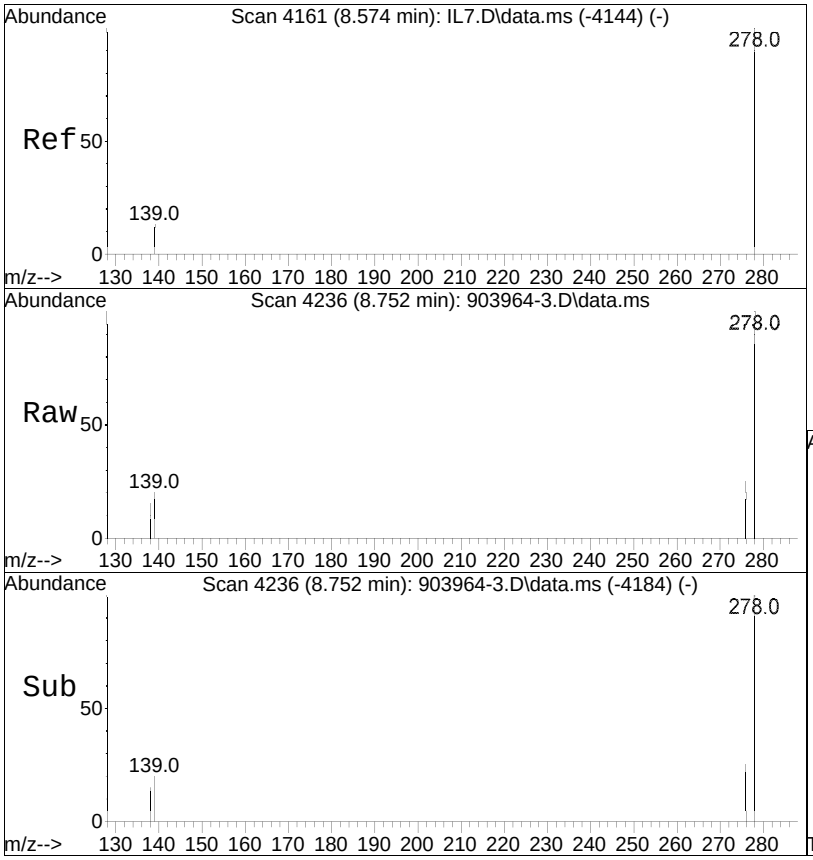


#40
Indeno[1,2,3-cd]pyrene
Concen: 3336.28 ng/ml
RT: 8.716 min Scan# 4215
Delta R.T. -0.008 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:276 Resp: 172343

Ion	Ratio	Lower	Upper
276	100		
138	25.0	14.8	22.2#

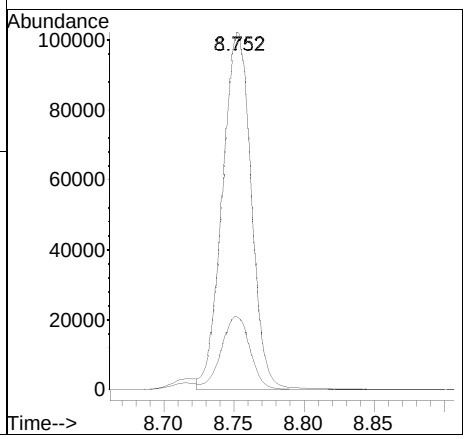


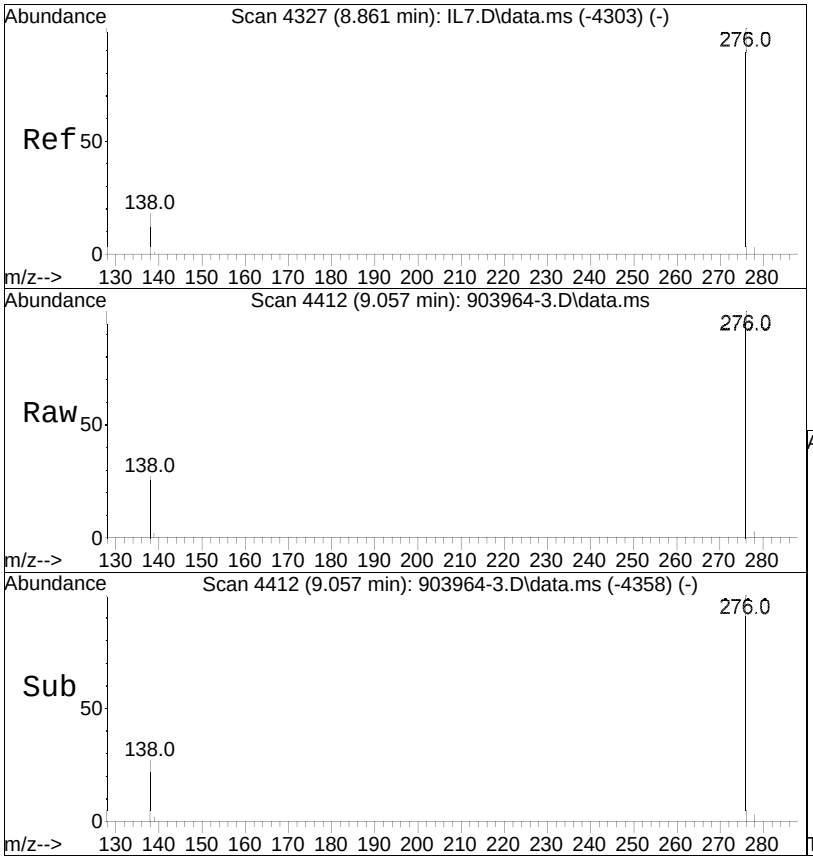


#41
Dibenzo[a,h]anthracene
Concen: 3013.45 ng/ml
RT: 8.752 min Scan# 4236
Delta R.T. -0.010 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:278 Resp: 144831

Ion	Ratio	Lower	Upper
278	100		
139	20.5	12.2	18.4#

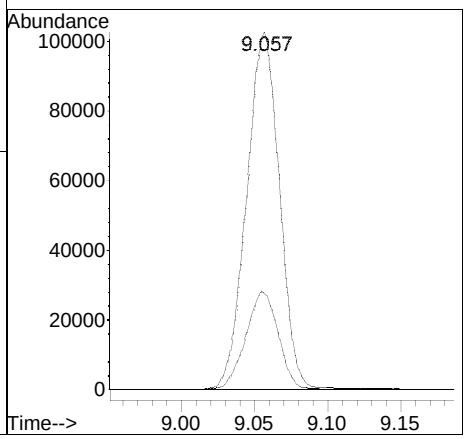




#42
Benzo[g,h,i]perylene
Concen: 3007.02 ng/ml
RT: 9.057 min Scan# 4412
Delta R.T. -0.006 min
Lab File: 903964-3.D
Acq: 03 Apr 2024 08:00 am

Tgt Ion:276 Resp: 158005

Ion	Ratio	Lower	Upper
276	100		
138	27.2	16.8	25.2#



Manual Integration Report

Data Path	: I:\8270SIM\sv119\240403LVI	QMethod	: SIM-LVI_231207n_sv119.M
Data File	: 903964-3.D	Operator	: sv119:ah
Date Inj'd	: 4/3/2024 8:00 am	Instrument	: SV119
Sample	: WG1903964-3,32,,ah	Quant Date	: 4/3/2024 8:17 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-4.D
Acq On : 03 Apr 2024 08:34 am
Operator : sv119:ah
Sample : WG1903964-4,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 03 08:49:16 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.228	152	57012	4000.000	ng/ml	0.00
Standard Area 1 = 53851			Recovery = 105.87%			
8) Naphthalene-d8	2.896	136	190510	4000.000	ng/ml	0.00
Standard Area 1 = 173620			Recovery = 109.73%			
17) Acenaphthene-d10	3.876	164	95066	4000.000	ng/ml	0.00
Standard Area 1 = 87313			Recovery = 108.88%			
22) Phenanthrene-d10	4.717	188	192656	4000.000	ng/ml	0.00
Standard Area 1 = 180904			Recovery = 106.50%			
31) Chrysene-d12	6.279	240	141949	4000.000	ng/ml	-0.01
Standard Area 1 = 149911			Recovery = 94.69%			
36) Perylene-d12	7.492	264	143005	4000.000	ng/ml	0.00
Standard Area 1 = 170346			Recovery = 83.95%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.633	112	46461	2979.466	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 59.59%			
3) Phenol-d6	2.047	99	48542	2596.926	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 51.94%			
7) Nitrobenzene-d5	2.509	82	25441	1794.307	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 71.77%			
13) 2-Fluorobiphenyl	3.496	172	58549	1376.061	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 55.04%			
21) 2,4,6-Tribromophenol	4.323	330	22485	4290.097	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 85.80%			
30) 4-Terphenyl-d14	5.638	244	45654	966.655	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 38.67%			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.088	93	47588	2993.614	ng/ml#	81
5) n-nitrosodi-n-propylamine	2.427	70	33323	3504.944	ng/ml	97
6) Hexachloroethane	2.490	117	21409	3035.545	ng/ml	91
9) Naphthalene	2.907	128	159829	3513.500	ng/ml	100
10) Hexachlorobutadiene	2.981	225	32220	3288.885	ng/ml	99
11) 2-Methylnaphthalene	3.289	142	100288	2981.677	ng/ml	97
12) 1-Methylnaphthalene	3.345	142	88848	2864.533	ng/ml	97
14) 2-Chloronaphthalene	3.561	162	102433	2859.026	ng/ml	92
15) 2,6-Dinitrotoluene	3.755	165	26671	3296.707	ng/ml	91
16) Acenaphthylene	3.794	152	148654	2792.025	ng/ml	100
18) Acenaphthene	3.894	153	94873	3228.165	ng/ml	97

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-4.D
Acq On : 03 Apr 2024 08:34 am
Operator : sv119:ah
Sample : WG1903964-4,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 03 08:49:16 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.982	165	35802	4085.900	ng/ml#	75
20) Fluorene	4.185	166	110891	3156.669	ng/ml	97
23) 4,6-Dinitro-o-cresol	4.213	198	19949	3474.442	ng/ml	93
24) Hexachlorobenzene	4.502	284	46021	3695.054	ng/ml	100
25) Pentachlorophenol	4.616	266	31588	3974.099	ng/ml	99
26) Phenanthrene	4.731	178	161542	3300.954	ng/ml	100
27) Anthracene	4.758	178	152723	3146.980	ng/ml	100
28) Fluoranthene	5.412	202	186234	2887.427	ng/ml	99
29) Pyrene	5.544	202	184850	2789.660	ng/ml	99
32) Benzo[a]anthracene	6.272	228	172633	3654.267	ng/ml	100
33) 3,3'-Dichlorobenzidine	6.262	252	10612	494.836	ng/ml#	98
34) Chrysene	6.296	228	145344	3102.424	ng/ml	100
35) Bis(2-ethylhexyl)phtha...	6.302	149	140668	4409.522	ng/ml	99
37) Benzo[b]fluoranthene	7.120	252	158048	3163.513	ng/ml	99
38) Benzo[k]fluoranthene	7.145	252	145626	3069.707	ng/ml	100
39) Benzo[a]pyrene	7.431	252	128589	2924.116	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.714	276	156548	3275.494	ng/ml#	86
41) Dibenzo[a,h]anthracene	8.752	278	128476	2889.241	ng/ml#	89
42) Benzo[g,h,i]perylene	9.057	276	145972	3002.584	ng/ml#	87

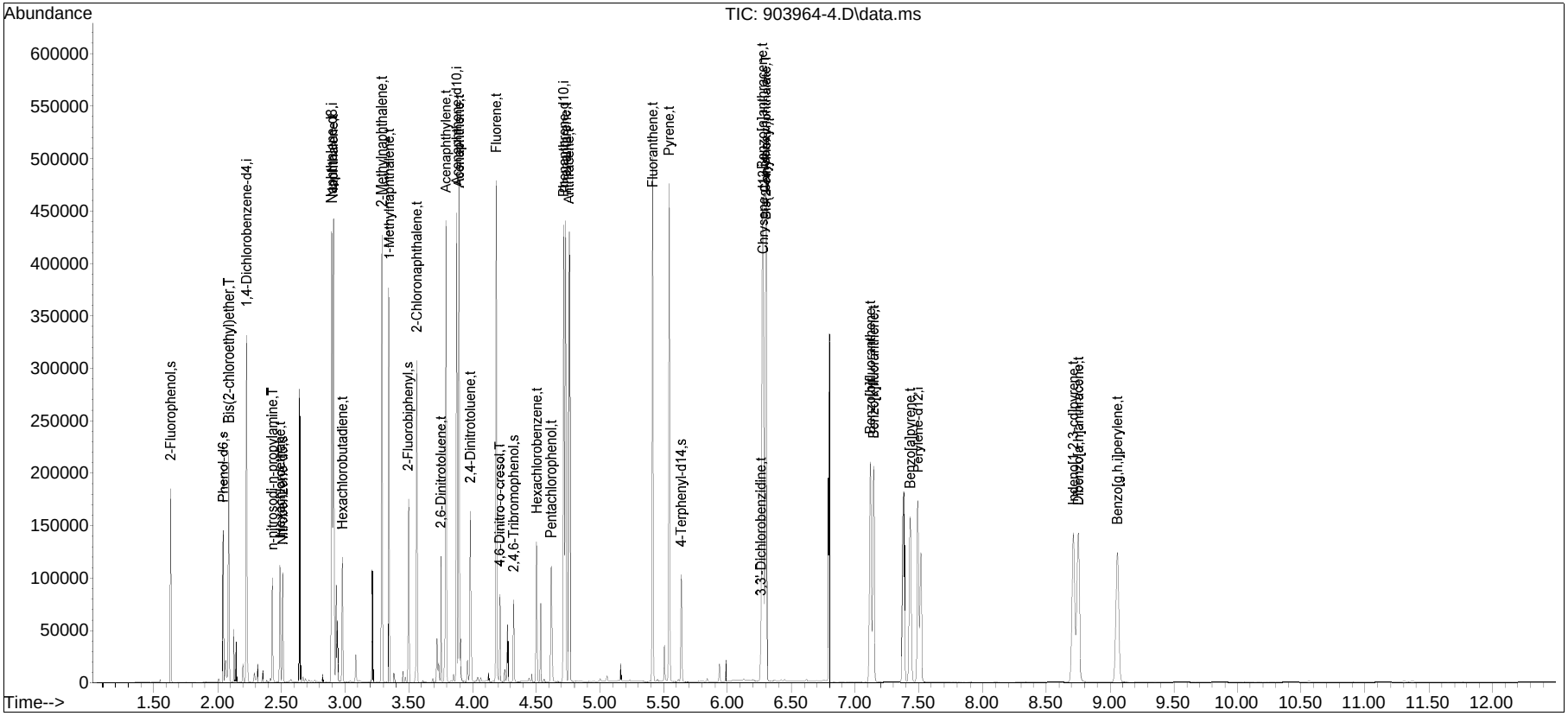
(#) = qualifier out of range (m) = manual integration (+) = signals summed

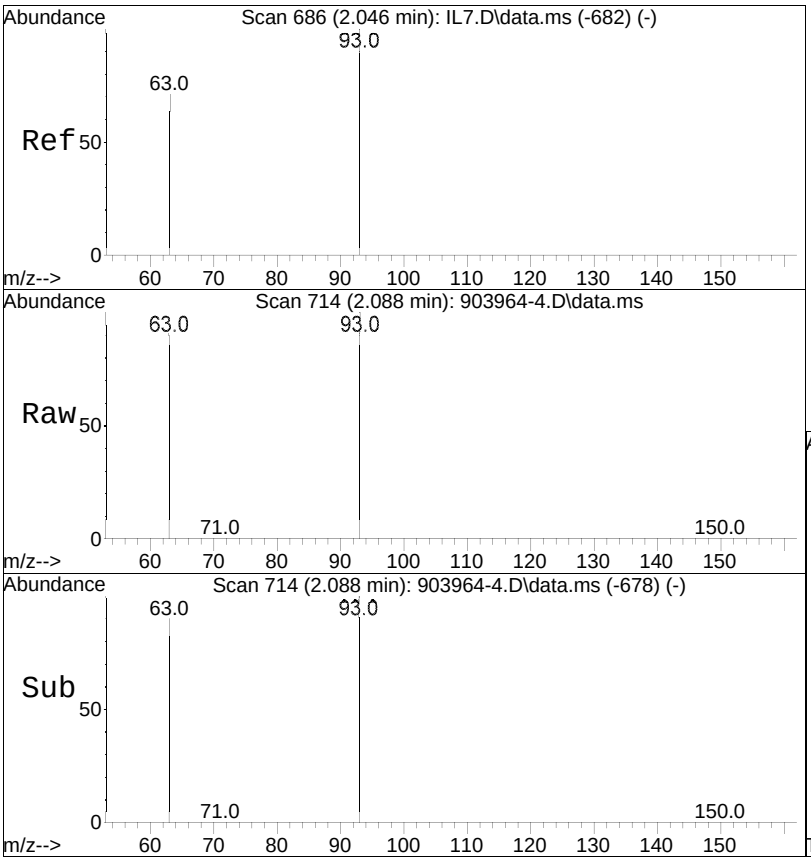
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-4.D
Acq On : 03 Apr 2024 08:34 am
Operator : sv119:ah
Sample : WG1903964-4,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 03 08:49:16 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0403.D•

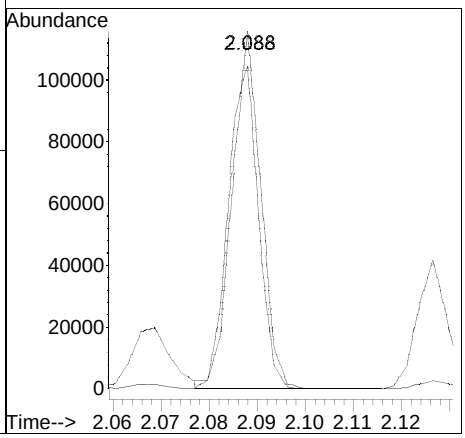


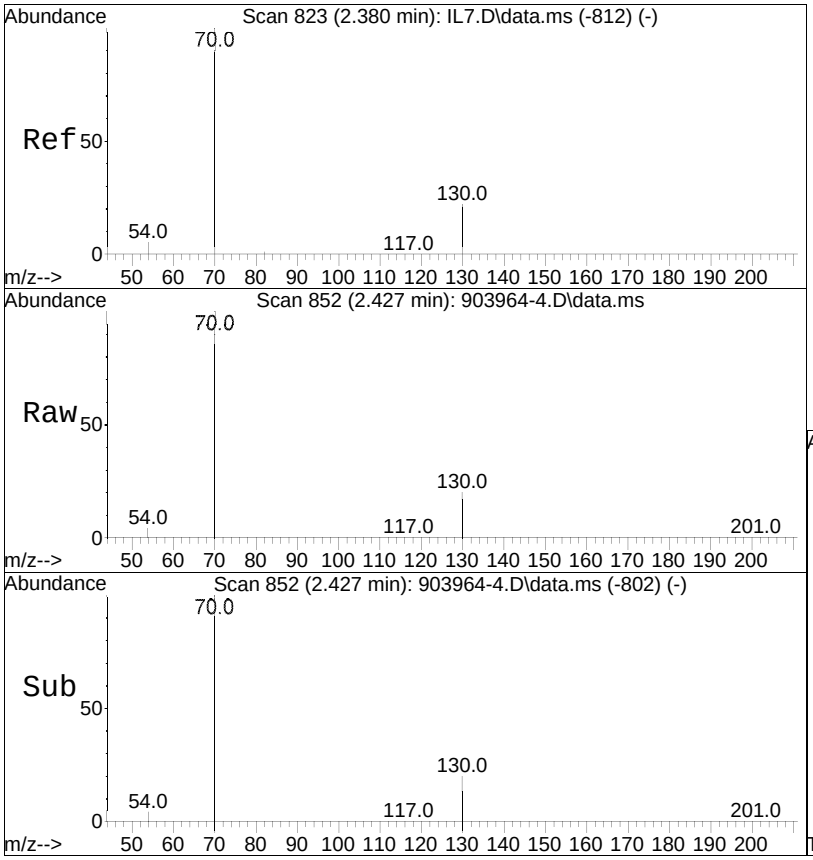


#4
Bis(2-chloroethyl)ether
Concen: 2993.61 ng/ml
RT: 2.088 min Scan# 714
Delta R.T. -0.000 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion: 93 Resp: 47588

Ion	Ratio	Lower	Upper
93	100		
63	94.8	62.6	94.0#

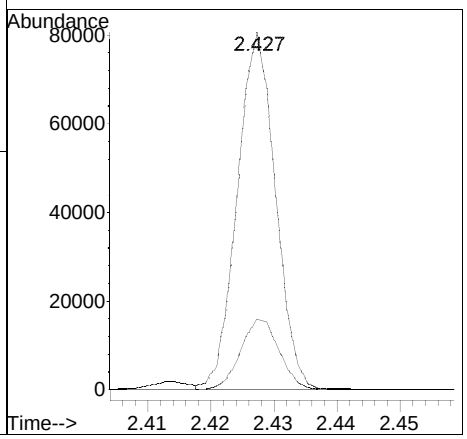


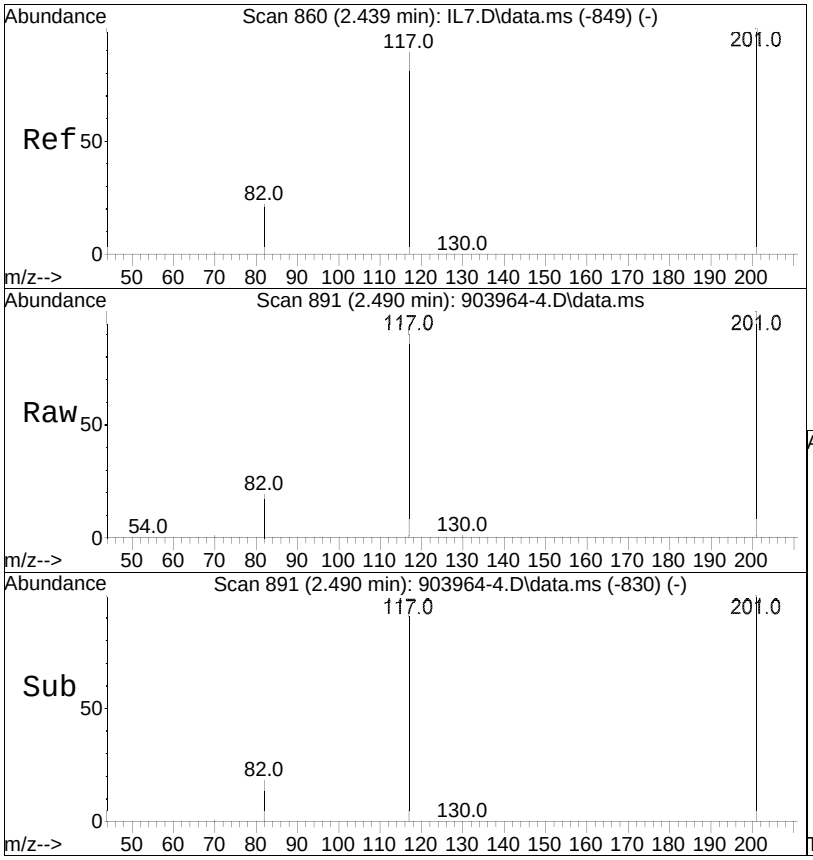


#5
n-nitrosodi-n-propylamine
Concen: 3504.94 ng/ml
RT: 2.427 min Scan# 852
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion: 70 Resp: 33323

Ion	Ratio	Lower	Upper
70	100		
130	20.0	15.0	22.6

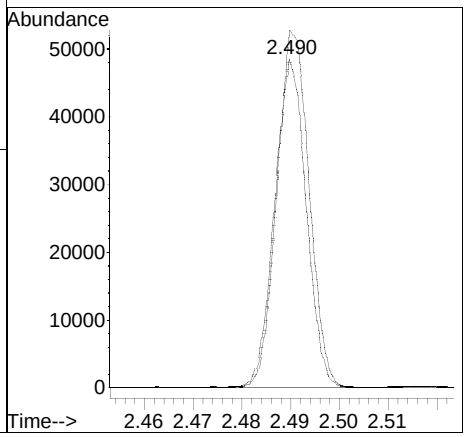


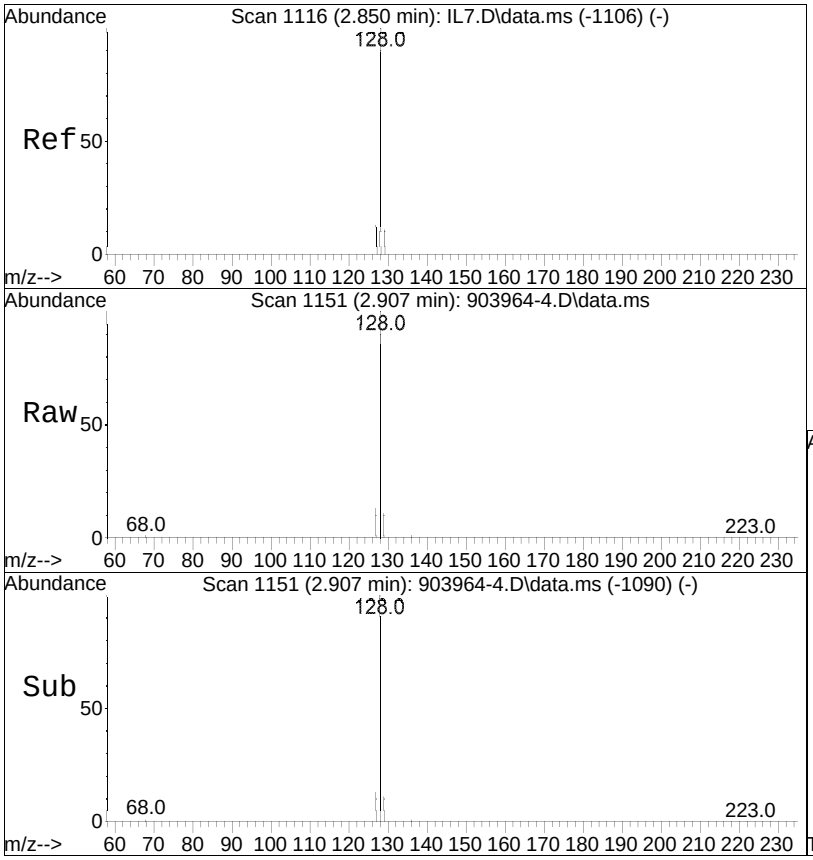


#6
Hexachloroethane
Concen: 3035.55 ng/ml
RT: 2.490 min Scan# 891
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:117 Resp: 21409

Ion	Ratio	Lower	Upper
117	100		
201	111.2	81.5	122.3

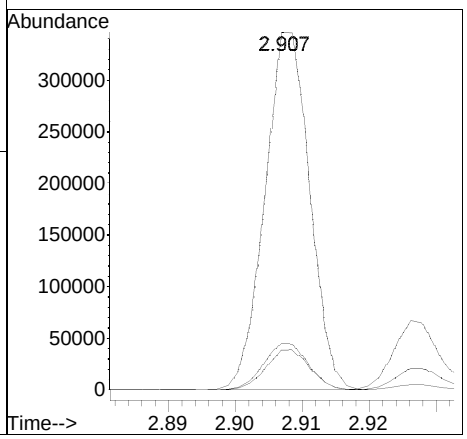


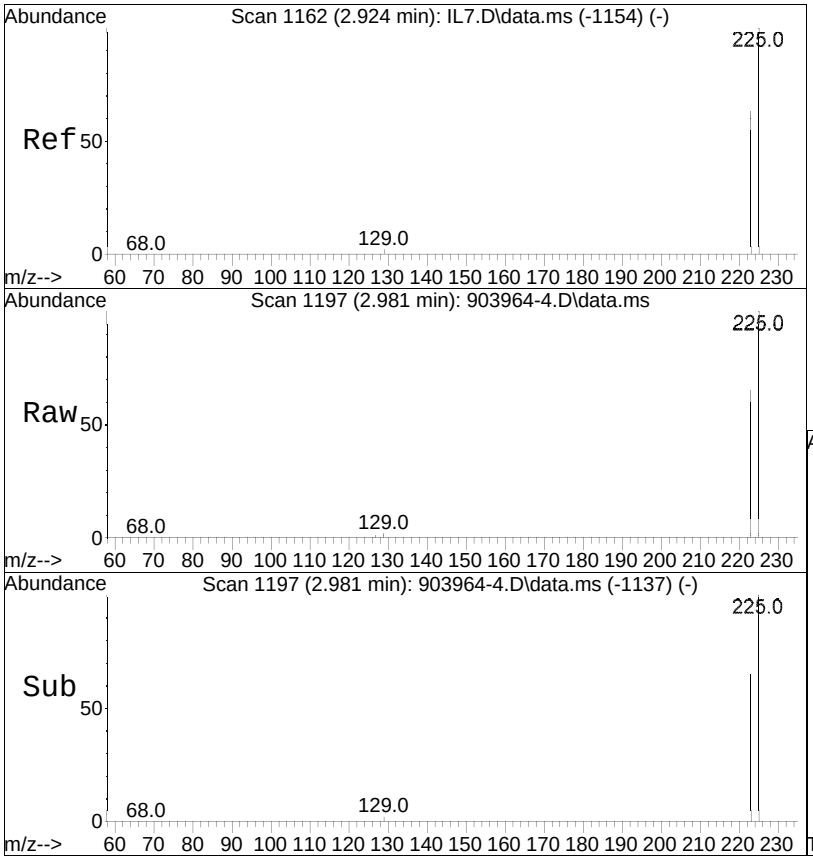


#9
Naphthalene
Concen: 3513.50 ng/ml
RT: 2.907 min Scan# 1151
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:128 Resp: 159829

Ion	Ratio	Lower	Upper
128	100		
129	11.1	8.8	13.2
127	13.1	10.6	15.8

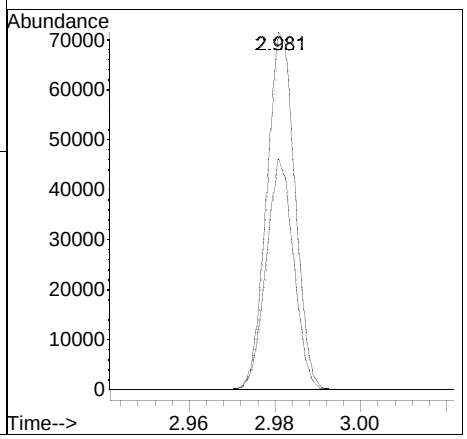


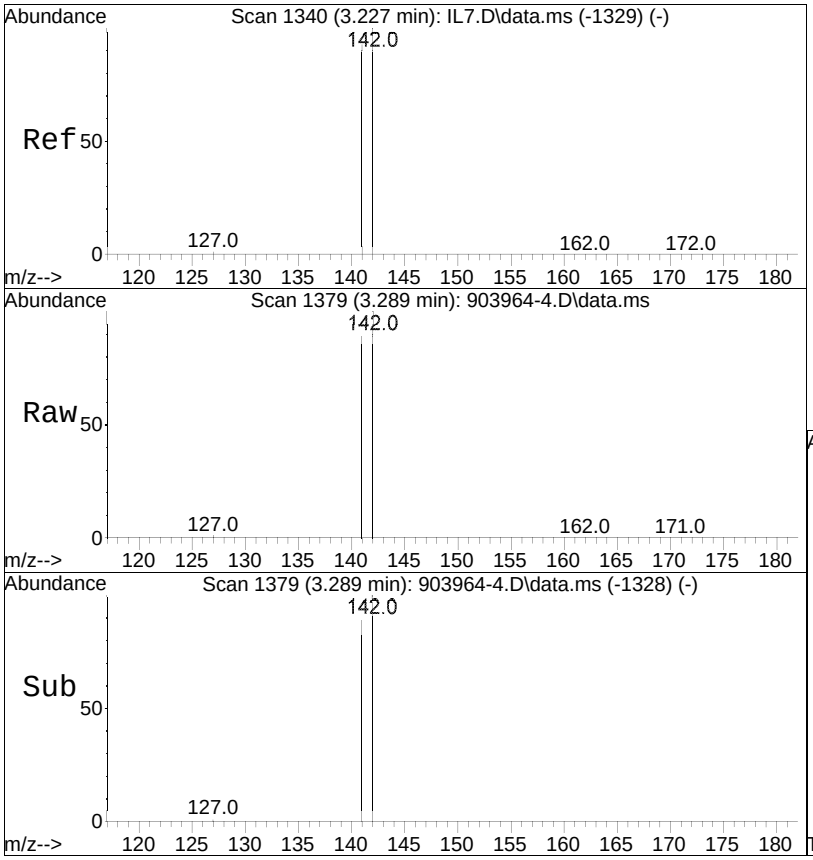


#10
Hexachlorobutadiene
Concen: 3288.89 ng/ml
RT: 2.981 min Scan# 1197
Delta R.T. -0.003 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:225 Resp: 32220

Ion	Ratio	Lower	Upper
225	100		
223	63.0	50.1	75.1

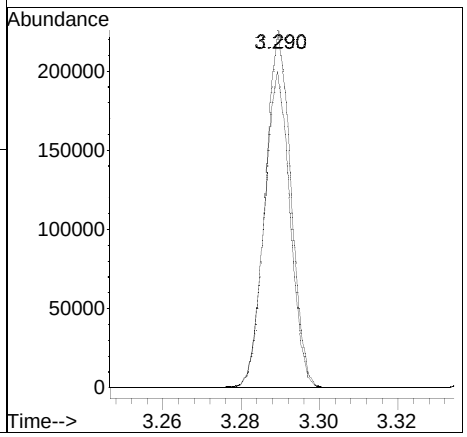


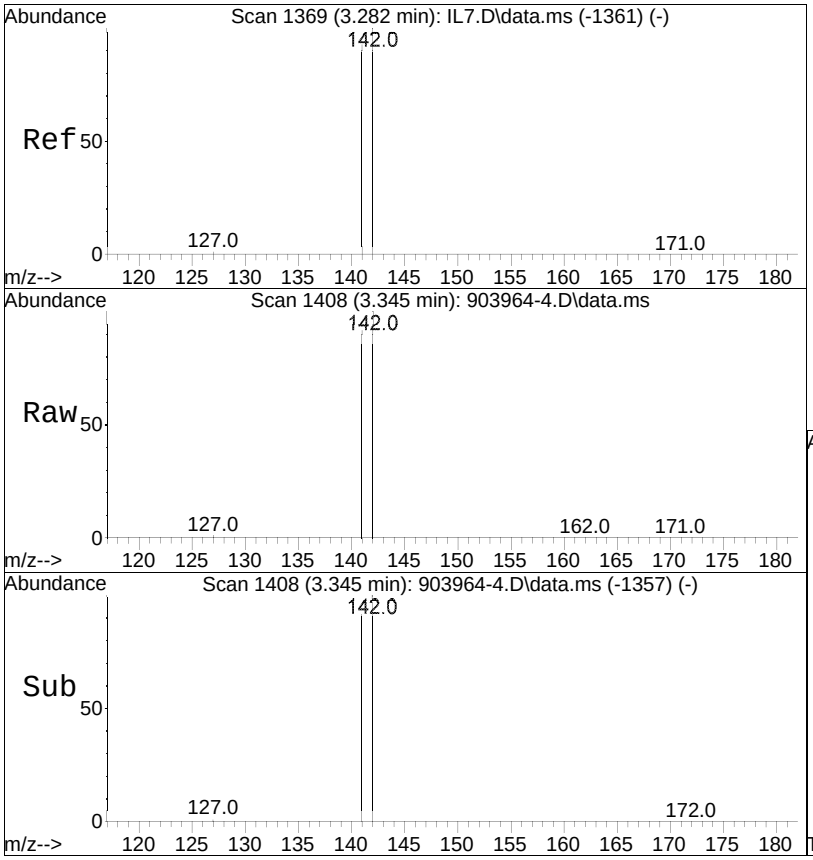


#11
2-Methylnaphthalene
Concen: 2981.68 ng/ml
RT: 3.289 min Scan# 1379
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:142 Resp: 100288

Ion	Ratio	Lower	Upper
142	100		
141	89.6	74.1	111.1

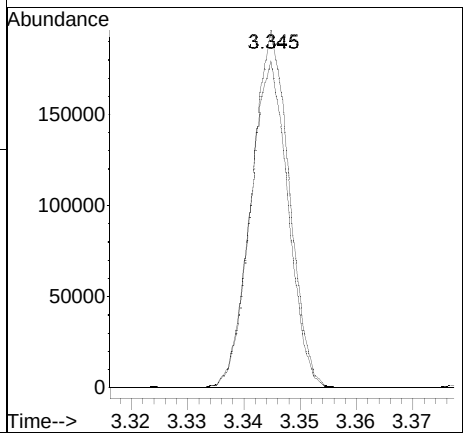


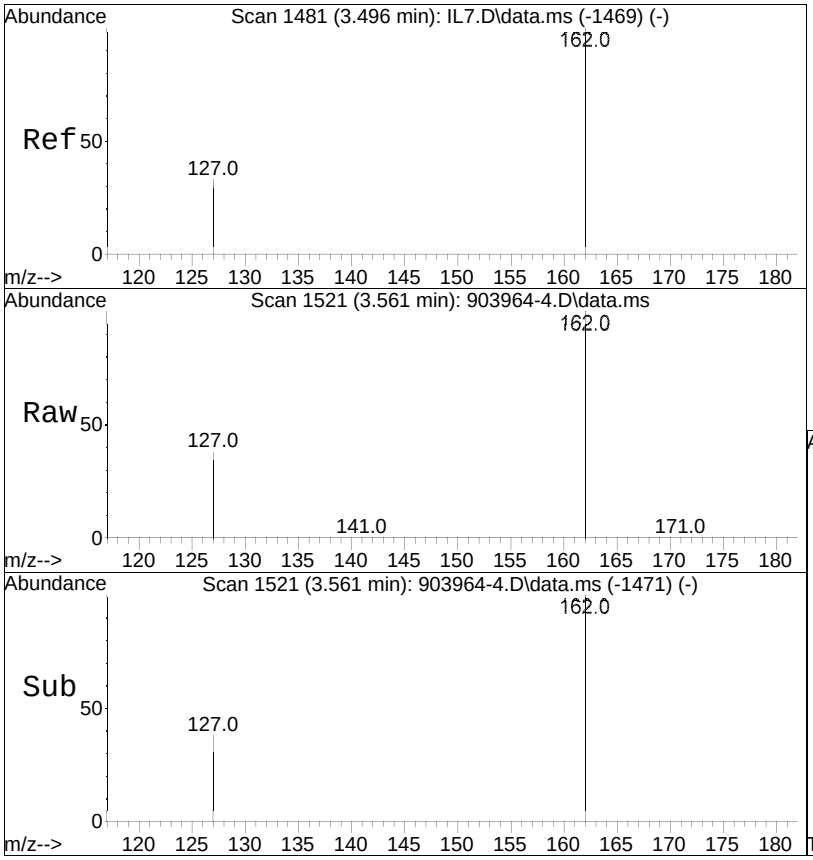


#12
1-Methylnaphthalene
Concen: 2864.53 ng/ml
RT: 3.345 min Scan# 1408
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:142 Resp: 88848

Ion	Ratio	Lower	Upper
142	100		
141	92.5	76.6	114.8

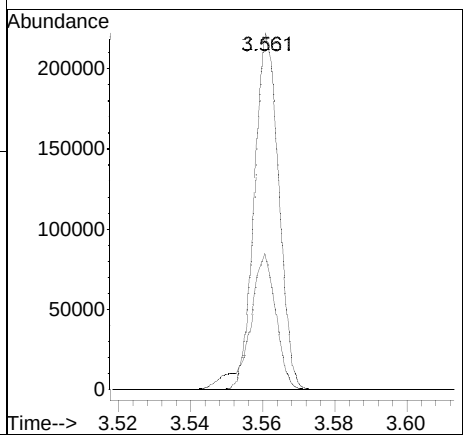


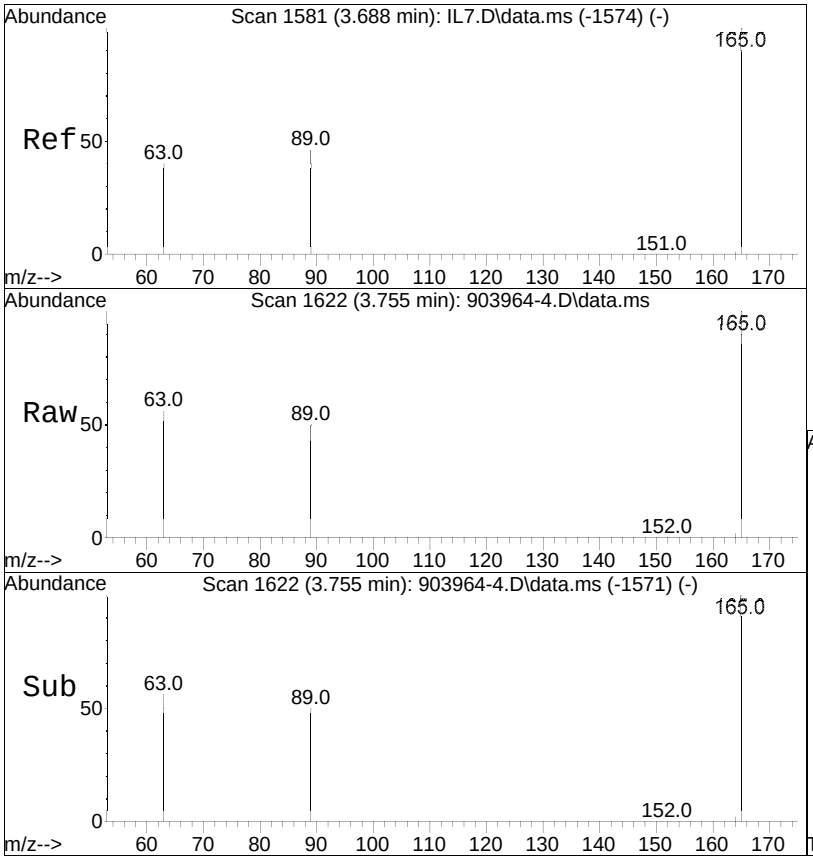


#14
2-Chloronaphthalene
Concen: 2859.03 ng/ml
RT: 3.561 min Scan# 1521
Delta R.T. -0.004 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:162 Resp: 102433

Ion	Ratio	Lower	Upper
162	100		
127	41.6	29.7	44.5

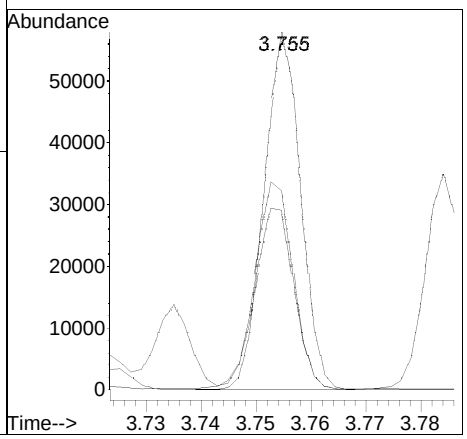


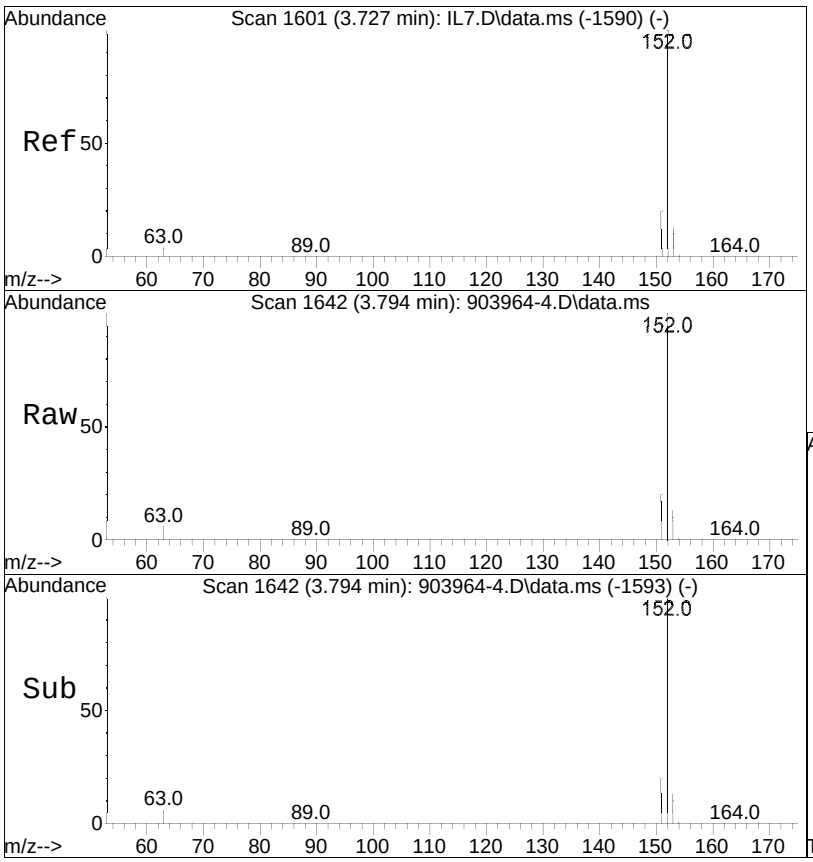


#15
2,6-Dinitrotoluene
Concen: 3296.71 ng/ml
RT: 3.755 min Scan# 1622
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:165 Resp: 26671

Ion	Ratio	Lower	Upper
165	100		
89	55.6	52.8	79.2
63	60.3	50.9	76.3

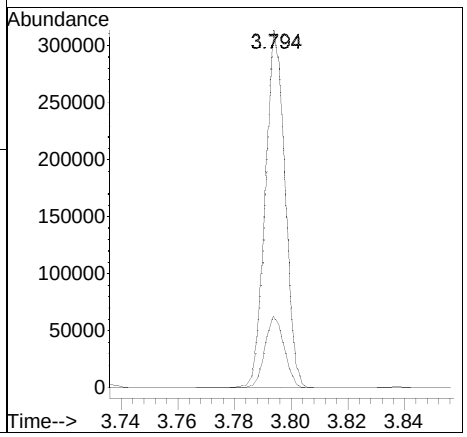


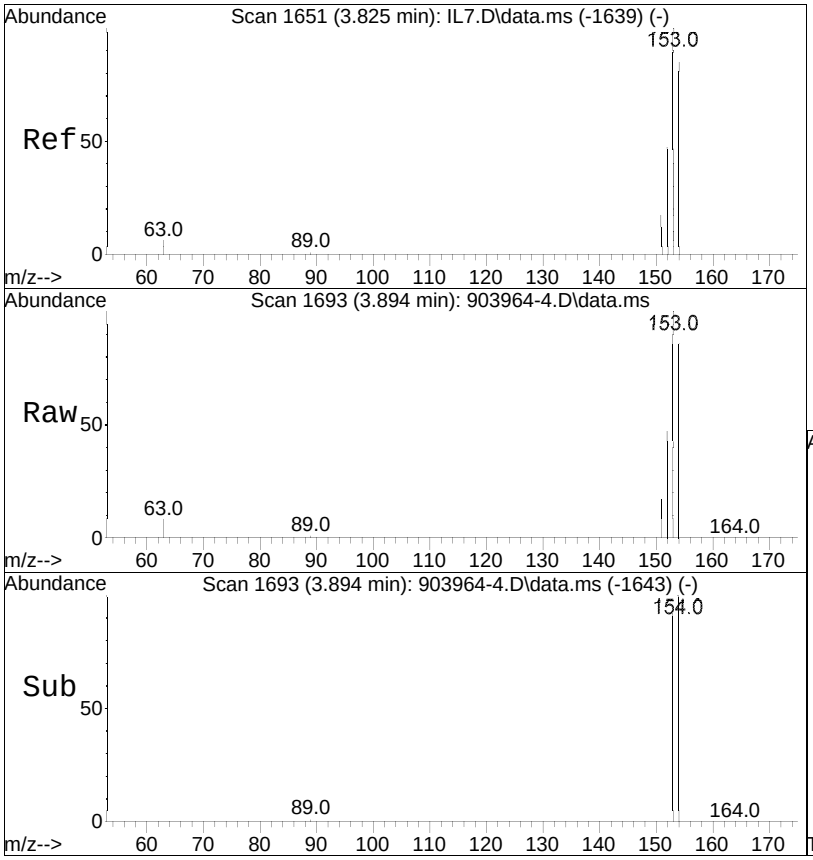


#16
Acenaphthylene
Concen: 2792.03 ng/ml
RT: 3.794 min Scan# 1642
Delta R.T. -0.004 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:152 Resp: 148654

Ion	Ratio	Lower	Upper
152	100		
151	19.8	16.0	24.0

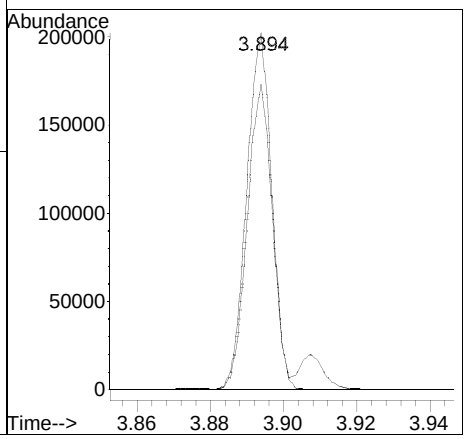


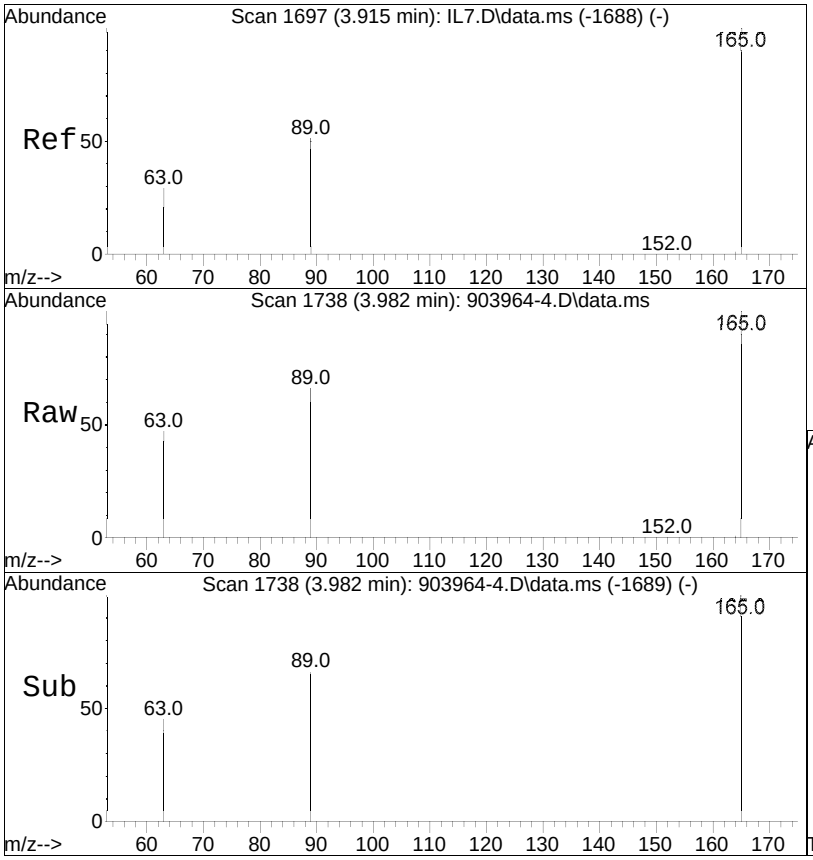


#18
Acenaphthene
Concen: 3228.17 ng/ml
RT: 3.894 min Scan# 1693
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:153 Resp: 94873

Ion	Ratio	Lower	Upper
153	100		
154	86.5	66.9	100.3

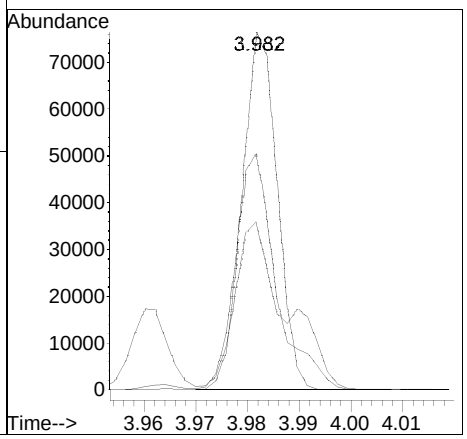


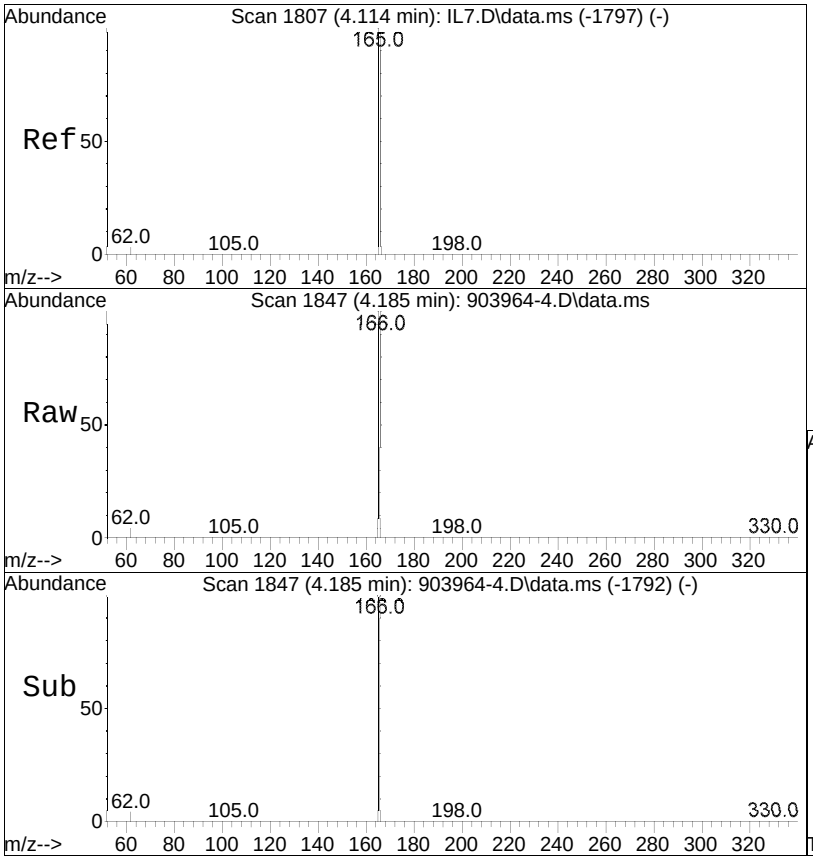


#19
2,4-Dinitrotoluene
Concen: 4085.90 ng/ml
RT: 3.982 min Scan# 1738
Delta R.T. -0.004 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:165 Resp: 35802

Ion	Ratio	Lower	Upper
165	100		
89	75.9	80.1	120.1#
63	67.0	38.9	58.3#

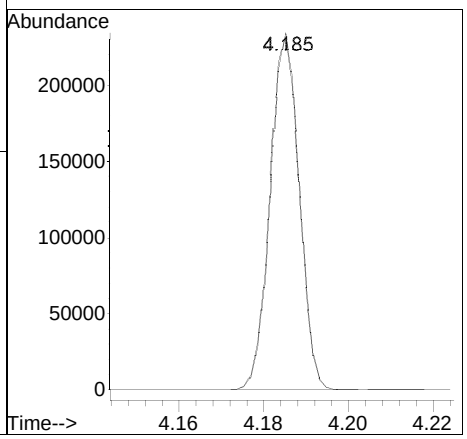


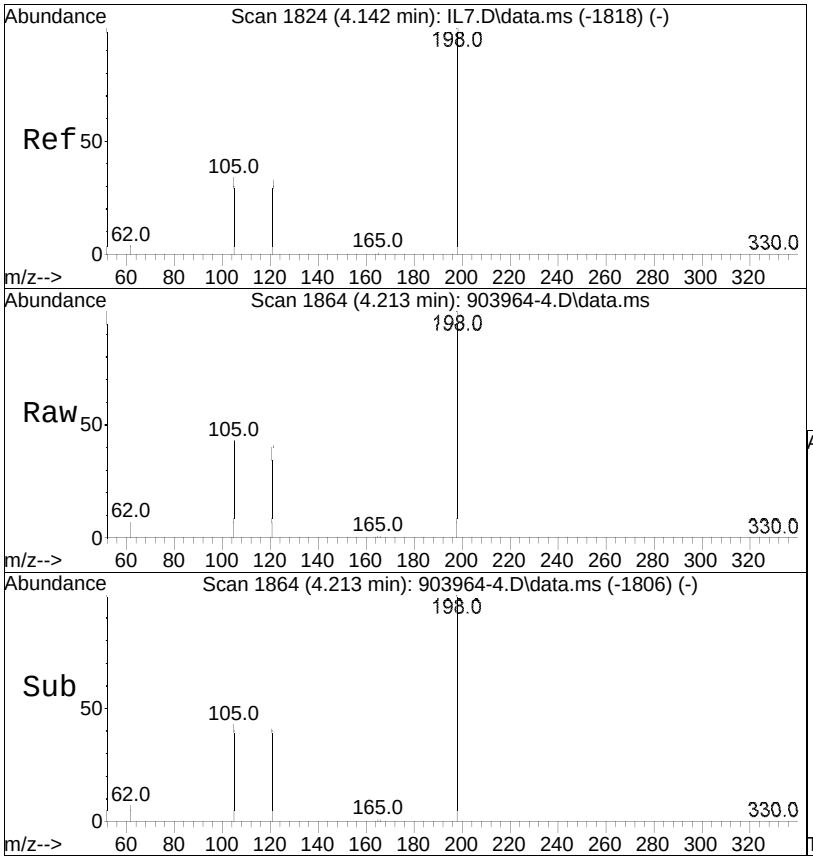


#20
Fluorene
Concen: 3156.67 ng/ml
RT: 4.185 min Scan# 1847
Delta R.T. -0.003 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:166 Resp: 110891

Ion	Ratio	Lower	Upper
166	100		
165	100.3	82.9	124.3

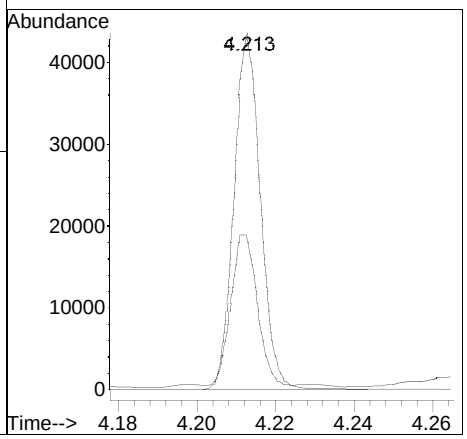


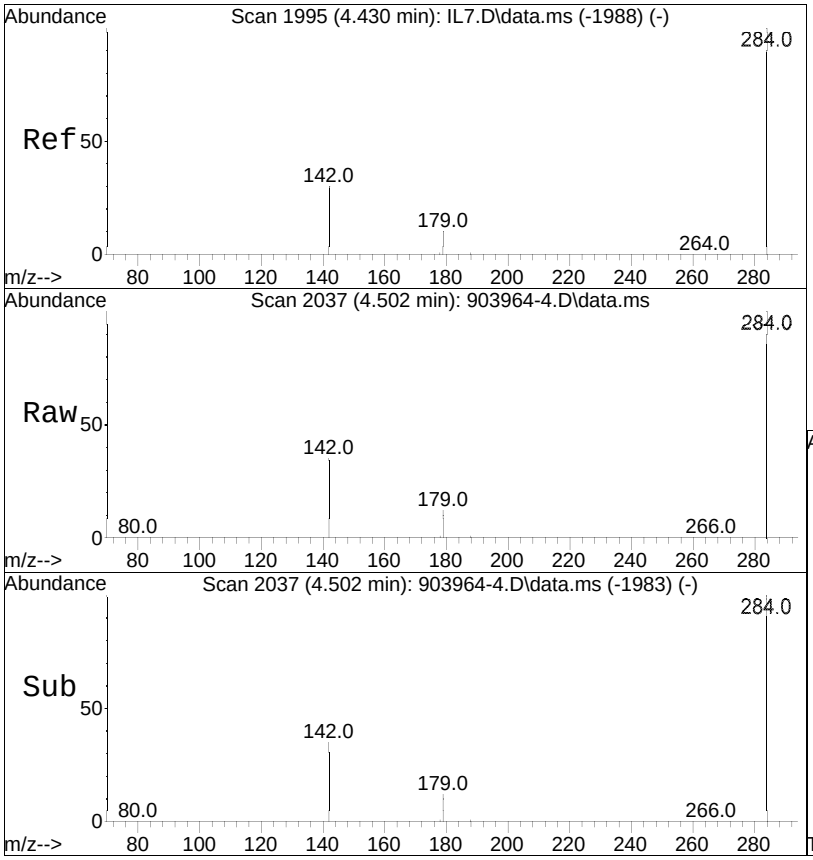


#23
4,6-Dinitro-o-cresol
Concen: 3474.44 ng/ml
RT: 4.213 min Scan# 1864
Delta R.T. -0.003 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:198 Resp: 19949

Ion	Ratio	Lower	Upper
198	100		
105	44.9	32.2	48.4

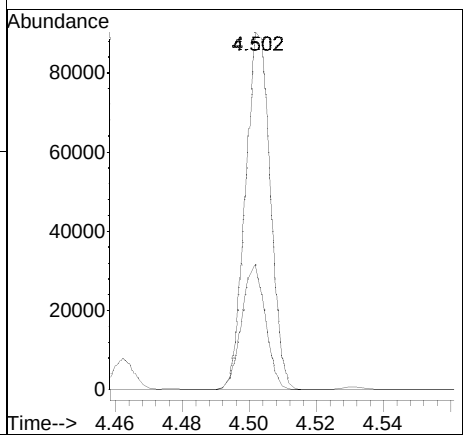


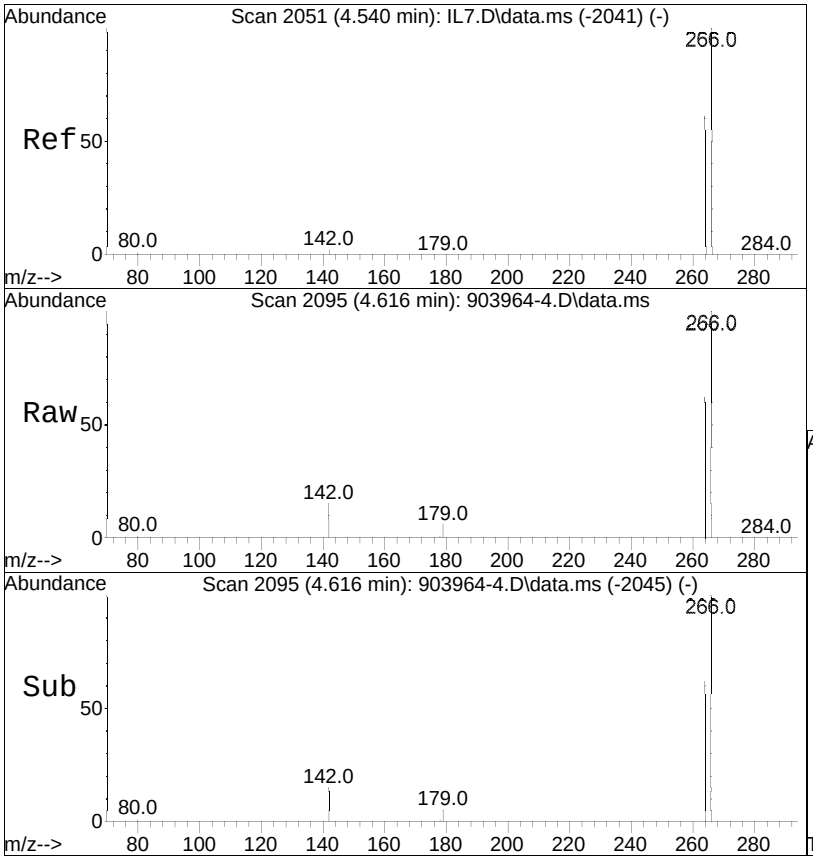


#24
Hexachlorobenzene
Concen: 3695.05 ng/ml
RT: 4.502 min Scan# 2037
Delta R.T. -0.004 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:284 Resp: 46021

Ion	Ratio	Lower	Upper
284	100		
142	33.8	26.9	40.3

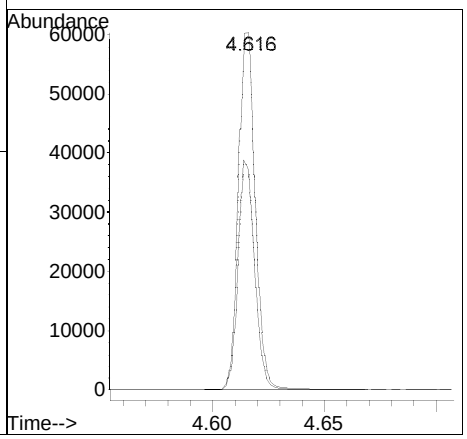


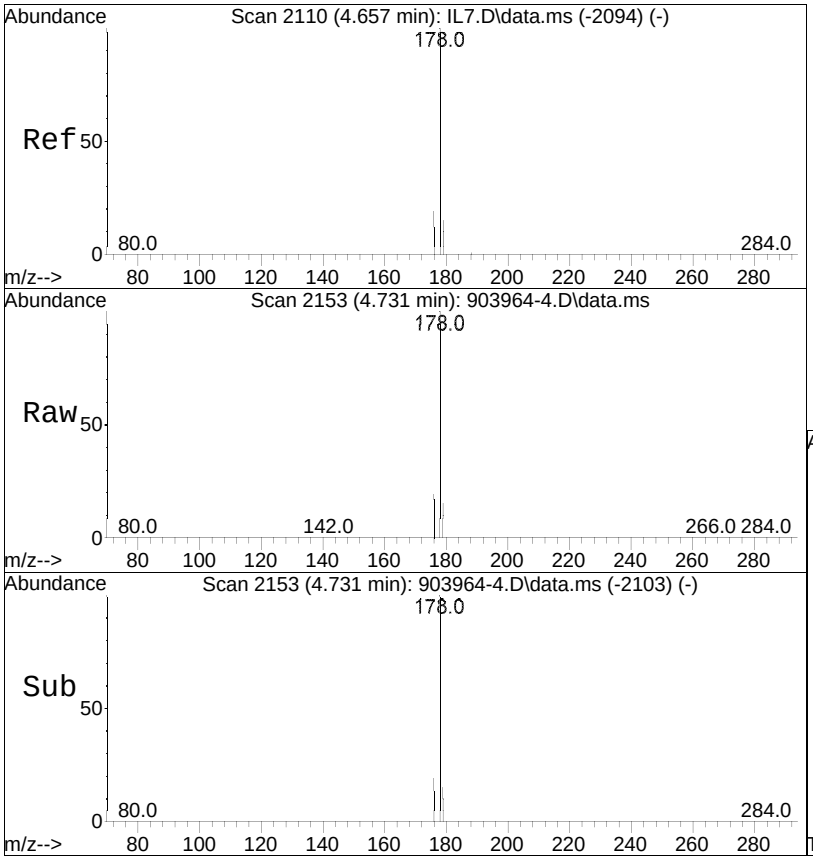


#25
Pentachlorophenol
Concen: 3974.10 ng/ml
RT: 4.616 min Scan# 2095
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:266 Resp: 31588

Ion	Ratio	Lower	Upper
266	100		
264	63.0	50.7	76.1

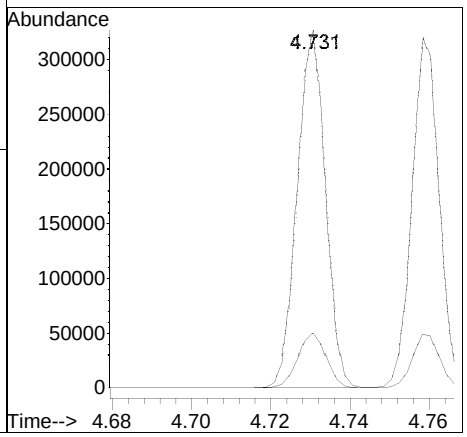


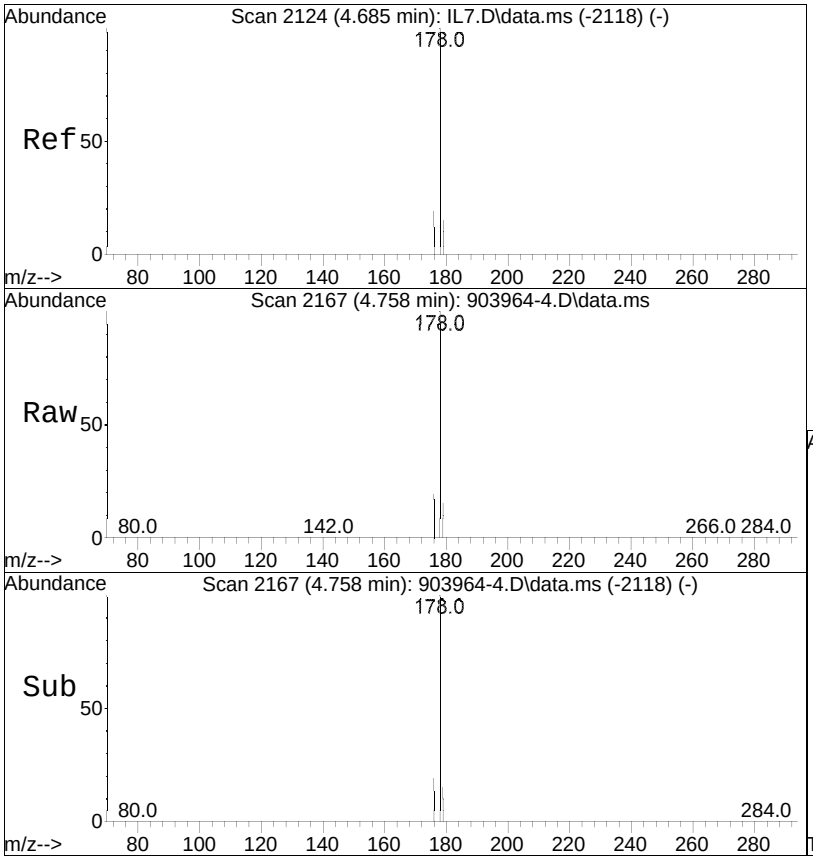


#26
Phenanthrene
Concen: 3300.95 ng/ml
RT: 4.731 min Scan# 2153
Delta R.T. -0.002 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:178 Resp: 161542

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.3	18.5

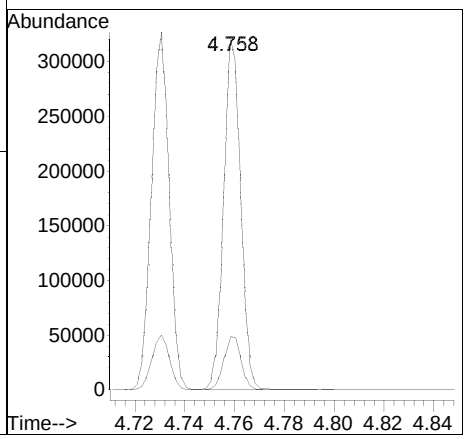


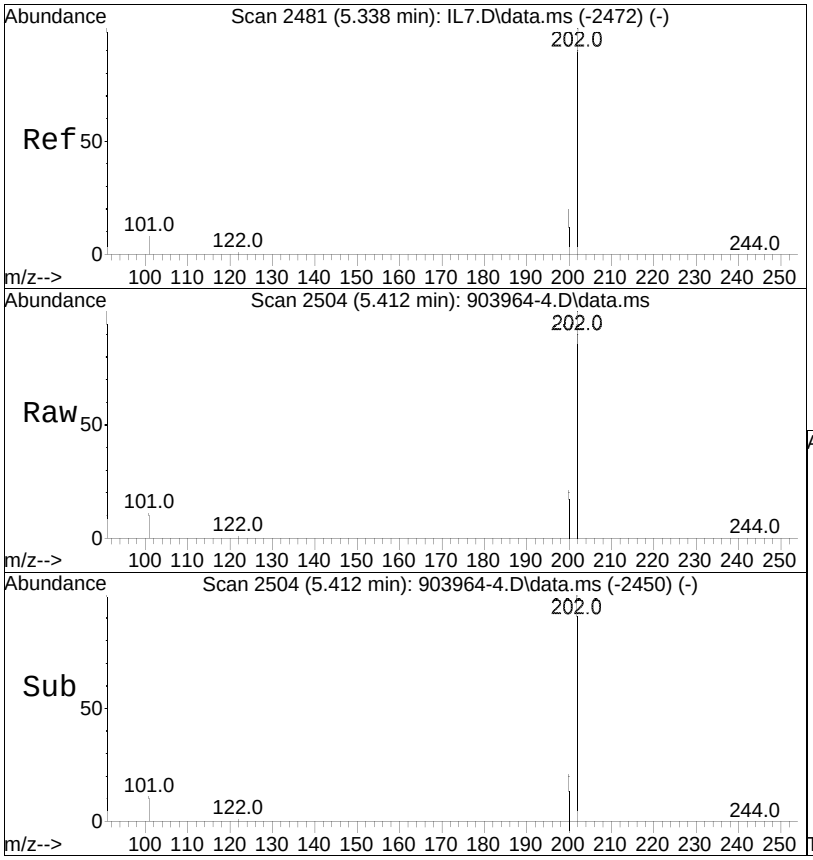


#27
Anthracene
Concen: 3146.98 ng/ml
RT: 4.758 min Scan# 2167
Delta R.T. -0.004 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:178 Resp: 152723

Ion	Ratio	Lower	Upper
178	100		
179	15.2	12.2	18.4

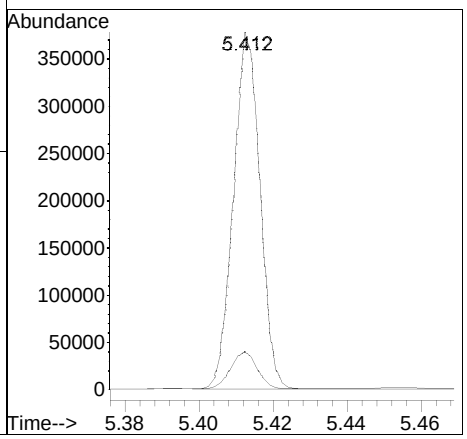


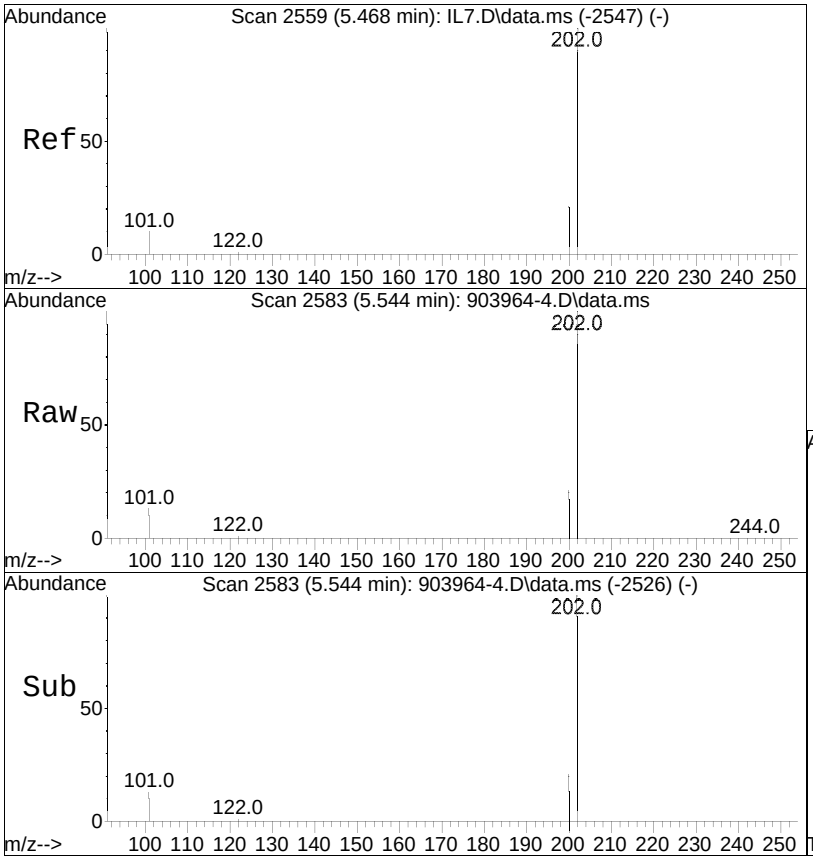


#28
Fluoranthene
Concen: 2887.43 ng/ml
RT: 5.412 min Scan# 2504
Delta R.T. -0.005 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:202 Resp: 186234

Ion	Ratio	Lower	Upper
202	100		
101	10.7	8.3	12.5

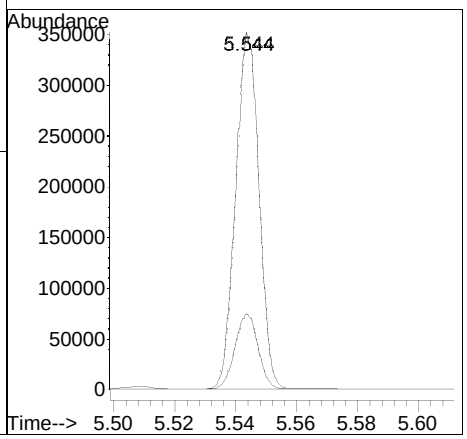


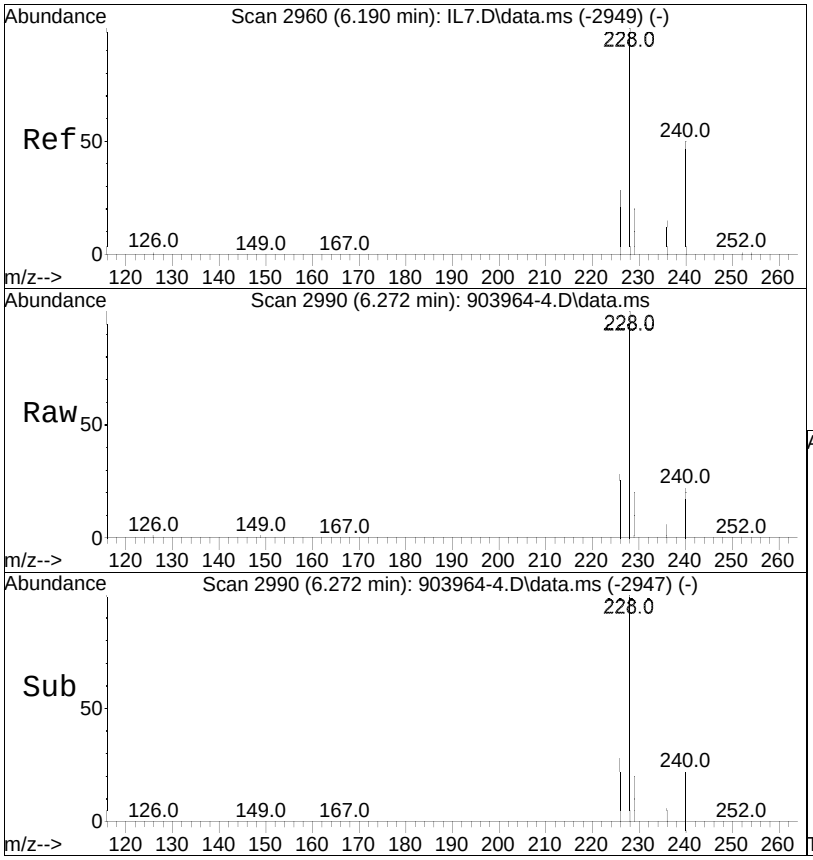


#29
Pyrene
Concen: 2789.66 ng/ml
RT: 5.544 min Scan# 2583
Delta R.T. -0.005 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:202 Resp: 184850

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

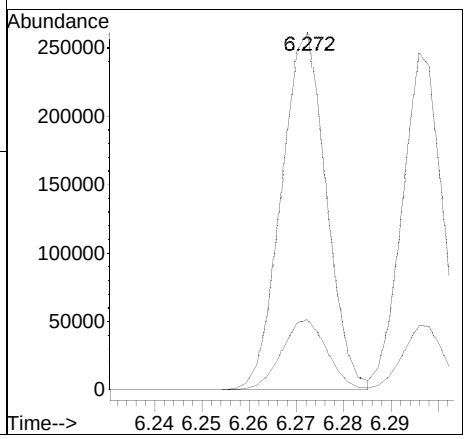


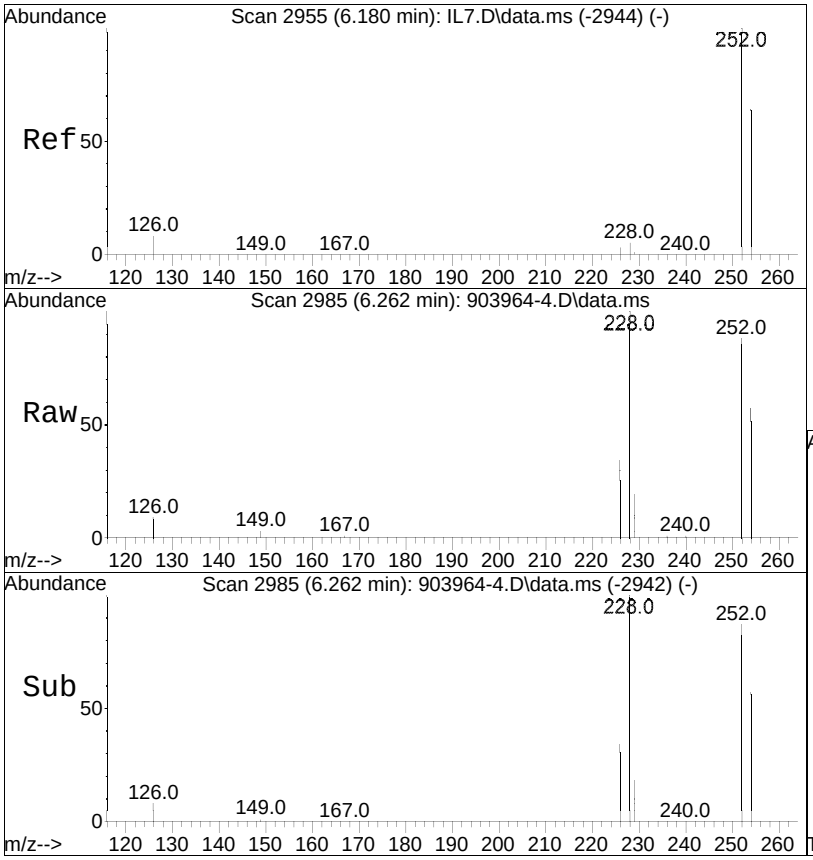


#32
Benzo[a]anthracene
Concen: 3654.27 ng/ml
RT: 6.272 min Scan# 2990
Delta R.T. -0.008 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:228 Resp: 172633

Ion	Ratio	Lower	Upper
228	100		
229	19.7	15.6	23.4

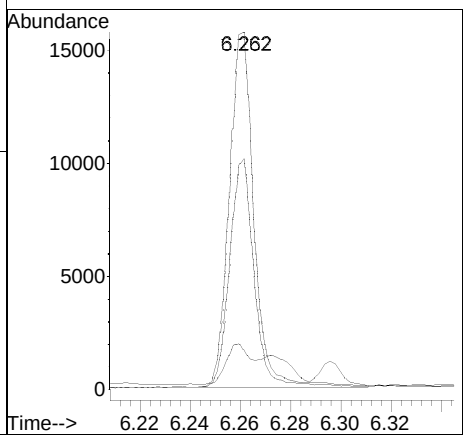


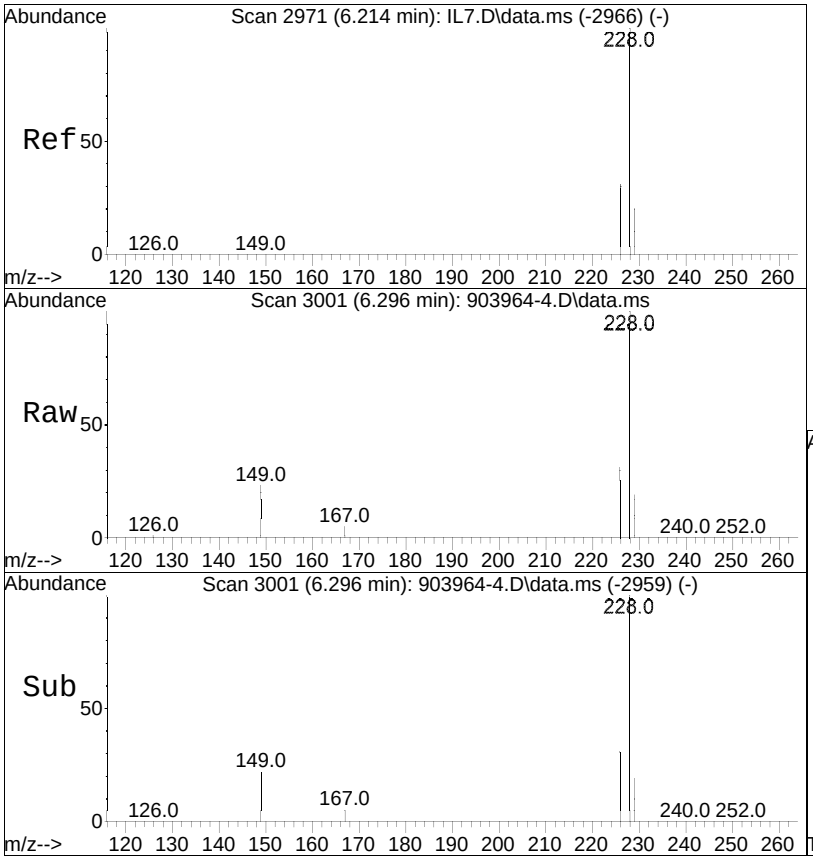


#33
3,3'-Dichlorobenzidine
Concen: 494.84 ng/ml
RT: 6.262 min Scan# 2985
Delta R.T. -0.008 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:252 Resp: 10612

Ion	Ratio	Lower	Upper
252	100		
126	11.7	7.7	11.5#
254	63.9	52.0	78.0

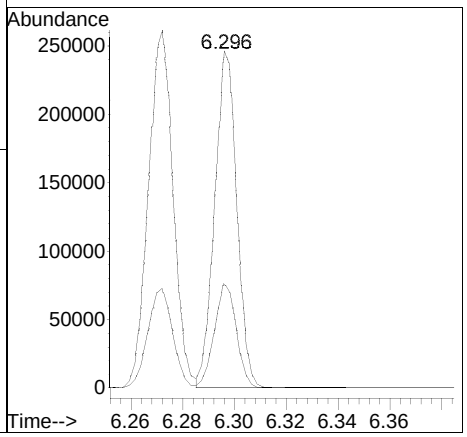


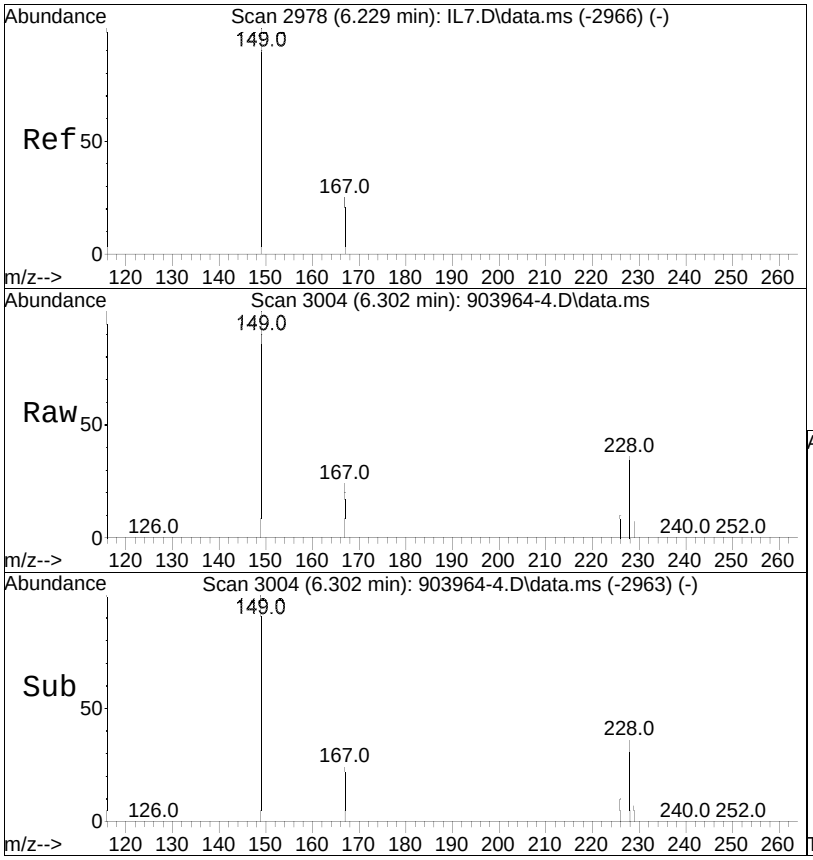


#34
Chrysene
Concen: 3102.42 ng/ml
RT: 6.296 min Scan# 3001
Delta R.T. -0.010 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:228 Resp: 145344

Ion	Ratio	Lower	Upper
228	100		
226	30.8	24.5	36.7

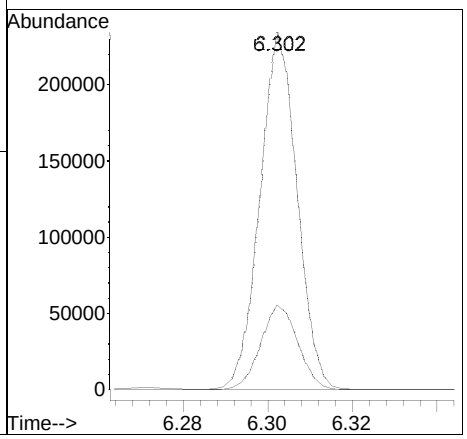


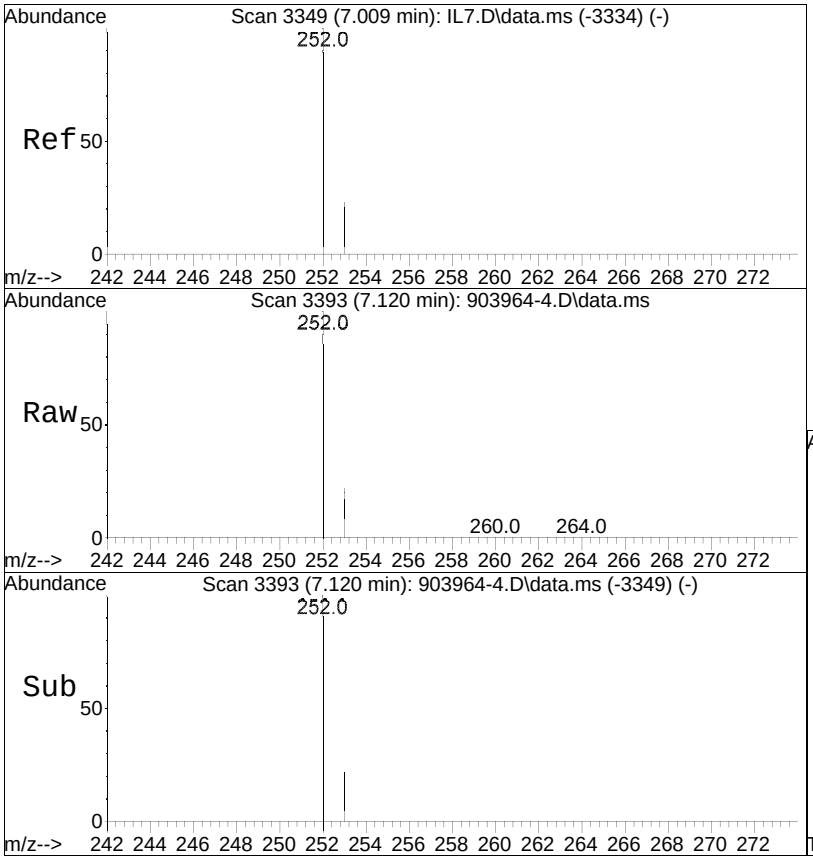


#35
Bis(2-ethylhexyl)phthalate
Concen: 4409.52 ng/ml
RT: 6.302 min Scan# 3004
Delta R.T. -0.012 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:149 Resp: 140668

Ion	Ratio	Lower	Upper
149	100		
167	23.8	18.5	27.7

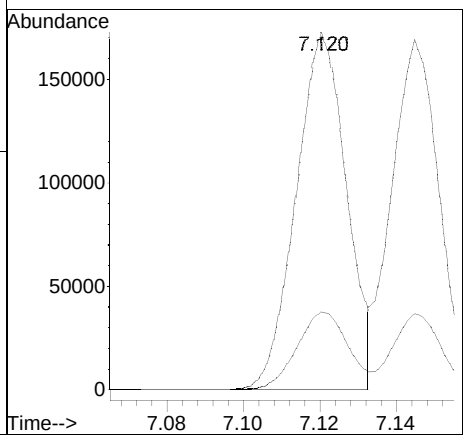


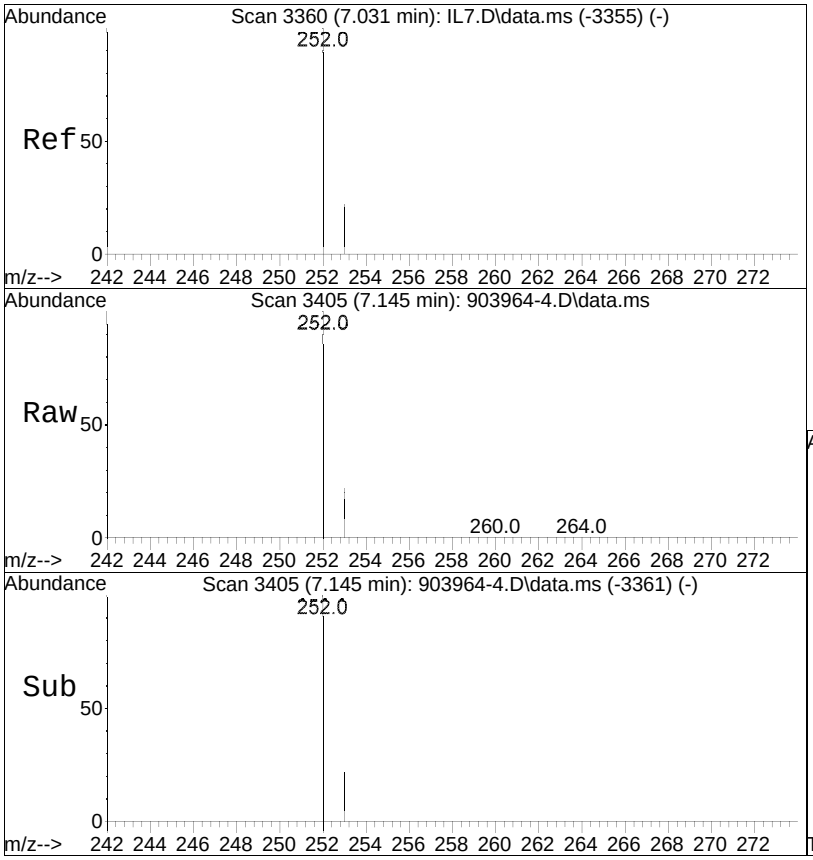


#37
Benzo[b]fluoranthene
Concen: 3163.51 ng/ml
RT: 7.120 min Scan# 3393
Delta R.T. -0.010 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:252 Resp: 158048

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.3	25.9

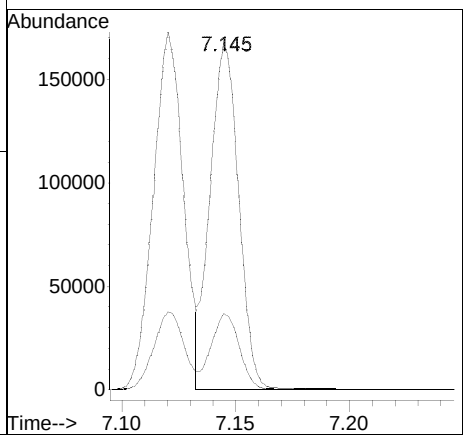


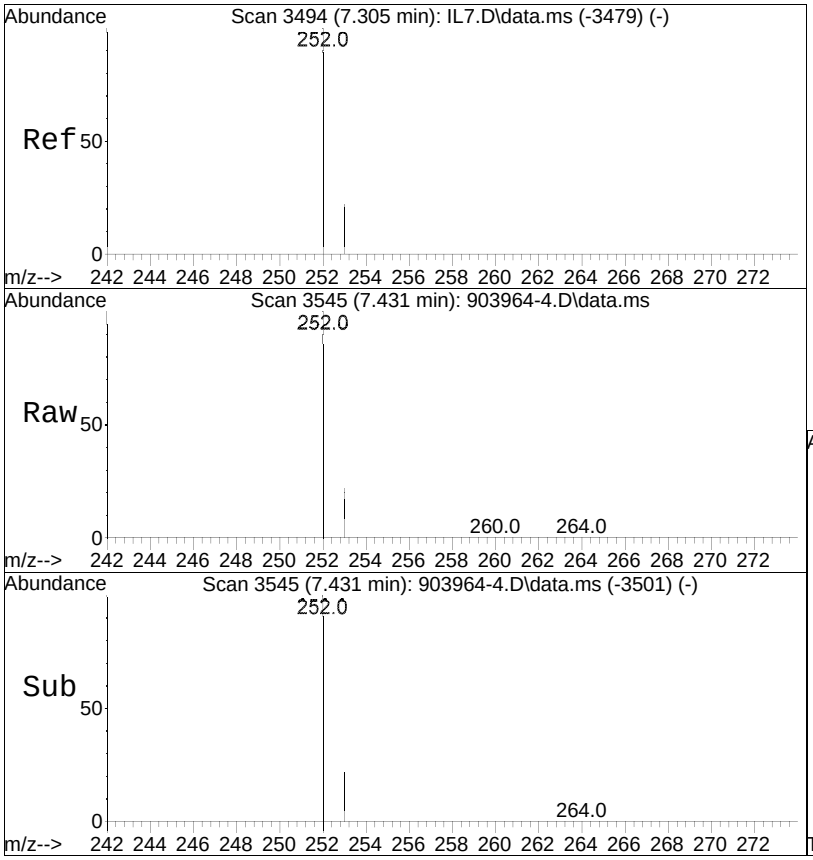


#38
Benzo[k]fluoranthene
Concen: 3069.71 ng/ml
RT: 7.145 min Scan# 3405
Delta R.T. -0.010 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:252 Resp: 145626

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.4	26.2

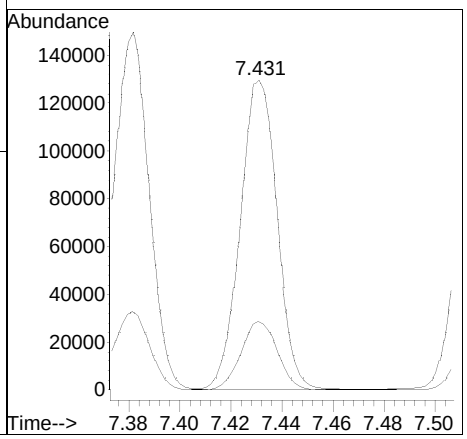


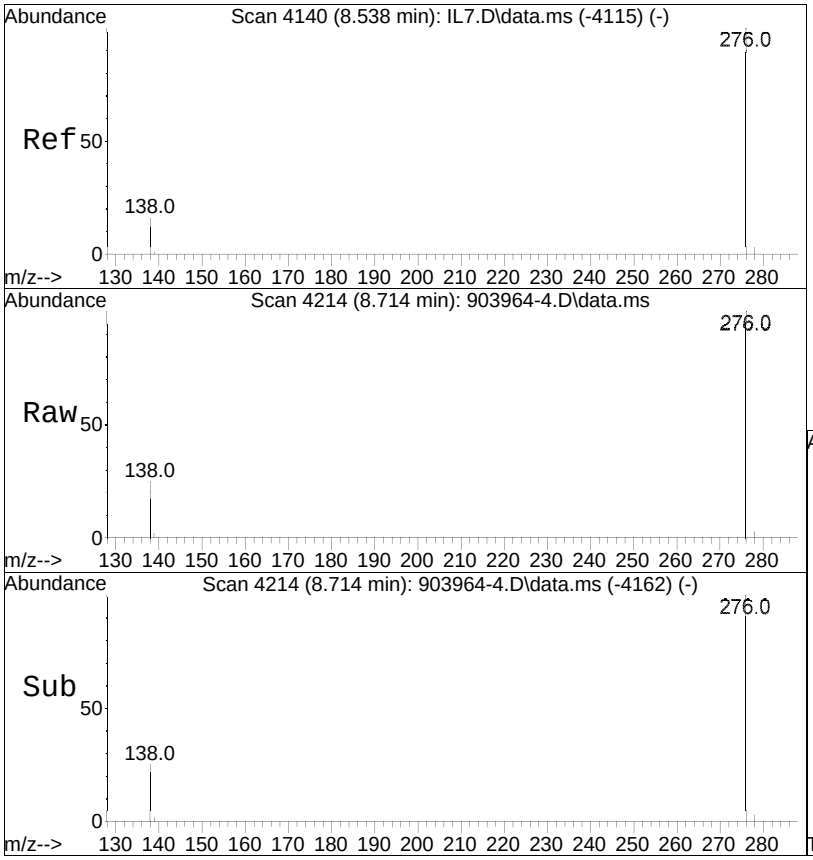


#39
Benzo[a]pyrene
Concen: 2924.12 ng/ml
RT: 7.431 min Scan# 3545
Delta R.T. -0.010 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:252 Resp: 128589

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.4	26.0

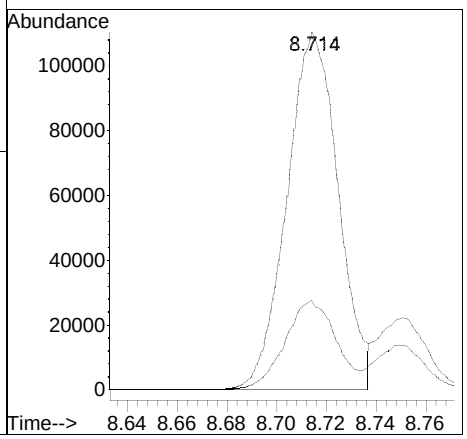


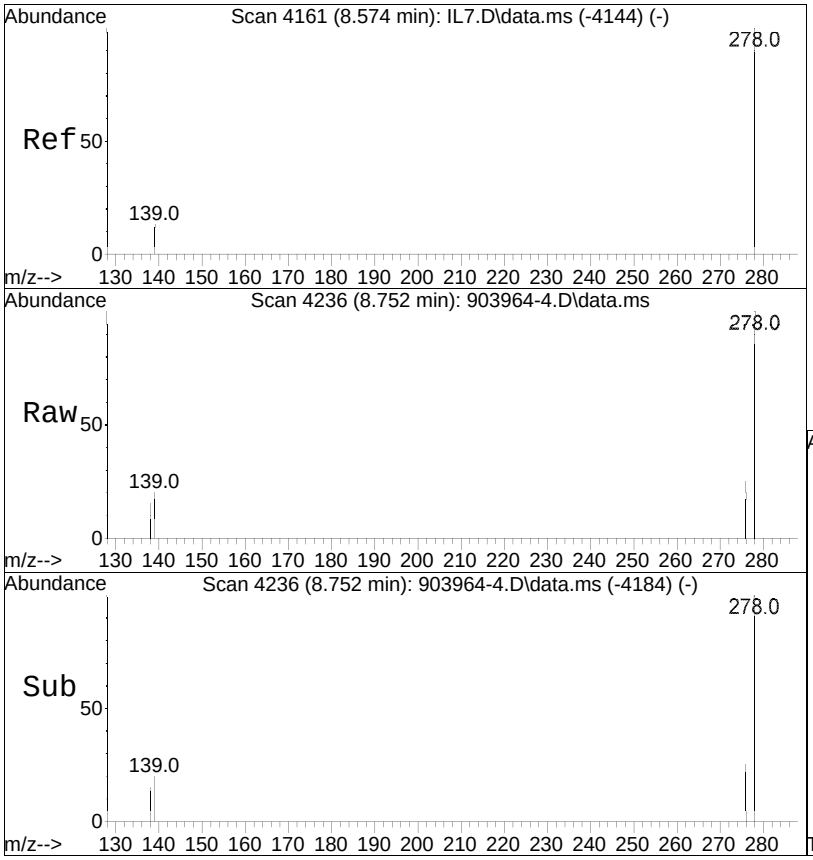


#40
Indeno[1,2,3-cd]pyrene
Concen: 3275.49 ng/ml
RT: 8.714 min Scan# 4214
Delta R.T. -0.010 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:276 Resp: 156548

Ion	Ratio	Lower	Upper
276	100		
138	24.8	14.8	22.2#

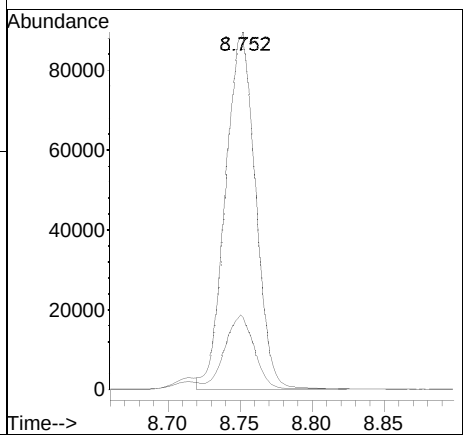


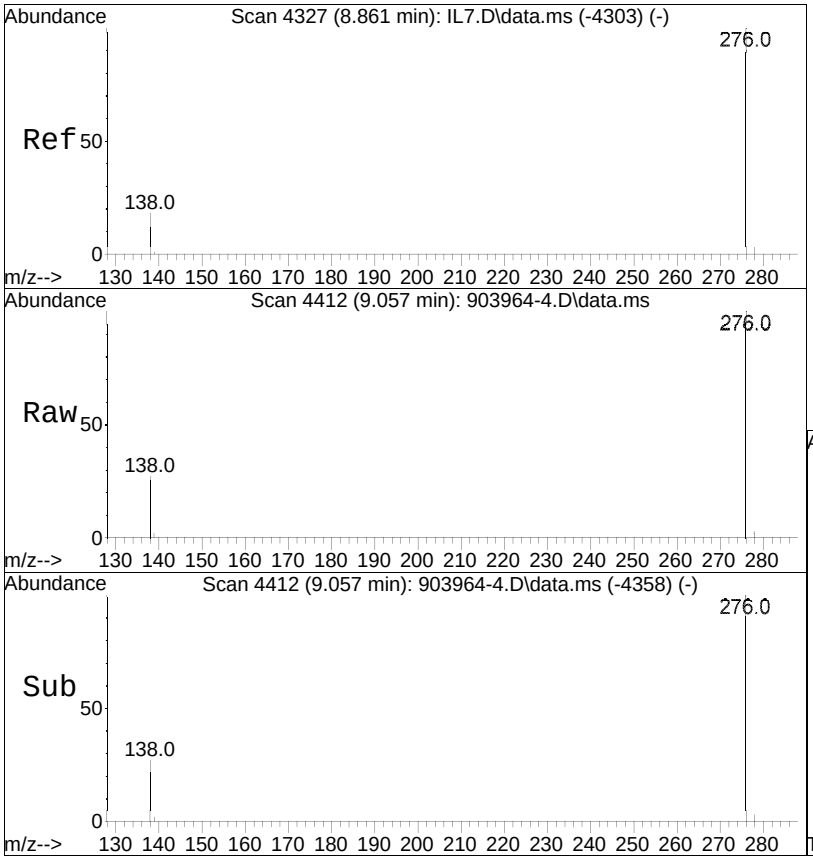


#41
Dibenzo[a,h]anthracene
Concen: 2889.24 ng/ml
RT: 8.752 min Scan# 4236
Delta R.T. -0.010 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:278 Resp: 128476

Ion	Ratio	Lower	Upper
278	100		
139	19.9	12.2	18.4#

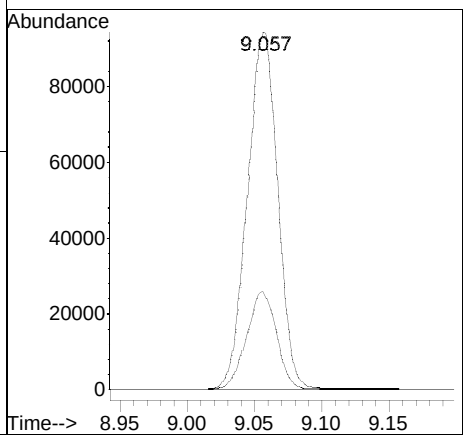




#42
Benzo[g,h,i]perylene
Concen: 3002.58 ng/ml
RT: 9.057 min Scan# 4412
Delta R.T. -0.006 min
Lab File: 903964-4.D
Acq: 03 Apr 2024 08:34 am

Tgt Ion:276 Resp: 145972

Ion	Ratio	Lower	Upper
276	100		
138	27.0	16.8	25.2#



Manual Integration Report

Data Path	: I:\8270SIM\sv119\240403LVI	QMethod	: SIM-LVI_231207n_sv119.M
Data File	: 903964-4.D	Operator	: sv119:ah
Date Inj'd	: 4/3/2024 8:34 am	Instrument	: SV119
Sample	: WG1903964-4,32,,ah	Quant Date	: 4/3/2024 8:49 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 903964-6.D
Acq On : 04 Apr 2024 08:16 am
Operator : sv119:jjw
Sample : WG1903964-6,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 11:05:49 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.228	152	57916	4000.000	ng/ml	-0.01
Standard Area 1 = 63465			Recovery = 91.26%			
8) Naphthalene-d8	2.893	136	183063	4000.000	ng/ml	-0.01
Standard Area 1 = 190169			Recovery = 96.26%			
17) Acenaphthene-d10	3.870	164	97862	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery = 88.77%			
22) Phenanthrene-d10	4.715	188	206501	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 84.38%			
31) Chrysene-d12	6.290	240	153670	4000.000	ng/ml	0.01
Standard Area 1 = 210122			Recovery = 73.13%			
36) Perylene-d12	7.498	264	163145	4000.000	ng/ml	0.01
Standard Area 1 = 221293			Recovery = 73.72%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.638	112	48178	3041.350	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 60.83%			
3) Phenol-d6	2.050	99	49851	2625.327	ng/ml	-0.01
Spiked Amount 5000.000	Range 15 - 110		Recovery = 52.51%			
7) Nitrobenzene-d5	2.508	82	26599	1846.697	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 130		Recovery = 73.87%			
13) 2-Fluorobiphenyl	3.492	172	63828	1561.158	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 62.45%			
21) 2,4,6-Tribromophenol	4.321	330	25335	4695.764	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 93.92%			
30) 4-Terphenyl-d14	5.643	244	61263	1210.184	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 48.41%			
Target Compounds						Qvalue
6) Hexachloroethane	2.487	117	21315	2975.044	ng/ml	89
9) Naphthalene	2.904	128	142380	3257.246	ng/ml	99
10) Hexachlorobutadiene	2.976	225	32873	3492.044	ng/ml	100
11) 2-Methylnaphthalene	3.286	142	104303	3227.198	ng/ml	97
14) 2-Chloronaphthalene	3.557	162	111092	3226.845	ng/ml	93
16) Acenaphthylene	3.790	152	164513	3215.586	ng/ml	99
18) Acenaphthene	3.890	153	104055	3439.436	ng/ml	99
20) Fluorene	4.182	166	123806	3423.620	ng/ml	97
24) Hexachlorobenzene	4.498	284	52437	3927.923	ng/ml	98
25) Pentachlorophenol	4.614	266	25888	3041.343	ng/ml	99

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 903964-6.D
Acq On : 04 Apr 2024 08:16 am
Operator : sv119:jjw
Sample : WG1903964-6,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 11:05:49 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.729	178	179910	3429.807	ng/ml	100
27) Anthracene	4.758	178	189090	3635.118	ng/ml	100
28) Fluoranthene	5.414	202	220736	3192.902	ng/ml	100
29) Pyrene	5.547	202	224190	3156.519	ng/ml	99
32) Benzo[a]anthracene	6.281	228	199926	3909.958	ng/ml	100
34) Chrysene	6.307	228	181311	3574.962	ng/ml	100
37) Benzo[b]fluoranthene	7.129	252	197645	3467.719	ng/ml	99
38) Benzo[k]fluoranthene	7.153	252	177807	3285.370	ng/ml	100
39) Benzo[a]pyrene	7.439	252	167081	3330.392	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.721	276	195292	3581.717	ng/ml#	87
41) Dibenzo[a,h]anthracene	8.756	278	163712M6	3227.154	ng/ml	
42) Benzo[g,h,i]perylene	9.060	276	177957	3208.619	ng/ml#	88

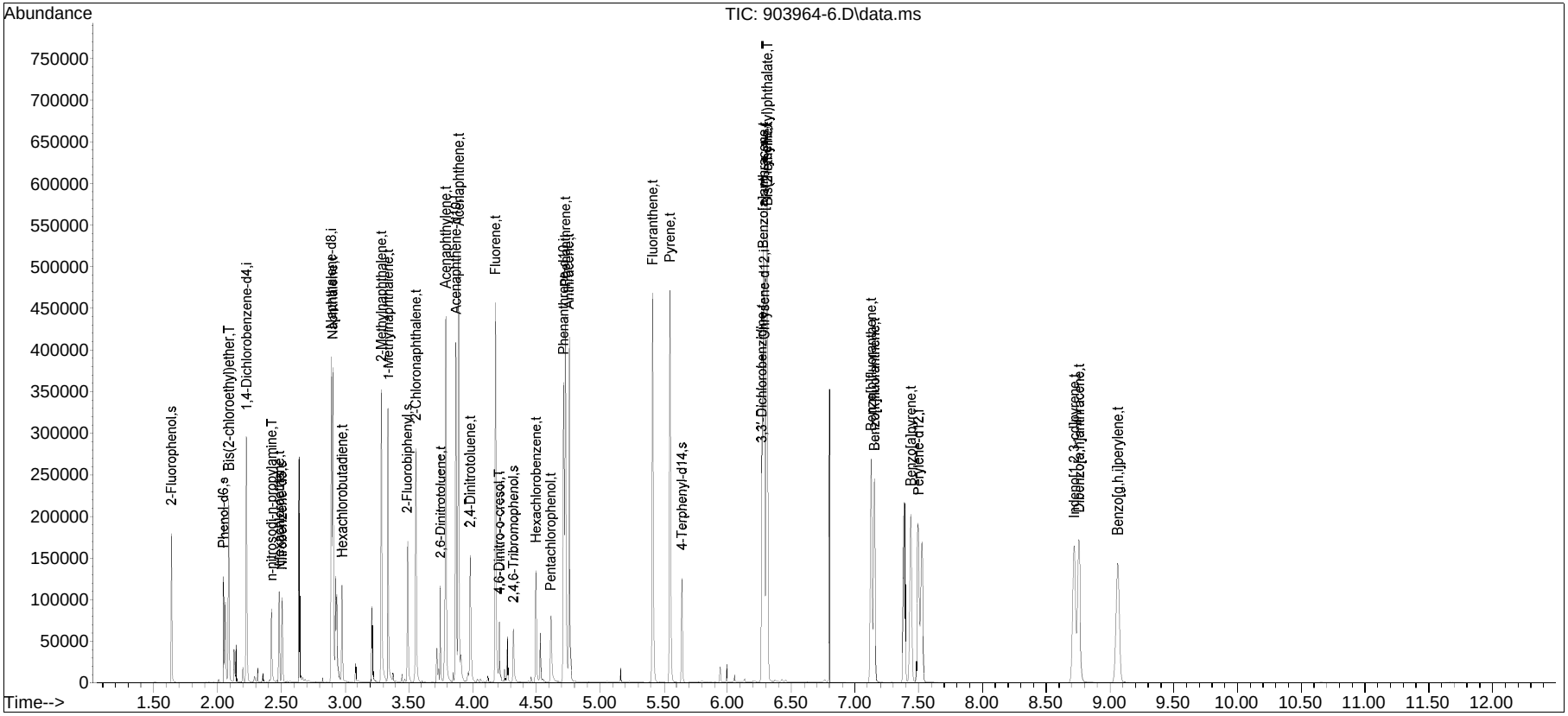
(#) = qualifier out of range (m) = manual integration (+) = signals summed

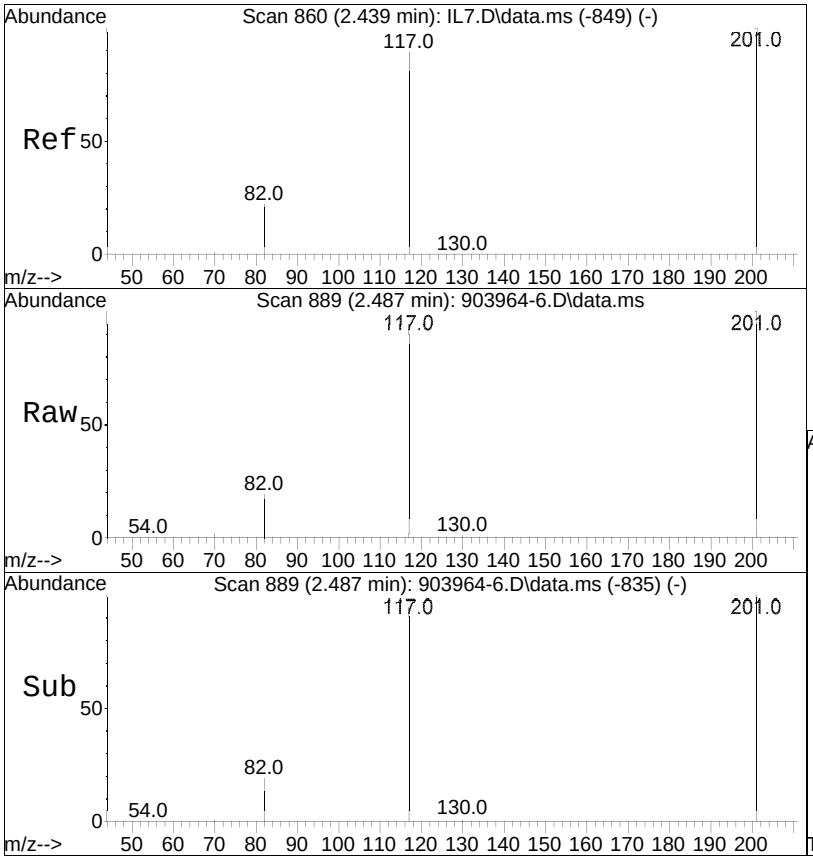
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 903964-6.D
Acq On : 04 Apr 2024 08:16 am
Operator : sv119:jjw
Sample : WG1903964-6,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 11:05:49 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

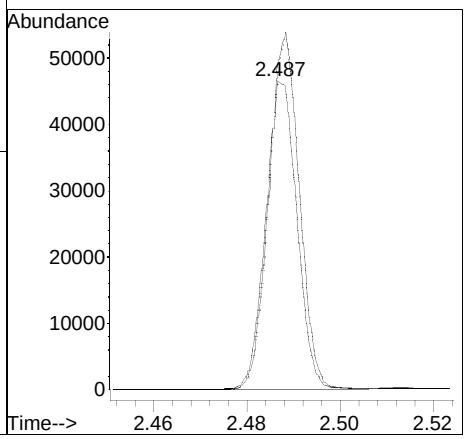


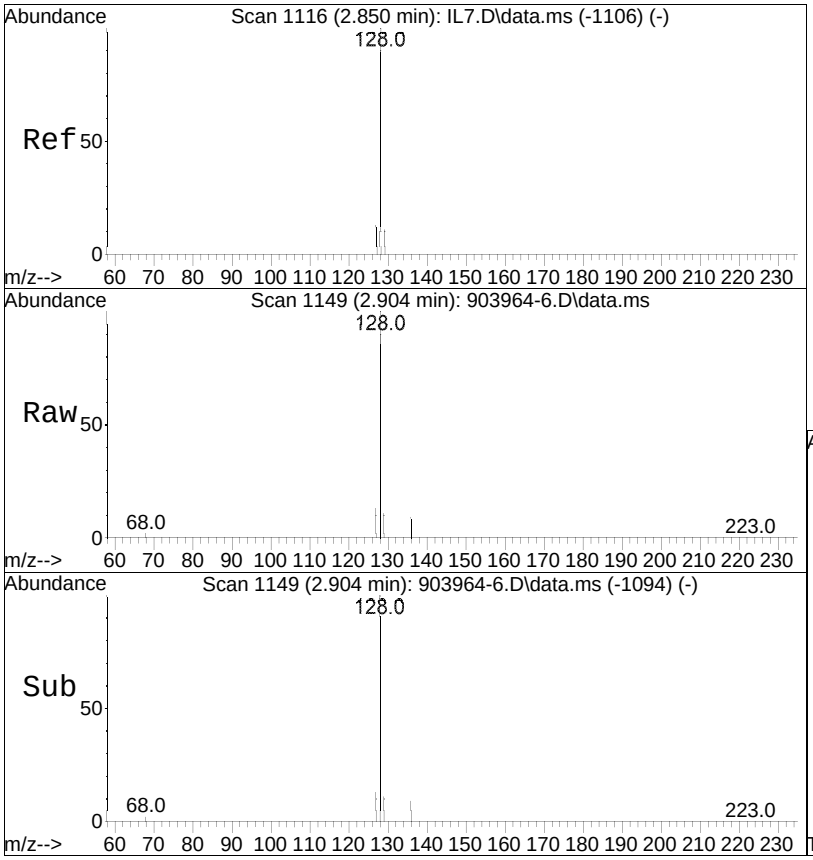


#6
Hexachloroethane
Concen: 2975.04 ng/ml
RT: 2.487 min Scan# 889
Delta R.T. -0.013 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:117 Resp: 21315

Ion	Ratio	Lower	Upper
117	100		
201	113.3	81.5	122.3

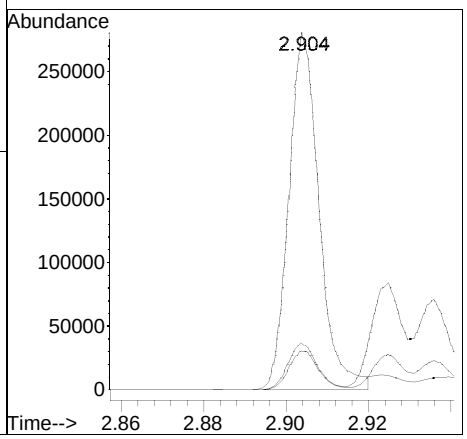


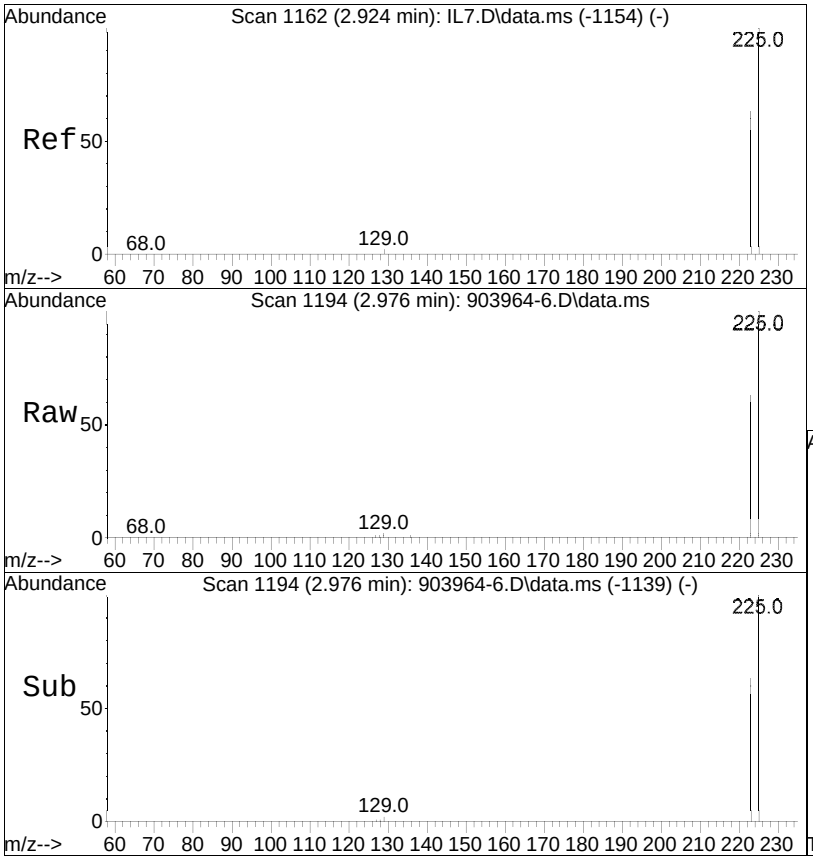


#9
Naphthalene
Concen: 3257.25 ng/ml
RT: 2.904 min Scan# 1149
Delta R.T. -0.011 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:128 Resp: 142380

Ion	Ratio	Lower	Upper
128	100		
129	10.8	8.8	13.2
127	12.7	10.6	15.8

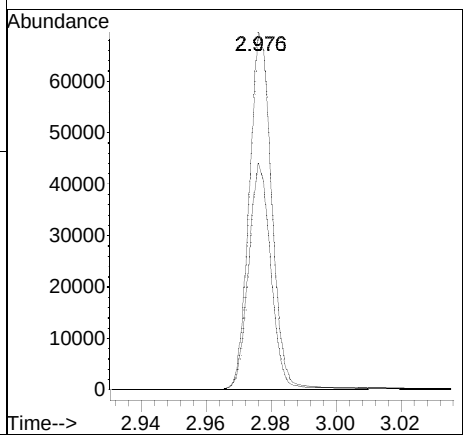


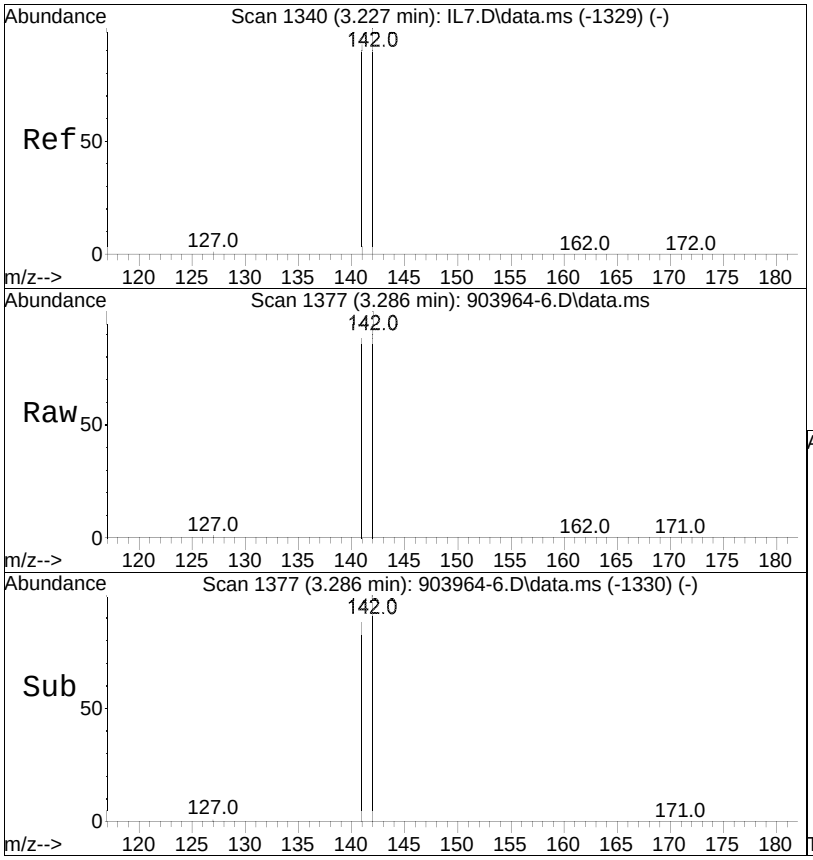


#10
Hexachlorobutadiene
Concen: 3492.04 ng/ml
RT: 2.976 min Scan# 1194
Delta R.T. -0.011 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:225 Resp: 32873

Ion	Ratio	Lower	Upper
225	100		
223	62.9	50.1	75.1

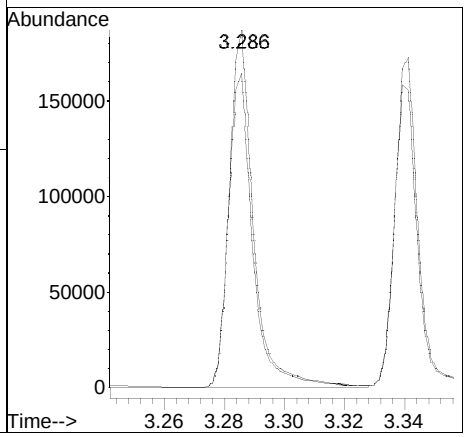


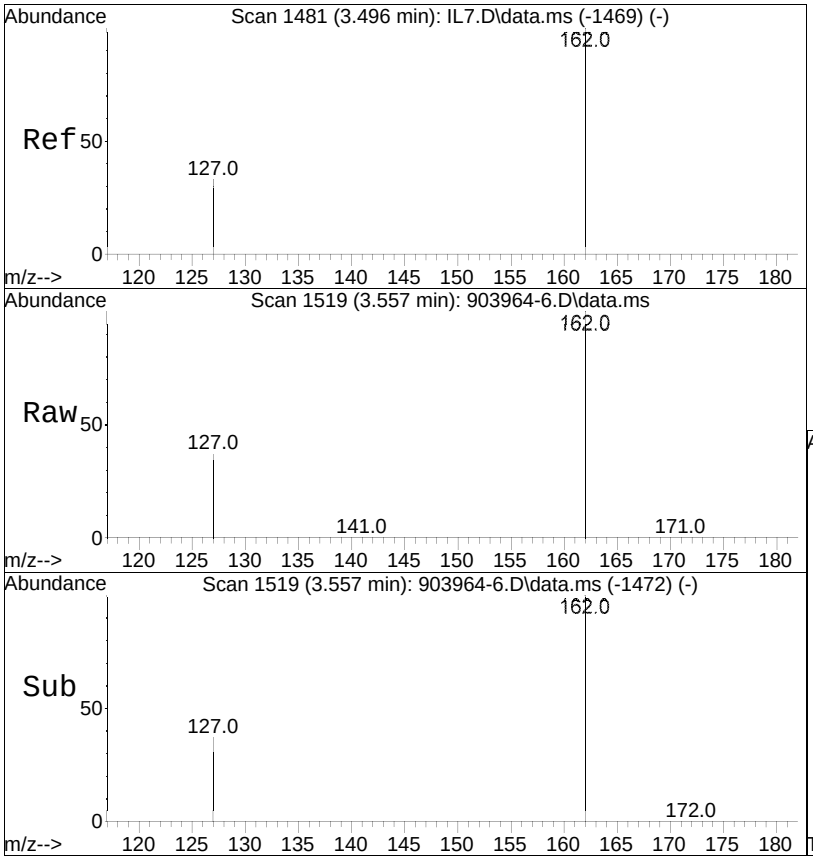


#11
2-Methylnaphthalene
Concen: 3227.20 ng/ml
RT: 3.286 min Scan# 1377
Delta R.T. -0.010 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:142 Resp: 104303

Ion	Ratio	Lower	Upper
142	100		
141	89.7	74.1	111.1

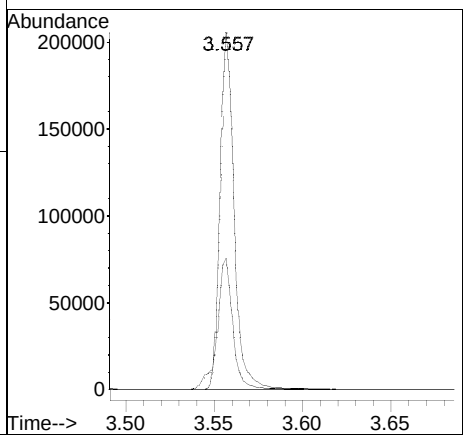


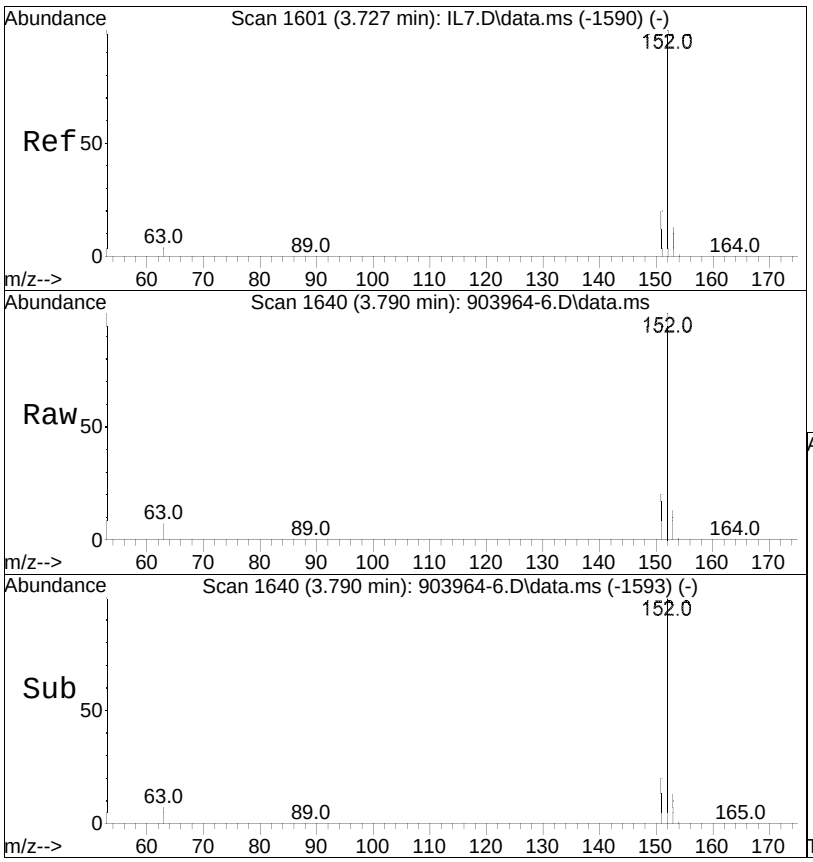


#14
2-Chloronaphthalene
Concen: 3226.85 ng/ml
RT: 3.557 min Scan# 1519
Delta R.T. -0.010 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:162 Resp: 111092

Ion	Ratio	Lower	Upper
162	100		
127	41.4	29.7	44.5

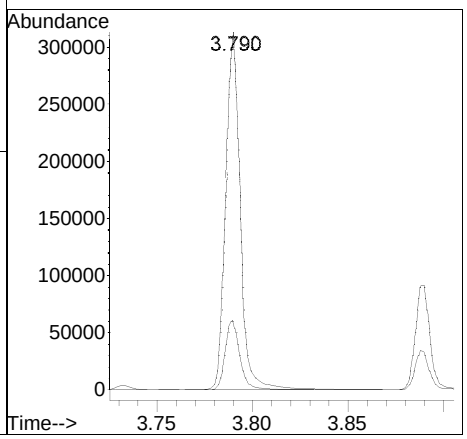


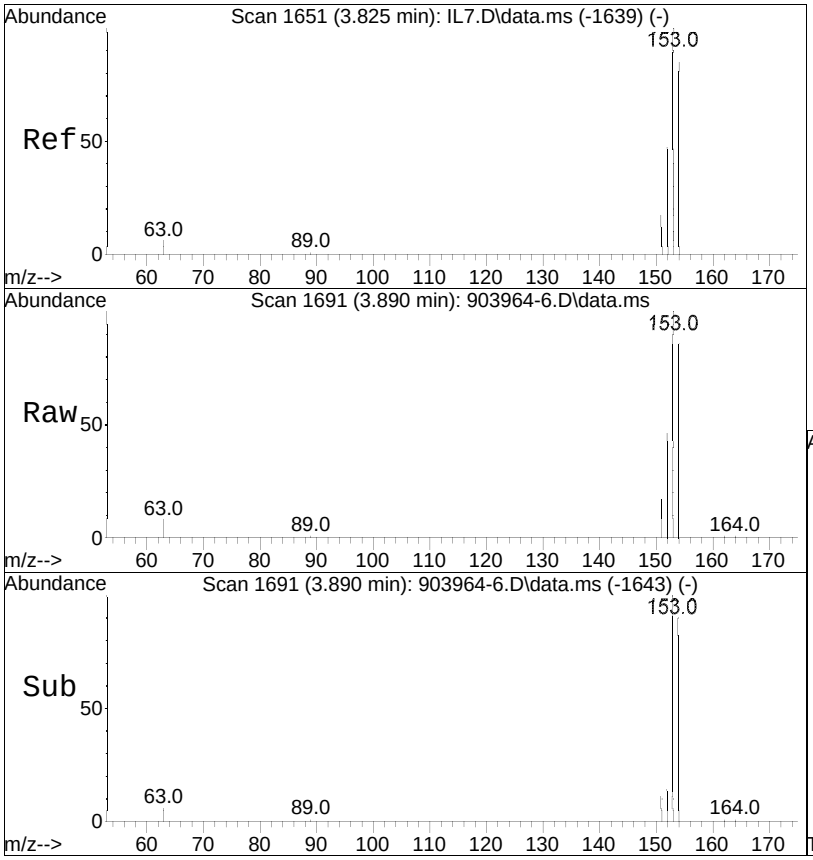


#16
Acenaphthylene
Concen: 3215.59 ng/ml
RT: 3.790 min Scan# 1640
Delta R.T. -0.008 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:152 Resp: 164513

Ion	Ratio	Lower	Upper
152	100		
151	19.7	16.0	24.0

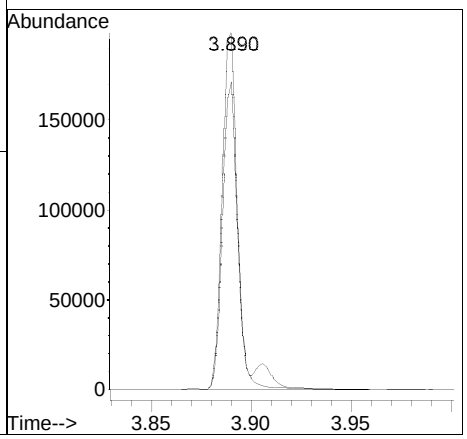


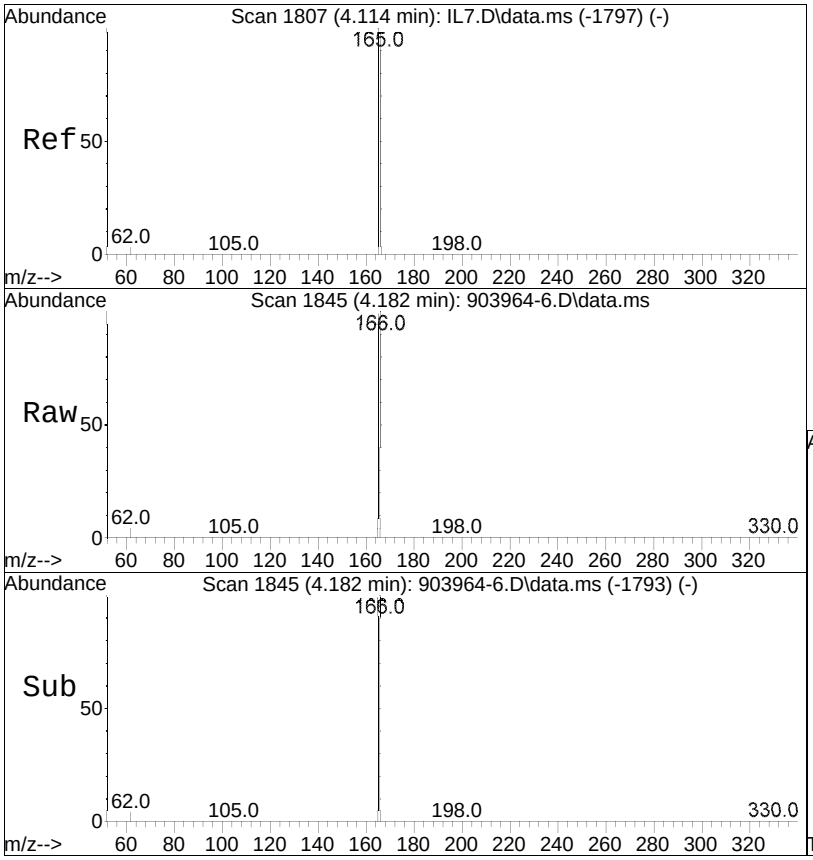


#18
Acenaphthene
Concen: 3439.44 ng/ml
RT: 3.890 min Scan# 1691
Delta R.T. -0.006 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:153 Resp: 104055

Ion	Ratio	Lower	Upper
153	100		
154	82.7	66.9	100.3

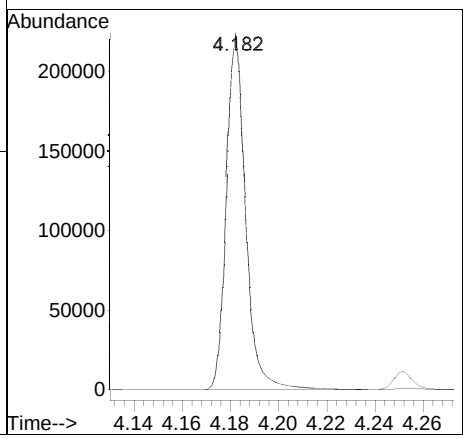


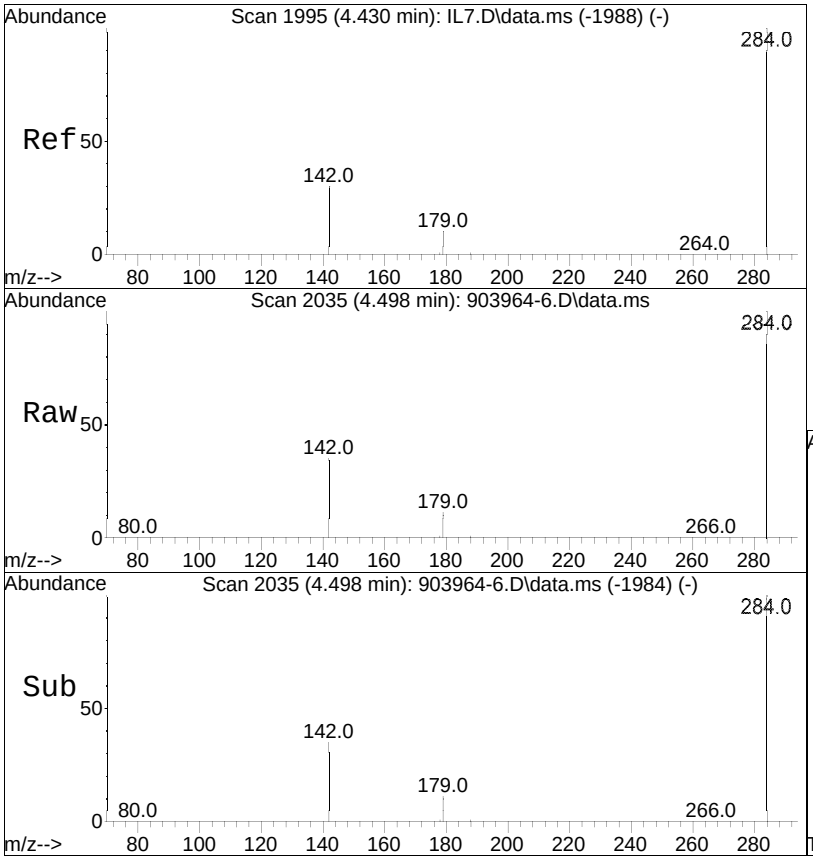


#20
Fluorene
Concen: 3423.62 ng/ml
RT: 4.182 min Scan# 1845
Delta R.T. -0.008 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:166 Resp: 123806

Ion	Ratio	Lower	Upper
166	100		
165	100.4	82.9	124.3

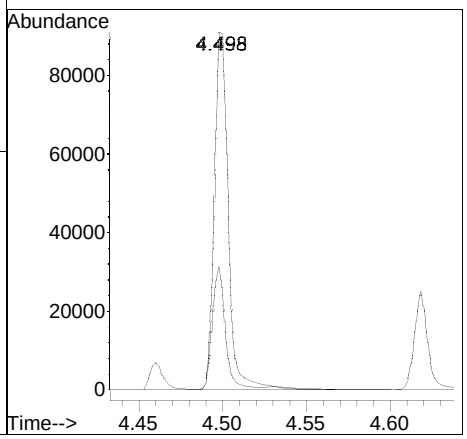


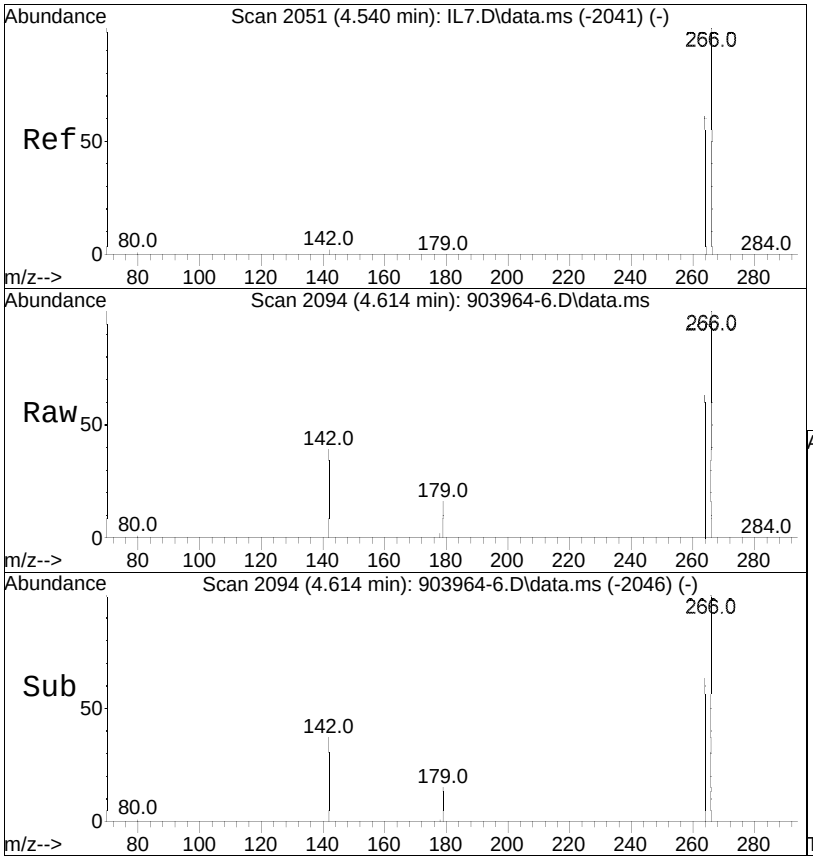


#24
Hexachlorobenzene
Concen: 3927.92 ng/ml
RT: 4.498 min Scan# 2035
Delta R.T. -0.008 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:284 Resp: 52437

Ion	Ratio	Lower	Upper
284	100		
142	32.4	26.9	40.3

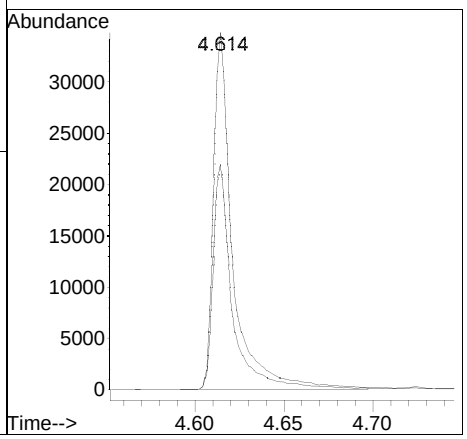


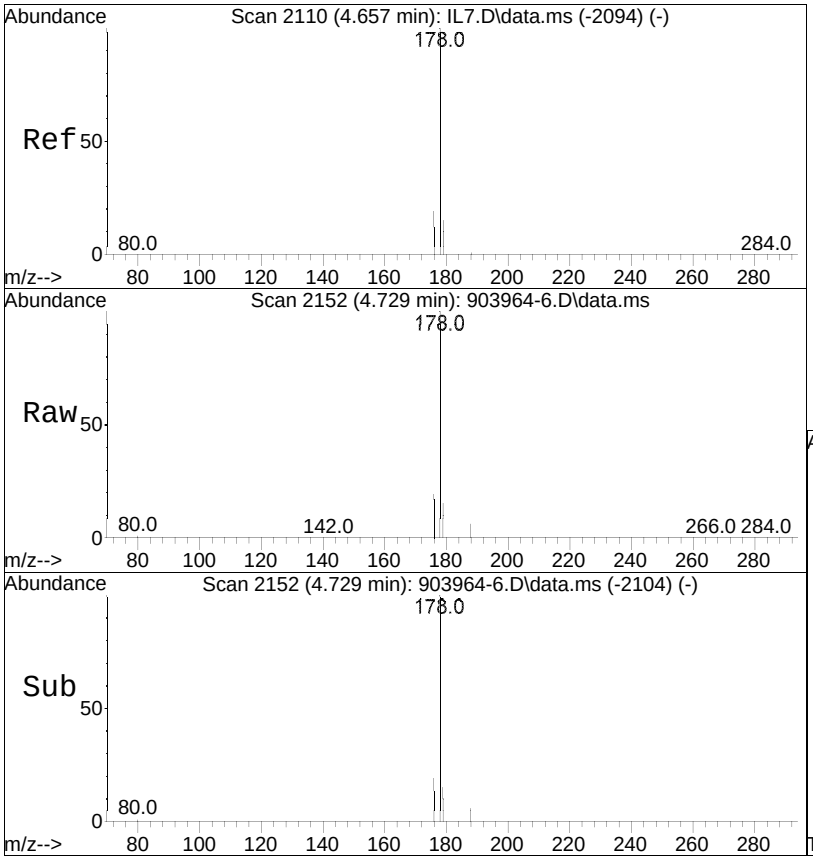


#25
Pentachlorophenol
Concen: 3041.34 ng/ml
RT: 4.614 min Scan# 2094
Delta R.T. -0.006 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:266 Resp: 25888

Ion	Ratio	Lower	Upper
266	100		
264	62.6	50.7	76.1

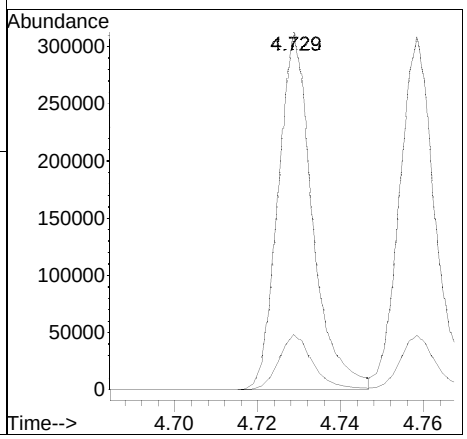


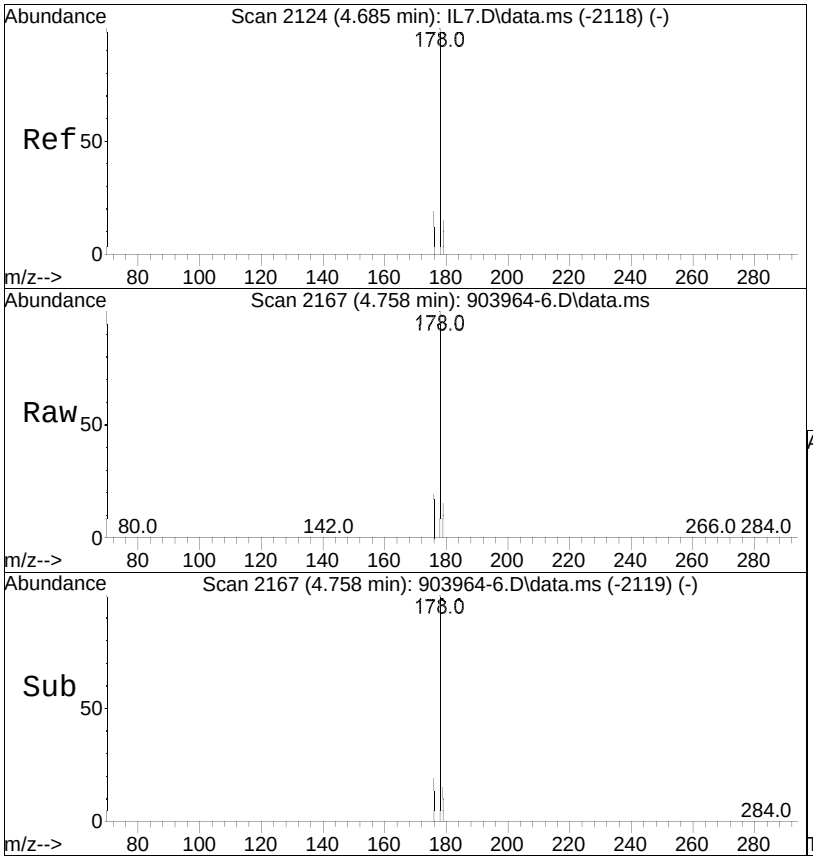


#26
Phenanthrene
Concen: 3429.81 ng/ml
RT: 4.729 min Scan# 2152
Delta R.T. -0.006 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:178 Resp: 179910

Ion	Ratio	Lower	Upper
178	100		
179	15.3	12.3	18.5

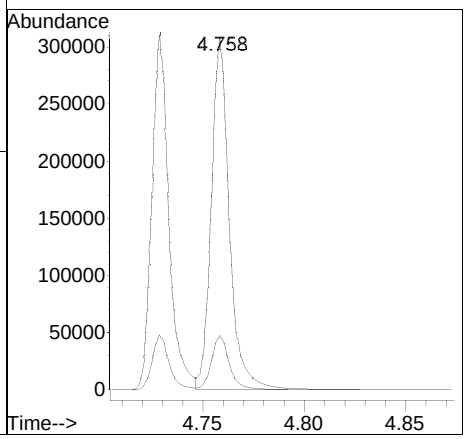


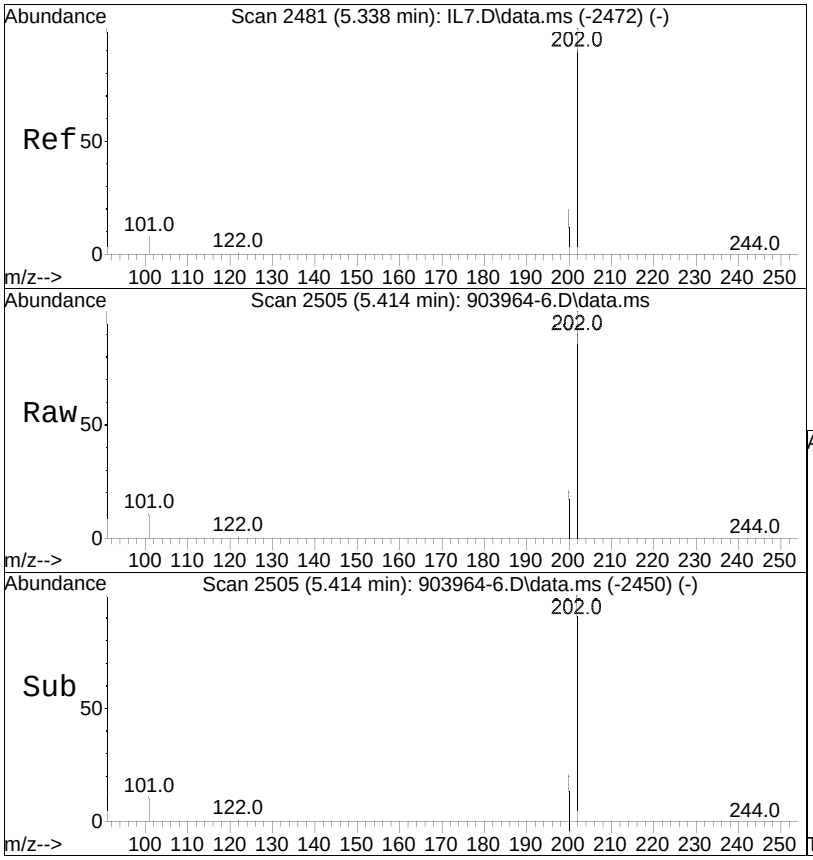


#27
Anthracene
Concen: 3635.12 ng/ml
RT: 4.758 min Scan# 2167
Delta R.T. -0.006 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:178 Resp: 189090

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.2	18.4

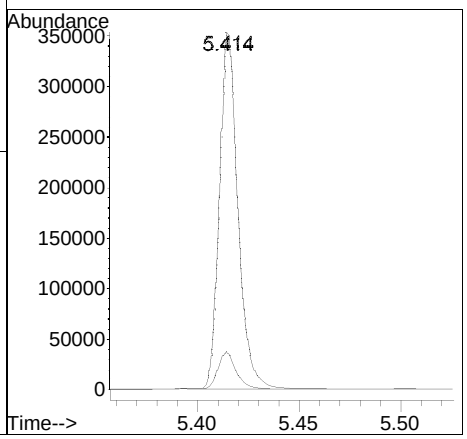


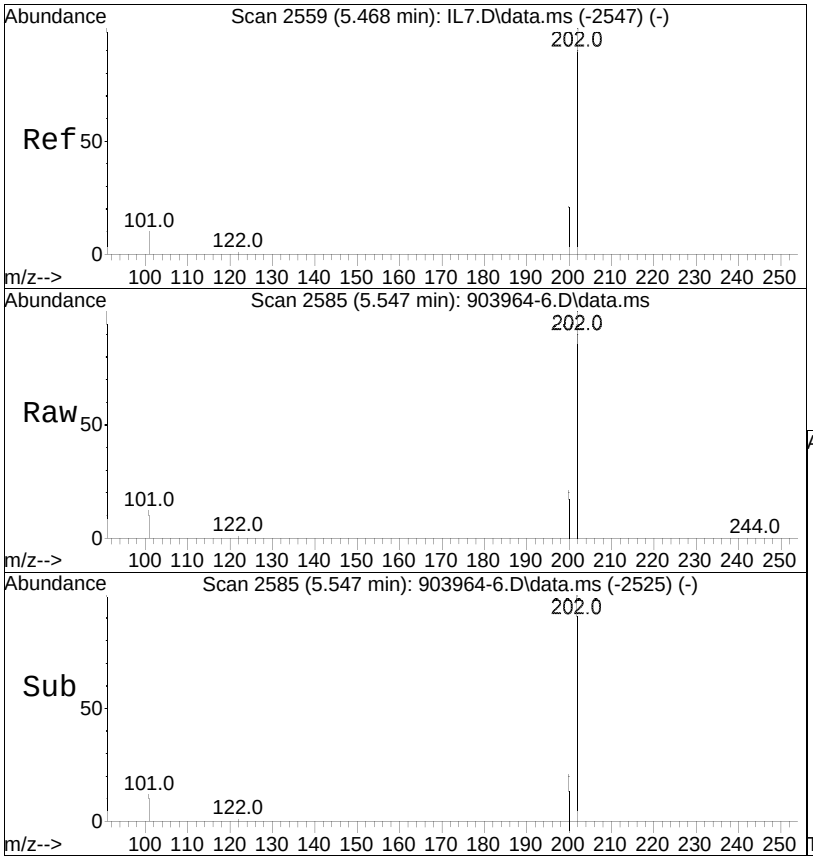


#28
Fluoranthene
Concen: 3192.90 ng/ml
RT: 5.414 min Scan# 2505
Delta R.T. -0.003 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:202 Resp: 220736

Ion	Ratio	Lower	Upper
202	100		
101	10.5	8.3	12.5

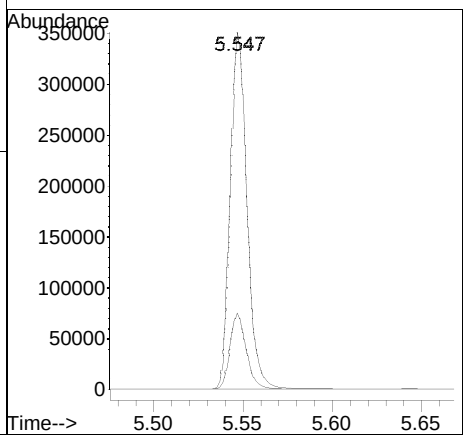


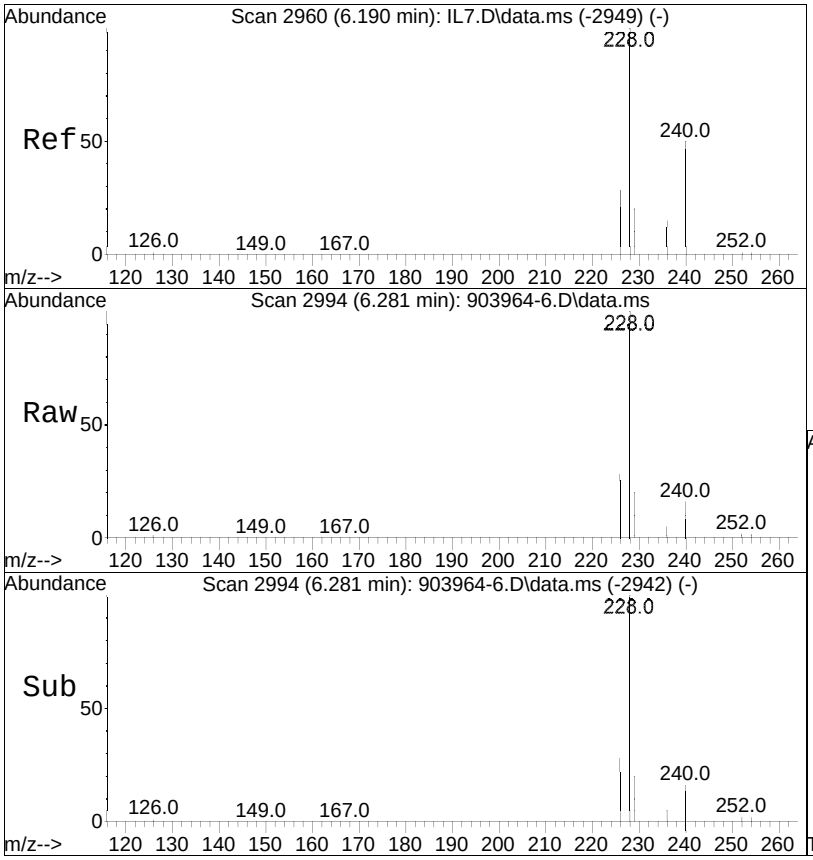


#29
Pyrene
Concen: 3156.52 ng/ml
RT: 5.547 min Scan# 2585
Delta R.T. 0.000 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:202 Resp: 224190

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

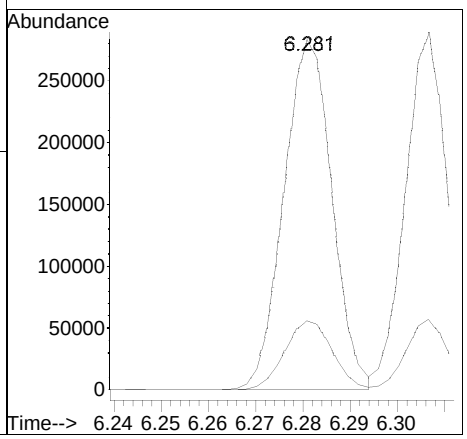


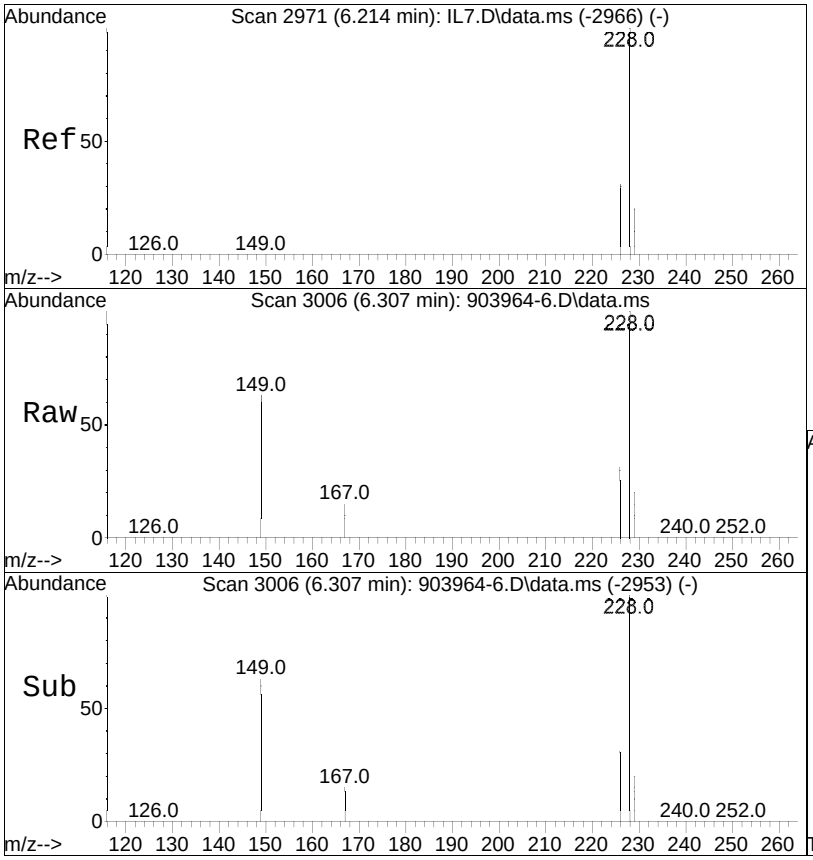


#32
Benzo[a]anthracene
Concen: 3909.96 ng/ml
RT: 6.281 min Scan# 2994
Delta R.T. 0.011 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:228 Resp: 199926

Ion	Ratio	Lower	Upper
228	100		
229	19.5	15.6	23.4

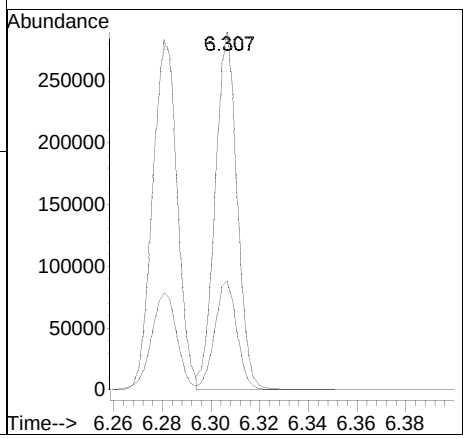


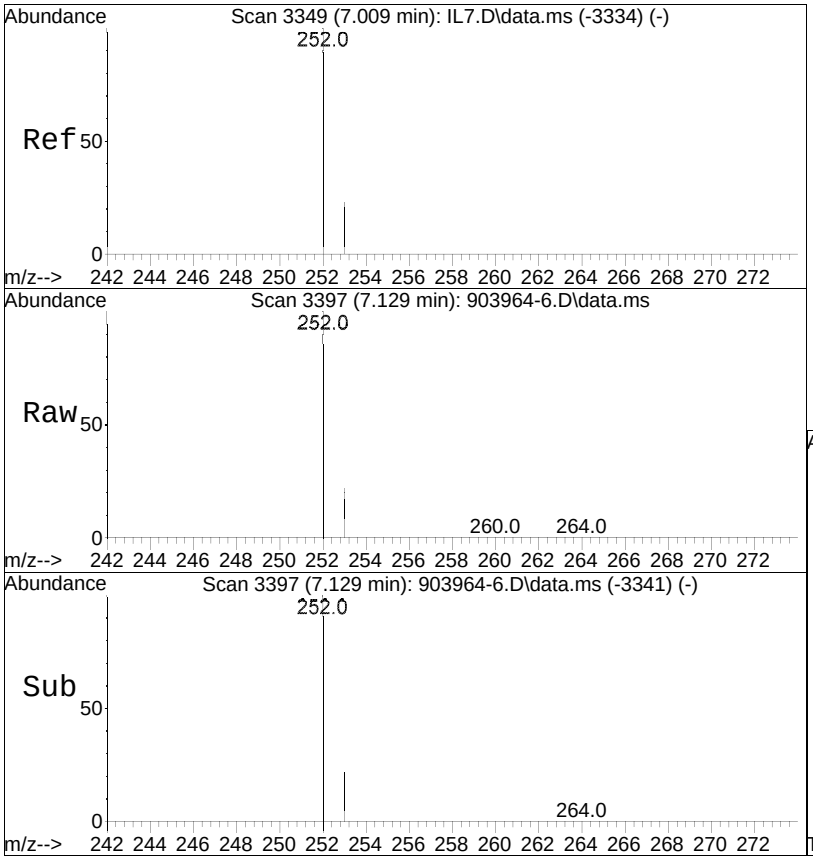


#34
Chrysene
Concen: 3574.96 ng/ml
RT: 6.307 min Scan# 3006
Delta R.T. 0.013 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:228 Resp: 181311

Ion	Ratio	Lower	Upper
228	100		
226	30.7	24.5	36.7

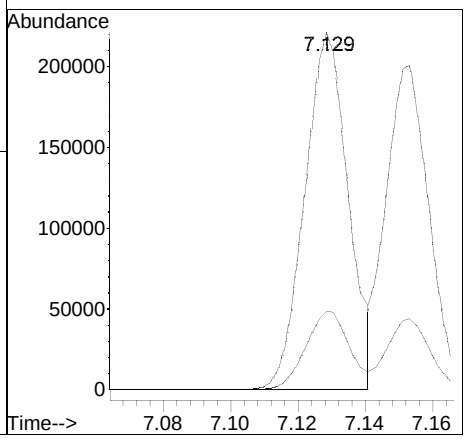


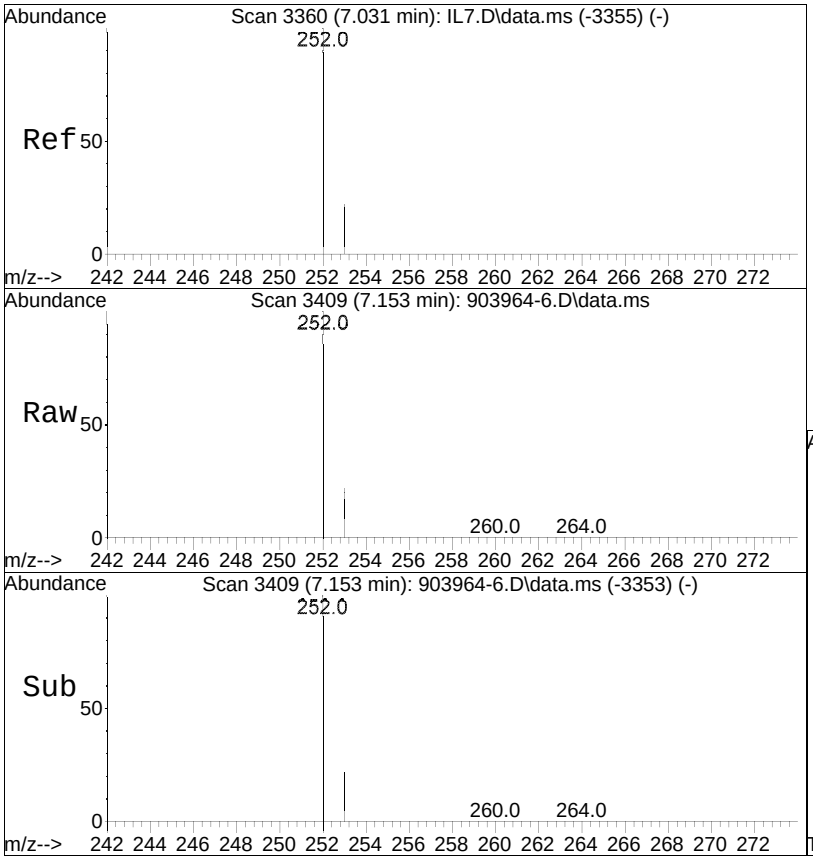


#37
Benzo[b]fluoranthene
Concen: 3467.72 ng/ml
RT: 7.129 min Scan# 3397
Delta R.T. 0.014 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:252 Resp: 197645

Ion	Ratio	Lower	Upper
252	100		
253	22.0	17.3	25.9

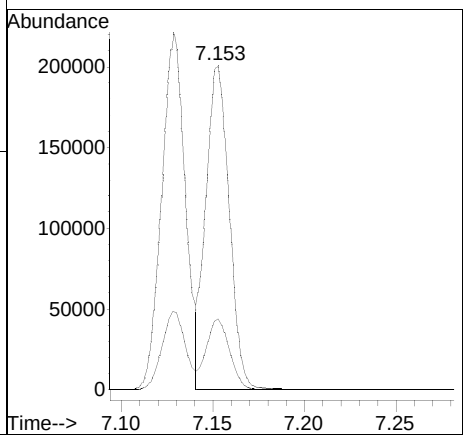


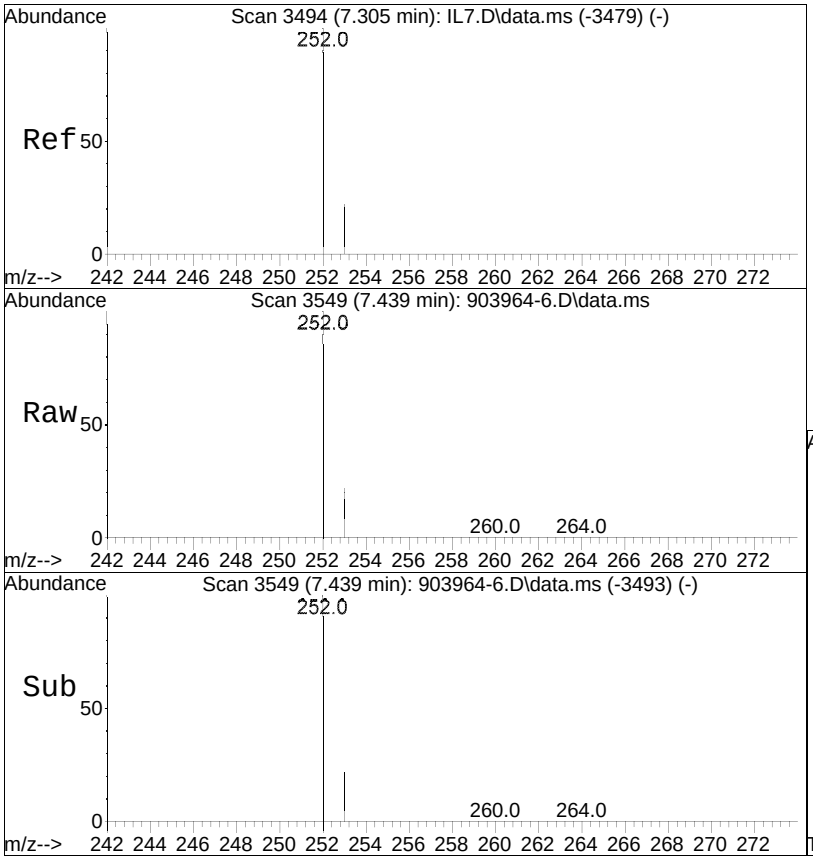


#38
Benzo[k]fluoranthene
Concen: 3285.37 ng/ml
RT: 7.153 min Scan# 3409
Delta R.T. 0.014 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:252 Resp: 177807

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.4	26.2

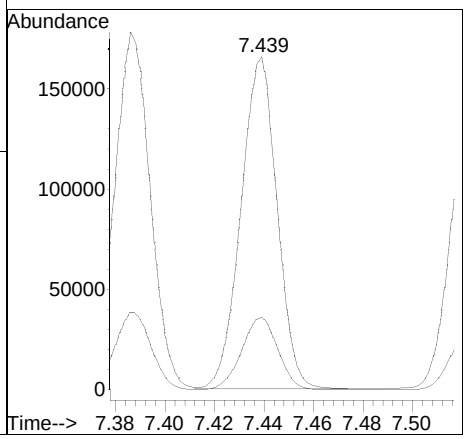


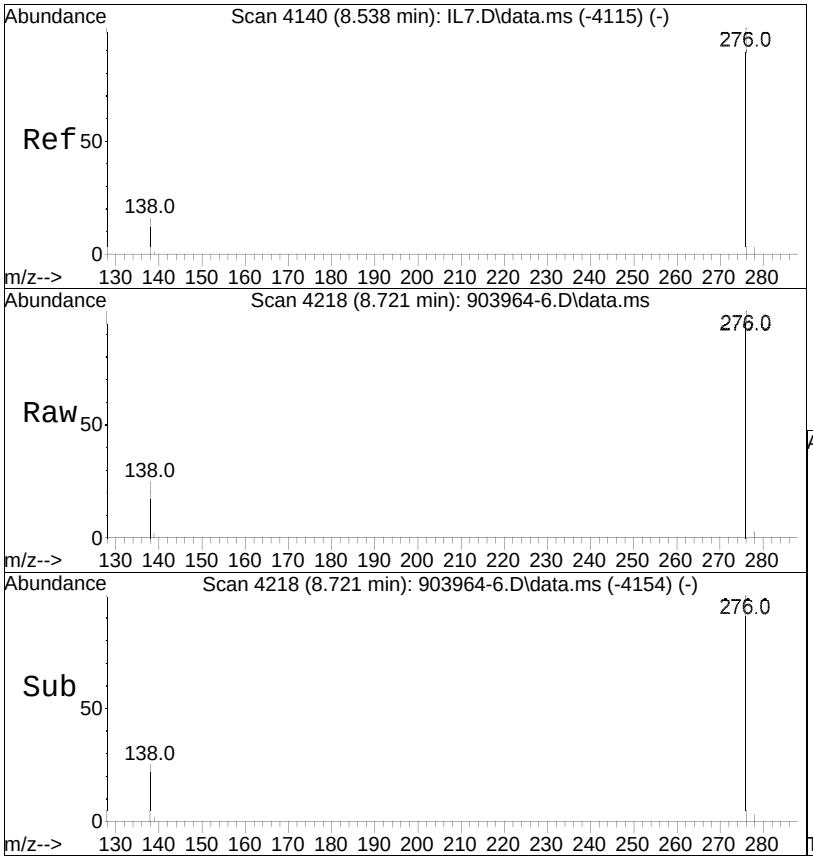


#39
Benzo[a]pyrene
Concen: 3330.39 ng/ml
RT: 7.439 min Scan# 3549
Delta R.T. 0.014 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:252 Resp: 167081

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.4	26.0

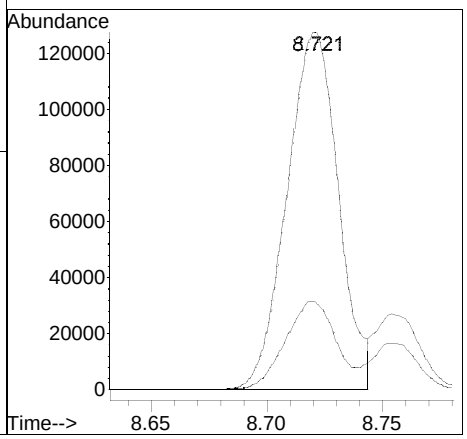


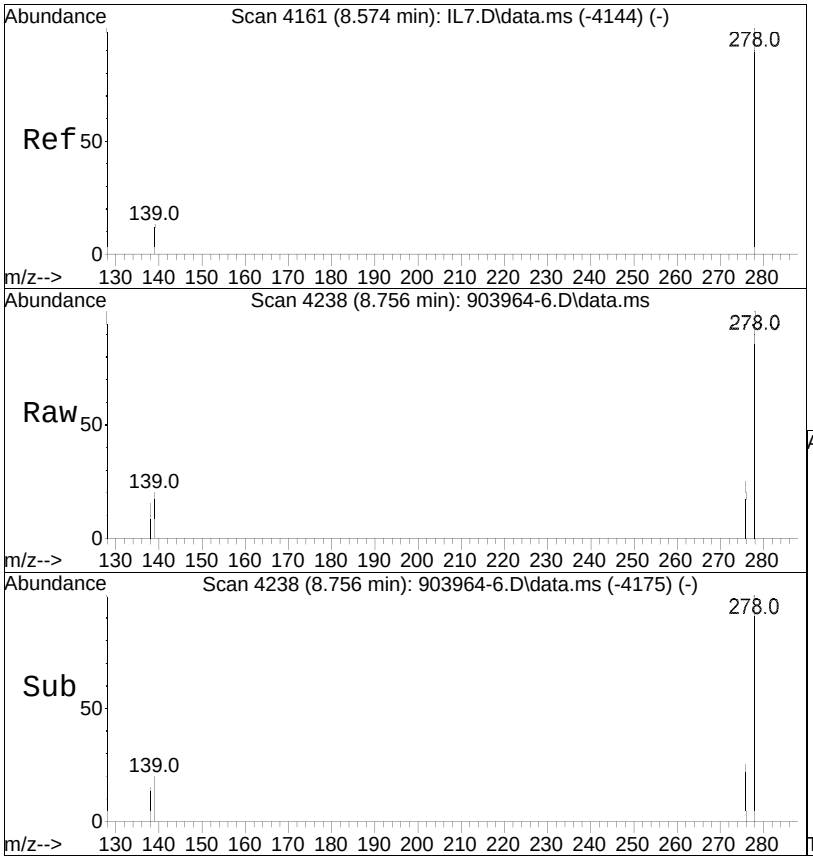


#40
Indeno[1,2,3-cd]pyrene
Concen: 3581.72 ng/ml
RT: 8.721 min Scan# 4218
Delta R.T. 0.010 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:276 Resp: 195292

Ion	Ratio	Lower	Upper
276	100		
138	24.3	14.8	22.2#

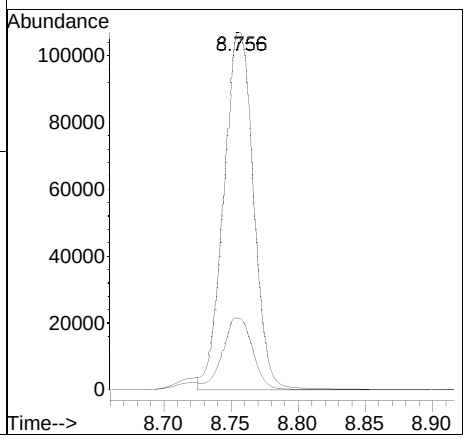


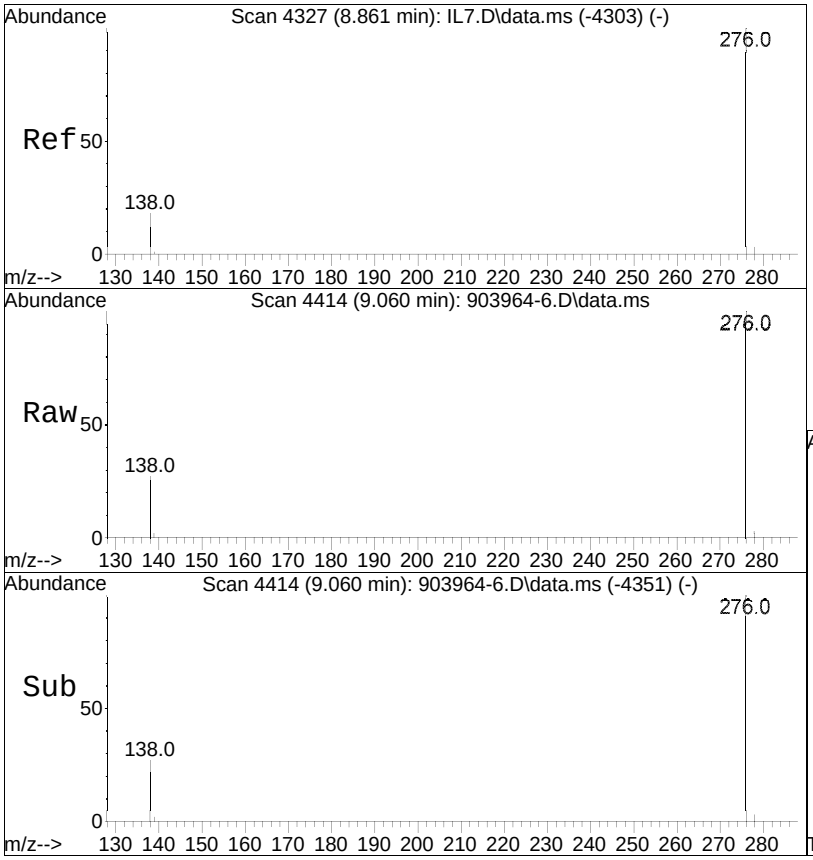


#41
Dibenzo[a,h]anthracene
Concen: 3227.15 ng/ml M6
RT: 8.756 min Scan# 4238
Delta R.T. 0.009 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:278 Resp: 163712

Ion	Ratio	Lower	Upper
278	100		
139	20.0	12.2	18.4#

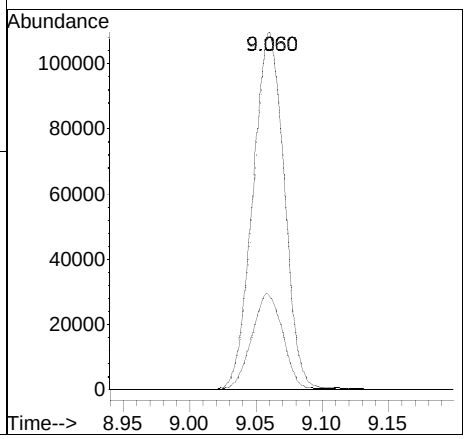




#42
Benzo[g,h,i]perylene
Concen: 3208.62 ng/ml
RT: 9.060 min Scan# 4414
Delta R.T. 0.009 min
Lab File: 903964-6.D
Acq: 04 Apr 2024 08:16 am

Tgt Ion:276 Resp: 177957

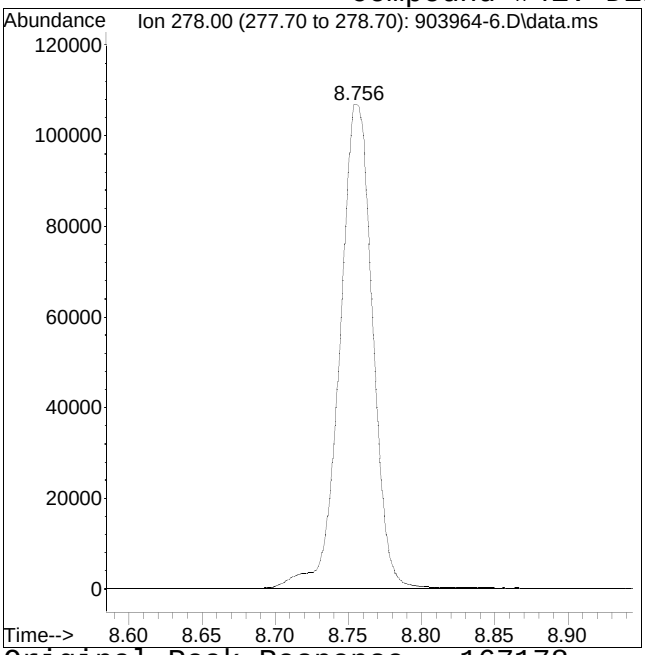
Ion	Ratio	Lower	Upper
276	100		
138	26.8	16.8	25.2#



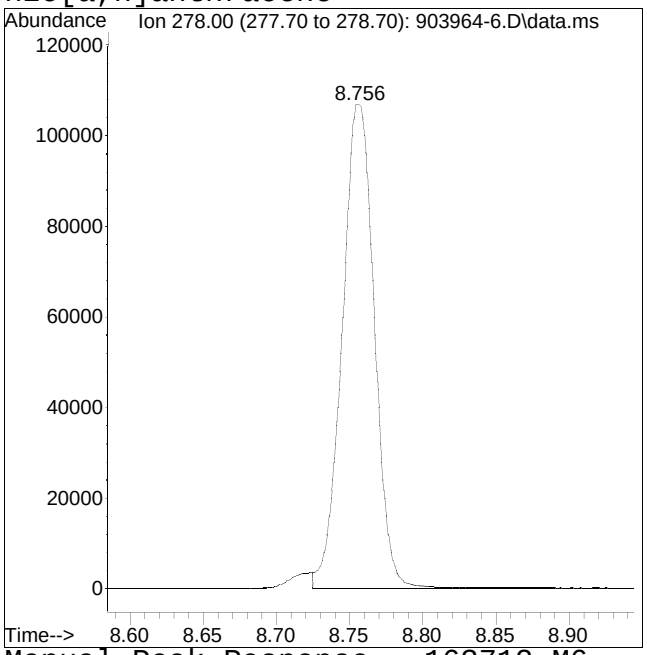
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 903964-6.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:16 am Instrument : SV119
Sample : WG1903964-6,32,,ah Quant Date : 4/4/2024 8:32 am

Compound #41: Dibenzo[a,h]anthracene



Original Peak Response = 167178



Manual Peak Response = 163712 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-5.D
Acq On : 03 Apr 2024 08:51 am
Operator : sv119:ah
Sample : WG1903964-5,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 03 09:07:10 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.231	152	48865	4000.000	ng/ml	0.00
Standard Area 1 = 53851			Recovery = 90.74%			
8) Naphthalene-d8	2.897	136	161125	4000.000	ng/ml	0.00
Standard Area 1 = 173620			Recovery = 92.80%			
17) Acenaphthene-d10	3.876	164	80702	4000.000	ng/ml	0.00
Standard Area 1 = 87313			Recovery = 92.43%			
22) Phenanthrene-d10	4.719	188	169162	4000.000	ng/ml	0.00
Standard Area 1 = 180904			Recovery = 93.51%			
31) Chrysene-d12	6.277	240	133217	4000.000	ng/ml	-0.01
Standard Area 1 = 149911			Recovery = 88.86%			
36) Perylene-d12	7.488	264	151867	4000.000	ng/ml	-0.01
Standard Area 1 = 170346			Recovery = 89.15%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.635	112	46730	3496.343	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 69.93%			
3) Phenol-d6	2.050	99	49708	3102.677	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 62.05%			
7) Nitrobenzene-d5	2.511	82	25959	2136.087	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 85.44%			
13) 2-Fluorobiphenyl	3.498	172	61117	1698.381	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 67.94%			
21) 2,4,6-Tribromophenol	4.323	330	23723	5331.934	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 106.64%			
30) 4-Terphenyl-d14	5.637	244	52017	1254.347	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 50.17%			
Target Compounds						Qvalue
4) Bis(2-chloroethyl)ether	2.091	93	47081	3455.512	ng/ml#	81
5) n-nitrosodi-n-propylamine	2.429	70	33913	4161.708	ng/ml	97
6) Hexachloroethane	2.491	117	21040	3480.603	ng/ml	90
9) Naphthalene	2.909	128	140761	3658.656	ng/ml	100
10) Hexachlorobutadiene	2.982	225	31653	3820.260	ng/ml	100
11) 2-Methylnaphthalene	3.289	142	99818	3508.935	ng/ml	97
12) 1-Methylnaphthalene	3.345	142	89616	3416.226	ng/ml	97
14) 2-Chloronaphthalene	3.562	162	104256	3440.599	ng/ml	92
15) 2,6-Dinitrotoluene	3.755	165	28203	4121.841	ng/ml	90
16) Acenaphthylene	3.796	152	153241	3403.083	ng/ml	100
18) Acenaphthene	3.894	153	98498	3948.039	ng/ml	97

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-5.D
Acq On : 03 Apr 2024 08:51 am
Operator : sv119:ah
Sample : WG1903964-5,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 03 09:07:10 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240403LVI\ccv0403.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
19) 2,4-Dinitrotoluene	3.984	165	37982	5106.217	ng/ml#	75
20) Fluorene	4.187	166	115724	3880.584	ng/ml	97
23) 4,6-Dinitro-o-cresol	4.214	198	20830	4123.126	ng/ml	93
24) Hexachlorobenzene	4.504	284	48500	4434.924	ng/ml	99
25) Pentachlorophenol	4.616	266	33935	4859.735	ng/ml	100
26) Phenanthrene	4.731	178	171432	3989.566	ng/ml	100
27) Anthracene	4.760	178	165659	3887.625	ng/ml	100
28) Fluoranthene	5.412	202	204216	3605.966	ng/ml	99
29) Pyrene	5.544	202	206874	3555.638	ng/ml	99
32) Benzo[a]anthracene	6.268	228	197239	4451.122	ng/ml	100
33) 3,3'-Dichlorobenzidine	6.257	252	22343	1110.142	ng/ml	98
34) Chrysene	6.294	228	166540	3787.872	ng/ml	99
35) Bis(2-ethylhexyl)phtha...	6.300	149	152801	5098.700	ng/ml	99
37) Benzo[b]fluoranthene	7.118	252	196945	3712.046	ng/ml	100
38) Benzo[k]fluoranthene	7.143	252	176150	3496.459	ng/ml	100
39) Benzo[a]pyrene	7.429	252	165945	3553.389	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.711	276	206015	4058.971	ng/ml#	86
41) Dibenzo[a,h]anthracene	8.751	278	166926	3534.871	ng/ml#	88
42) Benzo[g,h,i]perylene	9.055	276	190869	3696.995	ng/ml#	87

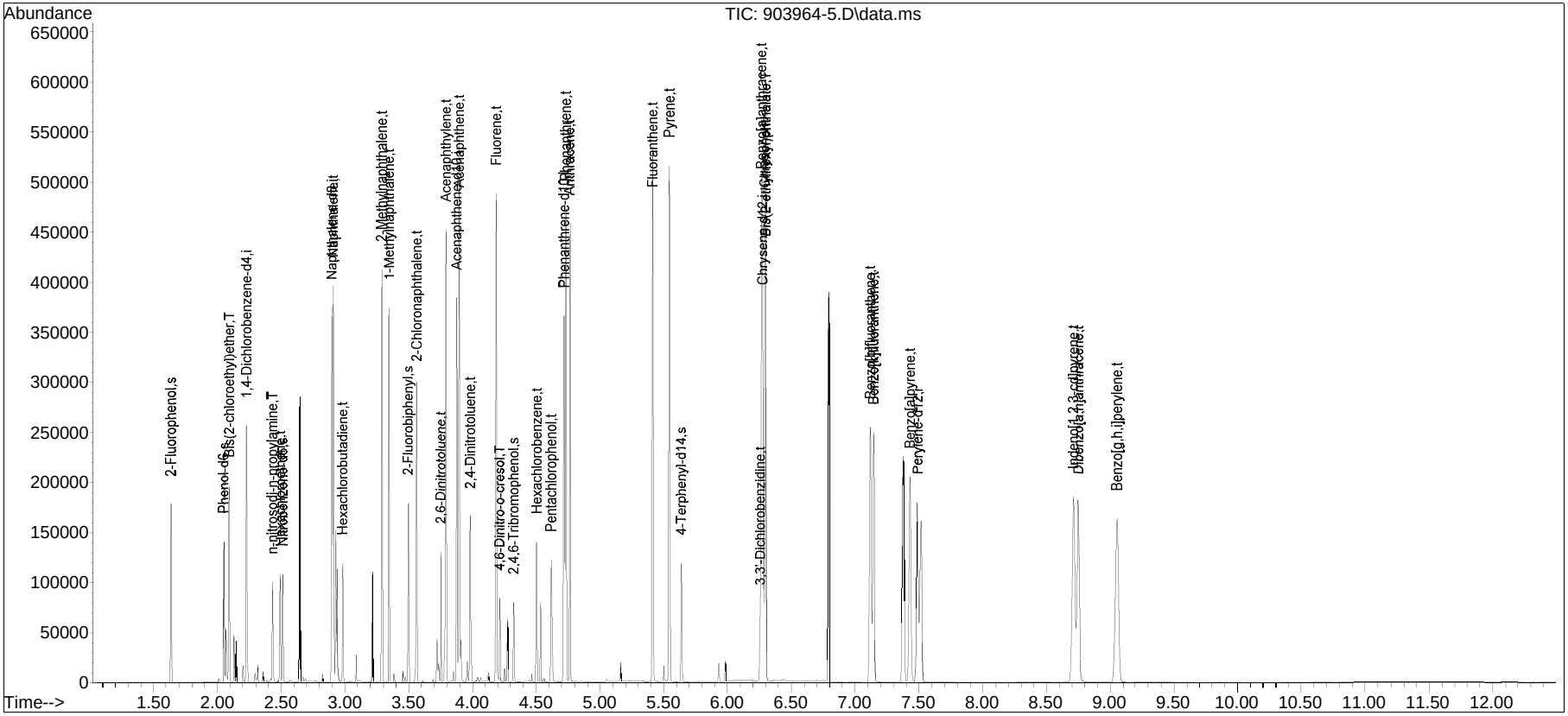
(#) = qualifier out of range (m) = manual integration (+) = signals summed

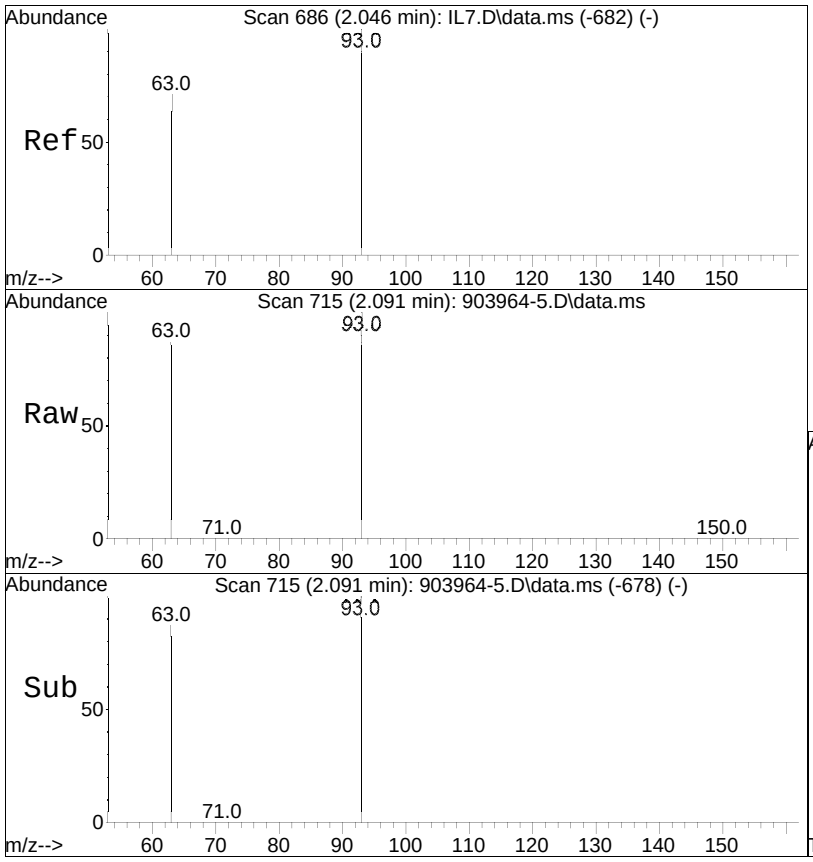
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240403LVI\
Data File : 903964-5.D
Acq On : 03 Apr 2024 08:51 am
Operator : sv119:ah
Sample : WG1903964-5,32,,ah
Misc : WG1904170,WG1903964,ical20642
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 03 09:07:10 2024
Quant Method : I:\8270sim\sv119\240403LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Wed Apr 03 06:56:03 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0403.D•

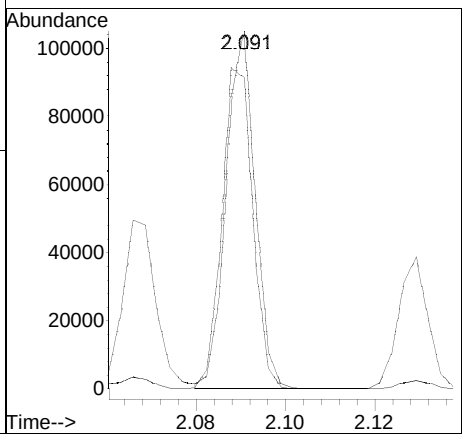


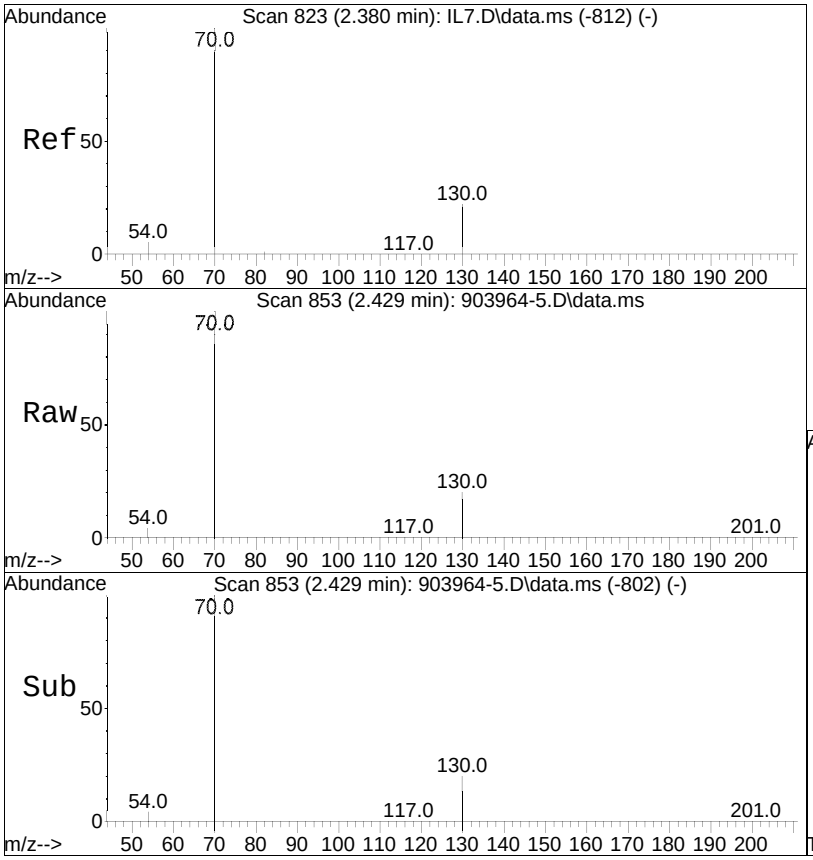


#4
Bis(2-chloroethyl)ether
Concen: 3455.51 ng/ml
RT: 2.091 min Scan# 715
Delta R.T. 0.003 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion: 93 Resp: 47081

Ion	Ratio	Lower	Upper
93	100		
63	94.9	62.6	94.0#

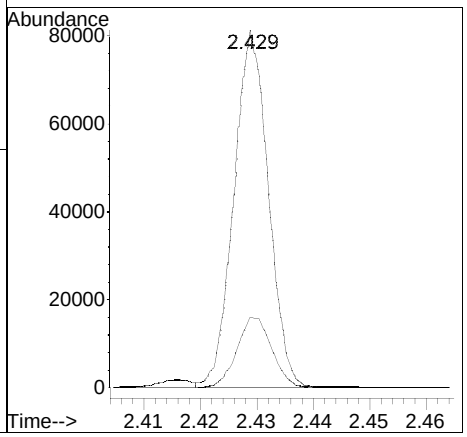


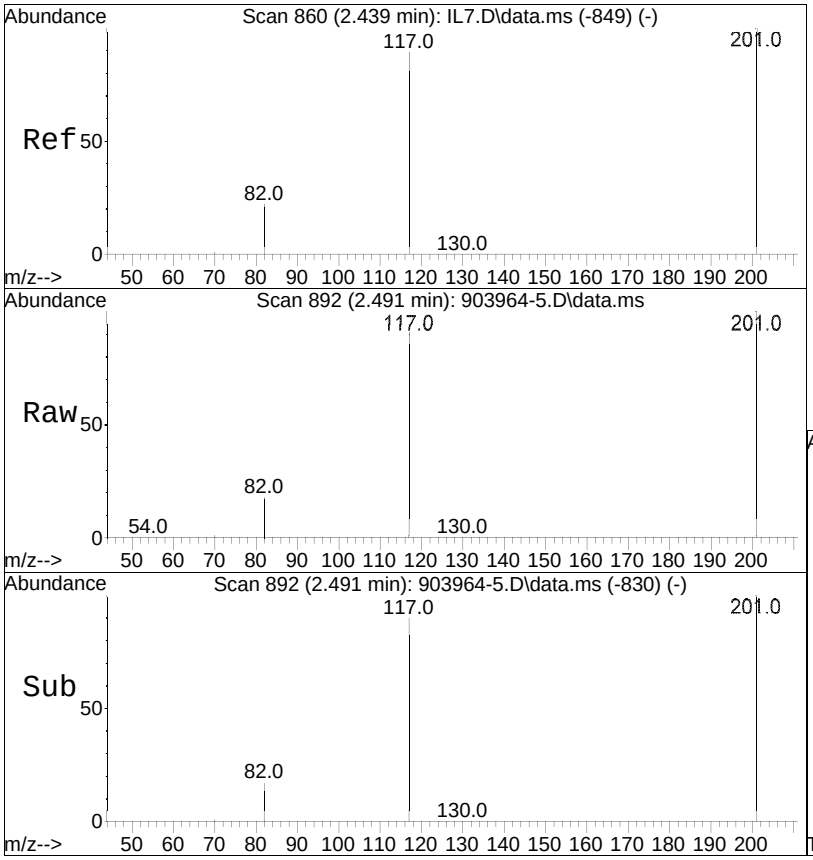


#5
n-nitrosodi-n-propylamine
Concen: 4161.71 ng/ml
RT: 2.429 min Scan# 853
Delta R.T. -0.000 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion: 70 Resp: 33913

Ion	Ratio	Lower	Upper
70	100		
130	20.1	15.0	22.6

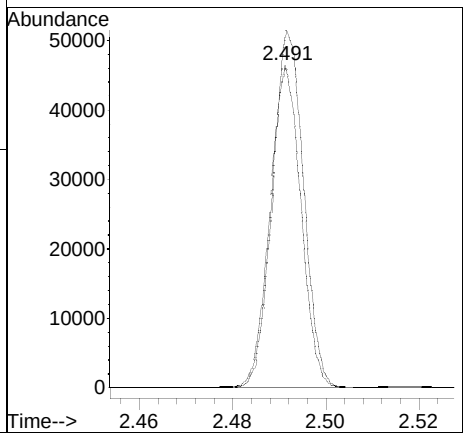


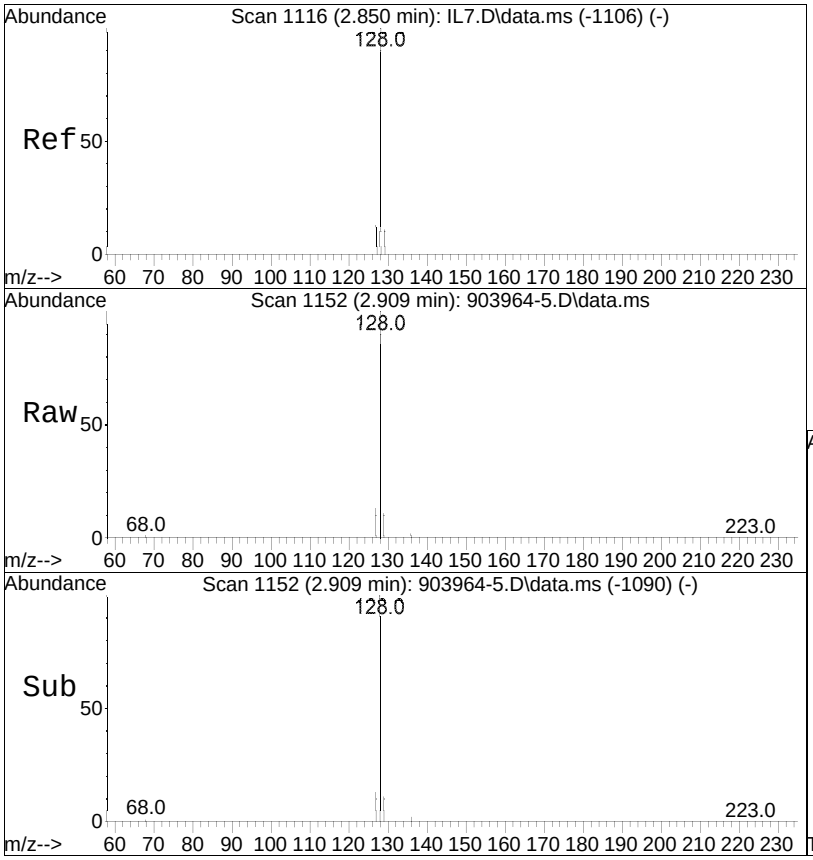


#6
Hexachloroethane
Concen: 3480.60 ng/ml
RT: 2.491 min Scan# 892
Delta R.T. -0.000 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:117 Resp: 21040

Ion	Ratio	Lower	Upper
117	100		
201	111.6	81.5	122.3

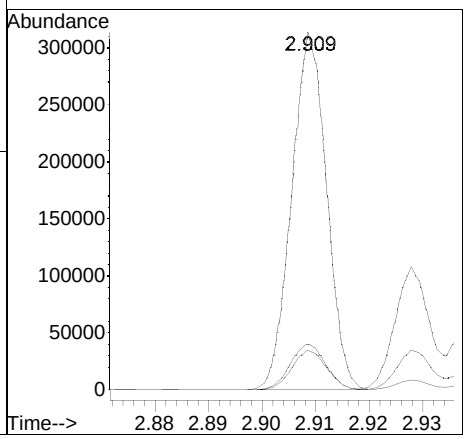


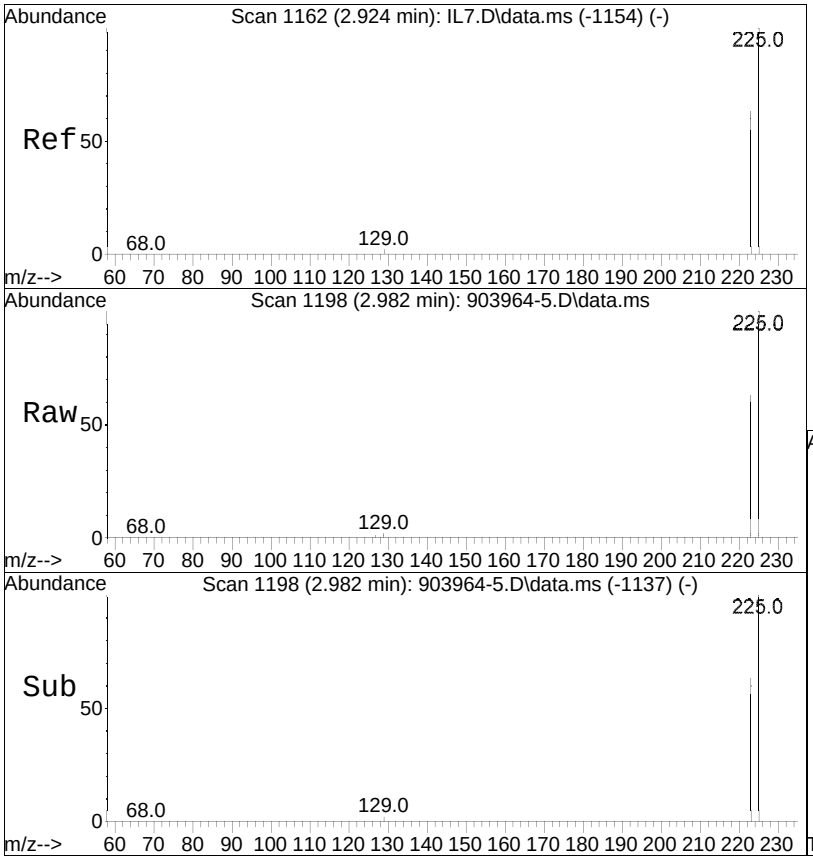


#9
Naphthalene
Concen: 3658.66 ng/ml
RT: 2.909 min Scan# 1152
Delta R.T. -0.000 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:128 Resp: 140761

Ion	Ratio	Lower	Upper
128	100		
129	11.1	8.8	13.2
127	13.1	10.6	15.8

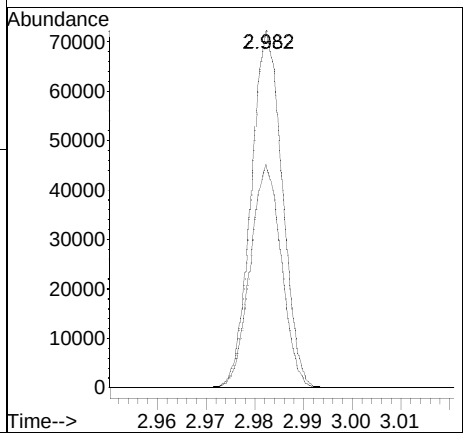


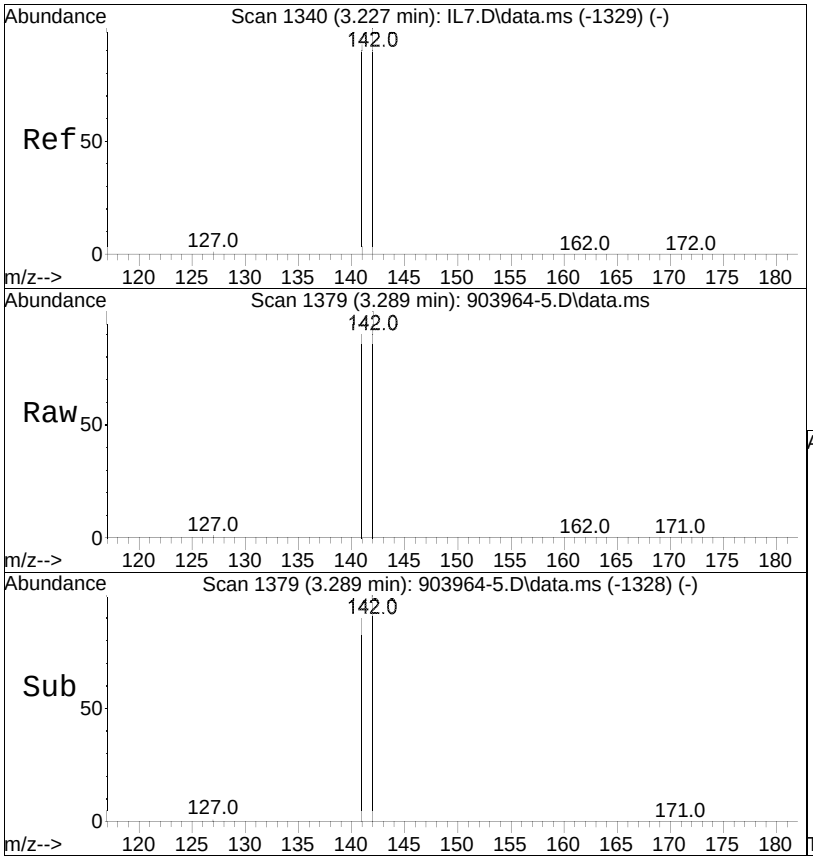


#10
Hexachlorobutadiene
Concen: 3820.26 ng/ml
RT: 2.982 min Scan# 1198
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:225 Resp: 31653

Ion	Ratio	Lower	Upper
225	100		
223	62.8	50.1	75.1

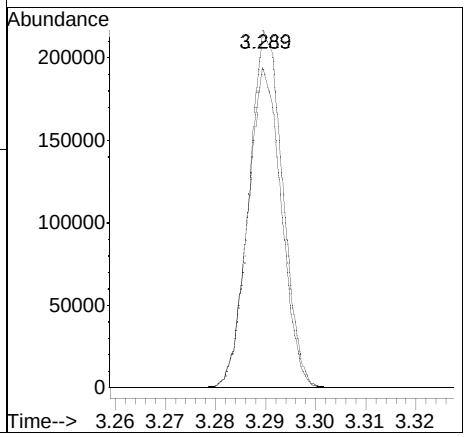


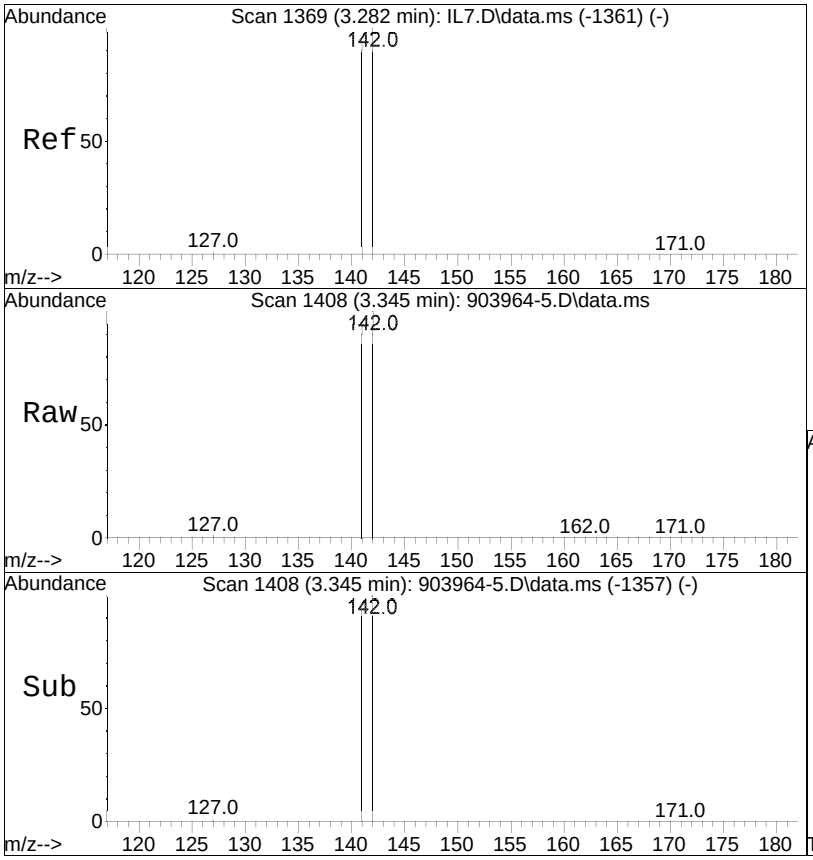


#11
2-Methylnaphthalene
Concen: 3508.94 ng/ml
RT: 3.289 min Scan# 1379
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:142 Resp: 99818

Ion	Ratio	Lower	Upper
142	100		
141	89.3	74.1	111.1

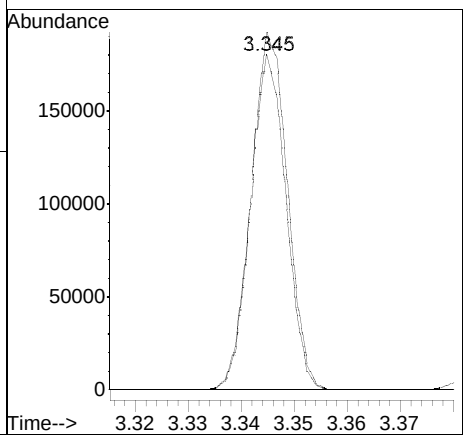


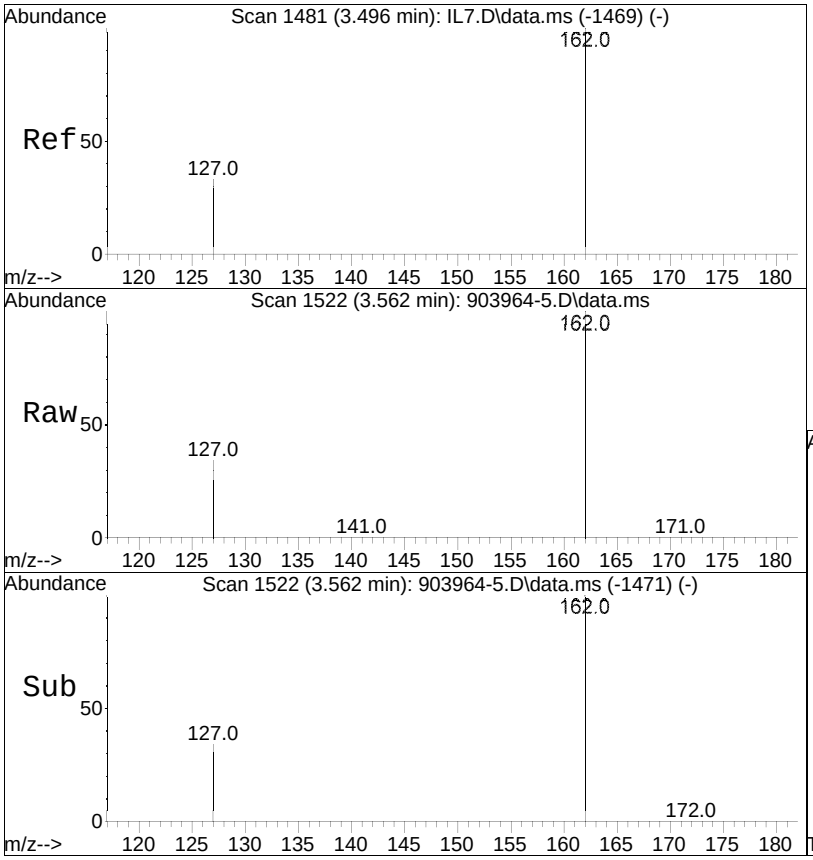


#12
1-Methylnaphthalene
Concen: 3416.23 ng/ml
RT: 3.345 min Scan# 1408
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:142 Resp: 89616

Ion	Ratio	Lower	Upper
142	100		
141	92.6	76.6	114.8

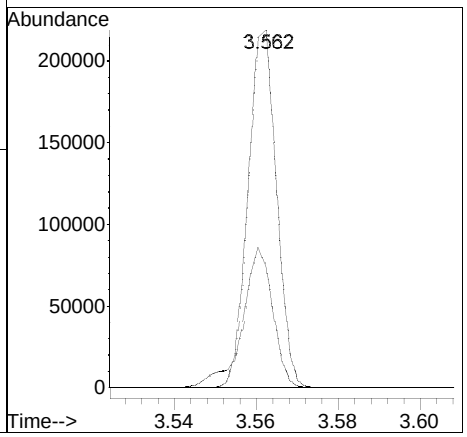


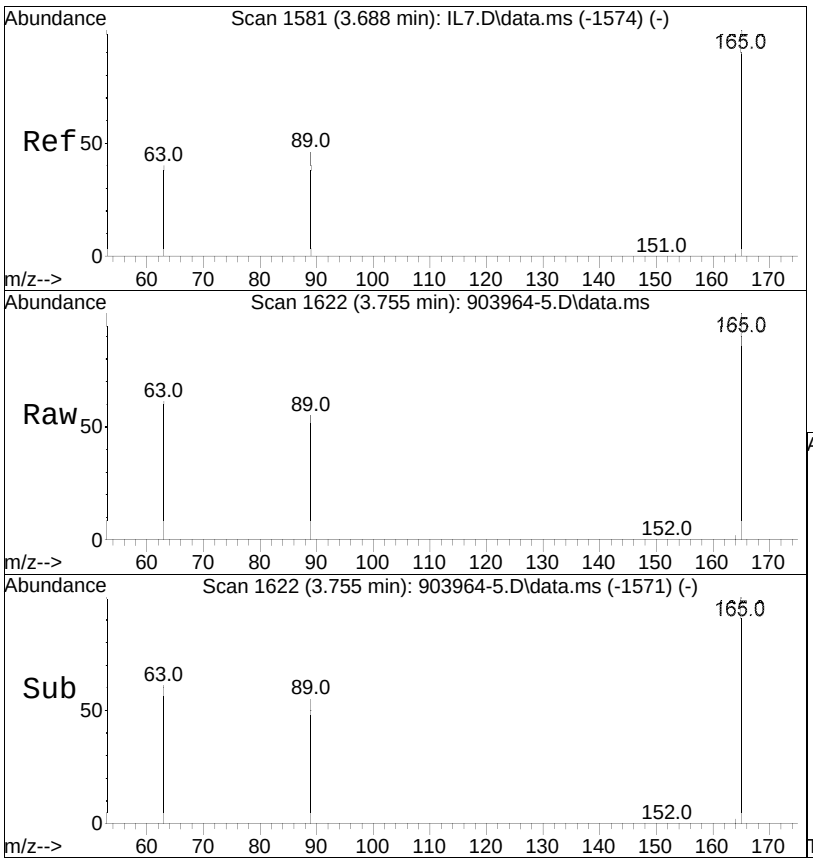


#14
2-Chloronaphthalene
Concen: 3440.60 ng/ml
RT: 3.562 min Scan# 1522
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:162 Resp: 104256

Ion	Ratio	Lower	Upper
162	100		
127	41.9	29.7	44.5

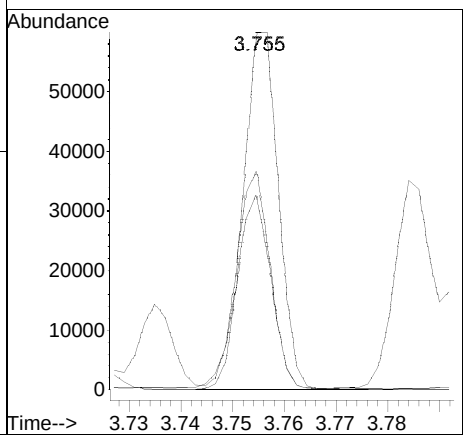


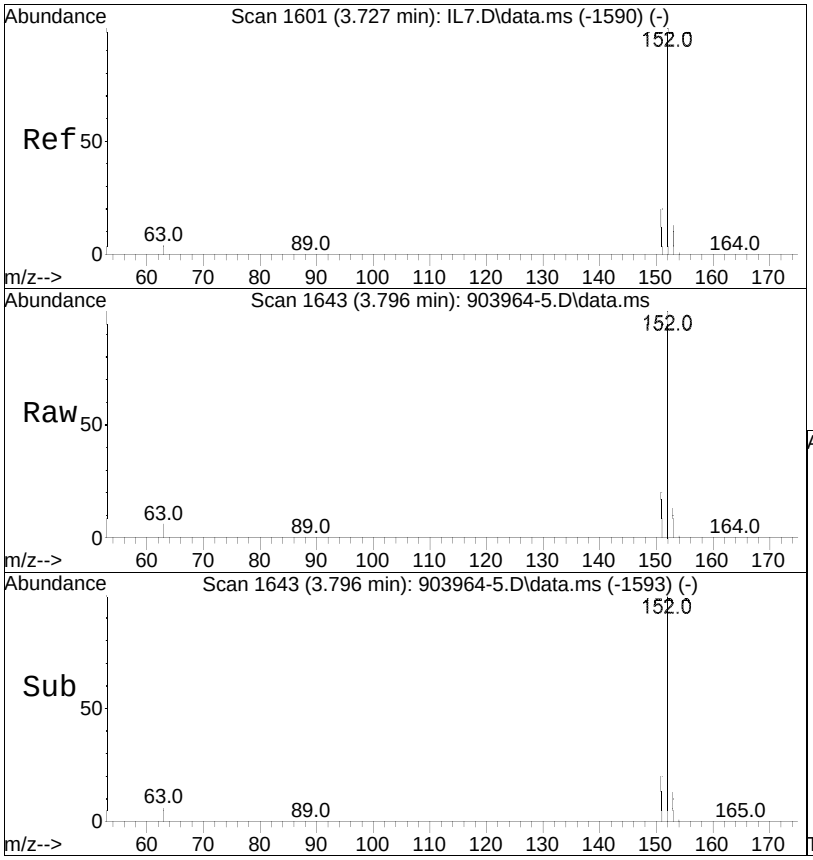


#15
2,6-Dinitrotoluene
Concen: 4121.84 ng/ml
RT: 3.755 min Scan# 1622
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:165 Resp: 28203

Ion	Ratio	Lower	Upper
165	100		
89	54.3	52.8	79.2
63	59.0	50.9	76.3

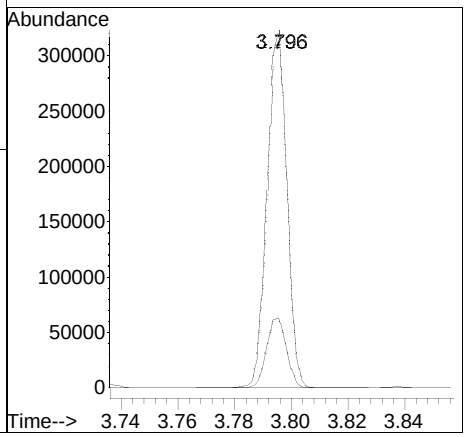


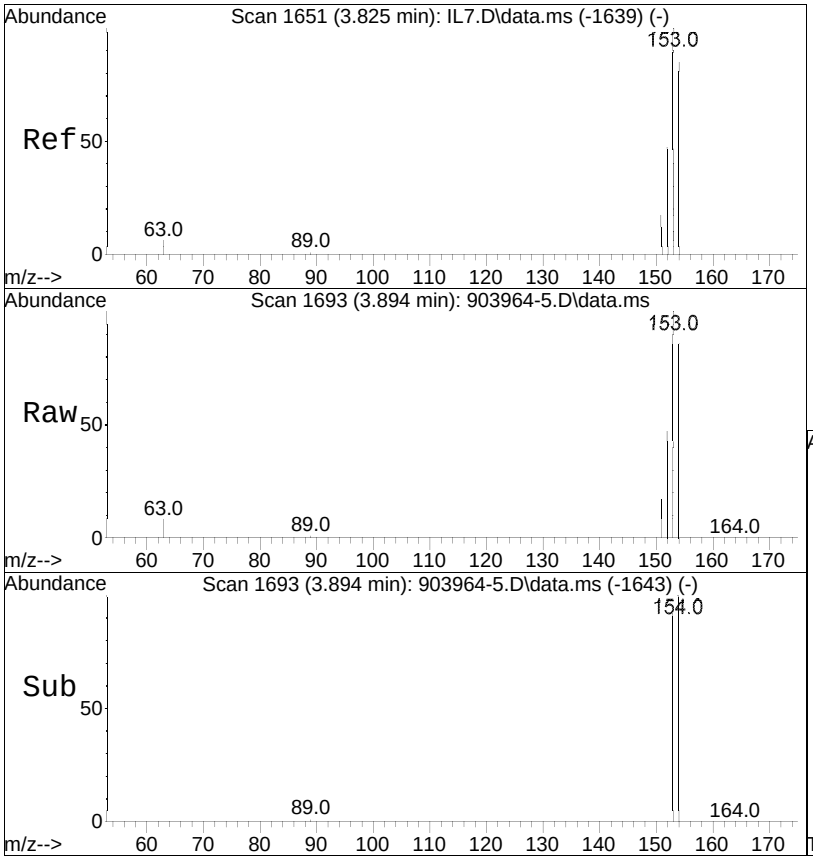


#16
Acenaphthylene
Concen: 3403.08 ng/ml
RT: 3.796 min Scan# 1643
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:152 Resp: 153241

Ion	Ratio	Lower	Upper
152	100		
151	19.9	16.0	24.0

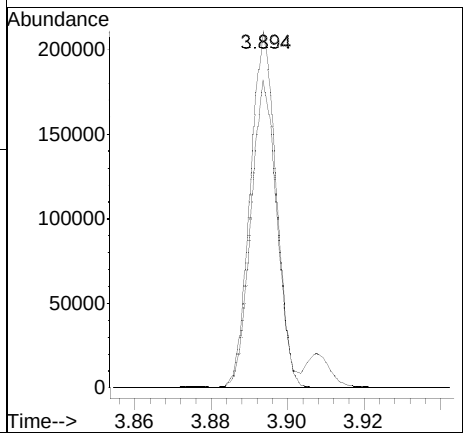


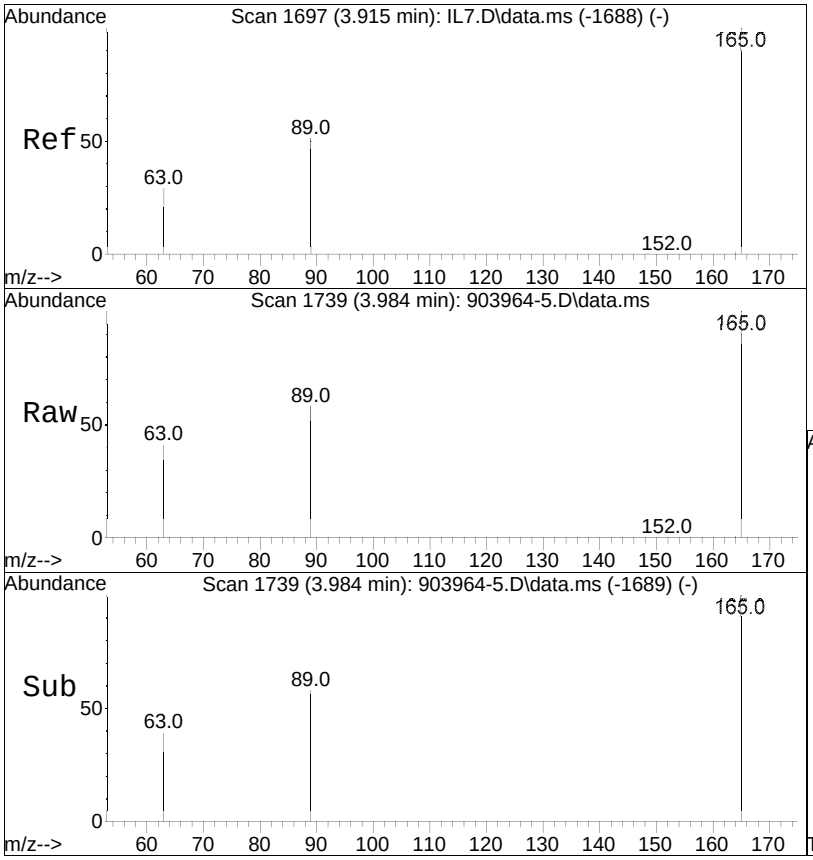


#18
Acenaphthene
Concen: 3948.04 ng/ml
RT: 3.894 min Scan# 1693
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:153 Resp: 98498

Ion	Ratio	Lower	Upper
153	100		
154	86.4	66.9	100.3

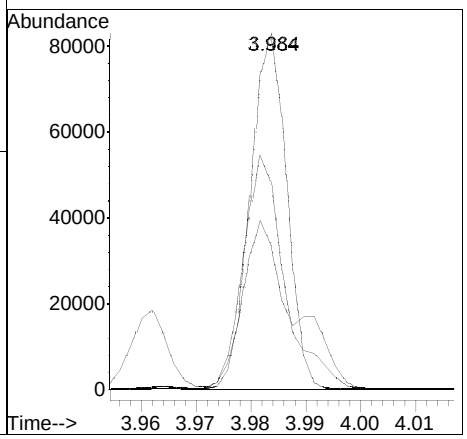


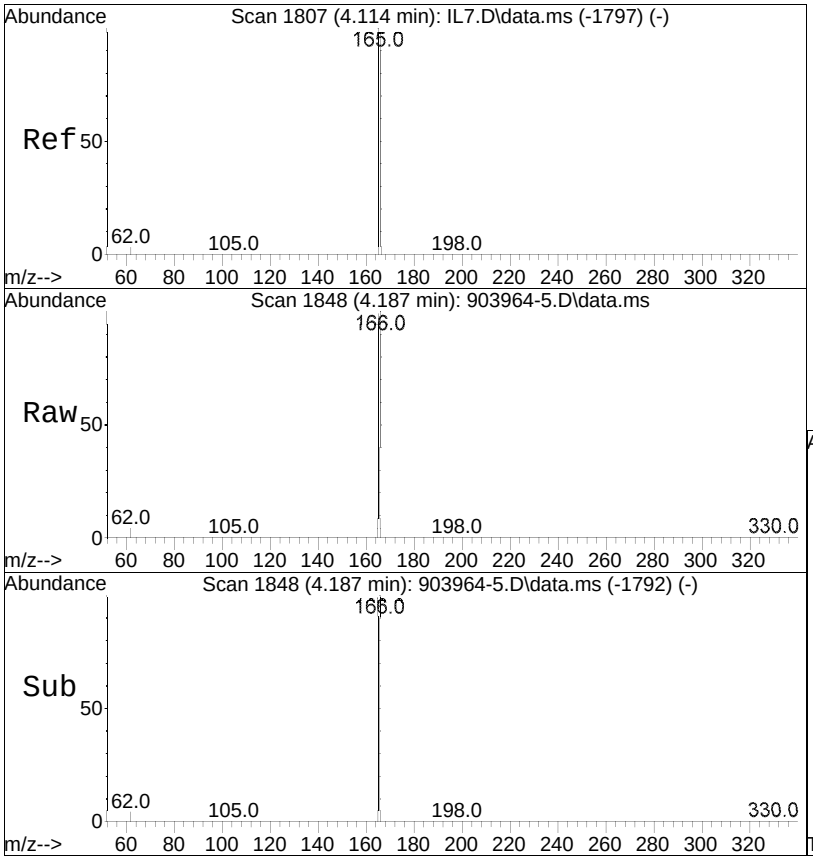


#19
2,4-Dinitrotoluene
Concen: 5106.22 ng/ml
RT: 3.984 min Scan# 1739
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:165 Resp: 37982

Ion	Ratio	Lower	Upper
165	100		
89	75.1	80.1	120.1#
63	66.0	38.9	58.3#

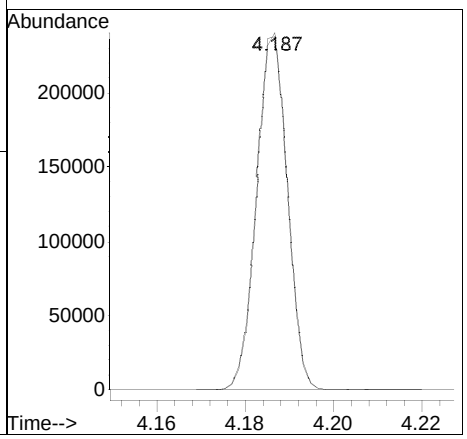


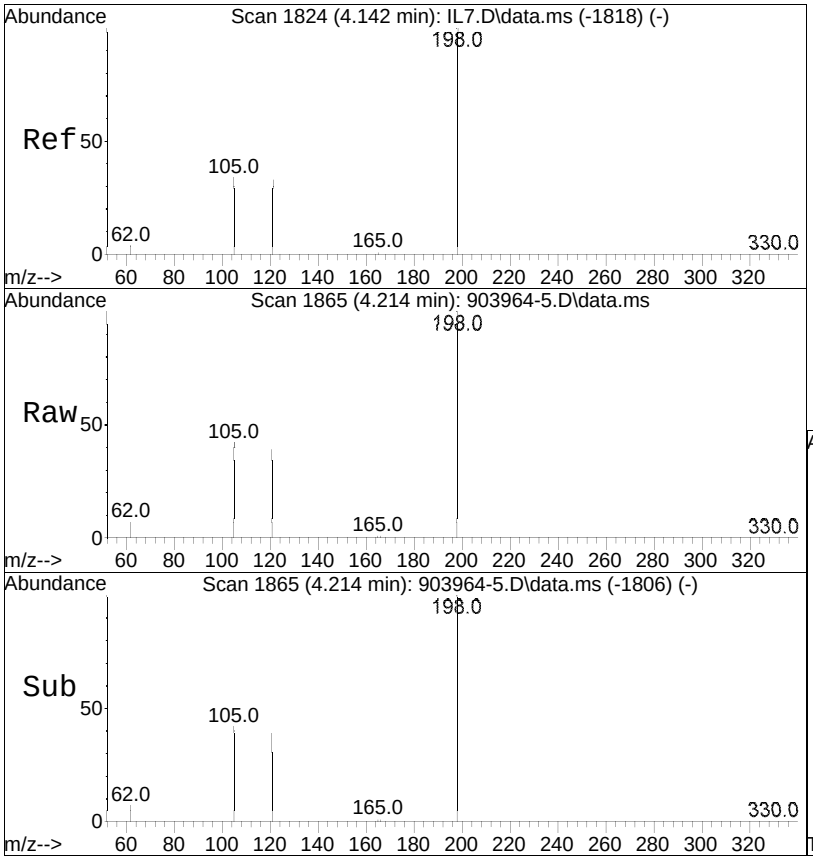


#20
Fluorene
Concen: 3880.58 ng/ml
RT: 4.187 min Scan# 1848
Delta R.T. -0.001 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:166 Resp: 115724

Ion	Ratio	Lower	Upper
166	100		
165	100.3	82.9	124.3

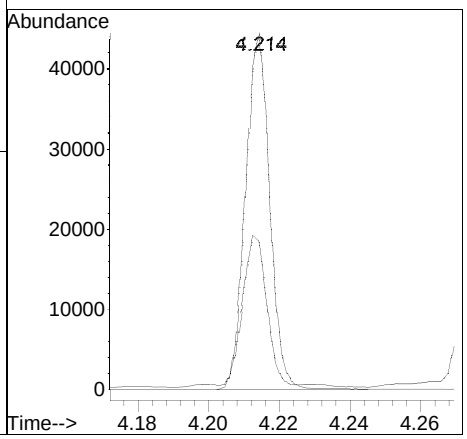


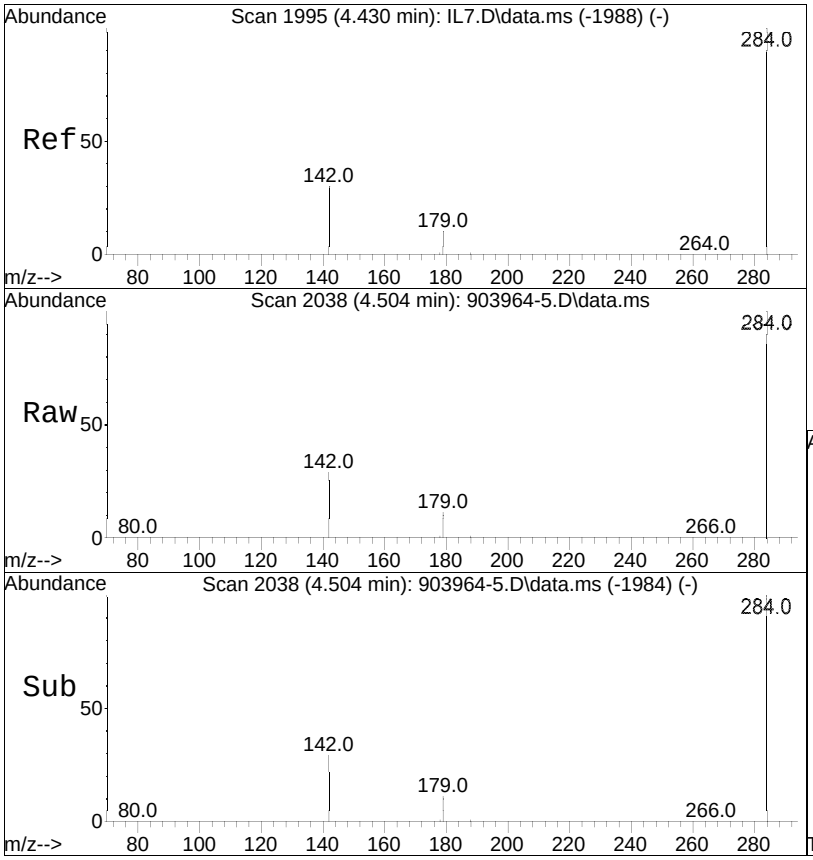


#23
4,6-Dinitro-o-cresol
Concen: 4123.13 ng/ml
RT: 4.214 min Scan# 1865
Delta R.T. -0.001 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:198 Resp: 20830

Ion	Ratio	Lower	Upper
198	100		
105	44.6	32.2	48.4

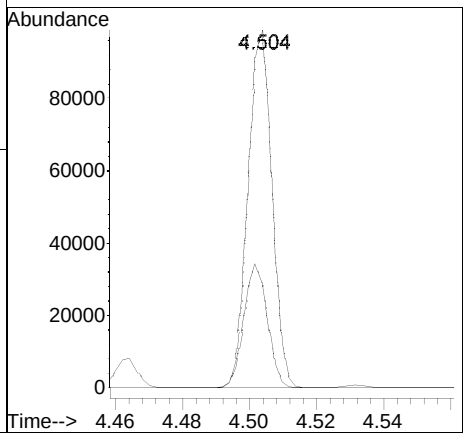


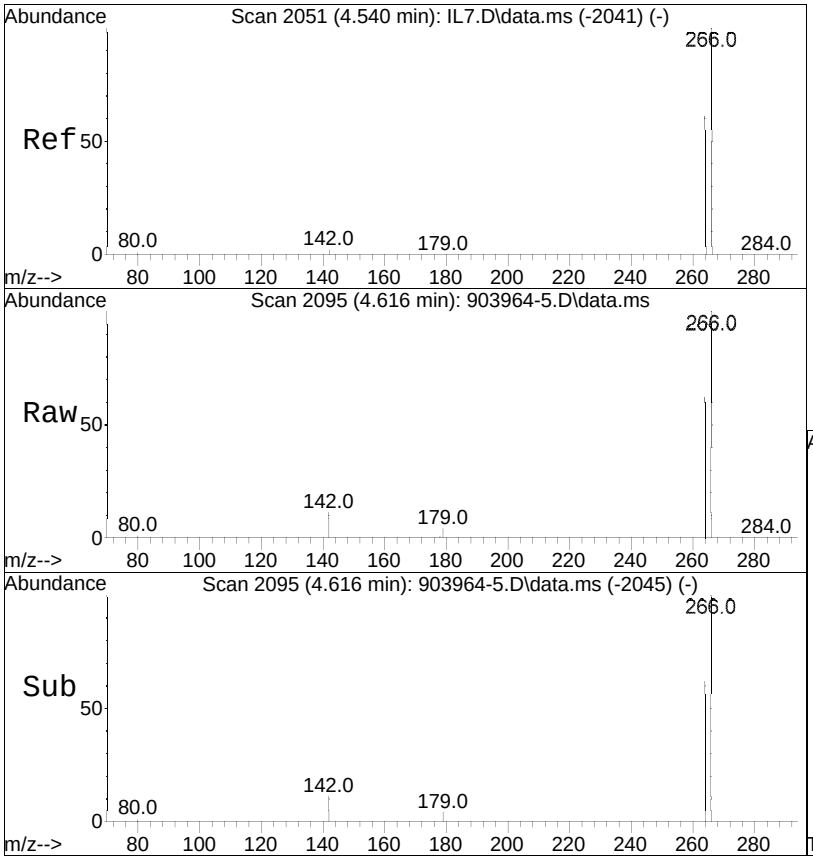


#24
Hexachlorobenzene
Concen: 4434.92 ng/ml
RT: 4.504 min Scan# 2038
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:284 Resp: 48500

Ion	Ratio	Lower	Upper
284	100		
142	34.0	26.9	40.3

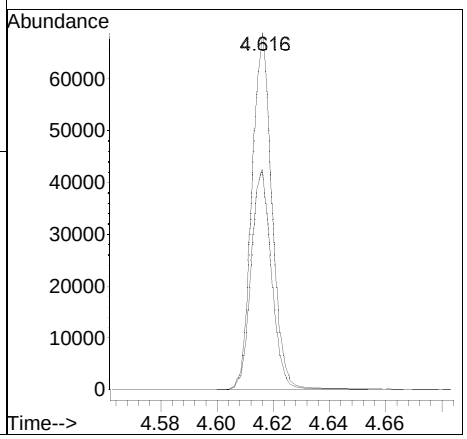


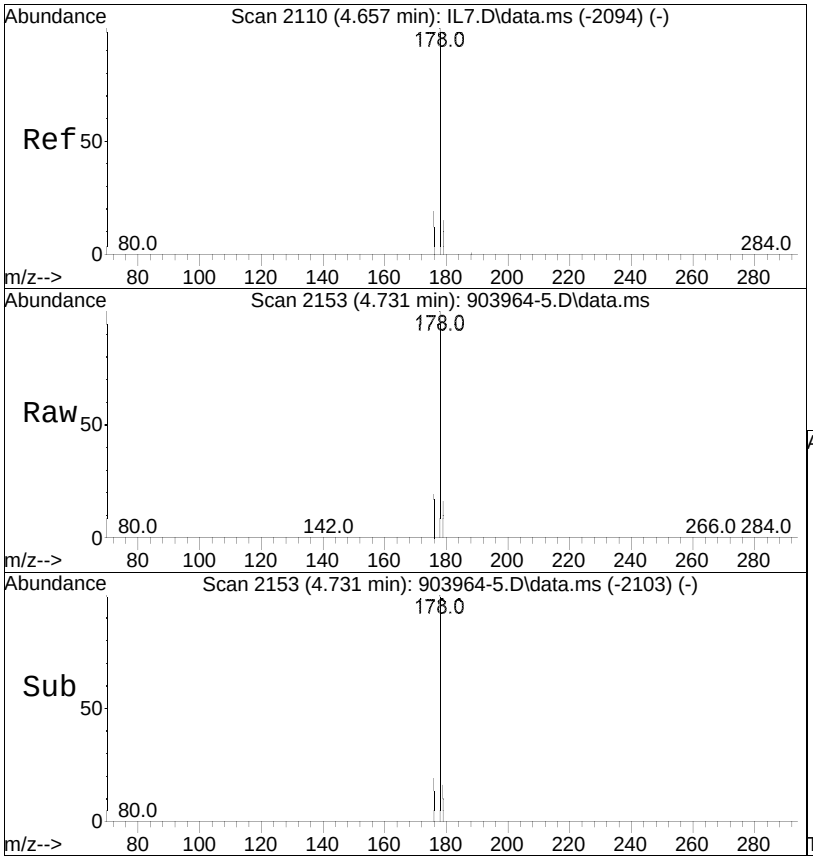


#25
Pentachlorophenol
Concen: 4859.73 ng/ml
RT: 4.616 min Scan# 2095
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:266 Resp: 33935

Ion	Ratio	Lower	Upper
266	100		
264	63.0	50.7	76.1

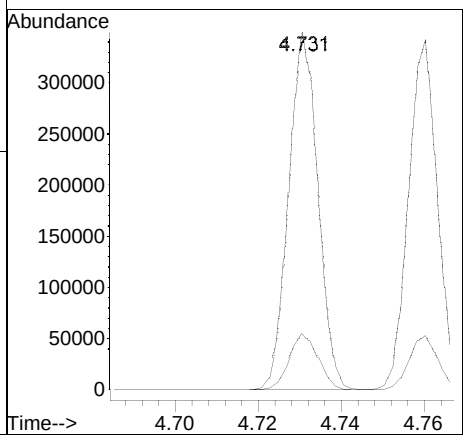


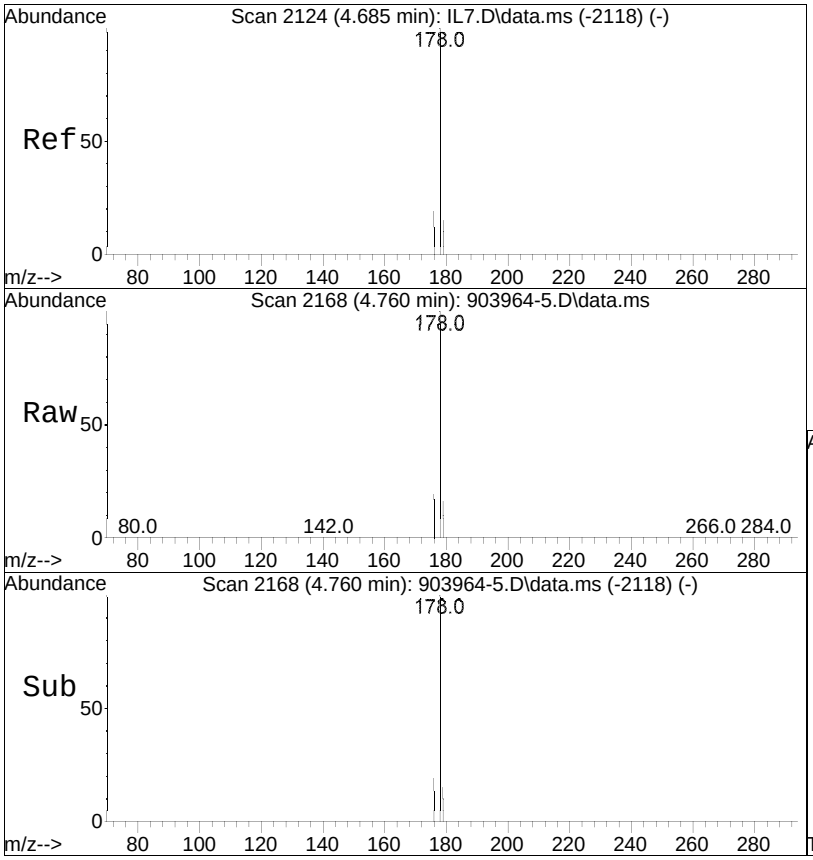


#26
Phenanthrene
Concen: 3989.57 ng/ml
RT: 4.731 min Scan# 2153
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:178 Resp: 171432

Ion	Ratio	Lower	Upper
178	100		
179	15.5	12.3	18.5

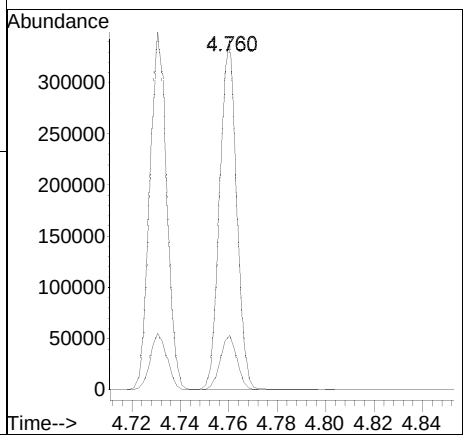


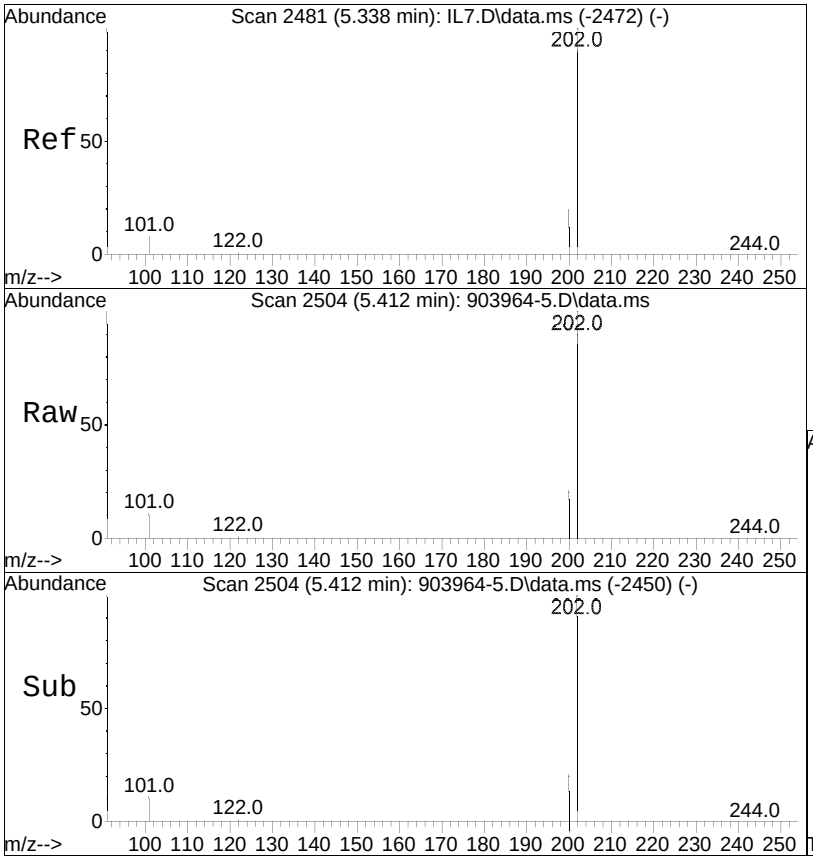


#27
Anthracene
Concen: 3887.62 ng/ml
RT: 4.760 min Scan# 2168
Delta R.T. -0.002 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:178 Resp: 165659

Ion	Ratio	Lower	Upper
178	100		
179	15.2	12.2	18.4

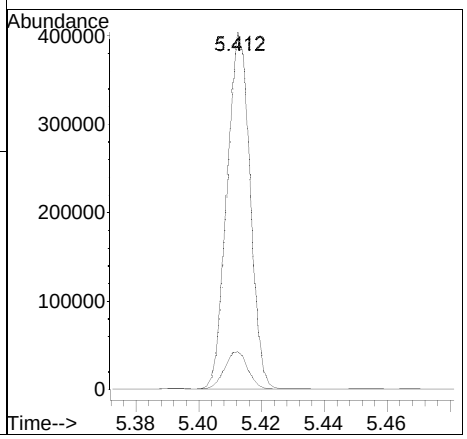


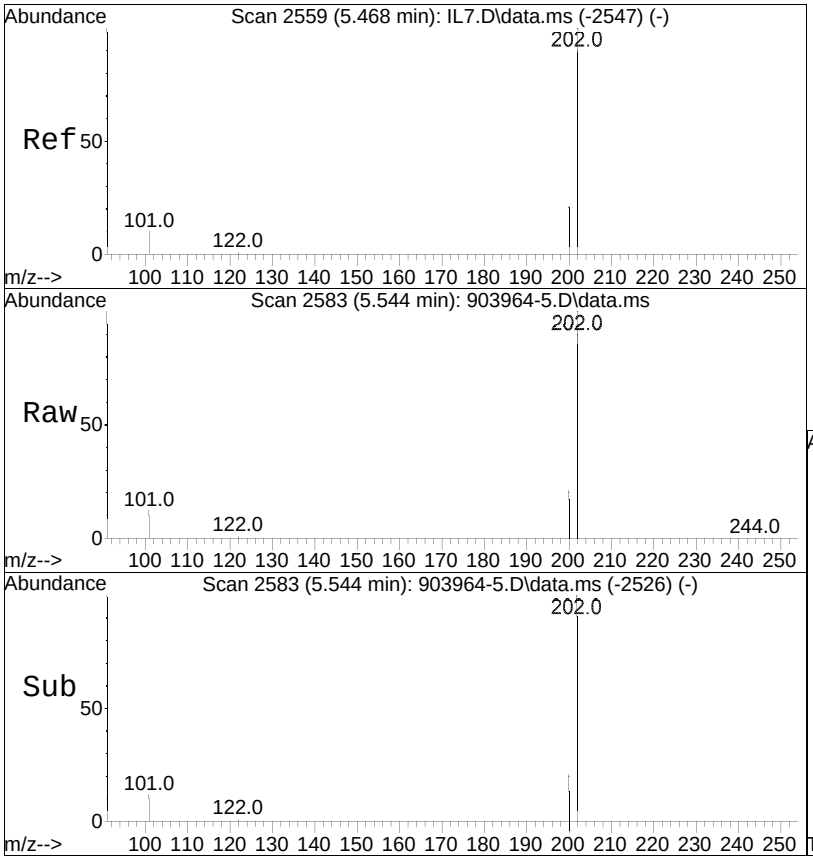


#28
Fluoranthene
Concen: 3605.97 ng/ml
RT: 5.412 min Scan# 2504
Delta R.T. -0.005 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:202 Resp: 204216

Ion	Ratio	Lower	Upper
202	100		
101	10.8	8.3	12.5

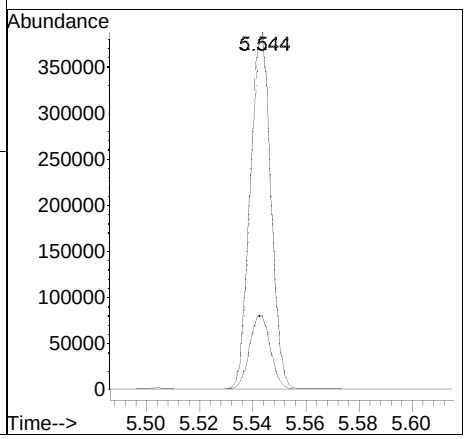


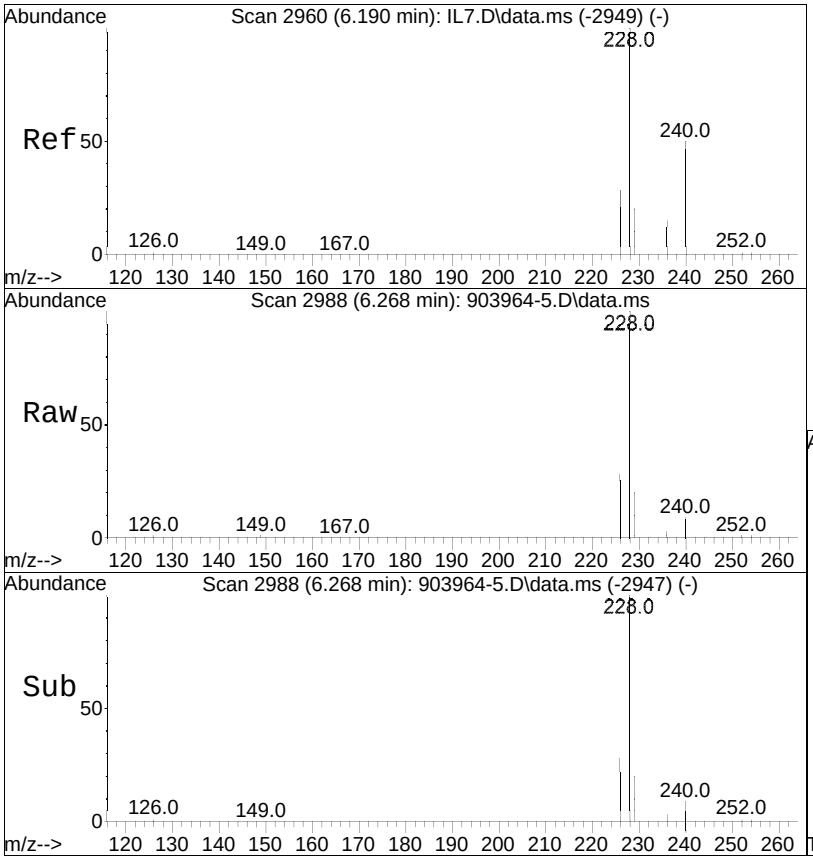


#29
Pyrene
Concen: 3555.64 ng/ml
RT: 5.544 min Scan# 2583
Delta R.T. -0.005 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:202 Resp: 206874

Ion	Ratio	Lower	Upper
202	100		
200	21.2	17.3	25.9

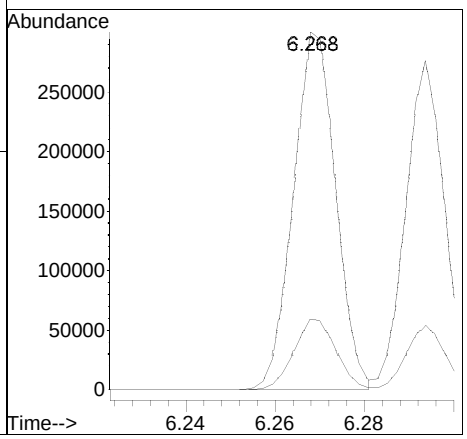


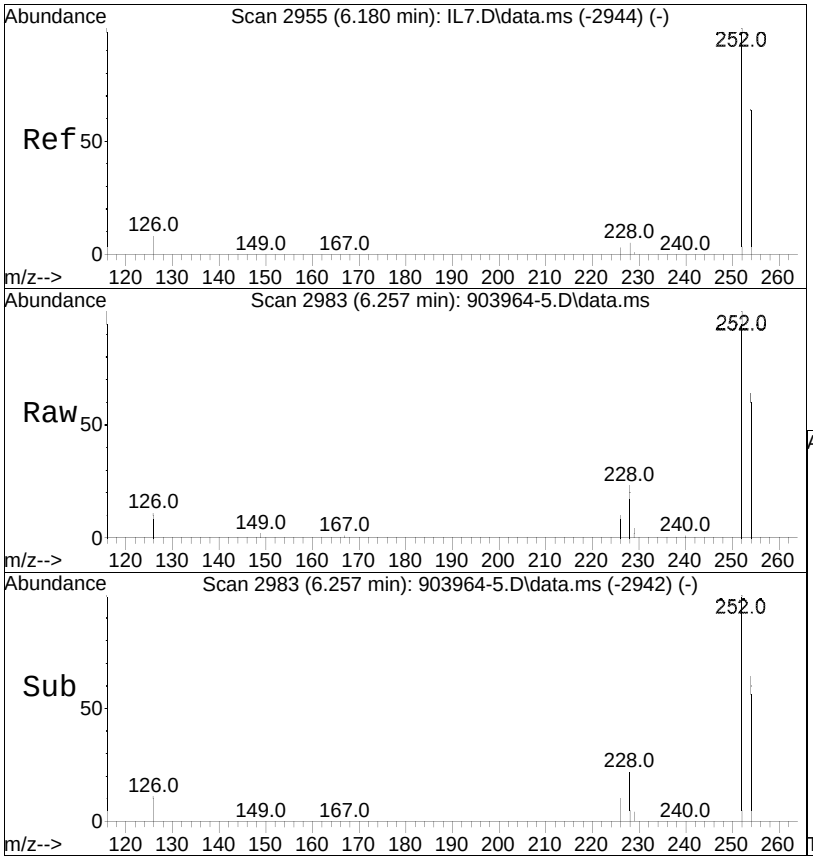


#32
Benzo[a]anthracene
Concen: 4451.12 ng/ml
RT: 6.268 min Scan# 2988
Delta R.T. -0.012 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:228 Resp: 197239

Ion	Ratio	Lower	Upper
228	100		
229	19.6	15.6	23.4

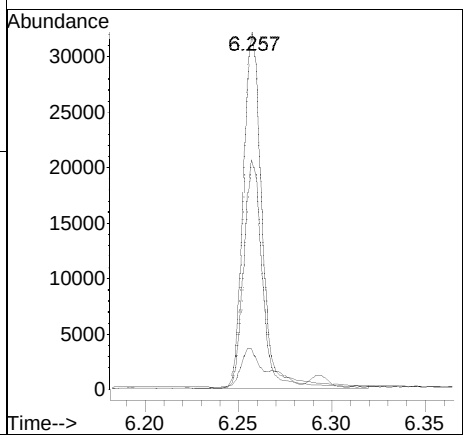


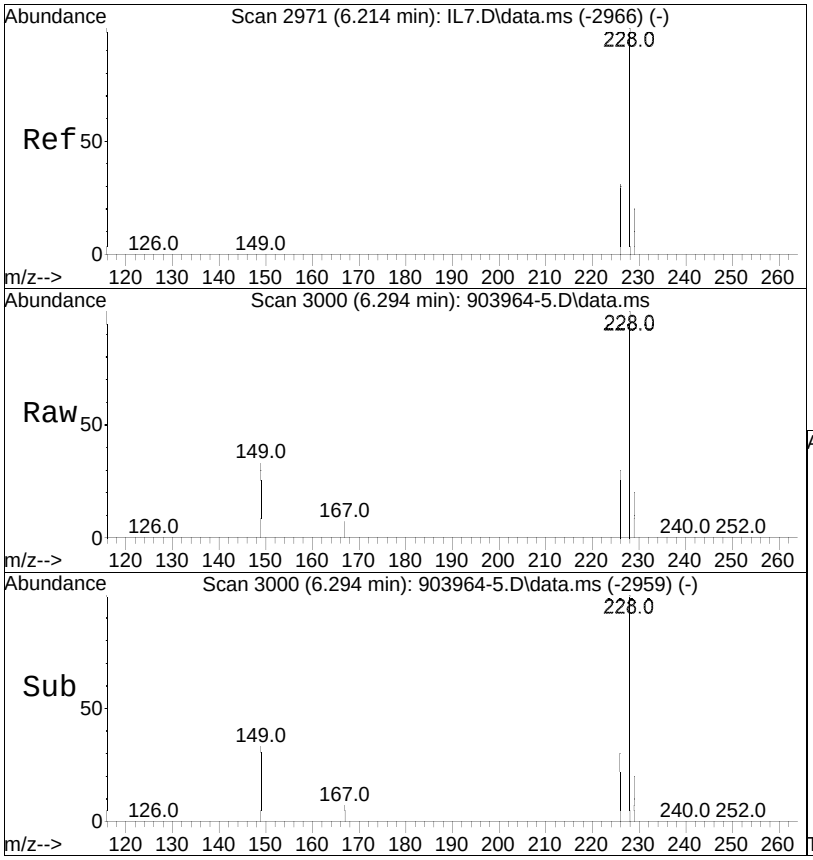


#33
3,3'-Dichlorobenzidine
Concen: 1110.14 ng/ml
RT: 6.257 min Scan# 2983
Delta R.T. -0.012 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:252 Resp: 22343

Ion	Ratio	Lower	Upper
252	100		
126	11.5	7.7	11.5
254	64.0	52.0	78.0

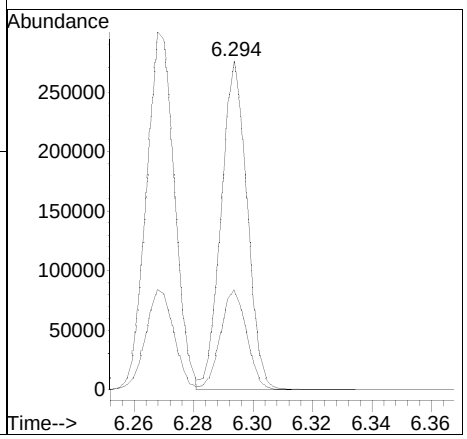


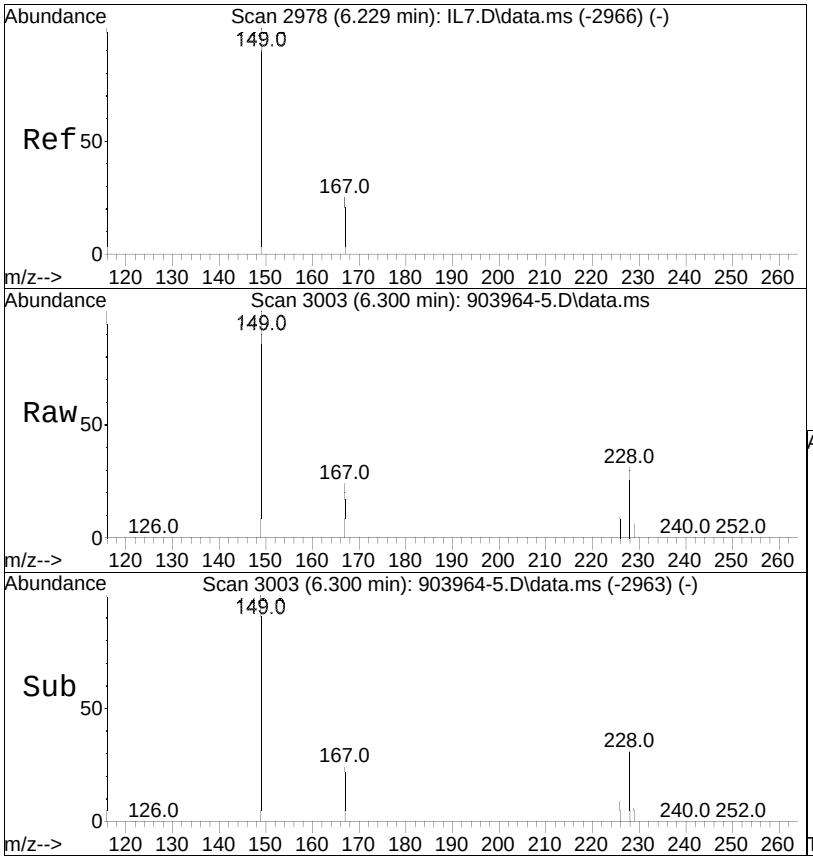


#34
Chrysene
Concen: 3787.87 ng/ml
RT: 6.294 min Scan# 3000
Delta R.T. -0.012 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:228 Resp: 166540

Ion	Ratio	Lower	Upper
228	100		
226	30.9	24.5	36.7

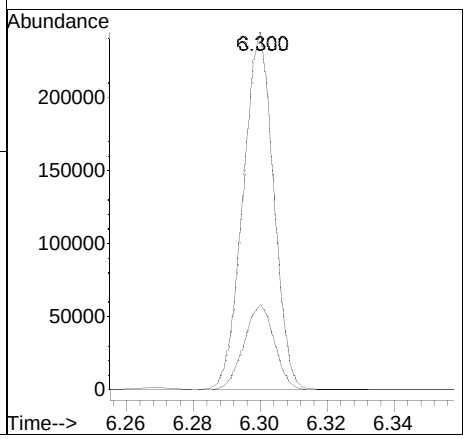


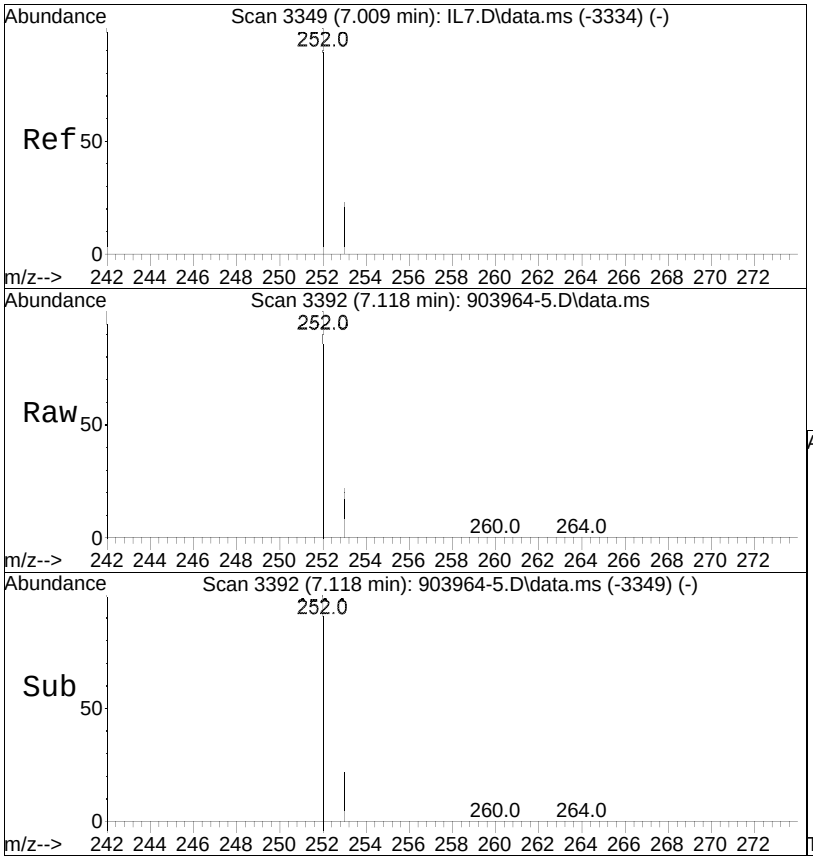


#35
Bis(2-ethylhexyl)phthalate
Concen: 5098.70 ng/ml
RT: 6.300 min Scan# 3003
Delta R.T. -0.014 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:149 Resp: 152801

Ion	Ratio	Lower	Upper
149	100		
167	23.7	18.5	27.7

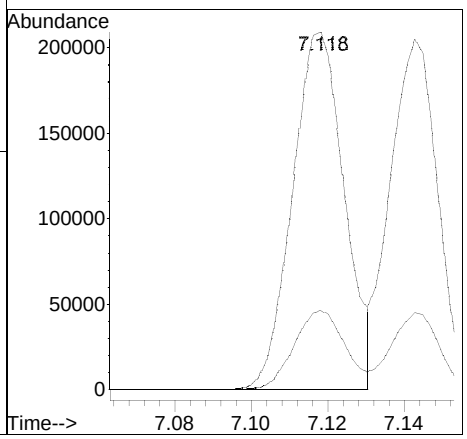


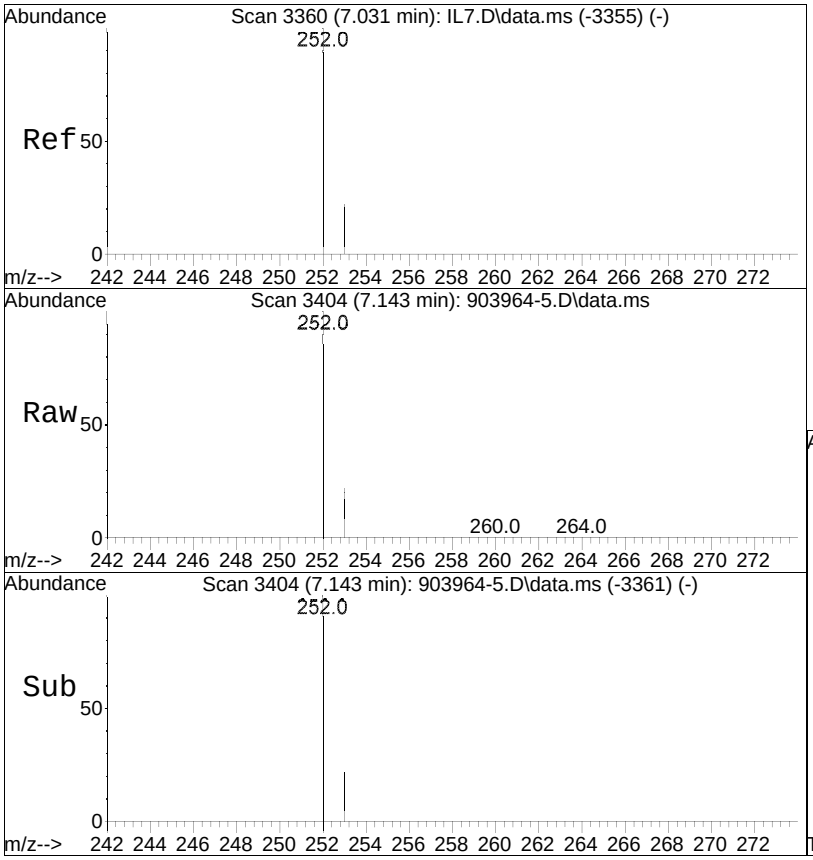


#37
Benzo[b]fluoranthene
Concen: 3712.05 ng/ml
RT: 7.118 min Scan# 3392
Delta R.T. -0.012 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:252 Resp: 196945

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.3	25.9

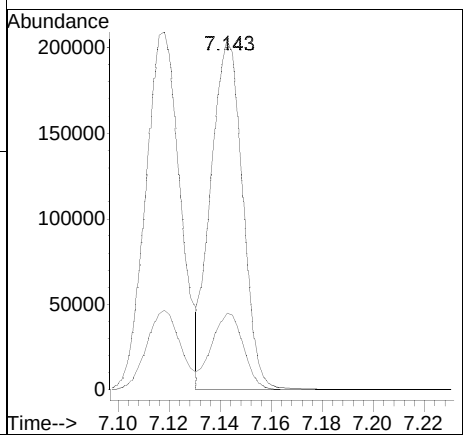


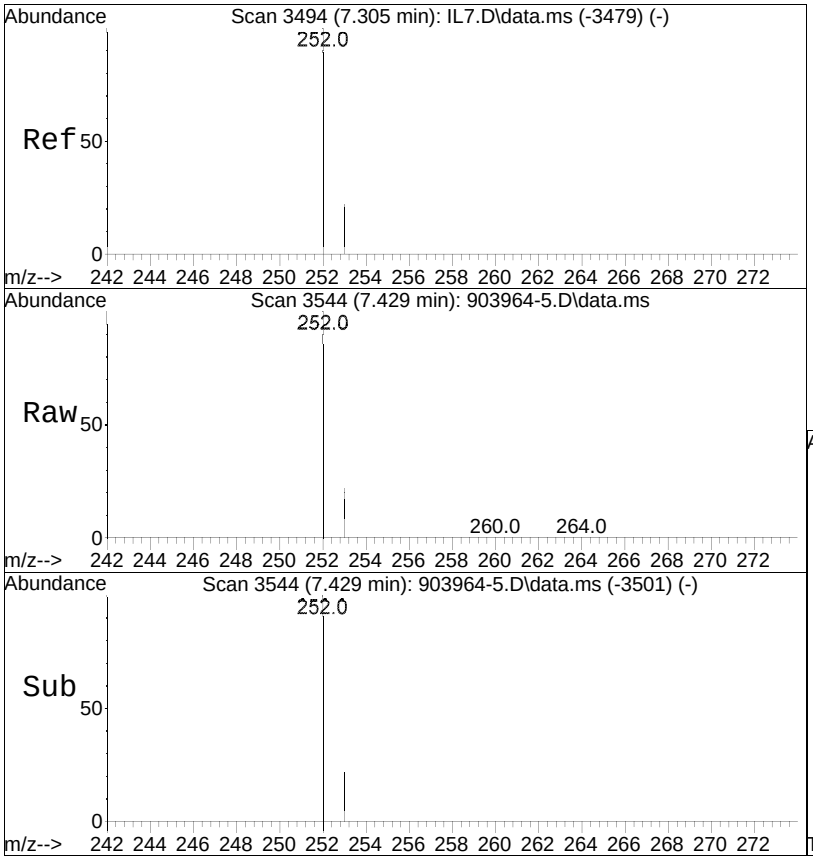


#38
Benzo[k]fluoranthene
Concen: 3496.46 ng/ml
RT: 7.143 min Scan# 3404
Delta R.T. -0.012 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:252 Resp: 176150

Ion	Ratio	Lower	Upper
252	100		
253	21.9	17.4	26.2

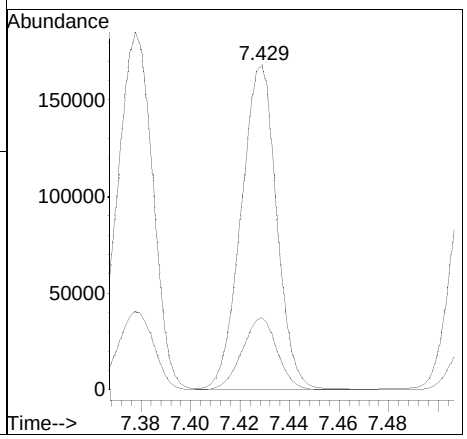


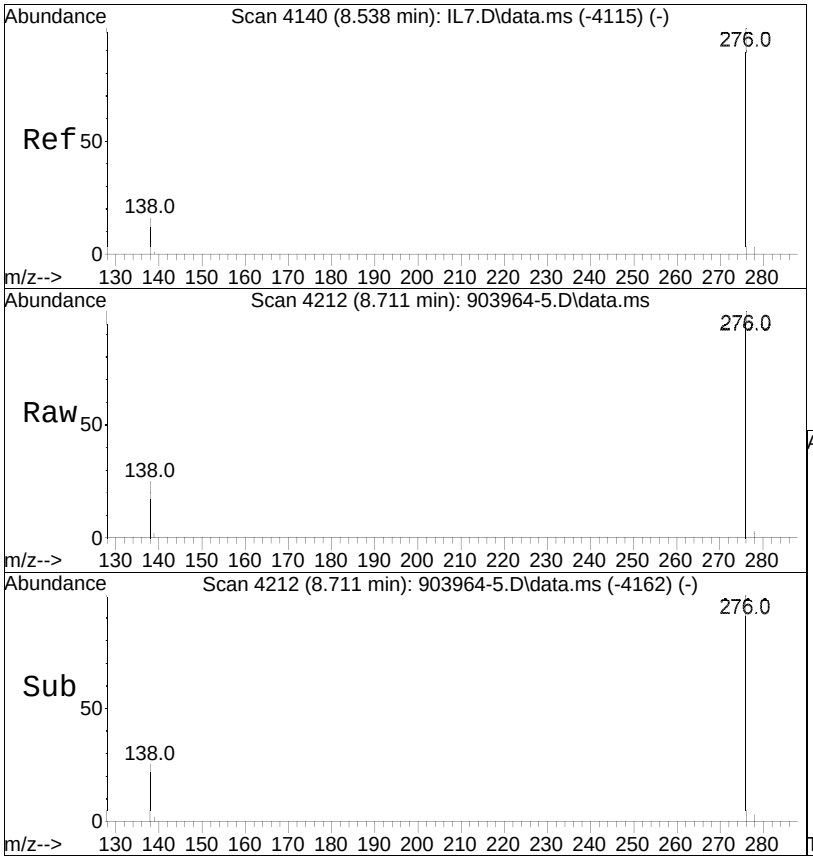


#39
Benzo[a]pyrene
Concen: 3553.39 ng/ml
RT: 7.429 min Scan# 3544
Delta R.T. -0.012 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:252 Resp: 165945

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.4	26.0

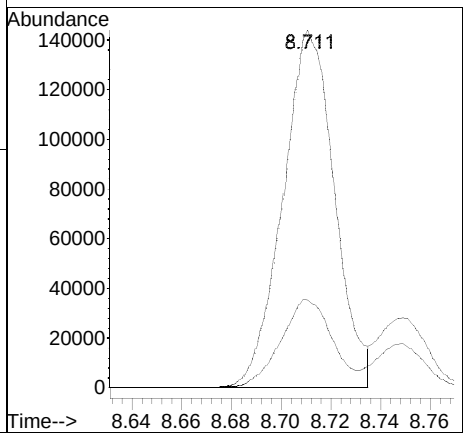


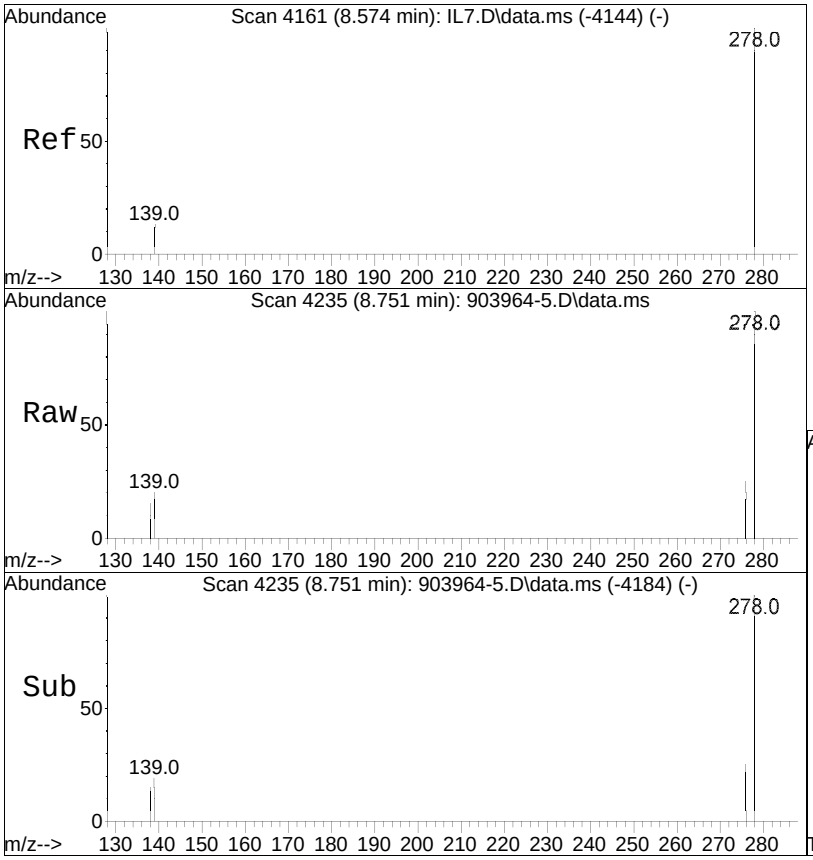


#40
Indeno[1,2,3-cd]pyrene
Concen: 4058.97 ng/ml
RT: 8.711 min Scan# 4212
Delta R.T. -0.013 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:276 Resp: 206015

Ion	Ratio	Lower	Upper
276	100		
138	24.7	14.8	22.2#

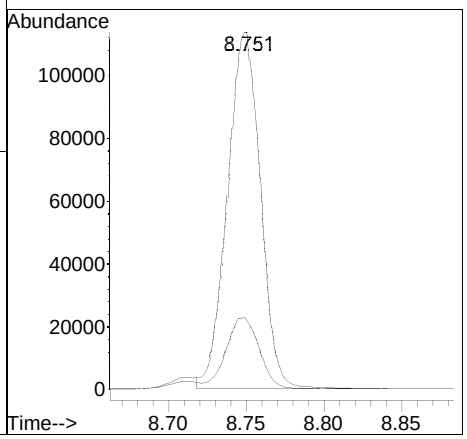


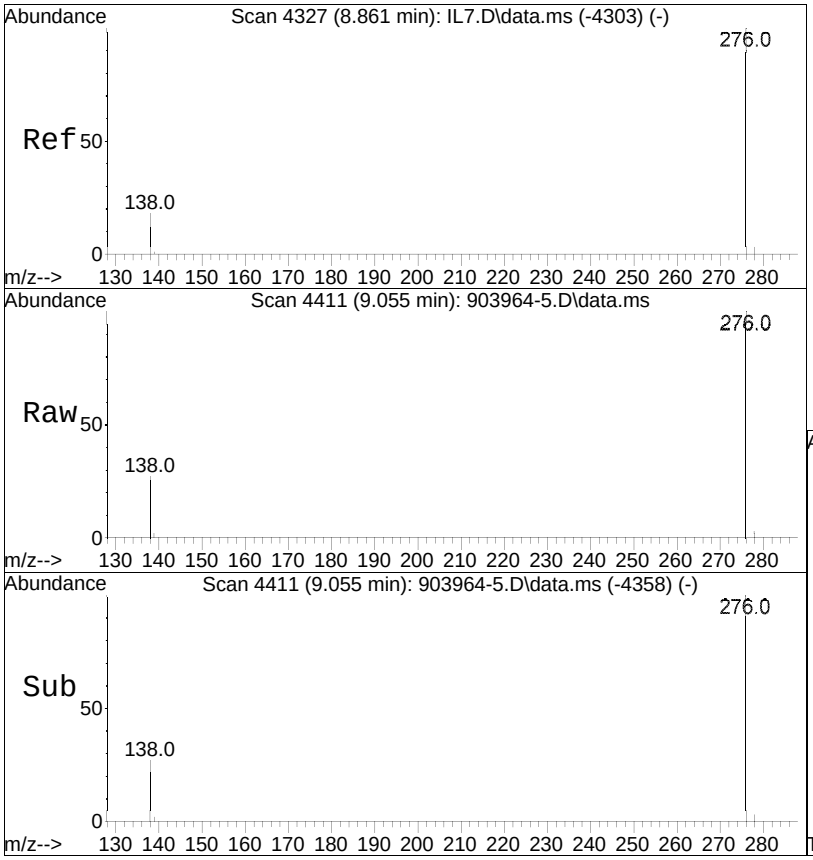


#41
Dibenzo[a,h]anthracene
Concen: 3534.87 ng/ml
RT: 8.751 min Scan# 4235
Delta R.T. -0.011 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:278 Resp: 166926

Ion	Ratio	Lower	Upper
278	100		
139	20.2	12.2	18.4#

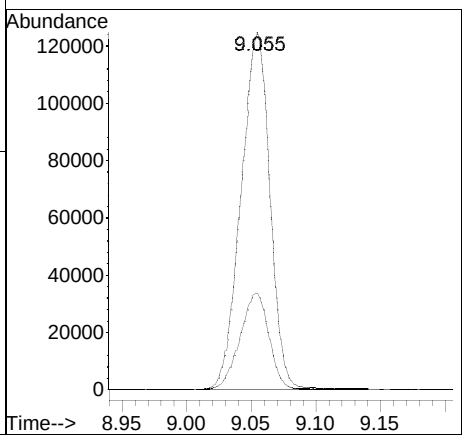




#42
Benzo[g,h,i]perylene
Concen: 3696.99 ng/ml
RT: 9.055 min Scan# 4411
Delta R.T. -0.008 min
Lab File: 903964-5.D
Acq: 03 Apr 2024 08:51 am

Tgt Ion:276 Resp: 190869

Ion	Ratio	Lower	Upper
276	100		
138	26.9	16.8	25.2#



Manual Integration Report

Data Path	: I:\8270SIM\sv119\240403LVI	QMethod	: SIM-LVI_231207n_sv119.M
Data File	: 903964-5.D	Operator	: sv119:ah
Date Inj'd	: 4/3/2024 8:51 am	Instrument	: SV119
Sample	: WG1903964-5,32,,ah	Quant Date	: 4/3/2024 9:07 am

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 903964-7.D
Acq On : 04 Apr 2024 08:33 am
Operator : sv119:jjw
Sample : WG1903964-7,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 11:06:28 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.231	152	56109	4000.000	ng/ml	0.00
Standard Area 1 = 63465			Recovery = 88.41%			
8) Naphthalene-d8	2.896	136	176340	4000.000	ng/ml	0.00
Standard Area 1 = 190169			Recovery = 92.73%			
17) Acenaphthene-d10	3.872	164	96066	4000.000	ng/ml	0.00
Standard Area 1 = 110246			Recovery = 87.14%			
22) Phenanthrene-d10	4.717	188	206437	4000.000	ng/ml	0.00
Standard Area 1 = 244714			Recovery = 84.36%			
31) Chrysene-d12	6.282	240	158446	4000.000	ng/ml	0.00
Standard Area 1 = 210122			Recovery = 75.41%			
36) Perylene-d12	7.489	264	170397	4000.000	ng/ml	0.00
Standard Area 1 = 221293			Recovery = 77.00%			
System Monitoring Compounds						
2) 2-Fluorophenol	1.642	112	50567	3294.966	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 65.90%			
3) Phenol-d6	2.055	99	52631	2860.996	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 57.22%			
7) Nitrobenzene-d5	2.511	82	28112	2014.597	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 80.58%			
13) 2-Fluorobiphenyl	3.493	172	67522	1714.473	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 68.58%			
21) 2,4,6-Tribromophenol	4.321	330	27053	5107.933	ng/ml	0.00
Spiked Amount 5000.000	Range 15 - 110		Recovery = 102.16%			
30) 4-Terphenyl-d14	5.640	244	66049	1305.131	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 130		Recovery = 52.21%			
Target Compounds						Qvalue
6) Hexachloroethane	2.490	117	22743	3276.588	ng/ml	89
9) Naphthalene	2.907	128	149129	3541.713	ng/ml	99
10) Hexachlorobutadiene	2.979	225	34625	3818.387	ng/ml	100
11) 2-Methylnaphthalene	3.287	142	110653	3554.199	ng/ml	97
14) 2-Chloronaphthalene	3.558	162	117131	3531.969	ng/ml	92
16) Acenaphthylene	3.792	152	174202	3534.783	ng/ml	99
18) Acenaphthene	3.889	153	109766	3696.038	ng/ml	100
20) Fluorene	4.183	166	129947	3660.619	ng/ml	97
24) Hexachlorobenzene	4.500	284	55559	4163.074	ng/ml	99
25) Pentachlorophenol	4.614	266	29848	3505.876	ng/ml	100

Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 903964-7.D
Acq On : 04 Apr 2024 08:33 am
Operator : sv119:jjw
Sample : WG1903964-7,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 11:06:28 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\8270sim\sv119\240404LVI\ccv0404.D
Sub List : DEFAULT - All compounds listed

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Phenanthrene	4.728	178	191208	3646.323	ng/ml	100
27) Anthracene	4.758	178	201083	3866.873	ng/ml	100
28) Fluoranthene	5.414	202	236004	3414.809	ng/ml	100
29) Pyrene	5.545	202	240627	3388.997	ng/ml	99
32) Benzo[a]anthracene	6.274	228	216924	4115.072	ng/ml	100
34) Chrysene	6.299	228	198367	3793.364	ng/ml	100
37) Benzo[b]fluoranthene	7.120	252	214702	3606.667	ng/ml	99
38) Benzo[k]fluoranthene	7.144	252	194324	3437.745	ng/ml	100
39) Benzo[a]pyrene	7.428	252	182995	3492.362	ng/ml	100
40) Indeno[1,2,3-cd]pyrene	8.710	276	211010	3705.285	ng/ml#	87
41) Dibenzo[a,h]anthracene	8.748	278	177624M6	3352.376	ng/ml	
42) Benzo[g,h,i]perylene	9.054	276	193380	3338.309	ng/ml#	88

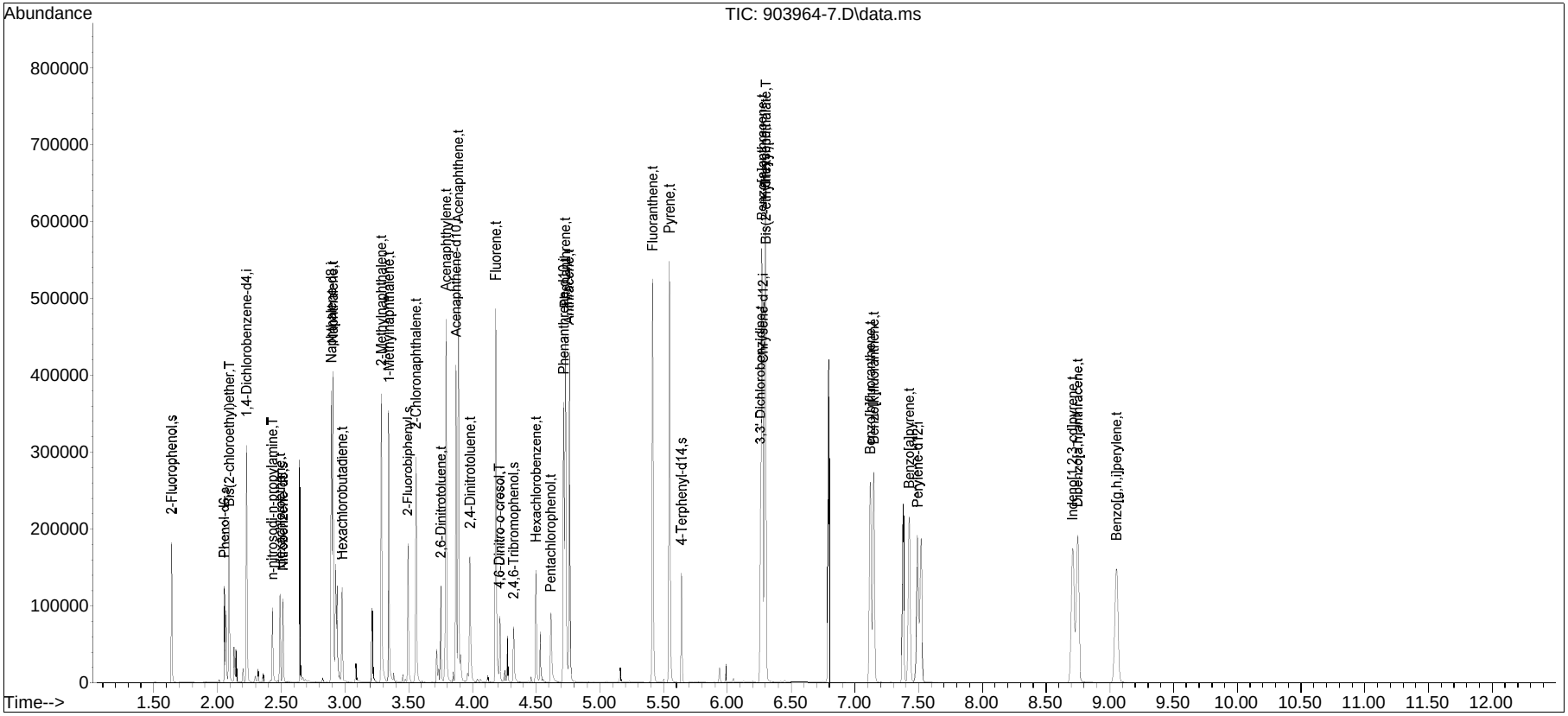
(#) = qualifier out of range (m) = manual integration (+) = signals summed

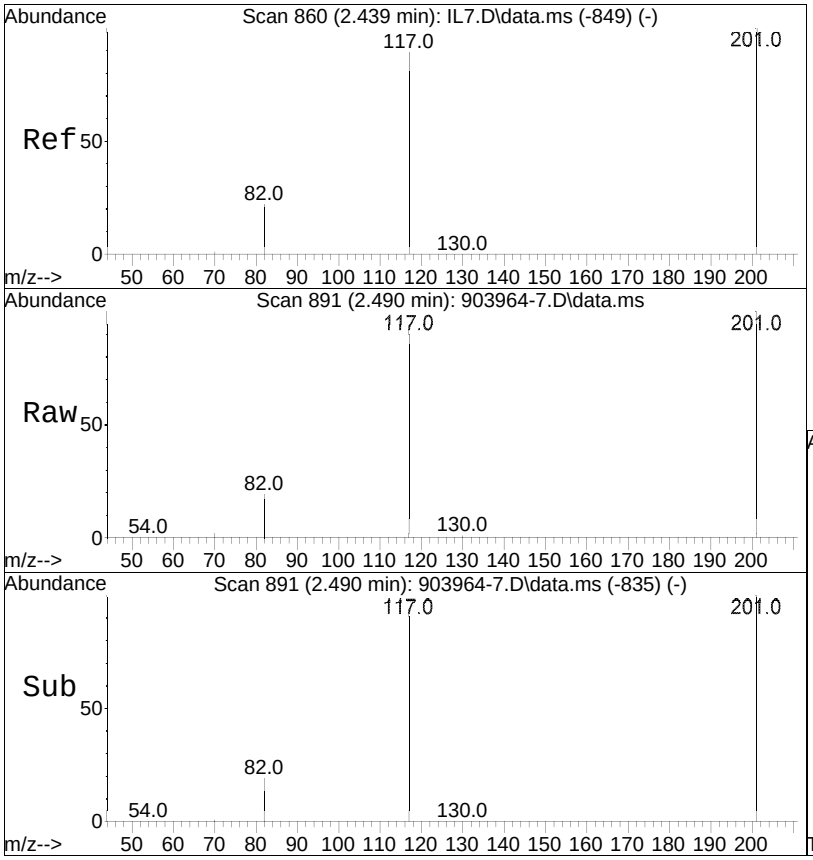
Quantitation Report (QT Reviewed)

Data Path : I:\8270SIM\sv119\240404LVI\
Data File : 903964-7.D
Acq On : 04 Apr 2024 08:33 am
Operator : sv119:jjw
Sample : WG1903964-7,32,,ah
Misc : WG1904665,WG1903964,ical20642
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 11:06:28 2024
Quant Method : I:\8270sim\sv119\240404LVI\SIM-LVI_231207n_sv119.M
Quant Title : Semivolatiles by GC/MS by modified 8270
QLast Update : Thu Apr 04 07:17:37 2024
Response via : Initial Calibration

Sub List : DEFAULT - All compounds listed\ccv0404.D•

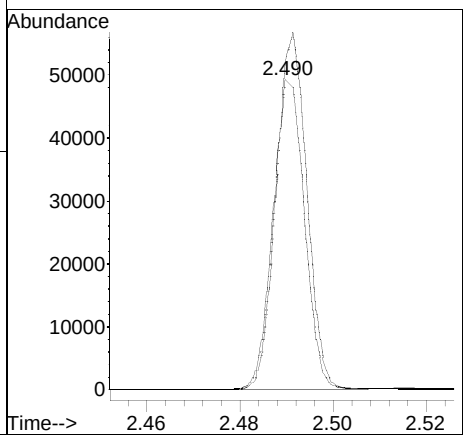


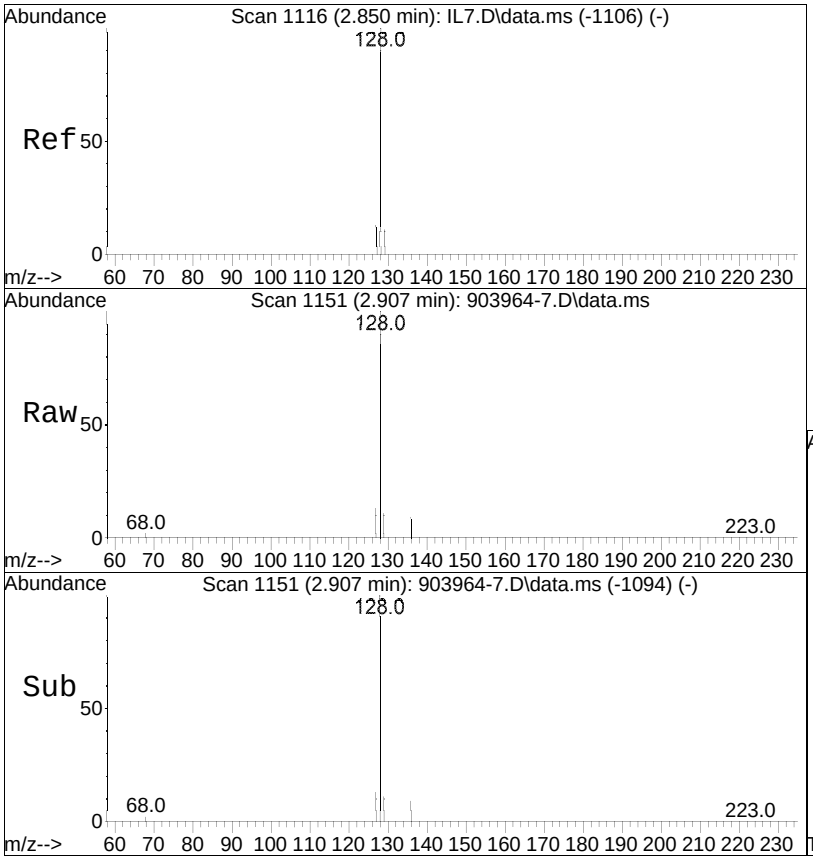


#6
Hexachloroethane
Concen: 3276.59 ng/ml
RT: 2.490 min Scan# 891
Delta R.T. -0.010 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:117 Resp: 22743

Ion	Ratio	Lower	Upper
117	100		
201	113.4	81.5	122.3

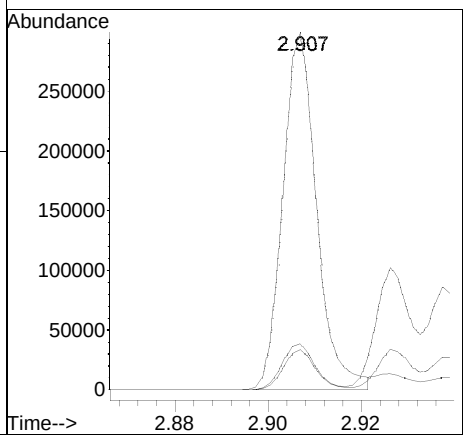


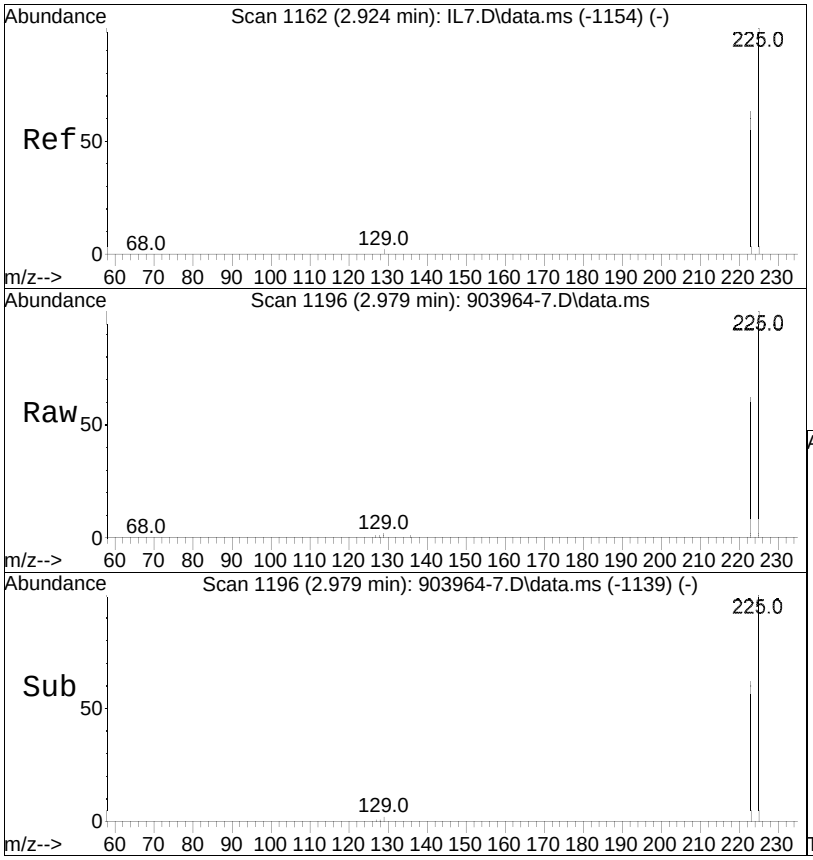


#9
Naphthalene
Concen: 3541.71 ng/ml
RT: 2.907 min Scan# 1151
Delta R.T. -0.008 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:128 Resp: 149129

Ion	Ratio	Lower	Upper
128	100		
129	10.9	8.8	13.2
127	12.7	10.6	15.8

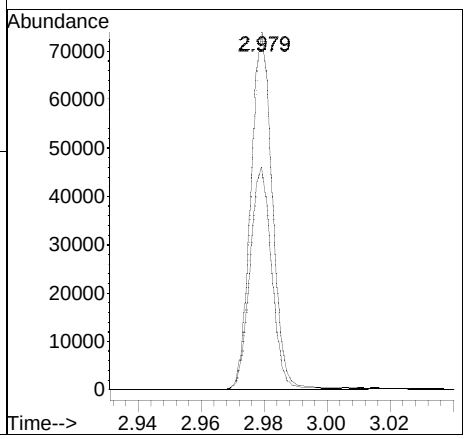


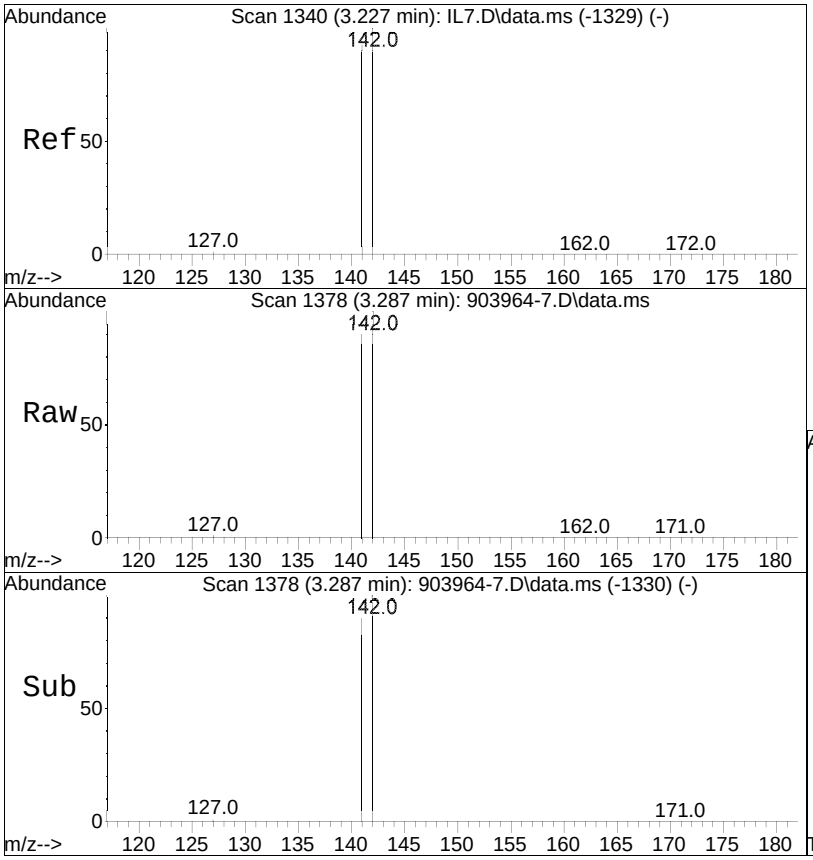


#10
Hexachlorobutadiene
Concen: 3818.39 ng/ml
RT: 2.979 min Scan# 1196
Delta R.T. -0.008 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:225 Resp: 34625

Ion	Ratio	Lower	Upper
225	100		
223	62.6	50.1	75.1

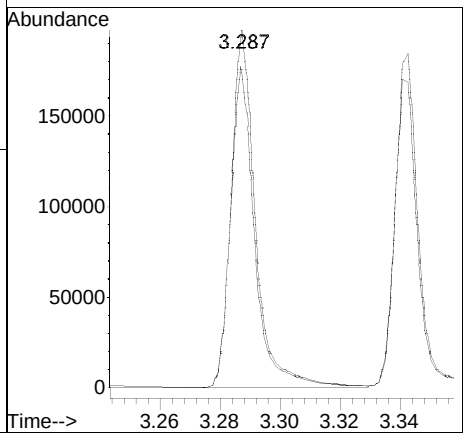


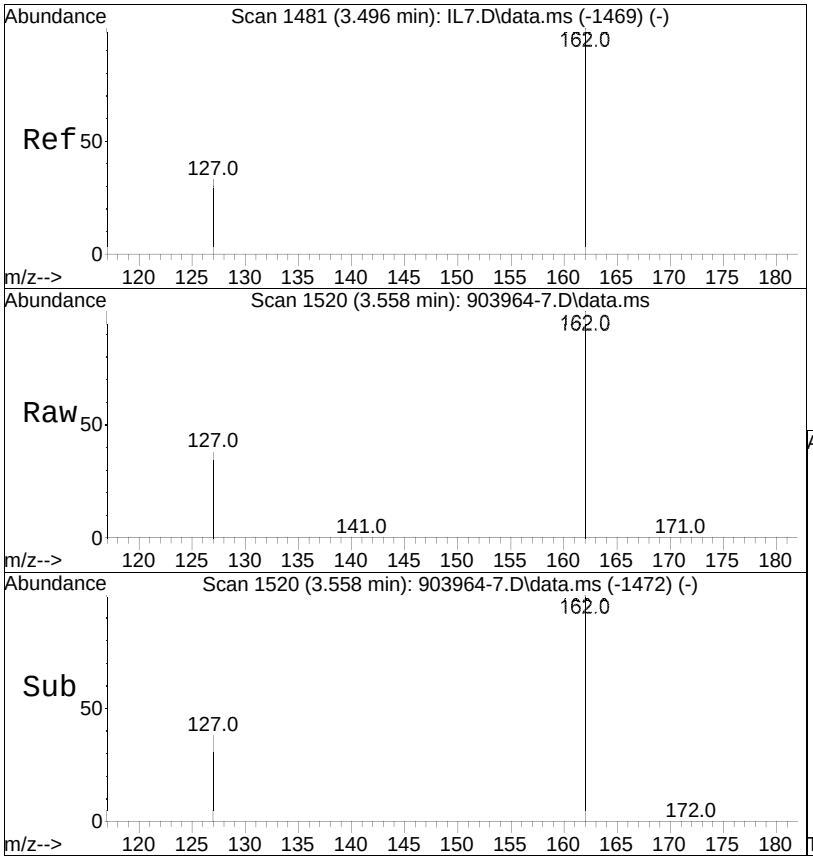


#11
2-Methylnaphthalene
Concen: 3554.20 ng/ml
RT: 3.287 min Scan# 1378
Delta R.T. -0.008 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:142 Resp: 110653

Ion	Ratio	Lower	Upper
142	100		
141	90.2	74.1	111.1

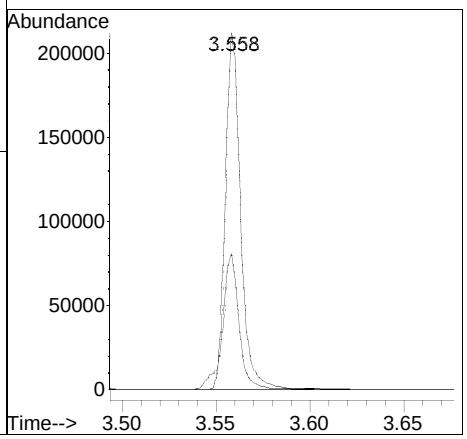


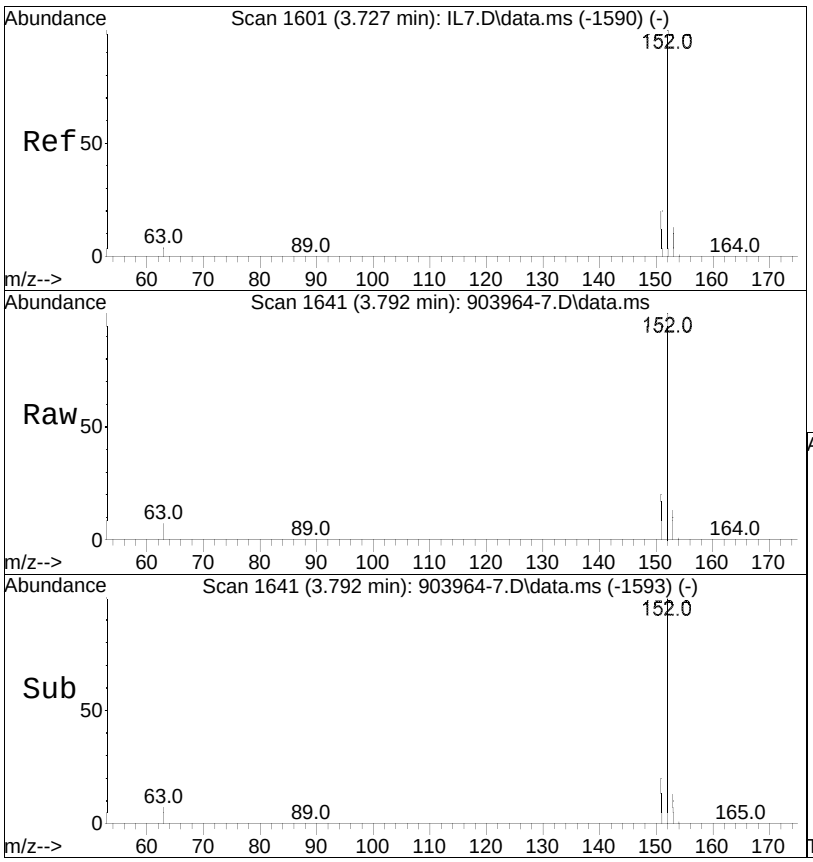


#14
2-Chloronaphthalene
Concen: 3531.97 ng/ml
RT: 3.558 min Scan# 1520
Delta R.T. -0.008 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:162 Resp: 117131

Ion	Ratio	Lower	Upper
162	100		
127	41.8	29.7	44.5

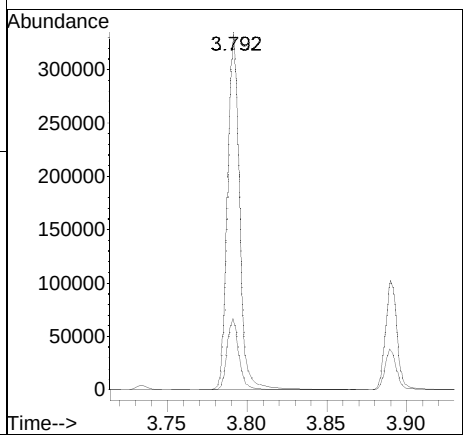


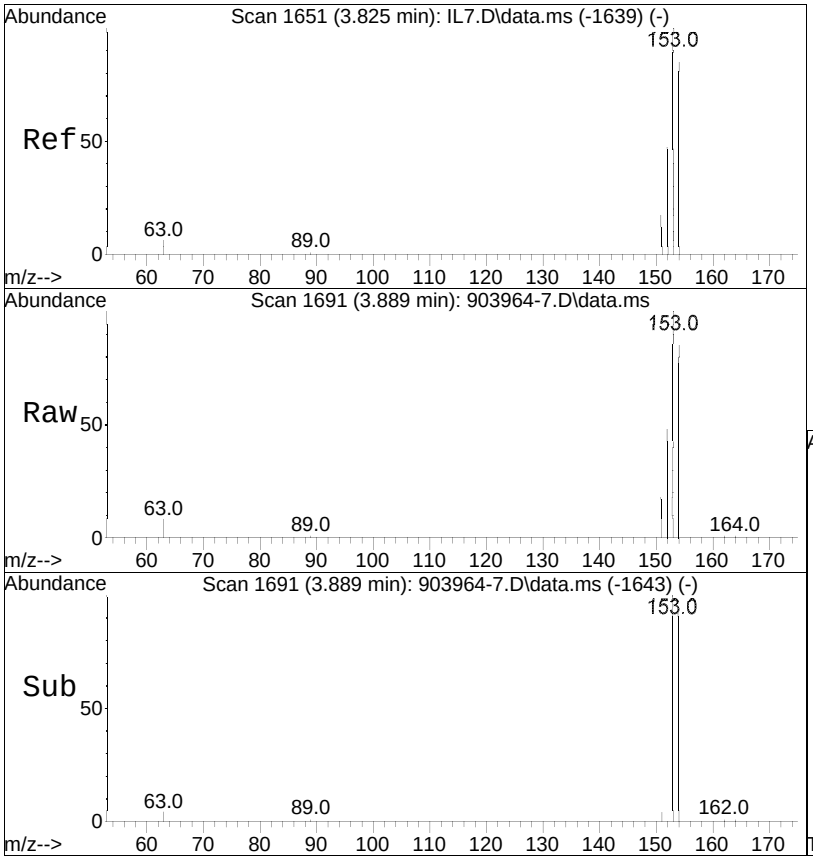


#16
Acenaphthylene
Concen: 3534.78 ng/ml
RT: 3.792 min Scan# 1641
Delta R.T. -0.006 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:152 Resp: 174202

Ion	Ratio	Lower	Upper
152	100		
151	19.7	16.0	24.0

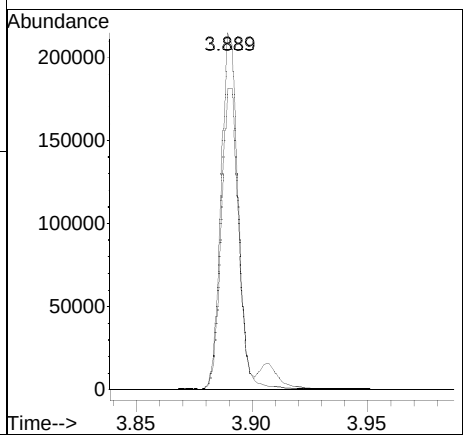


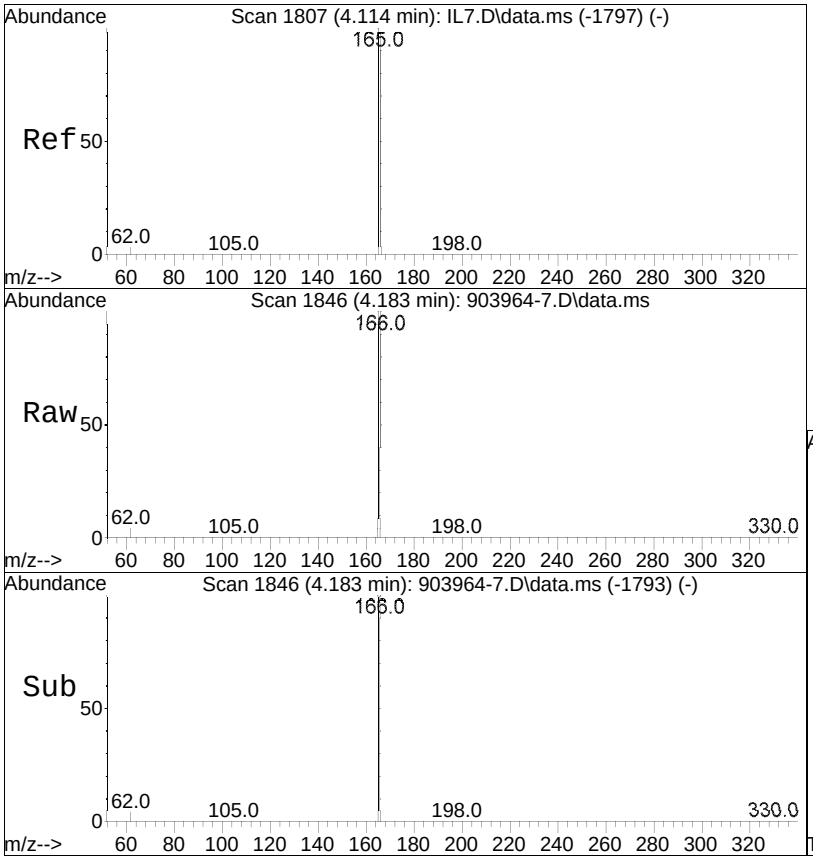


#18
Acenaphthene
Concen: 3696.04 ng/ml
RT: 3.889 min Scan# 1691
Delta R.T. -0.006 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:153 Resp: 109766

Ion	Ratio	Lower	Upper
153	100		
154	83.8	66.9	100.3

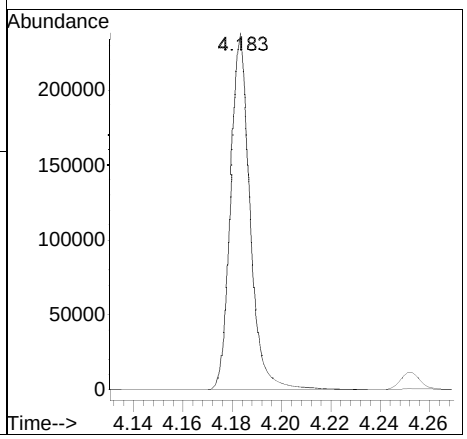


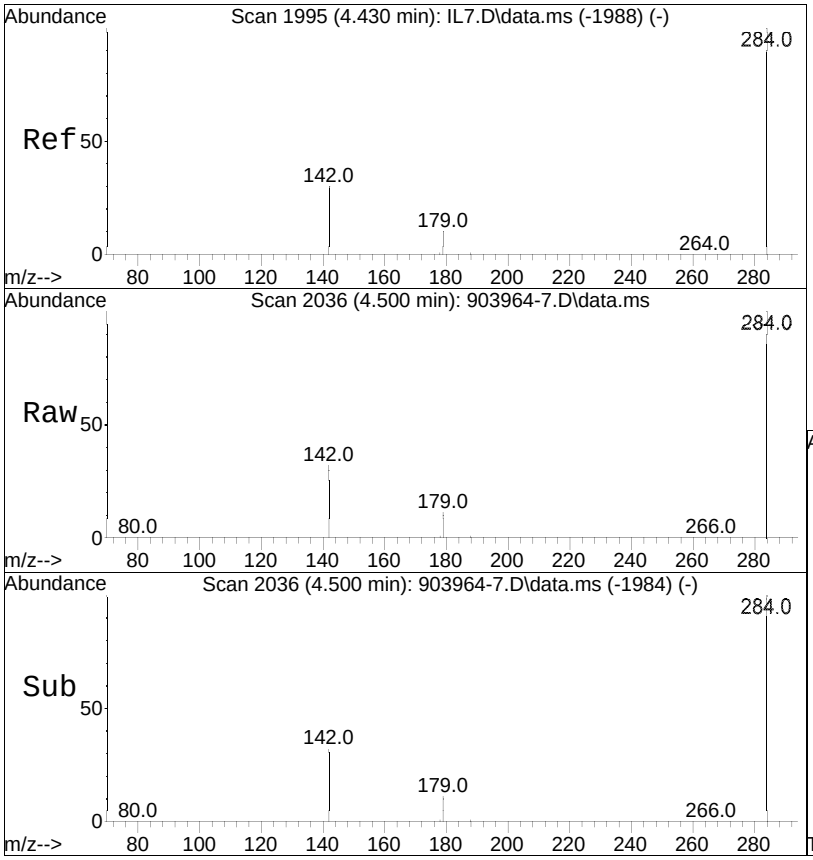


#20
Fluorene
Concen: 3660.62 ng/ml
RT: 4.183 min Scan# 1846
Delta R.T. -0.007 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:166 Resp: 129947

Ion	Ratio	Lower	Upper
166	100		
165	100.9	82.9	124.3

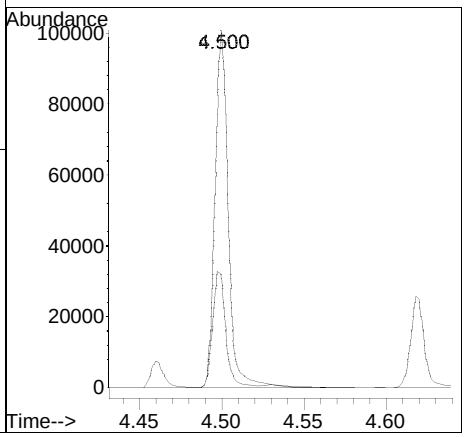


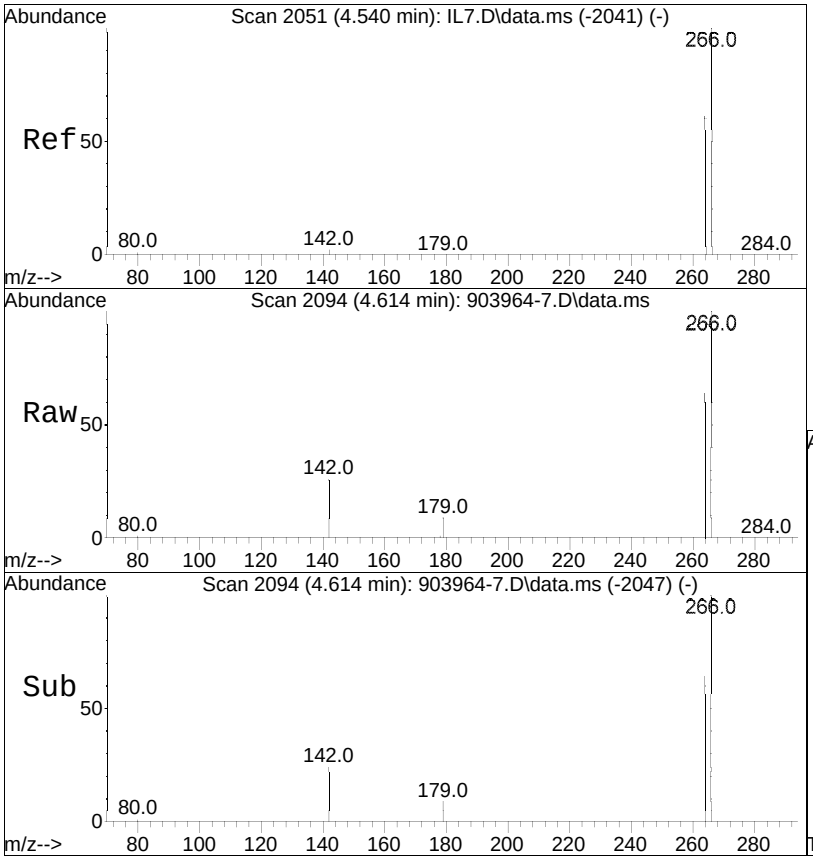


#24
Hexachlorobenzene
Concen: 4163.07 ng/ml
RT: 4.500 min Scan# 2036
Delta R.T. -0.006 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:284 Resp: 55559

Ion	Ratio	Lower	Upper
284	100		
142	33.0	26.9	40.3

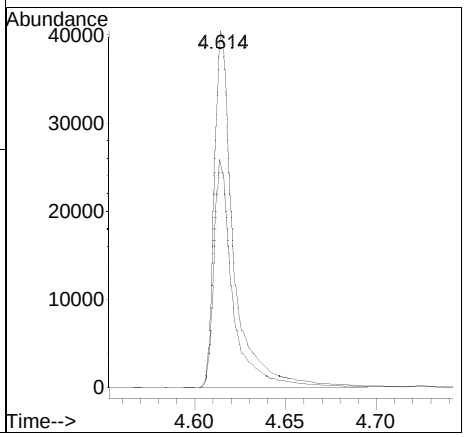


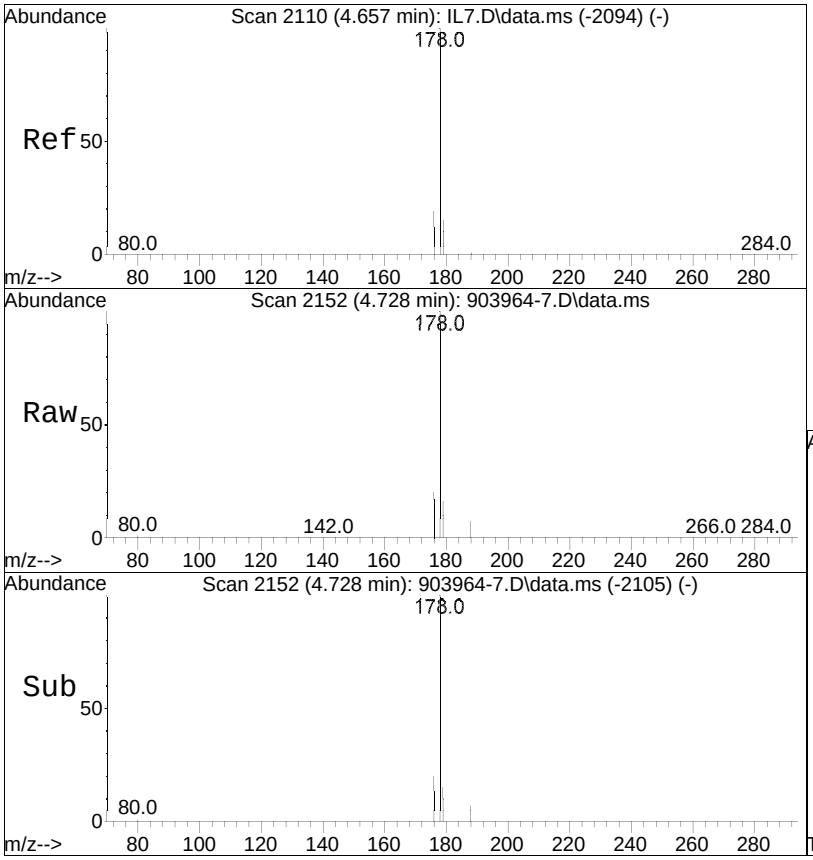


#25
Pentachlorophenol
Concen: 3505.88 ng/ml
RT: 4.614 min Scan# 2094
Delta R.T. -0.006 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:266 Resp: 29848

Ion	Ratio	Lower	Upper
266	100		
264	63.5	50.7	76.1

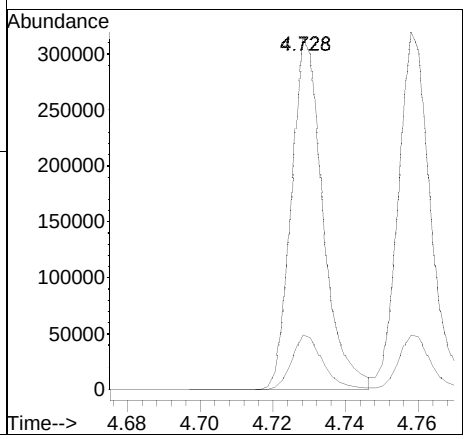


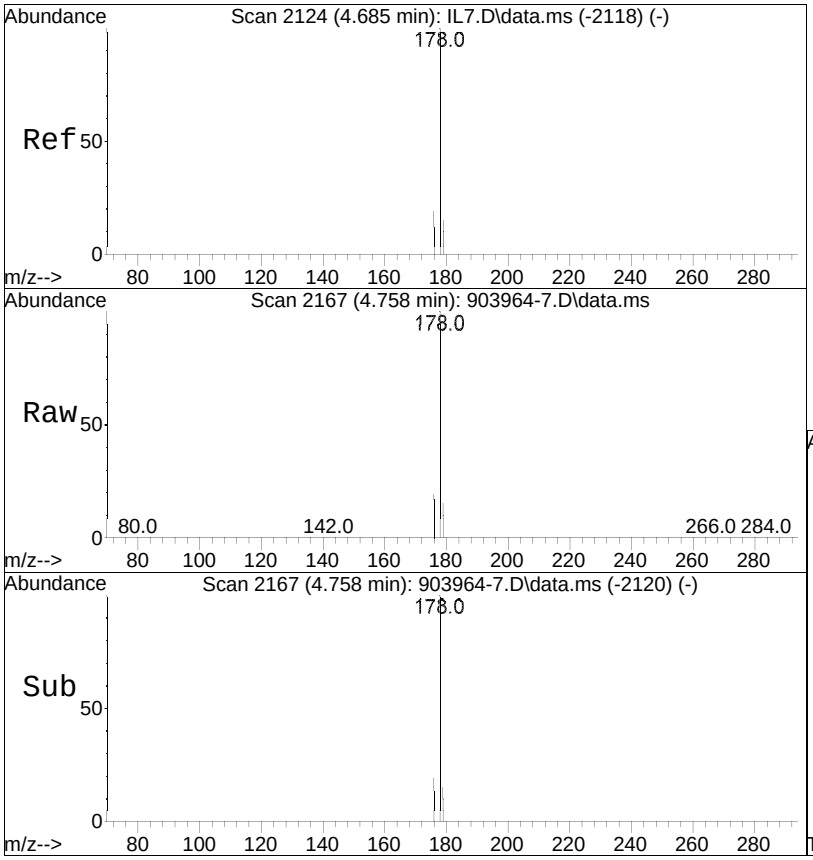


#26
Phenanthrene
Concen: 3646.32 ng/ml
RT: 4.728 min Scan# 2152
Delta R.T. -0.006 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:178 Resp: 191208

Ion	Ratio	Lower	Upper
178	100		
179	15.4	12.3	18.5

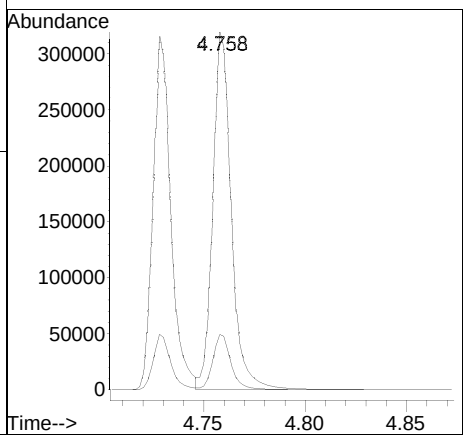


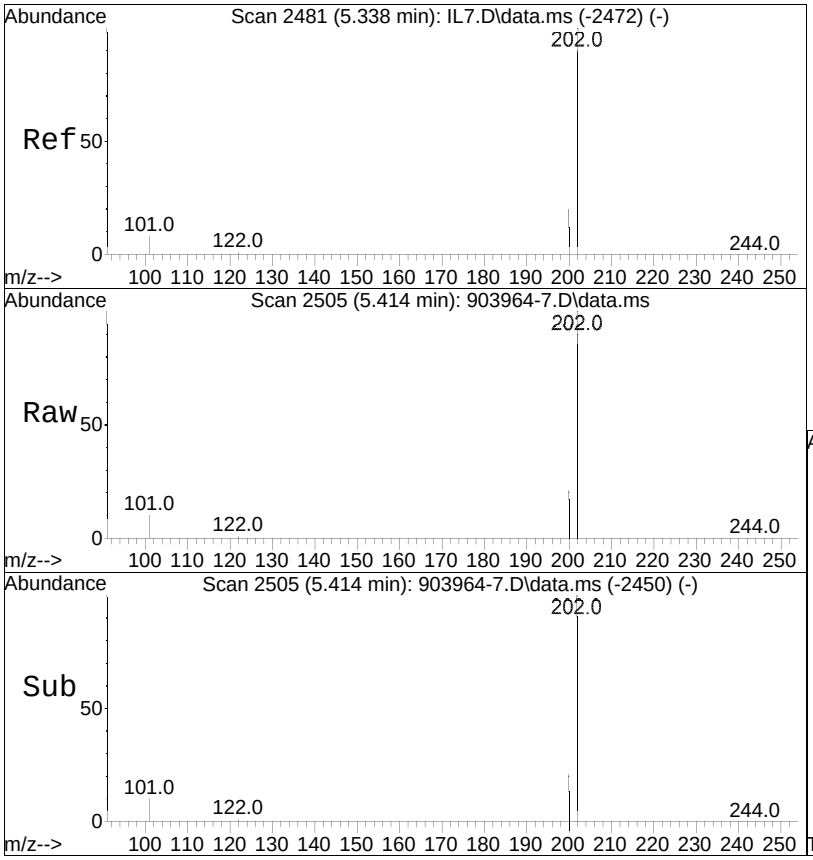


#27
Anthracene
Concen: 3866.87 ng/ml
RT: 4.758 min Scan# 2167
Delta R.T. -0.006 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:178 Resp: 201083

Ion	Ratio	Lower	Upper
178	100		
179	15.3	12.2	18.4

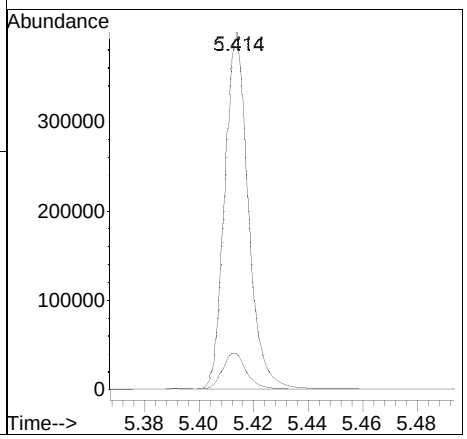


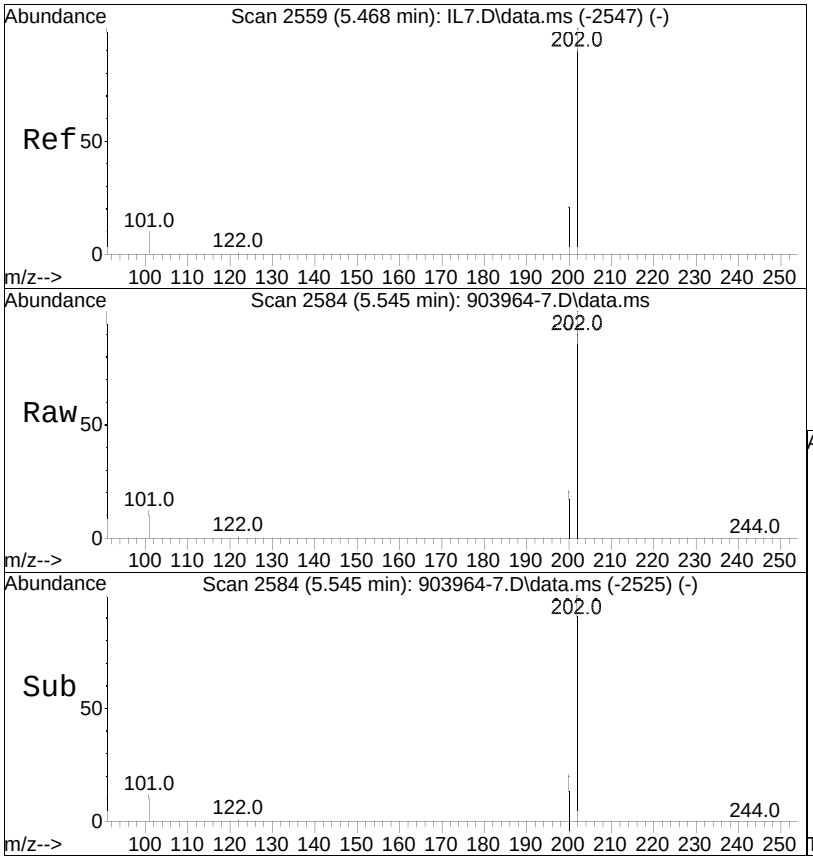


#28
Fluoranthene
Concen: 3414.81 ng/ml
RT: 5.414 min Scan# 2505
Delta R.T. -0.004 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:202 Resp: 236004

Ion	Ratio	Lower	Upper
202	100		
101	10.6	8.3	12.5

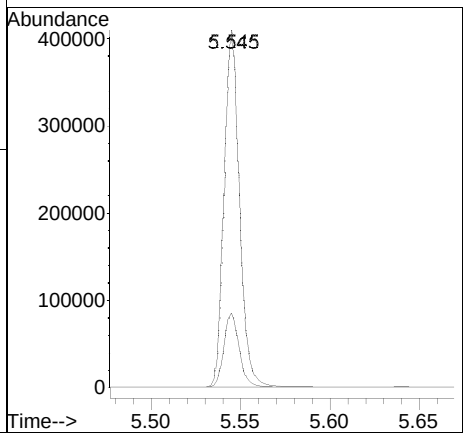


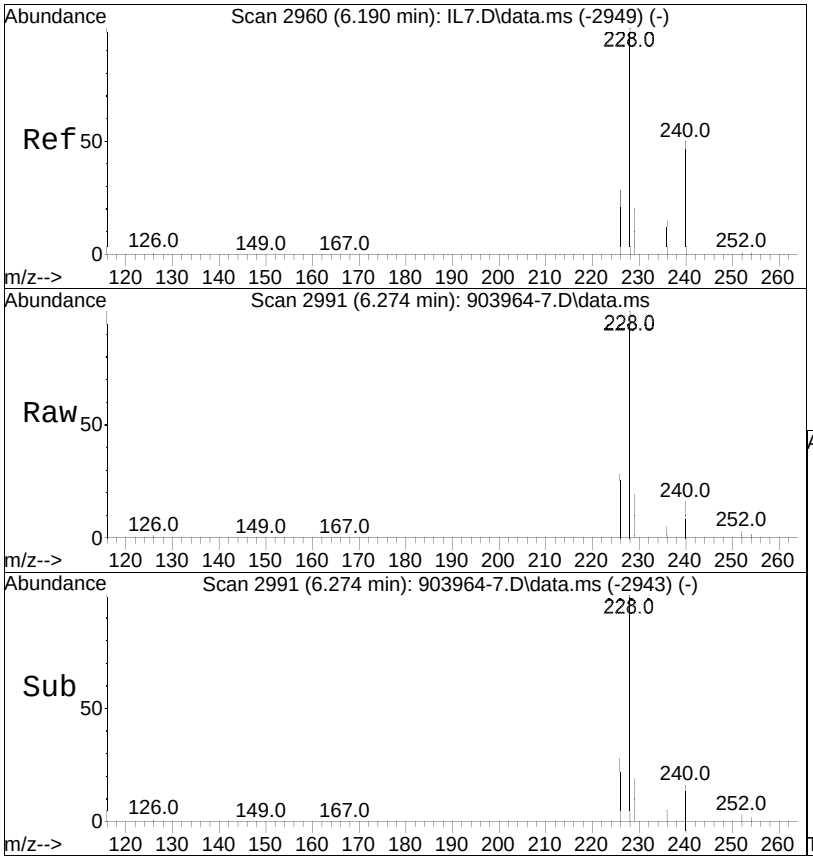


#29
Pyrene
Concen: 3389.00 ng/ml
RT: 5.545 min Scan# 2584
Delta R.T. -0.002 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:202 Resp: 240627

Ion	Ratio	Lower	Upper
202	100		
200	21.1	17.3	25.9

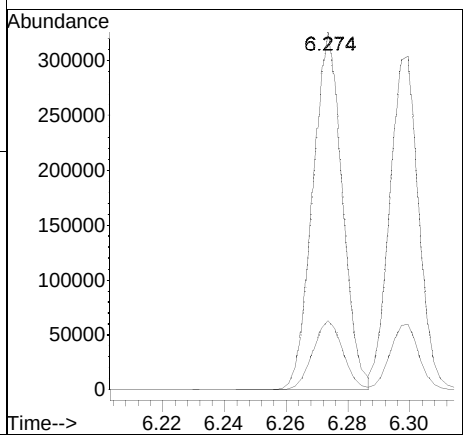


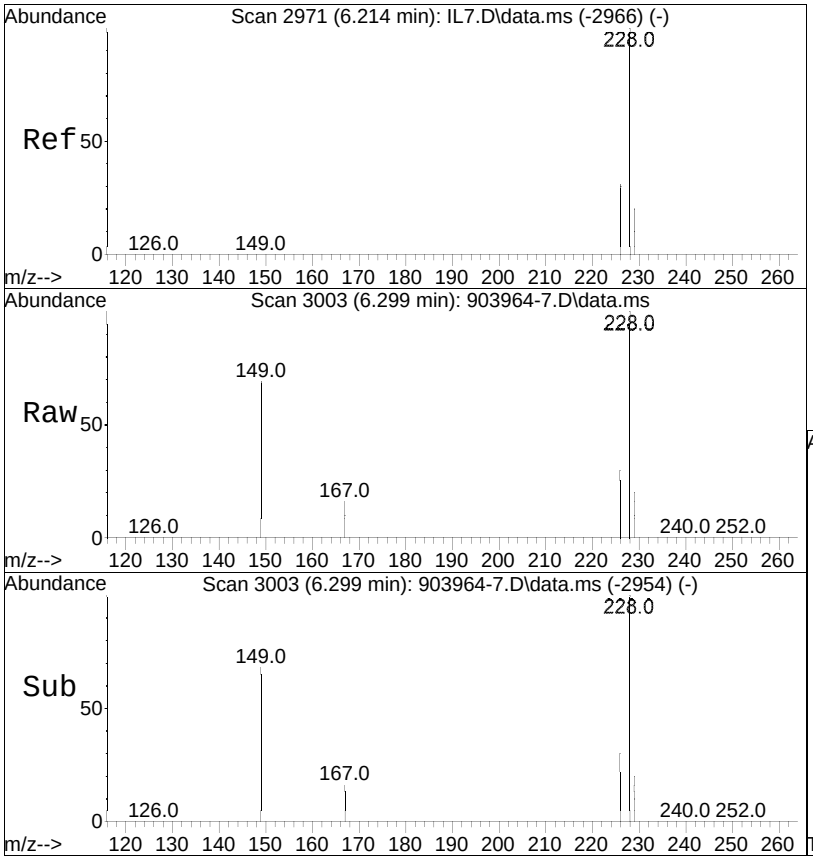


#32
Benzo[a]anthracene
Concen: 4115.07 ng/ml
RT: 6.274 min Scan# 2991
Delta R.T. 0.003 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:228 Resp: 216924

Ion	Ratio	Lower	Upper
228	100		
229	19.5	15.6	23.4

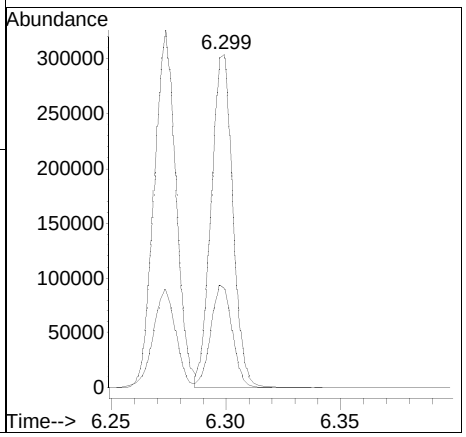


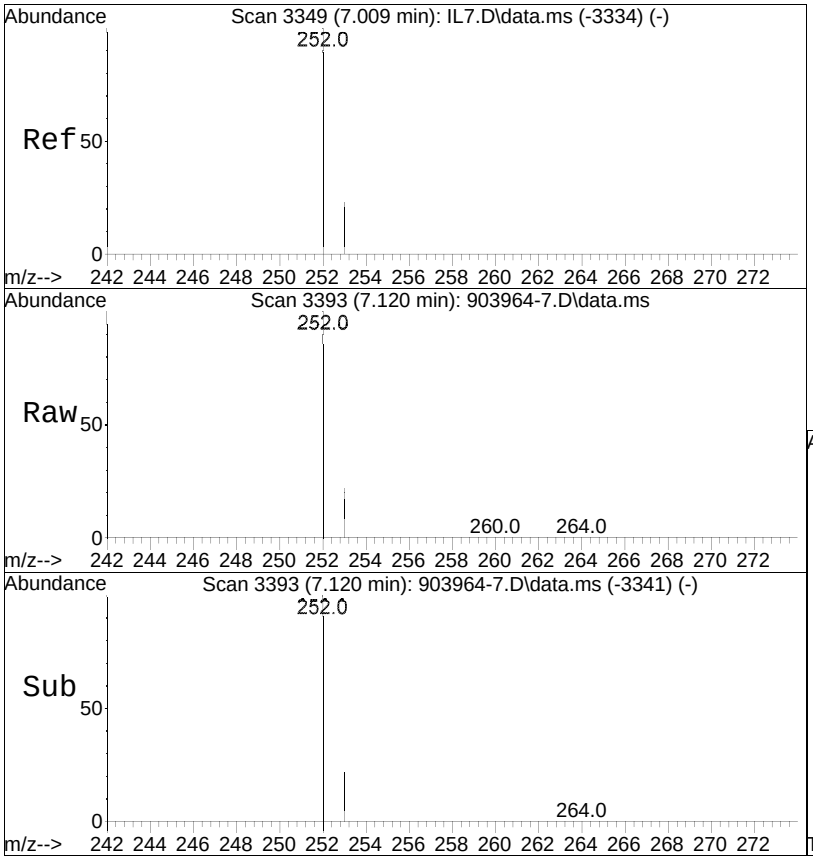


#34
Chrysene
Concen: 3793.36 ng/ml
RT: 6.299 min Scan# 3003
Delta R.T. 0.006 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:228 Resp: 198367

Ion	Ratio	Lower	Upper
228	100		
226	30.6	24.5	36.7

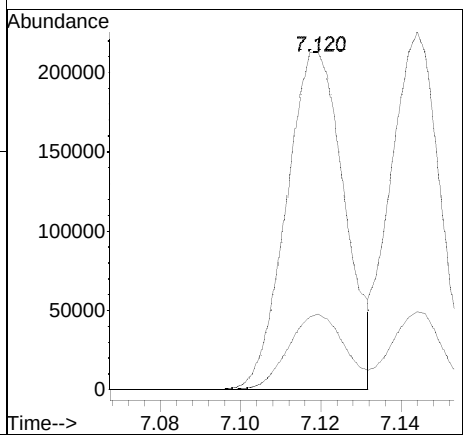


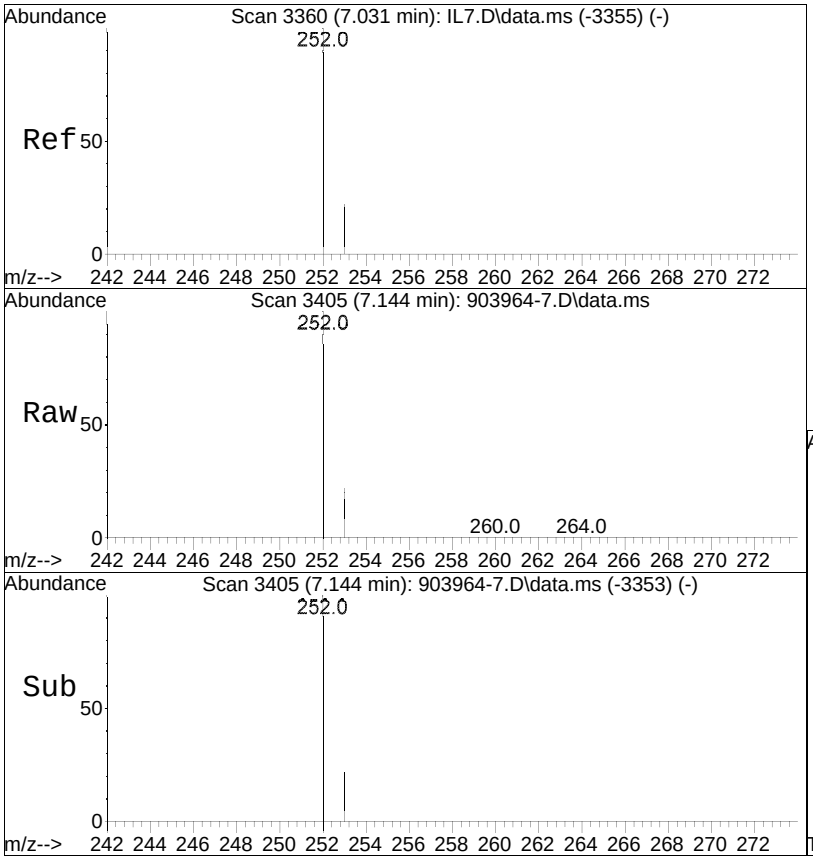


#37
Benzo[b]fluoranthene
Concen: 3606.67 ng/ml
RT: 7.120 min Scan# 3393
Delta R.T. 0.005 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:252 Resp: 214702

Ion	Ratio	Lower	Upper
252	100		
253	21.9	17.3	25.9

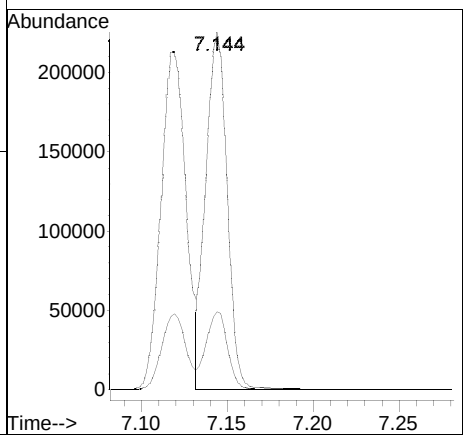


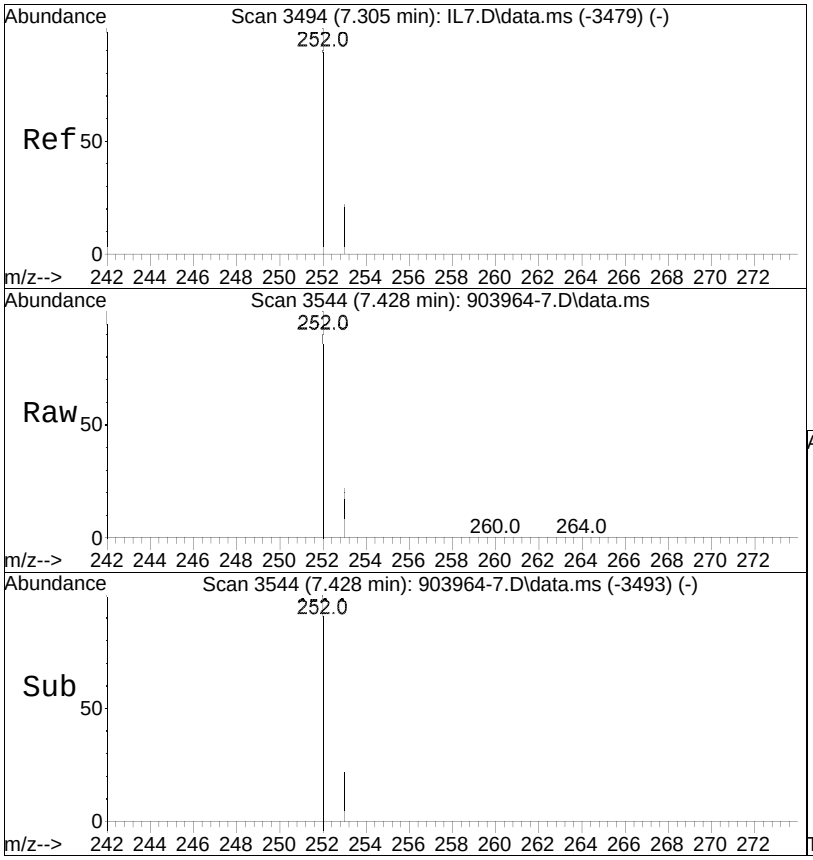


#38
Benzo[k]fluoranthene
Concen: 3437.75 ng/ml
RT: 7.144 min Scan# 3405
Delta R.T. 0.005 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:252 Resp: 194324

Ion	Ratio	Lower	Upper
252	100		
253	22.0	17.4	26.2

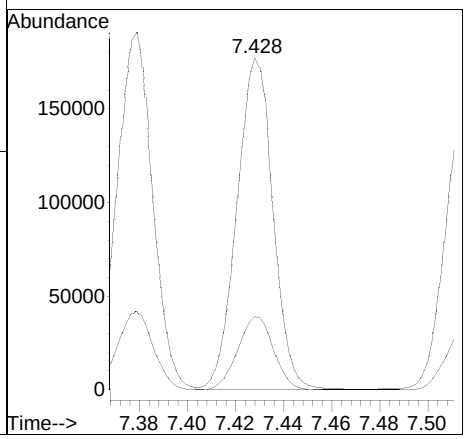


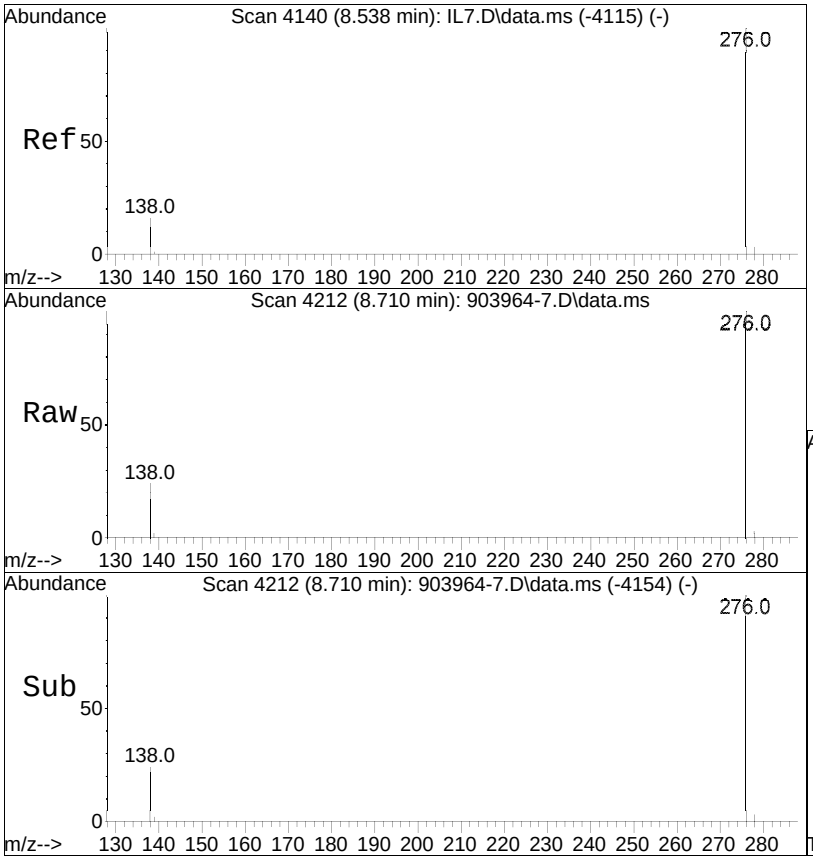


#39
Benzo[a]pyrene
Concen: 3492.36 ng/ml
RT: 7.428 min Scan# 3544
Delta R.T. 0.003 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:252 Resp: 182995

Ion	Ratio	Lower	Upper
252	100		
253	21.8	17.4	26.0

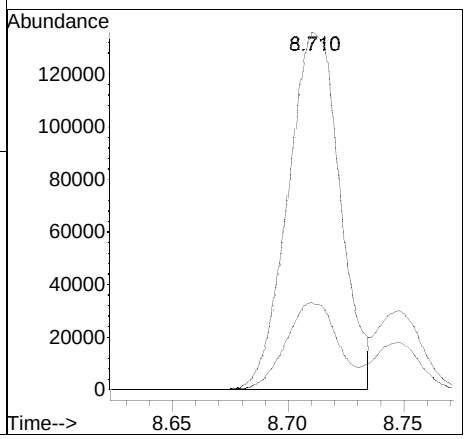


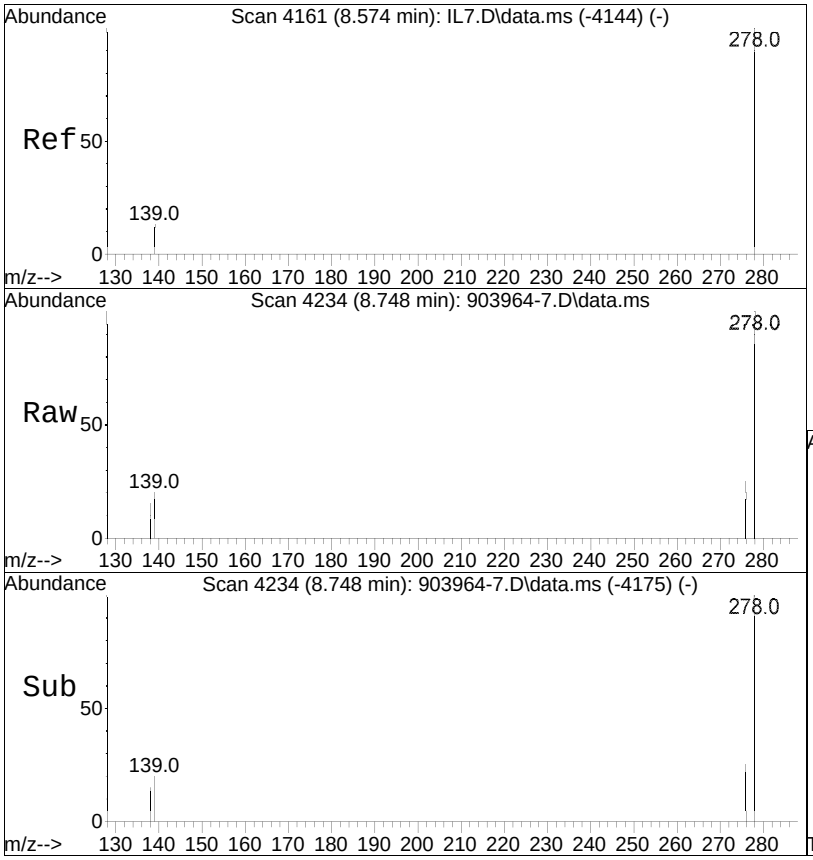


#40
Indeno[1,2,3-cd]pyrene
Concen: 3705.29 ng/ml
RT: 8.710 min Scan# 4212
Delta R.T. -0.001 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:276 Resp: 211010

Ion	Ratio	Lower	Upper
276	100		
138	24.4	14.8	22.2#

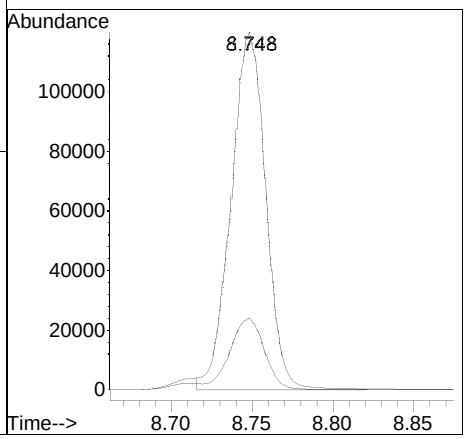


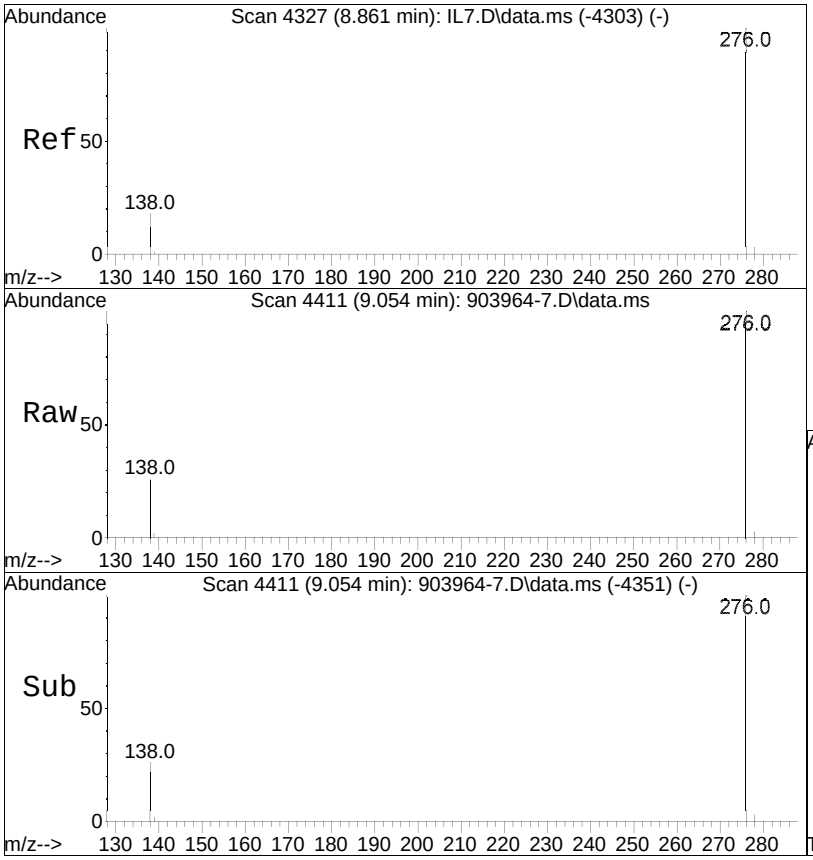


#41
Dibenzo[a,h]anthracene
Concen: 3352.38 ng/ml M6
RT: 8.748 min Scan# 4234
Delta R.T. 0.001 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:278 Resp: 177624

Ion	Ratio	Lower	Upper
278	100		
139	19.9	12.2	18.4#

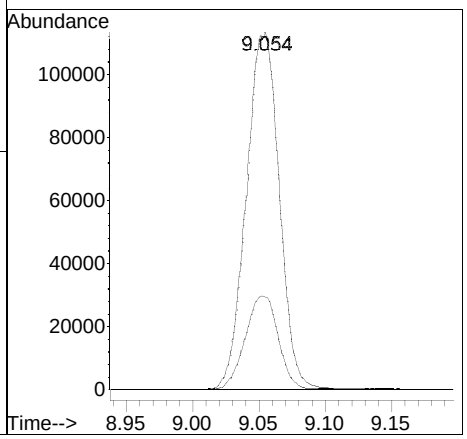




#42
Benzo[g,h,i]perylene
Concen: 3338.31 ng/ml
RT: 9.054 min Scan# 4411
Delta R.T. 0.003 min
Lab File: 903964-7.D
Acq: 04 Apr 2024 08:33 am

Tgt Ion:276 Resp: 193380

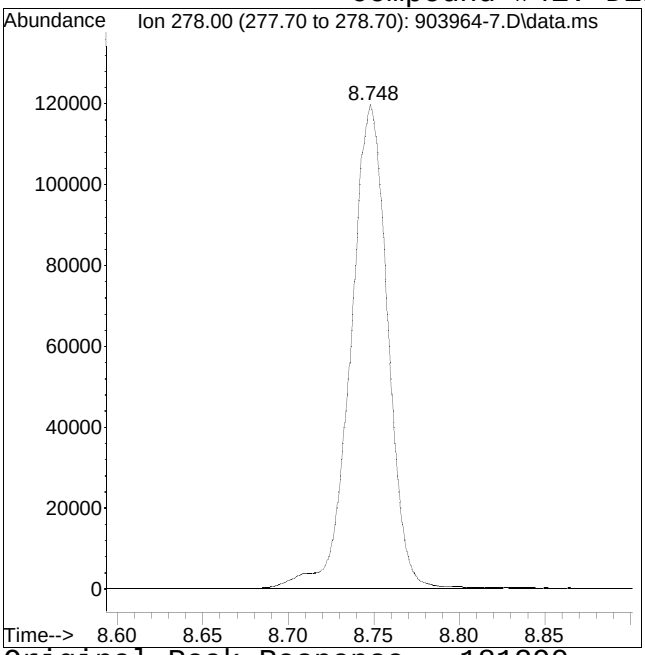
Ion	Ratio	Lower	Upper
276	100		
138	26.6	16.8	25.2#



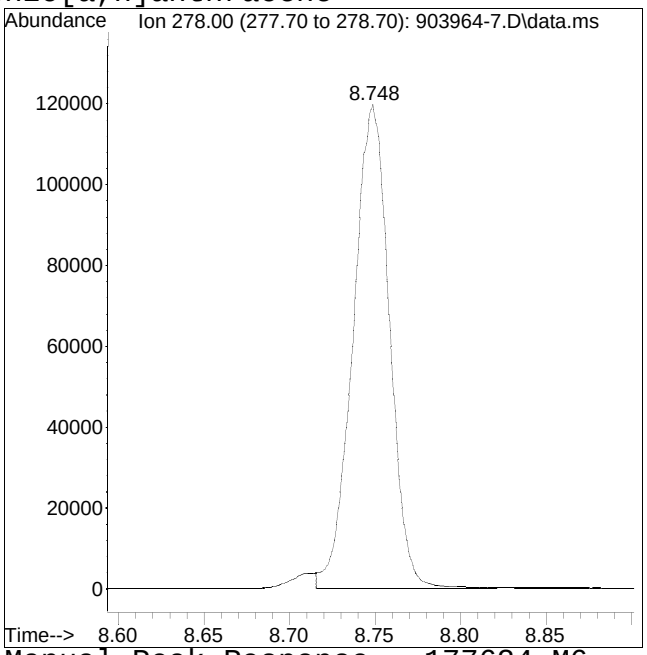
Manual Integration Report

Data Path : I:\8270SIM\sv119\240404LVIQMethod : SIM-LVI_231207n_sv119.M
Data File : 903964-7.D Operator : sv119:jjw
Date Inj'd : 4/4/2024 8:33 am Instrument : SV119
Sample : WG1903964-7,32,,ah Quant Date : 4/4/2024 8:50 am

Compound #41: Dibenzo[a,h]anthracene



Original Peak Response = 181290



Manual Peak Response = 177624 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Calculation of Semi Volatile Organic Compounds

Aqueous Concentration Formula: Amt * DF * 1000 * (1/Vo) * Vf

Where:
DF = Dilution Factor
Vo = Volume of Sample (mL)
Vf = Extraction Lab Final Volume (mL)

Soil Concentration Formula: Amt * DF * 1000 * (1/Wt) * Vf * (100/TS)
Where:
DF = Dilution Factor
Wt = Weight of Sample (g)
Vf = Extraction Lab Final Volume (mL)
TS = Total Solids

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Apr 04 2024, 12:00 pm

Work Group: WG1903964 for Department: 2 Organic Preparation

Created: 02-APR-24 Due: Operator: DAE

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2416561-01	MW-1	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0402	0403	S0	Amber-A.25
L2416731-01	SW_05D	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0403	0403	S0	Amber-A.25
L2416731-05	SW_08D	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0403	0403	S0	Amber-A.25
L2417074-01	MW-3A	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0404	0404	S0	Amber-A.25
L2417074-02	MW-6AR	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0404	0404	S0	Amber-A.25
L2417074-03	MW-7A	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417074-04	MW-7B	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417074-05	MW-7C	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417074-06	DUP	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0404	0404	S0	Amber-A.25
L2417074-07	EQ BLANK	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0403	0404	S0	Amber-A.25
L2417832-01	HRP-MW3 040224	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-02	HRP-MW1 040224	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-03	GW-17B 040224	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-04	MW-21B 040224	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-05	MW-21A 040224	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
L2417832-06	HRP-MW5A 040224	C	NYTCL-8270-SIM-LVI	WATER	DONE	U	0409	0403	3A	Amber-A.25
WG1903964-1	Laboratory Method Bl	S	NYTCL-8270-SIM-LVI	WATER	DONE	U				
WG1903964-2	Laboratory Control S	S	NYTCL-8270-SIM-LVI	WATER	DONE	U				
WG1903964-3	LCS Duplicate	S	NYTCL-8270-SIM-LVI	WATER	DONE	U				
WG1903964-4	Matrix Spike	S	NYTCL-8270-SIM-LVI	WATER	DONE	U				
WG1903964-5	Matrix Spike Duplica	S	NYTCL-8270-SIM-LVI	WATER	DONE	U				
WG1903964-6	Matrix Spike	S	NYTCL-8270-SIM-LVI	WATER	DONE	U				
WG1903964-7	Matrix Spike Duplica	S	NYTCL-8270-SIM-LVI	WATER	DONE	U				

Comments:

WG1903964-3	WG1903964-2
WG1903964-4	L2416561-01
WG1903964-5	L2416561-01
WG1903964-6	L2417074-01
WG1903964-7	L2417074-01

Analysis log File

Total Files Reported in Log : 13
Log Generated From Directory: I:\8270SIM\sv119\231207nLVIical\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	TUNE.D	DFTPPRUN.M	TUNE	WG1861379,,ical	12/7/2023 12:42 pm
2	IL10.D	SIM-LVI-fast	IL10,32,,20 Lot#10186	WG1861379,,ical	12/7/2023 1:10 pm
3	IL9.D	SIM-LVI-fast	IL9,32,,10 Lot#10227	WG1861379,,ical	12/7/2023 1:27 pm
4	IL8.D	SIM-LVI-fast	IL8,32,,5 Lot#10228	WG1861379,,ical	12/7/2023 1:46 pm
5	IL7.D	SIM-LVI-fast	IL7,32,,1 Lot#10229	WG1861379,,ical	12/7/2023 2:03 pm
6	IL6.D	SIM-LVI-fast	IL6,32,,0.25 Lot#10230	WG1861379,,ical	12/7/2023 2:20 pm
7	IL5.D	SIM-LVI-fast	IL5,32,,0.1 Lot#10231	WG1861379,,ical	12/7/2023 2:36 pm
8	IL4.D	SIM-LVI-fast	IL4,32,,0.05 Lot#10232	WG1861379,,ical	12/7/2023 2:53 pm
9	IL3.D	SIM-LVI-fast	IL3,32,,0.025 Lot#10233	WG1861379,,ical	12/7/2023 3:09 pm
10	IL2.D	SIM-LVI-fast	IL2,32,,0.01 Lot#10234	WG1861379,,ical	12/7/2023 3:26 pm
11	IL1.D	SIM-LVI-fast	IL1,32,, 0.005 Lot#1023	WG1861379,,ical	12/7/2023 3:42 pm
12	ICV.D	SIM-LVI-fast	CQICV,32,,1.0 Lot#10193	WG1861379,,ical	12/7/2023 3:59 pm
13	insblk.D	SIM-LVI-fast			12/7/2023 4:15 pm

Printed: 12/08/23 Page: 1

 SeqLog 1.0 - (c) 2009 Abacus Database Applications

	Type	Method File	Vial	Name	Data File	Comment
	Sample	DFTPPRUN.M	48	wg-1,32,,dftppsv119	deg0403	wg,,ical20642
	Sample	SIM-LVI-fast.M	49	wg-3,32,, ICV 10475 (0401)	ccv0403	wg,,ical20642
	Sample	SIM-LVI-fast.M	50	instrument blank	blank0403	wg,,ical20642
	Keyword					
	Sample	SIM-LVI-fast.M	1	WG1903964-1,32,,ah	903964-1	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	2	WG1903964-2,32,,ah	903964-2	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	3	WG1903964-3,32,,ah	903964-3	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	4	L2416561-01,32,,ah	16561-01	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	5	WG1903964-4,32,,ah	903964-4	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	6	WG1903964-5,32,,ah	903964-5	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	7	L2416753-01,32,,ah	16753-01	WG1904170,WG1903223,ical20642
	Sample	SIM-LVI-fast.M	8	WG1903873-2,32,,ah	903873-2	WG1904170,WG1903873,ical20642
	Sample	SIM-LVI-fast.M	9	WG1903873-3,32,,ah	903873-3	WG1904170,WG1903873,ical20642
	Sample	SIM-LVI-fast.M	10	WG1903873-1,32,,ah	903873-1	WG1904170,WG1903873,ical20642
	Sample	SIM-LVI-fast.M	11	L2416749-27,32,,ah	16749-27	WG1904170,WG1903873,ical20642
	Sample	SIM-LVI-fast.M	12	L2416731-07,,32,,RR,ah	6731-07	WG1904170,WG1903223,ical20642
	Sample	SIM-LVI-fast.M	13	L2416649-01,32,,RR,ah	16649-01	WG1904170,WG1903223,ical20642
	Sample	SIM-LVI-fast.M	14	L2417832-01,32,,R3A,ah	17832-01	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	15	L2417832-02,32,,R3A,ah	17832-02	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	16	L2417832-03,32,,R3A,ah	17832-03	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	17	L2417832-04,32,,R3A,ah	17832-04	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	18	L2417832-05,32,,R3A,ah	17832-05	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	19	L2417832-06,32,,R3A,ah	17832-06	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	20	L2416737-03,32,,RR,ah	16737-03	WG1904170,WG1903223,ical20642
	Sample	SIM-LVI-fast.M	21	Wg1903676-2,32,,ah	903676-2	WG1904170,wg1903676,ical20642
	Sample	SIM-LVI-fast.M	22	Wg1903676-3,32,,ah	903676-3	WG1904170,wg1903676,ical20642
	Sample	SIM-LVI-fast.M	23	L2417832-03d,32,5,R3A,jjw	832-03d1	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	24	L2417832-03d,32,20,R3A,jjw	832-03d2	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	25	Wg1903676-1,32,,ah	903676-1	WG1904170,wg1903676,ical20642
	Sample	SIM-LVI-fast.M	26	L2416646-01,32,,ah	16646-01	WG1904170,wg1903676,ical20642
	Sample	SIM-LVI-fast.M	27	L2416646-02,32,,ah	16646-02	WG1904170,wg1903676,ical20642
	Sample	SIM-LVI-fast.M	28	Wg1903746/694-2,32,,ah	903746-2	WG1904170,wg1903746,ical20642
	Sample	SIM-LVI-fast.M	29	Wg1903746/694-3,32,,ah	903746-3	WG1904170,wg1903746,ical20642
	Sample	SIM-LVI-fast.M	30	Wg1903746/694-1,32,,ah	903746-1	WG1904170,wg1903746,ical20642
	Sample	SIM-LVI-fast.M	31	L2416731-01,32,,ah	16731-01	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	32	L2416731-05,32,,ah	16731-05	WG1904170,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	33	L2415271-02,32,,ah	15271-02	WG1904170,wg1903746,ical20642
	Sample	SIM-LVI-fast.M	34	L2416609-01,32,,ah	16609-01	WG1904170,wg1903223,ical20642
	Sample	SIM-LVI-fast.M	35	Wg1903462-2,32,,ah	903462-2	WG1904170,wg1903462,ical20642

	Type	Method File	Vial	Name	Data File	Comment
	Sample	SIM-LVI-fast.M	36	Wg1903462-3,32,,ah	903462-3	WG1904170,wg1903462,ical20642
	Sample	SIM-LVI-fast.M	37	Wg1903462-1,32,,ah	903462-1	WG1904170,wg1903462,ical20642
	Sample	SIM-LVI-fast.M	38	L2416755-04,32,,ah	16755-04	WG1904170,wg1903462,ical20642
	Sample	SIM-LVI-fast.M	39	L2416755-02d,32,5,M,ah	755-02d1	WG1904170,WG1903462,ical20642
	Sample	SIM-LVI-fast.M	40	L2416755-03d,32,5,M,ah	755-03d1	WG1904170,WG1903462,ical20642

	Type	Method File	Vial	Name	Data File	Comment
	Sample	DFTPPRUN.M	48	wg-1,32,,dftppsv119	deg0404	wg,,ical20642
	Sample	SIM-LVI-fast.M	49	wg-3,32,, ICV 10475 (0401)	ccv0404	wg,,ical20642
	Sample	SIM-LVI-fast.M	50	instrument blank	blank0404	wg,,ical20642
	Keyword					
	Sample	SIM-LVI-fast.M	1	L2417074-01,32,,ah	17074-01	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	2	WG1903964-6,32,,ah	903964-6	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	3	WG1903964-7,32,,ah	903964-7	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	4	L2417074-02,32,,ah	17074-02	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	5	L2417074-03,32,,ah	17074-03	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	6	L2417074-04,32,,ah	17074-04	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	7	L2417074-05,32,,ah	17074-05	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	8	L2417074-06,32,,ah	17074-06	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	9	L2417074-07,32,,ah	17074-07	WG1904665,WG1903964,ical20642
	Sample	SIM-LVI-fast.M	10	L2417041-01,32,,AH	17041-01	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	11	L2417041-02,32,,AH	17041-02	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	12	L2417041-03,32,,AH	17041-03	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	13	L2417041-04,32,,AH	17041-04	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	14	L2417041-06,32,,AH	17041-06	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	15	L2417041-07,32,,AH	17041-07	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	16	L2417041-08,32,,AH	17041-08	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	17	L2417041-09,32,,AH	17041-09	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	18	L2417052-02,32,,AH	17052-02	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	19	L2417052-04,32,,AH	17052-04	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	20	L2417052-05,32,,AH	17052-05	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	21	L2417052-06,32,,AH	17052-06	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	22	L2417052-08,32,,AH	17052-08	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	23	L2417052-09,32,,AH	17052-09	WG1904665,WG1903694,ical20642
	Sample	SIM-LVI-fast.M	24	L2417089-01,32,10,AH	7089-01d1	WG1904665,WG1902658,ical20642
	Sample	SIM-LVI-fast.M	25	L2417089-03,32,10,AH	7089-03d1	WG1904665,WG1902658,ical20642

ORGANIC ELN REPORT

Workgroup: WG1903964

Prep Method: EPA 3510C
Solvent Type: DCM **Lot #:** EI200
Surrogate Type: ABN **Lot #:** 10614ab,09/20/2024,
Spike Type: ABN-SIM **Lot #:** 10588ab,09/08/2024,10575ax,0
Spike Verify by: RSN / DAE/DLP
Lims Spikelot: 8270-LVI

Additional Reagents/Stds

H2SO4	A030924
Na2SO4	23f1561004
NaOH	10NNaOH030324

Conc.Method: Buchi
Solvent Type: DCM
Lot #: EI200

Additional Reagents/Stds

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Vol ml	Ph	Surr Amt ml	Spike Amt ml	Concentration: Conc Date	Analyst	Final Vol ml	Conc Unit
L2416561-01 WATER	04/02/24 17:36	Daniel Erhagbai	275	<2,>12	1		04/03/24 02:18	Alaina Ohara-Cruz	1	H
L2416731-01 SAMP	04/03/24 07:33	Tian-Long Chheou	275	<2,>12	1		04/03/24 11:44	Kellsey Geikie	1	H
	SURROGATE 10614ar,09/20/2024,2c,25,7									
L2416731-05 SAMP	04/03/24 07:33	Tian-Long Chheou	275	<2,>12	1		04/03/24 11:44	Kellsey Geikie	1	H
	SURROGATE 10614ar,09/20/2024,2c,25,7									
L2417074-01 WATER	04/03/24 07:33	Tian-Long Chheou	275	<2,>12	1		04/03/24 11:44	Kellsey Geikie	1	H
	SURROGATE 10614ar,09/20/2024,2c,25,7									
L2417074-02 WATER	04/03/24 07:33	Tian-Long Chheou	275	<2,>12	1		04/03/24 11:44	Kellsey Geikie	1	H
	SURROGATE 10614ar,09/20/2024,2c,25,7									
L2417074-03 WATER	04/02/24 17:37	Daniel Erhagbai	154	<2,>12	1		04/03/24 02:18	Alaina Ohara-Cruz	1	H
	Amber limited volume									

Reported: 04-APR-24 12:00 PM

ORGANIC ELN REPORT

Workgroup: WG1903964

Sample/ Type	Extraction						Concentration			
	Extract Date	Analyst	Sample Vol **ml**	Ph	Surr Amt **ml**	Spike Amt **ml**	Conc Date	Analyst	Final Vol **ml**	Conc Unit
L2417074-04 WATER	04/02/24 17:37	Daniel Erhagbai	275	<2,>12	1		04/03/24 02:18	Alaina Ohara-Cruz	1	H
L2417074-05 WATER	04/02/24 17:37	Daniel Erhagbai	275	<2,>12	1		04/03/24 02:18	Alaina Ohara-Cruz	1	H
L2417074-06 WATER	04/03/24 07:33	Tian-Long Chheou	275	<2,>12	1		04/03/24 11:44	Kellsey Geikie	1	H
	SURROGATE 10614ar,09/20/2024,2c,25,7									
L2417074-07 WATER	04/02/24 17:37	Daniel Erhagbai	275	<2,>12	1		04/03/24 02:18	Alaina Ohara-Cruz	1	H
L2417832-01 SAMP	04/03/24 04:58	Francis Mbro-Menyah	275	<2,>12	1		04/03/24 09:31	Kellsey Geikie	1	H
L2417832-02 SAMP	04/03/24 04:58	Francis Mbro-Menyah	275	<2,>12	1		04/03/24 09:31	Kellsey Geikie	1	H
L2417832-03 SAMP	04/03/24 04:58	Francis Mbro-Menyah	275	<2,>12	1		04/03/24 09:31	Kellsey Geikie	1	H
L2417832-04 SAMP	04/03/24 04:58	Francis Mbro-Menyah	275	<2,>12	1		04/03/24 09:31	Kellsey Geikie	1	H

ORGANIC ELN REPORT

Workgroup: WG1903964

Sample/ Type	Extraction						Concentration			
	Extract Date	Analyst	Sample Vol ml	Ph	Surr Amt ml	Spike Amt ml	Conc Date	Analyst	Final Vol ml	Conc Unit
L2417832-05 SAMP	04/03/24 04:58	Francis Mbro-Menyah	275	<2,>12	1		04/03/24 09:31	Kellsey Geikie	1	H
L2417832-06 SAMP	04/03/24 04:58	Francis Mbro-Menyah	275	<2,>12	1		04/03/24 09:31	Kellsey Geikie	1	H
WG1903964-1 BLANK	04/02/24 17:36	Daniel Erhagbai	275	<2,>12	1		04/03/24 02:18	Alaina Ohara-Cruz	1	H
	Sharing Qc's with WG1903965									
WG1903964-2 LCS	04/02/24 17:36	Daniel Erhagbai	275	<2,>12	1	1	04/03/24 02:18	Alaina Ohara-Cruz	1	H
WG1903964-3 LCSD	04/02/24 17:36	Daniel Erhagbai	275	<2,>12	1	1	04/03/24 02:18	Alaina Ohara-Cruz	1	H
WG1903964-4 MS	04/02/24 17:36	Daniel Erhagbai	275	<2,>12	1	1	04/03/24 02:18	Alaina Ohara-Cruz	1	H
WG1903964-5 MSD	04/02/24 17:36	Daniel Erhagbai	275	<2,>12	1	1	04/03/24 02:18	Alaina Ohara-Cruz	1	H
WG1903964-6 MS	04/03/24 07:33	Tian-Long Chheou	275	<2,>12	1	1	04/03/24 11:44	Kellsey Geikie	1	H
	SURROGATE 10614ar,09/20/2024,2c,25,7, SPIKE 10588aw,09/08/2024,4r,25,710575au,08/26/2024,6c,25,5									

Reported: 04-APR-24 12:00 PM

ORGANIC ELN REPORT

Workgroup: WG1903964

Sample/ Type	Extraction						Concentration			
	Extract Date	Analyst	Sample Vol **ml**	Ph	Surr Amt **ml**	Spike Amt **ml**	Conc Date	Analyst	Final Vol **ml**	Conc Unit
WG1903964-7 MSD	04/03/24 07:33	Tian-Long Chheou	275	<2,>12	1	1	04/03/24 11:44	Kellsey Geikie	1	H
	SURROGATE 10614ar,09/20/2024,2c,25,7, SPIKE 10588aw,09/08/2024,4r,25,710575au,08/26/2024,6c,25,5									

Reported: 04-APR-24 12:00 PM

Metals

Inorganic Data
(ICPMS Analysis)

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 20:52
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903140.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	0.0109	0.0100	0.00327	
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	ND	0.00050	0.00016	U
7440-39-3	Barium, Total	0.01124	0.00050	0.00017	
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	3.62	0.100	0.0394	
7440-47-3	Chromium, Total	0.00047	0.00100	0.00017	J
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	ND	0.00100	0.00038	U
7439-89-6	Iron, Total	ND	0.0500	0.0191	U
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	0.811	0.0700	0.0242	
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	1.30	0.100	0.0309	
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	3.59	0.100	0.0293	
7440-28-0	Thallium, Total	0.00019	0.00100	0.00014	J
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 21:48
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903140.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	ND	0.0100	0.00327	U
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	ND	0.00050	0.00016	U
7440-39-3	Barium, Total	0.01778	0.00050	0.00017	
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-47-3	Chromium, Total	0.00048	0.00100	0.00017	J
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	ND	0.00100	0.00038	U
7439-89-6	Iron, Total	ND	0.0500	0.0191	U
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	5.78	0.0700	0.0242	
7439-96-5	Manganese, Total	0.02027	0.00100	0.00044	
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	1.71	0.100	0.0309	
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	10.5	0.100	0.0293	
7440-28-0	Thallium, Total	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 21:53
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903140.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	0.233	0.0100	0.00327	
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	0.00030	0.00050	0.00016	J
7440-39-3	Barium, Total	0.01817	0.00050	0.00017	
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-47-3	Chromium, Total	0.00043	0.00100	0.00017	J
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	0.00064	0.00100	0.00038	J
7439-89-6	Iron, Total	0.246	0.0500	0.0191	
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	5.34	0.0700	0.0242	
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	1.93	0.100	0.0309	
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	11.0	0.100	0.0293	
7440-28-0	Thallium, Total	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 21:57
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903140.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	0.0190	0.0100	0.00327	
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	0.00017	0.00050	0.00016	J
7440-39-3	Barium, Total	0.02658	0.00050	0.00017	
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	11.7	0.100	0.0394	
7440-47-3	Chromium, Total	0.00078	0.00100	0.00017	J
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	ND	0.00100	0.00038	U
7439-89-6	Iron, Total	0.0304	0.0500	0.0191	J
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	5.36	0.0700	0.0242	
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	2.22	0.100	0.0309	
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	13.2	0.100	0.0293	
7440-28-0	Thallium, Total	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 22:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903140.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	0.00917	0.0100	0.00327	J
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	ND	0.00050	0.00016	U
7440-39-3	Barium, Total	0.01027	0.00050	0.00017	
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	2.95	0.100	0.0394	
7440-47-3	Chromium, Total	0.00047	0.00100	0.00017	J
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	ND	0.00100	0.00038	U
7439-89-6	Iron, Total	ND	0.0500	0.0191	U
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	0.764	0.0700	0.0242	
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	1.19	0.100	0.0309	
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	3.41	0.100	0.0293	
7440-28-0	Thallium, Total	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 22:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903140.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	0.0713	0.0100	0.00327	
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	ND	0.00050	0.00016	U
7440-39-3	Barium, Total	0.00048	0.00050	0.00017	J
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	0.0656	0.100	0.0394	J
7440-47-3	Chromium, Total	0.00035	0.00100	0.00017	J
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	0.00152	0.00100	0.00038	
7439-89-6	Iron, Total	ND	0.0500	0.0191	U
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	ND	0.0700	0.0242	U
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	0.124	0.100	0.0309	
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	0.0620	0.100	0.0293	J
7440-28-0	Thallium, Total	0.00021	0.00100	0.00014	J
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	0.00470	0.01000	0.00341	J

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1902788-10	**Date Collected**	:
Client ID	: Serial Dilution	**Date Received**	:
Sample Location	:	**Date Analyzed**	: 04/01/24 20:47
Sample Matrix	: WATER	**Dilution Factor**	: 5
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903140.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-70-2	Calcium, Total	3.66	0.500	0.197	
7440-23-5	Sodium, Total	3.08	0.500	0.146	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1902788-1	**Date Collected**	: NA
Client ID	: WG1902788-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/01/24 07:55
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1903141.pdf	**Instrument ID**	: ICPMSQ2
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	ND	0.0100	0.00327	U
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	ND	0.00050	0.00016	U
7440-39-3	Barium, Total	ND	0.00050	0.00017	U
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	ND	0.100	0.0394	U
7440-47-3	Chromium, Total	ND	0.00100	0.00017	U
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	ND	0.00100	0.00038	U
7439-89-6	Iron, Total	ND	0.0500	0.0191	U
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	ND	0.0700	0.0242	U
7439-96-5	Manganese, Total	0.00137	0.00100	0.00044	
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	ND	0.100	0.0309	U
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	ND	0.100	0.0293	U
7440-28-0	Thallium, Total	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 05:54
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1904103.csv	**Instrument ID**	: ICPMSQ2
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-70-2	Calcium, Total	16.7	0.100	0.0394	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 05:59
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1904103.csv	**Instrument ID**	: ICPMSQ2
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-70-2	Calcium, Total	16.6	0.100	0.0394	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 15:45
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1904593.csv	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-96-5	Manganese, Total	0.00959	0.00100	0.00044	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 15:50
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1904593.csv	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-96-5	Manganese, Total	0.00607	0.00100	0.00044	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 15:55
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1904593.csv	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-96-5	Manganese, Total	0.00284	0.00100	0.00044	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 16:11
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1904593.csv	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-96-5	Manganese, Total	0.00164	0.00100	0.00044	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903862-1	**Date Collected**	: NA
Client ID	: WG1903862-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/04/24 15:13
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1904593.csv	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-96-5	Manganese, Total	ND	0.00100	0.00044	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/05/24 09:44
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1905057.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	0.00861	0.0100	0.00327	J
7440-36-0	Antimony, Dissolved	0.00102	0.00400	0.00042	J
7440-38-2	Arsenic, Dissolved	ND	0.00050	0.00016	U
7440-39-3	Barium, Dissolved	0.01114	0.00050	0.00017	
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	3.79	0.100	0.0394	
7440-47-3	Chromium, Dissolved	0.00090	0.00100	0.00017	J
7440-48-4	Cobalt, Dissolved	ND	0.00050	0.00016	U
7440-50-8	Copper, Dissolved	ND	0.00100	0.00038	U
7439-89-6	Iron, Dissolved	ND	0.0500	0.0191	U
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	0.844	0.0700	0.0242	
7439-96-5	Manganese, Dissolved	0.00286	0.00100	0.00044	
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	1.50	0.100	0.0309	
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	3.31	0.100	0.0293	
7440-28-0	Thallium, Dissolved	0.00022	0.00100	0.00014	J
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/05/24 10:25
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1905057.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	ND	0.0100	0.00327	U
7440-36-0	Antimony, Dissolved	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Dissolved	ND	0.00050	0.00016	U
7440-39-3	Barium, Dissolved	0.01849	0.00050	0.00017	
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	20.7	0.100	0.0394	
7440-47-3	Chromium, Dissolved	0.00058	0.00100	0.00017	J
7440-48-4	Cobalt, Dissolved	ND	0.00050	0.00016	U
7440-50-8	Copper, Dissolved	ND	0.00100	0.00038	U
7439-89-6	Iron, Dissolved	ND	0.0500	0.0191	U
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	6.48	0.0700	0.0242	
7439-96-5	Manganese, Dissolved	0.02352	0.00100	0.00044	
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	2.07	0.100	0.0309	
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	11.3	0.100	0.0293	
7440-28-0	Thallium, Dissolved	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/05/24 10:29
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1905057.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	0.00643	0.0100	0.00327	J
7440-36-0	Antimony, Dissolved	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Dissolved	0.00018	0.00050	0.00016	J
7440-39-3	Barium, Dissolved	0.01762	0.00050	0.00017	
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	21.8	0.100	0.0394	
7440-47-3	Chromium, Dissolved	0.00022	0.00100	0.00017	J
7440-48-4	Cobalt, Dissolved	ND	0.00050	0.00016	U
7440-50-8	Copper, Dissolved	0.00041	0.00100	0.00038	J
7439-89-6	Iron, Dissolved	ND	0.0500	0.0191	U
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	5.93	0.0700	0.0242	
7439-96-5	Manganese, Dissolved	0.00339	0.00100	0.00044	
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	2.32	0.100	0.0309	
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	12.0	0.100	0.0293	
7440-28-0	Thallium, Dissolved	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/05/24 10:34
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1905057.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	ND	0.0100	0.00327	U
7440-36-0	Antimony, Dissolved	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Dissolved	ND	0.00050	0.00016	U
7440-39-3	Barium, Dissolved	0.02442	0.00050	0.00017	
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	14.9	0.100	0.0394	
7440-47-3	Chromium, Dissolved	0.00086	0.00100	0.00017	J
7440-48-4	Cobalt, Dissolved	ND	0.00050	0.00016	U
7440-50-8	Copper, Dissolved	0.00039	0.00100	0.00038	J
7439-89-6	Iron, Dissolved	ND	0.0500	0.0191	U
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	6.27	0.0700	0.0242	
7439-96-5	Manganese, Dissolved	0.00139	0.00100	0.00044	
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	2.59	0.100	0.0309	
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	14.5	0.100	0.0293	
7440-28-0	Thallium, Dissolved	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/05/24 10:39
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1905057.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	0.00919	0.0100	0.00327	J
7440-36-0	Antimony, Dissolved	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Dissolved	ND	0.00050	0.00016	U
7440-39-3	Barium, Dissolved	0.01066	0.00050	0.00017	
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	3.84	0.100	0.0394	
7440-47-3	Chromium, Dissolved	0.00079	0.00100	0.00017	J
7440-48-4	Cobalt, Dissolved	ND	0.00050	0.00016	U
7440-50-8	Copper, Dissolved	ND	0.00100	0.00038	U
7439-89-6	Iron, Dissolved	ND	0.0500	0.0191	U
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	0.881	0.0700	0.0242	
7439-96-5	Manganese, Dissolved	0.00263	0.00100	0.00044	
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	1.53	0.100	0.0309	
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	3.08	0.100	0.0293	
7440-28-0	Thallium, Dissolved	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903435-1	**Date Collected**	: NA
Client ID	: WG1903435-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/05/24 09:21
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1905057.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	ND	0.0100	0.00327	U
7440-36-0	Antimony, Dissolved	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Dissolved	ND	0.00050	0.00016	U
7440-39-3	Barium, Dissolved	ND	0.00050	0.00017	U
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	ND	0.100	0.0394	U
7440-47-3	Chromium, Dissolved	ND	0.00100	0.00017	U
7440-48-4	Cobalt, Dissolved	ND	0.00050	0.00016	U
7440-50-8	Copper, Dissolved	ND	0.00100	0.00038	U
7439-89-6	Iron, Dissolved	ND	0.0500	0.0191	U
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	ND	0.0700	0.0242	U
7439-96-5	Manganese, Dissolved	ND	0.00100	0.00044	U
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	ND	0.100	0.0309	U
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	ND	0.100	0.0293	U
7440-28-0	Thallium, Dissolved	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903435-6	**Date Collected**	:
Client ID	: Serial Dilution	**Date Received**	:
Sample Location	:	**Date Analyzed**	: 04/05/24 10:03
Sample Matrix	: WATER	**Dilution Factor**	: 5
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1905057.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-70-2	Calcium, Dissolved	3.95	0.500	0.197	
7440-23-5	Sodium, Dissolved	3.47	0.500	0.146	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903862-1	**Date Collected**	: NA
Client ID	: WG1903862-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/07/24 15:46
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: WKP
Lab File ID	: WG1905724.pdf	**Instrument ID**	: ICPMSQ2
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	ND	0.0100	0.00327	U
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	ND	0.00050	0.00016	U
7440-39-3	Barium, Total	ND	0.00050	0.00017	U
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	ND	0.100	0.0394	U
7440-47-3	Chromium, Total	0.00088	0.00100	0.00017	J
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	ND	0.00100	0.00038	U
7439-89-6	Iron, Total	ND	0.0500	0.0191	U
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	ND	0.0700	0.0242	U
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	ND	0.100	0.0309	U
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	ND	0.100	0.0293	U
7440-28-0	Thallium, Total	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/10/24 17:43
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1906728.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-96-5	Manganese, Total	0.00412	0.00100	0.00044	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/10/24 17:38
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1906728.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	0.178	0.0100	0.00327	
7440-36-0	Antimony, Total	0.00043	0.00400	0.00042	J
7440-38-2	Arsenic, Total	ND	0.00050	0.00016	U
7440-39-3	Barium, Total	0.01853	0.00050	0.00017	
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	28.5	0.100	0.0394	
7440-47-3	Chromium, Total	0.00126	0.00100	0.00017	
7440-48-4	Cobalt, Total	0.00082	0.00050	0.00016	
7440-50-8	Copper, Total	0.00071	0.00100	0.00038	J
7439-89-6	Iron, Total	0.281	0.0500	0.0191	
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	6.34	0.0700	0.0242	
7439-96-5	Manganese, Total	5.584	0.00100	0.00044	
7440-02-0	Nickel, Total	0.00076	0.00200	0.00055	J
7440-09-7	Potassium, Total	3.03	0.100	0.0309	
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	12.2	0.100	0.0293	
7440-28-0	Thallium, Total	0.00019	0.00100	0.00014	J
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1906871-1	**Date Collected**	: NA
Client ID	: WG1906871-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/10/24 17:10
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1906728.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Total	ND	0.0100	0.00327	U
7440-36-0	Antimony, Total	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Total	0.00033	0.00050	0.00016	J
7440-39-3	Barium, Total	ND	0.00050	0.00017	U
7440-41-7	Beryllium, Total	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Total	ND	0.00020	0.00005	U
7440-70-2	Calcium, Total	ND	0.100	0.0394	U
7440-47-3	Chromium, Total	ND	0.00100	0.00017	U
7440-48-4	Cobalt, Total	ND	0.00050	0.00016	U
7440-50-8	Copper, Total	ND	0.00100	0.00038	U
7439-89-6	Iron, Total	ND	0.0500	0.0191	U
7439-92-1	Lead, Total	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Total	ND	0.0700	0.0242	U
7439-96-5	Manganese, Total	ND	0.00100	0.00044	U
7440-02-0	Nickel, Total	ND	0.00200	0.00055	U
7440-09-7	Potassium, Total	ND	0.100	0.0309	U
7782-49-2	Selenium, Total	ND	0.00500	0.00173	U
7440-22-4	Silver, Total	ND	0.00040	0.00016	U
7440-23-5	Sodium, Total	ND	0.100	0.0293	U
7440-28-0	Thallium, Total	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Total	ND	0.00500	0.00157	U
7440-66-6	Zinc, Total	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1906871-6	**Date Collected**	:
Client ID	: Serial Dilution	**Date Received**	:
Sample Location	:	**Date Analyzed**	: 04/10/24 17:34
Sample Matrix	: WATER	**Dilution Factor**	: 5
Analytical Method	: 1,6020B	**Analyst**	: EJF
Lab File ID	: WG1906728.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-39-3	Barium, Total	0.01894	0.00250	0.0009	
7440-70-2	Calcium, Total	30.3	0.500	0.197	
7439-95-4	Magnesium, Total	6.63	0.350	0.121	
7439-96-5	Manganese, Total	6.085	0.00500	0.0022	
7440-09-7	Potassium, Total	3.17	0.500	0.154	
7440-23-5	Sodium, Total	13.1	0.500	0.146	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/14/24 15:07
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: WKP
Lab File ID	: WG1908507.pdf	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	ND	0.0100	0.00327	U
7440-36-0	Antimony, Dissolved	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Dissolved	ND	0.00050	0.00016	U
7440-39-3	Barium, Dissolved	0.01680	0.00050	0.00017	
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	31.3	0.100	0.0394	
7440-47-3	Chromium, Dissolved	0.00032	0.00100	0.00017	J
7440-48-4	Cobalt, Dissolved	0.00070	0.00050	0.00016	
7440-50-8	Copper, Dissolved	ND	0.00100	0.00038	U
7439-89-6	Iron, Dissolved	0.0623	0.0500	0.0191	
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	6.81	0.0700	0.0242	
7439-96-5	Manganese, Dissolved	5.872	0.00100	0.00044	
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	3.29	0.100	0.0309	
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	13.0	0.100	0.0293	
7440-28-0	Thallium, Dissolved	0.00019	0.00100	0.00014	J
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1906880-1	**Date Collected**	: NA
Client ID	: WG1906880-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/14/24 14:39
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,6020B	**Analyst**	: WKP
Lab File ID	: WG1908507.pdf	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7429-90-5	Aluminum, Dissolved	ND	0.0100	0.00327	U
7440-36-0	Antimony, Dissolved	ND	0.00400	0.00042	U
7440-38-2	Arsenic, Dissolved	ND	0.00050	0.00016	U
7440-39-3	Barium, Dissolved	ND	0.00050	0.00017	U
7440-41-7	Beryllium, Dissolved	ND	0.00050	0.00010	U
7440-43-9	Cadmium, Dissolved	ND	0.00020	0.00005	U
7440-70-2	Calcium, Dissolved	ND	0.100	0.0394	U
7440-47-3	Chromium, Dissolved	ND	0.00100	0.00017	U
7440-48-4	Cobalt, Dissolved	ND	0.00050	0.00016	U
7440-50-8	Copper, Dissolved	ND	0.00100	0.00038	U
7439-89-6	Iron, Dissolved	ND	0.0500	0.0191	U
7439-92-1	Lead, Dissolved	ND	0.00100	0.00034	U
7439-95-4	Magnesium, Dissolved	ND	0.0700	0.0242	U
7439-96-5	Manganese, Dissolved	ND	0.00100	0.00044	U
7440-02-0	Nickel, Dissolved	ND	0.00200	0.00055	U
7440-09-7	Potassium, Dissolved	ND	0.100	0.0309	U
7782-49-2	Selenium, Dissolved	ND	0.00500	0.00173	U
7440-22-4	Silver, Dissolved	ND	0.00040	0.00016	U
7440-23-5	Sodium, Dissolved	ND	0.100	0.0293	U
7440-28-0	Thallium, Dissolved	ND	0.00100	0.00014	U
7440-62-2	Vanadium, Dissolved	ND	0.00500	0.00157	U
7440-66-6	Zinc, Dissolved	ND	0.01000	0.00341	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1906880-6	**Date Collected**	:
Client ID	: Serial Dilution	**Date Received**	:
Sample Location	:	**Date Analyzed**	: 04/14/24 15:02
Sample Matrix	: WATER	**Dilution Factor**	: 5
Analytical Method	: 1,6020B	**Analyst**	: WKP
Lab File ID	: WG1908507.pdf	**Instrument ID**	: ICPMSRQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-39-3	Barium, Dissolved	0.01646	0.00250	0.0009	
7440-70-2	Calcium, Dissolved	32.4	0.500	0.197	
7439-95-4	Magnesium, Dissolved	6.16	0.350	0.121	
7439-96-5	Manganese, Dissolved	5.836	0.00500	0.0022	
7440-09-7	Potassium, Dissolved	2.89	0.500	0.154	
7440-23-5	Sodium, Dissolved	11.9	0.500	0.146	

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1811827-1			R1811827-5			R1811827-7		R1811827-10	
Date Analyzed:	04/01/24 05:51			04/01/24 06:27			04/01/24 07:30		04/01/24 08:31	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	52.1000	104	60.0000	59.5	99	56.7	94	59.7	100
Antimony	50.0	51.0000	102	60.0000	60.6	101	59.8	100	61.9	103
Arsenic	50.0	51.6000	103	60.0000	60.8	101	60.2	100	60.8	101
Barium	50.0	51.4000	103	60.0000	61.6	103	60.2	100	63.5	106
Beryllium	50.0	50.4000	101	60.0000	57.5	96	61.4	102	58.7	98
Cadmium	50.0	51.0000	102	60.0000	61.0	102	60.2	100	61.5	102
Calcium	5000	5360.0000	107	6000.0000	6110	102	5970	100	6320	105
Chromium	50.0	52.3000	105	60.0000	60.6	101	59.0	98	60.4	101
Cobalt	50.0	52.3000	105	60.0000	61.1	102	60.2	100	62.6	104
Copper	50.0	51.4000	103	60.0000	61.4	102	60.3	100	62.4	104
Iron	5000	5240.0000	105	6000.0000	6040	101	5940	99	6210	104
Lead	50.0	48.0000	96	60.0000	57.9	96	56.4	94	53.8	90
Magnesium	5000	5210.0000	104	6000.0000	6060	101	5850	98	6270	104
Manganese	50.0	51.0000	102	60.0000	57.8	96	56.6	94	58.0	97
Nickel	50.0	51.9000	104	60.0000	61.4	102	60.3	100	62.7	104
Potassium	5000	5280.0000	106	6000.0000	6160	103	5940	99	6310	105
Selenium	50.0	51.3000	103	60.0000	60.6	101	59.2	99	60.8	101
Silver	50.0	48.6000	97	60.0000	58.7	98	58.2	97	59.0	98
Sodium	5000	5340.0000	107	6000.0000	6230	104	6140	102	6530	109
Thallium	50.0	49.1000	98	60.0000	59.7	100	56.4	94	56.6	94
Vanadium	50.0	52.5000	105	60.0000	60.0	100	59.1	98	60.4	101
Zinc	50.0	50.9000	102	60.0000	59.3	99	57.7	96	59.6	99

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1811827-12			R1811827-14		R1811827-16	
Date Analyzed:				04/01/24 09:29			04/01/24 10:27		04/01/24 11:28	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	59.5	99	58.0	97	61.4	102
Antimony				60.0000	60.0	100	59.8	100	59.9	100
Arsenic				60.0000	60.6	101	59.7	100	60.7	101
Barium				60.0000	61.4	102	61.6	103	61.5	102
Beryllium				60.0000	58.2	97	61.2	102	59.5	99
Cadmium				60.0000	60.4	101	58.5	98	60.3	100
Calcium				6000.0000	6450	108	6140	102	6300	105
Chromium				60.0000	59.1	98	58.4	97	60.4	101
Cobalt				60.0000	60.5	101	60.9	102	61.8	103
Copper				60.0000	60.7	101	60.3	100	61.8	103
Iron				6000.0000	5980	100	5930	99	6150	102
Lead				60.0000	55.9	93	57.2	95	59.2	99
Magnesium				6000.0000	6270	104	6050	101	6270	104
Manganese				60.0000	56.2	94	55.0	92	56.9	95
Nickel				60.0000	60.6	101	60.6	101	62.1	104
Potassium				6000.0000	6460	108	6100	102	6290	105
Selenium				60.0000	59.0	98	58.3	97	60.0	100
Silver				60.0000	57.6	96	57.1	95	57.8	96
Sodium				6000.0000	6480	108	6300	105	6500	108
Thallium				60.0000	58.7	98	56.1	94	62.8	105
Vanadium				60.0000	59.1	98	58.3	97	59.5	99
Zinc				60.0000	58.0	97	57.4	96	58.8	98

Acceptance Criteria:

ICV:	**95-105%**	**(Methods 200.7, 245.1)**
	90-110%	**(Methods 200.8, 6010, 6020, 7470, 7471, 7474)**
	85-115%	**(Method 1631)**
CCV:	**90-110%**	**(Methods 200.7, 245.1, 6010, 6020, 7474)**
	85-115%	**(Methods 200.8, 1631)**
	80-120%	**(Methods 7470, 7471)**

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1811827-18			R1811827-20		R1811827-22	
Date Analyzed:				04/01/24 12:25			04/01/24 13:31		04/01/24 13:54	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	58.3	97	57.6	96	58.2	97
Antimony				60.0000	61.6	103	61.7	103	60.6	101
Arsenic				60.0000	60.3	100	61.1	102	60.4	101
Barium				60.0000	63.4	106	63.4	106	61.9	103
Beryllium				60.0000	61.2	102	60.5	101	59.6	99
Cadmium				60.0000	60.5	101	61.1	102	61.3	102
Calcium				6000.0000	6330	106	6320	105	6200	103
Chromium				60.0000	58.9	98	59.9	100	59.5	99
Cobalt				60.0000	60.7	101	61.5	102	60.6	101
Copper				60.0000	60.6	101	62.3	104	61.1	102
Iron				6000.0000	5970	100	6110	102	5940	99
Lead				60.0000	60.1	100	61.3	102	58.0	97
Magnesium				6000.0000	6020	100	6030	100	6180	103
Manganese				60.0000	55.7	93	57.0	95	56.1	94
Nickel				60.0000	60.4	101	61.9	103	60.8	101
Potassium				6000.0000	6290	105	6210	104	6200	103
Selenium				60.0000	60.7	101	60.7	101	58.8	98
Silver				60.0000	57.9	96	58.6	98	59.4	99
Sodium				6000.0000	6140	102	6180	103	6400	107
Thallium				60.0000	55.8	93	63.8	106	60.5	101
Vanadium				60.0000	59.1	98	59.2	99	59.2	99
Zinc				60.0000	58.4	97	58.6	98	58.2	97

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1811827-24			R1811827-26		R1811827-28	
Date Analyzed:				04/01/24 14:57			04/01/24 16:18		04/01/24 17:20	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	57.1	95	58.9	98	56.1	94
Antimony				60.0000	59.0	98	64.2	107	61.2	102
Arsenic				60.0000	59.8	100	61.2	102	60.4	101
Barium				60.0000	60.4	101	64.0	107	65.9	110
Beryllium				60.0000	58.7	98	61.8	103	60.2	100
Cadmium				60.0000	60.2	100	62.5	104	61.9	103
Calcium				6000.0000	6450	108	6500	108	6400	107
Chromium				60.0000	59.0	98	59.5	99	58.9	98
Cobalt				60.0000	60.7	101	62.5	104	60.2	100
Copper				60.0000	60.7	101	62.3	104	60.8	101
Iron				6000.0000	5960	99	6070	101	5910	98
Lead				60.0000	56.4	94	62.7	104	64.4	107
Magnesium				6000.0000	6100	102	6370	106	6070	101
Manganese				60.0000	56.4	94	56.1	94	55.5	92
Nickel				60.0000	60.5	101	62.2	104	60.6	101
Potassium				6000.0000	6360	106	6470	108	6430	107
Selenium				60.0000	59.3	99	59.7	100	59.4	99
Silver				60.0000	58.0	97	60.6	101	59.6	99
Sodium				6000.0000	6260	104	6530	109	6270	104
Thallium				60.0000	59.6	99	65.5	109	56.6	94
Vanadium				60.0000	58.8	98	59.6	99	58.7	98
Zinc				60.0000	57.2	95	58.5	98	58.4	97

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1811827-30			R1811827-32		R1811827-34	
Date Analyzed:				04/01/24 17:49			04/01/24 19:18		04/01/24 20:14	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	58.5	98	57.3	96	57.6	96
Antimony				60.0000	61.2	102	62.4	104	62.1	104
Arsenic				60.0000	61.1	102	61.3	102	60.6	101
Barium				60.0000	63.2	105	65.6	109	62.7	104
Beryllium				60.0000	60.4	101	60.7	101	59.1	98
Cadmium				60.0000	61.5	102	61.2	102	60.3	100
Calcium				6000.0000	6490	108	6220	104	6030	100
Chromium				60.0000	59.8	100	60.0	100	59.1	98
Cobalt				60.0000	61.0	102	61.3	102	61.2	102
Copper				60.0000	61.6	103	61.6	103	61.2	102
Iron				6000.0000	6020	100	6020	100	6050	101
Lead				60.0000	57.1	95	57.6	96	64.6	108
Magnesium				6000.0000	6230	104	6090	102	5940	99
Manganese				60.0000	56.0	93	56.9	95	56.6	94
Nickel				60.0000	61.2	102	61.7	103	60.6	101
Potassium				6000.0000	6340	106	6140	102	6000	100
Selenium				60.0000	60.0	100	60.9	102	59.9	100
Silver				60.0000	59.0	98	58.2	97	58.1	97
Sodium				6000.0000	6430	107	6280	105	6160	103
Thallium				60.0000	58.5	98	60.5	101	61.4	102
Vanadium				60.0000	59.6	99	59.4	99	58.8	98
Zinc				60.0000	58.6	98	58.8	98	58.1	97

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1811827-36			R1811827-38		R1811827-40	
Date Analyzed:				04/01/24 21:10			04/01/24 22:07		04/01/24 22:21	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	58.1	97	56.9	95	56.7	94
Antimony				60.0000	64.8	108	61.6	103	61.2	102
Arsenic				60.0000	61.3	102	59.3	99	59.2	99
Barium				60.0000	65.2	109	61.3	102	61.4	102
Beryllium				60.0000	61.2	102	59.9	100	57.6	96
Cadmium				60.0000	63.1	105	60.4	101	60.7	101
Calcium				6000.0000	6030	100	5810	97	5850	98
Chromium				60.0000	60.1	100	57.8	96	58.4	97
Cobalt				60.0000	62.2	104	59.7	100	59.7	100
Copper				60.0000	62.0	103	60.7	101	60.0	100
Iron				6000.0000	6080	101	5830	97	5890	98
Lead				60.0000	59.0	98	60.9	102	65.1	108
Magnesium				6000.0000	6020	100	5880	98	5880	98
Manganese				60.0000	56.8	95	55.0	92	55.0	92
Nickel				60.0000	61.9	103	60.0	100	59.5	99
Potassium				6000.0000	6040	101	5790	96	5910	98
Selenium				60.0000	59.7	100	58.7	98	58.3	97
Silver				60.0000	60.2	100	57.7	96	57.9	96
Sodium				6000.0000	6270	104	6200	103	6100	102
Thallium				60.0000	61.0	102	63.0	105	60.3	100
Vanadium				60.0000	59.7	100	58.0	97	58.3	97
Zinc				60.0000	58.6	98	56.8	95	57.6	96

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1811843-1			R1811843-4			R1811843-6		R1811843-9	
Date Analyzed:	04/01/24 06:26			04/01/24 06:51			04/01/24 07:44		04/01/24 08:32	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	49.1000	98	60.0000	56.4	94	54.5	91	56.7	94
Antimony	50.0	48.9000	98	60.0000	57.0	95	59.6	99	60.2	100
Arsenic	50.0	49.1000	98	60.0000	55.3	92	56.4	94	56.5	94
Barium	50.0	48.9000	98	60.0000	58.6	98	58.6	98	58.3	97
Beryllium	50.0	49.0000	98	60.0000	55.3	92	58.1	97	58.9	98
Cadmium	50.0	48.8000	98	60.0000	56.7	94	59.1	98	59.2	99
Calcium	5000	4920.0000	98	6000.0000	5470	91	5470	91	5590	93
Chromium	50.0	48.1000	96	60.0000	55.7	93	56.1	94	56.9	95
Cobalt	50.0	49.3000	99	60.0000	58.6	98	57.2	95	56.8	95
Copper	50.0	49.7000	99	60.0000	58.9	98	57.9	96	56.9	95
Iron	5000	4980.0000	100	6000.0000	5800	97	5750	96	5640	94
Lead	50.0	45.8000	92	60.0000	55.4	92	56.3	94	54.7	91
Magnesium	5000	4900.0000	98	6000.0000	5660	94	5490	92	5780	96
Manganese	50.0	49.2000	98	60.0000	56.7	94	56.7	94	57.1	95
Nickel	50.0	50.0000	100	60.0000	58.4	97	58.6	98	57.1	95
Potassium	5000	4830.0000	97	6000.0000	5590	93	5500	92	5650	94
Selenium	50.0	49.6000	99	60.0000	53.9	90	56.8	95	57.0	95
Silver	50.0	47.7000	95	60.0000	58.2	97	59.4	99	58.8	98
Sodium	5000	4540.0000	91	6000.0000	5780	96	5570	93	5460	91
Thallium	50.0	48.3000	97	60.0000	59.6	99	60.1	100	58.3	97
Vanadium	50.0	48.7000	97	60.0000	54.2	90	54.9	92	57.4	96
Zinc	50.0	50.6000	101	60.0000	55.1	92	57.2	95	58.3	97

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1812758-1			R1812758-4			R1812758-6			
Date Analyzed :	04/03/24 04:52			04/03/24 05:23			04/03/24 06:21			
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Calcium	5000	5160.0000	103	6000.0000	6000	100	5570	93		

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1813317-1			R1813317-4			R1813317-6		R1813317-8	
Date Analyzed :	04/04/24 06:01			04/04/24 06:33			04/04/24 07:40		04/04/24 08:45	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	54.4000	109	60.0000	58.8	98	66.0	110	62.4	104
Antimony	50.0	53.2000	106	60.0000	60.4	101	62.0	103	62.8	105
Arsenic	50.0	52.9000	106	60.0000	60.5	101	58.1	97	58.7	98
Barium	50.0	52.9000	106	60.0000	60.6	101	63.4	106	60.9	102
Beryllium	50.0	52.4000	105	60.0000	61.4	102	55.9	93	61.8	103
Cadmium	50.0	52.9000	106	60.0000	59.6	99	59.3	99	60.5	101
Calcium	5000	5750.0000	115	6000.0000	6240	104	5890	98	6200	103
Chromium	50.0	54.5000	109	60.0000	60.2	100	60.6	101	57.5	96
Cobalt	50.0	55.0000	110	60.0000	62.4	104	58.5	98	61.3	102
Copper	50.0	52.3000	105	60.0000	60.2	100	56.2	94	57.9	96
Iron	5000	5440.0000	109	6000.0000	6270	104	6130	102	6220	104
Lead	50.0	53.6000	107	60.0000	56.9	95	55.0	92	55.5	92
Magnesium	5000	5450.0000	109	6000.0000	6440	107	5840	97	6150	102
Manganese	50.0	55.2000	110	60.0000	63.4	106	63.4	106	63.0	105
Nickel	50.0	53.4000	107	60.0000	60.6	101	59.5	99	60.8	101
Potassium	5000	5480.0000	110	6000.0000	6380	106	5780	96	6140	102
Selenium	50.0	49.4000	99	60.0000	63.2	105	64.1	107	60.2	100
Silver	50.0	52.8000	106	60.0000	60.7	101	58.4	97	60.3	100
Sodium	5000	5330.0000	107	6000.0000	6290	105	6300	105	6370	106
Thallium	50.0	52.2000	104	60.0000	60.0	100	55.6	93	59.8	100
Vanadium	50.0	52.2000	104	60.0000	58.9	98	59.9	100	60.5	101
Zinc	50.0	53.6000	107	60.0000	60.7	101	60.7	101	60.9	102

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1813317-11			R1813317-13		R1813317-15	
Date Analyzed:				04/04/24 09:38			04/04/24 10:40		04/04/24 11:24	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	61.2	102	59.8	100	58.2	97
Antimony				60.0000	63.1	105	61.8	103	59.3	99
Arsenic				60.0000	60.0	100	61.4	102	59.5	99
Barium				60.0000	62.3	104	61.8	103	61.2	102
Beryllium				60.0000	63.8	106	63.6	106	62.4	104
Cadmium				60.0000	60.4	101	59.7	100	58.2	97
Calcium				6000.0000	6450	108	5730	96	5620	94
Chromium				60.0000	60.0	100	55.2	92	53.9	90
Cobalt				60.0000	63.0	105	63.8	106	57.8	96
Copper				60.0000	59.9	100	60.0	100	54.8	91
Iron				6000.0000	6340	106	6360	106	5830	97
Lead				60.0000	57.2	95	57.5	96	55.8	93
Magnesium				6000.0000	6420	107	6590	110	6320	105
Manganese				60.0000	64.4	107	63.2	105	59.0	98
Nickel				60.0000	63.8	106	62.9	105	55.1	92
Potassium				6000.0000	6310	105	6050	101	5820	97
Selenium				60.0000	59.2	99	59.4	99	58.7	98
Silver				60.0000	60.2	100	60.1	100	57.4	96
Sodium				6000.0000	6410	107	6320	105	6080	101
Thallium				60.0000	57.3	96	60.3	100	57.3	96
Vanadium				60.0000	60.6	101	57.1	95	54.9	92
Zinc				60.0000	61.8	103	61.6	103	57.1	95

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1813317-17			R1813317-19		R1813317-21	
Date Analyzed:				04/04/24 12:23			04/04/24 13:45		04/04/24 14:44	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	65.9	110	65.1	108	66.2	110
Antimony				60.0000	64.6	108	62.0	103	63.5	106
Arsenic				60.0000	60.9	102	58.0	97	58.9	98
Barium				60.0000	64.1	107	62.8	105	65.4	109
Beryllium				60.0000	60.8	101	58.9	98	59.6	99
Cadmium				60.0000	61.8	103	59.4	99	60.8	101
Calcium				6000.0000	6420	107	5830	97	6860	114
Chromium				60.0000	57.2	95	54.5	91	54.9	92
Cobalt				60.0000	64.2	107	60.0	100	62.4	104
Copper				60.0000	59.6	99	55.2	92	57.4	96
Iron				6000.0000	6470	108	6260	104	6420	107
Lead				60.0000	55.9	93	56.0	93	55.5	92
Magnesium				6000.0000	6300	105	6210	104	6240	104
Manganese				60.0000	59.3	99	62.8	105	61.9	103
Nickel				60.0000	63.2	105	59.6	99	61.2	102
Potassium				6000.0000	6500	108	5920	99	6380	106
Selenium				60.0000	63.6	106	62.2	104	60.3	100
Silver				60.0000	61.0	102	58.3	97	59.7	100
Sodium				6000.0000	6490	108	6520	109	6600	110
Thallium				60.0000	60.0	100	56.0	93	58.5	98
Vanadium				60.0000	57.1	95	55.0	92	54.3	90
Zinc				60.0000	64.2	107	59.8	100	61.6	103

Acceptance Criteria:

ICV:	**95-105%**	**(Methods 200.7, 245.1)**
	90-110%	**(Methods 200.8, 6010, 6020, 7470, 7471, 7474)**
	85-115%	**(Method 1631)**
CCV:	**90-110%**	**(Methods 200.7, 245.1, 6010, 6020, 7474)**
	85-115%	**(Methods 200.8, 1631)**
	80-120%	**(Methods 7470, 7471)**

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1813317-23			R1813317-25			
Date Analyzed:				04/04/24 16:00			04/04/24 17:08			
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	59.9	100	61.7	103		
Antimony				60.0000	61.2	102	66.0	110		
Arsenic				60.0000	58.7	98	59.5	99		
Barium				60.0000	61.2	102	64.2	107		
Beryllium				60.0000	60.3	100	62.6	104		
Cadmium				60.0000	58.9	98	63.3	106		
Calcium				6000.0000	6000	100	6950	116		
Chromium				60.0000	53.5	89	62.1	104		
Cobalt				60.0000	59.8	100	66.0	110		
Copper				60.0000	56.8	95	61.7	103		
Iron				6000.0000	6220	104	6650	111		
Lead				60.0000	55.0	92	55.3	92		
Magnesium				6000.0000	6560	109	7310	122		
Manganese				60.0000	61.8	103	63.0	105		
Nickel				60.0000	58.1	97	64.9	108		
Potassium				6000.0000	5780	96	6780	113		
Selenium				60.0000	62.7	104	63.9	106		
Silver				60.0000	58.7	98	62.7	104		
Sodium				6000.0000	6180	103	7080	118		
Thallium				60.0000	53.9	90	62.0	103		
Vanadium				60.0000	54.1	90	62.0	103		
Zinc				60.0000	58.6	98	64.9	108		

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1813830-1			R1813830-4			R1813830-6		R1813830-9	
Date Analyzed :	04/05/24 08:16			04/05/24 09:01			04/05/24 10:07		04/05/24 11:06	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	52.1000	104	60.0000	64.0	107	64.1	107	65.7	110
Antimony	50.0	50.4000	101	60.0000	60.0	100	60.5	101	60.6	101
Arsenic	50.0	51.5000	103	60.0000	61.4	102	61.6	103	61.9	103
Barium	50.0	49.3000	99	60.0000	56.9	95	60.3	100	61.1	102
Beryllium	50.0	52.7000	105	60.0000	62.6	104	62.4	104	61.8	103
Cadmium	50.0	51.6000	103	60.0000	62.2	104	61.8	103	61.6	103
Calcium	5000	5230.0000	105	6000.0000	6490	108	6540	109	6500	108
Chromium	50.0	51.4000	103	60.0000	64.8	108	64.6	108	64.0	107
Cobalt	50.0	54.9000	110	60.0000	64.1	107	63.4	106	62.7	104
Copper	50.0	52.9000	106	60.0000	63.5	106	63.0	105	62.6	104
Iron	5000	5260.0000	105	6000.0000	6430	107	6390	106	6370	106
Lead	50.0	53.5000	107	60.0000	58.3	97	61.8	103	62.0	103
Magnesium	5000	5400.0000	108	6000.0000	6280	105	6530	109	6520	109
Manganese	50.0	52.2000	104	60.0000	64.2	107	64.5	108	65.2	109
Nickel	50.0	54.6000	109	60.0000	64.4	107	64.2	107	62.9	105
Potassium	5000	5100.0000	102	6000.0000	6530	109	6540	109	6530	109
Selenium	50.0	50.9000	102	60.0000	60.9	102	63.5	106	63.4	106
Silver	50.0	51.5000	103	60.0000	62.0	103	61.8	103	61.7	103
Sodium	5000	4580.0000	92	6000.0000	6390	106	6600	110	6560	109
Thallium	50.0	52.5000	105	60.0000	58.4	97	61.7	103	59.9	100
Vanadium	50.0	51.6000	103	60.0000	64.0	107	64.4	107	64.2	107
Zinc	50.0	53.5000	107	60.0000	62.5	104	61.9	103	62.2	104

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1814341-1			R1814341-4			R1814341-6		R1814341-8	
Date Analyzed :	04/07/24 13:50			04/07/24 14:21			04/07/24 15:30		04/07/24 16:30	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	49.5000	99	60.0000	64.0	107	59.9	100	64.9	108
Antimony	50.0	51.5000	103	60.0000	61.9	103	62.5	104	62.5	104
Arsenic	50.0	52.6000	105	60.0000	62.9	105	61.9	103	64.9	108
Barium	50.0	52.2000	104	60.0000	64.5	108	62.0	103	63.2	105
Beryllium	50.0	52.5000	105	60.0000	61.5	102	61.6	103	62.7	104
Cadmium	50.0	51.7000	103	60.0000	62.5	104	62.4	104	63.3	106
Calcium	5000	5140.0000	103	6000.0000	5980	100	6270	104	6150	102
Chromium	50.0	50.3000	101	60.0000	61.0	102	63.1	105	63.9	106
Cobalt	50.0	52.0000	104	60.0000	61.6	103	63.3	106	63.9	106
Copper	50.0	52.6000	105	60.0000	64.7	108	65.4	109	65.0	108
Iron	5000	5190.0000	104	6000.0000	6180	103	6390	106	6510	108
Lead	50.0	51.4000	103	60.0000	64.3	107	63.0	105	65.2	109
Magnesium	5000	4590.0000	92	6000.0000	6150	102	6140	102	6510	108
Nickel	50.0	52.4000	105	60.0000	61.5	102	63.6	106	64.1	107
Potassium	5000	4900.0000	98	6000.0000	6080	101	6160	103	6180	103
Selenium	50.0	52.5000	105	60.0000	60.3	100	64.9	108	65.8	110
Silver	50.0	51.2000	102	60.0000	62.3	104	62.8	105	62.8	105
Sodium	5000	4520.0000	90	6000.0000	5990	100	6060	101	6300	105
Thallium	50.0	45.8000	92	60.0000	56.6	94	57.4	96	58.2	97
Vanadium	50.0	50.6000	101	60.0000	58.8	98	63.0	105	63.2	105
Zinc	50.0	50.2000	100	60.0000	61.4	102	63.6	106	63.7	106

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1815274-1			R1815274-5			R1815274-7		R1815274-10	
Date Analyzed :	04/10/24 05:41			04/10/24 06:14			04/10/24 07:20		04/10/24 08:20	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	53.7000	107	60.0000	63.9	106	60.2	100	62.7	104
Antimony	50.0	52.7000	105	60.0000	61.2	102	60.2	100	60.2	100
Arsenic	50.0	51.7000	103	60.0000	61.0	102	59.4	99	60.2	100
Barium	50.0	51.2000	102	60.0000	59.4	99	56.9	95	59.4	99
Beryllium	50.0	52.6000	105	60.0000	60.7	101	58.3	97	59.3	99
Cadmium	50.0	51.5000	103	60.0000	59.4	99	58.4	97	57.6	96
Calcium	5000	5040.0000	101	6000.0000	6180	103	6100	102	6600	110
Chromium	50.0	55.2000	110	60.0000	60.5	101	60.2	100	62.5	104
Cobalt	50.0	54.6000	109	60.0000	62.4	104	59.5	99	61.1	102
Copper	50.0	52.7000	105	60.0000	61.5	102	58.7	98	59.5	99
Iron	5000	5250.0000	105	6000.0000	6300	105	6020	100	6200	103
Lead	50.0	52.4000	105	60.0000	59.3	99	58.6	98	57.0	95
Magnesium	5000	5340.0000	107	6000.0000	6140	102	5840	97	6450	108
Manganese	50.0	54.9000	110	60.0000	60.2	100	60.0	100	63.9	106
Nickel	50.0	53.4000	107	60.0000	62.1	104	59.2	99	60.1	100
Potassium	5000	4960.0000	99	6000.0000	6180	103	5950	99	6480	108
Selenium	50.0	53.6000	107	60.0000	60.0	100	58.8	98	63.8	106
Silver	50.0	51.3000	103	60.0000	59.8	100	58.8	98	58.3	97
Sodium	5000	5400.0000	108	6000.0000	6220	104	6020	100	6850	114
Thallium	50.0	51.1000	102	60.0000	58.3	97	57.8	96	55.9	93
Vanadium	50.0	49.3000	99	60.0000	61.3	102	60.4	101	63.4	106
Zinc	50.0	53.6000	107	60.0000	61.9	103	59.1	98	59.7	100

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1815274-12			R1815274-14		R1815274-16	
Date Analyzed:				04/10/24 08:39			04/10/24 10:08		04/10/24 11:06	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	60.8	101	60.5	101	60.8	101
Antimony				60.0000	58.9	98	60.8	101	59.9	100
Arsenic				60.0000	58.3	97	58.8	98	57.9	96
Barium				60.0000	57.1	95	59.0	98	58.0	97
Beryllium				60.0000	59.5	99	57.8	96	58.6	98
Cadmium				60.0000	56.6	94	58.5	98	56.7	94
Calcium				6000.0000	6560	109	6380	106	6160	103
Chromium				60.0000	62.4	104	60.8	101	60.3	100
Cobalt				60.0000	60.0	100	60.1	100	58.5	98
Copper				60.0000	59.4	99	58.9	98	57.7	96
Iron				6000.0000	6090	102	6030	100	5920	99
Lead				60.0000	56.0	93	57.4	96	57.3	96
Magnesium				6000.0000	6020	100	6110	102	5920	99
Manganese				60.0000	62.8	105	61.3	102	60.5	101
Nickel				60.0000	59.4	99	59.3	99	58.0	97
Potassium				6000.0000	6300	105	6140	102	5930	99
Selenium				60.0000	60.6	101	61.1	102	60.0	100
Silver				60.0000	57.1	95	58.6	98	57.3	96
Sodium				6000.0000	6210	104	6120	102	5950	99
Thallium				60.0000	55.7	93	57.5	96	56.8	95
Vanadium				60.0000	63.4	106	61.0	102	60.1	100
Zinc				60.0000	58.6	98	59.4	99	58.5	98

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1815274-18			R1815274-20		R1815274-22	
Date Analyzed:				04/10/24 11:59			04/10/24 13:25		04/10/24 14:10	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	59.3	99	57.9	96	60.0	100
Antimony				60.0000	59.8	100	59.9	100	61.5	102
Arsenic				60.0000	57.7	96	58.3	97	59.5	99
Barium				60.0000	57.2	95	56.2	94	58.0	97
Beryllium				60.0000	57.4	96	59.2	99	59.3	99
Cadmium				60.0000	56.9	95	57.5	96	57.9	96
Calcium				6000.0000	6100	102	5860	98	5970	100
Chromium				60.0000	58.5	98	59.7	100	59.1	98
Cobalt				60.0000	58.2	97	60.1	100	59.5	99
Copper				60.0000	57.6	96	59.1	98	59.3	99
Iron				6000.0000	5910	98	5980	100	5980	100
Lead				60.0000	55.9	93	56.6	94	58.5	98
Magnesium				6000.0000	5800	97	5750	96	5880	98
Manganese				60.0000	58.9	98	59.7	100	59.4	99
Nickel				60.0000	57.0	95	59.0	98	58.8	98
Potassium				6000.0000	6050	101	5760	96	5940	99
Selenium				60.0000	60.0	100	59.2	99	60.0	100
Silver				60.0000	56.9	95	57.6	96	58.1	97
Sodium				6000.0000	5850	98	5900	98	5950	99
Thallium				60.0000	55.7	93	56.6	94	58.2	97
Vanadium				60.0000	58.5	98	59.4	99	59.2	99
Zinc				60.0000	57.4	96	58.8	98	61.1	102

Acceptance Criteria:

ICV:	**95-105%**	**(Methods 200.7, 245.1)**
	90-110%	**(Methods 200.8, 6010, 6020, 7470, 7471, 7474)**
	85-115%	**(Method 1631)**
CCV:	**90-110%**	**(Methods 200.7, 245.1, 6010, 6020, 7474)**
	85-115%	**(Methods 200.8, 1631)**
	80-120%	**(Methods 7470, 7471)**

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1815274-24			R1815274-26		R1815274-28	
Date Analyzed:				04/10/24 15:05			04/10/24 16:56		04/10/24 17:53	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	61.8	103	61.4	102	59.5	99
Antimony				60.0000	61.8	103	60.1	100	63.2	105
Arsenic				60.0000	60.1	100	59.7	100	58.6	98
Barium				60.0000	58.7	98	58.3	97	60.5	101
Beryllium				60.0000	59.7	100	58.6	98	59.5	99
Cadmium				60.0000	58.5	98	57.6	96	58.2	97
Calcium				6000.0000	6250	104	6080	101	5830	97
Chromium				60.0000	61.4	102	60.8	101	59.8	100
Cobalt				60.0000	60.2	100	60.4	101	59.6	99
Copper				60.0000	60.0	100	60.2	100	58.9	98
Iron				6000.0000	6210	104	6120	102	6050	101
Lead				60.0000	58.4	97	57.0	95	57.4	96
Magnesium				6000.0000	6010	100	5850	98	5670	94
Manganese				60.0000	61.8	103	61.4	102	60.5	101
Nickel				60.0000	60.4	101	60.2	100	59.0	98
Potassium				6000.0000	6090	102	6000	100	5790	96
Selenium				60.0000	60.7	101	62.4	104	60.6	101
Silver				60.0000	58.8	98	57.7	96	58.3	97
Sodium				6000.0000	6130	102	5930	99	5690	95
Thallium				60.0000	57.8	96	56.2	94	57.0	95
Vanadium				60.0000	61.2	102	60.8	101	60.1	100
Zinc				60.0000	59.4	99	59.6	99	59.2	99

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1815274-30						
Date Analyzed :				04/10/24 18:33						
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	58.6	98				
Antimony				60.0000	63.7	106				
Arsenic				60.0000	58.7	98				
Barium				60.0000	59.5	99				
Beryllium				60.0000	59.3	99				
Cadmium				60.0000	57.4	96				
Calcium				6000.0000	5690	95				
Chromium				60.0000	60.4	101				
Cobalt				60.0000	61.4	102				
Copper				60.0000	61.2	102				
Iron				6000.0000	6140	102				
Lead				60.0000	57.7	96				
Magnesium				6000.0000	5610	94				
Manganese				60.0000	60.6	101				
Nickel				60.0000	61.1	102				
Potassium				6000.0000	5590	93				
Selenium				60.0000	59.7	100				
Silver				60.0000	58.0	97				
Sodium				6000.0000	5730	96				
Thallium				60.0000	56.9	95				
Vanadium				60.0000	61.0	102				
Zinc				60.0000	59.7	100				

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1816954-1									
Date Analyzed :	04/14/24 12:45									
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	53.0000	106							
Antimony	50.0	53.7000	107							
Arsenic	50.0	54.2000	108							
Barium	50.0	53.7000	107							
Beryllium	50.0	52.2000	104							
Cadmium	50.0	53.9000	108							
Calcium	5000	6030.0000	121							
Chromium	50.0	54.6000	109							
Cobalt	50.0	54.3000	109							
Copper	50.0	54.3000	109							
Iron	5000	5490.0000	110							
Lead	50.0	55.1000	110							
Magnesium	5000	5300.0000	106							
Manganese	50.0	52.4000	105							
Nickel	50.0	55.0000	110							
Potassium	5000	5240.0000	105							
Selenium	50.0	55.1000	110							
Silver	50.0	54.1000	108							
Sodium	5000	5490.0000	110							
Thallium	50.0	53.7000	107							
Vanadium	50.0	55.3000	111							
Zinc	50.0	55.1000	110							

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1816954-3			R1816954-6			R1816954-8		R1816954-11	
Date Analyzed:	04/14/24 12:59			04/14/24 13:28			04/14/24 14:28		04/14/24 15:30	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum	50.0	50.6000	101	60.0000	60.0	100	59.1	98	61.3	102
Antimony	50.0	50.6000	101	60.0000	56.7	94	59.6	99	59.4	99
Arsenic	50.0	50.4000	101	60.0000	59.7	100	58.8	98	57.7	96
Barium	50.0	49.7000	99	60.0000	58.4	97	59.4	99	58.6	98
Beryllium	50.0	49.1000	98	60.0000	58.3	97	58.9	98	58.3	97
Cadmium	50.0	49.6000	99	60.0000	57.9	96	58.0	97	60.0	100
Calcium	5000	5060.0000	101	6000.0000	6060	101	6550	109	6570	110
Chromium	50.0	50.2000	100	60.0000	58.7	98	60.0	100	62.0	103
Cobalt	50.0	48.3000	97	60.0000	60.1	100	58.9	98	58.7	98
Copper	50.0	50.2000	100	60.0000	61.1	102	60.3	100	59.3	99
Iron	5000	5080.0000	102	6000.0000	6190	103	6220	104	6140	102
Lead	50.0	48.4000	97	60.0000	57.0	95	57.0	95	55.5	92
Magnesium	5000	4990.0000	100	6000.0000	6410	107	6120	102	6110	102
Manganese	50.0	51.5000	103	60.0000	62.3	104	62.6	104	62.5	104
Nickel	50.0	50.5000	101	60.0000	60.8	101	63.0	105	58.6	98
Potassium	5000	5010.0000	100	6000.0000	6280	105	6350	106	6520	109
Selenium	50.0	47.8000	96	60.0000	58.7	98	56.9	95	56.7	94
Silver	50.0	50.0000	100	60.0000	59.6	99	60.9	102	59.6	99
Sodium	5000	4800.0000	96	6000.0000	6240	104	6160	103	6030	100
Thallium	50.0	47.6000	95	60.0000	56.8	95	57.8	96	55.6	93
Vanadium	50.0	48.5000	97	60.0000	58.9	98	60.6	101	62.6	104
Zinc	50.0	50.7000	101	60.0000	60.8	101	59.5	99	57.2	95

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Units**	: ug/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1816954-13						
Date Analyzed:				04/14/24 15:59						
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Aluminum				60.0000	59.9	100				
Antimony				60.0000	60.0	100				
Arsenic				60.0000	58.2	97				
Barium				60.0000	59.9	100				
Beryllium				60.0000	58.8	98				
Cadmium				60.0000	59.9	100				
Calcium				6000.0000	6040	101				
Chromium				60.0000	60.4	101				
Cobalt				60.0000	57.5	96				
Copper				60.0000	58.8	98				
Iron				6000.0000	6030	100				
Lead				60.0000	57.1	95				
Magnesium				6000.0000	5980	100				
Manganese				60.0000	60.6	101				
Nickel				60.0000	58.8	98				
Potassium				6000.0000	6400	107				
Selenium				60.0000	56.6	94				
Silver				60.0000	60.5	101				
Sodium				6000.0000	5870	98				
Thallium				60.0000	57.2	95				
Vanadium				60.0000	61.9	103				
Zinc				60.0000	57.1	95				

Acceptance Criteria:

ICV:	**95-105%**	**(Methods 200.7, 245.1)**
	90-110%	**(Methods 200.8, 6010, 6020, 7470, 7471, 7474)**
	85-115%	**(Method 1631)**
CCV:	**90-110%**	**(Methods 200.7, 245.1, 6010, 6020, 7474)**
	85-115%	**(Methods 200.8, 1631)**
	80-120%	**(Methods 7470, 7471)**

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1811827-2		R1811827-6		R1811827-8		R1811827-11			
Date Analyzed:	04/01/24 05:55		04/01/24 06:32		04/01/24 07:35		04/01/24 08:36			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U		
Antimony	0.429	U	0.429	U	0.429	U	0.429	U		
Arsenic	0.165	U	0.179	J	0.203	J	0.165	U		
Barium	0.173	U	0.173	U	0.173	U	0.173	U		
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U		
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U		
Calcium	39.4	U	39.4	U	39.4	U	39.4	U		
Chromium	0.178	U	0.178	U	0.178	U	0.178	U		
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U		
Copper	0.384	U	0.384	U	0.384	U	0.384	U		
Iron	19.1	U	19.1	U	19.1	U	19.1	U		
Lead	0.343	U	0.343	U	0.343	U	0.343	U		
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U		
Manganese	0.440	U	0.440	U	0.440	U	0.440	U		
Nickel	0.556	U	0.556	U	0.556	U	0.556	U		
Potassium	30.9	U	30.9	U	30.9	U	30.9	U		
Selenium	1.73	U	1.73	U	1.73	U	1.73	U		
Silver	0.163	U	0.163	U	0.163	U	0.163	U		
Sodium	29.3	U	29.3	U	29.3	U	67.3	J		
Thallium	0.555	J	0.462	J	0.469	J	0.443	J		
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U		
Zinc	3.41	U	3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1811827-3		R1811827-13		R1811827-15		R1811827-17			
Date Analyzed :	04/01/24 06:07		04/01/24 09:34		04/01/24 10:32		04/01/24 11:33			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U		
Antimony	0.429	U	0.429	U	0.429	U	0.429	U		
Arsenic	0.165	U	0.165	U	0.165	U	0.165	U		
Barium	0.173	U	0.173	U	0.173	U	0.173	U		
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U		
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U		
Calcium	39.4	U	39.4	U	39.4	U	39.4	U		
Chromium	0.178	U	0.178	U	0.178	U	0.178	U		
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U		
Copper	0.384	U	0.384	U	0.384	U	0.384	U		
Iron	19.1	U	19.1	U	19.1	U	23.1	J		
Lead	0.343	U	0.343	U	0.343	U	0.343	U		
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U		
Manganese	0.440	U	0.440	U	0.440	U	0.440	U		
Nickel	0.556	U	0.556	U	0.556	U	0.556	U		
Potassium	30.9	U	30.9	U	30.9	U	30.9	U		
Selenium	1.73	U	1.73	U	1.73	U	1.73	U		
Silver	0.163	U	0.163	U	0.163	U	0.163	U		
Sodium	29.3	U	33.0	J	52.1	J	47.8	J		
Thallium	0.143	U	0.434	J	0.442	J	0.538	J		
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U		
Zinc	3.41	U	3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1811827-19		R1811827-21		R1811827-23			
Date Analyzed:			04/01/24 12:29		04/01/24 13:36		04/01/24 13:59			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.429	U	0.429	U		
Arsenic			0.165	U	0.165	U	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			19.1	U	23.6	J	19.1	U		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	29.3	U		
Thallium			0.560	J	0.488	J	0.569	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1811827-25		R1811827-27		R1811827-29			
Date Analyzed:			04/01/24 15:01		04/01/24 16:23		04/01/24 17:25			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.879	J	0.429	U		
Arsenic			0.165	U	0.165	U	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			19.1	U	19.1	U	19.1	U		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	29.3	U		
Thallium			0.572	J	0.692	J	0.651	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1811827-31		R1811827-33		R1811827-35			
Date Analyzed:			04/01/24 17:54		04/01/24 19:23		04/01/24 20:19			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.429	U	0.429	U		
Arsenic			0.165	U	0.165	U	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			19.1	U	19.1	U	24.4	J		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	29.3	U		
Thallium			0.668	J	0.699	J	0.607	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1811827-37		R1811827-39		R1811827-41			
Date Analyzed:			04/01/24 21:15		04/01/24 22:11		04/01/24 22:26			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.429	U	0.429	U		
Arsenic			0.165	U	0.165	U	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			25.8	J	19.1	U	19.1	U		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	29.3	U		
Thallium			0.692	J	0.620	J	0.666	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1811843-2		R1811843-5		R1811843-7		R1811843-10		WG1902788-1	
Date Analyzed :	04/01/24 06:30		04/01/24 06:56		04/01/24 07:49		04/01/24 08:36		04/01/24 07:55	
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	mg/l	Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U	0.00327	U
Antimony	0.429	U	0.429	U	0.429	U	0.429	U	0.00042	U
Arsenic	0.165	U	0.165	U	0.165	U	0.165	U	0.00016	U
Barium	0.173	U	0.173	U	0.173	U	0.173	U	0.00017	U
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U	0.00010	U
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U	0.00005	U
Calcium	39.4	U	39.4	U	39.4	U	39.4	U	0.0394	U
Chromium	0.178	U	0.178	U	0.178	U	0.178	U	0.00017	U
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Copper	0.384	U	0.384	U	0.384	U	0.384	U	0.00038	U
Iron	19.1	U	19.1	U	19.1	U	19.1	U	0.0191	U
Lead	0.343	U	0.343	U	0.343	U	0.343	U	0.00034	U
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U	0.0242	U
Manganese	0.440	U	0.440	U	0.440	U	0.440	U	0.00137	
Nickel	0.556	U	0.556	U	0.556	U	0.556	U	0.00055	U
Potassium	30.9	U	30.9	U	30.9	U	30.9	U	0.0309	U
Selenium	1.73	U	1.73	U	1.73	U	1.73	U	0.00173	U
Silver	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Sodium	29.3	U	29.3	U	29.3	U	29.3	U	0.0293	U
Thallium	0.435	J	0.409	J	0.427	J	0.428	J	0.00014	U
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U	0.00157	U
Zinc	3.41	U	3.41	U	3.41	U	3.41	U	0.00341	U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2		

		Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID	:	R1812758-2		R1812758-5		R1812758-7					
Date Analyzed	:	04/03/24 04:57		04/03/24 05:27		04/03/24 06:26					
Parameter		ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Calcium		39.4	U	39.4	U	39.4	U				

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1813317-2		R1813317-5		R1813317-7		R1813317-9		WG1903862-1	
Date Analyzed :	04/04/24 06:06		04/04/24 06:38		04/04/24 07:45		04/04/24 08:50		04/04/24 15:13	
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	mg/l	Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U		
Antimony	0.429	U	0.429	U	0.429	U	0.429	U		
Arsenic	0.165	U	0.165	U	0.165	U	0.165	U		
Barium	0.173	U	0.173	U	0.173	U	0.173	U		
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U		
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U		
Calcium	39.4	U	39.4	U	39.4	U	39.4	U		
Chromium	0.178	U	0.178	U	0.178	U	0.178	U		
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U		
Copper	0.384	U	0.384	U	0.384	U	0.384	U		
Iron	19.1	U	19.1	U	19.1	U	19.1	U		
Lead	0.343	U	0.343	U	0.343	U	0.343	U		
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U		
Manganese	0.440	U	0.440	U	0.440	U	0.440	U	0.00044	U
Nickel	0.556	U	0.556	U	0.556	U	0.556	U		
Potassium	30.9	U	30.9	U	30.9	U	30.9	U		
Selenium	1.73	U	1.73	U	1.73	U	1.73	U		
Silver	0.163	U	0.163	U	0.163	U	0.163	U		
Sodium	29.3	U	29.3	U	29.3	U	29.3	U		
Thallium	0.328	J	0.340	J	0.345	J	0.412	J		
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U		
Zinc	3.41	U	3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1813317-12		R1813317-14		R1813317-16			
Date Analyzed:			04/04/24 09:43		04/04/24 10:44		04/04/24 11:28			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.429	U	0.429	U		
Arsenic			0.165	U	0.165	U	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			19.1	U	19.1	U	19.1	U		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	29.3	U		
Thallium			0.418	J	0.398	J	0.344	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1813317-18		R1813317-20		R1813317-22			
Date Analyzed:			04/04/24 12:28		04/04/24 13:50		04/04/24 14:48			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.429	U	0.429	U		
Arsenic			0.165	U	0.165	U	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			19.1	U	19.1	U	19.1	U		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	43.5	J		
Thallium			0.391	J	0.391	J	0.374	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1813317-24		R1813317-26					
Date Analyzed :			04/04/24 16:04		04/04/24 17:13					
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U				
Antimony			0.429	U	0.429	U				
Arsenic			0.165	U	0.165	U				
Barium			0.173	U	0.173	U				
Beryllium			0.107	U	0.107	U				
Cadmium			0.0599	U	0.0599	U				
Calcium			39.4	U	39.4	U				
Chromium			0.178	U	0.178	U				
Cobalt			0.163	U	0.163	U				
Copper			0.775	J	0.986	J				
Iron			19.1	U	19.1	U				
Lead			0.343	U	0.343	U				
Magnesium			24.2	U	24.2	U				
Manganese			0.440	U	0.440	U				
Nickel			1.26	J	1.94	J				
Potassium			30.9	U	30.9	U				
Selenium			1.73	U	1.73	U				
Silver			0.163	U	0.163	U				
Sodium			29.3	U	29.3	U				
Thallium			0.410	J	0.436	J				
Vanadium			1.57	U	1.57	U				
Zinc			3.41	U	3.41	U				

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1813830-2		R1813830-5		R1813830-7		R1813830-10		WG1903435-1	
Date Analyzed :	04/05/24 08:21		04/05/24 09:06		04/05/24 10:12		04/05/24 11:11		04/05/24 09:21	
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	mg/l	Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U	0.00327	U
Antimony	0.429	U	0.429	U	0.429	U	0.429	U	0.00042	U
Arsenic	0.165	U	0.168	J	0.165	U	0.165	U	0.00016	U
Barium	0.173	U	0.173	U	0.173	U	0.173	U	0.00017	U
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U	0.00010	U
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U	0.00005	U
Calcium	39.4	U	39.4	U	39.4	U	39.4	U	0.0394	U
Chromium	0.178	U	0.178	U	0.178	U	0.178	U	0.00017	U
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Copper	0.384	U	0.384	U	0.384	U	0.384	U	0.00038	U
Iron	19.1	U	19.1	U	19.1	U	19.1	U	0.0191	U
Lead	0.343	U	0.343	U	0.343	U	0.343	U	0.00034	U
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U	0.0242	U
Manganese	0.440	U	0.440	U	0.440	U	0.440	U	0.00044	U
Nickel	0.556	U	0.556	U	0.556	U	0.556	U	0.00055	U
Potassium	30.9	U	30.9	U	30.9	U	30.9	U	0.0309	U
Selenium	1.73	U	1.73	U	1.73	U	1.73	U	0.00173	U
Silver	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Sodium	29.3	U	29.3	U	32.0	J	39.5	J	0.0293	U
Thallium	0.202	J	0.233	J	0.209	J	0.195	J	0.00014	U
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U	0.00157	U
Zinc	3.41	U	3.41	U	3.41	U	3.41	U	0.00341	U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1814341-2		R1814341-5		R1814341-7		R1814341-9		WG1903862-1	
Date Analyzed :	04/07/24 13:54		04/07/24 14:25		04/07/24 15:35		04/07/24 16:35		04/07/24 15:46	
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	mg/l	Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U	0.00327	U
Antimony	0.429	U	0.429	U	0.429	U	0.429	U	0.00042	U
Arsenic	0.165	U	0.314	J	0.165	U	0.165	U	0.00016	U
Barium	0.173	U	0.173	U	0.173	U	0.173	U	0.00017	U
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U	0.00010	U
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U	0.00005	U
Calcium	39.4	U	39.4	U	39.4	U	39.4	U	0.0394	U
Chromium	0.178	U	0.178	U	0.178	U	0.178	U	0.00088	J
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Copper	0.384	U	0.384	U	0.384	U	0.384	U	0.00038	U
Iron	19.1	U	19.1	U	19.1	U	19.1	U	0.0191	U
Lead	0.343	U	0.343	U	0.343	U	0.343	U	0.00034	U
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U	0.0242	U
Nickel	0.556	U	0.556	U	0.556	U	0.556	U	0.00055	U
Potassium	30.9	U	30.9	U	30.9	U	30.9	U	0.0309	U
Selenium	1.73	U	1.73	U	1.73	U	1.73	U	0.00173	U
Silver	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Sodium	29.3	U	29.3	U	29.3	U	29.3	U	0.0293	U
Thallium	0.467	J	0.446	J	0.455	J	0.493	J	0.00014	U
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U	0.00157	U
Zinc	3.41	U	3.41	U	3.41	U	3.41	U	0.00341	U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1815274-2		R1815274-6		R1815274-8		R1815274-11		WG1906871-1	
Date Analyzed :	04/10/24 05:45		04/10/24 06:19		04/10/24 07:25		04/10/24 08:25		04/10/24 17:10	
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	mg/l	Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U	0.00327	U
Antimony	0.429	U	0.429	U	0.429	U	0.429	U	0.00042	U
Arsenic	0.165	U	0.200	J	0.165	U	0.165	U	0.00033	J
Barium	0.173	U	0.204	J	0.173	U	0.173	U	0.00017	U
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U	0.00010	U
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U	0.00005	U
Calcium	39.4	U	39.4	U	39.4	U	39.4	U	0.0394	U
Chromium	0.178	U	0.178	U	0.178	U	0.178	U	0.00017	U
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Copper	0.384	U	0.384	U	0.384	U	0.384	U	0.00038	U
Iron	19.1	U	21.1	J	19.1	U	19.1	U	0.0191	U
Lead	0.343	U	0.349	J	0.343	U	0.343	U	0.00034	U
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U	0.0242	U
Manganese	0.440	U	0.440	U	0.440	U	0.710	J	0.00044	U
Nickel	0.556	U	0.556	U	0.556	U	0.556	U	0.00055	U
Potassium	30.9	U	30.9	U	30.9	U	30.9	U	0.0309	U
Selenium	1.73	U	1.73	U	1.73	U	1.73	U	0.00173	U
Silver	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Sodium	29.3	U	29.3	U	29.3	U	345.		0.0293	U
Thallium	0.546	J	0.451	J	0.423	J	0.403	J	0.00014	U
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U	0.00157	U
Zinc	3.41	U	3.41	U	3.41	U	3.41	U	0.00341	U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1815274-3		R1815274-13		R1815274-15		R1815274-17			
Date Analyzed :	04/10/24 05:53		04/10/24 09:12		04/10/24 10:13		04/10/24 11:11			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U		
Antimony	0.429	U	0.429	U	0.429	U	0.429	U		
Arsenic	0.165	U	0.165	U	0.165	U	0.165	U		
Barium	0.173	U	0.173	U	0.173	U	0.173	U		
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U		
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U		
Calcium	39.4	U	39.4	U	39.4	U	39.4	U		
Chromium	0.178	U	0.178	U	0.178	U	0.178	U		
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U		
Copper	0.384	U	0.384	U	0.384	U	0.384	U		
Iron	19.1	U	19.1	U	19.1	U	19.1	U		
Lead	0.343	U	0.343	U	0.343	U	0.343	U		
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U		
Manganese	0.440	U	0.440	U	0.440	U	0.440	U		
Nickel	0.556	U	0.556	U	0.556	U	0.556	U		
Potassium	30.9	U	30.9	U	30.9	U	30.9	U		
Selenium	1.73	U	1.73	U	1.73	U	1.73	U		
Silver	0.163	U	0.163	U	0.163	U	0.163	U		
Sodium	29.3	U	69.3	J	29.3	U	29.3	U		
Thallium	0.143	U	0.143	U	0.521	J	0.527	J		
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U		
Zinc	3.41	U	3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1815274-19		R1815274-21		R1815274-23			
Date Analyzed:			04/10/24 12:03		04/10/24 13:29		04/10/24 14:15			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.429	U	0.429	U		
Arsenic			0.165	U	0.165	U	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			19.1	U	19.1	U	19.1	U		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	29.3	U		
Thallium			0.503	J	0.527	J	0.533	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1815274-25		R1815274-27		R1815274-29			
Date Analyzed:			04/10/24 15:09		04/10/24 17:01		04/10/24 17:58			
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U	3.27	U	3.27	U		
Antimony			0.429	U	0.429	U	0.429	U		
Arsenic			0.165	U	0.331	J	0.165	U		
Barium			0.173	U	0.173	U	0.173	U		
Beryllium			0.107	U	0.107	U	0.107	U		
Cadmium			0.0599	U	0.0599	U	0.0599	U		
Calcium			39.4	U	39.4	U	39.4	U		
Chromium			0.178	U	0.178	U	0.178	U		
Cobalt			0.163	U	0.163	U	0.163	U		
Copper			0.384	U	0.384	U	0.384	U		
Iron			19.1	U	19.1	U	19.1	U		
Lead			0.343	U	0.343	U	0.343	U		
Magnesium			24.2	U	24.2	U	24.2	U		
Manganese			0.440	U	0.440	U	0.440	U		
Nickel			0.556	U	0.556	U	0.556	U		
Potassium			30.9	U	30.9	U	30.9	U		
Selenium			1.73	U	1.73	U	1.73	U		
Silver			0.163	U	0.163	U	0.163	U		
Sodium			29.3	U	29.3	U	29.3	U		
Thallium			0.510	J	0.465	J	0.494	J		
Vanadium			1.57	U	1.57	U	1.57	U		
Zinc			3.41	U	3.41	U	3.41	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1815274-31							
Date Analyzed :			04/10/24 18:38							
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum			3.27	U						
Antimony			0.584	J						
Arsenic			0.165	U						
Barium			0.173	U						
Beryllium			0.107	U						
Cadmium			0.0599	U						
Calcium			39.4	U						
Chromium			0.178	U						
Cobalt			0.163	U						
Copper			0.384	U						
Iron			19.1	U						
Lead			0.343	U						
Magnesium			24.2	U						
Manganese			0.440	U						
Nickel			0.556	U						
Potassium			30.9	U						
Selenium			1.73	U						
Silver			0.163	U						
Sodium			29.3	U						
Thallium			0.477	J						
Vanadium			1.57	U						
Zinc			3.41	U						

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :	R1816954-2		R1816954-7		R1816954-9		R1816954-12		WG1906880-1	
Date Analyzed :	04/14/24 12:49		04/14/24 13:33		04/14/24 14:33		04/14/24 15:35		04/14/24 14:39	
Parameter	ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q	mg/l	Q
Aluminum	3.27	U	3.27	U	3.27	U	3.27	U	0.00327	U
Antimony	0.429	U	0.429	U	0.429	U	0.429	U	0.00042	U
Arsenic	0.165	U	0.165	U	0.165	U	0.165	U	0.00016	U
Barium	0.173	U	0.173	U	0.173	U	0.173	U	0.00017	U
Beryllium	0.107	U	0.107	U	0.107	U	0.107	U	0.00010	U
Cadmium	0.0599	U	0.0599	U	0.0599	U	0.0599	U	0.00005	U
Calcium	39.4	U	51.3	J	39.4	U	39.4	U	0.0394	U
Chromium	0.178	U	0.178	U	0.178	U	0.178	U	0.00017	U
Cobalt	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Copper	0.384	U	0.384	U	0.384	U	0.384	U	0.00038	U
Iron	19.1	U	19.1	U	19.1	U	19.1	U	0.0191	U
Lead	0.343	U	0.343	U	0.343	U	0.343	U	0.00034	U
Magnesium	24.2	U	24.2	U	24.2	U	24.2	U	0.0242	U
Manganese	0.440	U	0.440	U	0.440	U	0.440	U	0.00044	U
Nickel	0.556	U	0.556	U	0.556	U	0.556	U	0.00055	U
Potassium	30.9	U	30.9	U	30.9	U	30.9	U	0.0309	U
Selenium	1.73	U	1.73	U	1.73	U	1.73	U	0.00173	U
Silver	0.163	U	0.163	U	0.163	U	0.163	U	0.00016	U
Sodium	29.3	U	29.3	U	29.3	U	29.3	U	0.0293	U
Thallium	0.302	J	0.260	J	0.247	J	0.293	J	0.00014	U
Vanadium	1.57	U	1.57	U	1.57	U	1.57	U	0.00157	U
Zinc	3.41	U	3.41	U	3.41	U	3.41	U	0.00341	U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ		

		Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID	:	R1816954-4		R1816954-14							
Date Analyzed	:	04/14/24 13:04		04/14/24 16:04							
Parameter		ug/l	Q	ug/l	Q	ug/l	Q	ug/l	Q		Q
Aluminum		3.27	U	3.27	U						
Antimony		0.429	U	0.429	U						
Arsenic		0.165	U	0.165	U						
Barium		0.173	U	0.173	U						
Beryllium		0.107	U	0.107	U						
Cadmium		0.0599	U	0.0599	U						
Calcium		39.4	U	39.4	U						
Chromium		0.178	U	0.178	U						
Cobalt		0.163	U	0.163	U						
Copper		0.384	U	0.384	U						
Iron		19.1	U	19.1	U						
Lead		0.343	U	0.343	U						
Magnesium		24.2	U	24.2	U						
Manganese		0.440	U	0.440	U						
Nickel		0.556	U	0.556	U						
Potassium		30.9	U	30.9	U						
Selenium		1.73	U	1.73	U						
Silver		0.163	U	0.163	U						
Sodium		29.3	U	29.3	U						
Thallium		0.303	J	0.312	J						
Vanadium		1.57	U	1.57	U						
Zinc		3.41	U	3.41	U						

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Concentration Units**	: ug/l

	True		Initial Found				Final Found			
Lab ID :			R1811827-4							
Analysis Date :			04/01/24 06:13							
Analyte	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	100000		110000	110						
Antimony			0.197							
Arsenic			0.550							
Barium			1.28							
Beryllium			0.0303							
Cadmium			0.507							
Calcium	300000		261000	87						
Chromium			1.47							
Cobalt			2.08							
Copper			1.16							
Iron	250000		276000	110						
Lead			1.40							
Magnesium	100000		110000	110						
Manganese			4.20							
Nickel			2.66							
Potassium	100000		92900	93						
Selenium			3.07							
Silver			0.0308							
Sodium	250000		244000	98						
Thallium			0.0876							
Vanadium			-0.0128							
Zinc			2.18							

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Concentration Units**	: ug/l

	True		Initial Found				Final Found			
Lab ID :			R1811843-3							
Analysis Date :			04/01/24 06:38							
Analyte	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	100000		90700	91						
Antimony			0.181							
Arsenic			0.388							
Barium			1.32							
Beryllium			0.0366							
Cadmium			0.555							
Calcium	300000		278000	93						
Chromium			1.52							
Cobalt			2.03							
Copper			1.06							
Iron	250000		258000	103						
Lead			1.49							
Magnesium	100000		95400	95						
Manganese			4.37							
Nickel			2.63							
Potassium	100000		100000	100						
Selenium			2.97							
Silver			0.0290							
Sodium	250000		244000	98						
Thallium			0.136							
Vanadium			0.0692							
Zinc			1.82							

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Concentration Units**	: ug/l

		Initial Found				Final Found			
Lab ID :		R1812758-3							
Analysis Date :		04/03/24 05:09							
Analyte	**True Sol. A**	**Sol. AB**	**Sol. A**	**%R**	**Sol. AB**	**%R**	**Sol. A**	**%R**	**Sol. AB**	**%R**
Calcium	300000		290000	97						

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Concentration Units**	: ug/l

	True		Initial Found				Final Found			
Lab ID :			R1813317-3							
Analysis Date :			04/04/24 06:19							
Analyte	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	100000		76400	76						
Antimony			0.209							
Arsenic			0.651							
Barium			1.56							
Beryllium			0.0453							
Cadmium			0.267							
Calcium	300000		302000	101						
Chromium			0.697							
Cobalt			2.34							
Copper			1.24							
Iron	250000		239000	96						
Lead			1.55							
Magnesium	100000		105000	105						
Manganese			4.56							
Nickel			3.09							
Potassium	100000		101000	101						
Selenium			3.86							
Silver			0.0314							
Sodium	250000		200000	80						
Thallium			0.0759							
Vanadium			0.0473							
Zinc			3.09							

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Concentration Units**	: ug/l

	True		Initial Found				Final Found			
Lab ID :			R1813830-3							
Analysis Date :			04/05/24 08:47							
Analyte	**Sol. A**	**Sol. AB**	**Sol. A**	**%R**	**Sol. AB**	**%R**	**Sol. A**	**%R**	**Sol. AB**	**%R**
Aluminum	100000		121000	121						
Antimony			0.282							
Arsenic			0.541							
Barium			1.23							
Beryllium			0.0304							
Cadmium			0.513							
Calcium	300000		282000	94						
Chromium			1.50							
Cobalt			2.05							
Copper			1.04							
Iron	250000		342000	137						
Lead			1.34							
Magnesium	100000		122000	122						
Manganese			4.52							
Nickel			2.80							
Potassium	100000		103000	103						
Selenium			3.48							
Silver			0.0404							
Sodium	250000		253000	101						
Thallium			0.483							
Vanadium			0.136							
Zinc			2.00							

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Concentration Units**	: ug/l

	True		Initial Found				Final Found			
Lab ID :			R1814341-3							
Analysis Date :			04/07/24 14:03							
Analyte	**Sol. A**	**Sol. AB**	**Sol. A**	**%R**	**Sol. AB**	**%R**	**Sol. A**	**%R**	**Sol. AB**	**%R**
Aluminum	100000		99500	100						
Antimony			0.161							
Arsenic			0.394							
Barium			1.13							
Beryllium			0.0339							
Cadmium			0.621							
Calcium	300000		295000	98						
Chromium			1.43							
Cobalt			1.90							
Copper			0.701							
Iron	250000		240000	96						
Lead			1.45							
Magnesium	100000		102000	102						
Nickel			3.04							
Potassium	100000		102000	102						
Selenium			2.92							
Silver			0.0278							
Sodium	250000		264000	106						
Thallium			0.124							
Vanadium			0.0809							
Zinc			-1.01							

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Concentration Units**	: ug/l

	True		Initial Found				Final Found			
Lab ID :			R1815274-4							
Analysis Date :			04/10/24 06:00							
Analyte	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	100000		89800	90						
Antimony			0.226							
Arsenic			0.313							
Barium			1.29							
Beryllium			0.0210							
Cadmium			0.481							
Calcium	300000		272000	91						
Chromium			1.45							
Cobalt			1.95							
Copper			1.04							
Iron	250000		257000	103						
Lead			1.49							
Magnesium	100000		94800	95						
Manganese			4.53							
Nickel			2.65							
Potassium	100000		96700	97						
Selenium			3.46							
Silver			0.0328							
Sodium	250000		229000	92						
Thallium			0.0861							
Vanadium			-0.00235							
Zinc			2.69							

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 4a
Interference Check Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Concentration Units**	: ug/l

	True		Initial Found				Final Found			
Lab ID :			R1816954-5							
Analysis Date :			04/14/24 13:10							
Analyte	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	100000		83000	83						
Antimony			0.199							
Arsenic			0.378							
Barium			1.41							
Beryllium			0.0493							
Cadmium			0.275							
Calcium	300000		305000	102						
Chromium			1.35							
Cobalt			2.01							
Copper			0.826							
Iron	250000		230000	92						
Lead			1.53							
Magnesium	100000		95700	96						
Manganese			4.56							
Nickel			2.37							
Potassium	100000		102000	102						
Selenium			5.01							
Silver			0.0255							
Sodium	250000		228000	91						
Thallium			0.0884							
Vanadium			0.104							
Zinc			2.61							

Acceptance Criteria: Methods 200.7, 200.8, 6010, 6020

ICSA: 80-120%

ICSAB: 80-120%

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1902788-7	**MS Analysis Date**	: 04/01/24 20:24
Matrix Spike Dup	: WG1902788-8	**MSD Analysis Date**	: 04/01/24 20:28

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Aluminum, Total	0.0109	2	1.80	89	2	1.83	91	2	75-125	20
Antimony, Total	ND	0.5	0.3793	76	0.5	0.4300	86	13	75-125	20
Arsenic, Total	ND	0.12	0.1179	98	0.12	0.1187	99	1	75-125	20
Beryllium, Total	ND	0.05	0.05015	100	0.05	0.04892	98	2	75-125	20
Cadmium, Total	ND	0.053	0.05208	98	0.053	0.05141	97	1	75-125	20
Calcium, Total	3.62	10	12.8	92	10	12.8	92	0	75-125	20
Chromium, Total	0.00047J	0.2	0.1892	95	0.2	0.1885	94	0	75-125	20
Cobalt, Total	ND	0.5	0.4867	97	0.5	0.4845	97	0	75-125	20
Copper, Total	ND	0.25	0.2449	98	0.25	0.2483	99	1	75-125	20
Iron, Total	ND	1	1.10	110	1	1.06	106	4	75-125	20
Lead, Total	ND	0.53	0.5294	100	0.53	0.5282	100	0	75-125	20
Magnesium, Total	0.811	10	10.5	97	10	10.3	95	2	75-125	20
Manganese, Total	0.0027B	0.5	0.4602	92	0.5	0.4556	90	1	75-125	20
Nickel, Total	ND	0.5	0.4864	97	0.5	0.4896	98	1	75-125	20
Potassium, Total	1.30	10	11.0	97	10	11.1	98	1	75-125	20
Selenium, Total	ND	0.12	0.115	96	0.12	0.117	98	2	75-125	20
Silver, Total	ND	0.05	0.04653	93	0.05	0.04614	92	1	75-125	20
Sodium, Total	3.59	10	11.3	77	10	11.1	75	2	75-125	20
Thallium, Total	0.00019J	0.12	0.1108	92	0.12	0.1098	92	1	75-125	20
Vanadium, Total	ND	0.5	0.4642	93	0.5	0.4700	94	1	75-125	20
Zinc, Total	ND	0.5	0.4676	94	0.5	0.4652	93	1	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1902788-7	**MS Analysis Date**	: 04/01/24 20:33
Matrix Spike Dup	: WG1902788-8	**MSD Analysis Date**	: 04/01/24 20:38

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Barium, Total	0.01124	2	2.056	102	2	2.013	100	2	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: L2415362-01		
Matrix Spike	: WG1902788-3	**MS Analysis Date**	: 04/01/24 08:04
Matrix Spike Dup	: WG1902788-4	**MSD Analysis Date**	: 04/01/24 08:08

		Matrix Spike Sample				Matrix Spike Duplicate						
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R		Spike Added (mg/l)	Spike Conc. (mg/l)	%R		RPD	Recovery Limits	RPD Limit
Aluminum, Total	0.388	2	2.10	86		2	2.08	85		1	75-125	20
Antimony, Total	0.0007J	0.5	0.4272	85		0.5	0.4270	85		0	75-125	20
Arsenic, Total	0.0120	0.12	0.1148	86		0.12	0.1178	88		3	75-125	20
Barium, Total	1.694	2	3.387	85		2	3.405	86		1	75-125	20
Beryllium, Total	ND	0.05	0.04778	96		0.05	0.04613	92		4	75-125	20
Cadmium, Total	ND	0.053	0.04985	94		0.053	0.04881	92		2	75-125	20
Calcium, Total	125	10	134.	90		10	134.	90		0	75-125	20
Chromium, Total	0.0011	0.2	0.1730	86		0.2	0.1715	85		1	75-125	20
Cobalt, Total	0.0040	0.5	0.4327	86		0.5	0.4372	87		1	75-125	20
Copper, Total	0.0024	0.25	0.2210	87		0.25	0.2225	88		1	75-125	20
Iron, Total	0.918	1	1.76	84		1	1.83	91		4	75-125	20
Lead, Total	0.0014	0.53	0.4502	85		0.53	0.4648	87		3	75-125	20
Magnesium, Total	37.9	10	43.9	60	Q	10	42.7	48	Q	3	75-125	20
Manganese, Total	0.1018	0.5	0.5303	86		0.5	0.5337	86		1	75-125	20
Nickel, Total	0.0068	0.5	0.4380	86		0.5	0.4359	86		0	75-125	20
Potassium, Total	9.09	10	16.9	78		10	16.6	75		2	75-125	20
Selenium, Total	ND	0.12	0.0977	81		0.12	0.102	85		4	75-125	20
Silver, Total	ND	0.05	0.04543	91		0.05	0.04488	90		1	75-125	20
Sodium, Total	31.8	10	35.9	41	Q	10	35.8	40	Q	0	75-125	20
Thallium, Total	0.0002J	0.12	0.1093	91		0.12	0.1116	93		2	75-125	20
Vanadium, Total	0.0016J	0.5	0.4212	84		0.5	0.4254	85		1	75-125	20
Zinc, Total	0.0112	0.5	0.4407	86		0.5	0.4488	88		2	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: L2409778-50		
Matrix Spike	: WG1903862-3	**MS Analysis Date**	: 04/04/24 15:22
Matrix Spike Dup	: WG1903862-4	**MSD Analysis Date**	: 04/04/24 15:27

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Aluminum, Total	0.101	2	1.94	92	2	1.95	92	1	75-125	20
Antimony, Total	ND	0.5	0.5265	105	0.5	0.5465	109	4	75-125	20
Arsenic, Total	ND	0.12	0.1149	96	0.12	0.1298	108	12	75-125	20
Barium, Total	0.0209	2	2.131	106	2	2.227	110	4	75-125	20
Beryllium, Total	ND	0.05	0.05166	103	0.05	0.05384	108	4	75-125	20
Cadmium, Total	ND	0.053	0.05280	100	0.053	0.05455	103	3	75-125	20
Calcium, Total	30.4	10	35.1	47 Q	10	39.3	89	11	75-125	20
Chromium, Total	0.0004J	0.2	0.1796	90	0.2	0.1960	98	9	75-125	20
Cobalt, Total	0.0008	0.5	0.5181	103	0.5	0.5545	111	7	75-125	20
Copper, Total	0.0008J	0.25	0.2399	96	0.25	0.2625	105	9	75-125	20
Iron, Total	0.254	1	1.45	120	1	1.40	115	4	75-125	20
Lead, Total	ND	0.53	0.5072	96	0.53	0.5113	96	1	75-125	20
Magnesium, Total	7.88	10	19.8	119	10	21.6	137 Q	9	75-125	20
Manganese, Total	6.123	0.5	6.653	106	0.5	7.153	206 Q	7	75-125	20
Nickel, Total	0.0009J	0.5	0.5050	101	0.5	0.5592	112	10	75-125	20
Potassium, Total	3.25	10	14.5	112	10	15.2	120	5	75-125	20
Selenium, Total	ND	0.12	0.117	98	0.12	0.123	102	5	75-125	20
Silver, Total	ND	0.05	0.05000	100	0.05	0.05192	104	4	75-125	20
Sodium, Total	14.6	10	26.4	118	10	28.7	141 Q	8	75-125	20
Thallium, Total	ND	0.12	0.1215	101	0.12	0.1207	100	1	75-125	20
Vanadium, Total	ND	0.5	0.4837	97	0.5	0.5232	105	8	75-125	20
Zinc, Total	ND	0.5	0.5102	102	0.5	0.5710	114	11	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1903435-3	**MS Analysis Date**	: 04/05/24 09:30
Matrix Spike Dup	: WG1903435-4	**MSD Analysis Date**	: 04/05/24 09:35

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Aluminum, Dissolved	0.00861J	2	2.12	106	2	2.07	104	2	75-125	20
Antimony, Dissolved	0.00102J	0.5	0.4258	85	0.5	0.4231	85	1	75-125	20
Arsenic, Dissolved	ND	0.12	0.1205	100	0.12	0.1186	99	2	75-125	20
Barium, Dissolved	0.01114	2	2.062	102	2	1.992	99	3	75-125	20
Beryllium, Dissolved	ND	0.05	0.05173	103	0.05	0.05007	100	3	75-125	20
Cadmium, Dissolved	ND	0.053	0.05359	101	0.053	0.05244	99	2	75-125	20
Calcium, Dissolved	3.79	10	15.2	114	10	14.5	107	5	75-125	20
Chromium, Dissolved	0.00090J	0.2	0.2174	109	0.2	0.2138	107	2	75-125	20
Cobalt, Dissolved	ND	0.5	0.5302	106	0.5	0.5160	103	3	75-125	20
Copper, Dissolved	ND	0.25	0.2577	103	0.25	0.2535	101	2	75-125	20
Iron, Dissolved	ND	1	1.11	111	1	1.08	108	3	75-125	20
Lead, Dissolved	ND	0.53	0.5539	104	0.53	0.5387	102	3	75-125	20
Magnesium, Dissolved	0.844	10	11.6	108	10	11.5	106	1	75-125	20
Manganese, Dissolved	0.00286	0.5	0.5570	111	0.5	0.5513	110	1	75-125	20
Nickel, Dissolved	ND	0.5	0.5274	105	0.5	0.5173	103	2	75-125	20
Potassium, Dissolved	1.50	10	13.5	120	10	12.7	112	6	75-125	20
Selenium, Dissolved	ND	0.12	0.127	106	0.12	0.120	100	6	75-125	20
Silver, Dissolved	ND	0.05	0.05067	101	0.05	0.04911	98	3	75-125	20
Sodium, Dissolved	3.31	10	11.7	84	10	11.5	82	2	75-125	20
Thallium, Dissolved	0.00022J	0.12	0.1026	86	0.12	0.1015	84	1	75-125	20
Vanadium, Dissolved	ND	0.5	0.5398	108	0.5	0.5263	105	3	75-125	20
Zinc, Dissolved	ND	0.5	0.5272	105	0.5	0.5148	103	2	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02		
Matrix Spike	: WG1906871-3	**MS Analysis Date**	: 04/10/24 17:20
Matrix Spike Dup	: WG1906871-4	**MSD Analysis Date**	: 04/10/24 17:24

		Matrix Spike Sample				Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R		Spike Added (mg/l)	Spike Conc. (mg/l)	%R		RPD	Recovery Limits	RPD Limit
Aluminum, Total	0.178	2	2.20	101		2	2.28	105		4	75-125	20
Antimony, Total	0.00043J	0.5	0.4502	90		0.5	0.4563	91		1	75-125	20
Arsenic, Total	ND	0.12	0.1203	100		0.12	0.1156	96		4	75-125	20
Barium, Total	0.01853	2	1.969	98		2	1.978	98		0	75-125	20
Beryllium, Total	ND	0.05	0.04931	99		0.05	0.04952	99		0	75-125	20
Cadmium, Total	ND	0.053	0.05008	94		0.053	0.05091	96		2	75-125	20
Calcium, Total	28.5	10	39.6	111		10	40.6	121		2	75-125	20
Chromium, Total	0.00126	0.2	0.2142	106		0.2	0.2152	107		0	75-125	20
Cobalt, Total	0.00082	0.5	0.5229	104		0.5	0.5232	104		0	75-125	20
Copper, Total	0.00071J	0.25	0.2516	101		0.25	0.2495	100		1	75-125	20
Iron, Total	0.281	1	1.40	112		1	1.37	109		2	75-125	20
Lead, Total	ND	0.53	0.5009	94		0.53	0.5106	96		2	75-125	20
Magnesium, Total	6.34	10	15.8	95		10	16.5	102		4	75-125	20
Manganese, Total	5.584	0.5	6.324	148	Q	0.5	6.409	165	Q	1	75-125	20
Nickel, Total	0.00076J	0.5	0.5244	105		0.5	0.5207	104		1	75-125	20
Potassium, Total	3.03	10	13.8	108		10	14.1	111		2	75-125	20
Selenium, Total	ND	0.12	0.118	98		0.12	0.118	98		0	75-125	20
Silver, Total	ND	0.05	0.04721	94		0.05	0.04753	95		1	75-125	20
Sodium, Total	12.2	10	22.2	100		10	22.9	107		3	75-125	20
Thallium, Total	0.00019J	0.12	0.1180	98		0.12	0.1205	100		2	75-125	20
Vanadium, Total	ND	0.5	0.5381	108		0.5	0.5501	110		2	75-125	20
Zinc, Total	ND	0.5	0.5036	101		0.5	0.4971	99		1	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02		
Matrix Spike	: WG1906880-3	**MS Analysis Date**	: 04/14/24 14:48
Matrix Spike Dup	: WG1906880-4	**MSD Analysis Date**	: 04/14/24 14:53

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Antimony, Dissolved	ND	0.5	0.4695	94	0.5	0.4817	96	3	75-125	20
Arsenic, Dissolved	ND	0.12	0.1100	92	0.12	0.1194	100	8	75-125	20
Barium, Dissolved	0.01680	2	1.934	96	2	1.914	95	1	75-125	20
Beryllium, Dissolved	ND	0.05	0.04761	95	0.05	0.04836	97	2	75-125	20
Cadmium, Dissolved	ND	0.053	0.05029	95	0.053	0.05114	96	2	75-125	20
Calcium, Dissolved	31.3	10	41.7	104	10	37.1	58 Q	12	75-125	20
Chromium, Dissolved	0.00032J	0.2	0.2052	103	0.2	0.2112	106	3	75-125	20
Cobalt, Dissolved	0.00070	0.5	0.4757	95	0.5	0.4947	99	4	75-125	20
Copper, Dissolved	ND	0.25	0.2410	96	0.25	0.2526	101	5	75-125	20
Iron, Dissolved	0.0623	1	1.15	109	1	1.13	107	2	75-125	20
Lead, Dissolved	ND	0.53	0.4950	93	0.53	0.4996	94	1	75-125	20
Magnesium, Dissolved	6.81	10	16.8	100	10	17.1	103	2	75-125	20
Manganese, Dissolved	5.872	0.5	6.301	86	0.5	6.364	98	1	75-125	20
Nickel, Dissolved	ND	0.5	0.5086	102	0.5	0.5107	102	0	75-125	20
Potassium, Dissolved	3.29	10	14.2	109	10	14.2	109	0	75-125	20
Selenium, Dissolved	ND	0.12	0.100	83	0.12	0.111	92	10	75-125	20
Silver, Dissolved	ND	0.05	0.04840	97	0.05	0.04936	99	2	75-125	20
Sodium, Dissolved	13.0	10	22.3	93	10	22.5	95	1	75-125	20
Thallium, Dissolved	0.00019J	0.12	0.1078	90	0.12	0.1128	94	5	75-125	20
Vanadium, Dissolved	ND	0.5	0.4926	98	0.5	0.5164	103	5	75-125	20
Zinc, Dissolved	ND	0.5	0.4866	97	0.5	0.5018	100	3	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02		
Matrix Spike	: WG1906880-3	**MS Analysis Date**	: 04/14/24 15:48
Matrix Spike Dup	: WG1906880-4	**MSD Analysis Date**	: 04/14/24 15:53

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Aluminum, Dissolved	ND	2	1.93	96	2	1.99	100	3	75-125	20

Form 5b
Post Digest Spike Recovery

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02		
Post Spike	: WG1906880-5	**PS Analysis Date**	: 04/14/24 14:58

		Post Spike Sample			
	Sample	Spike	Spike		
	Conc.	Added	Conc.	%R	Recovery
Parameter	(mg/l)	(mg/l)	(mg/l)		Limits
Calcium, Dissolved	31.3	50	79.7	97	75-125

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1902788-2	**LCS Analysis Date**	: 04/01/24 07:59
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Aluminum, Total	2.00	1.80	90.					80-120	20
Antimony, Total	0.500	0.404	81.					80-120	20
Arsenic, Total	0.120	0.0999	83.					80-120	20
Barium, Total	2.00	1.86	93.					80-120	20
Beryllium, Total	0.0500	0.0474	95.					80-120	20
Cadmium, Total	0.0530	0.0498	94.					80-120	20
Calcium, Total	10.0	8.28	83.					80-120	20
Chromium, Total	0.200	0.186	93.					80-120	20
Cobalt, Total	0.500	0.449	90.					80-120	20
Copper, Total	0.250	0.231	92.					80-120	20
Iron, Total	1.00	0.987	99.					80-120	20
Lead, Total	0.530	0.473	89.					80-120	20
Magnesium, Total	10.0	9.07	91.					80-120	20
Manganese, Total	0.500	0.463	93.					80-120	20
Nickel, Total	0.500	0.458	92.					80-120	20
Potassium, Total	10.0	9.00	90.					80-120	20
Selenium, Total	0.120	0.0980	82.					80-120	20
Silver, Total	0.0500	0.0461	92.					80-120	20
Sodium, Total	10.0	8.72	87.					80-120	20
Thallium, Total	0.120	0.115	96.					80-120	20
Vanadium, Total	0.500	0.450	90.					80-120	20
Zinc, Total	0.500	0.454	91.					80-120	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1903862-2	**LCS Analysis Date**	: 04/04/24 15:17
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Manganese, Total	**0.500**	**0.557**	**111.**					**80-120**	**20**

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1903435-2	**LCS Analysis Date**	: 04/05/24 09:26
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Aluminum, Dissolved	2.00	2.11	106.					80-120	20
Antimony, Dissolved	0.500	0.422	84.					80-120	20
Arsenic, Dissolved	0.120	0.121	101.					80-120	20
Barium, Dissolved	2.00	2.03	101.					80-120	20
Beryllium, Dissolved	0.0500	0.0532	106.					80-120	20
Cadmium, Dissolved	0.0530	0.0532	100.					80-120	20
Calcium, Dissolved	10.0	10.9	109.					80-120	20
Chromium, Dissolved	0.200	0.210	105.					80-120	20
Cobalt, Dissolved	0.500	0.519	104.					80-120	20
Copper, Dissolved	0.250	0.258	103.					80-120	20
Iron, Dissolved	1.00	1.13	113.					80-120	20
Lead, Dissolved	0.530	0.549	104.					80-120	20
Magnesium, Dissolved	10.0	10.9	109.					80-120	20
Manganese, Dissolved	0.500	0.536	107.					80-120	20
Nickel, Dissolved	0.500	0.520	104.					80-120	20
Potassium, Dissolved	10.0	11.6	116.					80-120	20
Selenium, Dissolved	0.120	0.121	101.					80-120	20
Silver, Dissolved	0.0500	0.0500	100.					80-120	20
Sodium, Dissolved	10.0	8.63	86.					80-120	20
Thallium, Dissolved	0.120	0.102	85.					80-120	20
Vanadium, Dissolved	0.500	0.521	104.					80-120	20
Zinc, Dissolved	0.500	0.510	102.					80-120	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1903862-2	**LCS Analysis Date**	: 04/07/24 15:26
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Aluminum, Total	2.00	2.05	102.					80-120	20
Antimony, Total	0.500	0.480	96.					80-120	20
Arsenic, Total	0.120	0.131	109.					80-120	20
Barium, Total	2.00	2.02	101.					80-120	20
Beryllium, Total	0.0500	0.0520	104.					80-120	20
Cadmium, Total	0.0530	0.0546	103.					80-120	20
Calcium, Total	10.0	8.85	88.					80-120	20
Chromium, Total	0.200	0.210	105.					80-120	20
Cobalt, Total	0.500	0.524	105.					80-120	20
Copper, Total	0.250	0.271	108.					80-120	20
Iron, Total	1.00	0.987	99.					80-120	20
Lead, Total	0.530	0.556	105.					80-120	20
Magnesium, Total	10.0	10.6	106.					80-120	20
Nickel, Total	0.500	0.531	106.					80-120	20
Potassium, Total	10.0	9.84	98.					80-120	20
Selenium, Total	0.120	0.131	109.					80-120	20
Silver, Total	0.0500	0.0504	101.					80-120	20
Sodium, Total	10.0	9.62	96.					80-120	20
Thallium, Total	0.120	0.112	94.					80-120	20
Vanadium, Total	0.500	0.507	101.					80-120	20
Zinc, Total	0.500	0.521	104.					80-120	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1906871-2	**LCS Analysis Date**	: 04/10/24 17:15
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Aluminum, Total	2.00	1.95	98.					80-120	20
Arsenic, Total	0.120	0.113	94.					80-120	20
Barium, Total	2.00	1.88	94.					80-120	20
Beryllium, Total	0.0500	0.0498	100.					80-120	20
Cadmium, Total	0.0530	0.0467	88.					80-120	20
Calcium, Total	10.0	9.97	100.					80-120	20
Chromium, Total	0.200	0.201	100.					80-120	20
Cobalt, Total	0.500	0.501	100.					80-120	20
Copper, Total	0.250	0.243	97.					80-120	20
Iron, Total	1.00	1.03	103.					80-120	20
Lead, Total	0.530	0.476	90.					80-120	20
Magnesium, Total	10.0	9.36	94.					80-120	20
Manganese, Total	0.500	0.511	102.					80-120	20
Nickel, Total	0.500	0.488	98.					80-120	20
Potassium, Total	10.0	10.2	102.					80-120	20
Selenium, Total	0.120	0.113	94.					80-120	20
Silver, Total	0.0500	0.0444	89.					80-120	20
Sodium, Total	10.0	9.55	96.					80-120	20
Thallium, Total	0.120	0.110	92.					80-120	20
Vanadium, Total	0.500	0.503	101.					80-120	20
Zinc, Total	0.500	0.483	96.					80-120	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1906871-2	**LCS Analysis Date**	: 04/10/24 18:27
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Antimony, Total	**0.500**	**0.410**	**82.**					**80-120**	**20**

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1906880-2	**LCS Analysis Date**	: 04/14/24 14:44
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Antimony, Dissolved	0.500	0.473	94.					80-120	20
Arsenic, Dissolved	0.120	0.116	96.					80-120	20
Barium, Dissolved	2.00	1.89	94.					80-120	20
Beryllium, Dissolved	0.0500	0.0482	96.					80-120	20
Cadmium, Dissolved	0.0530	0.0505	95.					80-120	20
Calcium, Dissolved	10.0	9.17	92.					80-120	20
Chromium, Dissolved	0.200	0.201	101.					80-120	20
Cobalt, Dissolved	0.500	0.507	101.					80-120	20
Copper, Dissolved	0.250	0.249	99.					80-120	20
Iron, Dissolved	1.00	1.09	109.					80-120	20
Lead, Dissolved	0.530	0.511	96.					80-120	20
Magnesium, Dissolved	10.0	10.2	102.					80-120	20
Manganese, Dissolved	0.500	0.536	107.					80-120	20
Nickel, Dissolved	0.500	0.506	101.					80-120	20
Potassium, Dissolved	10.0	10.8	108.					80-120	20
Selenium, Dissolved	0.120	0.122	102.					80-120	20
Silver, Dissolved	0.0500	0.0495	99.					80-120	20
Sodium, Dissolved	10.0	9.95	100.					80-120	20
Thallium, Dissolved	0.120	0.113	94.					80-120	20
Vanadium, Dissolved	0.500	0.492	98.					80-120	20
Zinc, Dissolved	0.500	0.488	98.					80-120	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1906880-2	**LCS Analysis Date**	: 04/14/24 15:44
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
	True	Found	%R	True	Found	%R	RPD	Recovery	RPD
Parameter	(mg/l)	(mg/l)		(mg/l)	(mg/l)			Limits	Limit
Aluminum, Dissolved	2.00	1.93	96.					80-120	20

Form 8
Serial Dilutions

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/01/24 20:52
Serial Dilution ID	: WG1902788-10	**Analysis Date**	: 04/01/24 20:47

Parameter	Initial Sample Result (mg/l)	Serial Dilution Result (mg/l)	% Difference	%D Limit
Calcium, Total	3.62	3.66	1	20
Sodium, Total	3.59	3.08	14	20

Form 8
Serial Dilutions

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/05/24 09:44
Serial Dilution ID	: WG1903435-6	**Analysis Date**	: 04/05/24 10:03

Parameter	Initial Sample Result (mg/l)	Serial Dilution Result (mg/l)	% Difference	%D Limit
Calcium, Dissolved	3.79	3.95	4	20
Sodium, Dissolved	3.31	3.47	5	20

Form 8
Serial Dilutions

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02	**Analysis Date**	: 04/10/24 17:38
Serial Dilution ID	: WG1906871-6	**Analysis Date**	: 04/10/24 17:34

Parameter	Initial Sample Result (mg/l)	Serial Dilution Result (mg/l)	% Difference	%D Limit
Barium, Total	0.01853	0.01894	2	20
Calcium, Total	28.5	30.3	6	20
Magnesium, Total	6.34	6.63	5	20
Manganese, Total	5.584	6.085	9	20
Potassium, Total	3.03	3.17	5	20
Sodium, Total	12.2	13.1	7	20

Form 8
Serial Dilutions

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02	**Analysis Date**	: 04/14/24 15:07
Serial Dilution ID	: WG1906880-6	**Analysis Date**	: 04/14/24 15:02

Parameter	Initial Sample Result (mg/l)	Serial Dilution Result (mg/l)	% Difference	%D Limit
Barium, Dissolved	0.01680	0.01646	2	20
Calcium, Dissolved	31.3	32.4	4	20
Magnesium, Dissolved	6.81	6.16	10	20
Manganese, Dissolved	5.872	5.836	1	20
Potassium, Dissolved	3.29	2.89	12	20
Sodium, Dissolved	13.0	11.9	8	20

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 3005A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-01	03/31/24 19:07	-	50
L2417074-03	03/31/24 19:07	-	50
L2417074-04	03/31/24 19:07	-	50
L2417074-05	03/31/24 19:07	-	50
L2417074-06	03/31/24 19:07	-	50
L2417074-07	03/31/24 19:07	-	50
WG1902788-7	03/31/24 19:07	-	50
WG1902788-8	03/31/24 19:07	-	50
WG1902788-10	03/31/24 19:07	-	50

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 3005A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
WG1902788-1	03/31/24 19:07	-	50
WG1902788-2	03/31/24 19:07	-	50
WG1902788-3	03/31/24 19:07	-	50
WG1902788-4	03/31/24 19:07	-	50

Form 12
Preparation Log

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Matrix	:	**WATER**	**Prep Method**	:	**EPA 3005A**

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-03	03/31/24 19:07	-	50
L2417074-04	03/31/24 19:07	-	50

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 3005A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-04	04/02/24 15:12	-	50
L2417074-05	04/02/24 15:12	-	50
L2417074-06	04/02/24 15:12	-	50
L2417074-07	04/02/24 15:12	-	50
WG1903862-1	04/02/24 15:12	-	50
WG1903862-2	04/02/24 15:12	-	50
WG1903862-3	04/02/24 15:12	-	50
WG1903862-4	04/02/24 15:12	-	50

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 3005A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-01	04/02/24 04:33	-	50
L2417074-03	04/02/24 04:33	-	50
L2417074-04	04/02/24 04:33	-	50
L2417074-05	04/02/24 04:33	-	50
L2417074-06	04/02/24 04:33	-	50
WG1903435-1	04/02/24 04:33	-	50
WG1903435-2	04/02/24 04:33	-	50
WG1903435-3	04/02/24 04:33	-	50
WG1903435-4	04/02/24 04:33	-	50
WG1903435-6	04/02/24 04:33	-	50

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 3005A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
WG1903862-1	04/02/24 15:12	-	50
WG1903862-2	04/02/24 15:12	-	50

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 3005A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-01	04/10/24 10:42	-	50
L2417074-02	04/10/24 10:42	-	50
WG1906871-1	04/10/24 10:42	-	50
WG1906871-2	04/10/24 10:42	-	50
WG1906871-3	04/10/24 10:42	-	50
WG1906871-4	04/10/24 10:42	-	50
WG1906871-6	04/10/24 10:42	-	50

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 3005A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-02	04/10/24 10:30	-	50
WG1906880-1	04/10/24 10:30	-	50
WG1906880-2	04/10/24 10:30	-	50
WG1906880-3	04/10/24 10:30	-	50
WG1906880-4	04/10/24 10:30	-	50
WG1906880-5	04/10/24 10:30	-	50
WG1906880-6	04/10/24 10:30	-	50

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/01/24 04:48	**End Date**	: 04/01/24 22:26

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Manganese, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
R1811827-9 TUNE		04:48:00																						
R1811827-1 ICV	1	05:51:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-2 ICB	1	05:55:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-3 ICB	1	06:07:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-4 ICSA	1	06:13:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-5 CCV	1	06:27:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-6 CCB	1	06:32:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-7 CCV	1	07:30:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-8 CCB	1	07:35:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-10 CCV	1	08:31:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-11 CCB	1	08:36:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-12 CCV	1	09:29:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-13 CCB	1	09:34:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-14 CCV	1	10:27:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-15 CCB	1	10:32:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-16 CCV	1	11:28:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-17 CCB	1	11:33:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-18 CCV	1	12:25:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-19 CCB	1	12:29:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-20 CCV	1	13:31:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-21 CCB	1	13:36:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-22 CCV	1	13:54:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-23 CCB	1	13:59:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-24 CCV	1	14:57:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-25 CCB	1	15:01:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-26 CCV	1	16:18:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-27 CCB	1	16:23:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/01/24 04:48	**End Date**	: 04/01/24 22:26

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Manganese, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
R1811827-28 CCV	1	17:20:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-29 CCB	1	17:25:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-30 CCV	1	17:49:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-31 CCB	1	17:54:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-32 CCV	1	19:18:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-33 CCB	1	19:23:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-34 CCV	1	20:14:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-35 CCB	1	20:19:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1902788-7 MS	10	20:24:13	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1902788-8 MSD	10	20:28:53	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1902788-7 MS	50	20:33:34				X																		
WG1902788-8 MSD	50	20:38:15				X																		
WG1902788-10 SERDIL	5	20:47:37							X												X			
L2417074-01	1	20:52:17	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
R1811827-36 CCV	1	21:10:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-37 CCB	1	21:15:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-03	1	21:48:30	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-04	1	21:53:11	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X
L2417074-05	1	21:57:52	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
L2417074-06	1	22:02:34	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
R1811827-38 CCV	1	22:07:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-39 CCB	1	22:11:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-07	1	22:16:41	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
R1811827-40 CCV	1	22:21:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811827-41 CCB	1	22:26:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Analysis Method**	: 1,6020B
Start Date	: 04/01/24 04:50	**End Date**	: 04/01/24 08:36

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Manganese, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
R1811843-8 TUNE		04:50:00																						
R1811843-1 ICV	1	06:26:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-2 ICB	1	06:30:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-3 ICSA	1	06:38:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-4 CCV	1	06:51:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-5 CCB	1	06:56:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-6 CCV	1	07:44:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-7 CCB	1	07:49:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1902788-1 BLANK	1	07:55:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1902788-2 LCS	10	07:59:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1902788-3 MS	10	08:04:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1902788-4 MSD	10	08:08:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-9 CCV	1	08:32:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1811843-10 CCB	1	08:36:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Analysis Method**	: 1,6020B
Start Date	: 04/03/24 03:53	**End Date**	: 04/03/24 06:26

Sample Number	Dilution Factor	Analysis Time	Calcium, Total
R1812758-8 TUNE		03:53:00	
R1812758-1 ICV	1	04:52:53	X
R1812758-2 ICB	1	04:57:23	X
R1812758-3 ICSA	1	05:09:46	X
R1812758-4 CCV	1	05:23:13	X
R1812758-5 CCB	1	05:27:44	X
L2417074-03	1	05:54:47	X
L2417074-04	1	05:59:15	X
R1812758-6 CCV	1	06:21:42	X
R1812758-7 CCB	1	06:26:13	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Analysis Method**	: 1,6020B
Start Date	: 04/04/24 04:46	**End Date**	: 04/04/24 17:13

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Manganese, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
R1813317-10 TUNE		04:46:00																						
R1813317-1 ICV	1	06:01:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-2 ICB	1	06:06:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-3 ICSA	1	06:19:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-4 CCV	1	06:33:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-5 CCB	1	06:38:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-6 CCV	1	07:40:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-7 CCB	1	07:45:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-8 CCV	1	08:45:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-9 CCB	1	08:50:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-11 CCV	1	09:38:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-12 CCB	1	09:43:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-13 CCV	1	10:40:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-14 CCB	1	10:44:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-15 CCV	1	11:24:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-16 CCB	1	11:28:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-17 CCV	1	12:23:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-18 CCB	1	12:28:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-19 CCV	1	13:45:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-20 CCB	1	13:50:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-21 CCV	1	14:44:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-22 CCB	1	14:48:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903862-1 BLANK	1	15:13:11														X								
WG1903862-2 LCS	10	15:17:51														X								
WG1903862-3 MS	10	15:22:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903862-4 MSD	10	15:27:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-04	1	15:45:59														X								

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Analysis Method**	: 1,6020B
Start Date	: 04/04/24 04:46	**End Date**	: 04/04/24 17:13

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Manganese, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
L2417074-05	1	15:50:42														X								
L2417074-06	1	15:55:23														X								
R1813317-23 CCV	1	16:00:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-24 CCB	1	16:04:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-07	1	16:11:13														X								
R1813317-25 CCV	1	17:08:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813317-26 CCB	1	17:13:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/05/24 04:25	**End Date**	: 04/05/24 11:11

Sample Number	Dilution Factor	Analysis Time	Aluminum, Dissolved	Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Calcium, Dissolved	Chromium, Dissolved	Cobalt, Dissolved	Copper, Dissolved	Iron, Dissolved	Lead, Dissolved	Magnesium, Dissolved	Manganese, Dissolved	Nickel, Dissolved	Potassium, Dissolved	Selenium, Dissolved	Silver, Dissolved	Sodium, Dissolved	Thallium, Dissolved	Vanadium, Dissolved	Zinc, Dissolved
R1813830-8 TUNE		04:25:00																						
R1813830-1 ICV	1	08:16:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813830-2 ICB	1	08:21:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813830-3 ICSA	1	08:47:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813830-4 CCV	1	09:01:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813830-5 CCB	1	09:06:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903435-1 BLANK	1	09:21:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903435-2 LCS	10	09:26:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903435-3 MS	10	09:30:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903435-4 MSD	10	09:35:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-01	1	09:44:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903435-6 SERDIL	5	10:03:18							X												X			
R1813830-6 CCV	1	10:07:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813830-7 CCB	1	10:12:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-03	1	10:25:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-04	1	10:29:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-05	1	10:34:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-06	1	10:39:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813830-9 CCV	1	11:06:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1813830-10 CCB	1	11:11:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Analysis Method**	: 1,6020B
Start Date	: 04/07/24 11:47	**End Date**	: 04/07/24 16:35

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
R1814341-16 TUNE		11:47:00																					
R1814341-1 ICV	1	13:50:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-2 ICB	1	13:54:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-3 ICSA	1	14:03:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-4 CCV	1	14:21:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-5 CCB	1	14:25:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903862-2 LCS	10	15:26:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-6 CCV	1	15:30:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-7 CCB	1	15:35:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1903862-1 BLANK	1	15:46:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-8 CCV	1	16:30:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1814341-9 CCB	1	16:35:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/10/24 04:42	**End Date**	: 04/10/24 18:38

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Manganese, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
R1815274-9 TUNE		04:42:00																						
R1815274-1 ICV	1	05:41:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-2 ICB	1	05:45:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-3 ICB	1	05:53:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-4 ICSA	1	06:00:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-5 CCV	1	06:14:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-6 CCB	1	06:19:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-7 CCV	1	07:20:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-8 CCB	1	07:25:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-10 CCV	1	08:20:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-11 CCB	1	08:25:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-12 CCV	1	08:39:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-13 CCB	1	09:12:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-14 CCV	1	10:08:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-15 CCB	1	10:13:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-16 CCV	1	11:06:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-17 CCB	1	11:11:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-18 CCV	1	11:59:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-19 CCB	1	12:03:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-20 CCV	1	13:25:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-21 CCB	1	13:29:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-22 CCV	1	14:10:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-23 CCB	1	14:15:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-24 CCV	1	15:05:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-25 CCB	1	15:09:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-26 CCV	1	16:56:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-27 CCB	1	17:01:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/10/24 04:42	**End Date**	: 04/10/24 18:38

Sample Number	Dilution Factor	Analysis Time	Aluminum, Total	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Calcium, Total	Chromium, Total	Cobalt, Total	Copper, Total	Iron, Total	Lead, Total	Magnesium, Total	Manganese, Total	Nickel, Total	Potassium, Total	Selenium, Total	Silver, Total	Sodium, Total	Thallium, Total	Vanadium, Total	Zinc, Total
WG1906871-1 BLANK	1	17:10:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906871-2 LCS	10	17:15:34	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906871-3 MS	10	17:20:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906871-4 MSD	10	17:24:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906871-6 SERDIL	5	17:34:08				X			X						X	X		X			X			
L2417074-02	1	17:38:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
L2417074-01	1	17:43:25														X								
R1815274-28 CCV	1	17:53:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-29 CCB	1	17:58:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906871-2 LCS	10	18:27:42		X																				
R1815274-30 CCV	1	18:33:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1815274-31 CCB	1	18:38:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Analysis Method**	: 1,6020B
Start Date	: 04/14/24 11:46	**End Date**	: 04/14/24 16:04

Sample Number	Dilution Factor	Analysis Time	Aluminum, Dissolved	Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Calcium, Dissolved	Chromium, Dissolved	Cobalt, Dissolved	Copper, Dissolved	Iron, Dissolved	Lead, Dissolved	Magnesium, Dissolved	Manganese, Dissolved	Nickel, Dissolved	Potassium, Dissolved	Selenium, Dissolved	Silver, Dissolved	Sodium, Dissolved	Thallium, Dissolved	Vanadium, Dissolved	Zinc, Dissolved
R1816954-10 TUNE		11:46:00																						
R1816954-1 ICV	1	12:45:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-2 ICB	1	12:49:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-3 ICV	1	12:59:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-4 ICB	1	13:04:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-5 ICSA	1	13:10:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-6 CCV	1	13:28:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-7 CCB	1	13:33:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-8 CCV	1	14:28:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-9 CCB	1	14:33:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906880-1 BLANK	1	14:39:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906880-2 LCS	10	14:44:12		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906880-3 MS	10	14:48:55		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906880-4 MSD	10	14:53:34		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906880-5 PS	10	14:58:13							X															
WG1906880-6 SERDIL	5	15:02:52				X			X						X	X		X			X			
L2417074-02	1	15:07:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-11 CCV	1	15:30:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-12 CCB	1	15:35:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WG1906880-2 LCS	50	15:44:16	X																					
WG1906880-3 MS	50	15:48:56	X																					
WG1906880-4 MSD	50	15:53:37	X																					
R1816954-13 CCV	1	15:59:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
R1816954-14 CCB	1	16:04:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1811827-9	**Analysis Date**	: 04/01/24 04:48
ICP-MS Instrument	: iCAP Q		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9395	0.715	1.1
115 In	114.8965	0.729	2.1
7 Li	7.0568	0.685	1.3
238 U	238.0417	0.698	0.8

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1811843-8	**Analysis Date**	: 04/01/24 04:50
ICP-MS Instrument	: iCAP Q		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9179	0.687	1.2
115 In	114.882	0.714	1.4
7 Li	6.9945	0.674	0.9
238 U	238.0487	0.733	1.4

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1812758-8	**Analysis Date**	: 04/03/24 03:53
ICP-MS Instrument	: iCAP Q		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9202	0.686	0.9
115 In	114.8864	0.71	1.2
7 Li	6.997	0.675	1
238 U	238.0592	0.735	1.1

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1813317-10	**Analysis Date**	: 04/04/24 04:46
ICP-MS Instrument	: iCAP RQ		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9198	0.688	0.8
115 In	114.9012	0.677	1.1
7 Li	7.0191	0.652	1.1
238 U	238.0675	0.682	0.5

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1813830-8	**Analysis Date**	: 04/05/24 04:25
ICP-MS Instrument	: iCAP Q		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9305	0.72	1.1
115 In	114.8897	0.742	1.8
7 Li	7.0496	0.7	1.1
238 U	238.043	0.721	1.1

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1814341-16	**Analysis Date**	: 04/07/24 11:47
ICP-MS Instrument	: iCAP Q		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9128	0.697	3.2
115 In	114.8784	0.715	3.3
7 Li	6.9967	0.683	2.1
238 U	238.0422	0.705	2

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1815274-9	**Analysis Date**	: 04/10/24 04:42
ICP-MS Instrument	: iCAP Q		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9256	0.735	2.6
115 In	114.8897	0.746	1.4
7 Li	7.0492	0.705	2.2
238 U	238.0513	0.713	1

Form 14
ICP-MS Tune

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab Sample ID	: R1816954-10	**Analysis Date**	: 04/14/24 11:46
ICP-MS Instrument	: iCAP RQ		

Mass Element	Avg Measured Mass (amu)	Avg. Peak Width at 10% Peak Height (amu)	%RSD
59 Co	58.9207	0.695	1.3
115 In	114.8971	0.696	0.5
7 Li	7.0253	0.656	1.1
238 U	238.047	0.713	1.2

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/01/24	**End Date**	: 04/01/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1811827-1 ICV	05:51:15	92	107	98	103	164
R1811827-2 ICB	05:55:54	92	104	98	104	145
R1811827-3 ICB	06:07:01	99	110	95	101	178
R1811827-4 ICSA	06:13:24	78	116	102	98	136
R1811827-5 CCV	06:27:25	88	117	105	108	165
R1811827-6 CCB	06:32:06	82	99	100	107	169
R1811827-7 CCV	07:30:54	84	111	102	106	189
R1811827-8 CCB	07:35:35	85	102	100	107	176
R1811827-10 CCV	08:31:59	98	120	107	110	188
R1811827-11 CCB	08:36:40	101	117	106	108	175
R1811827-12 CCV	09:29:34	103	131	111	116	200
R1811827-13 CCB	09:34:16	103	116	106	113	171
R1811827-14 CCV	10:27:31	99	128	110	115	201
R1811827-15 CCB	10:32:13	101	119	109	112	185
R1811827-16 CCV	11:28:50	92	116	104	111	182
R1811827-17 CCB	11:33:32	91	104	102	107	156
R1811827-18 CCV	12:25:12	86	110	104	109	166
R1811827-19 CCB	12:29:54	82	91	102	105	144
R1811827-20 CCV	13:31:46	84	108	100	107	174
R1811827-21 CCB	13:36:28	85	99	100	105	161
R1811827-22 CCV	13:54:24	88	112	103	109	192
R1811827-23 CCB	13:59:06	88	102	102	108	183
R1811827-24 CCV	14:57:07	83	112	103	110	180
R1811827-25 CCB	15:01:50	82	97	99	108	186
R1811827-26 CCV	16:18:23	87	108	106	110	182
R1811827-27 CCB	16:23:05	89	109	103	109	171
R1811827-28 CCV	17:20:30	79	103	96	102	163

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/01/24	**End Date**	: 04/01/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1811827-29 CCB	17:25:13	81	91	92	96	140
R1811827-30 CCV	17:49:36	80	105	96	103	189
R1811827-31 CCB	17:54:18	80	92	94	101	158
R1811827-32 CCV	19:18:39	76	96	93	98	175
R1811827-33 CCB	19:23:22	75	88	92	98	155
R1811827-34 CCV	20:14:46	77	102	96	101	171
R1811827-35 CCB	20:19:29	76	91	96	101	158
WG1902788-7 MS	20:24:13	76	94	100	104	184
WG1902788-8 MSD	20:28:53	78	95	99	103	163
WG1902788-7 MS	20:33:34	76	87	100	103	182
WG1902788-8 MSD	20:38:15	80	98	99	103	175
WG1902788-10 SERDIL	20:47:37	74	92	98	102	181
L2417074-01	20:52:17	82	103	101	106	152
R1811827-36 CCV	21:10:59	72	91	97	97	141
R1811827-37 CCB	21:15:42	72	89	96	101	181
L2417074-03	21:48:30	83	104	102	105	180
L2417074-04	21:53:11	77	93	101	104	182
L2417074-05	21:57:52	77	90	97	98	151
L2417074-06	22:02:34	80	98	101	103	195
R1811827-38 CCV	22:07:15	73	94	96	97	180
R1811827-39 CCB	22:11:58	73	88	91	93	146
L2417074-07	22:16:41	75	88	94	99	154
R1811827-40 CCV	22:21:22	73	97	93	95	175
R1811827-41 CCB	22:26:05	72	87	91	94	162

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	:	**Analysis Method**	:
Start Date	: 04/01/24	**End Date**	: 04/01/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1811843-1 ICV	06:26:10	88	89	89	91	92
R1811843-2 ICB	06:30:40	86	83	88	90	91
R1811843-3 ICSA	06:38:31	64	68	83	90	76
R1811843-4 CCV	06:51:59	97	100	250	106	104
R1811843-5 CCB	06:56:30	98	98	190	104	103
R1811843-6 CCV	07:44:38	95	98	110	101	100
R1811843-7 CCB	07:49:09	98	94	108	102	102
WG1902788-1 BLANK	07:55:01	100	96	112	104	103
WG1902788-2 LCS	07:59:30	93	91	104	97	96
WG1902788-3 MS	08:04:00	92	89	102	98	98
WG1902788-4 MSD	08:08:30	94	94	102	98	97
R1811843-9 CCV	08:32:25	90	94	97	96	96
R1811843-10 CCB	08:36:56	79	79	98	94	95

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ2	**Analysis Method**	: 1,6020B
Start Date	: 04/03/24	**End Date**	: 04/03/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1812758-1 ICV	04:52:53	80	82	93	93	95
R1812758-2 ICB	04:57:23	92	92	90	92	94
R1812758-3 ICSA	05:09:46	69	74	87	92	84
R1812758-4 CCV	05:23:13	87	92	97	96	99
R1812758-5 CCB	05:27:44	95	98	101	96	100
L2417074-03	05:54:47	80	80	84	82	83
L2417074-04	05:59:15	80	80	88	80	83
R1812758-6 CCV	06:21:42	78	85	90	81	85
R1812758-7 CCB	06:26:13	80	82	91	84	88

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Analysis Method**	: 1,6020B
Start Date	: 04/04/24	**End Date**	: 04/04/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1813317-1 ICV	06:01:20	97	107	107	104	119
R1813317-2 ICB	06:06:03	99	105	108	107	121
R1813317-3 ICSA	06:19:21	84	107	118	103	110
R1813317-4 CCV	06:33:27	102	112	111	106	122
R1813317-5 CCB	06:38:11	102	106	107	104	113
R1813317-6 CCV	07:40:30	104	101	106	104	128
R1813317-7 CCB	07:45:14	103	95	102	102	120
R1813317-8 CCV	08:45:22	91	99	106	104	122
R1813317-9 CCB	08:50:06	94	98	104	104	121
R1813317-11 CCV	09:38:40	88	100	105	102	121
R1813317-12 CCB	09:43:25	92	96	104	105	119
R1813317-13 CCV	10:40:08	89	104	110	104	120
R1813317-14 CCB	10:44:53	92	105	109	106	121
R1813317-15 CCV	11:24:10	94	114	110	108	135
R1813317-16 CCB	11:28:55	93	105	107	109	130
R1813317-17 CCV	12:23:39	101	101	112	108	130
R1813317-18 CCB	12:28:24	104	104	110	110	130
R1813317-19 CCV	13:45:31	105	109	110	114	149
R1813317-20 CCB	13:50:16	107	104	109	111	144
R1813317-21 CCV	14:44:10	106	106	112	108	127
R1813317-22 CCB	14:48:55	108	108	110	114	138
WG1903862-1 BLANK	15:13:11	110	105	113	108	125
WG1903862-2 LCS	15:17:51	105	110	110	118	145
WG1903862-3 MS	15:22:32	103	107	113	112	125
WG1903862-4 MSD	15:27:13	103	110	112	115	138
L2417074-04	15:45:59	98	112	115	111	138
L2417074-05	15:50:42	98	106	113	106	122

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Analysis Method**	: 1,6020B
Start Date	: 04/04/24	**End Date**	: 04/04/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
L2417074-06	15:55:23	101	104	113	107	124
R1813317-23 CCV	16:00:04	98	111	111	109	138
R1813317-24 CCB	16:04:49	101	105	109	110	127
L2417074-07	16:11:13	101	104	112	107	124
R1813317-25 CCV	17:08:41	93	104	112	106	125
R1813317-26 CCB	17:13:26	97	103	111	111	126

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/05/24	**End Date**	: 04/05/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1813830-1 ICV	08:16:43	92	94	99	97	86
R1813830-2 ICB	08:21:23	92	91	95	96	83
R1813830-3 ICSA	08:47:32	81	98	102	92	74
R1813830-4 CCV	09:01:30	90	99	106	100	89
R1813830-5 CCB	09:06:11	88	90	98	98	85
WG1903435-1 BLANK	09:21:33	100	118	101	111	199
WG1903435-2 LCS	09:26:09	92	97	104	103	103
WG1903435-3 MS	09:30:46	90	92	100	100	97
WG1903435-4 MSD	09:35:24	89	89	98	96	85
L2417074-01	09:44:40	90	90	97	95	85
WG1903435-6 SERDIL	10:03:18	105	107	110	106	101
R1813830-6 CCV	10:07:57	97	102	102	100	87
R1813830-7 CCB	10:12:38	94	92	96	96	82
L2417074-03	10:25:20	101	101	103	102	97
L2417074-04	10:29:59	98	96	102	101	96
L2417074-05	10:34:39	97	94	99	98	86
L2417074-06	10:39:18	96	93	98	98	86
R1813830-9 CCV	11:06:57	91	94	96	95	96
R1813830-10 CCB	11:11:38	86	84	92	93	81

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	:	**Analysis Method**	:
Start Date	: 04/07/24	**End Date**	: 04/07/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1814341-1 ICV	13:50:03	111	111	132	102	105
R1814341-2 ICB	13:54:33	111	110	117	104	106
R1814341-3 ICSA	14:03:00	87	88	94	96	82
R1814341-4 CCV	14:21:20	106	108	87	99	99
R1814341-5 CCB	14:25:51	107	104	87	104	103
WG1903862-2 LCS	15:26:05	115	110	89	108	102
R1814341-6 CCV	15:30:34	111	116	85	106	106
R1814341-7 CCB	15:35:05	108	107	87	107	107
WG1903862-1 BLANK	15:46:06	106	106	85	104	102
R1814341-8 CCV	16:30:42	100	107	80	95	91
R1814341-9 CCB	16:35:13	100	100	80	98	94

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/10/24	**End Date**	: 04/10/24

Sample #	Time	Internal Standards %RI For:			
		Lithium	Scandium	Ge	In
R1815274-1 ICV	05:41:17	96	104	102	99
R1815274-2 ICB	05:45:57	91	91	95	93
R1815274-3 ICB	05:53:21	92	94	97	95
R1815274-4 ICSA	06:00:45	81	106	102	89
R1815274-5 CCV	06:14:43	94	113	105	100
R1815274-6 CCB	06:19:24	83	92	101	99
R1815274-7 CCV	07:20:36	91	107	100	100
R1815274-8 CCB	07:25:17	84	88	96	93
R1815274-10 CCV	08:20:21	121	116	101	101
R1815274-11 CCB	08:25:03	117	104	95	95
R1815274-12 CCV	08:39:44	123	112	90	91
R1815274-13 CCB	09:12:58	124	100	79	82
R1815274-14 CCV	10:08:57	113	116	94	93
R1815274-15 CCB	10:13:38	107	97	92	90
R1815274-16 CCV	11:06:19	106	111	95	96
R1815274-17 CCB	11:11:00	102	100	96	97
R1815274-18 CCV	11:59:07	100	112	104	100
R1815274-19 CCB	12:03:48	95	98	97	98
R1815274-20 CCV	13:25:01	95	108	100	97
R1815274-21 CCB	13:29:43	91	92	95	90
R1815274-22 CCV	14:10:56	97	110	99	98
R1815274-23 CCB	14:15:38	91	94	98	97
R1815274-24 CCV	15:05:02	96	105	98	98
R1815274-25 CCB	15:09:44	94	95	97	97
R1815274-26 CCV	16:56:50	100	108	92	92
R1815274-27 CCB	17:01:33	83	85	84	84
WG1906871-1 BLANK	17:10:56	86	85	89	86

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSQ	**Analysis Method**	: 1,6020B
Start Date	: 04/10/24	**End Date**	: 04/10/24

Sample #	Time	Internal Standards %RI For:			
		Lithium	Scandium	Ge	In
WG1906871-2 LCS	17:15:34	92	97	98	96
WG1906871-3 MS	17:20:13	94	96	98	94
WG1906871-4 MSD	17:24:51	91	94	99	92
WG1906871-6 SERDIL	17:34:08	90	92	98	94
L2417074-02	17:38:46	87	95	101	101
L2417074-01	17:43:25	88	95	101	100
R1815274-28 CCV	17:53:24	91	106	98	96
R1815274-29 CCB	17:58:06	82	86	90	88
WG1906871-2 LCS	18:27:42	94	97	97	96
R1815274-30 CCV	18:33:59	91	109	97	95
R1815274-31 CCB	18:38:42	83	89	88	87

Form 15
ICP-MS Internal Standards Relative Intensity Summary

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: ICPMSRQ	**Analysis Method**	: 1,6020B
Start Date	: 04/14/24	**End Date**	: 04/14/24

Sample #	Time	Internal Standards %RI For:				
		Lithium	Scandium	Ge	In	Bismuth
R1816954-1 ICV	12:45:12	100	106	104	99	112
R1816954-2 ICB	12:49:55	102	105	104	101	112
R1816954-3 ICV	12:59:16	99	106	104	99	114
R1816954-4 ICB	13:04:00	103	104	103	102	115
R1816954-5 ICSA	13:10:25	96	112	115	98	110
R1816954-6 CCV	13:28:15	100	105	104	98	111
R1816954-7 CCB	13:33:00	104	106	103	100	112
R1816954-8 CCV	14:28:58	102	112	106	99	112
R1816954-9 CCB	14:33:42	105	108	108	102	115
WG1906880-1 BLANK	14:39:30	104	108	106	100	115
WG1906880-2 LCS	14:44:12	105	109	106	102	115
WG1906880-3 MS	14:48:55	103	111	106	101	114
WG1906880-4 MSD	14:53:34	104	110	107	104	115
WG1906880-5 PS	14:58:13	102	109	108	99	113
WG1906880-6 SERDIL	15:02:52	103	106	106	101	105
L2417074-02	15:07:32	100	108	109	101	115
R1816954-11 CCV	15:30:17	101	106	104	98	112
R1816954-12 CCB	15:35:02	103	103	101	98	104
WG1906880-2 LCS	15:44:16	105	109	105	100	114
WG1906880-3 MS	15:48:56	104	106	102	101	113
WG1906880-4 MSD	15:53:37	103	106	104	102	114
R1816954-13 CCV	15:59:44	101	106	105	98	114
R1816954-14 CCB	16:04:28	102	104	101	100	106

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File: PM9836-1
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METALS by 6020B (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container/Sample Preservation
Aluminum, Total	7429-90-5	0.01	0.00327	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Antimony, Total	7440-36-0	0.004	0.000429	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Arsenic, Total	7440-38-2	0.0005	0.000165	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Barium, Total	7440-39-3	0.0005	0.000173	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Beryllium, Total	7440-41-7	0.0005	0.000107	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cadmium, Total	7440-43-9	0.0002	0.0000599	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Calcium, Total	7440-70-2	0.1	0.0394	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Chromium, Total	7440-47-3	0.001	0.000178	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cobalt, Total	7440-48-4	0.0005	0.000163	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Copper, Total	7440-50-8	0.001	0.000384	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Lithium, Total	7439-93-2	0.001	0.000083	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Iron, Total	7439-89-6	0.05	0.0191	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Lead, Total	7439-92-1	0.001	0.000343	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Magnesium, Total	7439-95-4	0.07	0.0242	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Manganese, Total	7439-96-5	0.001	0.00044	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Nickel, Total	7440-02-0	0.002	0.000556	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Potassium, Total	7440-09-7	0.1	0.0309	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Selenium, Total	7782-49-2	0.005	0.00173	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Silver, Total	7440-22-4	0.0004	0.000163	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Sodium, Total	7440-23-5	0.1	0.0293	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Thallium, Total	7440-28-0	0.0005	0.000143	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Vanadium, Total	7440-62-2	0.005	0.00157	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Zinc, Total	7440-66-6	0.01	0.00341	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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METALS by 6020B (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container/Sample Preservation
Aluminum, Total	7429-90-5	10	1.48	mg/kg	48-151	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Antimony, Total	7440-36-0	0.16	0.01352	mg/kg	1-208	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Arsenic, Total	7440-38-2	0.05	0.0066	mg/kg	79-121	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Barium, Total	7440-39-3	0.3	0.02112	mg/kg	83-117	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Beryllium, Total	7440-41-7	0.03	0.00872	mg/kg	83-117	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Cadmium, Total	7440-43-9	0.02	0.00264	mg/kg	83-117	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Calcium, Total	7440-70-2	50	6.08	mg/kg	81-119	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Chromium, Total	7440-47-3	0.2	0.0468	mg/kg	80-120	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Cobalt, Total	7440-48-4	0.05	0.00532	mg/kg	84-115	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Copper, Total	7440-50-8	0.2	0.0194	mg/kg	81-118	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Iron, Total	7439-89-6	20	2.06	mg/kg	45-155	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Lead, Total	7439-92-1	0.06	0.0146	mg/kg	81-117	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Magnesium, Total	7439-95-4	10	1.232	mg/kg	76-124	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Manganese, Total	7439-96-5	0.2	0.0444	mg/kg	81-117	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Nickel, Total	7440-02-0	0.1	0.02672	mg/kg	83-117	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Potassium, Total	7440-09-7	10	1.588	mg/kg	71-129	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Selenium, Total	7782-49-2	0.2	0.0756	mg/kg	78-122	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Silver, Total	7440-22-4	0.05	0.00488	mg/kg	75-124	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Sodium, Total	7440-23-5	15	1.172	mg/kg	72-127	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Thallium, Total	7440-28-0	0.02	0.00516	mg/kg	80-120	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Vanadium, Total	7440-62-2	0.1	0.03792	mg/kg	78-122	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Zinc, Total	7440-66-6	1	0.26	mg/kg	82-118	20	75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Performance Report

System

Start time:	4/1/2024 4:48:44 AM
Instrument:	iCAP Q
Operator:	ALPHALAB\Metals-Instrument
Template:	STD AGD
Instrument Serial Number:	03031R
Last Autotune:	Autotune-!InstallTune KEDS Line1-20240318-145008763.imatdat
Solution:	1 ppb Tune B in 2% HNO3 and 0.5% HCl.

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	0.6 CPS	Less than	5.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	5.0 CPS
7Li	Passed	19,969.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	30,646.0 CPS	Greater than	1,000.0 CPS
238U	Passed	113,769.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0111	Less than	0.025
137Ba++/137Ba	Passed	0.0077	Less than	0.034
115In	Passed	52,835.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	1.3%	5
59Co	1.1%	5
238U	0.8%	5
140Ce.16O	4.6%	2
140Ce	1.4%	2
115In	2.1%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	7.0568	0.0408	0.685	0.600	0.900
59Co	Passed	58.9395	0.0063	0.715	0.600	0.900
115In	Passed	114.8965	0.0074	0.729	0.600	0.900
238U	Passed	238.0417	0.0091	0.698	0.600	0.900

Tune Settings

Parameter	Value
Additional Gas Flow 1	43.10
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-374.02
Auxilliary Flow	0.80
CCT Bias	0.56
CCT Entry Lens	-89.99
CCT Exit Lens	-160.01
CCT Focus Lens	-6.01
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-198.39
D2 Lens	-80.00
Deflection Entry Lens	-35.01
Dry Pump Speed	0.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-285.80
Focus Lens	21.00
Nebulizer Flow	0.38
Peristaltic Pump Speed	16.86
Plasma Power	1549.58
Pole Bias	3.01
Quad Entry Lens	-25.20
Sampling Depth	5.00
Spray Chamber Temperature	2.68
Torch Horizontal Position	-0.70
Torch Vertical Position	0.95
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	1.00
Virtual CCT Mass to Dac Factor	60.00
Virtual CCT Mass to Dac Offset	80.00

Vacuum Check

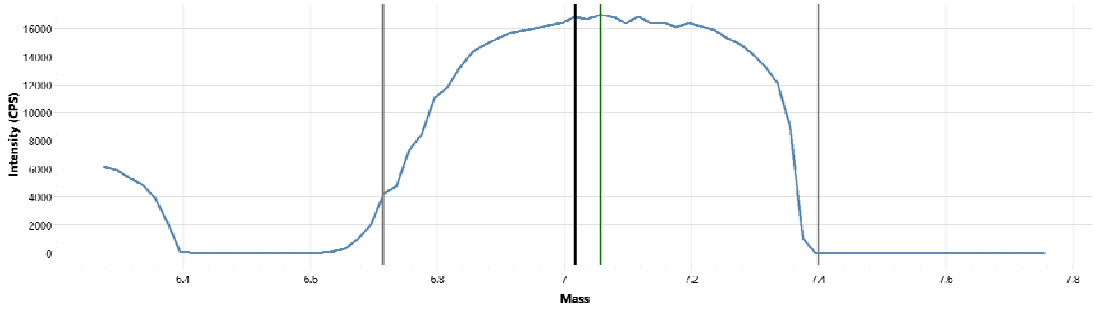
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	1.639e-7
Interface Pressure		1.654e+0

Detector Voltages

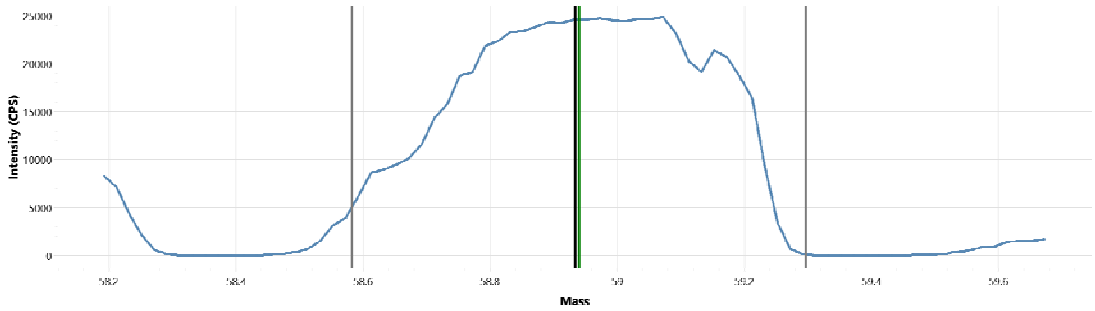
Analog	Counting
-1762.50	887.50

Mass Calibration Peaks

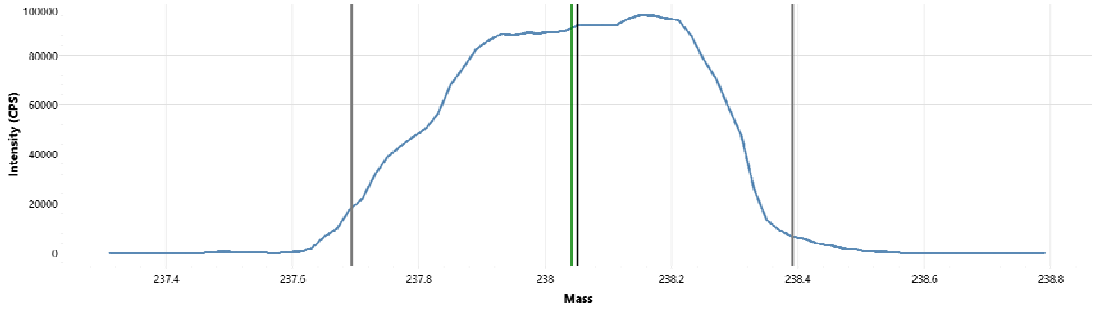
Analyte: 7Li



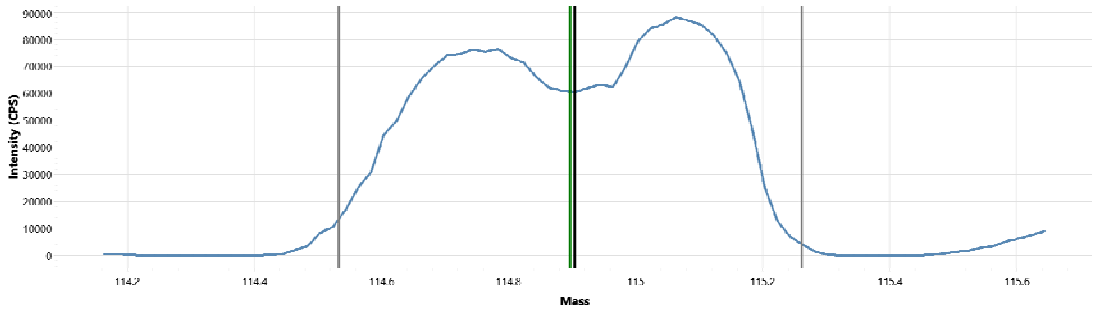
Analyte: 59Co



Analyte: 238U



Analyte: 115In



Performance Report

System

Start time:	4/1/2024 4:50:59 AM
Instrument:	iCAP Q
Operator:	ALPHALAB\a2-icpmsq2
Template:	STD AGD
Instrument Serial Number:	Q01717
Last Autotune:	Autotune-SourceTune High Matrix-20240307-150123100.imatdat
Solution:	1 ppb Tune B in 2% HNO3 and 0.5% HCl.

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	0.0 CPS	Less than	5.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	5.0 CPS
7Li	Passed	44,162.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	30,396.0 CPS	Greater than	1,000.0 CPS
238U	Passed	52,113.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0117	Less than	0.025
137Ba++/137Ba	Passed	0.0278	Less than	0.034
115In	Passed	30,421.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	0.9%	5
59Co	1.2%	5
238U	1.4%	5
140Ce.16O	4.9%	2
140Ce	0.8%	2
115In	1.4%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	6.9945	0.0215	0.674	0.650	0.850
59Co	Passed	58.9179	0.0153	0.687	0.650	0.850
115In	Passed	114.8820	0.0218	0.714	0.650	0.850
238U	Passed	238.0487	0.0021	0.733	0.650	0.850

Tune Settings

Parameter	Value
Additional Gas Flow 1	41.22
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-384.97
Auxilliary Flow	0.80
CCT Bias	-3.21
CCT Entry Lens	-70.02
CCT Exit Lens	-160.01
CCT Focus Lens	-21.00
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-200.05
D2 Lens	-90.01
Deflection Entry Lens	-35.01
Dry Pump Speed	0.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-80.10
Focus Lens	21.00
Nebulizer Flow	0.42
Peristaltic Pump Speed	17.00
Plasma Power	1550.00
Pole Bias	1.00
Quad Entry Lens	-20.00
Sampling Depth	5.00
Spray Chamber Temperature	2.70
Torch Horizontal Position	0.85
Torch Vertical Position	-1.06
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	0.65
Virtual CCT Mass to Dac Factor	130.00
Virtual CCT Mass to Dac Offset	0.01

Vacuum Check

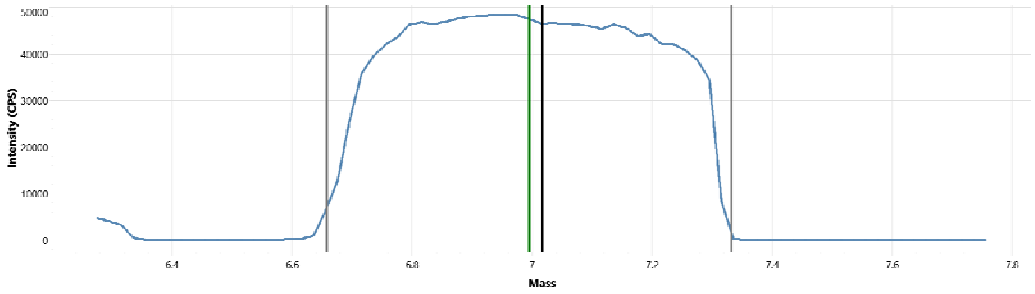
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	2.813e-7
Interface Pressure		1.936e+0

Detector Voltages

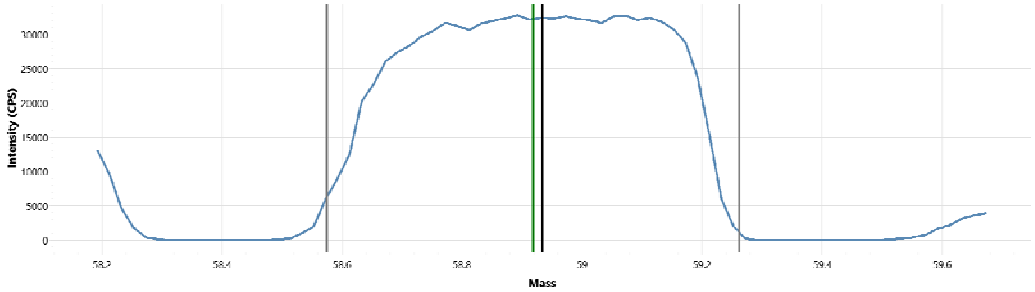
Analog	Counting
-1987.50	1537.50

Mass Calibration Peaks

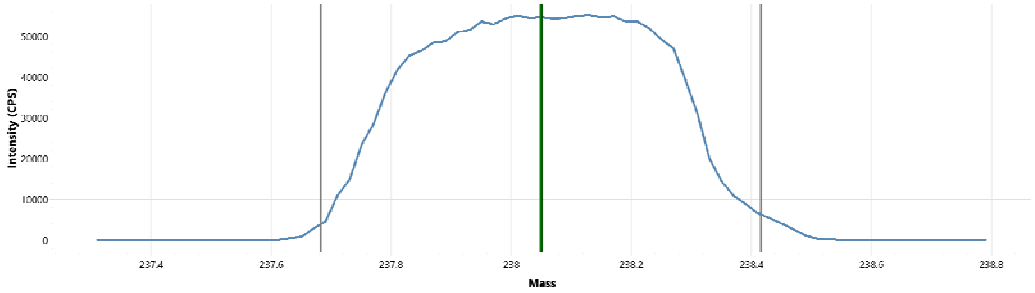
Analyte: 7Li



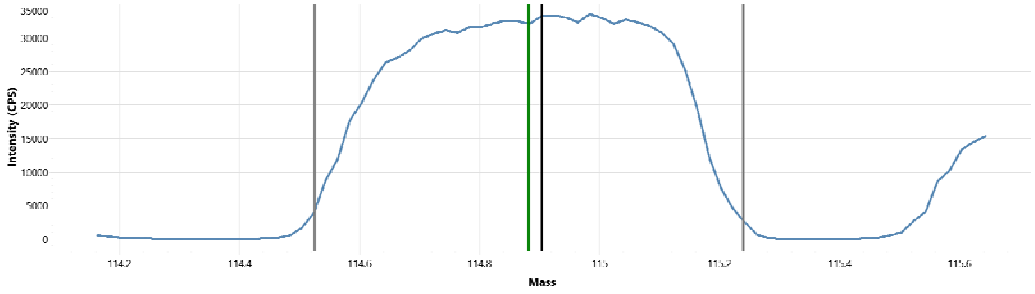
Analyte: 59Co



Analyte: 238U



Analyte: 115In



Performance Report

System

Start time:	4/3/2024 3:53:44 AM
Instrument:	iCAP Q
Operator:	ALPHALAB\a2-icpmsq2
Template:	STD AGD
Instrument Serial Number:	Q01717
Last Autotune:	Autotune-SourceTune High Matrix-20240307-150123100.imatdat
Solution:	1 ppb Tune B in 2% HNO3 and 0.5% HCl.

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	0.0 CPS	Less than	5.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	5.0 CPS
7Li	Passed	38,078.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	27,568.0 CPS	Greater than	1,000.0 CPS
238U	Passed	47,125.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0127	Less than	0.025
137Ba++/137Ba	Passed	0.0323	Less than	0.034
115In	Passed	26,270.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	1.0%	5
59Co	0.9%	5
238U	1.1%	5
140Ce.16O	9.3%	2
140Ce	0.6%	2
115In	1.2%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	6.9970	0.0190	0.675	0.650	0.850
59Co	Passed	58.9202	0.0130	0.686	0.650	0.850
115In	Passed	114.8864	0.0174	0.710	0.650	0.850
238U	Passed	238.0592	0.0085	0.735	0.650	0.850

Tune Settings

Parameter	Value
Additional Gas Flow 1	41.22
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-384.97
Auxilliary Flow	0.80
CCT Bias	-3.21
CCT Entry Lens	-70.02
CCT Exit Lens	-160.01
CCT Focus Lens	-21.00
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-200.05
D2 Lens	-90.01
Deflection Entry Lens	-35.01
Dry Pump Speed	0.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-80.10
Focus Lens	21.00
Nebulizer Flow	0.42
Peristaltic Pump Speed	17.00
Plasma Power	1550.00
Pole Bias	1.00
Quad Entry Lens	-20.00
Sampling Depth	5.00
Spray Chamber Temperature	2.70
Torch Horizontal Position	0.85
Torch Vertical Position	-1.06
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	0.65
Virtual CCT Mass to Dac Factor	130.00
Virtual CCT Mass to Dac Offset	0.01

Vacuum Check

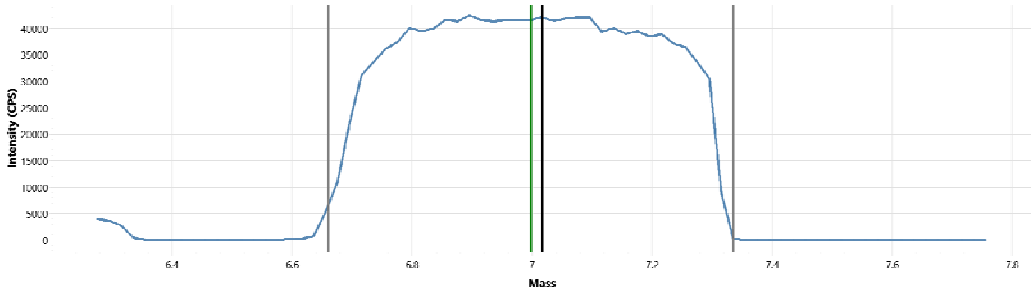
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	2.877e-7
Interface Pressure		1.936e+0

Detector Voltages

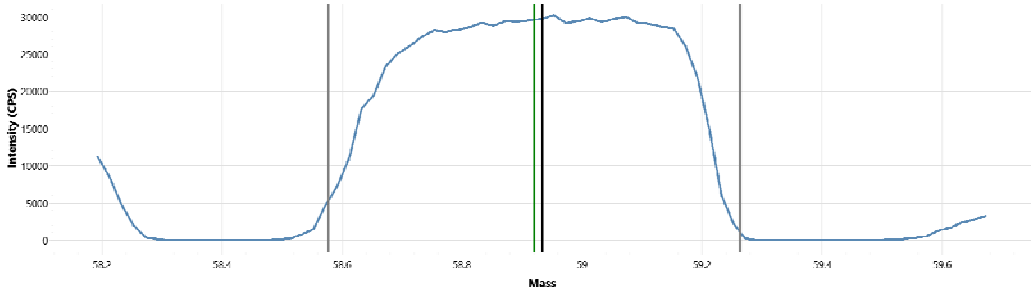
Analog	Counting
-1987.50	1537.50

Mass Calibration Peaks

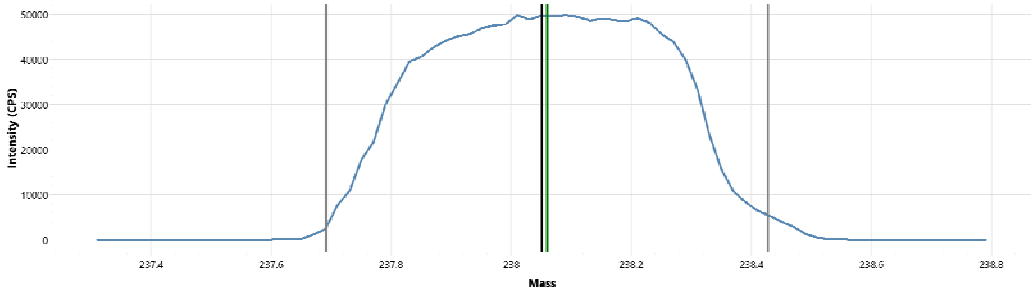
Analyte: 7Li



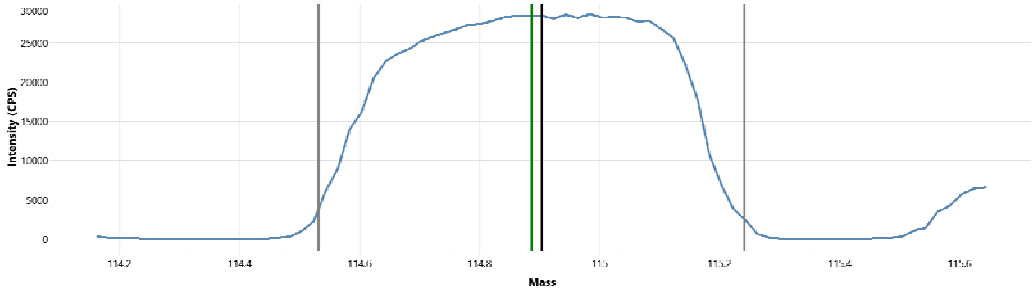
Analyte: 59Co



Analyte: 238U



Analyte: 115In



Performance Report

System

Start time:	4/4/2024 4:46:29 AM
Instrument:	iCAP RQ
Operator:	ALPHALAB\ICPMSRQ
Template:	STD_DEF
Instrument Serial Number:	RQ01904
Last Autotune:	Autotune-!CaliTune STD-100V-20240322-152811806.imatdat
Solution:	No solution specified

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	6.8 CPS	Less than	10.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	10.0 CPS
7Li	Passed	31,095.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	104,755.0 CPS	Greater than	1,000.0 CPS
238U	Passed	87,700.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0183	Less than	0.025
137Ba++/137Ba	Passed	0.0118	Less than	0.034
115In	Passed	95,173.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	1.1%	5
59Co	0.8%	5
238U	0.5%	5
115In	1.1%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	7.0191	0.0030	0.652	0.600	0.900
59Co	Passed	58.9198	0.0134	0.688	0.600	0.900
115In	Passed	114.9012	0.0027	0.677	0.600	0.900
238U	Passed	238.0675	0.0167	0.682	0.600	0.900

Tune Settings

Parameter	Value
Additional Gas Flow 1	0.00
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-382.40
Auxilliary Flow	0.80
CCT Bias	-3.50
CCT Entry Lens	-102.01
CCT Exit Lens	-160.01
CCT Focus Lens	-2.16
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-210.01
D2 Lens	-80.00
Deflection Entry Lens	-35.01
Dry Pump Speed	100.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-159.46
Focus Lens	21.00
Nebulizer Flow	0.90
Peristaltic Pump Speed	20.00
Plasma Power	1549.58
Pole Bias	-0.93
Quad Entry Lens	-30.79
Sampling Depth	5.00
Spray Chamber Temperature	2.68
Torch Horizontal Position	-0.18
Torch Vertical Position	-1.04
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	0.65
Virtual CCT Mass to Dac Factor	130.00
Virtual CCT Mass to Dac Offset	-45.00

Vacuum Check

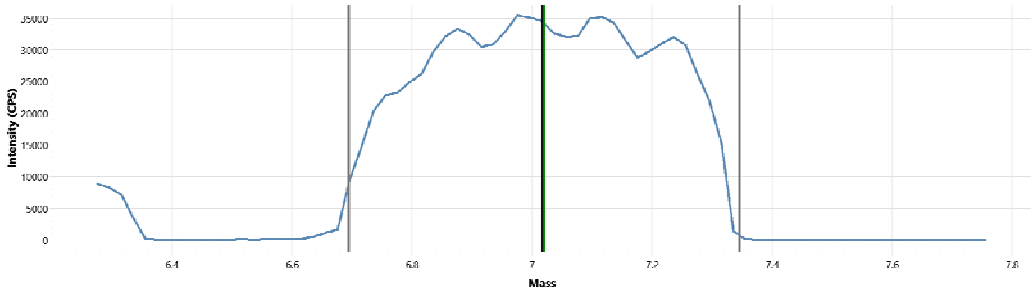
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	2.458e-7
Interface Pressure		1.654e+0

Detector Voltages

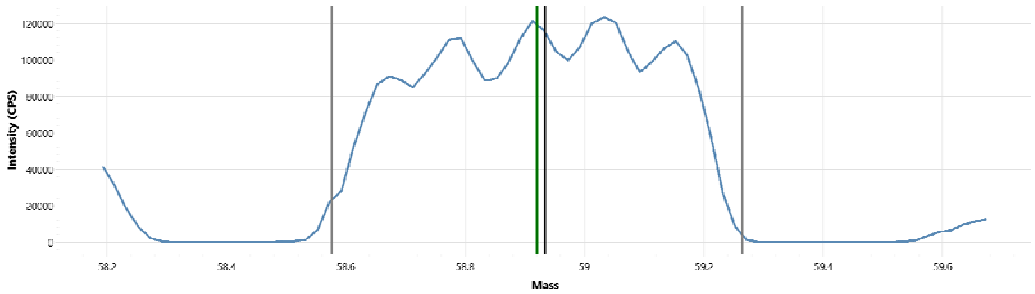
Analog	Counting
-2400.00	1450.00

Mass Calibration Peaks

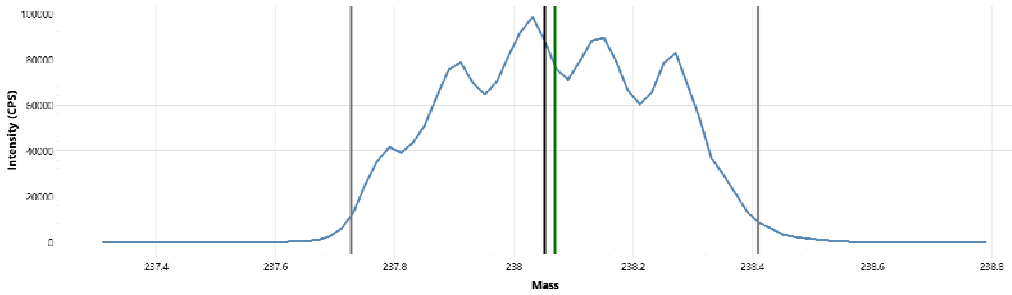
Analyte: 7Li



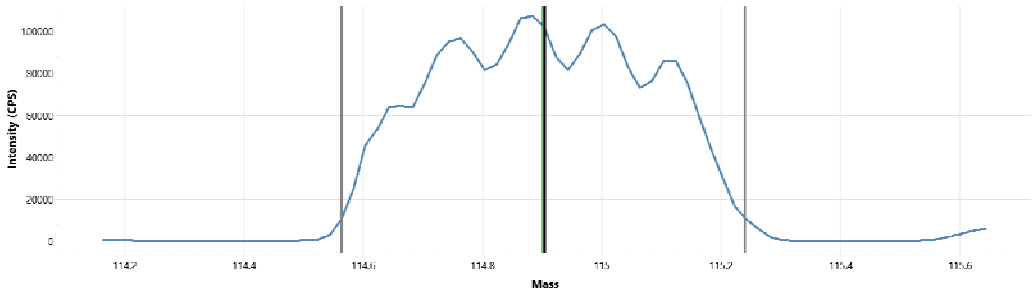
Analyte: 59Co



Analyte: 238U



Analyte: 115In



Performance Report

System

Start time:	4/5/2024 4:25:56 AM
Instrument:	iCAP Q
Operator:	ALPHALAB\Metals-Instrument
Template:	STD AGD
Instrument Serial Number:	03031R
Last Autotune:	Autotune-!InstallTune KEDS Line1-20240318-145008763.imatdat
Solution:	1 ppb Tune B in 2% HNO3 and 0.5% HCl.

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	0.8 CPS	Less than	5.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	5.0 CPS
7Li	Passed	16,152.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	20,970.0 CPS	Greater than	1,000.0 CPS
238U	Passed	85,664.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0108	Less than	0.025
137Ba++/137Ba	Passed	0.0092	Less than	0.034
115In	Passed	34,639.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	1.1%	5
59Co	1.1%	5
238U	1.1%	5
140Ce.16O	2.6%	2
140Ce	1.1%	2
115In	1.8%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	7.0496	0.0336	0.700	0.600	0.900
59Co	Passed	58.9305	0.0027	0.720	0.600	0.900
115In	Passed	114.8897	0.0141	0.742	0.600	0.900
238U	Passed	238.0430	0.0078	0.721	0.600	0.900

Tune Settings

Parameter	Value
Additional Gas Flow 1	43.10
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-374.02
Auxilliary Flow	0.80
CCT Bias	0.56
CCT Entry Lens	-89.99
CCT Exit Lens	-160.01
CCT Focus Lens	-6.01
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-198.39
D2 Lens	-80.00
Deflection Entry Lens	-35.01
Dry Pump Speed	0.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-285.80
Focus Lens	21.00
Nebulizer Flow	0.38
Peristaltic Pump Speed	16.86
Plasma Power	1549.58
Pole Bias	3.01
Quad Entry Lens	-25.20
Sampling Depth	5.00
Spray Chamber Temperature	2.68
Torch Horizontal Position	-0.70
Torch Vertical Position	0.95
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	1.00
Virtual CCT Mass to Dac Factor	60.00
Virtual CCT Mass to Dac Offset	80.00

Vacuum Check

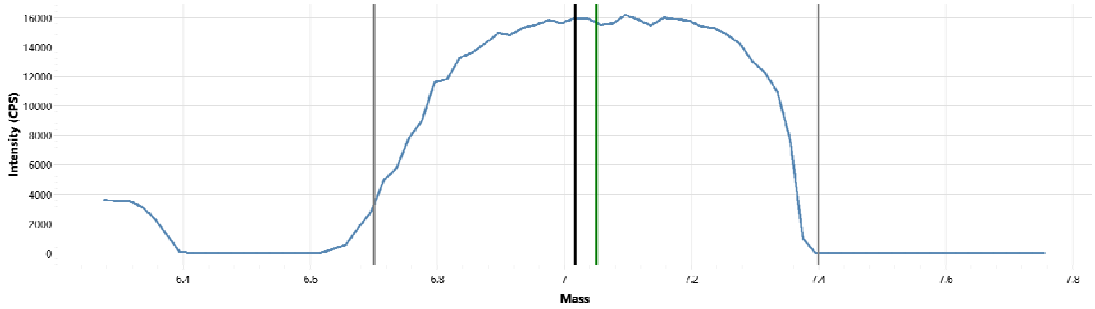
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	1.464e-7
Interface Pressure		1.617e+0

Detector Voltages

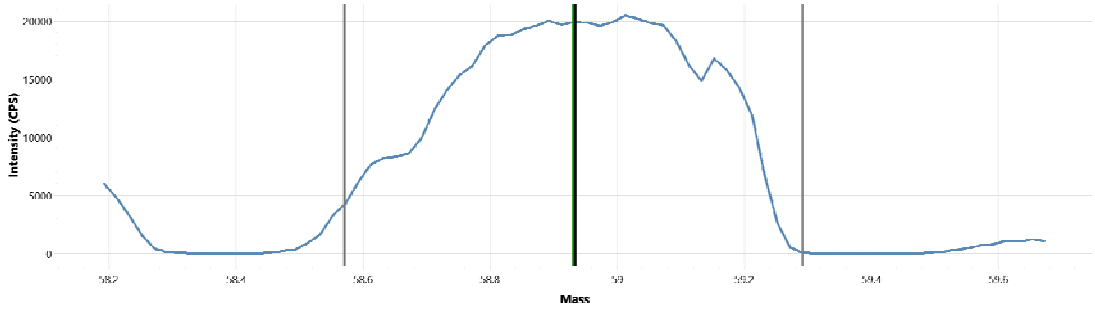
Analog	Counting
-1762.50	887.50

Mass Calibration Peaks

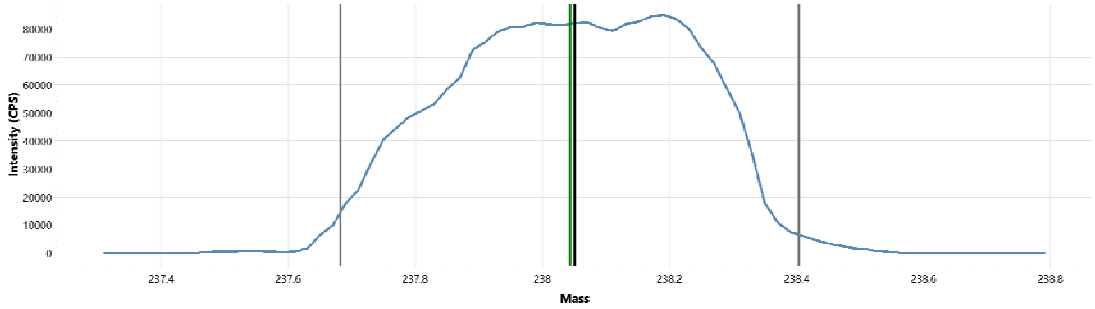
Analyte: 7Li



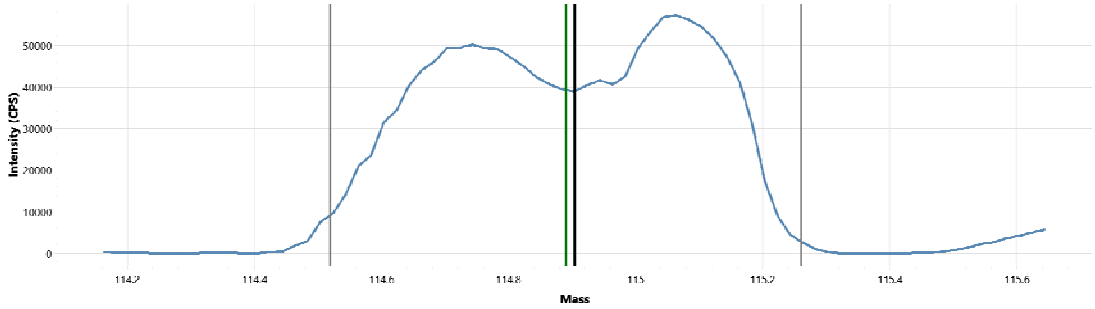
Analyte: 59Co



Analyte: 238U



Analyte: 115In



System

Start time:	4/7/2024 11:47:25 AM
Instrument:	iCAP Q
Operator:	ALPHALAB\a2-icpmsq2
Template:	STD AGD
Instrument Serial Number:	Q01717
Last Autotune:	Autotune-SourceTune High Matrix-20240307-150123100.imatdat
Solution:	1 ppb Tune B in 2% HNO3 and 0.5% HCl.

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	0.2 CPS	Less than	5.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	5.0 CPS
7Li	Passed	53,722.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	44,718.0 CPS	Greater than	1,000.0 CPS
238U	Passed	56,219.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0088	Less than	0.025
137Ba++/137Ba	Passed	0.0258	Less than	0.034
115In	Passed	44,114.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	2.1%	5
59Co	3.2%	5
238U	2.0%	5
140Ce.16O	3.4%	2
140Ce	2.0%	2
115In	3.3%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	6.9967	0.0193	0.683	0.650	0.850
59Co	Passed	58.9128	0.0204	0.697	0.650	0.850
115In	Passed	114.8784	0.0255	0.715	0.650	0.850
238U	Passed	238.0422	0.0086	0.705	0.650	0.850

Tune Settings

Parameter	Value
Additional Gas Flow 1	41.22
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-384.97
Auxilliary Flow	0.80
CCT Bias	-3.21
CCT Entry Lens	-70.02
CCT Exit Lens	-160.01
CCT Focus Lens	-21.00
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-200.05
D2 Lens	-90.01
Deflection Entry Lens	-35.01
Dry Pump Speed	0.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-80.10
Focus Lens	21.00
Nebulizer Flow	0.42
Peristaltic Pump Speed	17.00
Plasma Power	1550.00
Pole Bias	1.00
Quad Entry Lens	-20.00
Sampling Depth	5.00
Spray Chamber Temperature	2.70
Torch Horizontal Position	0.85
Torch Vertical Position	-1.06
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	0.65
Virtual CCT Mass to Dac Factor	130.00
Virtual CCT Mass to Dac Offset	0.01

Vacuum Check

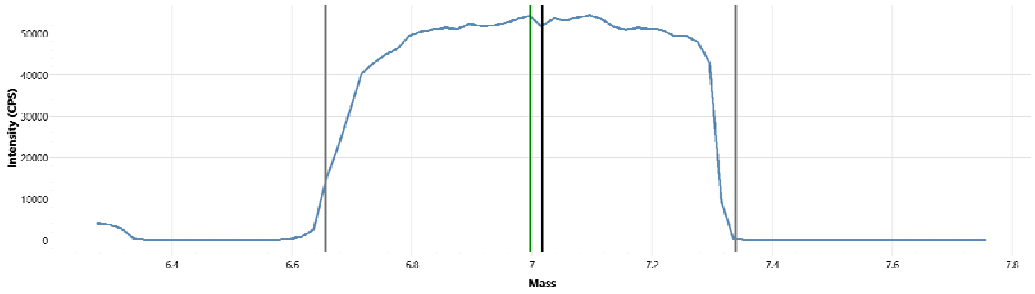
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	4.828e-7
Interface Pressure		1.936e+0

Detector Voltages

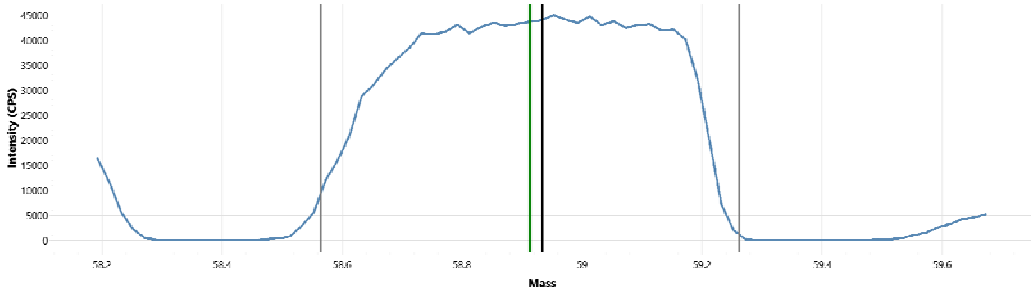
Analog	Counting
-1987.50	1537.50

Mass Calibration Peaks

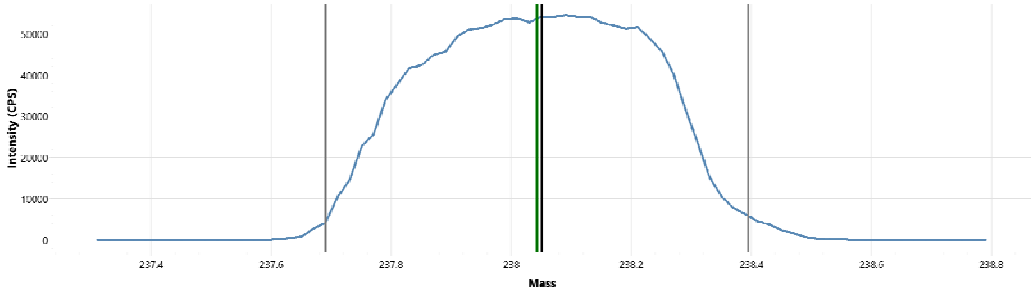
Analyte: 7Li



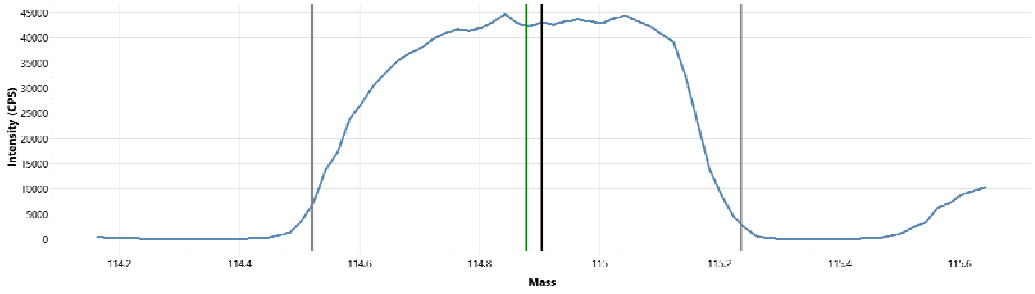
Analyte: 59Co



Analyte: 238U



Analyte: 115In



Performance Report

System

Start time:	4/10/2024 4:42:00 AM
Instrument:	iCAP Q
Operator:	ALPHALAB\Metals-Instrument
Template:	STD AGD
Instrument Serial Number:	03031R
Last Autotune:	Autotune-!InstallTune KEDS Line1-20240318-145008763.imatdat
Solution:	1 ppb Tune B in 2% HNO3 and 0.5% HCl.

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	2.0 CPS	Less than	5.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	5.0 CPS
7Li	Passed	10,480.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	17,437.0 CPS	Greater than	1,000.0 CPS
238U	Passed	29,148.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0085	Less than	0.025
137Ba++/137Ba	Passed	0.0072	Less than	0.034
115In	Passed	25,584.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	2.2%	5
59Co	2.6%	5
238U	1.0%	5
140Ce.16O	7.1%	2
140Ce	2.0%	2
115In	1.4%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	7.0492	0.0332	0.705	0.600	0.900
59Co	Passed	58.9256	0.0076	0.735	0.600	0.900
115In	Passed	114.8897	0.0141	0.746	0.600	0.900
238U	Passed	238.0513	0.0006	0.713	0.600	0.900

Tune Settings

Parameter	Value
Additional Gas Flow 1	43.10
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-374.02
Auxilliary Flow	0.80
CCT Bias	0.56
CCT Entry Lens	-89.99
CCT Exit Lens	-160.01
CCT Focus Lens	-6.01
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-198.39
D2 Lens	-80.00
Deflection Entry Lens	-35.01
Dry Pump Speed	0.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-122.44
Focus Lens	21.00
Nebulizer Flow	0.28
Peristaltic Pump Speed	17.00
Plasma Power	1549.58
Pole Bias	3.01
Quad Entry Lens	-25.20
Sampling Depth	5.00
Spray Chamber Temperature	2.68
Torch Horizontal Position	-0.70
Torch Vertical Position	0.95
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	1.00
Virtual CCT Mass to Dac Factor	60.00
Virtual CCT Mass to Dac Offset	80.00

Vacuum Check

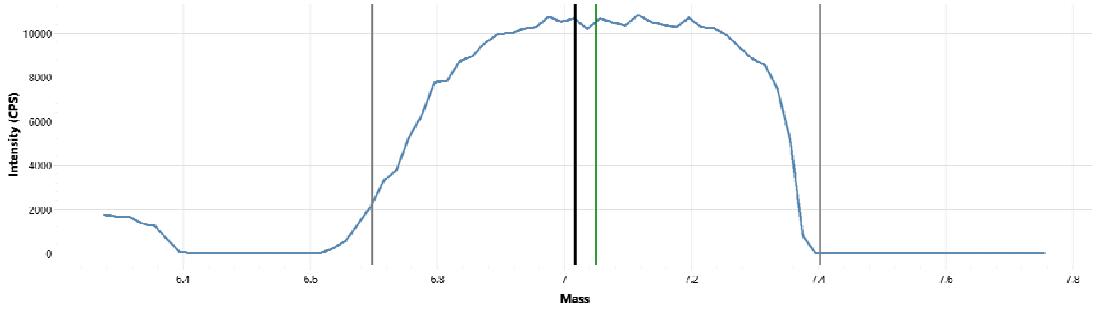
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	1.432e-7
Interface Pressure		1.617e+0

Detector Voltages

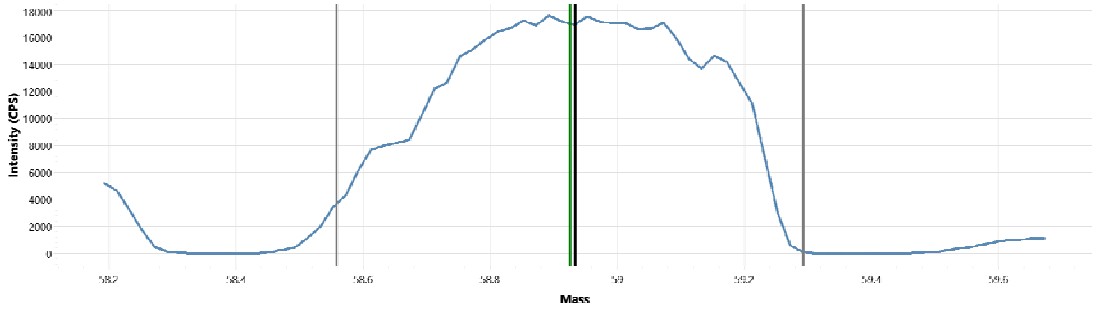
Analog	Counting
-1737.50	1037.50

Mass Calibration Peaks

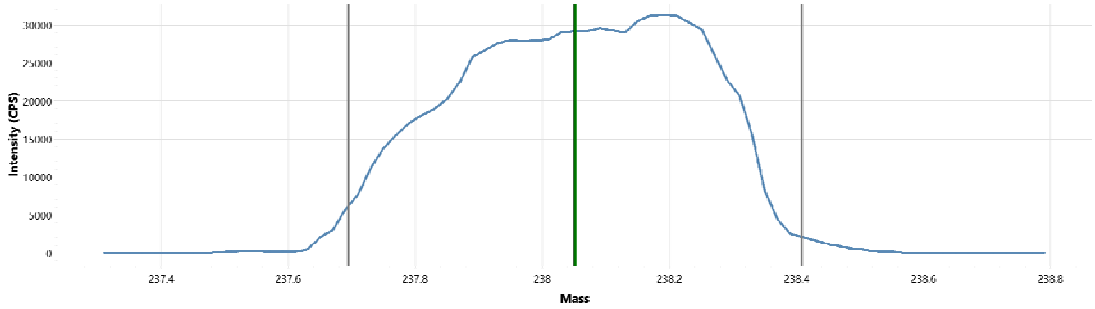
Analyte: 7Li



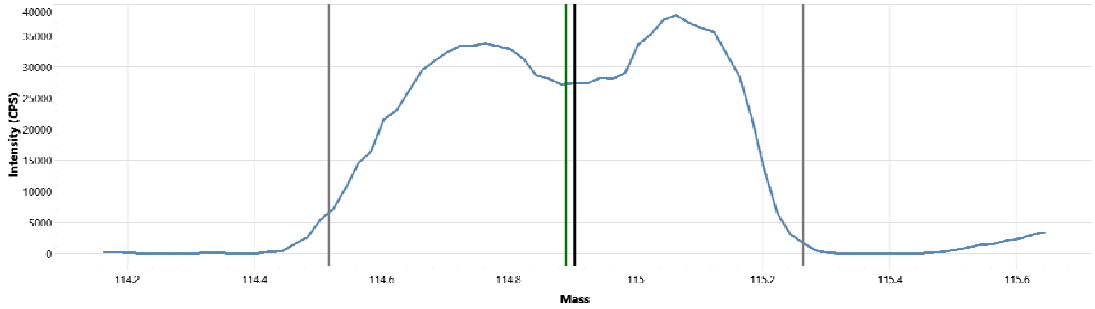
Analyte: 59Co



Analyte: 238U



Analyte: 115In



System

Start time:	4/14/2024 11:46:18 AM
Instrument:	iCAP RQ
Operator:	ALPHALAB\ICPMSRQ
Template:	STD_DEF
Instrument Serial Number:	RQ01904
Last Autotune:	Autotune-!CaliTune STD-100V-20240322-152811806.imatdat
Solution:	No solution specified

Sensitivity & Stability Test

Result	Runs	Sweeps
Passed	5	10

Sensitivity

Analyte	Result	Value	Condition	Limit
Bkg4.5	Passed	4.8 CPS	Less than	10.0 CPS
Bkg220.7	Passed	0.0 CPS	Less than	10.0 CPS
7Li	Passed	12,700.0 CPS	Greater than	10,000.0 CPS
59Co	Passed	28,791.0 CPS	Greater than	1,000.0 CPS
238U	Passed	32,476.0 CPS	Greater than	20,000.0 CPS
140Ce.16O/140Ce	Passed	0.0221	Less than	0.025
137Ba++/137Ba	Passed	0.007	Less than	0.034
115In	Passed	31,569.0 CPS	Greater than	5,000.0 CPS

Stability

Analyte	Value	Limit
7Li	1.1%	5
59Co	1.3%	5
238U	1.2%	5
115In	0.5%	5

Mass Calibration Test

Result	Channels	Dwell	MeasureWidth	PointSpacing	Sweeps
Passed	75	0.04	1.5	0.02	10

Analyte	Result	Centroid Mass [u]	Offset	Peak width [u]	Peak width min [u]	Peak width max [u]
7Li	Passed	7.0253	0.0093	0.656	0.600	0.900
59Co	Passed	58.9207	0.0125	0.695	0.600	0.900
115In	Passed	114.8971	0.0068	0.696	0.600	0.900
238U	Passed	238.0470	0.0038	0.713	0.600	0.900

Tune Settings

Parameter	Value
Additional Gas Flow 1	0.00
Additional Gas Flow 2	0.00
Additional Gas Flow 3	0.00
Angular Deflection	-382.40
Auxilliary Flow	0.80
CCT Bias	-3.50
CCT Entry Lens	-102.01
CCT Exit Lens	-160.01
CCT Focus Lens	-2.16
CCT1 Flow	0.00
CCT1 Shut-Off Valve	0.00
CCT2 Flow	0.00
CCT2 Shut-Off Valve	0.00
Cool Flow	14.00
D1 Lens	-210.01
D2 Lens	-80.00
Deflection Entry Lens	-35.01
Dry Pump Speed	100.00
Extraction Lens 1 Negative	0.00
Extraction Lens 1 Polarity	0.00
Extraction Lens 1 Positive	0.00
Extraction Lens 2	-119.90
Focus Lens	21.00
Nebulizer Flow	0.82
Peristaltic Pump Speed	17.00
Plasma Power	1549.58
Pole Bias	-0.93
Quad Entry Lens	-30.79
Sampling Depth	5.00
Spray Chamber Temperature	2.68
Torch Horizontal Position	-0.18
Torch Vertical Position	-1.04
Virtual CCT Mass Maximum Dac Limit Set	4095.00
Virtual CCT Mass parameter b	0.65
Virtual CCT Mass to Dac Factor	130.00
Virtual CCT Mass to Dac Offset	-45.00

Vacuum Check

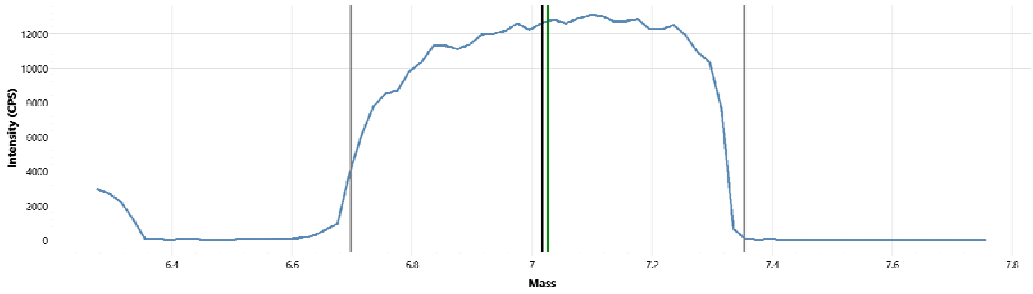
Parameter	Result	Value
Analyzer Pressure	Vacuum ok	2.458e-7
Interface Pressure		1.581e+0

Detector Voltages

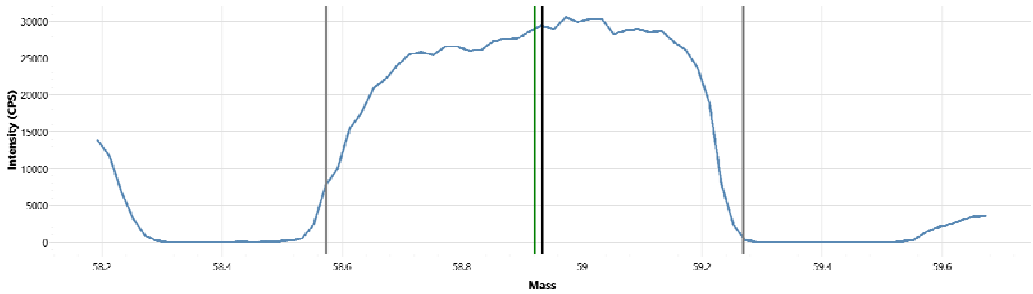
Analog	Counting
-2400.00	1450.00

Mass Calibration Peaks

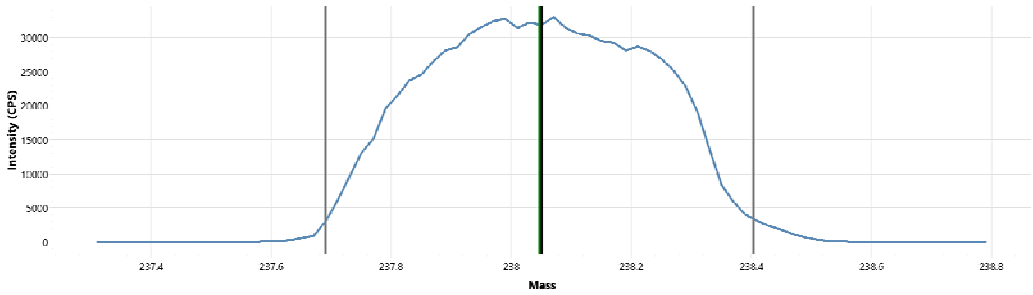
Analyte: 7Li



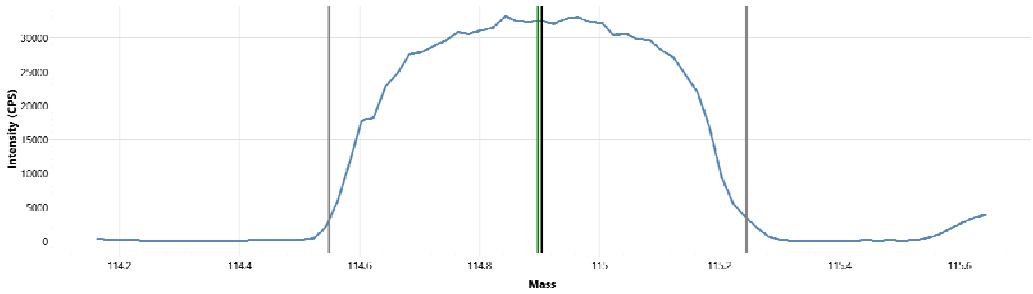
Analyte: 59Co



Analyte: 238U

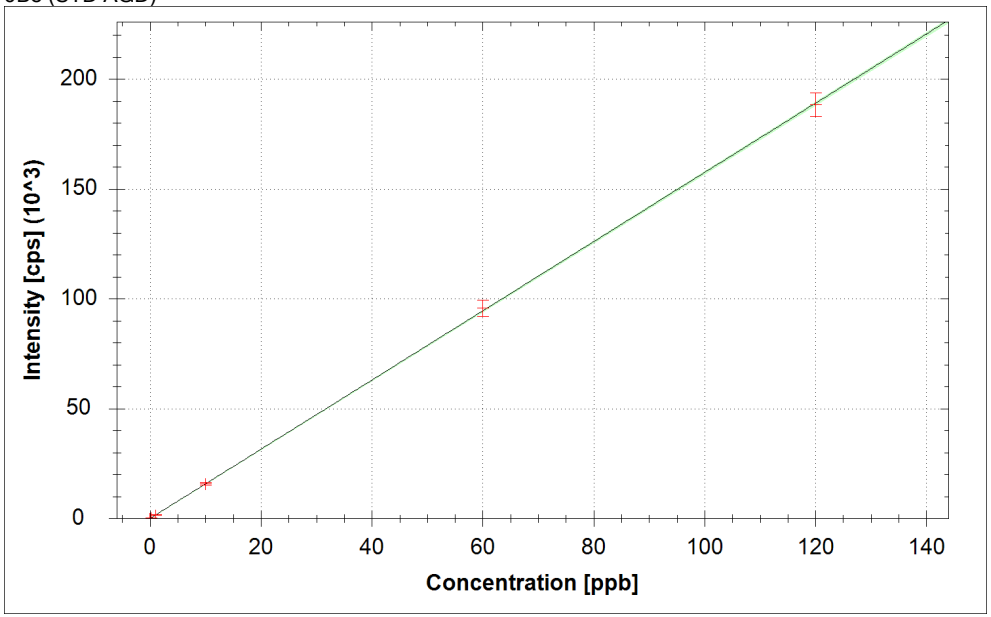


Analyte: 115In



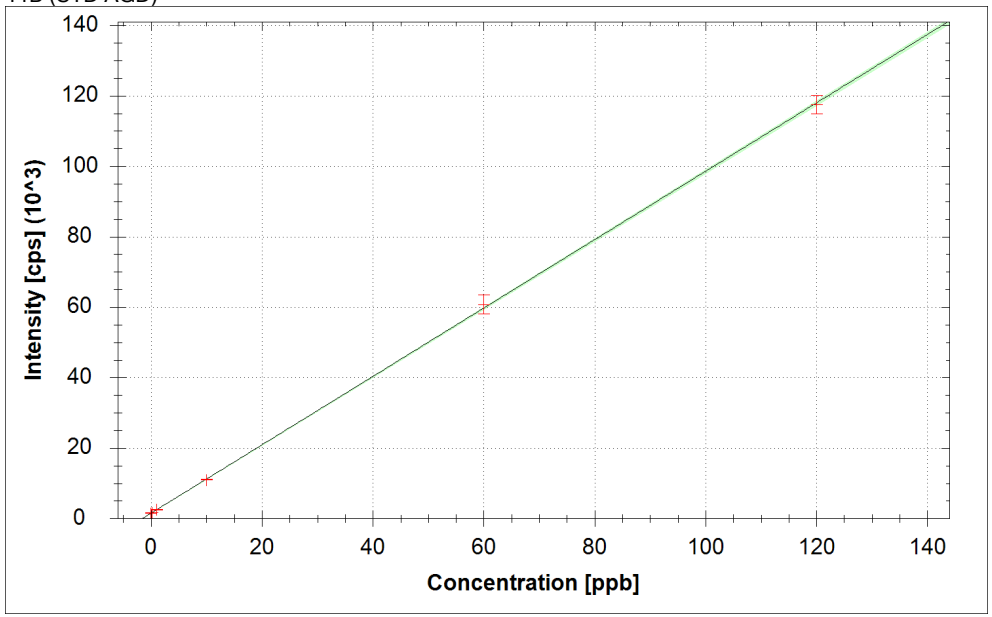
Calibration Curves:

9Be (STD AGD)



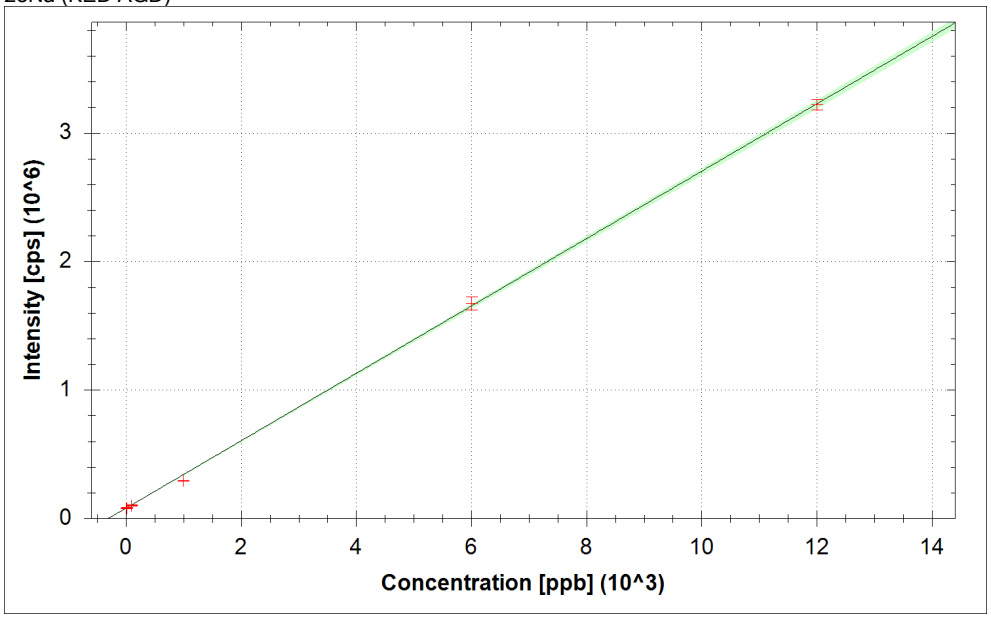
f(x) = 1574.1437*x + 19.5122
R² = 0.9999
BEC = 0.012 ppb
LoD = 0.0112 ppb

11B (STD AGD)



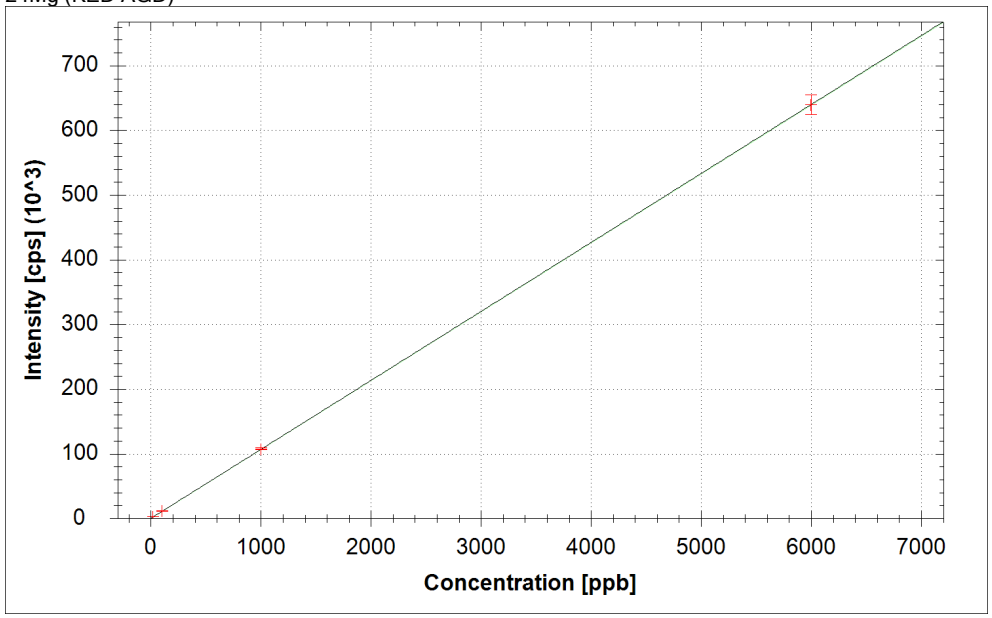
f(x) = 970.5140*x + 1498.6908
R² = 0.9999
BEC = 1.544 ppb
LoD = 0.1675 ppb

23Na (KED AGD)



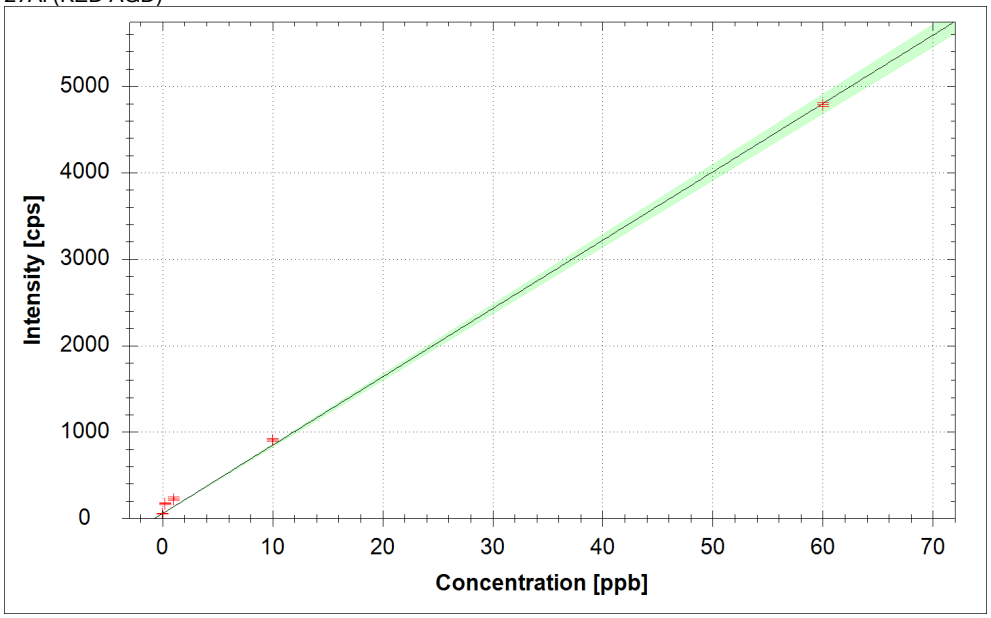
f(x) = 262.1945*x + 79774.3851
R² = 0.9997
BEC = 304.257 ppb
LoD = 33.0242 ppb

24Mg (KED AGD)



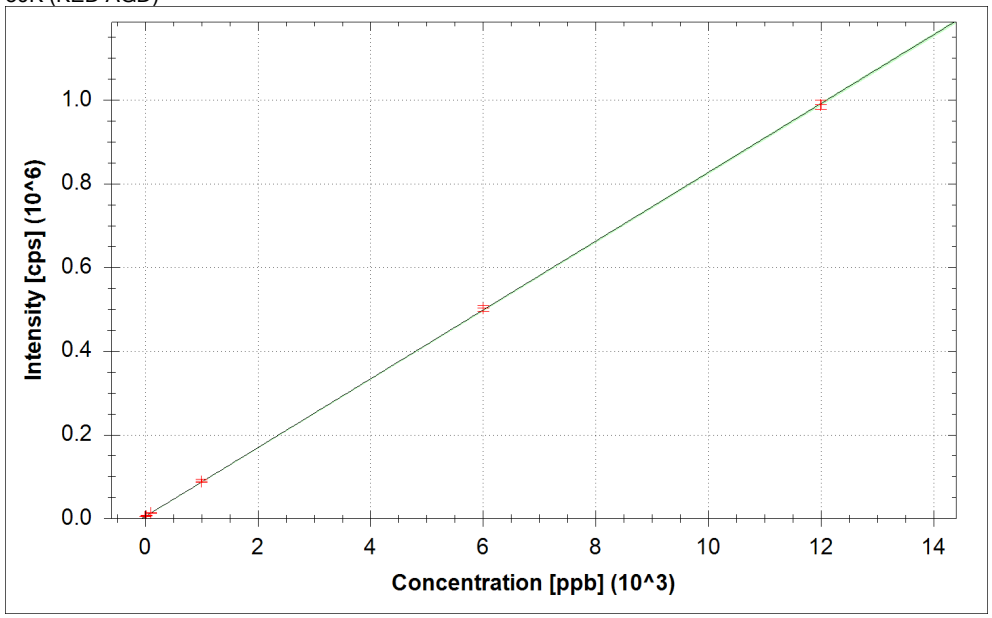
f(x) = 106.6157*x + 110.3441
R² = 1.0000
BEC = 1.035 ppb
LoD = 0.6892 ppb

27Al (KED AGD)



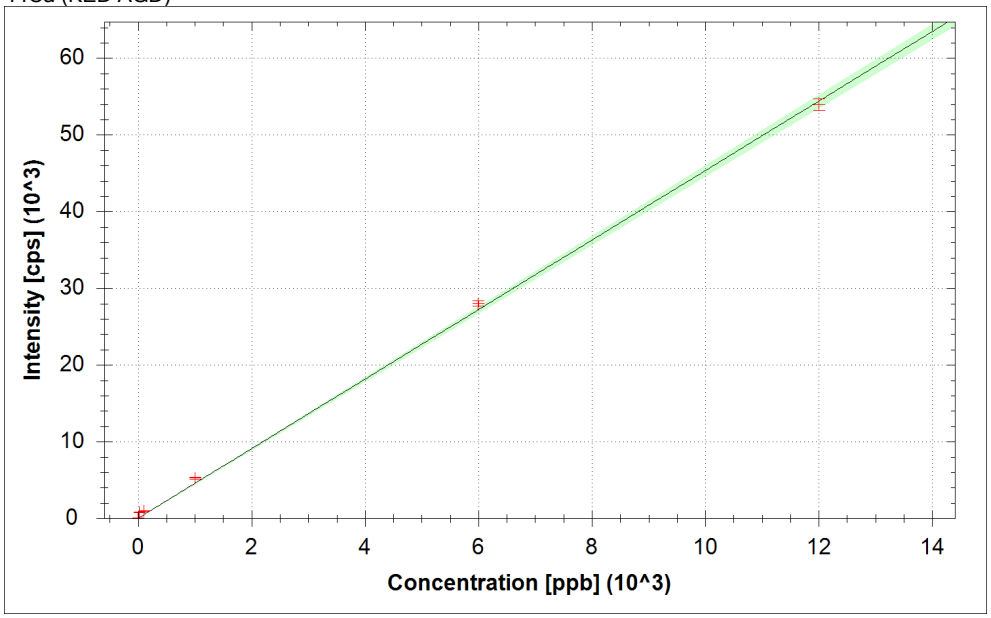
f(x) = 79.0446*x + 55.6802
R² = 0.9987
BEC = 0.704 ppb
LoD = 0.1400 ppb

39K (KED AGD)



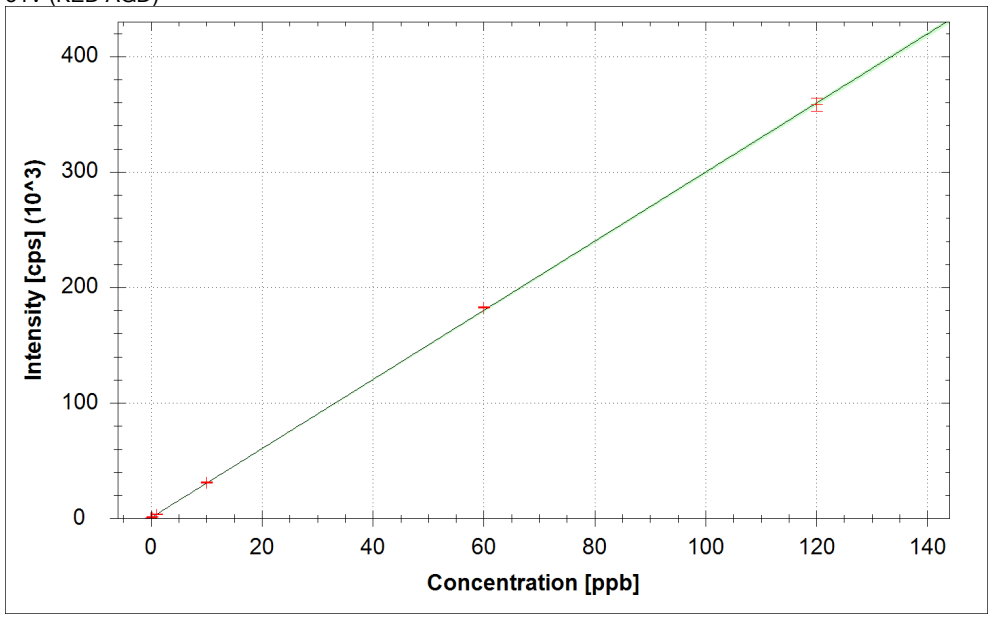
f(x) = 82.1836*x + 4682.1326
R² = 1.0000
BEC = 56.972 ppb
LoD = 3.9222 ppb

44Ca (KED AGD)



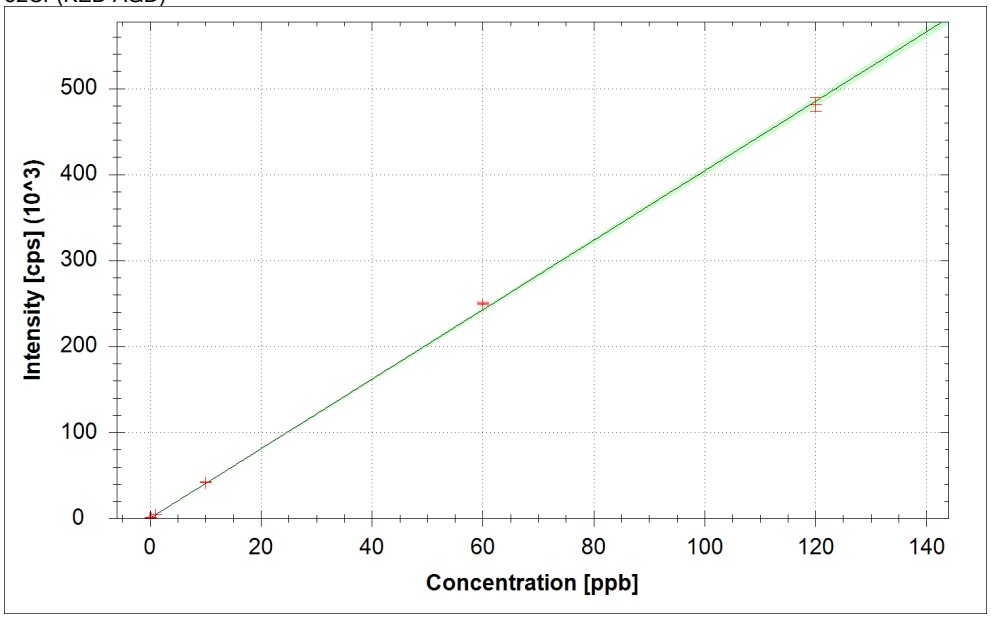
f(x) = 4.5303*x + 31.1973
R² = 0.9992
BEC = 6.886 ppb
LoD = 2.6399 ppb

51V (KED AGD)



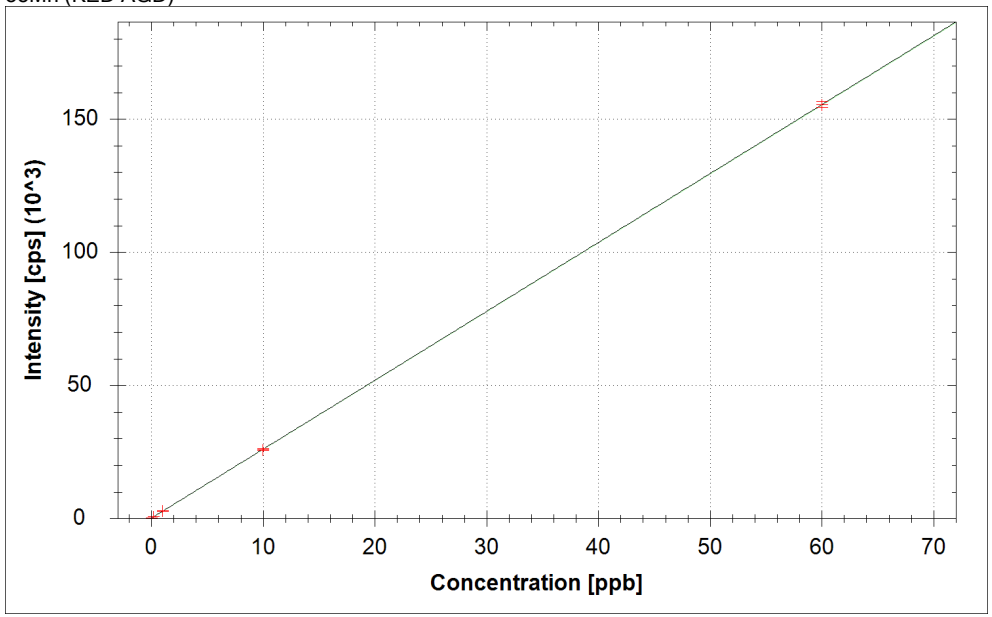
f(x) = 2991.4295*x + 588.9672
R² = 0.9999
BEC = 0.197 ppb
LoD = 0.0942 ppb

52Cr (KED AGD)



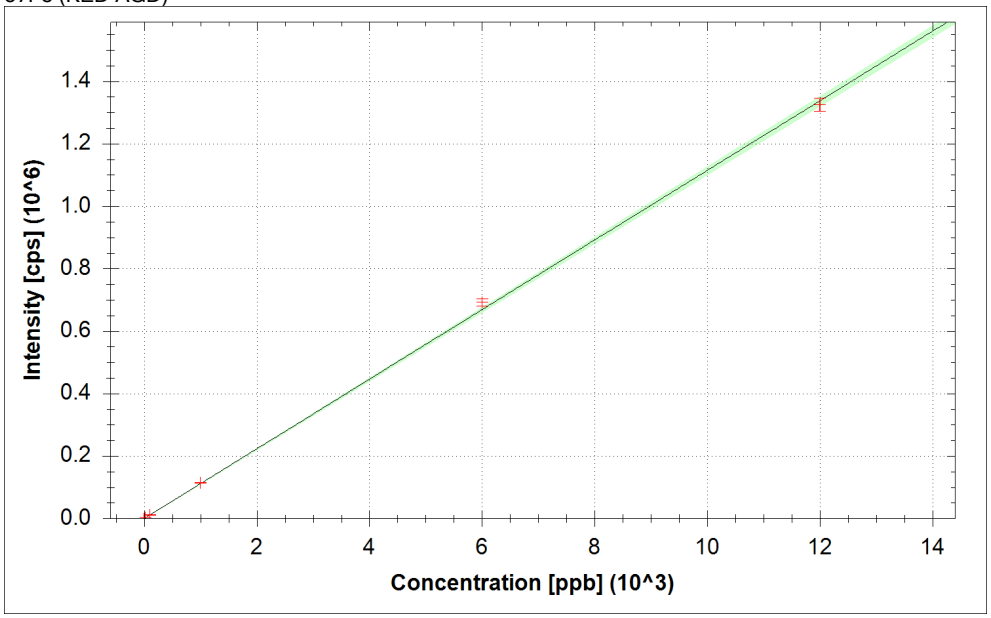
f(x) = 4038.9881*x + 208.9710
R² = 0.9996
BEC = 0.052 ppb
LoD = 0.0418 ppb

55Mn (KED AGD)



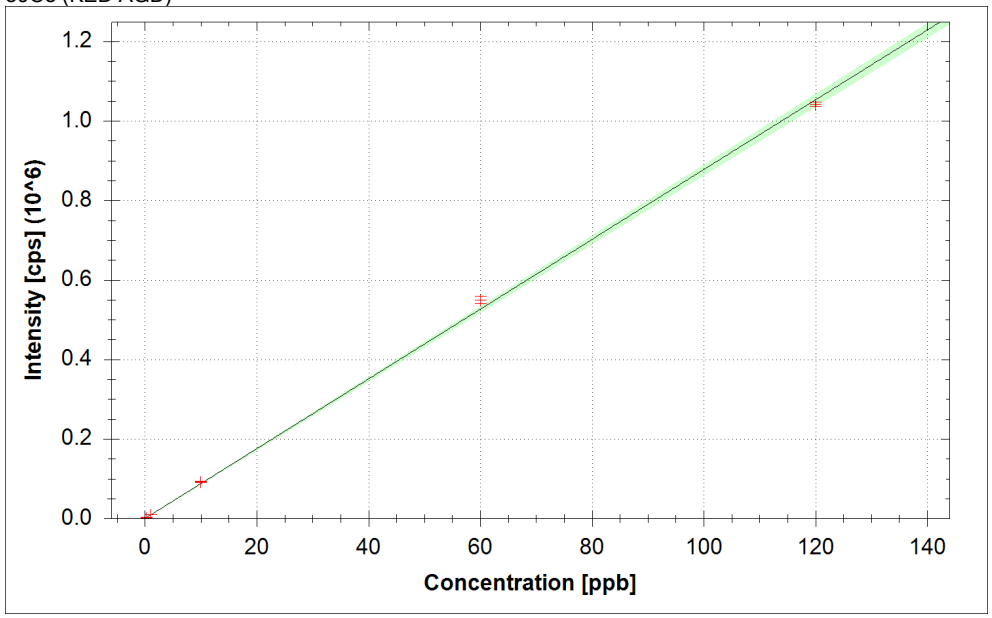
f(x) = 2587.5982*x + 108.8945
R² = 1.0000
BEC = 0.042 ppb
LoD = 0.0088 ppb

57Fe (KED AGD)



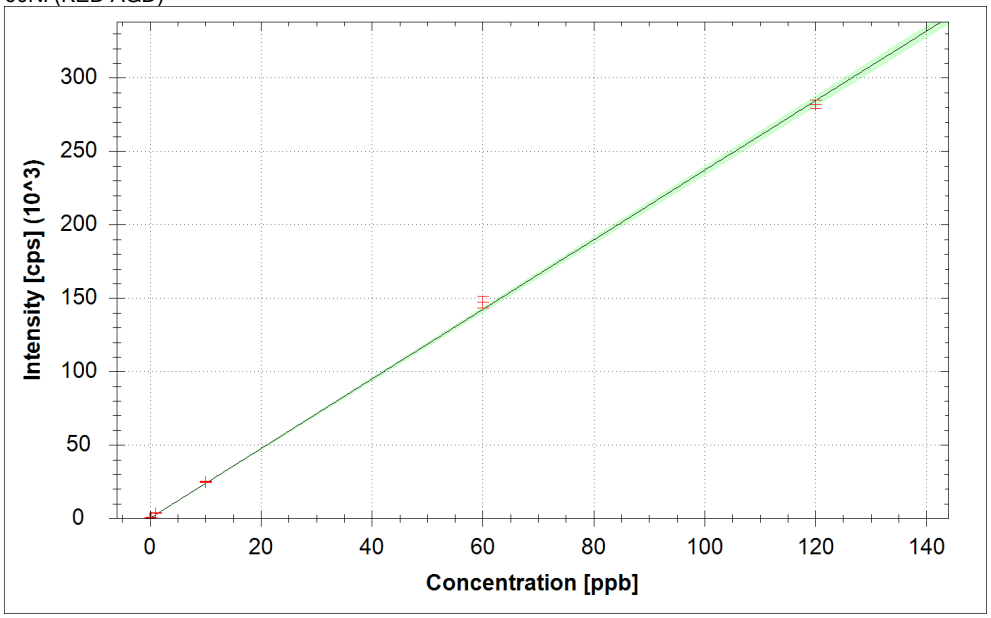
f(x) = 111.4077*x + 75.6139
R² = 0.9995
BEC = 0.679 ppb
LoD = 0.3645 ppb

59Co (KED AGD)



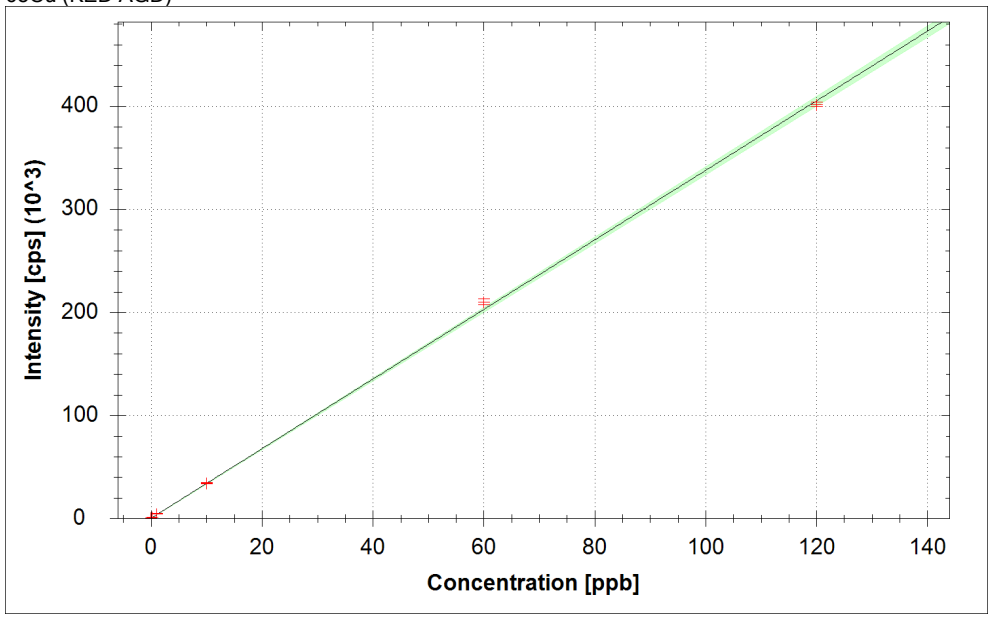
f(x) = 8771.8063*x + 30.7792
R² = 0.9993
BEC = 0.004 ppb
LoD = 0.0029 ppb

60Ni (KED AGD)



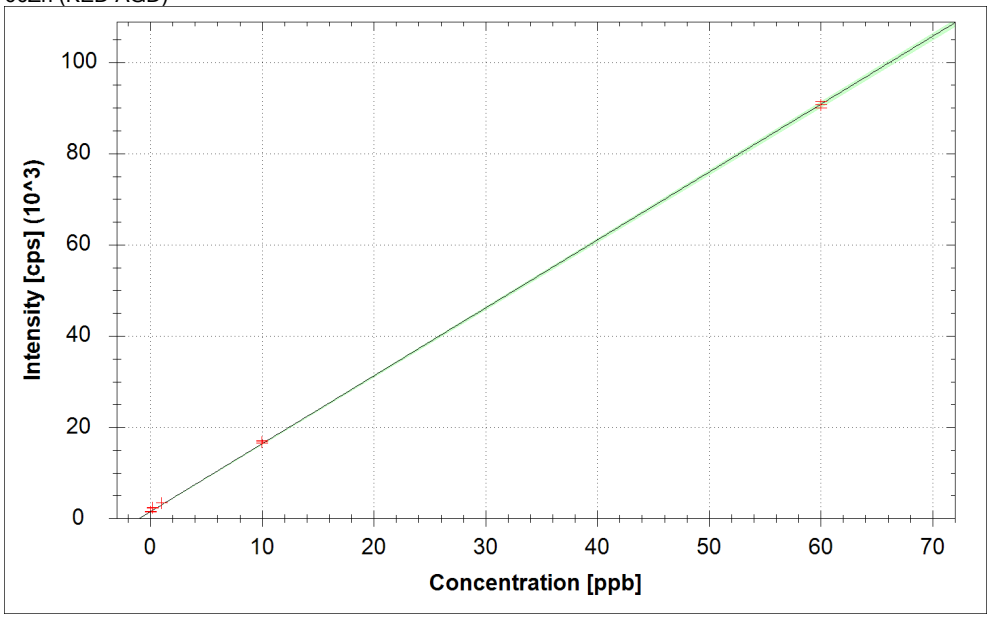
f(x) = 2368.7300*x + 144.9473
R² = 0.9995
BEC = 0.061 ppb
LoD = 0.0202 ppb

65Cu (KED AGD)



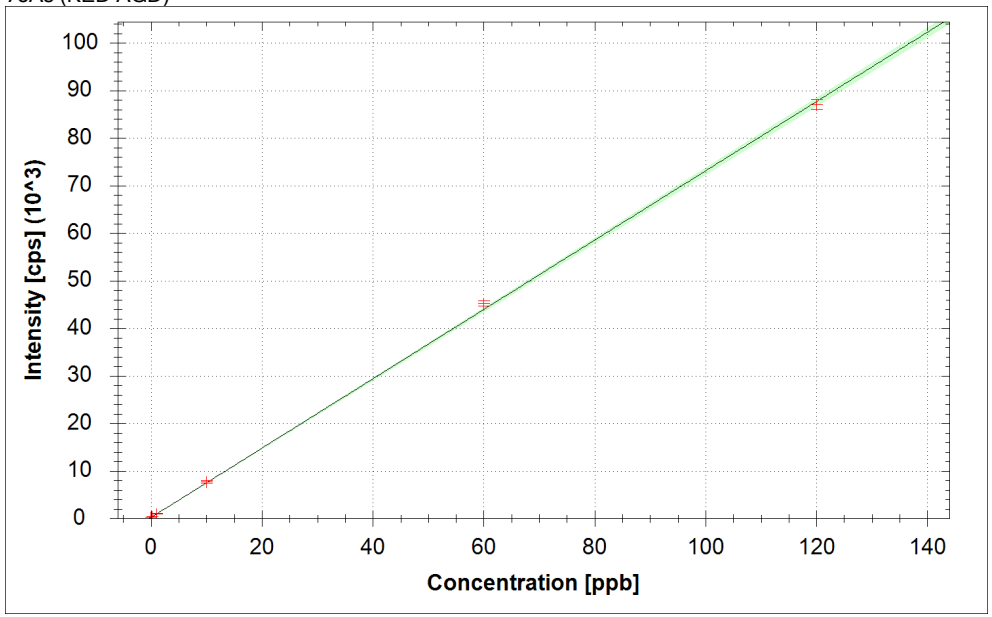
f(x) = 3376.1850*x + 194.3647
R² = 0.9995
BEC = 0.058 ppb
LoD = 0.0251 ppb

66Zn (KED AGD)



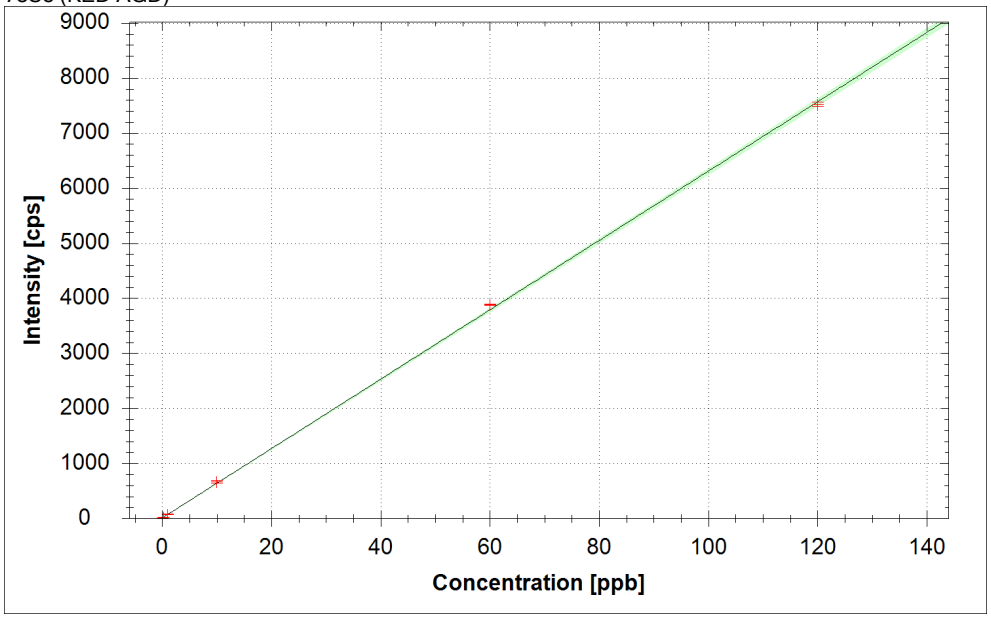
f(x) = 1488.1710*x + 1481.0483
R² = 0.9999
BEC = 0.995 ppb
LoD = 0.1612 ppb

75As (KED AGD)



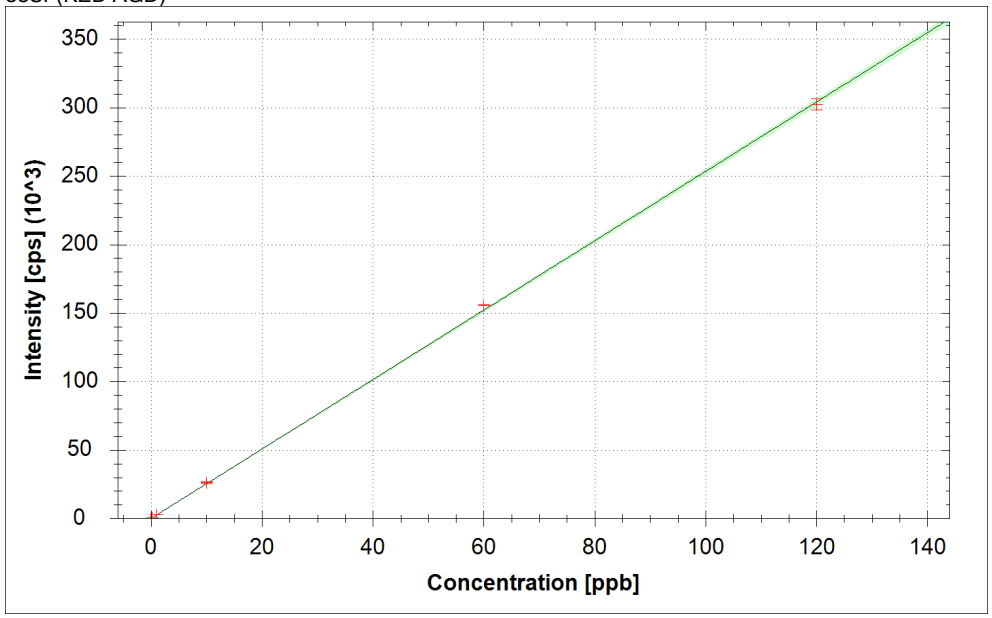
f(x) = 728.6613*x + 212.2913
R² = 0.9997
BEC = 0.291 ppb
LoD = 0.0747 ppb

78Se (KED AGD)



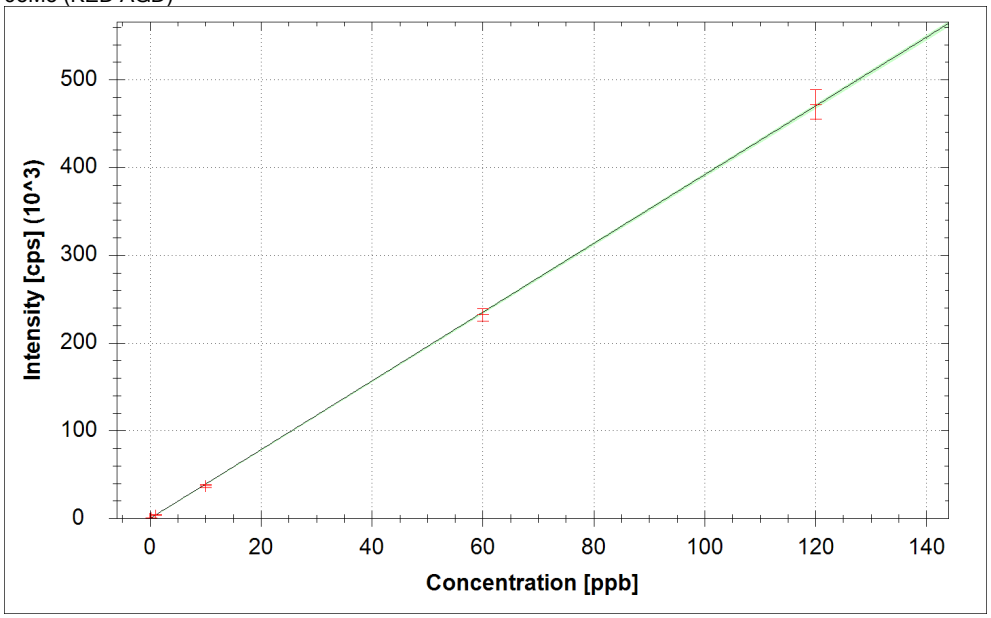
f(x) = 62.9739*x + 9.9275
R² = 0.9997
BEC = 0.158 ppb
LoD = 0.0826 ppb

88Sr (KED AGD)



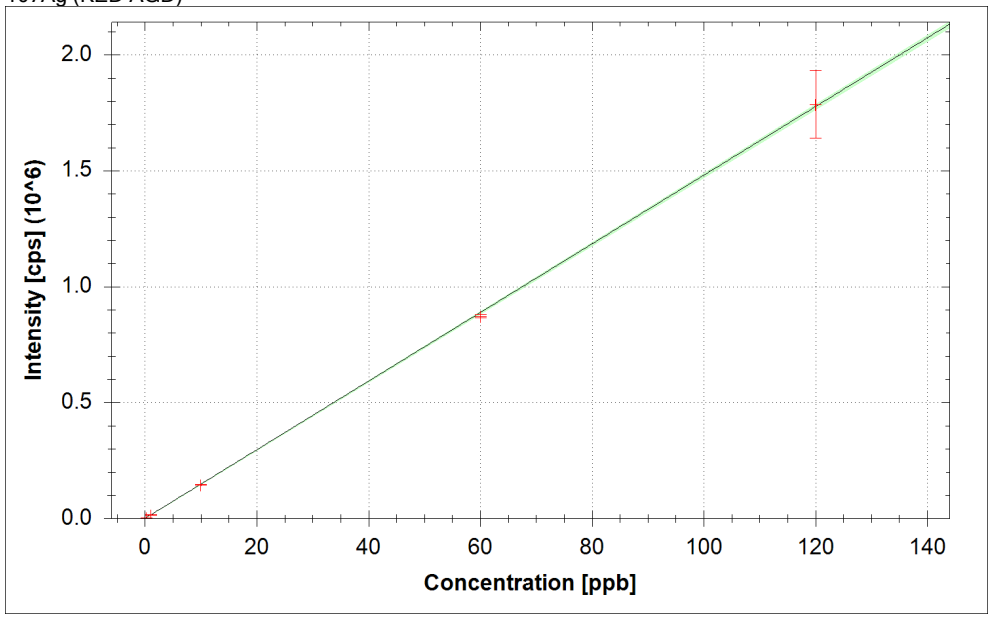
f(x) = 2532.6068*x + 26.3123
R² = 0.9998
BEC = 0.010 ppb
LoD = 0.0006 ppb

95Mo (KED AGD)



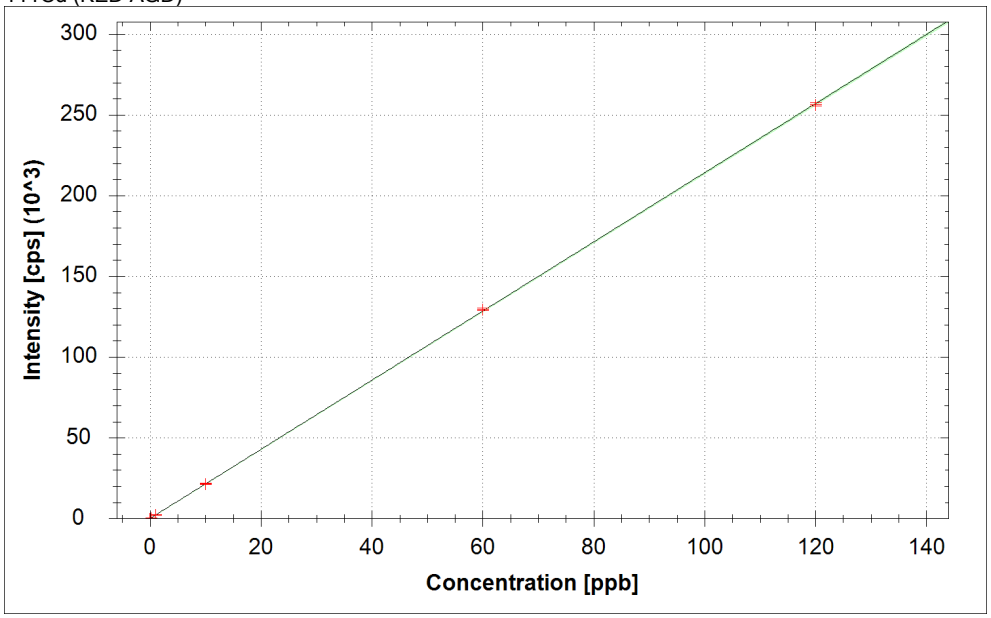
f(x) = 3915.7867*x + 17.9821
R² = 0.9999
BEC = 0.005 ppb
LoD = 0.0133 ppb

107Ag (KED AGD)



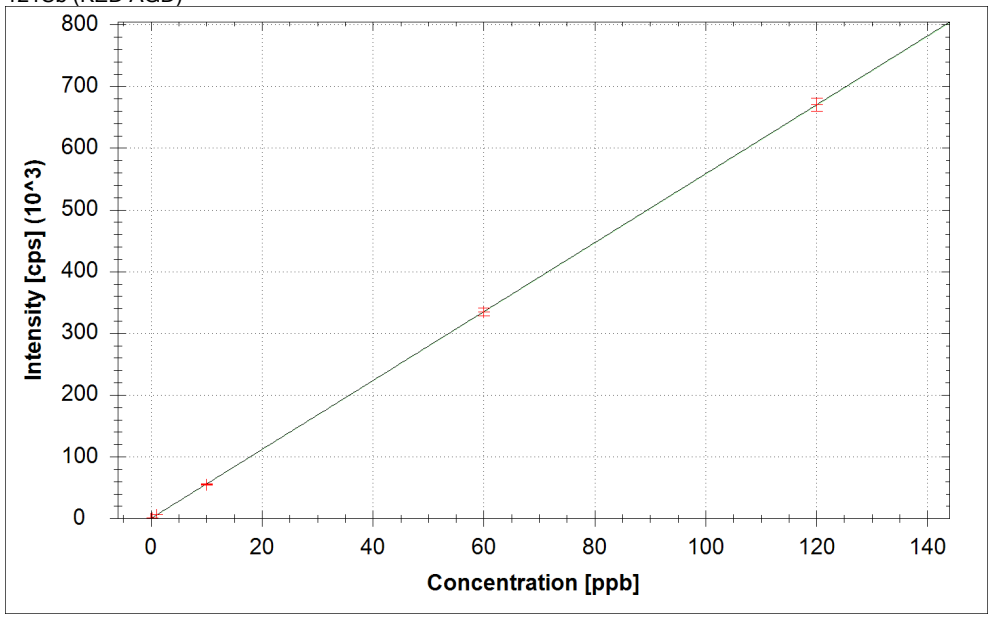
f(x) = 14797.4711*x + 94.6991
R² = 0.9999
BEC = 0.006 ppb
LoD = 0.0051 ppb

111Cd (KED AGD)



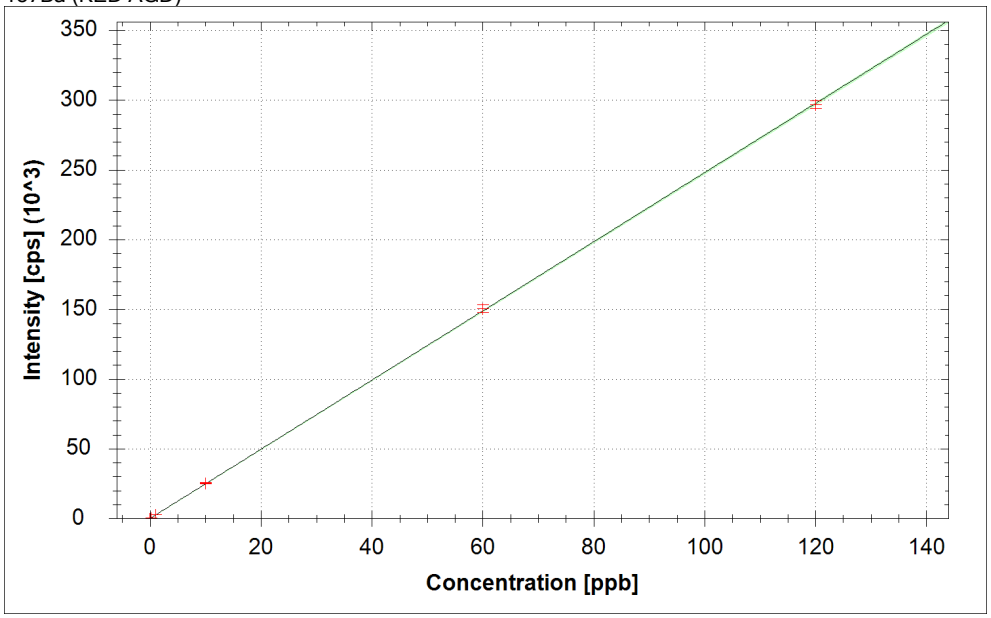
f(x) = 2140.4222*x + 4.8896
R² = 1.0000
BEC = 0.002 ppb
LoD = 0.0011 ppb

121Sb (KED AGD)



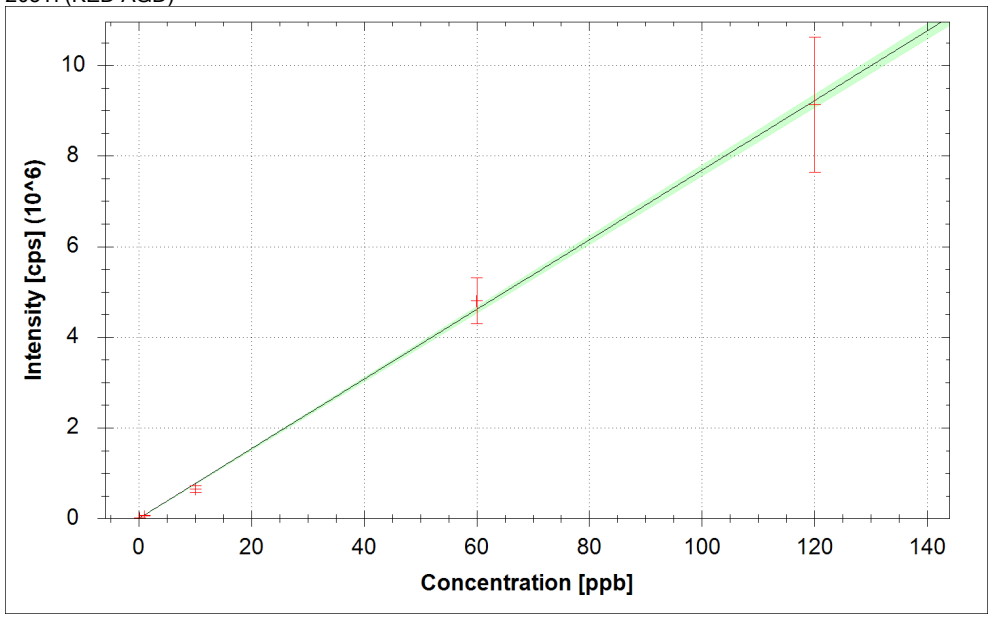
f(x) = 5581.6706*x + 68.2008
R² = 1.0000
BEC = 0.012 ppb
LoD = 0.0052 ppb

137Ba (KED AGD)



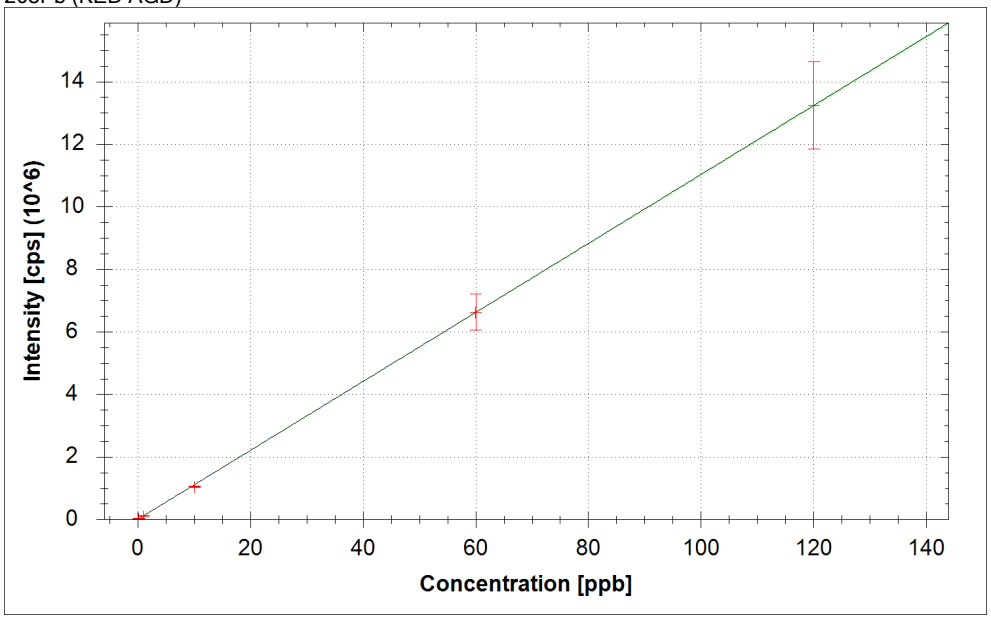
f(x) = 2478.8016*x + 39.9438
R² = 1.0000
BEC = 0.016 ppb
LoD = 0.0071 ppb

205Tl (KED AGD)



f(x) = 76784.3037*x + 523.4632
R² = 0.9992
BEC = 0.007 ppb
LoD = 0.0036 ppb

208Pb (KED AGD)



f(x) = 110208.8802*x + 4239.5075
R² = 1.0000
BEC = 0.038 ppb
LoD = 0.0160 ppb

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 5:18:19 AM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	101.494 %	1.2 %		0.000 %
6Li (KED AGD)	101.126 %	3.0 %		0.000 %
9Be (STD AGD)	0.201 ppb	7.4 %	0.200 ppb	0.428 %
11B (STD AGD)	0.178 ppb	22.9 %	0.200 ppb	10.752 %
23Na (KED AGD)	10.126 ppb	91.2 %	20.000 ppb	49.372 %
24Mg (KED AGD)	22.703 ppb	1.6 %	20.000 ppb	13.515 %
27Al (KED AGD)	1.434 ppb	10.7 %	0.200 ppb	616.851 %
39K (KED AGD)	18.604 ppb	27.0 %	20.000 ppb	6.980 %
44Ca (KED AGD)	167.778 ppb	9.2 %	20.000 ppb	738.888 %
45Sc (STD AGD)	116.442 %	0.8 %		0.000 %
51V (KED AGD)	0.184 ppb	25.8 %	0.200 ppb	8.085 %
52Cr (KED AGD)	0.232 ppb	3.8 %	0.200 ppb	15.755 %
55Mn (KED AGD)	0.236 ppb	10.3 %	0.200 ppb	17.865 %
57Fe (KED AGD)	22.388 ppb	0.5 %	20.000 ppb	11.940 %
59Co (KED AGD)	0.217 ppb	4.7 %	0.200 ppb	8.314 %
60Ni (KED AGD)	0.238 ppb	2.8 %	0.200 ppb	18.792 %
65Cu (KED AGD)	0.233 ppb	7.3 %	0.200 ppb	16.729 %
66Zn (KED AGD)	0.587 ppb	11.0 %	0.200 ppb	193.361 %
74Ge (KED AGD)	103.511 %	2.5 %		0.000 %
75As (KED AGD)	0.203 ppb	1.6 %	0.200 ppb	1.454 %
78Se (KED AGD)	0.196 ppb	21.6 %	0.200 ppb	2.227 %
88Sr (KED AGD)	0.276 ppb	5.7 %	0.200 ppb	38.051 %
95Mo (KED AGD)	0.195 ppb	6.7 %	0.200 ppb	2.252 %
103Rh (KED AGD)	105.926 %	0.9 %		0.000 %
107Ag (KED AGD)	0.197 ppb	4.6 %	0.200 ppb	1.628 %
111Cd (KED AGD)	0.203 ppb	11.0 %	0.200 ppb	1.509 %
115In (KED AGD)	110.869 %	2.9 %		0.000 %
121Sb (KED AGD)	0.198 ppb	1.8 %	0.200 ppb	1.185 %
137Ba (KED AGD)	0.199 ppb	4.0 %	0.200 ppb	0.648 %
159Tb (KED AGD)	109.031 %	1.9 %		0.000 %
175Lu (KED AGD)	108.868 %	11.3 %		0.000 %
205Tl (KED AGD)	0.159 ppb	5.5 %	0.200 ppb	20.383 %
208Pb (KED AGD)	0.183 ppb	14.1 %	0.200 ppb	8.496 %
209Bi (KED AGD)	146.243 %	25.1 %		0.000 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 5:22:56 AM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	97.608 %	4.8 %		0.000 %
6Li (KED AGD)	99.856 %	2.7 %		0.000 %
9Be (STD AGD)	0.974 ppb	0.7 %	1.000 ppb	2.587 %
11B (STD AGD)	1.018 ppb	12.2 %	1.000 ppb	1.819 %
23Na (KED AGD)	80.807 ppb	23.2 %	100.000 ppb	19.193 %
24Mg (KED AGD)	105.655 ppb	1.5 %	100.000 ppb	5.655 %
27Al (KED AGD)	2.178 ppb	9.9 %	1.000 ppb	117.812 %
39K (KED AGD)	102.354 ppb	8.7 %	100.000 ppb	2.354 %
44Ca (KED AGD)	210.617 ppb	5.2 %	100.000 ppb	110.617 %
45Sc (STD AGD)	112.612 %	3.5 %		0.000 %
51V (KED AGD)	0.955 ppb	3.5 %	1.000 ppb	4.522 %
52Cr (KED AGD)	1.028 ppb	4.6 %	1.000 ppb	2.838 %
55Mn (KED AGD)	1.044 ppb	6.6 %	1.000 ppb	4.366 %
57Fe (KED AGD)	100.144 ppb	4.4 %	100.000 ppb	0.144 %
59Co (KED AGD)	1.049 ppb	4.4 %	1.000 ppb	4.910 %
60Ni (KED AGD)	1.471 ppb	3.4 %	1.000 ppb	47.068 %
65Cu (KED AGD)	1.261 ppb	3.9 %	1.000 ppb	26.053 %
66Zn (KED AGD)	1.310 ppb	2.2 %	1.000 ppb	31.026 %
74Ge (KED AGD)	103.012 %	0.8 %		0.000 %
75As (KED AGD)	1.052 ppb	5.0 %	1.000 ppb	5.172 %
78Se (KED AGD)	0.967 ppb	7.1 %	1.000 ppb	3.297 %
88Sr (KED AGD)	1.067 ppb	2.5 %	1.000 ppb	6.742 %
95Mo (KED AGD)	0.933 ppb	6.1 %	1.000 ppb	6.668 %
103Rh (KED AGD)	104.866 %	1.2 %		0.000 %
107Ag (KED AGD)	0.972 ppb	2.6 %	1.000 ppb	2.761 %
111Cd (KED AGD)	1.014 ppb	3.2 %	1.000 ppb	1.446 %
115In (KED AGD)	109.237 %	3.5 %		0.000 %
121Sb (KED AGD)	0.996 ppb	1.5 %	1.000 ppb	0.357 %
137Ba (KED AGD)	1.006 ppb	0.3 %	1.000 ppb	0.636 %
159Tb (KED AGD)	107.696 %	1.0 %		0.000 %
175Lu (KED AGD)	107.314 %	10.9 %		0.000 %
205Tl (KED AGD)	0.767 ppb	12.4 %	1.000 ppb	23.329 %
208Pb (KED AGD)	0.908 ppb	9.7 %	1.000 ppb	9.240 %
209Bi (KED AGD)	142.091 %	23.1 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 10/1000 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 5:27:34 AM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	98.530 %	2.5 %		0.000 %
6Li (KED AGD)	102.714 %	3.2 %		0.000 %
9Be (STD AGD)	9.974 ppb	3.4 %	10.000 ppb	0.256 %
11B (STD AGD)	9.755 ppb	0.9 %	10.000 ppb	2.448 %
23Na (KED AGD)	813.906 ppb	1.5 %	1,000.000 ppb	18.609 %
24Mg (KED AGD)	1,007.037 ppb	1.5 %	1,000.000 ppb	0.704 %
27Al (KED AGD)	10.755 ppb	1.9 %	10.000 ppb	7.547 %
39K (KED AGD)	1,033.095 ppb	3.9 %	1,000.000 ppb	3.310 %
44Ca (KED AGD)	1,153.714 ppb	2.5 %	1,000.000 ppb	15.371 %
45Sc (STD AGD)	116.725 %	0.9 %		0.000 %
51V (KED AGD)	10.234 ppb	1.5 %	10.000 ppb	2.338 %
52Cr (KED AGD)	10.340 ppb	1.2 %	10.000 ppb	3.398 %
55Mn (KED AGD)	9.959 ppb	1.6 %	10.000 ppb	0.410 %
57Fe (KED AGD)	1,024.762 ppb	1.4 %	1,000.000 ppb	2.476 %
59Co (KED AGD)	10.460 ppb	2.1 %	10.000 ppb	4.602 %
60Ni (KED AGD)	10.475 ppb	2.1 %	10.000 ppb	4.753 %
65Cu (KED AGD)	10.144 ppb	1.7 %	10.000 ppb	1.437 %
66Zn (KED AGD)	10.262 ppb	2.1 %	10.000 ppb	2.618 %
74Ge (KED AGD)	102.972 %	3.6 %		0.000 %
75As (KED AGD)	10.292 ppb	3.8 %	10.000 ppb	2.916 %
78Se (KED AGD)	10.412 ppb	4.1 %	10.000 ppb	4.116 %
88Sr (KED AGD)	10.257 ppb	3.3 %	10.000 ppb	2.572 %
95Mo (KED AGD)	9.450 ppb	4.8 %	10.000 ppb	5.498 %
103Rh (KED AGD)	104.622 %	2.3 %		0.000 %
107Ag (KED AGD)	9.747 ppb	1.1 %	10.000 ppb	2.526 %
111Cd (KED AGD)	10.026 ppb	1.9 %	10.000 ppb	0.262 %
115In (KED AGD)	109.777 %	2.2 %		0.000 %
121Sb (KED AGD)	9.868 ppb	1.7 %	10.000 ppb	1.316 %
137Ba (KED AGD)	10.104 ppb	1.9 %	10.000 ppb	1.036 %
159Tb (KED AGD)	108.645 %	1.2 %		0.000 %
175Lu (KED AGD)	103.390 %	1.7 %		0.000 %
205Tl (KED AGD)	8.399 ppb	10.3 %	10.000 ppb	16.007 %
208Pb (KED AGD)	9.479 ppb	2.3 %	10.000 ppb	5.215 %
209Bi (KED AGD)	150.722 %	20.8 %		0.000 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 5:32:12 AM
Total Dilution Factor 166.6666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	91.602 %	3.6 %		0.000 %
6Li (KED AGD)	97.112 %	3.6 %		0.000 %
9Be (STD AGD)	60.779 ppb	3.9 %	60.000 ppb	1.298 %
11B (STD AGD)	61.042 ppb	4.5 %	60.000 ppb	1.737 %
23Na (KED AGD)	6,073.251 ppb	3.3 %	6,000.000 ppb	1.221 %
24Mg (KED AGD)	5,998.724 ppb	2.4 %	6,000.000 ppb	0.021 %
27Al (KED AGD)	59.850 ppb	0.5 %	60.000 ppb	0.249 %
39K (KED AGD)	6,049.490 ppb	1.4 %	6,000.000 ppb	0.825 %
44Ca (KED AGD)	6,174.172 ppb	1.2 %	6,000.000 ppb	2.903 %
45Sc (STD AGD)	115.839 %	2.0 %		0.000 %
51V (KED AGD)	60.856 ppb	0.2 %	60.000 ppb	1.427 %
52Cr (KED AGD)	61.800 ppb	0.7 %	60.000 ppb	3.000 %
55Mn (KED AGD)	60.006 ppb	0.7 %	60.000 ppb	0.010 %
57Fe (KED AGD)	6,209.199 ppb	1.7 %	6,000.000 ppb	3.487 %
59Co (KED AGD)	62.601 ppb	1.6 %	60.000 ppb	4.336 %
60Ni (KED AGD)	62.137 ppb	2.7 %	60.000 ppb	3.562 %
65Cu (KED AGD)	62.137 ppb	1.4 %	60.000 ppb	3.561 %
66Zn (KED AGD)	59.950 ppb	0.8 %	60.000 ppb	0.083 %
74Ge (KED AGD)	97.096 %	0.3 %		0.000 %
75As (KED AGD)	61.709 ppb	1.2 %	60.000 ppb	2.848 %
78Se (KED AGD)	61.512 ppb	0.2 %	60.000 ppb	2.520 %
88Sr (KED AGD)	61.425 ppb	0.2 %	60.000 ppb	2.375 %
95Mo (KED AGD)	59.271 ppb	3.0 %	60.000 ppb	1.216 %
103Rh (KED AGD)	99.080 %	1.1 %		0.000 %
107Ag (KED AGD)	58.857 ppb	0.8 %	60.000 ppb	1.906 %
111Cd (KED AGD)	60.539 ppb	0.7 %	60.000 ppb	0.899 %
115In (KED AGD)	102.021 %	2.7 %		0.000 %
121Sb (KED AGD)	59.873 ppb	1.9 %	60.000 ppb	0.212 %
137Ba (KED AGD)	60.628 ppb	2.0 %	60.000 ppb	1.046 %
159Tb (KED AGD)	105.234 %	1.7 %		0.000 %
175Lu (KED AGD)	104.955 %	9.0 %		0.000 %
205Tl (KED AGD)	62.521 ppb	10.4 %	60.000 ppb	4.201 %
208Pb (KED AGD)	60.086 ppb	8.7 %	60.000 ppb	0.143 %
209Bi (KED AGD)	145.462 %	23.2 %		0.000 %

Standards:

Analysis Index: 8
Analysis Name: 120/12000 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 5:36:51 AM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	88.532 %	3.3 %		0.000 %
6Li (KED AGD)	94.687 %	4.0 %		0.000 %
9Be (STD AGD)	119.613 ppb	2.9 %	120.000 ppb	0.323 %
11B (STD AGD)	119.499 ppb	2.2 %	120.000 ppb	0.417 %
23Na (KED AGD)	11,979.059 ppb	1.3 %	12,000.000 ppb	0.175 %
24Mg (KED AGD)	13,623.416 ppb	2.9 %	12,000.000 ppb	13.528 %
27Al (KED AGD)	115.729 ppb	3.1 %	120.000 ppb	3.559 %
39K (KED AGD)	11,972.480 ppb	1.1 %	12,000.000 ppb	0.229 %
44Ca (KED AGD)	11,898.937 ppb	1.4 %	12,000.000 ppb	0.842 %
45Sc (STD AGD)	120.392 %	0.6 %		0.000 %
51V (KED AGD)	119.553 ppb	1.6 %	120.000 ppb	0.373 %
52Cr (KED AGD)	119.072 ppb	1.7 %	120.000 ppb	0.774 %
55Mn (KED AGD)	114.202 ppb	1.6 %	120.000 ppb	4.832 %
57Fe (KED AGD)	11,893.332 ppb	1.6 %	12,000.000 ppb	0.889 %
59Co (KED AGD)	118.660 ppb	0.6 %	120.000 ppb	1.116 %
60Ni (KED AGD)	118.888 ppb	1.0 %	120.000 ppb	0.927 %
65Cu (KED AGD)	118.917 ppb	0.6 %	120.000 ppb	0.902 %
66Zn (KED AGD)	114.231 ppb	0.7 %	120.000 ppb	4.808 %
74Ge (KED AGD)	95.861 %	1.0 %		0.000 %
75As (KED AGD)	119.121 ppb	1.2 %	120.000 ppb	0.733 %
78Se (KED AGD)	119.210 ppb	0.6 %	120.000 ppb	0.658 %
88Sr (KED AGD)	119.265 ppb	1.3 %	120.000 ppb	0.612 %
95Mo (KED AGD)	120.411 ppb	3.6 %	120.000 ppb	0.343 %
103Rh (KED AGD)	97.848 %	0.8 %		0.000 %
107Ag (KED AGD)	120.593 ppb	8.1 %	120.000 ppb	0.494 %
111Cd (KED AGD)	119.728 ppb	0.4 %	120.000 ppb	0.227 %
115In (KED AGD)	100.262 %	1.9 %		0.000 %
121Sb (KED AGD)	120.075 ppb	1.5 %	120.000 ppb	0.062 %
137Ba (KED AGD)	119.677 ppb	1.0 %	120.000 ppb	0.269 %
159Tb (KED AGD)	105.321 %	0.3 %		0.000 %
175Lu (KED AGD)	112.246 %	10.0 %		0.000 %
205Tl (KED AGD)	118.875 ppb	16.3 %	120.000 ppb	0.937 %
208Pb (KED AGD)	120.001 ppb	10.5 %	120.000 ppb	0.001 %
209Bi (KED AGD)	153.061 %	19.7 %		0.000 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 1
Analysis label: Rinse
Analysis started at: 4/1/2024 5:04:24 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.678 %	106.007 %	0.008 ppb	0.160 ppb	-18.002 ppb	0.195 ppb	0.082 ppb	-4.171 ppb	10.694 ppb
Concentration per Run 1	105.235 %	100.751 %	0.010 ppb	0.142 ppb	-8.173 ppb	0.450 ppb	0.071 ppb	-3.709 ppb	9.888 ppb
Concentration per Run 2	101.669 %	105.776 %	0.006 ppb	0.148 ppb	-20.548 ppb	0.031 ppb	0.087 ppb	-2.630 ppb	10.919 ppb
Concentration per Run 3	101.131 %	111.493 %	0.008 ppb	0.189 ppb	-25.284 ppb	0.103 ppb	0.088 ppb	-6.176 ppb	11.273 ppb
Concentration RSD	2.2 %	5.1 %	26.3 %	16.0 %	49.1 %	115.1 %	11.1 %	43.6 %	6.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.796 %	-0.017 ppb	0.026 ppb	0.061 ppb	0.559 ppb	0.004 ppb	0.052 ppb	0.048 ppb	0.512 ppb
Concentration per Run 1	108.428 %	-0.021 ppb	0.052 ppb	0.072 ppb	0.440 ppb	0.003 ppb	0.110 ppb	0.043 ppb	0.542 ppb
Concentration per Run 2	107.371 %	-0.034 ppb	0.013 ppb	0.058 ppb	0.629 ppb	0.006 ppb	0.038 ppb	0.050 ppb	0.520 ppb
Concentration per Run 3	104.588 %	0.004 ppb	0.013 ppb	0.054 ppb	0.607 ppb	0.004 ppb	0.007 ppb	0.052 ppb	0.475 ppb
Concentration RSD	1.9 %	113.7 %	88.5 %	15.3 %	18.5 %	29.9 %	102.1 %	9.2 %	6.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.153 %	0.002 ppb	-0.047 ppb	0.003 ppb	0.012 ppb	103.938 %	0.003 ppb	-0.001 ppb	107.039 %
Concentration per Run 1	101.877 %	0.027 ppb	-0.065 ppb	0.002 ppb	0.011 ppb	99.473 %	0.004 ppb	0.000 ppb	104.489 %
Concentration per Run 2	105.019 %	0.001 ppb	-0.045 ppb	0.004 ppb	0.013 ppb	106.137 %	0.003 ppb	0.000 ppb	106.852 %
Concentration per Run 3	105.562 %	-0.023 ppb	-0.032 ppb	0.003 ppb	0.011 ppb	106.204 %	0.003 ppb	-0.002 ppb	109.776 %
Concentration RSD	1.9 %	1,375.8 %	34.7 %	30.3 %	10.4 %	3.7 %	22.4 %	136.4 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.002 ppb	0.017 ppb	106.980 %	112.487 %	0.003 ppb	0.042 ppb	41.267 %
Concentration per Run 1	0.003 ppb	0.020 ppb	101.614 %	112.275 %	0.003 ppb	0.053 ppb	45.589 %
Concentration per Run 2	0.000 ppb	0.014 ppb	108.976 %	102.034 %	0.003 ppb	0.047 ppb	40.965 %
Concentration per Run 3	0.001 ppb	0.017 ppb	110.350 %	123.153 %	0.002 ppb	0.026 ppb	37.246 %
Concentration RSD	103.7 %	19.5 %	4.4 %	9.4 %	39.4 %	33.2 %	10.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 2
Analysis label: CAL LOT #M24-1045
Analysis started at: 4/1/2024 5:09:01 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.056 %	102.743 %	0.001 ppb	0.113 ppb	-8.024 ppb	-0.281 ppb	0.111 ppb	-0.895 ppb	10.532 ppb
Concentration per Run 1	105.930 %	101.357 %	0.000 ppb	0.087 ppb	-13.439 ppb	-0.111 ppb	0.026 ppb	-1.150 ppb	11.264 ppb
Concentration per Run 2	101.806 %	105.776 %	0.004 ppb	0.090 ppb	-19.207 ppb	-0.374 ppb	0.117 ppb	-1.969 ppb	10.642 ppb
Concentration per Run 3	98.433 %	101.097 %	0.000 ppb	0.161 ppb	8.574 ppb	-0.359 ppb	0.190 ppb	0.436 ppb	9.690 ppb
Concentration RSD	3.7 %	2.6 %	178.3 %	37.3 %	182.7 %	52.4 %	73.9 %	136.7 %	7.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.155 %	-0.011 ppb	0.012 ppb	0.061 ppb	0.614 ppb	0.005 ppb	0.058 ppb	0.048 ppb	0.211 ppb
Concentration per Run 1	114.350 %	-0.002 ppb	0.020 ppb	0.054 ppb	0.671 ppb	0.004 ppb	0.030 ppb	0.068 ppb	0.221 ppb
Concentration per Run 2	107.872 %	-0.041 ppb	0.008 ppb	0.055 ppb	0.687 ppb	0.004 ppb	0.068 ppb	0.031 ppb	0.230 ppb
Concentration per Run 3	105.242 %	0.011 ppb	0.010 ppb	0.076 ppb	0.483 ppb	0.007 ppb	0.075 ppb	0.046 ppb	0.182 ppb
Concentration RSD	4.3 %	256.1 %	50.0 %	19.9 %	18.5 %	33.0 %	42.2 %	38.4 %	12.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.615 %	0.000 ppb	-0.040 ppb	0.003 ppb	0.011 ppb	104.455 %	0.001 ppb	-0.001 ppb	107.853 %
Concentration per Run 1	102.152 %	-0.014 ppb	-0.073 ppb	0.002 ppb	0.012 ppb	104.582 %	-0.001 ppb	-0.002 ppb	106.483 %
Concentration per Run 2	99.067 %	0.018 ppb	-0.051 ppb	0.003 ppb	0.005 ppb	104.017 %	0.001 ppb	0.001 ppb	105.590 %
Concentration per Run 3	103.626 %	-0.005 ppb	0.003 ppb	0.004 ppb	0.015 ppb	104.767 %	0.003 ppb	-0.001 ppb	111.485 %
Concentration RSD	2.3 %	5,277.0 %	96.8 %	39.0 %	45.7 %	0.4 %	174.9 %	224.3 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.001 ppb	0.012 ppb	106.073 %	107.431 %	0.001 ppb	0.024 ppb	95.481 %
Concentration per Run 1	-0.001 ppb	0.007 ppb	106.274 %	99.165 %	0.000 ppb	0.032 ppb	109.334 %
Concentration per Run 2	0.002 ppb	0.017 ppb	104.609 %	100.468 %	0.002 ppb	0.026 ppb	90.924 %
Concentration per Run 3	0.003 ppb	0.013 ppb	107.337 %	122.661 %	0.001 ppb	0.014 ppb	86.185 %
Concentration RSD	120.0 %	43.0 %	1.3 %	12.3 %	71.2 %	38.9 %	12.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	3	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Blank EJF ICPMSQ	Rack	4		
Analysis started at:	4/1/2024 5:13:37 AM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.1 %	0.3 %	0.0 %	0.0 %	0.2 %	0.1 %	0.0 %	0.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.2 %	0.3 %	0.1 %	0.2 %	0.3 %	0.1 %	0.1 %	0.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.1 %	0.1 %	0.2 %	0.0 %	1.0 %	0.0 %	0.3 %	0.2 %	0.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.1 %	0.1 %	0.0 %	0.1 %	0.2 %	0.1 %	0.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 4
Analysis label: 0.2/20 Cal
Analysis started at: 4/1/2024 5:18:19 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 2
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.494 %	101.126 %	0.201 ppb	0.178 ppb	10.126 ppb	22.703 ppb	1.434 ppb	18.604 ppb	167.778 ppb
Concentration per Run 1	102.588 %	99.625 %	0.184 ppb	0.218 ppb	7.759 ppb	22.333 ppb	1.535 ppb	12.801 ppb	163.966 ppb
Concentration per Run 2	101.680 %	104.563 %	0.211 ppb	0.136 ppb	2.307 ppb	23.058 ppb	1.258 ppb	21.517 ppb	154.524 ppb
Concentration per Run 3	100.213 %	99.191 %	0.208 ppb	0.181 ppb	20.311 ppb	22.718 ppb	1.508 ppb	21.494 ppb	184.843 ppb
Concentration RSD	1.2 %	3.0 %	7.4 %	22.9 %	91.2 %	1.6 %	10.7 %	27.0 %	9.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.442 %	0.184 ppb	0.232 ppb	0.236 ppb	22.388 ppb	0.217 ppb	0.238 ppb	0.233 ppb	0.587 ppb
Concentration per Run 1	115.595 %	0.137 ppb	0.227 ppb	0.213 ppb	22.326 ppb	0.208 ppb	0.245 ppb	0.253 ppb	0.654 ppb
Concentration per Run 2	117.489 %	0.183 ppb	0.225 ppb	0.232 ppb	22.515 ppb	0.228 ppb	0.234 ppb	0.220 ppb	0.525 ppb
Concentration per Run 3	116.240 %	0.232 ppb	0.242 ppb	0.262 ppb	22.323 ppb	0.214 ppb	0.234 ppb	0.227 ppb	0.581 ppb
Concentration RSD	0.8 %	25.8 %	3.8 %	10.3 %	0.5 %	4.7 %	2.8 %	7.3 %	11.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.511 %	0.203 ppb	0.196 ppb	0.276 ppb	0.195 ppb	105.926 %	0.197 ppb	0.203 ppb	110.869 %
Concentration per Run 1	101.375 %	0.207 ppb	0.168 ppb	0.267 ppb	0.211 ppb	105.643 %	0.205 ppb	0.214 ppb	110.714 %
Concentration per Run 2	102.764 %	0.201 ppb	0.244 ppb	0.267 ppb	0.187 ppb	107.032 %	0.187 ppb	0.177 ppb	107.779 %
Concentration per Run 3	106.395 %	0.201 ppb	0.174 ppb	0.294 ppb	0.189 ppb	105.105 %	0.198 ppb	0.218 ppb	114.114 %
Concentration RSD	2.5 %	1.6 %	21.6 %	5.7 %	6.7 %	0.9 %	4.6 %	11.0 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.198 ppb	0.199 ppb	109.031 %	108.868 %	0.159 ppb	0.183 ppb	146.243 %
Concentration per Run 1	0.194 ppb	0.202 ppb	109.993 %	100.744 %	0.157 ppb	0.201 ppb	188.448 %
Concentration per Run 2	0.200 ppb	0.190 ppb	110.429 %	102.875 %	0.169 ppb	0.195 ppb	128.147 %
Concentration per Run 3	0.199 ppb	0.204 ppb	106.670 %	122.984 %	0.152 ppb	0.153 ppb	122.135 %
Concentration RSD	1.8 %	4.0 %	1.9 %	11.3 %	5.5 %	14.1 %	25.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 5
Analysis label: 1/100 Cal
Analysis started at: 4/1/2024 5:22:56 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 3
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.608 %	99.856 %	0.974 ppb	1.018 ppb	80.807 ppb	105.655 ppb	2.178 ppb	102.354 ppb	210.617 ppb
Concentration per Run 1	102.164 %	101.444 %	0.966 ppb	0.948 ppb	69.287 ppb	103.940 ppb	2.001 ppb	93.233 ppb	200.713 ppb
Concentration per Run 2	97.800 %	101.357 %	0.978 ppb	0.945 ppb	70.681 ppb	106.080 ppb	2.115 ppb	102.851 ppb	208.695 ppb
Concentration per Run 3	92.859 %	96.766 %	0.978 ppb	1.161 ppb	102.454 ppb	106.944 ppb	2.418 ppb	110.977 ppb	222.442 ppb
Concentration RSD	4.8 %	2.7 %	0.7 %	12.2 %	23.2 %	1.5 %	9.9 %	8.7 %	5.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	112.612 %	0.955 ppb	1.028 ppb	1.044 ppb	100.144 ppb	1.049 ppb	1.471 ppb	1.261 ppb	1.310 ppb
Concentration per Run 1	116.562 %	0.972 ppb	1.012 ppb	1.121 ppb	95.018 ppb	1.100 ppb	1.524 ppb	1.259 ppb	1.330 ppb
Concentration per Run 2	112.581 %	0.916 ppb	0.991 ppb	1.020 ppb	102.905 ppb	1.010 ppb	1.425 ppb	1.211 ppb	1.277 ppb
Concentration per Run 3	108.692 %	0.977 ppb	1.081 ppb	0.990 ppb	102.510 ppb	1.038 ppb	1.463 ppb	1.311 ppb	1.324 ppb
Concentration RSD	3.5 %	3.5 %	4.6 %	6.6 %	4.4 %	4.4 %	3.4 %	3.9 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.012 %	1.052 ppb	0.967 ppb	1.067 ppb	0.933 ppb	104.866 %	0.972 ppb	1.014 ppb	109.237 %
Concentration per Run 1	102.063 %	0.992 ppb	0.960 ppb	1.037 ppb	0.867 ppb	106.209 %	0.984 ppb	1.040 ppb	106.577 %
Concentration per Run 2	103.465 %	1.093 ppb	0.902 ppb	1.088 ppb	0.971 ppb	104.777 %	0.944 ppb	1.026 ppb	113.632 %
Concentration per Run 3	103.509 %	1.070 ppb	1.039 ppb	1.078 ppb	0.962 ppb	103.614 %	0.990 ppb	0.977 ppb	107.502 %
Concentration RSD	0.8 %	5.0 %	7.1 %	2.5 %	6.1 %	1.2 %	2.6 %	3.2 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.996 ppb	1.006 ppb	107.696 %	107.314 %	0.767 ppb	0.908 ppb	142.091 %
Concentration per Run 1	1.006 ppb	1.003 ppb	107.371 %	100.575 %	0.723 ppb	0.963 ppb	179.892 %
Concentration per Run 2	0.979 ppb	1.009 ppb	108.855 %	120.832 %	0.701 ppb	0.806 ppb	124.483 %
Concentration per Run 3	1.004 ppb	1.007 ppb	106.861 %	100.536 %	0.876 ppb	0.953 ppb	121.898 %
Concentration RSD	1.5 %	0.3 %	1.0 %	10.9 %	12.4 %	9.7 %	23.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 6
Analysis label: 10/1000 Cal
Analysis started at: 4/1/2024 5:27:34 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 4
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.530 %	102.714 %	9.974 ppb	9.755 ppb	813.906 ppb	1,007.037 ppb	10.755 ppb	1,033.095 ppb	1,153.714 ppb
Concentration per Run 1	101.326 %	98.932 %	9.654 ppb	9.653 ppb	818.469 ppb	1,017.017 ppb	10.544 ppb	994.545 ppb	1,121.225 ppb
Concentration per Run 2	97.706 %	104.996 %	9.941 ppb	9.778 ppb	822.974 ppb	1,014.759 ppb	10.947 ppb	1,074.703 ppb	1,173.914 ppb
Concentration per Run 3	96.556 %	104.216 %	10.328 ppb	9.835 ppb	800.275 ppb	989.333 ppb	10.774 ppb	1,030.038 ppb	1,166.003 ppb
Concentration RSD	2.5 %	3.2 %	3.4 %	0.9 %	1.5 %	1.5 %	1.9 %	3.9 %	2.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.725 %	10.234 ppb	10.340 ppb	9.959 ppb	1,024.762 ppb	10.460 ppb	10.475 ppb	10.144 ppb	10.262 ppb
Concentration per Run 1	117.932 %	10.071 ppb	10.307 ppb	9.802 ppb	1,008.755 ppb	10.391 ppb	10.307 ppb	10.220 ppb	10.232 ppb
Concentration per Run 2	115.891 %	10.367 ppb	10.235 ppb	10.128 ppb	1,030.220 ppb	10.285 ppb	10.391 ppb	9.950 ppb	10.060 ppb
Concentration per Run 3	116.352 %	10.263 ppb	10.477 ppb	9.947 ppb	1,035.311 ppb	10.705 ppb	10.728 ppb	10.261 ppb	10.493 ppb
Concentration RSD	0.9 %	1.5 %	1.2 %	1.6 %	1.4 %	2.1 %	2.1 %	1.7 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.972 %	10.292 ppb	10.412 ppb	10.257 ppb	9.450 ppb	104.622 %	9.747 ppb	10.026 ppb	109.777 %
Concentration per Run 1	103.219 %	9.987 ppb	9.962 ppb	9.866 ppb	9.030 ppb	106.656 %	9.746 ppb	10.137 ppb	110.397 %
Concentration per Run 2	106.550 %	10.151 ppb	10.815 ppb	10.462 ppb	9.388 ppb	105.185 %	9.640 ppb	9.811 ppb	111.816 %
Concentration per Run 3	99.147 %	10.738 ppb	10.458 ppb	10.443 ppb	9.932 ppb	102.025 %	9.857 ppb	10.131 ppb	107.118 %
Concentration RSD	3.6 %	3.8 %	4.1 %	3.3 %	4.8 %	2.3 %	1.1 %	1.9 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	9.868 ppb	10.104 ppb	108.645 %	103.390 %	8.399 ppb	9.479 ppb	150.722 %
Concentration per Run 1	9.681 ppb	9.991 ppb	109.433 %	102.860 %	7.544 ppb	9.431 ppb	186.627 %
Concentration per Run 2	10.007 ppb	10.321 ppb	109.360 %	105.371 %	8.373 ppb	9.289 ppb	136.918 %
Concentration per Run 3	9.916 ppb	9.999 ppb	107.143 %	101.938 %	9.281 ppb	9.715 ppb	128.620 %
Concentration RSD	1.7 %	1.9 %	1.2 %	1.7 %	10.3 %	2.3 %	20.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	7	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/1/2024 5:32:12 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	91.602 %	97.112 %	60.779 ppb	61.042 ppb	6,073.251 ppb	5,998.724 ppb	59.850 ppb	6,049.490 ppb	6,174.172 ppb
Concentration per Run 1	94.808 %	97.632 %	58.476 ppb	58.450 ppb	6,057.504 ppb	5,997.969 ppb	60.029 ppb	6,088.646 ppb	6,197.071 ppb
Concentration per Run 2	91.846 %	100.318 %	60.629 ppb	60.756 ppb	5,881.759 ppb	5,856.503 ppb	59.496 ppb	5,954.901 ppb	6,091.956 ppb
Concentration per Run 3	88.153 %	93.387 %	63.232 ppb	63.921 ppb	6,280.490 ppb	6,141.701 ppb	60.026 ppb	6,104.923 ppb	6,233.487 ppb
Concentration RSD	3.6 %	3.6 %	3.9 %	4.5 %	3.3 %	2.4 %	0.5 %	1.4 %	1.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	115.839 %	60.856 ppb	61.800 ppb	60.006 ppb	6,209.199 ppb	62.601 ppb	62.137 ppb	62.137 ppb	59.950 ppb
Concentration per Run 1	118.546 %	60.797 ppb	61.816 ppb	59.973 ppb	6,307.692 ppb	63.601 ppb	63.441 ppb	63.124 ppb	60.388 ppb
Concentration per Run 2	114.775 %	60.762 ppb	61.385 ppb	59.609 ppb	6,095.555 ppb	61.579 ppb	60.219 ppb	61.559 ppb	59.405 ppb
Concentration per Run 3	114.195 %	61.009 ppb	62.198 ppb	60.436 ppb	6,224.352 ppb	62.624 ppb	62.752 ppb	61.727 ppb	60.057 ppb
Concentration RSD	2.0 %	0.2 %	0.7 %	0.7 %	1.7 %	1.6 %	2.7 %	1.4 %	0.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.096 %	61.709 ppb	61.512 ppb	61.425 ppb	59.271 ppb	99.080 %	58.857 ppb	60.539 ppb	102.021 %
Concentration per Run 1	97.310 %	62.353 ppb	61.359 ppb	61.456 ppb	57.398 ppb	100.094 %	58.730 ppb	60.181 ppb	105.088 %
Concentration per Run 2	97.227 %	60.933 ppb	61.521 ppb	61.286 ppb	59.408 ppb	99.186 %	58.457 ppb	60.457 ppb	101.350 %
Concentration per Run 3	96.750 %	61.842 ppb	61.657 ppb	61.533 ppb	61.005 ppb	97.961 %	59.383 ppb	60.979 ppb	99.624 %
Concentration RSD	0.3 %	1.2 %	0.2 %	0.2 %	3.0 %	1.1 %	0.8 %	0.7 %	2.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.873 ppb	60.628 ppb	105.234 %	104.955 %	62.521 ppb	60.086 ppb	145.462 %
Concentration per Run 1	58.743 ppb	59.232 ppb	106.687 %	100.433 %	59.933 ppb	62.925 ppb	184.322 %
Concentration per Run 2	59.873 ppb	61.372 ppb	103.303 %	115.832 %	57.687 ppb	54.074 ppb	128.301 %
Concentration per Run 3	61.003 ppb	61.279 ppb	105.713 %	98.600 %	69.943 ppb	63.259 ppb	123.765 %
Concentration RSD	1.9 %	2.0 %	1.7 %	9.0 %	10.4 %	8.7 %	23.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 8
Analysis label: 120/12000 Cal
Analysis started at: 4/1/2024 5:36:51 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 6
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.532 %	94.687 %	119.613 ppb	119.499 ppb	11,979.059 ppb	13,623.416 ppb	115.729 ppb	11,972.480 ppb	11,898.937 ppb
Concentration per Run 1	90.773 %	98.845 %	116.163 ppb	116.998 ppb	11,904.626 ppb	13,391.657 ppb	113.361 ppb	11,990.520 ppb	**11,873.522 ppb**
Concentration per Run 2	89.627 %	93.647 %	119.644 ppb	119.158 ppb	11,871.880 ppb	13,397.059 ppb	113.949 ppb	11,827.624 ppb	**11,748.287 ppb**
Concentration per Run 3	85.196 %	91.568 %	123.032 ppb	122.341 ppb	12,160.671 ppb	14,081.532 ppb	119.877 ppb	12,099.295 ppb	**12,075.000 ppb**
Concentration RSD	3.3 %	4.0 %	2.9 %	2.2 %	1.3 %	2.9 %	3.1 %	1.1 %	1.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	120.392 %	119.553 ppb	119.072 ppb	114.202 ppb	11,893.332 ppb	118.660 ppb	118.888 ppb	118.917 ppb	114.231 ppb
Concentration per Run 1	120.825 %	117.839 ppb	117.257 ppb	112.685 ppb	11,792.255 ppb	118.953 ppb	119.903 ppb	119.475 ppb	114.290 ppb
Concentration per Run 2	120.744 %	119.207 ppb	118.742 ppb	113.733 ppb	11,772.428 ppb	117.901 ppb	117.525 ppb	118.195 ppb	113.448 ppb
Concentration per Run 3	119.608 %	121.612 ppb	121.215 ppb	116.187 ppb	12,115.312 ppb	119.127 ppb	119.235 ppb	119.082 ppb	114.955 ppb
Concentration RSD	0.6 %	1.6 %	1.7 %	1.8 %	1.6 %	0.6 %	1.0 %	0.6 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.861 %	119.121 ppb	119.210 ppb	119.265 ppb	120.411 ppb	97.848 %	120.593 ppb	119.728 ppb	100.262 %
Concentration per Run 1	**95.360 %**	119.715 ppb	**119.436 ppb**	120.427 ppb	116.355 ppb	98.744 %	115.150 ppb	120.152 ppb	**101.374 %**
Concentration per Run 2	**96.933 %**	117.488 ppb	**118.429 ppb**	117.432 ppb	119.926 ppb	97.524 %	114.702 ppb	119.240 ppb	**98.096 %**
Concentration per Run 3	**95.290 %**	120.159 ppb	**119.764 ppb**	119.937 ppb	124.952 ppb	97.276 %	131.926 ppb	119.793 ppb	**101.316 %**
Concentration RSD	1.0 %	1.2 %	0.6 %	1.3 %	3.6 %	0.8 %	8.1 %	0.4 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	120.075 ppb	119.677 ppb	105.321 %	112.246 %	118.875 ppb	120.001 ppb	153.061 %
Concentration per Run 1	119.168 ppb	118.361 ppb	105.377 %	118.283 %	102.453 ppb	**112.402 ppb**	181.707 %
Concentration per Run 2	122.206 ppb	120.540 ppb	104.998 %	119.158 %	113.946 ppb	**112.988 ppb**	155.933 %
Concentration per Run 3	118.850 ppb	120.131 ppb	105.588 %	99.296 %	140.226 ppb	**134.615 ppb**	121.544 %
Concentration RSD	1.5 %	1.0 %	0.3 %	10.0 %	16.3 %	10.5 %	19.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 9
Analysis label: Sr 200ppb
Analysis started at: 4/1/2024 5:46:33 AM
User name ALPHALAB\Metals-Instrument
Rack 4
Vial 55
Comment Sr Inteference Check

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.381 %	96.304 %	0.004 ppb	0.626 ppb	-4.712 ppb	1.851 ppb	0.398 ppb	1.441 ppb	0.778 ppb
Concentration per Run 1	96.226 %	89.662 %	0.010 ppb	0.556 ppb	8.731 ppb	1.624 ppb	0.344 ppb	9.238 ppb	17.088 ppb
Concentration per Run 2	94.688 %	106.729 %	0.003 ppb	0.663 ppb	-19.543 ppb	1.828 ppb	0.351 ppb	-0.101 ppb	-15.669 ppb
Concentration per Run 3	95.229 %	92.521 %	-0.001 ppb	0.660 ppb	-3.325 ppb	2.101 ppb	0.499 ppb	-4.815 ppb	0.913 ppb
Concentration RSD	0.8 %	9.5 %	143.9 %	9.7 %	301.1 %	12.9 %	22.0 %	496.5 %	2,105.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.148 %	-0.125 ppb	0.139 ppb	0.019 ppb	10.373 ppb	0.002 ppb	0.059 ppb	0.028 ppb	0.442 ppb
Concentration per Run 1	107.290 %	-0.137 ppb	0.165 ppb	0.028 ppb	10.781 ppb	0.003 ppb	0.091 ppb	0.014 ppb	0.578 ppb
Concentration per Run 2	109.005 %	-0.108 ppb	0.109 ppb	0.015 ppb	8.666 ppb	0.003 ppb	0.041 ppb	0.032 ppb	0.337 ppb
Concentration per Run 3	108.151 %	-0.132 ppb	0.144 ppb	0.014 ppb	11.672 ppb	0.001 ppb	0.044 ppb	0.039 ppb	0.411 ppb
Concentration RSD	0.8 %	12.3 %	20.0 %	38.3 %	14.9 %	44.5 %	47.9 %	45.9 %	27.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.814 %	0.056 ppb	0.143 ppb	188.451 ppb	0.671 ppb	99.599 %	0.009 ppb	0.007 ppb	103.656 %
Concentration per Run 1	88.481 %	0.096 ppb	0.185 ppb	199.217 ppb	0.643 ppb	94.530 %	0.013 ppb	0.006 ppb	97.678 %
Concentration per Run 2	107.880 %	0.023 ppb	0.149 ppb	179.275 ppb	0.642 ppb	105.084 %	0.007 ppb	0.006 ppb	112.892 %
Concentration per Run 3	97.081 %	0.051 ppb	0.094 ppb	186.861 ppb	0.728 ppb	99.183 %	0.008 ppb	0.008 ppb	100.398 %
Concentration RSD	9.9 %	64.9 %	32.1 %	5.3 %	7.3 %	5.3 %	37.7 %	21.5 %	7.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.025 ppb	0.055 ppb	104.412 %	111.257 %	0.350 ppb	0.007 ppb	166.432 %
Concentration per Run 1	0.026 ppb	0.051 ppb	99.150 %	92.539 %	0.472 ppb	0.020 ppb	200.232 %
Concentration per Run 2	0.022 ppb	0.058 ppb	110.784 %	124.697 %	0.287 ppb	0.002 ppb	165.264 %
Concentration per Run 3	0.027 ppb	0.057 ppb	103.303 %	116.535 %	0.291 ppb	0.000 ppb	133.800 %
Concentration RSD	9.4 %	7.1 %	5.6 %	15.0 %	30.2 %	150.0 %	20.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 10
Analysis label: ICV
Analysis started at: 4/1/2024 5:51:15 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 7
Comment ICV

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	91.516 %	93.705 %	50.368 ppb	51.828 ppb	5,336.577 ppb	5,211.251 ppb	52.102 ppb	5,275.596 ppb	5,361.828 ppb
Concentration per Run 1	93.856 %	93.560 %	48.857 ppb	50.234 ppb	5,176.030 ppb	5,086.814 ppb	50.077 ppb	4,987.982 ppb	5,181.615 ppb
Concentration per Run 2	91.870 %	95.553 %	49.709 ppb	51.477 ppb	5,513.860 ppb	5,414.623 ppb	54.337 ppb	5,584.381 ppb	5,654.955 ppb
Concentration per Run 3	88.820 %	92.001 %	52.539 ppb	53.773 ppb	5,319.841 ppb	5,132.315 ppb	51.893 ppb	5,254.424 ppb	5,248.916 ppb
Recovery Percentage 1			100.736 %	103.656 %	106.732 %	104.225 %	104.205 %	105.512 %	107.237 %
Concentration RSD	2.8 %	1.9 %	3.8 %	3.5 %	3.2 %	3.4 %	4.1 %	5.7 %	4.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.920 %	52.501 ppb	52.266 ppb	51.058 ppb	5,245.573 ppb	52.261 ppb	51.887 ppb	51.360 ppb	50.872 ppb
Concentration per Run 1	109.676 %	51.120 ppb	50.865 ppb	49.339 ppb	5,082.360 ppb	51.214 ppb	50.864 ppb	50.401 ppb	49.044 ppb
Concentration per Run 2	106.534 %	53.429 ppb	52.561 ppb	52.187 ppb	5,344.434 ppb	52.504 ppb	51.809 ppb	51.034 ppb	51.993 ppb
Concentration per Run 3	104.551 %	52.954 ppb	53.372 ppb	51.649 ppb	5,309.926 ppb	53.066 ppb	52.986 ppb	52.646 ppb	51.578 ppb
Recovery Percentage 1		105.002 %	104.532 %	102.117 %	104.911 %	104.522 %	103.773 %	102.721 %	101.743 %
Concentration RSD	2.4 %	2.3 %	2.4 %	3.0 %	2.7 %	1.8 %	2.0 %	2.3 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.147 %	51.654 ppb	51.282 ppb	53.049 ppb	50.728 ppb	99.730 %	48.556 ppb	51.031 ppb	103.447 %
Concentration per Run 1	99.834 %	49.597 ppb	48.502 ppb	50.305 ppb	47.317 ppb	102.376 %	47.293 ppb	49.136 ppb	105.411 %
Concentration per Run 2	99.831 %	53.264 ppb	53.766 ppb	56.182 ppb	53.315 ppb	98.674 %	49.553 ppb	52.078 ppb	106.087 %
Concentration per Run 3	94.777 %	52.101 ppb	51.577 ppb	52.659 ppb	51.552 ppb	98.141 %	48.822 ppb	51.877 ppb	98.843 %
Recovery Percentage 1		103.308 %	102.563 %	106.097 %	101.456 %		97.112 %	102.061 %	
Concentration RSD	3.0 %	3.6 %	5.2 %	5.6 %	6.1 %	2.3 %	2.4 %	3.2 %	3.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	51.049 ppb	51.361 ppb	107.347 %	113.824 %	49.142 ppb	48.046 ppb	164.020 %
Concentration per Run 1	48.989 ppb	48.838 ppb	110.153 %	121.775 %	40.947 ppb	44.453 ppb	204.540 %
Concentration per Run 2	52.493 ppb	53.551 ppb	106.684 %	120.398 %	47.583 ppb	45.975 ppb	161.341 %
Concentration per Run 3	51.667 ppb	51.693 ppb	105.204 %	99.301 %	58.896 ppb	53.711 ppb	126.178 %
Recovery Percentage 1	102.099 %	102.721 %			98.284 %	96.093 %	
Concentration RSD	3.6 %	4.6 %	2.4 %	11.1 %	18.5 %	10.3 %	23.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 11 User name ALPHALAB\Metals-Instrument Comment ICB
Analysis label: ICB Rack 0
Analysis started at: 4/1/2024 5:55:54 AM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	91.802 %	99.884 %	0.011 ppb	0.605 ppb	-9.189 ppb	-0.217 ppb	0.322 ppb	-2.401 ppb	1.070 ppb
Concentration per Run 1	95.088 %	101.704 %	0.012 ppb	0.551 ppb	-12.773 ppb	-0.285 ppb	0.446 ppb	-2.505 ppb	2.019 ppb
Concentration per Run 2	93.612 %	100.664 %	0.007 ppb	0.607 ppb	-13.392 ppb	-0.227 ppb	0.335 ppb	0.294 ppb	0.643 ppb
Concentration per Run 3	86.705 %	97.285 %	0.014 ppb	0.657 ppb	-1.401 ppb	-0.138 ppb	0.185 ppb	-4.991 ppb	0.548 ppb
Recovery Percentage 1			2.220 %	6.051 %	-9.189 %	-0.309 %	3.219 %	-2.401 %	1.070 %
Concentration RSD	4.9 %	2.3 %	30.1 %	8.8 %	73.5 %	34.1 %	40.6 %	110.1 %	77.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.191 %	-0.135 ppb	0.012 ppb	0.190 ppb	12.357 ppb	0.001 ppb	0.011 ppb	0.000 ppb	-0.145 ppb
Concentration per Run 1	109.298 %	-0.119 ppb	0.018 ppb	0.160 ppb	14.140 ppb	0.000 ppb	0.000 ppb	-0.010 ppb	-0.122 ppb
Concentration per Run 2	104.796 %	-0.148 ppb	0.017 ppb	0.206 ppb	13.247 ppb	0.004 ppb	0.009 ppb	0.001 ppb	-0.156 ppb
Concentration per Run 3	98.480 %	-0.138 ppb	0.000 ppb	0.205 ppb	9.683 ppb	-0.002 ppb	0.025 ppb	0.009 ppb	-0.158 ppb
Recovery Percentage 1		-2.701 %	1.179 %	19.022 %	24.713 %	0.115 %	0.559 %	-0.010 %	-2.906 %
Concentration RSD	5.2 %	10.9 %	83.5 %	14.0 %	19.1 %	542.5 %	112.5 %	10,014.3 %	13.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.110 %	0.089 ppb	0.413 ppb	0.006 ppb	1.237 ppb	100.967 %	0.005 ppb	0.007 ppb	104.249 %
Concentration per Run 1	95.332 %	0.119 ppb	0.321 ppb	0.007 ppb	1.260 ppb	100.576 %	0.008 ppb	0.009 ppb	105.265 %
Concentration per Run 2	100.521 %	0.072 ppb	0.394 ppb	0.005 ppb	1.191 ppb	100.344 %	0.004 ppb	0.007 ppb	104.859 %
Concentration per Run 3	98.478 %	0.078 ppb	0.523 ppb	0.004 ppb	1.260 ppb	101.980 %	0.002 ppb	0.004 ppb	102.624 %
Recovery Percentage 1		17.899 %	8.250 %	0.056 %	61.845 %		1.214 %	3.381 %	
Concentration RSD	2.7 %	29.1 %	24.7 %	28.8 %	3.2 %	0.9 %	57.9 %	40.1 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.088 ppb	0.019 ppb	105.059 %	111.806 %	0.555 ppb	0.001 ppb	144.871 %
Concentration per Run 1	0.083 ppb	0.015 ppb	103.968 %	118.068 %	0.491 ppb	0.003 ppb	175.636 %
Concentration per Run 2	0.081 ppb	0.019 ppb	103.543 %	98.433 %	0.648 ppb	0.006 ppb	128.730 %
Concentration per Run 3	0.100 ppb	0.025 ppb	107.665 %	118.918 %	0.527 ppb	-0.005 ppb	130.246 %
Recovery Percentage 1	2.203 %	3.885 %			55.519 %	0.117 %	
Concentration RSD	11.9 %	26.1 %	2.2 %	10.4 %	14.8 %	468.9 %	18.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 12
Analysis label: ICB
Analysis started at: 4/1/2024 6:07:01 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment ICB

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	99.325 %	95.928 %	0.002 ppb	0.186 ppb	-13.431 ppb	-0.968 ppb	-0.495 ppb	-6.942 ppb	-1.935 ppb
Concentration per Run 1	98.887 %	90.008 %	0.001 ppb	0.208 ppb	-3.194 ppb	-0.965 ppb	-0.477 ppb	-6.572 ppb	-0.251 ppb
Concentration per Run 2	99.262 %	101.790 %	0.001 ppb	0.197 ppb	-23.788 ppb	-1.035 ppb	-0.497 ppb	-6.652 ppb	-2.871 ppb
Concentration per Run 3	99.826 %	95.986 %	0.004 ppb	0.152 ppb	-13.313 ppb	-0.905 ppb	-0.512 ppb	-7.601 ppb	-2.683 ppb
Recovery Percentage 1			0.452 %	1.857 %	-13.431 %	-1.383 %	-4.954 %	-6.942 %	-1.935 %
Concentration RSD	0.5 %	6.1 %	83.3 %	15.9 %	76.7 %	6.7 %	3.6 %	8.2 %	75.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.034 %	-0.134 ppb	0.018 ppb	-0.014 ppb	2.551 ppb	-0.003 ppb	-0.022 ppb	-0.018 ppb	-0.308 ppb
Concentration per Run 1	108.361 %	-0.126 ppb	0.042 ppb	-0.001 ppb	2.810 ppb	-0.004 ppb	-0.006 ppb	-0.010 ppb	-0.260 ppb
Concentration per Run 2	110.896 %	-0.144 ppb	0.003 ppb	-0.027 ppb	2.322 ppb	-0.001 ppb	-0.034 ppb	-0.032 ppb	-0.327 ppb
Concentration per Run 3	110.844 %	-0.133 ppb	0.009 ppb	-0.016 ppb	2.522 ppb	-0.003 ppb	-0.026 ppb	-0.013 ppb	-0.336 ppb
Recovery Percentage 1		-2.685 %	1.785 %	-1.445 %	5.102 %	-0.500 %	-1.107 %	-1.842 %	-6.152 %
Concentration RSD	1.3 %	7.0 %	119.9 %	90.1 %	9.6 %	45.5 %	63.5 %	65.9 %	13.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.326 %	0.006 ppb	0.051 ppb	-0.002 ppb	0.195 ppb	99.716 %	-0.003 ppb	0.000 ppb	101.007 %
Concentration per Run 1	86.644 %	0.019 ppb	0.044 ppb	-0.002 ppb	0.169 ppb	94.379 %	-0.004 ppb	-0.002 ppb	93.910 %
Concentration per Run 2	101.685 %	-0.015 ppb	0.022 ppb	-0.004 ppb	0.205 ppb	104.839 %	-0.002 ppb	0.000 ppb	106.774 %
Concentration per Run 3	97.649 %	0.013 ppb	0.086 ppb	-0.001 ppb	0.210 ppb	99.931 %	-0.003 ppb	0.001 ppb	102.338 %
Recovery Percentage 1		1.144 %	1.014 %	-0.023 %	9.728 %		-0.670 %	-0.027 %	
Concentration RSD	8.2 %	317.8 %	64.0 %	57.2 %	11.5 %	5.2 %	30.2 %	2,799.7 %	6.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.013 ppb	-0.002 ppb	102.796 %	102.086 %	0.123 ppb	-0.008 ppb	178.127 %
Concentration per Run 1	0.012 ppb	-0.002 ppb	96.472 %	88.508 %	0.147 ppb	0.001 ppb	226.725 %
Concentration per Run 2	0.011 ppb	-0.002 ppb	105.911 %	101.506 %	0.118 ppb	-0.009 ppb	173.099 %
Concentration per Run 3	0.015 ppb	-0.002 ppb	106.004 %	116.243 %	0.104 ppb	-0.014 ppb	134.556 %
Recovery Percentage 1	0.318 %	-0.407 %			12.273 %	-0.752 %	
Concentration RSD	16.3 %	7.4 %	5.3 %	13.6 %	17.8 %	103.0 %	26.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	13	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/1/2024 6:13:24 AM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	77.884 %	92.232 %	0.030 ppb	2.873 ppb	**243,992.376 ppb**	**110,445.016 ppb**	**109,779.520 ppb**	**92,932.547 ppb**	**261,265.746 ppb**
Concentration per Run 1	82.164 %	89.229 %	0.028 ppb	2.776 ppb	243,220.416 ppb	109,186.919 ppb	106,895.119 ppb	94,363.220 ppb	262,234.518 ppb
Concentration per Run 2	77.400 %	94.687 %	0.030 ppb	2.815 ppb	247,299.302 ppb	114,227.250 ppb	114,746.591 ppb	96,106.222 ppb	271,912.186 ppb
Concentration per Run 3	74.089 %	92.781 %	0.033 ppb	3.028 ppb	241,457.410 ppb	107,920.880 ppb	107,696.850 ppb	88,328.200 ppb	249,650.532 ppb
Recovery Percentage 1			3.029 %	14.364 %	97.597 %	110.445 %	109.780 %	92.933 %	87.089 %
Concentration RSD	5.2 %	3.0 %	7.1 %	4.7 %	1.2 %	3.0 %	3.9 %	4.4 %	4.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.061 %	-0.013 ppb	1.471 ppb	4.205 ppb	**275,709.588 ppb**	2.077 ppb	2.663 ppb	1.156 ppb	2.184 ppb
Concentration per Run 1	121.094 %	-0.019 ppb	1.488 ppb	4.244 ppb	274,953.716 ppb	2.065 ppb	2.722 ppb	1.100 ppb	2.111 ppb
Concentration per Run 2	113.437 %	-0.019 ppb	1.509 ppb	4.200 ppb	277,348.594 ppb	2.057 ppb	2.616 ppb	1.155 ppb	2.235 ppb
Concentration per Run 3	113.652 %	0.000 ppb	1.417 ppb	4.171 ppb	274,826.454 ppb	2.109 ppb	2.652 ppb	1.212 ppb	2.207 ppb
Recovery Percentage 1		-0.255 %	44.585 %	73.770 %	110.284 %	72.365 %	43.659 %	40.986 %	19.158 %
Concentration RSD	3.8 %	84.2 %	3.3 %	0.9 %	0.5 %	1.3 %	2.0 %	4.8 %	3.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.243 %	0.550 ppb	3.073 ppb	2.558 ppb	**2,670.504 ppb**	90.687 %	0.031 ppb	0.507 ppb	98.103 %
Concentration per Run 1	98.259 %	0.602 ppb	3.016 ppb	2.491 ppb	2,605.509 ppb	89.875 %	0.030 ppb	0.475 ppb	96.158 %
Concentration per Run 2	106.807 %	0.530 ppb	3.160 ppb	2.648 ppb	2,670.865 ppb	91.241 %	0.030 ppb	0.518 ppb	102.084 %
Concentration per Run 3	101.662 %	0.518 ppb	3.041 ppb	2.536 ppb	2,735.138 ppb	90.946 %	0.033 ppb	0.529 ppb	96.068 %
Recovery Percentage 1		33.736 %	23.819 %	94.752 %	133.525 %		3.855 %	126.786 %	
Concentration RSD	4.2 %	8.2 %	2.5 %	3.2 %	2.4 %	0.8 %	6.0 %	5.7 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.197 ppb	1.283 ppb	96.147 %	94.663 %	0.088 ppb	1.398 ppb	135.633 %
Concentration per Run 1	0.195 ppb	1.290 ppb	84.303 %	91.667 %	0.071 ppb	1.416 ppb	170.092 %
Concentration per Run 2	0.203 ppb	1.262 ppb	102.964 %	97.281 %	0.094 ppb	1.365 ppb	119.460 %
Concentration per Run 3	0.194 ppb	1.297 ppb	101.174 %	95.041 %	0.098 ppb	1.414 ppb	117.347 %
Recovery Percentage 1	2.468 %	68.232 %			4.383 %	45.106 %	
Concentration RSD	2.6 %	1.5 %	10.7 %	3.0 %	16.6 %	2.1 %	22.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 14
Analysis label: LDR Check - 10/1[ppm
Analysis started at: 4/1/2024 6:18:08 AM
User name ALPHALAB\Metals-Instrument
Rack 4
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.996 %	108.519 %	0.006 ppb	0.294 ppb	24.760 ppb	3.356 ppb	3.837 ppb	15.301 ppb	15.709 ppb
Concentration per Run 1	93.248 %	99.451 %	0.009 ppb	0.256 ppb	55.877 ppb	4.646 ppb	4.414 ppb	17.162 ppb	21.012 ppb
Concentration per Run 2	89.436 %	113.746 %	0.003 ppb	0.372 ppb	14.929 ppb	2.679 ppb	3.721 ppb	15.280 ppb	13.235 ppb
Concentration per Run 3	90.302 %	112.360 %	0.006 ppb	0.254 ppb	3.475 ppb	2.742 ppb	3.375 ppb	13.461 ppb	12.881 ppb
Concentration RSD	2.2 %	7.3 %	45.9 %	23.0 %	111.3 %	33.3 %	13.8 %	12.1 %	29.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	115.960 %	-0.148 ppb	0.434 ppb	10,894.193 ppb	96.817 ppb	0.043 ppb	0.140 ppb	12,520.938 ppb	11,228.137 ppb
Concentration per Run 1	118.003 %	-0.134 ppb	0.457 ppb	11,184.764 ppb	117.455 ppb	0.044 ppb	0.161 ppb	12,967.620 ppb	11,486.282 ppb
Concentration per Run 2	113.989 %	-0.168 ppb	0.402 ppb	10,770.165 ppb	91.797 ppb	0.042 ppb	0.111 ppb	12,107.579 ppb	10,955.320 ppb
Concentration per Run 3	115.889 %	-0.144 ppb	0.443 ppb	10,727.649 ppb	81.198 ppb	0.044 ppb	0.149 ppb	12,487.616 ppb	11,242.811 ppb
Concentration RSD	1.7 %	11.9 %	6.6 %	2.3 %	19.3 %	3.0 %	18.7 %	3.4 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	121.119 %	955.422 ppb	0.033 ppb	0.224 ppb	14.655 ppb	120.328 %	0.038 ppb	0.020 ppb	124.686 %
Concentration per Run 1	114.650 %	976.242 ppb	0.037 ppb	0.222 ppb	15.603 ppb	116.122 %	0.041 ppb	0.023 ppb	117.278 %
Concentration per Run 2	129.297 %	938.650 ppb	0.029 ppb	0.229 ppb	14.240 ppb	123.676 %	0.039 ppb	0.017 ppb	132.723 %
Concentration per Run 3	119.410 %	951.373 ppb	0.033 ppb	0.222 ppb	14.122 ppb	121.185 %	0.034 ppb	0.019 ppb	124.057 %
Concentration RSD	6.2 %	2.0 %	11.8 %	1.8 %	5.6 %	3.2 %	8.6 %	14.9 %	6.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.016 ppb	11,962.529 ppb	120.679 %	133.834 %	0.048 ppb	9,382.880 ppb	165.880 %
Concentration per Run 1	0.016 ppb	12,108.457 ppb	115.291 %	127.538 %	0.032 ppb	9,711.397 ppb	187.155 %
Concentration per Run 2	0.017 ppb	11,834.260 ppb	125.120 %	141.116 %	0.052 ppb	8,934.461 ppb	171.720 %
Concentration per Run 3	0.015 ppb	11,944.870 ppb	121.626 %	132.849 %	0.059 ppb	9,502.781 ppb	138.765 %
Concentration RSD	5.9 %	1.2 %	4.1 %	5.1 %	29.2 %	4.3 %	14.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	15	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/1/2024 6:22:48 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.216 %	102.714 %	0.010 ppb	0.149 ppb	14.227 ppb	0.189 ppb	0.310 ppb	4.459 ppb	10.941 ppb
Concentration per Run 1	92.330 %	106.295 %	0.007 ppb	0.073 ppb	1.086 ppb	0.084 ppb	0.416 ppb	0.440 ppb	9.977 ppb
Concentration per Run 2	88.815 %	100.318 %	0.013 ppb	0.125 ppb	29.517 ppb	0.538 ppb	0.310 ppb	11.126 ppb	11.782 ppb
Concentration per Run 3	83.504 %	101.531 %	0.010 ppb	0.249 ppb	12.079 ppb	-0.056 ppb	0.203 ppb	1.810 ppb	11.064 ppb
Concentration RSD	5.0 %	3.1 %	32.9 %	60.5 %	100.8 %	164.2 %	34.5 %	130.4 %	8.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.088 %	-0.165 ppb	0.023 ppb	0.203 ppb	27.336 ppb	0.003 ppb	0.059 ppb	0.298 ppb	1.341 ppb
Concentration per Run 1	109.542 %	-0.167 ppb	0.033 ppb	0.221 ppb	30.313 ppb	0.004 ppb	0.077 ppb	0.366 ppb	1.552 ppb
Concentration per Run 2	104.359 %	-0.154 ppb	0.015 ppb	0.221 ppb	24.746 ppb	0.001 ppb	0.047 ppb	0.252 ppb	1.309 ppb
Concentration per Run 3	98.362 %	-0.175 ppb	0.022 ppb	0.168 ppb	26.949 ppb	0.006 ppb	0.053 ppb	0.276 ppb	1.162 ppb
Concentration RSD	5.4 %	6.7 %	40.3 %	15.2 %	10.3 %	78.0 %	27.2 %	20.2 %	14.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	107.159 %	1.072 ppb	0.004 ppb	0.004 ppb	3.007 ppb	110.333 %	0.002 ppb	-0.001 ppb	112.605 %
Concentration per Run 1	105.670 %	1.096 ppb	0.010 ppb	0.005 ppb	2.809 ppb	109.965 %	0.000 ppb	0.000 ppb	111.486 %
Concentration per Run 2	111.878 %	1.078 ppb	-0.004 ppb	0.004 ppb	3.084 ppb	111.520 %	0.003 ppb	-0.001 ppb	116.979 %
Concentration per Run 3	103.928 %	1.043 ppb	0.006 ppb	0.003 ppb	3.127 ppb	109.514 %	0.002 ppb	-0.001 ppb	109.350 %
Concentration RSD	3.9 %	2.5 %	166.3 %	26.6 %	5.7 %	1.0 %	102.0 %	90.1 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.009 ppb	0.133 ppb	112.443 %	117.682 %	0.040 ppb	0.587 ppb	173.111 %
Concentration per Run 1	0.010 ppb	0.170 ppb	112.019 %	102.804 %	0.031 ppb	0.797 ppb	209.738 %
Concentration per Run 2	0.010 ppb	0.120 ppb	113.941 %	129.263 %	0.041 ppb	0.513 ppb	174.564 %
Concentration per Run 3	0.009 ppb	0.108 ppb	111.370 %	120.979 %	0.048 ppb	0.452 ppb	135.032 %
Concentration RSD	1.4 %	24.8 %	1.2 %	11.5 %	21.4 %	31.3 %	21.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	16	User name	ALPHALAB\Metals-Instrument	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 6:27:25 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.649 %	102.195 %	57.523 ppb	56.251 ppb	6,227.026 ppb	6,056.354 ppb	59.510 ppb	6,159.639 ppb	6,106.789 ppb
Concentration per Run 1	86.632 %	99.711 %	59.339 ppb	57.745 ppb	6,527.132 ppb	6,309.616 ppb	63.268 ppb	6,616.742 ppb	6,496.209 ppb
Concentration per Run 2	87.941 %	110.974 %	56.936 ppb	55.750 ppb	6,114.128 ppb	5,913.154 ppb	57.585 ppb	5,935.167 ppb	6,051.619 ppb
Concentration per Run 3	88.376 %	95.899 %	56.294 ppb	55.258 ppb	6,039.819 ppb	5,946.293 ppb	57.678 ppb	5,927.008 ppb	5,772.539 ppb
Recovery Percentage 1			95.871 %	93.752 %	103.784 %	100.939 %	99.183 %	102.661 %	101.780 %
Concentration RSD	1.0 %	7.7 %	2.8 %	2.3 %	4.2 %	3.6 %	5.5 %	6.4 %	6.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	117.124 %	59.992 ppb	60.610 ppb	57.801 ppb	6,043.897 ppb	61.117 ppb	61.396 ppb	61.399 ppb	59.280 ppb
Concentration per Run 1	114.234 %	63.465 ppb	64.341 ppb	60.519 ppb	6,474.562 ppb	66.152 ppb	66.137 ppb	66.468 ppb	63.367 ppb
Concentration per Run 2	118.301 %	59.251 ppb	59.345 ppb	57.106 ppb	5,915.973 ppb	59.583 ppb	59.697 ppb	59.522 ppb	58.516 ppb
Concentration per Run 3	118.836 %	57.260 ppb	58.144 ppb	55.778 ppb	5,741.156 ppb	57.615 ppb	58.354 ppb	58.206 ppb	55.957 ppb
Recovery Percentage 1		99.987 %	101.017 %	96.335 %	100.732 %	101.861 %	102.327 %	102.331 %	98.800 %
Concentration RSD	2.1 %	5.3 %	5.4 %	4.2 %	6.3 %	7.3 %	6.8 %	7.2 %	6.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.336 %	60.811 ppb	60.597 ppb	60.598 ppb	60.726 ppb	106.076 %	58.695 ppb	60.992 ppb	108.579 %
Concentration per Run 1	100.671 %	65.121 ppb	63.387 ppb	63.171 ppb	62.945 ppb	104.058 %	63.268 ppb	65.397 ppb	103.166 %
Concentration per Run 2	109.617 %	60.701 ppb	62.248 ppb	63.040 ppb	60.980 ppb	104.997 %	58.439 ppb	61.343 ppb	109.683 %
Concentration per Run 3	105.721 %	56.612 ppb	56.156 ppb	55.585 ppb	58.251 ppb	109.174 %	54.379 ppb	56.236 ppb	112.889 %
Recovery Percentage 1		101.352 %	100.994 %	100.997 %	101.209 %		97.825 %	101.653 %	
Concentration RSD	4.3 %	7.0 %	6.4 %	7.2 %	3.9 %	2.6 %	7.6 %	7.5 %	4.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.638 ppb	61.591 ppb	111.417 %	117.333 %	59.667 ppb	57.901 ppb	165.203 %
Concentration per Run 1	65.002 ppb	66.304 ppb	106.371 %	98.907 %	66.403 ppb	69.454 ppb	191.374 %
Concentration per Run 2	62.127 ppb	63.253 ppb	111.245 %	123.430 %	56.589 ppb	54.056 ppb	132.334 %
Concentration per Run 3	54.787 ppb	55.216 ppb	116.635 %	129.661 %	56.010 ppb	50.195 ppb	171.900 %
Recovery Percentage 1	101.064 %	102.652 %			99.446 %	96.502 %	
Concentration RSD	8.7 %	9.3 %	4.6 %	13.9 %	9.8 %	17.6 %	18.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	17	User name	ALPHALAB\Metals-Instrument	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 6:32:06 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.610 %	97.776 %	0.006 ppb	0.545 ppb	7.525 ppb	-0.514 ppb	-0.403 ppb	-0.718 ppb	-2.459 ppb
Concentration per Run 1	85.141 %	101.531 %	0.003 ppb	0.401 ppb	-3.269 ppb	0.010 ppb	-0.332 ppb	-0.778 ppb	-3.177 ppb
Concentration per Run 2	81.488 %	95.640 %	0.014 ppb	0.653 ppb	15.748 ppb	-0.841 ppb	-0.425 ppb	1.203 ppb	-1.798 ppb
Concentration per Run 3	78.200 %	96.159 %	0.000 ppb	0.582 ppb	10.095 ppb	-0.712 ppb	-0.452 ppb	-2.580 ppb	-2.402 ppb
Recovery Percentage 1			1.189 %	5.449 %	7.525 %	-0.735 %	-4.029 %	-0.718 %	-2.459 %
Concentration RSD	4.3 %	3.3 %	122.6 %	23.8 %	129.8 %	89.1 %	15.7 %	263.4 %	28.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.455 %	-0.137 ppb	0.014 ppb	0.033 ppb	18.760 ppb	-0.001 ppb	-0.010 ppb	0.024 ppb	-0.129 ppb
Concentration per Run 1	105.158 %	-0.142 ppb	0.036 ppb	0.034 ppb	17.423 ppb	0.001 ppb	-0.014 ppb	0.033 ppb	-0.145 ppb
Concentration per Run 2	98.587 %	-0.135 ppb	0.011 ppb	0.037 ppb	20.986 ppb	-0.003 ppb	-0.001 ppb	0.019 ppb	-0.101 ppb
Concentration per Run 3	94.620 %	-0.133 ppb	-0.003 ppb	0.029 ppb	17.869 ppb	-0.001 ppb	-0.015 ppb	0.019 ppb	-0.139 ppb
Recovery Percentage 1		-2.738 %	1.447 %	3.310 %	37.519 %	-0.198 %	-0.512 %	2.351 %	-2.572 %
Concentration RSD	5.4 %	3.5 %	134.6 %	12.0 %	10.3 %	187.3 %	78.2 %	35.6 %	18.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.989 %	0.179 ppb	0.305 ppb	-0.002 ppb	1.866 ppb	103.350 %	0.007 ppb	0.004 ppb	106.696 %
Concentration per Run 1	102.367 %	0.173 ppb	0.342 ppb	-0.002 ppb	1.752 ppb	105.207 %	0.013 ppb	0.004 ppb	109.621 %
Concentration per Run 2	98.873 %	0.169 ppb	0.238 ppb	-0.002 ppb	1.892 ppb	102.057 %	0.003 ppb	0.005 ppb	106.644 %
Concentration per Run 3	98.727 %	0.196 ppb	0.337 ppb	-0.003 ppb	1.954 ppb	102.786 %	0.004 ppb	0.004 ppb	103.824 %
Recovery Percentage 1		35.810 %	6.109 %	-0.024 %	93.298 %		1.635 %	2.201 %	
Concentration RSD	2.1 %	8.1 %	19.1 %	30.2 %	5.5 %	1.6 %	89.0 %	20.3 %	2.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.046 ppb	0.014 ppb	108.426 %	121.271 %	0.462 ppb	0.146 ppb	169.440 %
Concentration per Run 1	0.036 ppb	0.021 ppb	110.457 %	122.872 %	0.396 ppb	0.160 ppb	204.844 %
Concentration per Run 2	0.046 ppb	0.012 ppb	106.380 %	120.204 %	0.546 ppb	0.141 ppb	165.914 %
Concentration per Run 3	0.056 ppb	0.010 ppb	108.442 %	120.736 %	0.445 ppb	0.137 ppb	137.562 %
Recovery Percentage 1	1.153 %	2.847 %			46.218 %	14.594 %	
Concentration RSD	21.8 %	38.6 %	1.9 %	1.2 %	16.6 %	8.4 %	19.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 18
Analysis label: WG1901949-1 MCP-6020TL-10
Analysis started at: 4/1/2024 6:44:34 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	96.601 %	103.465 %	0.002 ppb	0.138 ppb	-8.005 ppb	-0.044 ppb	0.887 ppb	-1.148 ppb	19.318 ppb
Concentration per Run 1	96.982 %	104.130 %	-0.003 ppb	0.121 ppb	-2.554 ppb	-0.192 ppb	0.961 ppb	5.083 ppb	21.680 ppb
Concentration per Run 2	95.861 %	104.823 %	0.002 ppb	0.178 ppb	-11.879 ppb	-0.129 ppb	0.969 ppb	-3.685 ppb	20.388 ppb
Concentration per Run 3	96.959 %	101.444 %	0.007 ppb	0.114 ppb	-9.584 ppb	0.189 ppb	0.731 ppb	-4.842 ppb	15.886 ppb
Concentration RSD	0.7 %	1.7 %	220.8 %	25.3 %	60.7 %	465.1 %	15.2 %	472.8 %	15.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.162 %	-0.180 ppb	0.839 ppb	0.170 ppb	4.023 ppb	0.000 ppb	0.036 ppb	0.066 ppb	-0.093 ppb
Concentration per Run 1	109.117 %	-0.178 ppb	0.825 ppb	0.187 ppb	3.429 ppb	-0.002 ppb	0.042 ppb	0.063 ppb	-0.143 ppb
Concentration per Run 2	109.996 %	-0.179 ppb	0.846 ppb	0.161 ppb	4.171 ppb	0.003 ppb	0.028 ppb	0.074 ppb	-0.043 ppb
Concentration per Run 3	114.372 %	-0.182 ppb	0.847 ppb	0.162 ppb	4.471 ppb	-0.001 ppb	0.037 ppb	0.062 ppb	-0.094 ppb
Concentration RSD	2.5 %	1.2 %	1.4 %	8.5 %	13.3 %	875.5 %	20.1 %	9.9 %	53.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.423 %	0.065 ppb	0.041 ppb	0.011 ppb	0.347 ppb	105.530 %	-0.001 ppb	-0.001 ppb	109.421 %
Concentration per Run 1	103.214 %	0.090 ppb	0.042 ppb	0.013 ppb	0.282 ppb	104.994 %	-0.001 ppb	0.001 ppb	112.470 %
Concentration per Run 2	99.976 %	0.074 ppb	0.034 ppb	0.010 ppb	0.379 ppb	105.223 %	0.001 ppb	-0.002 ppb	107.948 %
Concentration per Run 3	104.079 %	0.031 ppb	0.048 ppb	0.010 ppb	0.379 ppb	106.372 %	-0.003 ppb	-0.001 ppb	107.844 %
Concentration RSD	2.1 %	46.3 %	16.8 %	16.3 %	16.1 %	0.7 %	194.1 %	198.8 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.006 ppb	0.008 ppb	108.783 %	122.121 %	0.069 ppb	0.081 ppb	191.930 %
Concentration per Run 1	-0.002 ppb	0.013 ppb	107.938 %	121.705 %	0.063 ppb	0.086 ppb	211.899 %
Concentration per Run 2	0.008 ppb	0.006 ppb	108.982 %	121.694 %	0.074 ppb	0.084 ppb	187.321 %
Concentration per Run 3	0.014 ppb	0.005 ppb	109.428 %	122.965 %	0.071 ppb	0.073 ppb	176.570 %
Concentration RSD	125.3 %	54.8 %	0.7 %	0.6 %	8.1 %	8.6 %	9.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	19	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	xWG1901949-2d10 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 6:49:11 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.293 %	103.494 %	5.128 ppb	100.631 ppb	815.464 ppb	978.686 ppb	185.673 ppb	1,009.837 ppb	983.167 ppb
Concentration per Run 1	88.229 %	105.429 %	4.906 ppb	96.325 ppb	845.907 ppb	1,009.180 ppb	192.566 ppb	1,060.026 ppb	1,015.995 ppb
Concentration per Run 2	83.594 %	101.357 %	5.216 ppb	100.981 ppb	816.782 ppb	969.994 ppb	188.886 ppb	1,016.089 ppb	1,001.674 ppb
Concentration per Run 3	81.056 %	103.696 %	5.262 ppb	104.585 ppb	783.703 ppb	956.883 ppb	175.568 ppb	953.395 ppb	931.832 ppb
Concentration RSD	4.3 %	2.0 %	3.8 %	4.1 %	3.8 %	2.8 %	4.8 %	5.3 %	4.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.394 %	47.829 ppb	19.461 ppb	47.895 ppb	110.971 ppb	49.655 ppb	49.862 ppb	25.103 ppb	48.248 ppb
Concentration per Run 1	102.789 %	48.399 ppb	19.556 ppb	47.945 ppb	109.274 ppb	49.844 ppb	49.687 ppb	25.013 ppb	48.629 ppb
Concentration per Run 2	99.668 %	48.577 ppb	19.836 ppb	48.614 ppb	112.894 ppb	49.920 ppb	50.792 ppb	25.508 ppb	48.558 ppb
Concentration per Run 3	95.725 %	46.510 ppb	18.991 ppb	47.127 ppb	110.743 ppb	49.202 ppb	49.106 ppb	24.787 ppb	47.556 ppb
Concentration RSD	3.6 %	2.4 %	2.2 %	1.6 %	1.6 %	0.8 %	1.7 %	1.5 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.967 %	12.109 ppb	12.023 ppb	97.606 ppb	93.879 ppb	103.575 %	4.797 ppb	5.322 ppb	106.138 %
Concentration per Run 1	103.382 %	12.267 ppb	12.730 ppb	102.981 ppb	91.218 ppb	105.061 %	4.826 ppb	5.409 ppb	111.263 %
Concentration per Run 2	100.183 %	12.239 ppb	11.673 ppb	96.369 ppb	94.552 ppb	103.172 %	4.734 ppb	5.217 ppb	105.207 %
Concentration per Run 3	99.336 %	11.820 ppb	11.668 ppb	93.469 ppb	95.868 ppb	102.492 %	4.832 ppb	5.340 ppb	101.945 %
Concentration RSD	2.1 %	2.1 %	5.1 %	5.0 %	2.6 %	1.3 %	1.1 %	1.8 %	4.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	34.530 ppb	198.487 ppb	109.851 %	103.528 %	12.003 ppb	56.367 ppb	213.991 %
Concentration per Run 1	33.695 ppb	200.149 ppb	111.266 %	106.648 %	11.557 ppb	54.683 ppb	268.345 %
Concentration per Run 2	34.252 ppb	199.156 ppb	108.265 %	101.531 %	12.433 ppb	57.900 ppb	197.781 %
Concentration per Run 3	35.643 ppb	196.157 ppb	110.022 %	102.404 %	12.020 ppb	56.519 ppb	175.846 %
Concentration RSD	2.9 %	1.0 %	1.4 %	2.6 %	3.6 %	2.9 %	22.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 20
Analysis label: WG1901949-3d10 MCP-6020TL-10
Analysis started at: 4/1/2024 6:53:47 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 3
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.300 %	96.159 %	5.179 ppb	101.858 ppb	855.073 ppb	991.685 ppb	188.099 ppb	1,016.248 ppb	976.641 ppb
Concentration per Run 1	84.298 %	92.867 %	4.973 ppb	98.751 ppb	968.042 ppb	1,095.891 ppb	212.509 ppb	1,162.649 ppb	1,063.210 ppb
Concentration per Run 2	80.330 %	98.065 %	5.330 ppb	103.483 ppb	810.541 ppb	953.665 ppb	181.611 ppb	995.404 ppb	939.593 ppb
Concentration per Run 3	79.271 %	97.545 %	5.235 ppb	103.340 ppb	786.636 ppb	925.499 ppb	170.177 ppb	890.690 ppb	927.119 ppb
Concentration RSD	3.3 %	3.0 %	3.6 %	2.6 %	11.5 %	9.2 %	11.6 %	13.5 %	7.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.811 %	49.049 ppb	20.137 ppb	48.088 ppb	105.718 ppb	50.351 ppb	51.174 ppb	25.440 ppb	49.273 ppb
Concentration per Run 1	91.315 %	52.284 ppb	21.640 ppb	52.416 ppb	115.465 ppb	52.942 ppb	53.597 ppb	26.798 ppb	52.261 ppb
Concentration per Run 2	88.996 %	47.898 ppb	19.672 ppb	46.651 ppb	102.552 ppb	49.559 ppb	49.933 ppb	24.708 ppb	48.708 ppb
Concentration per Run 3	92.121 %	46.964 ppb	19.099 ppb	45.197 ppb	99.139 ppb	48.554 ppb	49.991 ppb	24.814 ppb	46.852 ppb
Concentration RSD	1.8 %	5.8 %	6.6 %	7.9 %	8.1 %	4.6 %	4.1 %	4.6 %	5.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.127 %	12.320 ppb	12.233 ppb	98.989 ppb	100.303 ppb	96.946 %	5.017 ppb	5.624 ppb	94.181 %
Concentration per Run 1	95.922 %	13.067 ppb	13.610 ppb	110.401 ppb	101.255 ppb	95.831 %	5.213 ppb	5.857 ppb	97.190 %
Concentration per Run 2	95.825 %	12.160 ppb	11.635 ppb	96.136 ppb	99.733 ppb	97.651 %	4.910 ppb	5.529 ppb	95.564 %
Concentration per Run 3	96.634 %	11.734 ppb	11.455 ppb	90.429 ppb	99.921 ppb	97.355 %	4.930 ppb	5.486 ppb	89.788 %
Concentration RSD	0.5 %	5.5 %	9.8 %	10.4 %	0.8 %	1.0 %	3.4 %	3.6 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	41.672 ppb	219.123 ppb	94.296 %	93.585 %	12.955 ppb	60.435 ppb	140.863 %
Concentration per Run 1	42.507 ppb	244.034 ppb	82.095 %	93.180 %	13.382 ppb	62.964 ppb	182.969 %
Concentration per Run 2	40.707 ppb	207.606 ppb	100.804 %	94.864 %	12.581 ppb	58.641 ppb	121.844 %
Concentration per Run 3	41.803 ppb	205.731 ppb	99.987 %	92.712 %	12.902 ppb	59.700 ppb	117.776 %
Concentration RSD	2.2 %	9.9 %	11.2 %	1.2 %	3.1 %	3.7 %	25.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 21
Analysis label: I2416274-01 MCP-6020TL-10
Analysis started at: 4/1/2024 6:58:25 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 4
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.871 %	88.247 %	0.028 ppb	245.271 ppb	141,953.997 ppb	3,146.625 ppb	2.185 ppb	5,333.034 ppb	27,712.440 ppb
Concentration per Run 1	86.237 %	88.882 %	0.032 ppb	247.414 ppb	144,987.981 ppb	3,214.894 ppb	2.327 ppb	5,643.700 ppb	28,487.821 ppb
Concentration per Run 2	84.715 %	87.843 %	0.026 ppb	242.985 ppb	139,818.199 ppb	3,129.029 ppb	2.298 ppb	5,071.965 ppb	26,840.961 ppb
Concentration per Run 3	83.660 %	88.016 %	0.027 ppb	245.415 ppb	141,055.810 ppb	3,095.953 ppb	1.930 ppb	5,283.438 ppb	27,808.539 ppb
Concentration RSD	1.5 %	0.6 %	11.2 %	0.9 %	1.9 %	2.0 %	10.1 %	5.4 %	3.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.380 %	-0.101 ppb	0.917 ppb	0.725 ppb	6.035 ppb	0.020 ppb	0.443 ppb	1.400 ppb	5.406 ppb
Concentration per Run 1	106.613 %	-0.098 ppb	0.916 ppb	0.657 ppb	6.343 ppb	0.026 ppb	0.419 ppb	1.396 ppb	5.258 ppb
Concentration per Run 2	105.049 %	-0.114 ppb	0.891 ppb	0.712 ppb	5.801 ppb	0.016 ppb	0.455 ppb	1.400 ppb	5.477 ppb
Concentration per Run 3	104.479 %	-0.092 ppb	0.944 ppb	0.806 ppb	5.960 ppb	0.019 ppb	0.455 ppb	1.404 ppb	5.483 ppb
Concentration RSD	1.0 %	11.0 %	2.9 %	10.4 %	4.6 %	26.2 %	4.7 %	0.3 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.641 %	0.092 ppb	0.731 ppb	141.672 ppb	2.879 ppb	92.520 %	0.010 ppb	0.057 ppb	99.831 %
Concentration per Run 1	101.046 %	0.069 ppb	0.663 ppb	142.957 ppb	2.775 ppb	93.866 %	0.013 ppb	0.044 ppb	107.116 %
Concentration per Run 2	92.625 %	0.081 ppb	0.717 ppb	140.509 ppb	2.938 ppb	90.689 %	0.009 ppb	0.057 ppb	94.086 %
Concentration per Run 3	93.252 %	0.127 ppb	0.814 ppb	141.549 ppb	2.923 ppb	93.003 %	0.009 ppb	0.070 ppb	98.290 %
Concentration RSD	4.9 %	33.0 %	10.5 %	0.9 %	3.1 %	1.8 %	21.3 %	22.4 %	6.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	3.267 ppb	68.409 ppb	102.448 %	105.019 %	0.077 ppb	0.074 ppb	144.921 %
Concentration per Run 1	3.311 ppb	67.117 ppb	103.412 %	119.679 %	0.060 ppb	0.061 ppb	177.477 %
Concentration per Run 2	3.288 ppb	70.040 ppb	100.600 %	96.389 %	0.088 ppb	0.085 ppb	131.976 %
Concentration per Run 3	3.201 ppb	68.069 ppb	103.331 %	98.988 %	0.081 ppb	0.077 ppb	125.309 %
Concentration RSD	1.8 %	2.2 %	1.6 %	12.2 %	19.0 %	16.5 %	19.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 22
Analysis label: I2416427-02 MCP-6020TL-10
Analysis started at: 4/1/2024 7:03:02 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 5
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.104 %	88.998 %	0.011 ppb	125.184 ppb	173,075.691 ppb	24,855.758 ppb	11.418 ppb	21,653.782 ppb	66,690.675 ppb
Concentration per Run 1	86.074 %	82.038 %	0.008 ppb	123.731 ppb	187,695.762 ppb	26,719.592 ppb	12.393 ppb	23,213.379 ppb	70,938.366 ppb
Concentration per Run 2	84.500 %	88.622 %	0.006 ppb	123.725 ppb	171,745.313 ppb	24,883.719 ppb	11.700 ppb	21,057.564 ppb	66,017.071 ppb
Concentration per Run 3	81.739 %	96.333 %	0.019 ppb	128.096 ppb	159,785.997 ppb	22,963.963 ppb	10.161 ppb	20,690.402 ppb	63,116.586 ppb
Concentration RSD	2.6 %	8.0 %	63.7 %	2.0 %	8.1 %	7.6 %	10.0 %	6.3 %	5.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	119.991 %	0.840 ppb	1.236 ppb	473.122 ppb	28,981.224 ppb	4.751 ppb	9.036 ppb	0.536 ppb	0.433 ppb
Concentration per Run 1	121.294 %	0.901 ppb	1.313 ppb	492.555 ppb	29,981.001 ppb	5.002 ppb	9.459 ppb	0.535 ppb	0.509 ppb
Concentration per Run 2	120.317 %	0.830 ppb	1.208 ppb	474.954 ppb	29,274.681 ppb	4.726 ppb	9.181 ppb	0.595 ppb	0.440 ppb
Concentration per Run 3	118.363 %	0.789 ppb	1.187 ppb	451.857 ppb	27,687.989 ppb	4.526 ppb	8.468 ppb	0.479 ppb	0.349 ppb
Concentration RSD	1.2 %	6.7 %	5.4 %	4.3 %	4.1 %	5.0 %	5.7 %	10.8 %	18.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.476 %	335.656 ppb	0.178 ppb	358.446 ppb	7.124 ppb	90.214 %	0.000 ppb	0.015 ppb	93.220 %
Concentration per Run 1	89.353 %	349.215 ppb	0.186 ppb	371.763 ppb	6.972 ppb	87.266 %	0.001 ppb	0.017 ppb	89.863 %
Concentration per Run 2	92.499 %	332.863 ppb	0.181 ppb	356.025 ppb	7.223 ppb	90.936 %	-0.001 ppb	0.011 ppb	94.309 %
Concentration per Run 3	95.575 %	324.890 ppb	0.167 ppb	347.550 ppb	7.178 ppb	92.440 %	-0.001 ppb	0.018 ppb	95.489 %
Concentration RSD	3.4 %	3.7 %	5.4 %	3.4 %	1.9 %	3.0 %	393.7 %	24.3 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.223 ppb	149.947 ppb	101.709 %	102.692 %	0.051 ppb	0.072 ppb	143.753 %
Concentration per Run 1	1.293 ppb	156.536 ppb	97.872 %	92.242 %	0.043 ppb	0.078 ppb	184.637 %
Concentration per Run 2	1.203 ppb	149.366 ppb	101.947 %	116.182 %	0.051 ppb	0.059 ppb	126.569 %
Concentration per Run 3	1.173 ppb	143.938 ppb	105.307 %	99.652 %	0.060 ppb	0.079 ppb	120.055 %
Concentration RSD	5.1 %	4.2 %	3.7 %	11.9 %	16.7 %	15.8 %	24.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 23
Analysis label: I2416427-03 MCP-6020TL-10
Analysis started at: 4/1/2024 7:07:40 AM

User name ALPHALAB\Metals-Instrument
Rack 1
Vial 6

Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	92.293 %	103.783 %	0.011 ppb	3.756 ppb	4,750.621 ppb	2,407.226 ppb	8.122 ppb	2,625.237 ppb	6,106.718 ppb
Concentration per Run 1	93.560 %	106.122 %	0.014 ppb	3.727 ppb	4,524.898 ppb	2,250.793 ppb	7.793 ppb	2,502.020 ppb	5,874.386 ppb
Concentration per Run 2	92.752 %	100.231 %	0.011 ppb	3.840 ppb	4,940.294 ppb	2,546.168 ppb	8.274 ppb	2,673.917 ppb	6,308.993 ppb
Concentration per Run 3	90.568 %	104.996 %	0.007 ppb	3.700 ppb	4,786.672 ppb	2,424.716 ppb	8.299 ppb	2,699.773 ppb	6,136.774 ppb
Concentration RSD	1.7 %	3.0 %	35.0 %	2.0 %	4.4 %	6.2 %	3.5 %	4.1 %	3.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.249 %	-0.082 ppb	1.120 ppb	98.934 ppb	2,857.837 ppb	0.098 ppb	2.253 ppb	0.466 ppb	1.822 ppb
Concentration per Run 1	115.953 %	-0.117 ppb	1.148 ppb	97.421 ppb	2,846.338 ppb	0.102 ppb	2.360 ppb	0.475 ppb	1.866 ppb
Concentration per Run 2	116.837 %	-0.080 ppb	1.124 ppb	100.318 ppb	2,870.894 ppb	0.088 ppb	2.166 ppb	0.438 ppb	1.773 ppb
Concentration per Run 3	115.956 %	-0.049 ppb	1.089 ppb	99.064 ppb	2,856.279 ppb	0.103 ppb	2.232 ppb	0.485 ppb	1.826 ppb
Concentration RSD	0.4 %	41.4 %	2.7 %	1.5 %	0.4 %	8.5 %	4.4 %	5.4 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.611 %	0.708 ppb	-0.010 ppb	28.838 ppb	0.695 ppb	104.167 %	0.001 ppb	0.020 ppb	106.560 %
Concentration per Run 1	97.076 %	0.726 ppb	-0.020 ppb	27.902 ppb	0.601 ppb	102.780 %	0.002 ppb	0.023 ppb	102.189 %
Concentration per Run 2	104.211 %	0.694 ppb	0.018 ppb	29.199 ppb	0.651 ppb	104.936 %	0.000 ppb	0.020 ppb	110.221 %
Concentration per Run 3	103.545 %	0.705 ppb	-0.028 ppb	29.412 ppb	0.833 ppb	104.784 %	0.001 ppb	0.018 ppb	107.269 %
Concentration RSD	3.9 %	2.3 %	248.2 %	2.8 %	17.6 %	1.2 %	74.6 %	14.3 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.610 ppb	20.542 ppb	110.538 %	115.589 %	0.035 ppb	0.109 ppb	183.581 %
Concentration per Run 1	0.601 ppb	20.170 ppb	108.562 %	101.160 %	0.025 ppb	0.123 ppb	195.276 %
Concentration per Run 2	0.601 ppb	20.444 ppb	111.680 %	121.594 %	0.041 ppb	0.103 ppb	181.530 %
Concentration per Run 3	0.628 ppb	21.011 ppb	111.372 %	124.012 %	0.039 ppb	0.101 ppb	173.937 %
Concentration RSD	2.5 %	2.1 %	1.6 %	10.9 %	25.5 %	11.1 %	5.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	24	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416427-04 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 7:12:18 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.925 %	101.675 %	0.005 ppb	9.220 ppb	48,476.991 ppb	6,909.813 ppb	39.302 ppb	2,024.355 ppb	23,368.294 ppb
Concentration per Run 1	91.237 %	99.711 %	0.008 ppb	9.013 ppb	46,990.832 ppb	6,696.197 ppb	37.183 ppb	1,956.381 ppb	22,916.336 ppb
Concentration per Run 2	87.474 %	101.530 %	0.000 ppb	9.309 ppb	49,846.364 ppb	7,008.295 ppb	38.837 ppb	2,058.061 ppb	23,663.374 ppb
Concentration per Run 3	85.063 %	103.783 %	0.007 ppb	9.338 ppb	48,593.775 ppb	7,024.949 ppb	41.887 ppb	2,058.622 ppb	23,525.173 ppb
Concentration RSD	3.5 %	2.0 %	87.9 %	2.0 %	3.0 %	2.7 %	6.1 %	2.9 %	1.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.658 %	0.020 ppb	1.277 ppb	307.978 ppb	146.173 ppb	0.097 ppb	2.032 ppb	0.439 ppb	19.868 ppb
Concentration per Run 1	115.434 %	-0.040 ppb	1.244 ppb	304.155 ppb	141.965 ppb	0.099 ppb	2.049 ppb	0.421 ppb	19.805 ppb
Concentration per Run 2	111.303 %	0.022 ppb	1.408 ppb	307.043 ppb	146.036 ppb	0.083 ppb	2.053 ppb	0.435 ppb	20.018 ppb
Concentration per Run 3	108.237 %	0.078 ppb	1.178 ppb	312.735 ppb	150.518 ppb	0.110 ppb	1.994 ppb	0.461 ppb	19.780 ppb
Concentration RSD	3.2 %	298.3 %	9.3 %	1.4 %	2.9 %	14.0 %	1.6 %	4.5 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.861 %	1.919 ppb	-0.006 ppb	100.179 ppb	14.571 ppb	101.508 %	0.002 ppb	0.009 ppb	105.641 %
Concentration per Run 1	99.300 %	1.892 ppb	0.036 ppb	96.541 ppb	13.850 ppb	100.454 %	0.003 ppb	0.006 ppb	101.479 %
Concentration per Run 2	102.259 %	1.958 ppb	-0.009 ppb	101.988 ppb	14.851 ppb	101.468 %	0.002 ppb	0.011 ppb	106.912 %
Concentration per Run 3	104.025 %	1.906 ppb	-0.043 ppb	102.009 ppb	15.013 ppb	102.603 %	0.001 ppb	0.009 ppb	108.532 %
Concentration RSD	2.3 %	1.8 %	702.8 %	3.1 %	4.3 %	1.1 %	55.0 %	30.2 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.455 ppb	21.079 ppb	111.017 %	121.184 %	0.028 ppb	0.215 ppb	154.335 %
Concentration per Run 1	0.429 ppb	20.370 ppb	111.230 %	118.529 %	0.017 ppb	0.214 ppb	184.689 %
Concentration per Run 2	0.465 ppb	21.358 ppb	110.189 %	122.997 %	0.033 ppb	0.205 ppb	141.811 %
Concentration per Run 3	0.470 ppb	21.510 ppb	111.633 %	122.024 %	0.036 ppb	0.227 ppb	136.507 %
Concentration RSD	4.9 %	2.9 %	0.7 %	1.9 %	36.5 %	5.2 %	17.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 25
Analysis label: I2416427-05 MCP-6020TL-10
Analysis started at: 4/1/2024 7:16:56 AM

User name ALPHALAB\Metals-Instrument
Rack 1
Vial 8

Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.852 %	105.140 %	0.020 ppb	2.480 ppb	5,052.058 ppb	1,694.729 ppb	19.723 ppb	1,029.675 ppb	5,256.312 ppb
Concentration per Run 1	99.041 %	102.743 %	0.018 ppb	2.595 ppb	4,949.887 ppb	1,691.112 ppb	18.857 ppb	988.302 ppb	5,219.121 ppb
Concentration per Run 2	97.220 %	109.847 %	0.018 ppb	2.444 ppb	4,920.159 ppb	1,651.386 ppb	19.265 ppb	1,012.033 ppb	5,041.939 ppb
Concentration per Run 3	97.296 %	102.830 %	0.024 ppb	2.402 ppb	5,286.129 ppb	1,741.688 ppb	21.047 ppb	1,088.691 ppb	5,507.876 ppb
Concentration RSD	1.1 %	3.9 %	17.0 %	4.1 %	4.0 %	2.7 %	5.9 %	5.1 %	4.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	117.313 %	0.182 ppb	0.894 ppb	3.821 ppb	63.670 ppb	0.110 ppb	5.113 ppb	0.440 ppb	1.773 ppb
Concentration per Run 1	117.326 %	0.155 ppb	0.893 ppb	3.746 ppb	63.543 ppb	0.122 ppb	5.066 ppb	0.405 ppb	1.784 ppb
Concentration per Run 2	117.229 %	0.191 ppb	0.848 ppb	3.623 ppb	60.187 ppb	0.098 ppb	5.075 ppb	0.458 ppb	1.726 ppb
Concentration per Run 3	117.385 %	0.198 ppb	0.941 ppb	4.096 ppb	67.280 ppb	0.111 ppb	5.198 ppb	0.458 ppb	1.809 ppb
Concentration RSD	0.1 %	12.6 %	5.2 %	6.4 %	5.6 %	10.8 %	1.4 %	6.9 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.924 %	0.340 ppb	-0.018 ppb	27.556 ppb	0.674 ppb	110.357 %	0.001 ppb	0.031 ppb	111.652 %
Concentration per Run 1	103.325 %	0.312 ppb	-0.060 ppb	26.713 ppb	0.617 ppb	109.206 %	0.001 ppb	0.039 ppb	107.317 %
Concentration per Run 2	112.083 %	0.304 ppb	0.002 ppb	26.817 ppb	0.661 ppb	113.420 %	0.001 ppb	0.021 ppb	116.426 %
Concentration per Run 3	105.365 %	0.403 ppb	0.004 ppb	29.140 ppb	0.744 ppb	108.444 %	0.000 ppb	0.033 ppb	111.212 %
Concentration RSD	4.3 %	16.1 %	203.5 %	5.0 %	9.5 %	2.4 %	96.3 %	28.3 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.294 ppb	8.749 ppb	112.885 %	117.618 %	0.034 ppb	0.106 ppb	190.954 %
Concentration per Run 1	0.283 ppb	8.711 ppb	112.247 %	119.021 %	0.022 ppb	0.101 ppb	201.788 %
Concentration per Run 2	0.287 ppb	8.340 ppb	116.511 %	129.809 %	0.033 ppb	0.092 ppb	192.149 %
Concentration per Run 3	0.312 ppb	9.195 ppb	109.898 %	104.024 %	0.048 ppb	0.126 ppb	178.924 %
Concentration RSD	5.3 %	4.9 %	3.0 %	11.0 %	36.8 %	16.3 %	6.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 26
Analysis label: I2416427-06 MCP-6020TL-10
Analysis started at: 4/1/2024 7:21:35 AM

User name ALPHALAB\Metals-Instrument
Rack 1
Vial 9

Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	92.883 %	102.483 %	0.011 ppb	131.636 ppb	121,125.574 ppb	30,189.861 ppb	34.697 ppb	9,734.553 ppb	120,951.556 ppb
Concentration per Run 1	97.298 %	107.508 %	0.012 ppb	128.397 ppb	116,287.159 ppb	28,894.622 ppb	32.062 ppb	9,426.266 ppb	117,025.007 ppb
Concentration per Run 2	93.008 %	101.097 %	0.015 ppb	132.186 ppb	122,381.266 ppb	30,432.416 ppb	35.280 ppb	9,771.149 ppb	122,053.547 ppb
Concentration per Run 3	88.344 %	98.845 %	0.005 ppb	134.323 ppb	124,708.297 ppb	31,242.547 ppb	36.751 ppb	10,006.242 ppb	123,776.115 ppb
Concentration RSD	4.8 %	4.4 %	46.2 %	2.3 %	3.6 %	4.0 %	6.9 %	3.0 %	2.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	118.193 %	0.032 ppb	1.121 ppb	366.097 ppb	2,231.302 ppb	6.815 ppb	10.372 ppb	0.941 ppb	1.563 ppb
Concentration per Run 1	122.584 %	0.016 ppb	1.054 ppb	345.597 ppb	2,149.329 ppb	6.665 ppb	10.493 ppb	0.884 ppb	1.554 ppb
Concentration per Run 2	118.773 %	0.046 ppb	1.125 ppb	372.681 ppb	2,222.054 ppb	6.746 ppb	10.075 ppb	0.956 ppb	1.552 ppb
Concentration per Run 3	113.222 %	0.034 ppb	1.185 ppb	380.012 ppb	2,322.523 ppb	7.033 ppb	10.549 ppb	0.983 ppb	1.583 ppb
Concentration RSD	4.0 %	47.2 %	5.9 %	5.0 %	3.9 %	2.8 %	2.5 %	5.5 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.600 %	8.972 ppb	0.082 ppb	672.441 ppb	9.755 ppb	104.744 %	-0.001 ppb	0.038 ppb	109.291 %
Concentration per Run 1	107.909 %	8.979 ppb	0.055 ppb	654.809 ppb	9.323 ppb	106.223 %	-0.001 ppb	0.034 ppb	109.719 %
Concentration per Run 2	106.271 %	8.875 ppb	0.101 ppb	678.825 ppb	10.114 ppb	103.535 %	0.000 ppb	0.036 ppb	109.611 %
Concentration per Run 3	105.620 %	9.062 ppb	0.091 ppb	683.687 ppb	9.829 ppb	104.474 %	-0.002 ppb	0.044 ppb	108.542 %
Concentration RSD	1.1 %	1.0 %	29.7 %	2.3 %	4.1 %	1.3 %	146.0 %	13.0 %	0.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.255 ppb	49.849 ppb	114.337 %	126.036 %	0.043 ppb	0.173 ppb	160.919 %
Concentration per Run 1	0.245 ppb	49.322 ppb	114.628 %	126.379 %	0.034 ppb	0.174 ppb	198.047 %
Concentration per Run 2	0.259 ppb	50.314 ppb	114.809 %	127.131 %	0.046 ppb	0.168 ppb	147.033 %
Concentration per Run 3	0.260 ppb	49.910 ppb	113.575 %	124.599 %	0.050 ppb	0.179 ppb	137.678 %
Concentration RSD	3.4 %	1.0 %	0.6 %	1.0 %	18.6 %	3.2 %	20.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	27	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416427-07 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 7:26:14 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	83.723 %	96.159 %	0.014 ppb	169.312 ppb	158,360.397 ppb	23,607.184 ppb	10.005 ppb	20,497.742 ppb	66,907.897 ppb
Concentration per Run 1	86.606 %	103.003 %	0.016 ppb	165.775 ppb	151,477.198 ppb	22,194.405 ppb	9.479 ppb	20,060.055 ppb	64,824.331 ppb
Concentration per Run 2	83.406 %	93.387 %	0.013 ppb	172.335 ppb	161,471.800 ppb	24,347.039 ppb	9.945 ppb	20,272.501 ppb	67,487.809 ppb
Concentration per Run 3	81.157 %	92.088 %	0.014 ppb	169.825 ppb	162,132.193 ppb	24,280.107 ppb	10.590 ppb	21,160.669 ppb	68,411.551 ppb
Concentration RSD	3.3 %	6.2 %	10.4 %	2.0 %	3.8 %	5.2 %	5.6 %	2.8 %	2.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	114.531 %	0.681 ppb	1.515 ppb	306.333 ppb	33,802.082 ppb	1.932 ppb	13.189 ppb	0.163 ppb	0.196 ppb
Concentration per Run 1	117.542 %	0.656 ppb	1.388 ppb	293.688 ppb	32,319.136 ppb	1.882 ppb	12.817 ppb	0.162 ppb	0.140 ppb
Concentration per Run 2	113.817 %	0.708 ppb	1.610 ppb	310.481 ppb	34,402.937 ppb	2.015 ppb	13.340 ppb	0.172 ppb	0.223 ppb
Concentration per Run 3	112.234 %	0.680 ppb	1.547 ppb	314.828 ppb	34,684.173 ppb	1.900 ppb	13.409 ppb	0.156 ppb	0.225 ppb
Concentration RSD	2.4 %	3.8 %	7.6 %	3.6 %	3.8 %	3.7 %	2.5 %	5.1 %	24.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.710 %	417.482 ppb	0.146 ppb	361.975 ppb	6.663 ppb	95.840 %	0.001 ppb	0.004 ppb	101.462 %
Concentration per Run 1	102.551 %	404.896 ppb	0.166 ppb	352.339 ppb	6.141 ppb	97.553 %	-0.002 ppb	0.007 ppb	104.303 %
Concentration per Run 2	96.691 %	424.738 ppb	0.134 ppb	367.682 ppb	6.967 ppb	95.095 %	0.002 ppb	0.002 ppb	99.295 %
Concentration per Run 3	96.886 %	422.812 ppb	0.140 ppb	365.904 ppb	6.882 ppb	94.871 %	0.001 ppb	0.003 ppb	100.788 %
Concentration RSD	3.4 %	2.6 %	11.7 %	2.3 %	6.8 %	1.6 %	369.4 %	73.6 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.249 ppb	139.069 ppb	106.732 %	119.797 %	0.042 ppb	0.133 ppb	172.149 %
Concentration per Run 1	0.230 ppb	134.384 ppb	107.776 %	120.992 %	0.031 ppb	0.125 ppb	202.079 %
Concentration per Run 2	0.254 ppb	142.283 ppb	107.725 %	118.512 %	0.046 ppb	0.139 ppb	178.656 %
Concentration per Run 3	0.262 ppb	140.538 ppb	104.694 %	119.888 %	0.048 ppb	0.133 ppb	135.711 %
Concentration RSD	6.8 %	3.0 %	1.7 %	1.0 %	21.4 %	5.2 %	19.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	28	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 7:30:54 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	83.720 %	102.917 %	61.447 ppb	62.301 ppb	6,142.945 ppb	5,848.187 ppb	56.721 ppb	5,939.514 ppb	5,972.946 ppb
Concentration per Run 1	88.067 %	106.642 %	59.430 ppb	59.870 ppb	6,040.576 ppb	5,726.256 ppb	54.989 ppb	5,865.190 ppb	5,879.770 ppb
Concentration per Run 2	83.417 %	100.318 %	62.226 ppb	62.863 ppb	6,239.959 ppb	5,976.422 ppb	58.739 ppb	6,028.001 ppb	6,017.123 ppb
Concentration per Run 3	79.677 %	101.790 %	62.685 ppb	64.170 ppb	6,148.301 ppb	5,841.884 ppb	56.435 ppb	5,925.350 ppb	6,021.944 ppb
Recovery Percentage 1			102.412 %	103.835 %	102.382 %	97.470 %	94.535 %	98.992 %	99.549 %
Concentration RSD	5.0 %	3.2 %	2.9 %	3.5 %	1.6 %	2.1 %	3.3 %	1.4 %	1.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.606 %	59.080 ppb	59.055 ppb	56.598 ppb	5,943.281 ppb	60.251 ppb	60.337 ppb	60.336 ppb	57.738 ppb
Concentration per Run 1	112.877 %	57.885 ppb	57.646 ppb	55.496 ppb	5,876.910 ppb	59.627 ppb	60.308 ppb	59.946 ppb	56.967 ppb
Concentration per Run 2	112.289 %	59.848 ppb	59.257 ppb	56.115 ppb	5,927.987 ppb	60.340 ppb	60.453 ppb	60.230 ppb	57.522 ppb
Concentration per Run 3	106.650 %	59.507 ppb	60.262 ppb	58.182 ppb	6,024.947 ppb	60.787 ppb	60.251 ppb	60.832 ppb	58.726 ppb
Recovery Percentage 1		98.467 %	98.425 %	94.330 %	99.055 %	100.419 %	100.562 %	100.560 %	96.230 %
Concentration RSD	3.1 %	1.8 %	2.2 %	2.5 %	1.3 %	1.0 %	0.2 %	0.7 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.479 %	60.246 ppb	59.254 ppb	58.670 ppb	58.536 ppb	104.833 %	58.239 ppb	60.217 ppb	106.374 %
Concentration per Run 1	103.715 %	59.690 ppb	57.579 ppb	57.955 ppb	55.944 ppb	107.383 %	57.515 ppb	58.572 ppb	109.086 %
Concentration per Run 2	103.120 %	59.724 ppb	59.790 ppb	58.656 ppb	58.833 ppb	104.351 %	58.531 ppb	60.377 ppb	106.905 %
Concentration per Run 3	100.603 %	61.323 ppb	60.393 ppb	59.399 ppb	60.831 ppb	102.765 %	58.671 ppb	61.703 ppb	103.131 %
Recovery Percentage 1		100.409 %	98.757 %	97.783 %	97.560 %		97.065 %	100.362 %	
Concentration RSD	1.6 %	1.5 %	2.5 %	1.2 %	4.2 %	2.2 %	1.1 %	2.6 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.814 ppb	60.197 ppb	110.706 %	121.787 %	56.403 ppb	56.410 ppb	189.271 %
Concentration per Run 1	58.614 ppb	57.751 ppb	113.938 %	124.245 %	51.676 ppb	54.706 ppb	215.869 %
Concentration per Run 2	59.817 ppb	60.903 ppb	109.313 %	119.029 %	58.498 ppb	57.651 ppb	179.241 %
Concentration per Run 3	61.010 ppb	61.937 ppb	108.867 %	122.088 %	59.035 ppb	56.871 ppb	172.701 %
Recovery Percentage 1	99.689 %	100.328 %			94.005 %	94.016 %	
Concentration RSD	2.0 %	3.6 %	2.5 %	2.2 %	7.3 %	2.7 %	12.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 29
Analysis label: CCB
Analysis started at: 4/1/2024 7:35:35 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	85.243 %	102.108 %	0.005 ppb	1.801 ppb	16.679 ppb	-0.604 ppb	-0.472 ppb	-1.108 ppb	-2.367 ppb
Concentration per Run 1	86.135 %	101.271 %	0.011 ppb	1.780 ppb	21.893 ppb	-0.476 ppb	-0.511 ppb	1.398 ppb	-1.646 ppb
Concentration per Run 2	85.878 %	101.790 %	0.002 ppb	1.767 ppb	15.274 ppb	-0.726 ppb	-0.412 ppb	-0.119 ppb	-2.820 ppb
Concentration per Run 3	83.717 %	103.263 %	0.003 ppb	1.857 ppb	12.869 ppb	-0.610 ppb	-0.491 ppb	-4.603 ppb	-2.635 ppb
Recovery Percentage 1			1.039 %	18.015 %	16.679 %	-0.862 %	-4.715 %	-1.108 %	-2.367 %
Concentration RSD	1.6 %	1.0 %	94.7 %	2.7 %	28.0 %	20.7 %	11.1 %	281.6 %	26.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.348 %	-0.150 ppb	0.006 ppb	0.004 ppb	19.050 ppb	0.000 ppb	-0.005 ppb	0.008 ppb	-0.573 ppb
Concentration per Run 1	102.227 %	-0.148 ppb	0.017 ppb	-0.006 ppb	20.447 ppb	-0.001 ppb	0.010 ppb	0.008 ppb	-0.582 ppb
Concentration per Run 2	102.869 %	-0.150 ppb	0.013 ppb	0.007 ppb	18.641 ppb	0.000 ppb	-0.013 ppb	0.016 ppb	-0.573 ppb
Concentration per Run 3	101.950 %	-0.153 ppb	-0.012 ppb	0.011 ppb	18.063 ppb	-0.001 ppb	-0.012 ppb	0.001 ppb	-0.564 ppb
Recovery Percentage 1		-3.007 %	0.611 %	0.399 %	38.101 %	-0.096 %	-0.252 %	0.819 %	-11.462 %
Concentration RSD	0.5 %	1.9 %	261.3 %	218.8 %	6.5 %	158.1 %	253.1 %	94.1 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.902 %	0.203 ppb	0.283 ppb	0.000 ppb	1.333 ppb	105.162 %	0.006 ppb	0.005 ppb	106.794 %
Concentration per Run 1	98.820 %	0.181 ppb	0.249 ppb	0.002 ppb	1.339 ppb	103.778 %	0.010 ppb	0.004 ppb	106.127 %
Concentration per Run 2	99.064 %	0.194 ppb	0.230 ppb	-0.002 ppb	1.321 ppb	104.865 %	0.006 ppb	0.008 ppb	106.596 %
Concentration per Run 3	101.820 %	0.235 ppb	0.370 ppb	0.001 ppb	1.337 ppb	106.842 %	0.001 ppb	0.004 ppb	107.659 %
Recovery Percentage 1		40.629 %	5.656 %	0.000 %	66.625 %		1.464 %	2.475 %	
Concentration RSD	1.7 %	13.7 %	26.8 %	23,735.1 %	0.7 %	1.5 %	80.8 %	48.2 %	0.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.160 ppb	-0.002 ppb	107.118 %	114.101 %	0.469 ppb	0.053 ppb	175.704 %
Concentration per Run 1	0.146 ppb	-0.005 ppb	105.110 %	100.296 %	0.477 ppb	0.071 ppb	201.574 %
Concentration per Run 2	0.150 ppb	0.000 ppb	107.670 %	117.924 %	0.518 ppb	0.046 ppb	180.542 %
Concentration per Run 3	0.184 ppb	-0.001 ppb	108.574 %	124.082 %	0.413 ppb	0.043 ppb	144.996 %
Recovery Percentage 1	3.998 %	-0.376 %			46.920 %	5.317 %	
Concentration RSD	13.2 %	133.1 %	1.7 %	10.8 %	11.4 %	29.0 %	16.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 30
Analysis label: wg1903075-1 2008SL
Analysis started at: 4/1/2024 7:41:17 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 22
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.166 %	103.927 %	0.003 ppb	1.623 ppb	20.025 ppb	1.988 ppb	1.676 ppb	4.576 ppb	17.467 ppb
Concentration per Run 1	91.692 %	101.357 %	-0.001 ppb	1.588 ppb	11.296 ppb	1.461 ppb	1.319 ppb	1.459 ppb	18.057 ppb
Concentration per Run 2	88.944 %	111.753 %	0.011 ppb	1.604 ppb	17.793 ppb	2.012 ppb	1.902 ppb	3.770 ppb	17.593 ppb
Concentration per Run 3	86.862 %	98.672 %	-0.002 ppb	1.676 ppb	30.985 ppb	2.490 ppb	1.806 ppb	8.501 ppb	16.751 ppb
Concentration RSD	2.7 %	6.6 %	248.5 %	2.9 %	50.1 %	25.9 %	18.6 %	78.4 %	3.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.487 %	-0.164 ppb	0.057 ppb	0.046 ppb	11.654 ppb	0.011 ppb	0.029 ppb	0.634 ppb	0.082 ppb
Concentration per Run 1	111.220 %	-0.182 ppb	0.059 ppb	0.044 ppb	10.581 ppb	0.013 ppb	0.032 ppb	0.610 ppb	0.034 ppb
Concentration per Run 2	109.451 %	-0.144 ppb	0.059 ppb	0.050 ppb	12.918 ppb	0.008 ppb	0.021 ppb	0.614 ppb	0.098 ppb
Concentration per Run 3	107.789 %	-0.166 ppb	0.054 ppb	0.045 ppb	11.463 ppb	0.012 ppb	0.034 ppb	0.677 ppb	0.113 ppb
Concentration RSD	1.6 %	11.6 %	5.7 %	7.0 %	10.1 %	22.7 %	23.1 %	5.9 %	51.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.327 %	0.124 ppb	0.031 ppb	0.024 ppb	0.462 ppb	110.087 %	-0.001 ppb	0.001 ppb	113.016 %
Concentration per Run 1	106.527 %	0.132 ppb	0.005 ppb	0.024 ppb	0.402 ppb	110.754 %	0.000 ppb	0.002 ppb	113.239 %
Concentration per Run 2	108.283 %	0.110 ppb	0.071 ppb	0.024 ppb	0.488 ppb	109.933 %	-0.002 ppb	0.001 ppb	116.846 %
Concentration per Run 3	101.171 %	0.130 ppb	0.018 ppb	0.024 ppb	0.494 ppb	109.576 %	-0.002 ppb	0.001 ppb	108.962 %
Concentration RSD	3.5 %	10.0 %	112.4 %	0.9 %	11.1 %	0.5 %	78.3 %	49.3 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.407 ppb	0.044 ppb	111.823 %	119.186 %	0.138 ppb	0.039 ppb	193.439 %
Concentration per Run 1	0.377 ppb	0.052 ppb	111.964 %	125.301 %	0.094 ppb	0.034 ppb	215.362 %
Concentration per Run 2	0.422 ppb	0.030 ppb	111.197 %	126.229 %	0.146 ppb	0.035 ppb	189.530 %
Concentration per Run 3	0.421 ppb	0.050 ppb	112.307 %	106.029 %	0.175 ppb	0.047 ppb	175.425 %
Concentration RSD	6.3 %	27.6 %	0.5 %	9.6 %	29.7 %	18.3 %	10.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	31	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1903075-2d10 2008SL	Rack	1		
Analysis started at:	4/1/2024 7:45:55 AM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.152 %	106.729 %	4.844 ppb	94.759 ppb	827.070 ppb	979.349 ppb	188.277 ppb	1,008.311 ppb	980.973 ppb
Concentration per Run 1	90.670 %	108.461 %	4.742 ppb	92.947 ppb	795.948 ppb	954.410 ppb	182.823 ppb	975.526 ppb	963.574 ppb
Concentration per Run 2	87.918 %	105.256 %	4.870 ppb	94.571 ppb	870.529 ppb	1,022.224 ppb	198.805 ppb	1,068.569 ppb	1,008.910 ppb
Concentration per Run 3	85.867 %	106.469 %	4.919 ppb	96.759 ppb	814.734 ppb	961.412 ppb	183.203 ppb	980.837 ppb	970.435 ppb
Concentration RSD	2.7 %	1.5 %	1.9 %	2.0 %	4.7 %	3.8 %	4.8 %	5.2 %	2.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.826 %	47.533 ppb	19.162 ppb	47.186 ppb	106.902 ppb	49.285 ppb	49.605 ppb	24.921 ppb	47.850 ppb
Concentration per Run 1	110.353 %	46.930 ppb	18.919 ppb	46.410 ppb	102.761 ppb	49.655 ppb	49.537 ppb	25.013 ppb	48.037 ppb
Concentration per Run 2	108.520 %	47.525 ppb	19.172 ppb	47.134 ppb	110.052 ppb	47.929 ppb	49.063 ppb	23.992 ppb	47.081 ppb
Concentration per Run 3	107.604 %	48.144 ppb	19.395 ppb	48.013 ppb	107.894 ppb	50.272 ppb	50.214 ppb	25.757 ppb	48.431 ppb
Concentration RSD	1.3 %	1.3 %	1.2 %	1.7 %	3.5 %	2.5 %	1.2 %	3.6 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.962 %	12.193 ppb	12.125 ppb	97.912 ppb	92.747 ppb	107.856 %	4.745 ppb	5.277 ppb	111.478 %
Concentration per Run 1	104.607 %	12.192 ppb	11.474 ppb	95.199 ppb	89.538 ppb	108.683 %	4.747 ppb	5.300 ppb	109.087 %
Concentration per Run 2	109.825 %	11.932 ppb	12.735 ppb	100.800 ppb	92.371 ppb	109.130 %	4.697 ppb	5.242 ppb	117.033 %
Concentration per Run 3	100.455 %	12.456 ppb	12.166 ppb	97.736 ppb	96.333 ppb	105.754 %	4.792 ppb	5.290 ppb	108.313 %
Concentration RSD	4.5 %	2.1 %	5.2 %	2.9 %	3.7 %	1.7 %	1.0 %	0.6 %	4.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	36.237 ppb	197.722 ppb	110.243 %	125.008 %	9.997 ppb	46.915 ppb	189.443 %
Concentration per Run 1	36.028 ppb	198.172 ppb	110.739 %	124.137 %	10.003 ppb	47.592 ppb	215.081 %
Concentration per Run 2	35.817 ppb	198.815 ppb	110.056 %	126.627 %	9.882 ppb	46.030 ppb	181.010 %
Concentration per Run 3	36.868 ppb	196.179 ppb	109.934 %	124.260 %	10.105 ppb	47.124 ppb	172.238 %
Concentration RSD	1.5 %	0.7 %	0.4 %	1.1 %	1.1 %	1.7 %	11.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 32
Analysis label: WG1901949-2d10 MCP-6020TL-10
Analysis started at: 4/1/2024 7:55:00 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 29
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.163 %	105.804 %	4.971 ppb	99.193 ppb	791.003 ppb	946.225 ppb	179.518 ppb	972.201 ppb	952.704 ppb
Concentration per Run 1	88.855 %	106.035 %	4.974 ppb	98.415 ppb	784.585 ppb	936.692 ppb	180.516 ppb	963.921 ppb	939.847 ppb
Concentration per Run 2	87.313 %	108.115 %	4.961 ppb	98.928 ppb	771.944 ppb	935.341 ppb	175.724 ppb	939.923 ppb	938.207 ppb
Concentration per Run 3	85.321 %	103.263 %	4.977 ppb	100.236 ppb	816.480 ppb	966.643 ppb	182.314 ppb	1,012.760 ppb	980.059 ppb
Concentration RSD	2.0 %	2.3 %	0.2 %	0.9 %	2.9 %	1.9 %	1.9 %	3.8 %	2.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.328 %	46.881 ppb	19.407 ppb	46.481 ppb	108.211 ppb	49.588 ppb	50.013 ppb	25.145 ppb	47.779 ppb
Concentration per Run 1	105.541 %	46.791 ppb	19.435 ppb	45.998 ppb	105.209 ppb	49.969 ppb	50.896 ppb	25.714 ppb	47.960 ppb
Concentration per Run 2	105.286 %	47.181 ppb	19.486 ppb	46.501 ppb	110.697 ppb	49.102 ppb	49.449 ppb	24.721 ppb	47.865 ppb
Concentration per Run 3	102.157 %	46.672 ppb	19.300 ppb	46.945 ppb	108.725 ppb	49.693 ppb	49.693 ppb	25.000 ppb	47.512 ppb
Concentration RSD	1.8 %	0.6 %	0.5 %	1.0 %	2.6 %	0.9 %	1.5 %	2.0 %	0.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.938 %	12.061 ppb	11.820 ppb	96.173 ppb	101.047 ppb	106.346 %	4.774 ppb	5.315 ppb	107.873 %
Concentration per Run 1	101.859 %	12.198 ppb	11.618 ppb	93.405 ppb	99.701 ppb	108.940 %	4.761 ppb	5.222 ppb	109.732 %
Concentration per Run 2	102.078 %	11.746 ppb	11.733 ppb	95.018 ppb	101.108 ppb	105.803 %	4.814 ppb	5.279 ppb	105.772 %
Concentration per Run 3	101.878 %	12.239 ppb	12.110 ppb	100.098 ppb	102.330 ppb	104.294 %	4.747 ppb	5.444 ppb	108.113 %
Concentration RSD	0.1 %	2.3 %	2.2 %	3.6 %	1.3 %	2.2 %	0.7 %	2.2 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	43.280 ppb	198.502 ppb	109.695 %	117.147 %	10.898 ppb	50.717 ppb	168.769 %
Concentration per Run 1	42.226 ppb	193.126 ppb	111.473 %	104.229 %	12.179 ppb	57.111 ppb	189.923 %
Concentration per Run 2	43.202 ppb	199.488 ppb	108.626 %	124.687 %	10.218 ppb	46.989 ppb	173.625 %
Concentration per Run 3	44.412 ppb	202.893 ppb	108.985 %	122.524 %	10.297 ppb	48.050 ppb	142.760 %
Concentration RSD	2.5 %	2.5 %	1.4 %	9.6 %	10.2 %	11.0 %	14.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 33
Analysis label: wg1903075-3d10 2008SL
Analysis started at: 4/1/2024 7:59:36 AM

User name ALPHALAB\Metals-Instrument
Rack 1
Vial 25

Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	85.264 %	100.924 %	4.888 ppb	180.418 ppb	87,055.677 ppb	6,915.331 ppb	183.177 ppb	4,877.973 ppb	11,942.117 ppb
Concentration per Run 1	87.523 %	104.909 %	4.771 ppb	177.642 ppb	81,451.836 ppb	6,431.403 ppb	168.888 ppb	4,649.554 ppb	11,399.452 ppb
Concentration per Run 2	85.554 %	95.639 %	4.951 ppb	180.408 ppb	89,835.247 ppb	7,068.204 ppb	187.733 ppb	4,821.831 ppb	12,000.915 ppb
Concentration per Run 3	82.716 %	102.224 %	4.941 ppb	183.204 ppb	89,879.949 ppb	7,246.386 ppb	192.911 ppb	5,162.533 ppb	12,425.985 ppb
Concentration RSD	2.8 %	4.7 %	2.1 %	1.5 %	5.6 %	6.2 %	6.9 %	5.4 %	4.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.161 %	46.649 ppb	18.390 ppb	59.347 ppb	99.134 ppb	47.107 ppb	48.096 ppb	24.217 ppb	44.279 ppb
Concentration per Run 1	110.187 %	44.793 ppb	17.772 ppb	56.720 ppb	92.895 ppb	46.008 ppb	47.075 ppb	23.618 ppb	43.384 ppb
Concentration per Run 2	105.168 %	48.150 ppb	18.714 ppb	60.299 ppb	103.394 ppb	48.345 ppb	50.123 ppb	25.303 ppb	45.269 ppb
Concentration per Run 3	103.128 %	47.004 ppb	18.685 ppb	61.021 ppb	101.112 ppb	46.968 ppb	47.091 ppb	23.729 ppb	44.184 ppb
Concentration RSD	3.4 %	3.7 %	2.9 %	3.9 %	5.6 %	2.5 %	3.6 %	3.9 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.310 %	11.683 ppb	10.908 ppb	180.986 ppb	98.264 ppb	99.482 %	4.587 ppb	5.010 ppb	104.444 %
Concentration per Run 1	103.905 %	11.266 ppb	10.407 ppb	174.127 ppb	93.306 ppb	100.744 %	4.525 ppb	4.974 ppb	104.929 %
Concentration per Run 2	97.743 %	11.999 ppb	11.059 ppb	182.542 ppb	101.010 ppb	98.144 %	4.609 ppb	5.056 ppb	101.689 %
Concentration per Run 3	105.281 %	11.783 ppb	11.259 ppb	186.290 ppb	100.476 ppb	99.558 %	4.626 ppb	5.001 ppb	106.714 %
Concentration RSD	3.9 %	3.2 %	4.1 %	3.4 %	4.4 %	1.3 %	1.2 %	0.8 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	52.844 ppb	199.327 ppb	107.091 %	102.166 %	11.021 ppb	52.429 ppb	158.437 %
Concentration per Run 1	51.332 ppb	193.252 ppb	107.597 %	101.555 %	10.685 ppb	52.112 ppb	197.553 %
Concentration per Run 2	53.856 ppb	201.282 ppb	105.257 %	100.759 %	11.342 ppb	53.683 ppb	140.938 %
Concentration per Run 3	53.344 ppb	203.446 ppb	108.420 %	104.184 %	11.035 ppb	51.492 ppb	136.821 %
Concentration RSD	2.5 %	2.7 %	1.5 %	1.8 %	3.0 %	2.2 %	21.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	34	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1903075-4 2008SL	Rack	1		
Analysis started at:	4/1/2024 8:04:12 AM	Vial	26		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	93.500 %	107.104 %	0.007 ppb	739.433 ppb	844,250.814 ppb	66,738.975 ppb	4.787 ppb	33,816.019 ppb	97,777.122 ppb
Concentration per Run 1	95.972 %	100.404 %	0.010 ppb	730.413 ppb	862,476.782 ppb	67,508.144 ppb	4.878 ppb	34,219.996 ppb	98,542.723 ppb
Concentration per Run 2	93.163 %	108.201 %	0.003 ppb	740.693 ppb	826,272.499 ppb	65,070.094 ppb	4.711 ppb	32,929.055 ppb	95,809.570 ppb
Concentration per Run 3	91.365 %	112.706 %	0.008 ppb	747.194 ppb	844,003.161 ppb	67,638.687 ppb	4.772 ppb	34,299.007 ppb	98,979.071 ppb
Concentration RSD	2.5 %	5.8 %	55.5 %	1.1 %	2.1 %	2.2 %	1.8 %	2.3 %	1.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	132.158 %	2.335 ppb	1.297 ppb	128.320 ppb	19.151 ppb	0.158 ppb	8.667 ppb	3.761 ppb	4.287 ppb
Concentration per Run 1	133.094 %	2.337 ppb	1.336 ppb	131.856 ppb	19.377 ppb	0.160 ppb	9.081 ppb	3.755 ppb	4.443 ppb
Concentration per Run 2	131.883 %	2.287 ppb	1.268 ppb	122.157 ppb	17.570 ppb	0.153 ppb	8.583 ppb	3.788 ppb	4.178 ppb
Concentration per Run 3	131.497 %	2.380 ppb	1.287 ppb	130.945 ppb	20.506 ppb	0.162 ppb	8.336 ppb	3.742 ppb	4.240 ppb
Concentration RSD	0.6 %	2.0 %	2.7 %	4.2 %	7.7 %	3.0 %	4.4 %	0.6 %	3.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.746 %	1.180 ppb	0.310 ppb	1,015.070 ppb	10.393 ppb	98.565 %	0.004 ppb	0.001 ppb	105.625 %
Concentration per Run 1	100.611 %	1.220 ppb	0.266 ppb	991.424 ppb	10.350 ppb	97.393 %	0.003 ppb	0.000 ppb	100.103 %
Concentration per Run 2	104.293 %	1.117 ppb	0.332 ppb	984.832 ppb	10.171 ppb	98.791 %	0.004 ppb	0.002 ppb	106.716 %
Concentration per Run 3	109.333 %	1.202 ppb	0.332 ppb	1,068.955 ppb	10.658 ppb	99.511 %	0.005 ppb	0.002 ppb	110.057 %
Concentration RSD	4.2 %	4.7 %	12.2 %	4.6 %	2.4 %	1.1 %	30.0 %	118.1 %	4.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	2.196 ppb	19.614 ppb	107.885 %	108.282 %	0.085 ppb	0.349 ppb	141.714 %
Concentration per Run 1	2.236 ppb	19.741 ppb	104.870 %	99.211 %	0.087 ppb	0.378 ppb	172.467 %
Concentration per Run 2	2.119 ppb	18.724 ppb	107.516 %	101.581 %	0.098 ppb	0.366 ppb	125.517 %
Concentration per Run 3	2.234 ppb	20.376 ppb	111.269 %	124.053 %	0.069 ppb	0.304 ppb	127.158 %
Concentration RSD	3.0 %	4.2 %	3.0 %	12.7 %	17.7 %	11.3 %	18.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 35
Analysis label: L2417416-01 2008SL
Analysis started at: 4/1/2024 8:08:48 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 24
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	99.161 %	108.981 %	0.006 ppb	751.844 ppb	876,042.518 ppb	68,919.578 ppb	4.633 ppb	35,626.861 ppb	100,984.557 ppb
Concentration per Run 1	101.908 %	104.649 %	0.005 ppb	746.217 ppb	859,938.254 ppb	68,010.884 ppb	4.459 ppb	34,927.242 ppb	99,538.858 ppb
Concentration per Run 2	99.030 %	112.620 %	0.005 ppb	758.880 ppb	860,485.853 ppb	66,778.819 ppb	4.416 ppb	33,985.159 ppb	98,169.418 ppb
Concentration per Run 3	96.546 %	109.674 %	0.006 ppb	750.435 ppb	907,703.448 ppb	71,969.032 ppb	5.025 ppb	37,968.182 ppb	105,245.395 ppb
Concentration RSD	2.7 %	3.7 %	11.8 %	0.9 %	3.1 %	3.9 %	7.3 %	5.8 %	3.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	134.159 %	2.501 ppb	1.346 ppb	131.447 ppb	17.195 ppb	0.174 ppb	8.688 ppb	3.979 ppb	3.686 ppb
Concentration per Run 1	135.175 %	2.444 ppb	1.389 ppb	128.857 ppb	16.734 ppb	0.174 ppb	8.574 ppb	3.933 ppb	3.554 ppb
Concentration per Run 2	134.707 %	2.449 ppb	1.339 ppb	128.401 ppb	16.665 ppb	0.159 ppb	8.726 ppb	3.900 ppb	3.649 ppb
Concentration per Run 3	132.597 %	2.611 ppb	1.309 ppb	137.082 ppb	18.185 ppb	0.190 ppb	8.762 ppb	4.103 ppb	3.854 ppb
Concentration RSD	1.0 %	3.8 %	3.0 %	3.7 %	5.0 %	8.9 %	1.1 %	2.7 %	4.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.848 %	1.243 ppb	0.245 ppb	1,041.008 ppb	8.389 ppb	103.028 %	0.017 ppb	0.001 ppb	110.439 %
Concentration per Run 1	108.548 %	1.203 ppb	0.235 ppb	980.022 ppb	7.961 ppb	105.176 %	0.014 ppb	0.001 ppb	110.569 %
Concentration per Run 2	106.922 %	1.249 ppb	0.180 ppb	1,028.745 ppb	8.343 ppb	101.190 %	0.017 ppb	0.002 ppb	106.352 %
Concentration per Run 3	111.074 %	1.276 ppb	0.320 ppb	1,114.258 ppb	8.863 ppb	102.719 %	0.019 ppb	0.001 ppb	114.394 %
Concentration RSD	1.9 %	2.9 %	28.9 %	6.5 %	5.4 %	2.0 %	14.9 %	56.8 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.448 ppb	19.745 ppb	110.025 %	116.882 %	0.039 ppb	0.323 ppb	143.005 %
Concentration per Run 1	1.373 ppb	18.937 ppb	111.407 %	123.143 %	0.026 ppb	0.297 ppb	181.801 %
Concentration per Run 2	1.464 ppb	19.688 ppb	107.355 %	100.695 %	0.051 ppb	0.372 ppb	124.850 %
Concentration per Run 3	1.506 ppb	20.610 ppb	111.313 %	126.806 %	0.040 ppb	0.300 ppb	122.363 %
Concentration RSD	4.7 %	4.2 %	2.1 %	12.1 %	32.8 %	13.2 %	23.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 36
Analysis label: L2416206-01 2008SL
Analysis started at: 4/1/2024 8:13:27 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 27
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.838 %	108.403 %	0.004 ppb	55.232 ppb	141,793.640 ppb	6,865.599 ppb	24.413 ppb	5,509.997 ppb	42,364.691 ppb
Concentration per Run 1	99.375 %	103.003 %	0.006 ppb	53.430 ppb	145,359.705 ppb	7,054.152 ppb	24.494 ppb	5,719.560 ppb	43,491.608 ppb
Concentration per Run 2	96.637 %	111.667 %	0.007 ppb	55.153 ppb	136,497.710 ppb	6,577.231 ppb	23.083 ppb	5,148.943 ppb	40,731.393 ppb
Concentration per Run 3	91.502 %	110.540 %	0.000 ppb	57.112 ppb	143,523.505 ppb	6,965.414 ppb	25.663 ppb	5,661.488 ppb	42,871.072 ppb
Concentration RSD	4.2 %	4.3 %	80.7 %	3.3 %	3.3 %	3.7 %	5.3 %	5.7 %	3.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	118.636 %	1.354 ppb	0.925 ppb	252.095 ppb	6.889 ppb	0.279 ppb	0.695 ppb	2.097 ppb	-0.139 ppb
Concentration per Run 1	121.236 %	1.345 ppb	0.967 ppb	254.815 ppb	7.943 ppb	0.296 ppb	0.765 ppb	2.270 ppb	-0.083 ppb
Concentration per Run 2	118.644 %	1.286 ppb	0.914 ppb	244.529 ppb	6.426 ppb	0.291 ppb	0.667 ppb	2.054 ppb	-0.163 ppb
Concentration per Run 3	116.029 %	1.432 ppb	0.895 ppb	256.940 ppb	6.299 ppb	0.250 ppb	0.653 ppb	1.966 ppb	-0.170 ppb
Concentration RSD	2.2 %	5.4 %	4.0 %	2.6 %	13.3 %	9.0 %	8.7 %	7.5 %	35.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	111.263 %	1.346 ppb	0.251 ppb	266.545 ppb	3.612 ppb	107.595 %	0.014 ppb	0.008 ppb	111.926 %
Concentration per Run 1	106.343 %	1.402 ppb	0.360 ppb	270.905 ppb	3.611 ppb	105.694 %	0.019 ppb	0.005 ppb	107.839 %
Concentration per Run 2	108.771 %	1.343 ppb	0.220 ppb	262.711 ppb	3.528 ppb	107.420 %	0.015 ppb	0.010 ppb	110.168 %
Concentration per Run 3	118.676 %	1.291 ppb	0.173 ppb	266.020 ppb	3.697 ppb	109.670 %	0.009 ppb	0.010 ppb	117.771 %
Concentration RSD	5.9 %	4.1 %	38.7 %	1.5 %	2.3 %	1.9 %	33.9 %	30.9 %	4.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.208 ppb	32.432 ppb	110.566 %	112.044 %	0.043 ppb	0.050 ppb	145.280 %
Concentration per Run 1	1.213 ppb	33.069 ppb	106.949 %	101.259 %	0.037 ppb	0.060 ppb	176.229 %
Concentration per Run 2	1.190 ppb	31.963 ppb	111.188 %	106.335 %	0.052 ppb	0.052 ppb	129.887 %
Concentration per Run 3	1.219 ppb	32.265 ppb	113.561 %	128.538 %	0.041 ppb	0.037 ppb	129.723 %
Concentration RSD	1.3 %	1.8 %	3.0 %	12.9 %	18.6 %	23.1 %	18.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	37	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417416-02 2008SL	Rack	1		
Analysis started at:	4/1/2024 8:18:03 AM	Vial	28		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.037 %	113.717 %	0.007 ppb	1,037.444 ppb	886,581.906 ppb	73,987.489 ppb	540.592 ppb	38,152.471 ppb	97,535.900 ppb
Concentration per Run 1	99.548 %	115.132 %	0.008 ppb	1,080.399 ppb	855,617.080 ppb	71,639.610 ppb	523.552 ppb	36,882.099 ppb	93,956.279 ppb
Concentration per Run 2	102.371 %	111.493 %	0.008 ppb	1,028.874 ppb	898,906.523 ppb	75,710.491 ppb	552.576 ppb	38,544.499 ppb	99,736.868 ppb
Concentration per Run 3	101.194 %	114.525 %	0.004 ppb	1,003.060 ppb	905,222.115 ppb	74,612.367 ppb	545.647 ppb	39,030.815 ppb	98,914.552 ppb
Concentration RSD	1.4 %	1.7 %	36.1 %	3.8 %	3.0 %	2.8 %	2.8 %	3.0 %	3.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	136.030 %	1.734 ppb	0.296 ppb	91.547 ppb	41.994 ppb	0.330 ppb	0.707 ppb	0.627 ppb	-0.052 ppb
Concentration per Run 1	135.109 %	1.585 ppb	0.295 ppb	87.714 ppb	39.160 ppb	0.329 ppb	0.748 ppb	0.642 ppb	-0.042 ppb
Concentration per Run 2	136.046 %	1.805 ppb	0.317 ppb	94.836 ppb	44.319 ppb	0.342 ppb	0.678 ppb	0.601 ppb	-0.049 ppb
Concentration per Run 3	136.934 %	1.813 ppb	0.277 ppb	92.090 ppb	42.501 ppb	0.320 ppb	0.697 ppb	0.639 ppb	-0.066 ppb
Concentration RSD	0.7 %	7.4 %	6.8 %	3.9 %	6.2 %	3.3 %	5.1 %	3.7 %	23.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	112.398 %	1.054 ppb	0.260 ppb	1,048.517 ppb	8.137 ppb	104.091 %	0.010 ppb	0.008 ppb	113.078 %
Concentration per Run 1	111.257 %	0.970 ppb	0.224 ppb	1,000.297 ppb	7.766 ppb	104.972 %	0.011 ppb	0.010 ppb	111.443 %
Concentration per Run 2	111.635 %	1.113 ppb	0.309 ppb	1,089.390 ppb	8.189 ppb	103.782 %	0.010 ppb	0.006 ppb	115.932 %
Concentration per Run 3	114.301 %	1.079 ppb	0.248 ppb	1,055.864 ppb	8.455 ppb	103.521 %	0.009 ppb	0.007 ppb	111.859 %
Concentration RSD	1.5 %	7.0 %	16.8 %	4.3 %	4.3 %	0.7 %	7.9 %	30.9 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.133 ppb	19.646 ppb	112.106 %	117.892 %	0.024 ppb	0.256 ppb	150.060 %
Concentration per Run 1	1.105 ppb	19.287 ppb	112.532 %	123.416 %	0.014 ppb	0.237 ppb	195.929 %
Concentration per Run 2	1.122 ppb	19.534 ppb	114.465 %	127.010 %	0.025 ppb	0.235 ppb	129.934 %
Concentration per Run 3	1.171 ppb	20.116 ppb	109.321 %	103.251 %	0.033 ppb	0.296 ppb	124.318 %
Concentration RSD	3.1 %	2.2 %	2.3 %	10.9 %	38.4 %	13.5 %	26.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	38	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416427-08 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 8:22:40 AM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	93.370 %	103.725 %	0.009 ppb	152.187 ppb	168,391.402 ppb	27,098.368 ppb	9.015 ppb	22,427.419 ppb	72,234.047 ppb
Concentration per Run 1	96.655 %	105.256 %	0.011 ppb	149.572 ppb	166,943.652 ppb	26,511.697 ppb	8.778 ppb	22,207.090 ppb	70,647.799 ppb
Concentration per Run 2	92.517 %	104.909 %	0.013 ppb	153.722 ppb	171,276.902 ppb	27,903.327 ppb	9.288 ppb	23,089.956 ppb	74,585.540 ppb
Concentration per Run 3	90.938 %	101.011 %	0.003 ppb	153.268 ppb	166,953.653 ppb	26,880.078 ppb	8.977 ppb	21,985.211 ppb	71,468.801 ppb
Concentration RSD	3.2 %	2.3 %	57.8 %	1.5 %	1.5 %	2.7 %	2.8 %	2.6 %	2.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	125.931 %	1.080 ppb	1.271 ppb	314.989 ppb	34,802.439 ppb	3.503 ppb	8.724 ppb	0.460 ppb	0.322 ppb
Concentration per Run 1	129.627 %	1.057 ppb	1.248 ppb	315.744 ppb	35,079.570 ppb	3.483 ppb	9.126 ppb	0.509 ppb	0.376 ppb
Concentration per Run 2	124.836 %	1.115 ppb	1.303 ppb	315.102 ppb	34,360.598 ppb	3.401 ppb	8.253 ppb	0.408 ppb	0.297 ppb
Concentration per Run 3	123.330 %	1.069 ppb	1.262 ppb	314.121 ppb	34,967.150 ppb	3.626 ppb	8.793 ppb	0.464 ppb	0.293 ppb
Concentration RSD	2.6 %	2.9 %	2.3 %	0.3 %	1.1 %	3.3 %	5.0 %	11.0 %	14.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.744 %	430.518 ppb	0.161 ppb	368.023 ppb	6.589 ppb	101.949 %	0.006 ppb	0.005 ppb	110.566 %
Concentration per Run 1	102.838 %	434.979 ppb	0.177 ppb	364.061 ppb	6.194 ppb	104.191 %	0.011 ppb	0.007 ppb	111.398 %
Concentration per Run 2	110.137 %	427.420 ppb	0.136 ppb	376.726 ppb	6.685 ppb	101.348 %	0.005 ppb	0.005 ppb	112.412 %
Concentration per Run 3	104.256 %	429.155 ppb	0.170 ppb	363.284 ppb	6.889 ppb	100.307 %	0.004 ppb	0.005 ppb	107.887 %
Concentration RSD	3.7 %	0.9 %	13.6 %	2.1 %	5.4 %	2.0 %	57.6 %	23.1 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.276 ppb	159.323 ppb	108.948 %	119.162 %	0.020 ppb	0.035 ppb	152.725 %
Concentration per Run 1	0.253 ppb	154.925 ppb	109.762 %	104.867 %	0.015 ppb	0.046 ppb	183.830 %
Concentration per Run 2	0.287 ppb	162.995 ppb	110.071 %	129.732 %	0.021 ppb	0.027 ppb	141.114 %
Concentration per Run 3	0.289 ppb	160.049 ppb	107.012 %	122.888 %	0.024 ppb	0.031 ppb	133.232 %
Concentration RSD	7.3 %	2.6 %	1.5 %	10.8 %	24.0 %	28.0 %	17.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	39	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416427-09 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 8:27:19 AM	Vial	12		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.450 %	110.021 %	0.051 ppb	26.088 ppb	1,759.844 ppb	3,092.024 ppb	127.243 ppb	3,188.400 ppb	31,711.510 ppb
Concentration per Run 1	101.118 %	105.949 %	0.045 ppb	26.439 ppb	1,849.127 ppb	3,203.217 ppb	131.282 ppb	3,294.397 ppb	32,752.664 ppb
Concentration per Run 2	102.589 %	111.147 %	0.055 ppb	26.033 ppb	1,744.245 ppb	3,119.998 ppb	126.742 ppb	3,142.462 ppb	30,749.654 ppb
Concentration per Run 3	100.644 %	112.966 %	0.052 ppb	25.793 ppb	1,686.161 ppb	2,952.858 ppb	123.706 ppb	3,128.340 ppb	31,632.211 ppb
Concentration RSD	1.0 %	3.3 %	9.7 %	1.3 %	4.7 %	4.1 %	3.0 %	2.9 %	3.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	122.613 %	1.439 ppb	1.208 ppb	21.775 ppb	457.650 ppb	0.570 ppb	1.802 ppb	5.167 ppb	2.638 ppb
Concentration per Run 1	119.529 %	1.455 ppb	1.316 ppb	22.406 ppb	468.519 ppb	0.598 ppb	1.933 ppb	5.339 ppb	2.782 ppb
Concentration per Run 2	124.786 %	1.373 ppb	1.150 ppb	21.640 ppb	458.061 ppb	0.576 ppb	1.773 ppb	5.051 ppb	2.536 ppb
Concentration per Run 3	123.523 %	1.489 ppb	1.159 ppb	21.278 ppb	446.370 ppb	0.534 ppb	1.699 ppb	5.111 ppb	2.598 ppb
Concentration RSD	2.2 %	4.2 %	7.7 %	2.6 %	2.4 %	5.7 %	6.7 %	2.9 %	4.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.685 %	1.315 ppb	0.237 ppb	83.563 ppb	0.830 ppb	107.634 %	0.024 ppb	0.095 ppb	112.711 %
Concentration per Run 1	107.797 %	1.293 ppb	0.260 ppb	84.345 ppb	0.798 ppb	106.960 %	0.028 ppb	0.110 ppb	111.974 %
Concentration per Run 2	110.165 %	1.294 ppb	0.238 ppb	84.026 ppb	0.831 ppb	106.107 %	0.023 ppb	0.086 ppb	113.726 %
Concentration per Run 3	111.095 %	1.358 ppb	0.213 ppb	82.317 ppb	0.862 ppb	109.834 %	0.022 ppb	0.088 ppb	112.432 %
Concentration RSD	1.6 %	2.8 %	9.8 %	1.3 %	3.9 %	1.8 %	12.1 %	14.2 %	0.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.205 ppb	3.518 ppb	110.739 %	119.410 %	0.044 ppb	0.959 ppb	154.977 %
Concentration per Run 1	0.196 ppb	3.490 ppb	111.325 %	105.132 %	0.041 ppb	1.089 ppb	191.361 %
Concentration per Run 2	0.195 ppb	3.578 ppb	109.894 %	125.700 %	0.045 ppb	0.893 ppb	137.273 %
Concentration per Run 3	0.225 ppb	3.487 ppb	110.997 %	127.396 %	0.046 ppb	0.895 ppb	136.295 %
Concentration RSD	8.4 %	1.5 %	0.7 %	10.4 %	6.3 %	11.7 %	20.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	40	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 8:31:59 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.168 %	105.082 %	58.681 ppb	61.850 ppb	6,526.695 ppb	6,272.052 ppb	59.750 ppb	6,310.119 ppb	6,325.106 ppb
Concentration per Run 1	99.123 %	115.132 %	59.114 ppb	62.361 ppb	6,220.832 ppb	5,997.549 ppb	57.746 ppb	6,208.780 ppb	6,167.639 ppb
Concentration per Run 2	97.580 %	100.491 %	58.980 ppb	62.425 ppb	6,728.198 ppb	6,448.130 ppb	61.425 ppb	6,370.061 ppb	6,519.287 ppb
Concentration per Run 3	97.801 %	99.625 %	57.950 ppb	60.766 ppb	6,631.056 ppb	6,370.478 ppb	60.077 ppb	6,351.517 ppb	6,288.392 ppb
Recovery Percentage 1			97.802 %	103.084 %	108.778 %	104.534 %	99.583 %	105.169 %	105.418 %
Concentration RSD	0.8 %	8.3 %	1.1 %	1.5 %	4.1 %	3.8 %	3.1 %	1.4 %	2.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	120.034 %	60.452 ppb	60.386 ppb	58.020 ppb	6,209.456 ppb	62.639 ppb	62.747 ppb	62.386 ppb	59.550 ppb
Concentration per Run 1	119.750 %	58.860 ppb	58.943 ppb	56.567 ppb	6,070.440 ppb	62.218 ppb	61.403 ppb	61.531 ppb	59.187 ppb
Concentration per Run 2	119.679 %	60.593 ppb	60.899 ppb	58.864 ppb	6,290.972 ppb	63.008 ppb	63.953 ppb	62.680 ppb	59.524 ppb
Concentration per Run 3	120.674 %	61.904 ppb	61.315 ppb	58.629 ppb	6,266.957 ppb	62.691 ppb	62.886 ppb	62.946 ppb	59.939 ppb
Recovery Percentage 1		100.753 %	100.643 %	96.700 %	103.491 %	104.398 %	104.579 %	103.976 %	99.250 %
Concentration RSD	0.5 %	2.5 %	2.1 %	2.2 %	1.9 %	0.6 %	2.0 %	1.2 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.915 %	60.804 ppb	60.857 ppb	60.544 ppb	59.542 ppb	107.819 %	58.965 ppb	61.503 ppb	109.972 %
Concentration per Run 1	108.058 %	61.313 ppb	60.360 ppb	61.080 ppb	58.172 ppb	107.628 %	60.242 ppb	62.023 ppb	111.377 %
Concentration per Run 2	106.419 %	60.901 ppb	61.738 ppb	60.743 ppb	59.893 ppb	107.593 %	58.414 ppb	61.679 ppb	110.785 %
Concentration per Run 3	106.267 %	60.199 ppb	60.473 ppb	59.808 ppb	60.560 ppb	108.236 %	58.240 ppb	60.806 ppb	107.753 %
Recovery Percentage 1		101.341 %	101.429 %	100.906 %	99.236 %		98.275 %	102.505 %	
Concentration RSD	0.9 %	0.9 %	1.3 %	1.1 %	2.1 %	0.3 %	1.9 %	1.0 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.874 ppb	63.532 ppb	107.650 %	124.107 %	56.622 ppb	53.774 ppb	187.538 %
Concentration per Run 1	61.435 ppb	63.737 ppb	106.754 %	122.036 %	52.970 ppb	54.684 ppb	241.956 %
Concentration per Run 2	62.018 ppb	63.662 ppb	109.193 %	126.952 %	56.717 ppb	52.572 ppb	179.967 %
Concentration per Run 3	62.170 ppb	63.198 ppb	107.005 %	123.334 %	60.178 ppb	54.067 ppb	140.690 %
Recovery Percentage 1	103.124 %	105.887 %			94.369 %	89.624 %	
Concentration RSD	0.6 %	0.5 %	1.2 %	2.1 %	6.4 %	2.0 %	27.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 41
Analysis label: CCB
Analysis started at: 4/1/2024 8:36:40 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.622 %	100.578 %	0.004 ppb	4.128 ppb	67.329 ppb	-0.465 ppb	-0.460 ppb	4.020 ppb	-1.555 ppb
Concentration per Run 1	100.765 %	101.531 %	0.002 ppb	4.169 ppb	65.452 ppb	0.057 ppb	-0.435 ppb	5.407 ppb	-1.067 ppb
Concentration per Run 2	102.103 %	101.444 %	0.007 ppb	4.093 ppb	62.307 ppb	-0.730 ppb	-0.499 ppb	4.228 ppb	-0.676 ppb
Concentration per Run 3	98.998 %	98.758 %	0.003 ppb	4.122 ppb	74.229 ppb	-0.724 ppb	-0.445 ppb	2.426 ppb	-2.924 ppb
Recovery Percentage 1			0.787 %	41.282 %	67.329 %	-0.665 %	-4.596 %	4.020 %	-1.555 %
Concentration RSD	1.5 %	1.6 %	74.3 %	0.9 %	9.2 %	97.3 %	7.5 %	37.3 %	77.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.624 %	-0.138 ppb	0.011 ppb	0.007 ppb	17.695 ppb	-0.001 ppb	-0.005 ppb	0.060 ppb	-0.536 ppb
Concentration per Run 1	115.101 %	-0.146 ppb	0.014 ppb	-0.001 ppb	18.773 ppb	-0.001 ppb	0.005 ppb	0.056 ppb	-0.535 ppb
Concentration per Run 2	119.433 %	-0.122 ppb	0.014 ppb	0.003 ppb	17.895 ppb	-0.001 ppb	-0.015 ppb	0.052 ppb	-0.535 ppb
Concentration per Run 3	115.337 %	-0.147 ppb	0.006 ppb	0.020 ppb	16.417 ppb	-0.002 ppb	-0.004 ppb	0.071 ppb	-0.536 ppb
Recovery Percentage 1		-2.766 %	1.138 %	0.736 %	35.390 %	-0.218 %	-0.241 %	5.955 %	-10.712 %
Concentration RSD	2.1 %	10.4 %	41.9 %	152.5 %	6.7 %	75.6 %	211.9 %	17.0 %	0.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.821 %	0.143 ppb	0.309 ppb	0.002 ppb	1.297 ppb	106.516 %	0.008 ppb	0.004 ppb	108.312 %
Concentration per Run 1	107.275 %	0.119 ppb	0.277 ppb	0.005 ppb	1.329 ppb	108.149 %	0.011 ppb	0.007 ppb	109.680 %
Concentration per Run 2	104.949 %	0.091 ppb	0.332 ppb	-0.001 ppb	1.270 ppb	105.573 %	0.008 ppb	0.003 ppb	107.864 %
Concentration per Run 3	105.238 %	0.220 ppb	0.319 ppb	0.001 ppb	1.291 ppb	105.825 %	0.005 ppb	0.002 ppb	107.393 %
Recovery Percentage 1		28.699 %	6.190 %	0.019 %	64.837 %		2.075 %	2.029 %	
Concentration RSD	1.2 %	47.4 %	9.4 %	152.2 %	2.3 %	1.3 %	37.2 %	59.9 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.176 ppb	0.003 ppb	107.665 %	121.391 %	0.443 ppb	0.036 ppb	175.150 %
Concentration per Run 1	0.163 ppb	0.004 ppb	108.863 %	122.705 %	0.392 ppb	0.039 ppb	210.867 %
Concentration per Run 2	0.170 ppb	0.004 ppb	107.158 %	119.640 %	0.518 ppb	0.037 ppb	173.328 %
Concentration per Run 3	0.196 ppb	0.001 ppb	106.973 %	121.828 %	0.418 ppb	0.033 ppb	141.255 %
Recovery Percentage 1	4.404 %	0.595 %			44.272 %	3.649 %	
Concentration RSD	9.8 %	44.7 %	1.0 %	1.3 %	14.9 %	8.2 %	19.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 42
Analysis label: I2416613-03 MCP-6020TL-10
Analysis started at: 4/1/2024 8:43:22 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 13
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	96.922 %	101.704 %	0.020 ppb	13.027 ppb	15,278.808 ppb	1,687.001 ppb	101.080 ppb	1,167.321 ppb	7,221.570 ppb
Concentration per Run 1	102.316 %	106.555 %	0.018 ppb	12.499 ppb	14,721.148 ppb	1,625.698 ppb	96.432 ppb	1,123.497 ppb	6,957.808 ppb
Concentration per Run 2	95.535 %	98.152 %	0.023 ppb	13.110 ppb	15,477.564 ppb	1,714.901 ppb	103.757 ppb	1,216.502 ppb	7,470.170 ppb
Concentration per Run 3	92.916 %	100.404 %	0.017 ppb	13.474 ppb	15,637.712 ppb	1,720.404 ppb	103.051 ppb	1,161.965 ppb	7,236.732 ppb
Concentration RSD	5.0 %	4.3 %	15.3 %	3.8 %	3.2 %	3.2 %	4.0 %	4.0 %	3.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.627 %	0.110 ppb	1.057 ppb	38.902 ppb	182.193 ppb	0.212 ppb	0.736 ppb	0.556 ppb	1.278 ppb
Concentration per Run 1	107.092 %	0.092 ppb	1.018 ppb	37.719 ppb	174.579 ppb	0.200 ppb	0.701 ppb	0.532 ppb	1.272 ppb
Concentration per Run 2	99.632 %	0.108 ppb	1.069 ppb	39.242 ppb	186.614 ppb	0.219 ppb	0.731 ppb	0.533 ppb	1.315 ppb
Concentration per Run 3	101.157 %	0.130 ppb	1.084 ppb	39.744 ppb	185.386 ppb	0.218 ppb	0.777 ppb	0.604 ppb	1.248 ppb
Concentration RSD	3.8 %	17.4 %	3.3 %	2.7 %	3.6 %	5.0 %	5.2 %	7.5 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.035 %	0.463 ppb	0.130 ppb	37.327 ppb	0.399 ppb	103.416 %	0.001 ppb	0.007 ppb	106.311 %
Concentration per Run 1	105.454 %	0.470 ppb	0.108 ppb	36.199 ppb	0.263 ppb	108.210 %	0.000 ppb	0.004 ppb	112.149 %
Concentration per Run 2	103.337 %	0.454 ppb	0.173 ppb	37.434 ppb	0.442 ppb	102.844 %	-0.001 ppb	0.011 ppb	104.848 %
Concentration per Run 3	103.313 %	0.465 ppb	0.109 ppb	38.347 ppb	0.491 ppb	99.195 %	0.002 ppb	0.006 ppb	101.936 %
Concentration RSD	1.2 %	1.8 %	28.4 %	2.9 %	30.1 %	4.4 %	254.3 %	51.7 %	4.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.150 ppb	6.693 ppb	105.167 %	114.779 %	0.112 ppb	0.164 ppb	161.172 %
Concentration per Run 1	0.127 ppb	6.391 ppb	109.260 %	122.849 %	0.077 ppb	0.151 ppb	203.918 %
Concentration per Run 2	0.160 ppb	6.706 ppb	104.981 %	123.180 %	0.114 ppb	0.151 ppb	151.454 %
Concentration per Run 3	0.164 ppb	6.981 ppb	101.259 %	98.307 %	0.145 ppb	0.191 ppb	128.144 %
Concentration RSD	13.6 %	4.4 %	3.8 %	12.4 %	30.7 %	14.1 %	24.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	43	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416613-04 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 8:47:58 AM	Vial	14		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.550 %	106.266 %	0.012 ppb	64.186 ppb	54,808.796 ppb	22,170.253 ppb	13.594 ppb	23,280.117 ppb	85,118.731 ppb
Concentration per Run 1	106.851 %	106.122 %	0.014 ppb	61.107 ppb	55,257.025 ppb	22,277.562 ppb	13.895 ppb	23,983.807 ppb	87,016.217 ppb
Concentration per Run 2	102.133 %	105.862 %	0.006 ppb	65.061 ppb	54,123.946 ppb	21,783.315 ppb	13.036 ppb	22,063.900 ppb	81,909.564 ppb
Concentration per Run 3	98.665 %	106.815 %	0.015 ppb	66.391 ppb	55,045.416 ppb	22,449.882 ppb	13.853 ppb	23,792.644 ppb	86,430.411 ppb
Concentration RSD	4.0 %	0.5 %	40.9 %	4.3 %	1.1 %	1.6 %	3.6 %	4.5 %	3.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	128.048 %	0.072 ppb	1.092 ppb	1,646.108 ppb	2,795.151 ppb	1.548 ppb	2.858 ppb	1.333 ppb	2.609 ppb
Concentration per Run 1	131.493 %	0.058 ppb	1.089 ppb	1,668.387 ppb	2,835.569 ppb	1.594 ppb	2.931 ppb	1.324 ppb	2.622 ppb
Concentration per Run 2	126.635 %	0.065 ppb	1.137 ppb	1,630.668 ppb	2,772.099 ppb	1.556 ppb	2.902 ppb	1.347 ppb	2.636 ppb
Concentration per Run 3	126.015 %	0.092 ppb	1.050 ppb	1,639.268 ppb	2,777.787 ppb	1.495 ppb	2.741 ppb	1.326 ppb	2.569 ppb
Concentration RSD	2.3 %	24.5 %	4.0 %	1.2 %	1.3 %	3.2 %	3.6 %	1.0 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	107.761 %	2.677 ppb	0.119 ppb	324.140 ppb	0.458 ppb	105.596 %	0.000 ppb	0.005 ppb	112.046 %
Concentration per Run 1	106.707 %	2.689 ppb	0.132 ppb	329.149 ppb	0.424 ppb	105.430 %	-0.001 ppb	0.003 ppb	111.727 %
Concentration per Run 2	105.359 %	2.743 ppb	0.088 ppb	317.388 ppb	0.461 ppb	104.755 %	0.000 ppb	0.006 ppb	109.675 %
Concentration per Run 3	111.218 %	2.597 ppb	0.137 ppb	325.885 ppb	0.488 ppb	106.605 %	0.000 ppb	0.006 ppb	114.738 %
Concentration RSD	2.8 %	2.8 %	22.7 %	1.9 %	7.1 %	0.9 %	162.5 %	30.9 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.172 ppb	48.788 ppb	110.906 %	119.840 %	0.071 ppb	0.042 ppb	174.916 %
Concentration per Run 1	0.163 ppb	49.133 ppb	109.580 %	126.669 %	0.047 ppb	0.039 ppb	202.794 %
Concentration per Run 2	0.169 ppb	48.393 ppb	110.515 %	103.260 %	0.091 ppb	0.052 ppb	177.628 %
Concentration per Run 3	0.183 ppb	48.837 ppb	112.623 %	129.590 %	0.075 ppb	0.035 ppb	144.325 %
Concentration RSD	6.2 %	0.8 %	1.4 %	12.0 %	31.2 %	21.7 %	16.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 44
Analysis label: I2416613-05 MCP-6020TL-10
Analysis started at: 4/1/2024 8:52:34 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 15
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.382 %	105.920 %	0.022 ppb	15.689 ppb	16,727.298 ppb	2,065.966 ppb	102.772 ppb	1,671.596 ppb	8,701.484 ppb
Concentration per Run 1	104.125 %	107.595 %	0.018 ppb	15.366 ppb	16,861.838 ppb	2,110.948 ppb	101.768 ppb	1,688.048 ppb	8,763.090 ppb
Concentration per Run 2	101.421 %	106.988 %	0.026 ppb	15.714 ppb	16,063.540 ppb	1,980.283 ppb	98.777 ppb	1,606.600 ppb	8,261.982 ppb
Concentration per Run 3	98.601 %	103.177 %	0.022 ppb	15.988 ppb	17,256.516 ppb	2,106.667 ppb	107.769 ppb	1,720.139 ppb	9,079.379 ppb
Concentration RSD	2.7 %	2.3 %	17.0 %	2.0 %	3.6 %	3.6 %	4.5 %	3.5 %	4.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	118.034 %	0.228 ppb	1.391 ppb	77.198 ppb	234.260 ppb	0.261 ppb	0.971 ppb	0.738 ppb	1.373 ppb
Concentration per Run 1	120.286 %	0.254 ppb	1.440 ppb	76.981 ppb	236.283 ppb	0.241 ppb	0.990 ppb	0.729 ppb	1.327 ppb
Concentration per Run 2	118.741 %	0.207 ppb	1.325 ppb	76.430 ppb	236.384 ppb	0.261 ppb	0.987 ppb	0.776 ppb	1.412 ppb
Concentration per Run 3	115.074 %	0.224 ppb	1.407 ppb	78.184 ppb	230.113 ppb	0.281 ppb	0.936 ppb	0.708 ppb	1.382 ppb
Concentration RSD	2.3 %	10.3 %	4.3 %	1.2 %	1.5 %	7.6 %	3.1 %	4.7 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.425 %	0.523 ppb	0.051 ppb	44.038 ppb	0.369 ppb	110.532 %	0.004 ppb	0.006 ppb	113.146 %
Concentration per Run 1	111.754 %	0.490 ppb	0.013 ppb	44.083 ppb	0.291 ppb	110.887 %	0.006 ppb	0.007 ppb	115.991 %
Concentration per Run 2	103.797 %	0.582 ppb	0.011 ppb	43.278 ppb	0.395 ppb	109.330 %	0.005 ppb	0.005 ppb	108.235 %
Concentration per Run 3	109.724 %	0.497 ppb	0.130 ppb	44.755 ppb	0.421 ppb	111.379 %	0.002 ppb	0.006 ppb	115.214 %
Concentration RSD	3.8 %	9.8 %	133.3 %	1.7 %	18.6 %	1.0 %	57.9 %	15.1 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.124 ppb	7.784 ppb	110.639 %	124.710 %	0.051 ppb	0.155 ppb	179.691 %
Concentration per Run 1	0.118 ppb	7.793 ppb	112.696 %	126.506 %	0.037 ppb	0.154 ppb	206.897 %
Concentration per Run 2	0.127 ppb	7.734 ppb	108.726 %	121.798 %	0.057 ppb	0.155 ppb	182.581 %
Concentration per Run 3	0.127 ppb	7.824 ppb	110.495 %	125.825 %	0.060 ppb	0.156 ppb	149.594 %
Concentration RSD	4.5 %	0.6 %	1.8 %	2.0 %	24.6 %	0.6 %	16.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	45	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416613-06 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 8:57:10 AM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	105.910 %	105.516 %	0.021 ppb	11.297 ppb	15,698.093 ppb	1,759.386 ppb	110.829 ppb	1,222.710 ppb	7,392.443 ppb
Concentration per Run 1	108.712 %	103.523 %	0.018 ppb	11.155 ppb	16,395.621 ppb	1,835.076 ppb	113.791 ppb	1,295.421 ppb	7,703.937 ppb
Concentration per Run 2	104.904 %	105.342 %	0.019 ppb	11.321 ppb	15,183.366 ppb	1,688.893 ppb	106.162 ppb	1,131.298 ppb	7,059.472 ppb
Concentration per Run 3	104.115 %	107.681 %	0.026 ppb	11.416 ppb	15,515.292 ppb	1,754.188 ppb	112.536 ppb	1,241.412 ppb	7,413.921 ppb
Concentration RSD	2.3 %	2.0 %	21.3 %	1.2 %	4.0 %	4.2 %	3.7 %	6.8 %	4.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	128.270 %	0.287 ppb	1.090 ppb	39.202 ppb	188.587 ppb	0.217 ppb	0.804 ppb	0.626 ppb	1.858 ppb
Concentration per Run 1	129.513 %	0.348 ppb	1.151 ppb	40.708 ppb	191.808 ppb	0.215 ppb	0.747 ppb	0.628 ppb	1.919 ppb
Concentration per Run 2	128.767 %	0.219 ppb	1.076 ppb	38.239 ppb	190.705 ppb	0.222 ppb	0.827 ppb	0.644 ppb	1.887 ppb
Concentration per Run 3	126.529 %	0.294 ppb	1.042 ppb	38.657 ppb	183.248 ppb	0.214 ppb	0.838 ppb	0.605 ppb	1.769 ppb
Concentration RSD	1.2 %	22.5 %	5.1 %	3.4 %	2.5 %	2.1 %	6.2 %	3.1 %	4.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	110.383 %	0.430 ppb	0.029 ppb	36.672 ppb	0.229 ppb	112.369 %	0.001 ppb	0.009 ppb	113.701 %
Concentration per Run 1	109.628 %	0.452 ppb	0.047 ppb	38.055 ppb	0.210 ppb	111.530 %	0.000 ppb	0.009 ppb	114.701 %
Concentration per Run 2	107.136 %	0.421 ppb	0.004 ppb	35.482 ppb	0.213 ppb	109.516 %	0.001 ppb	0.005 ppb	108.047 %
Concentration per Run 3	114.384 %	0.416 ppb	0.037 ppb	36.480 ppb	0.265 ppb	116.062 %	0.001 ppb	0.012 ppb	118.356 %
Concentration RSD	3.3 %	4.5 %	77.4 %	3.5 %	13.5 %	3.0 %	38.7 %	39.7 %	4.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.105 ppb	6.514 ppb	111.380 %	120.522 %	0.045 ppb	0.163 ppb	191.325 %
Concentration per Run 1	0.098 ppb	6.568 ppb	112.246 %	126.091 %	0.029 ppb	0.148 ppb	200.206 %
Concentration per Run 2	0.111 ppb	6.608 ppb	107.251 %	102.353 %	0.058 ppb	0.196 ppb	184.384 %
Concentration per Run 3	0.104 ppb	6.366 ppb	114.644 %	133.123 %	0.049 ppb	0.146 ppb	189.384 %
Concentration RSD	6.2 %	2.0 %	3.4 %	13.4 %	33.1 %	17.4 %	4.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 46
Analysis label: I2416613-07 MCP-6020TL-10
Analysis started at: 4/1/2024 9:01:47 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 17
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.564 %	106.411 %	0.025 ppb	10.704 ppb	13,994.483 ppb	1,747.670 ppb	121.080 ppb	1,265.499 ppb	7,600.676 ppb
Concentration per Run 1	104.733 %	101.704 %	0.026 ppb	10.052 ppb	15,072.704 ppb	1,875.668 ppb	131.665 ppb	1,370.641 ppb	8,215.102 ppb
Concentration per Run 2	97.248 %	109.674 %	0.030 ppb	10.792 ppb	13,055.676 ppb	1,627.662 ppb	110.976 ppb	1,146.112 ppb	7,138.986 ppb
Concentration per Run 3	93.710 %	107.855 %	0.018 ppb	11.266 ppb	13,855.071 ppb	1,739.680 ppb	120.598 ppb	1,279.744 ppb	7,447.938 ppb
Concentration RSD	5.7 %	3.9 %	24.6 %	5.7 %	7.3 %	7.1 %	8.6 %	8.9 %	7.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	114.492 %	0.396 ppb	1.183 ppb	30.198 ppb	169.441 ppb	0.170 ppb	0.783 ppb	0.576 ppb	1.165 ppb
Concentration per Run 1	121.283 %	0.497 ppb	1.238 ppb	32.160 ppb	178.620 ppb	0.165 ppb	0.792 ppb	0.605 ppb	1.281 ppb
Concentration per Run 2	112.247 %	0.363 ppb	1.149 ppb	28.903 ppb	160.577 ppb	0.180 ppb	0.814 ppb	0.569 ppb	1.121 ppb
Concentration per Run 3	109.945 %	0.329 ppb	1.163 ppb	29.531 ppb	169.125 ppb	0.165 ppb	0.744 ppb	0.555 ppb	1.095 ppb
Concentration RSD	5.2 %	22.4 %	4.0 %	5.7 %	5.3 %	5.1 %	4.5 %	4.5 %	8.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.527 %	0.518 ppb	0.026 ppb	38.420 ppb	0.191 ppb	109.510 %	0.001 ppb	0.008 ppb	109.962 %
Concentration per Run 1	105.768 %	0.527 ppb	0.009 ppb	40.585 ppb	0.188 ppb	106.335 %	0.000 ppb	0.006 ppb	108.786 %
Concentration per Run 2	106.497 %	0.499 ppb	0.033 ppb	36.416 ppb	0.178 ppb	111.407 %	0.001 ppb	0.010 ppb	107.206 %
Concentration per Run 3	113.316 %	0.528 ppb	0.036 ppb	38.259 ppb	0.208 ppb	110.789 %	0.001 ppb	0.009 ppb	113.894 %
Concentration RSD	3.8 %	3.2 %	55.7 %	5.4 %	7.9 %	2.5 %	81.7 %	21.0 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.099 ppb	6.813 ppb	107.111 %	111.222 %	0.041 ppb	0.243 ppb	171.911 %
Concentration per Run 1	0.099 ppb	6.960 ppb	105.270 %	102.378 %	0.032 ppb	0.267 ppb	196.210 %
Concentration per Run 2	0.097 ppb	6.730 ppb	106.754 %	103.874 %	0.049 ppb	0.252 ppb	145.557 %
Concentration per Run 3	0.102 ppb	6.750 ppb	109.310 %	127.415 %	0.041 ppb	0.210 ppb	173.966 %
Concentration RSD	2.7 %	1.9 %	1.9 %	12.6 %	20.7 %	12.1 %	14.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	47	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416613-08 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 9:06:24 AM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.410 %	105.342 %	0.022 ppb	11.018 ppb	15,557.537 ppb	2,153.741 ppb	215.594 ppb	938.435 ppb	6,675.767 ppb
Concentration per Run 1	103.871 %	103.003 %	0.018 ppb	10.903 ppb	16,634.356 ppb	2,311.707 ppb	229.489 ppb	997.672 ppb	7,164.421 ppb
Concentration per Run 2	99.165 %	108.548 %	0.025 ppb	11.086 ppb	14,691.259 ppb	1,988.011 ppb	197.745 ppb	874.534 ppb	6,241.646 ppb
Concentration per Run 3	98.194 %	104.476 %	0.023 ppb	11.064 ppb	15,346.995 ppb	2,161.505 ppb	219.547 ppb	943.099 ppb	6,621.235 ppb
Concentration RSD	3.0 %	2.7 %	17.2 %	0.9 %	6.4 %	7.5 %	7.5 %	6.6 %	6.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.485 %	0.667 ppb	1.587 ppb	61.440 ppb	1,125.809 ppb	0.444 ppb	1.986 ppb	0.860 ppb	3.450 ppb
Concentration per Run 1	111.238 %	0.789 ppb	1.743 ppb	64.993 ppb	1,195.525 ppb	0.454 ppb	2.100 ppb	0.879 ppb	3.619 ppb
Concentration per Run 2	108.636 %	0.625 ppb	1.504 ppb	58.603 ppb	1,081.012 ppb	0.445 ppb	1.925 ppb	0.844 ppb	3.429 ppb
Concentration per Run 3	108.580 %	0.586 ppb	1.513 ppb	60.724 ppb	1,100.889 ppb	0.433 ppb	1.932 ppb	0.858 ppb	3.301 ppb
Concentration RSD	1.4 %	16.2 %	8.5 %	5.3 %	5.4 %	2.4 %	5.0 %	2.1 %	4.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.508 %	0.819 ppb	0.095 ppb	36.131 ppb	0.198 ppb	104.097 %	0.002 ppb	0.024 ppb	103.298 %
Concentration per Run 1	101.697 %	0.882 ppb	0.038 ppb	38.329 ppb	0.188 ppb	101.298 %	0.003 ppb	0.029 ppb	101.109 %
Concentration per Run 2	103.917 %	0.787 ppb	0.125 ppb	34.632 ppb	0.205 ppb	104.912 %	0.000 ppb	0.021 ppb	101.928 %
Concentration per Run 3	107.909 %	0.789 ppb	0.121 ppb	35.433 ppb	0.201 ppb	106.082 %	0.003 ppb	0.024 ppb	106.857 %
Concentration RSD	3.0 %	6.6 %	51.7 %	5.4 %	4.4 %	2.4 %	92.3 %	16.0 %	3.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.127 ppb	6.330 ppb	103.194 %	99.762 %	0.040 ppb	0.935 ppb	153.596 %
Concentration per Run 1	0.119 ppb	6.678 ppb	100.020 %	95.887 %	0.029 ppb	0.986 ppb	190.167 %
Concentration per Run 2	0.121 ppb	6.042 ppb	103.332 %	101.141 %	0.048 ppb	0.911 ppb	136.914 %
Concentration per Run 3	0.141 ppb	6.269 ppb	106.230 %	102.257 %	0.045 ppb	0.907 ppb	133.706 %
Concentration RSD	9.4 %	5.1 %	3.0 %	3.4 %	24.7 %	4.8 %	20.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 48
Analysis label: I2416613-09 MCP-6020TL-10
Analysis started at: 4/1/2024 9:11:01 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 19
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.385 %	106.151 %	0.017 ppb	16.965 ppb	5,013.937 ppb	2,510.313 ppb	195.836 ppb	2,524.584 ppb	12,144.648 ppb
Concentration per Run 1	102.996 %	107.248 %	0.018 ppb	16.981 ppb	5,093.465 ppb	2,529.831 ppb	193.673 ppb	2,511.186 ppb	12,125.193 ppb
Concentration per Run 2	100.565 %	107.681 %	0.011 ppb	17.008 ppb	4,912.807 ppb	2,489.809 ppb	196.581 ppb	2,582.201 ppb	12,224.260 ppb
Concentration per Run 3	100.595 %	103.523 %	0.022 ppb	16.906 ppb	5,035.538 ppb	2,511.298 ppb	197.253 ppb	2,480.364 ppb	12,084.492 ppb
Concentration RSD	1.4 %	2.2 %	32.6 %	0.3 %	1.8 %	0.8 %	1.0 %	2.1 %	0.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	117.178 %	0.485 ppb	1.433 ppb	46.795 ppb	795.575 ppb	0.185 ppb	2.027 ppb	1.644 ppb	5.429 ppb
Concentration per Run 1	119.238 %	0.464 ppb	1.367 ppb	45.896 ppb	779.245 ppb	0.172 ppb	1.978 ppb	1.576 ppb	5.263 ppb
Concentration per Run 2	116.332 %	0.557 ppb	1.517 ppb	46.866 ppb	811.892 ppb	0.199 ppb	2.138 ppb	1.713 ppb	5.570 ppb
Concentration per Run 3	115.963 %	0.435 ppb	1.417 ppb	47.623 ppb	795.588 ppb	0.183 ppb	1.964 ppb	1.642 ppb	5.453 ppb
Concentration RSD	1.5 %	13.0 %	5.3 %	1.8 %	2.1 %	7.4 %	4.8 %	4.2 %	2.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.103 %	0.758 ppb	0.007 ppb	48.084 ppb	0.184 ppb	105.922 %	-0.001 ppb	0.005 ppb	110.589 %
Concentration per Run 1	107.629 %	0.730 ppb	-0.022 ppb	48.019 ppb	0.174 ppb	106.088 %	0.001 ppb	0.002 ppb	111.348 %
Concentration per Run 2	101.853 %	0.789 ppb	0.025 ppb	48.637 ppb	0.175 ppb	106.477 %	-0.001 ppb	0.004 ppb	111.221 %
Concentration per Run 3	105.827 %	0.754 ppb	0.018 ppb	47.597 ppb	0.202 ppb	105.203 %	-0.002 ppb	0.008 ppb	109.197 %
Concentration RSD	2.8 %	3.9 %	345.0 %	1.1 %	8.6 %	0.6 %	178.7 %	58.6 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.096 ppb	10.982 ppb	108.602 %	117.373 %	0.028 ppb	0.197 ppb	187.229 %
Concentration per Run 1	0.091 ppb	11.013 ppb	108.571 %	103.828 %	0.024 ppb	0.224 ppb	204.425 %
Concentration per Run 2	0.094 ppb	10.927 ppb	107.516 %	123.332 %	0.030 ppb	0.187 ppb	182.230 %
Concentration per Run 3	0.103 ppb	11.005 ppb	109.721 %	124.960 %	0.031 ppb	0.180 ppb	175.032 %
Concentration RSD	6.3 %	0.4 %	1.0 %	10.0 %	14.4 %	12.1 %	8.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 49
Analysis label: I2416613-10 MCP-6020TL-10
Analysis started at: 4/1/2024 9:15:39 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 20
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.200 %	101.213 %	0.013 ppb	93.811 ppb	66,807.974 ppb	28,882.088 ppb	8.819 ppb	16,087.987 ppb	119,572.940 ppb
Concentration per Run 1	102.462 %	102.830 %	0.011 ppb	89.834 ppb	67,729.290 ppb	29,480.674 ppb	8.632 ppb	16,911.274 ppb	124,616.953 ppb
Concentration per Run 2	98.197 %	102.310 %	0.014 ppb	94.840 ppb	65,457.484 ppb	28,392.950 ppb	9.210 ppb	16,073.881 ppb	120,073.962 ppb
Concentration per Run 3	93.941 %	98.498 %	0.015 ppb	96.758 ppb	67,237.146 ppb	28,772.640 ppb	8.615 ppb	15,278.806 ppb	114,027.906 ppb
Concentration RSD	4.3 %	2.3 %	14.9 %	3.8 %	1.8 %	1.9 %	3.8 %	5.1 %	4.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	126.261 %	0.128 ppb	0.962 ppb	774.232 ppb	15,761.170 ppb	2.063 ppb	1.880 ppb	0.292 ppb	0.735 ppb
Concentration per Run 1	130.868 %	0.166 ppb	1.002 ppb	773.009 ppb	15,738.803 ppb	2.017 ppb	1.761 ppb	0.265 ppb	0.771 ppb
Concentration per Run 2	125.968 %	0.128 ppb	0.964 ppb	778.497 ppb	15,911.005 ppb	2.091 ppb	2.029 ppb	0.301 ppb	0.759 ppb
Concentration per Run 3	121.947 %	0.090 ppb	0.920 ppb	771.188 ppb	15,633.701 ppb	2.080 ppb	1.849 ppb	0.308 ppb	0.677 ppb
Concentration RSD	3.5 %	29.8 %	4.3 %	0.5 %	0.9 %	1.9 %	7.3 %	7.8 %	7.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.602 %	90.091 ppb	0.098 ppb	399.167 ppb	2.144 ppb	105.142 %	-0.002 ppb	0.006 ppb	112.901 %
Concentration per Run 1	111.834 %	90.812 ppb	0.143 ppb	452.288 ppb	2.064 ppb	105.630 %	-0.003 ppb	0.005 ppb	117.996 %
Concentration per Run 2	106.261 %	91.591 ppb	0.043 ppb	377.105 ppb	2.256 ppb	106.032 %	-0.003 ppb	0.005 ppb	109.909 %
Concentration per Run 3	110.711 %	87.869 ppb	0.108 ppb	368.107 ppb	2.111 ppb	103.764 %	0.000 ppb	0.007 ppb	110.799 %
Concentration RSD	2.7 %	2.2 %	51.7 %	11.6 %	4.7 %	1.2 %	70.2 %	16.3 %	3.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.075 ppb	94.852 ppb	109.531 %	126.208 %	0.017 ppb	0.010 ppb	173.729 %
Concentration per Run 1	0.070 ppb	94.482 ppb	109.897 %	126.973 %	0.009 ppb	0.009 ppb	200.484 %
Concentration per Run 2	0.075 ppb	96.711 ppb	108.875 %	124.157 %	0.022 ppb	0.013 ppb	179.155 %
Concentration per Run 3	0.079 ppb	93.364 ppb	109.820 %	127.494 %	0.022 ppb	0.008 ppb	141.547 %
Concentration RSD	6.1 %	1.8 %	0.5 %	1.4 %	43.5 %	25.4 %	17.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	50	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416613-11 MCP-6020TL-10	Rack	1		
Analysis started at:	4/1/2024 9:20:17 AM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	106.910 %	107.826 %	0.005 ppb	28.374 ppb	60,118.750 ppb	15,550.496 ppb	2.924 ppb	6,297.011 ppb	89,541.232 ppb
Concentration per Run 1	106.487 %	104.909 %	0.007 ppb	28.482 ppb	65,291.681 ppb	17,159.076 ppb	3.058 ppb	6,948.658 ppb	98,422.797 ppb
Concentration per Run 2	108.343 %	108.981 %	0.004 ppb	28.370 ppb	57,383.874 ppb	14,485.217 ppb	2.750 ppb	5,976.715 ppb	84,458.571 ppb
Concentration per Run 3	105.898 %	109.587 %	0.004 ppb	28.271 ppb	57,680.694 ppb	15,007.197 ppb	2.963 ppb	5,965.659 ppb	85,742.328 ppb
Concentration RSD	1.2 %	2.4 %	37.9 %	0.4 %	7.5 %	9.1 %	5.4 %	9.0 %	8.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	132.288 %	-0.119 ppb	0.853 ppb	500.456 ppb	6,628.145 ppb	0.042 ppb	1.428 ppb	0.121 ppb	-0.244 ppb
Concentration per Run 1	129.740 %	-0.118 ppb	0.884 ppb	583.371 ppb	7,001.276 ppb	0.044 ppb	1.458 ppb	0.160 ppb	-0.182 ppb
Concentration per Run 2	134.481 %	-0.118 ppb	0.817 ppb	458.758 ppb	6,514.026 ppb	0.037 ppb	1.400 ppb	0.106 ppb	-0.301 ppb
Concentration per Run 3	132.642 %	-0.121 ppb	0.858 ppb	459.239 ppb	6,369.133 ppb	0.046 ppb	1.428 ppb	0.099 ppb	-0.249 ppb
Concentration RSD	1.8 %	1.6 %	3.9 %	14.3 %	5.0 %	11.6 %	2.0 %	27.3 %	24.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.360 %	3.260 ppb	-0.020 ppb	268.697 ppb	0.486 ppb	102.315 %	0.001 ppb	-0.001 ppb	111.037 %
Concentration per Run 1	103.501 %	3.560 ppb	0.003 ppb	295.438 ppb	0.529 ppb	98.540 %	0.000 ppb	-0.002 ppb	107.730 %
Concentration per Run 2	107.131 %	3.115 ppb	-0.028 ppb	258.995 ppb	0.466 ppb	100.579 %	0.001 ppb	0.000 ppb	106.659 %
Concentration per Run 3	108.449 %	3.104 ppb	-0.034 ppb	251.659 ppb	0.462 ppb	107.826 %	0.002 ppb	-0.001 ppb	118.723 %
Concentration RSD	2.4 %	8.0 %	103.1 %	8.7 %	7.7 %	4.8 %	88.3 %	53.0 %	6.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.050 ppb	63.976 ppb	107.163 %	110.656 %	0.020 ppb	0.007 ppb	164.424 %
Concentration per Run 1	0.051 ppb	69.651 ppb	102.029 %	120.031 %	0.011 ppb	0.003 ppb	185.368 %
Concentration per Run 2	0.055 ppb	63.331 ppb	105.986 %	102.044 %	0.024 ppb	0.010 ppb	134.169 %
Concentration per Run 3	0.043 ppb	58.946 ppb	113.473 %	109.893 %	0.026 ppb	0.007 ppb	173.737 %
Concentration RSD	13.0 %	8.4 %	5.4 %	8.1 %	41.7 %	55.8 %	16.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	51	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416304-01 2008TL	Rack	1		
Analysis started at:	4/1/2024 9:24:55 AM	Vial	35		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.635 %	103.350 %	0.013 ppb	30.798 ppb	255,388.246 ppb	5,752.979 ppb	227.698 ppb	2,101.859 ppb	4,598.678 ppb
Concentration per Run 1	103.846 %	97.199 %	0.017 ppb	30.553 ppb	267,714.909 ppb	5,999.817 ppb	239.196 ppb	2,196.650 ppb	4,851.234 ppb
Concentration per Run 2	100.591 %	108.548 %	0.015 ppb	30.604 ppb	241,403.863 ppb	5,471.579 ppb	221.400 ppb	2,020.937 ppb	4,389.784 ppb
Concentration per Run 3	100.470 %	104.303 %	0.008 ppb	31.237 ppb	257,045.966 ppb	5,787.541 ppb	222.497 ppb	2,087.989 ppb	4,555.015 ppb
Concentration RSD	1.9 %	5.5 %	32.7 %	1.2 %	5.2 %	4.6 %	4.4 %	4.2 %	5.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	123.386 %	1.929 ppb	2.509 ppb	39.162 ppb	642.278 ppb	0.370 ppb	2.635 ppb	32.428 ppb	89.914 ppb
Concentration per Run 1	125.417 %	1.922 ppb	2.628 ppb	41.036 ppb	651.891 ppb	0.387 ppb	2.760 ppb	33.194 ppb	91.761 ppb
Concentration per Run 2	122.268 %	1.895 ppb	2.433 ppb	37.813 ppb	635.295 ppb	0.375 ppb	2.522 ppb	31.987 ppb	89.148 ppb
Concentration per Run 3	122.473 %	1.969 ppb	2.468 ppb	38.637 ppb	639.649 ppb	0.347 ppb	2.625 ppb	32.102 ppb	88.833 ppb
Concentration RSD	1.4 %	1.9 %	4.1 %	4.3 %	1.3 %	5.6 %	4.5 %	2.1 %	1.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.510 %	0.569 ppb	0.070 ppb	42.431 ppb	0.978 ppb	103.833 %	0.039 ppb	0.195 ppb	109.065 %
Concentration per Run 1	102.478 %	0.578 ppb	0.067 ppb	43.483 ppb	0.944 ppb	102.516 %	0.037 ppb	0.205 ppb	107.445 %
Concentration per Run 2	108.297 %	0.570 ppb	0.020 ppb	42.156 ppb	0.948 ppb	102.607 %	0.038 ppb	0.187 ppb	111.079 %
Concentration per Run 3	108.756 %	0.560 ppb	0.123 ppb	41.653 ppb	1.041 ppb	106.376 %	0.043 ppb	0.193 ppb	108.673 %
Concentration RSD	3.3 %	1.6 %	73.1 %	2.2 %	5.6 %	2.1 %	8.5 %	4.7 %	1.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.422 ppb	15.578 ppb	108.318 %	110.098 %	0.025 ppb	1.833 ppb	154.068 %
Concentration per Run 1	0.421 ppb	15.650 ppb	105.373 %	120.417 %	0.014 ppb	1.651 ppb	191.627 %
Concentration per Run 2	0.432 ppb	15.344 ppb	110.052 %	105.118 %	0.032 ppb	1.927 ppb	137.605 %
Concentration per Run 3	0.413 ppb	15.740 ppb	109.528 %	104.758 %	0.029 ppb	1.922 ppb	132.972 %
Concentration RSD	2.3 %	1.3 %	2.4 %	8.1 %	39.3 %	8.6 %	21.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	52	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 9:29:34 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	103.228 %	108.115 %	58.163 ppb	59.159 ppb	6,480.488 ppb	6,274.141 ppb	59.541 ppb	6,459.284 ppb	6,448.724 ppb
Concentration per Run 1	104.639 %	105.862 %	57.850 ppb	58.758 ppb	6,543.934 ppb	6,211.611 ppb	57.718 ppb	6,558.460 ppb	6,414.571 ppb
Concentration per Run 2	103.751 %	110.627 %	57.831 ppb	58.830 ppb	6,240.380 ppb	6,099.247 ppb	57.782 ppb	6,137.717 ppb	6,213.703 ppb
Concentration per Run 3	101.294 %	107.855 %	58.806 ppb	59.890 ppb	6,657.151 ppb	6,511.565 ppb	63.124 ppb	6,681.677 ppb	6,717.899 ppb
Recovery Percentage 1			96.938 %	98.599 %	108.008 %	104.569 %	99.235 %	107.655 %	107.479 %
Concentration RSD	1.7 %	2.2 %	1.0 %	1.1 %	3.3 %	3.4 %	5.2 %	4.4 %	3.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	131.041 %	59.104 ppb	59.116 ppb	56.188 ppb	5,977.667 ppb	60.516 ppb	60.597 ppb	60.716 ppb	57.979 ppb
Concentration per Run 1	131.023 %	58.858 ppb	59.345 ppb	54.982 ppb	5,949.453 ppb	61.593 ppb	61.327 ppb	61.451 ppb	58.791 ppb
Concentration per Run 2	131.552 %	58.214 ppb	58.394 ppb	56.396 ppb	5,989.482 ppb	60.477 ppb	60.608 ppb	61.094 ppb	57.633 ppb
Concentration per Run 3	130.548 %	60.241 ppb	59.609 ppb	57.186 ppb	5,994.067 ppb	59.478 ppb	59.857 ppb	59.603 ppb	57.514 ppb
Recovery Percentage 1		98.507 %	98.527 %	93.647 %	99.628 %	100.860 %	100.996 %	101.193 %	96.632 %
Concentration RSD	0.4 %	1.8 %	1.1 %	2.0 %	0.4 %	1.7 %	1.2 %	1.6 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	111.157 %	60.638 ppb	59.019 ppb	61.213 ppb	58.146 ppb	110.678 %	57.584 ppb	60.352 ppb	115.862 %
Concentration per Run 1	109.577 %	60.591 ppb	57.562 ppb	60.190 ppb	55.101 ppb	111.284 %	57.212 ppb	59.784 ppb	115.191 %
Concentration per Run 2	108.484 %	61.634 ppb	58.648 ppb	60.179 ppb	59.283 ppb	110.181 %	58.365 ppb	61.744 ppb	112.256 %
Concentration per Run 3	115.411 %	59.688 ppb	60.846 ppb	63.269 ppb	60.053 ppb	110.569 %	57.175 ppb	59.527 ppb	120.139 %
Recovery Percentage 1		101.064 %	98.364 %	102.021 %	96.910 %		95.974 %	100.586 %	
Concentration RSD	3.4 %	1.6 %	2.8 %	2.9 %	4.6 %	0.5 %	1.2 %	2.0 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.964 ppb	61.402 ppb	111.061 %	120.237 %	58.662 ppb	55.896 ppb	199.661 %
Concentration per Run 1	59.179 ppb	60.429 ppb	111.002 %	107.031 %	60.899 ppb	61.769 ppb	236.142 %
Concentration per Run 2	60.557 ppb	61.167 ppb	110.498 %	124.034 %	57.315 ppb	53.946 ppb	186.543 %
Concentration per Run 3	60.156 ppb	62.611 ppb	111.683 %	129.647 %	57.772 ppb	51.975 ppb	176.296 %
Recovery Percentage 1	99.940 %	102.337 %			97.770 %	93.161 %	
Concentration RSD	1.2 %	1.8 %	0.5 %	9.8 %	3.3 %	9.3 %	16.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 53
Analysis label: CCB
Analysis started at: 4/1/2024 9:34:16 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.632 %	106.064 %	0.004 ppb	2.130 ppb	33.019 ppb	-0.402 ppb	-0.219 ppb	2.975 ppb	-1.587 ppb
Concentration per Run 1	104.132 %	103.610 %	0.003 ppb	2.180 ppb	35.505 ppb	0.048 ppb	-0.185 ppb	1.933 ppb	-1.013 ppb
Concentration per Run 2	102.452 %	107.595 %	0.008 ppb	2.128 ppb	20.806 ppb	-0.625 ppb	-0.032 ppb	0.323 ppb	-2.767 ppb
Concentration per Run 3	101.312 %	106.988 %	0.002 ppb	2.082 ppb	42.747 ppb	-0.629 ppb	-0.439 ppb	6.669 ppb	-0.982 ppb
Recovery Percentage 1			0.844 %	21.300 %	33.019 %	-0.574 %	-2.186 %	2.975 %	-1.587 %
Concentration RSD	1.4 %	2.0 %	80.5 %	2.3 %	33.9 %	97.0 %	94.0 %	110.9 %	64.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	115.898 %	-0.134 ppb	0.004 ppb	0.015 ppb	15.571 ppb	0.000 ppb	-0.014 ppb	0.004 ppb	-0.556 ppb
Concentration per Run 1	114.600 %	-0.139 ppb	0.016 ppb	0.010 ppb	17.089 ppb	0.000 ppb	-0.015 ppb	0.005 ppb	-0.563 ppb
Concentration per Run 2	115.798 %	-0.136 ppb	-0.006 ppb	0.002 ppb	15.358 ppb	0.000 ppb	0.000 ppb	0.008 ppb	-0.558 ppb
Concentration per Run 3	117.295 %	-0.127 ppb	0.000 ppb	0.033 ppb	14.266 ppb	0.001 ppb	-0.028 ppb	-0.002 ppb	-0.547 ppb
Recovery Percentage 1		-2.682 %	0.373 %	1.503 %	31.142 %	0.060 %	-0.713 %	0.378 %	-11.125 %
Concentration RSD	1.2 %	4.5 %	303.0 %	109.0 %	9.1 %	105.0 %	99.1 %	135.5 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.411 %	0.123 ppb	0.287 ppb	0.000 ppb	1.195 ppb	109.438 %	0.004 ppb	0.004 ppb	113.077 %
Concentration per Run 1	104.687 %	0.102 ppb	0.277 ppb	0.000 ppb	1.189 ppb	109.656 %	0.009 ppb	0.008 ppb	111.655 %
Concentration per Run 2	104.447 %	0.131 ppb	0.263 ppb	0.000 ppb	1.268 ppb	108.062 %	0.003 ppb	0.002 ppb	109.034 %
Concentration per Run 3	110.100 %	0.137 ppb	0.320 ppb	-0.001 ppb	1.127 ppb	110.597 %	0.001 ppb	0.002 ppb	118.543 %
Recovery Percentage 1		24.650 %	5.739 %	-0.002 %	59.730 %		1.018 %	2.020 %	
Concentration RSD	3.0 %	14.8 %	10.4 %	360.7 %	5.9 %	1.2 %	105.3 %	93.1 %	4.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.088 ppb	-0.001 ppb	107.062 %	124.531 %	0.434 ppb	0.017 ppb	170.752 %
Concentration per Run 1	0.077 ppb	0.006 ppb	106.987 %	122.467 %	0.402 ppb	0.022 ppb	198.999 %
Concentration per Run 2	0.092 ppb	-0.004 ppb	106.104 %	124.158 %	0.494 ppb	0.017 ppb	171.520 %
Concentration per Run 3	0.095 ppb	-0.004 ppb	108.095 %	126.969 %	0.404 ppb	0.012 ppb	141.738 %
Recovery Percentage 1	2.199 %	-0.122 %			43.351 %	1.721 %	
Concentration RSD	10.9 %	942.3 %	0.9 %	1.8 %	12.1 %	29.3 %	16.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 54
Analysis label: WG1901983-1 2008TL
Analysis started at: 4/1/2024 9:41:16 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 30
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	103.867 %	106.786 %	0.002 ppb	1.886 ppb	1.454 ppb	0.999 ppb	1.153 ppb	0.856 ppb	12.559 ppb
Concentration per Run 1	108.618 %	102.830 %	0.002 ppb	1.745 ppb	1.302 ppb	1.040 ppb	0.976 ppb	2.212 ppb	10.622 ppb
Concentration per Run 2	101.940 %	106.642 %	0.004 ppb	1.991 ppb	8.354 ppb	0.790 ppb	1.162 ppb	-1.888 ppb	11.950 ppb
Concentration per Run 3	101.042 %	110.887 %	-0.001 ppb	1.923 ppb	-5.293 ppb	1.166 ppb	1.321 ppb	2.242 ppb	15.105 ppb
Concentration RSD	4.0 %	3.8 %	131.7 %	6.7 %	469.3 %	19.2 %	15.0 %	277.7 %	18.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.091 %	-0.140 ppb	0.842 ppb	0.173 ppb	3.555 ppb	-0.002 ppb	0.011 ppb	0.058 ppb	-0.462 ppb
Concentration per Run 1	119.994 %	-0.140 ppb	0.870 ppb	0.171 ppb	3.320 ppb	-0.002 ppb	0.008 ppb	0.065 ppb	-0.461 ppb
Concentration per Run 2	113.595 %	-0.129 ppb	0.856 ppb	0.168 ppb	3.859 ppb	-0.003 ppb	-0.010 ppb	0.061 ppb	-0.446 ppb
Concentration per Run 3	114.685 %	-0.151 ppb	0.798 ppb	0.179 ppb	3.487 ppb	0.000 ppb	0.036 ppb	0.050 ppb	-0.480 ppb
Concentration RSD	2.9 %	7.6 %	4.6 %	3.4 %	7.8 %	86.1 %	210.1 %	13.5 %	3.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.683 %	0.042 ppb	0.031 ppb	0.005 ppb	0.212 ppb	108.484 %	-0.003 ppb	-0.002 ppb	108.944 %
Concentration per Run 1	101.394 %	0.074 ppb	0.021 ppb	0.007 ppb	0.207 ppb	105.968 %	-0.002 ppb	-0.001 ppb	102.161 %
Concentration per Run 2	105.124 %	0.045 ppb	0.045 ppb	0.005 ppb	0.197 ppb	108.981 %	-0.003 ppb	-0.002 ppb	108.986 %
Concentration per Run 3	110.532 %	0.006 ppb	0.025 ppb	0.005 ppb	0.231 ppb	110.503 %	-0.003 ppb	-0.002 ppb	115.686 %
Concentration RSD	4.3 %	82.2 %	41.7 %	17.0 %	8.2 %	2.1 %	22.1 %	24.7 %	6.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.039 ppb	0.010 ppb	104.128 %	120.440 %	0.087 ppb	0.002 ppb	152.364 %
Concentration per Run 1	0.039 ppb	0.004 ppb	102.488 %	115.861 %	0.072 ppb	0.004 ppb	181.390 %
Concentration per Run 2	0.036 ppb	0.012 ppb	103.054 %	120.640 %	0.097 ppb	0.004 ppb	138.016 %
Concentration per Run 3	0.043 ppb	0.015 ppb	106.843 %	124.820 %	0.091 ppb	-0.002 ppb	137.687 %
Concentration RSD	8.6 %	58.7 %	2.3 %	3.7 %	14.9 %	200.2 %	16.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 55
Analysis label: WG1901983-2d10 2008TL
Analysis started at: 4/1/2024 9:45:53 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 31
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.945 %	105.082 %	4.873 ppb	97.578 ppb	845.047 ppb	1,008.643 ppb	188.848 ppb	1,023.105 ppb	991.834 ppb
Concentration per Run 1	104.222 %	102.483 %	4.926 ppb	98.245 ppb	840.060 ppb	999.736 ppb	180.116 ppb	993.145 ppb	952.413 ppb
Concentration per Run 2	102.120 %	105.776 %	4.940 ppb	96.633 ppb	865.263 ppb	1,024.160 ppb	195.073 ppb	1,032.917 ppb	1,020.276 ppb
Concentration per Run 3	102.492 %	106.988 %	4.754 ppb	97.856 ppb	829.818 ppb	1,002.032 ppb	191.356 ppb	1,043.254 ppb	1,002.813 ppb
Concentration RSD	1.1 %	2.2 %	2.1 %	0.9 %	2.2 %	1.3 %	4.1 %	2.6 %	3.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	121.979 %	48.902 ppb	19.916 ppb	47.280 ppb	109.662 ppb	50.804 ppb	51.198 ppb	25.093 ppb	48.128 ppb
Concentration per Run 1	124.072 %	48.300 ppb	19.849 ppb	46.249 ppb	106.189 ppb	51.416 ppb	51.742 ppb	24.987 ppb	47.628 ppb
Concentration per Run 2	119.388 %	48.318 ppb	19.818 ppb	46.903 ppb	108.266 ppb	49.807 ppb	50.707 ppb	24.984 ppb	48.338 ppb
Concentration per Run 3	122.478 %	50.088 ppb	20.082 ppb	48.689 ppb	114.530 ppb	51.190 ppb	51.145 ppb	25.308 ppb	48.417 ppb
Concentration RSD	2.0 %	2.1 %	0.7 %	2.7 %	4.0 %	1.7 %	1.0 %	0.7 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.975 %	12.204 ppb	11.531 ppb	96.077 ppb	94.440 ppb	109.257 %	4.785 ppb	5.373 ppb	112.700 %
Concentration per Run 1	107.616 %	12.038 ppb	11.179 ppb	92.313 ppb	88.532 ppb	111.522 %	4.683 ppb	5.320 ppb	113.217 %
Concentration per Run 2	110.634 %	11.919 ppb	11.521 ppb	97.624 ppb	95.534 ppb	107.696 %	4.772 ppb	5.441 ppb	111.778 %
Concentration per Run 3	108.675 %	12.654 ppb	11.892 ppb	98.296 ppb	99.254 ppb	108.552 %	4.901 ppb	5.358 ppb	113.104 %
Concentration RSD	1.4 %	3.2 %	3.1 %	3.4 %	5.8 %	1.8 %	2.3 %	1.2 %	0.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	39.258 ppb	204.868 ppb	108.994 %	118.312 %	10.587 ppb	50.104 ppb	214.058 %
Concentration per Run 1	37.941 ppb	198.596 ppb	110.111 %	124.958 %	9.791 ppb	46.361 ppb	260.418 %
Concentration per Run 2	39.598 ppb	208.237 ppb	109.682 %	124.947 %	9.841 ppb	47.527 ppb	201.905 %
Concentration per Run 3	40.234 ppb	207.771 ppb	107.189 %	105.029 %	12.130 ppb	56.424 ppb	179.850 %
Concentration RSD	3.0 %	2.7 %	1.4 %	9.7 %	12.6 %	11.0 %	19.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 56
Analysis label: WG1901983-3d10 2008TL
Analysis started at: 4/1/2024 9:50:31 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 33
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.301 %	103.292 %	5.015 ppb	104.800 ppb	28,244.511 ppb	1,938.955 ppb	219.690 ppb	1,635.839 ppb	5,878.626 ppb
Concentration per Run 1	100.595 %	102.397 %	5.020 ppb	106.374 ppb	27,493.598 ppb	1,870.996 ppb	208.595 ppb	1,586.829 ppb	5,630.511 ppb
Concentration per Run 2	100.506 %	105.516 %	4.970 ppb	103.556 ppb	27,861.392 ppb	1,909.890 ppb	222.696 ppb	1,662.303 ppb	5,980.356 ppb
Concentration per Run 3	99.800 %	101.964 %	5.055 ppb	104.471 ppb	29,378.543 ppb	2,035.979 ppb	227.777 ppb	1,658.384 ppb	6,025.010 ppb
Concentration RSD	0.4 %	1.9 %	0.9 %	1.4 %	3.5 %	4.4 %	4.5 %	2.6 %	3.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	118.512 %	49.706 ppb	20.022 ppb	125.095 ppb	446.455 ppb	50.918 ppb	51.410 ppb	25.745 ppb	49.550 ppb
Concentration per Run 1	117.058 %	48.222 ppb	19.618 ppb	120.187 ppb	428.585 ppb	49.860 ppb	50.961 ppb	25.495 ppb	48.342 ppb
Concentration per Run 2	120.561 %	49.600 ppb	20.281 ppb	127.474 ppb	444.768 ppb	51.235 ppb	51.366 ppb	25.437 ppb	49.657 ppb
Concentration per Run 3	117.917 %	51.296 ppb	20.167 ppb	127.623 ppb	466.010 ppb	51.659 ppb	51.903 ppb	26.304 ppb	50.651 ppb
Concentration RSD	1.5 %	3.1 %	1.8 %	3.4 %	4.2 %	1.8 %	0.9 %	1.9 %	2.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.119 %	12.478 ppb	11.790 ppb	132.271 ppb	100.815 ppb	104.162 %	4.865 ppb	5.387 ppb	109.813 %
Concentration per Run 1	105.609 %	12.091 ppb	11.112 ppb	126.320 ppb	93.740 ppb	105.751 %	4.817 ppb	5.336 ppb	106.982 %
Concentration per Run 2	105.246 %	12.506 ppb	12.078 ppb	136.226 ppb	102.585 ppb	102.505 %	4.874 ppb	5.433 ppb	110.682 %
Concentration per Run 3	104.502 %	12.837 ppb	12.181 ppb	134.267 ppb	106.119 ppb	104.230 %	4.904 ppb	5.391 ppb	111.776 %
Concentration RSD	0.5 %	3.0 %	5.0 %	4.0 %	6.3 %	1.6 %	0.9 %	0.9 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	52.167 ppb	216.123 ppb	107.202 %	103.962 %	11.546 ppb	57.026 ppb	168.234 %
Concentration per Run 1	51.210 ppb	208.734 ppb	109.121 %	104.091 %	11.059 ppb	56.372 ppb	210.471 %
Concentration per Run 2	53.101 ppb	220.468 ppb	105.433 %	104.391 %	11.693 ppb	57.057 ppb	150.259 %
Concentration per Run 3	52.189 ppb	219.167 ppb	107.054 %	103.403 %	11.886 ppb	57.648 ppb	143.971 %
Concentration RSD	1.8 %	3.0 %	1.7 %	0.5 %	3.7 %	1.1 %	21.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	57	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1901983-4 2008TL	Rack	1		
Analysis started at:	4/1/2024 9:55:09 AM	Vial	34		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.176 %	99.422 %	0.021 ppb	54.927 ppb	267,459.225 ppb	9,001.509 ppb	246.020 ppb	6,005.360 ppb	48,803.746 ppb
Concentration per Run 1	98.546 %	96.679 %	0.022 ppb	55.489 ppb	260,863.256 ppb	8,734.146 ppb	232.783 ppb	5,815.869 ppb	47,419.696 ppb
Concentration per Run 2	98.042 %	105.082 %	0.018 ppb	54.479 ppb	262,465.466 ppb	8,887.468 ppb	243.571 ppb	5,924.112 ppb	48,414.123 ppb
Concentration per Run 3	94.939 %	96.506 %	0.024 ppb	54.811 ppb	279,048.952 ppb	9,382.913 ppb	261.707 ppb	6,276.098 ppb	50,577.420 ppb
Concentration RSD	2.0 %	4.9 %	14.7 %	0.9 %	3.8 %	3.8 %	5.9 %	4.0 %	3.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	126.288 %	0.825 ppb	1.347 ppb	858.704 ppb	3,337.565 ppb	3.558 ppb	1.697 ppb	2.973 ppb	7.224 ppb
Concentration per Run 1	126.624 %	0.799 ppb	1.315 ppb	818.603 ppb	3,196.262 ppb	3.576 ppb	1.610 ppb	2.868 ppb	6.904 ppb
Concentration per Run 2	127.821 %	0.775 ppb	1.359 ppb	877.075 ppb	3,350.859 ppb	3.543 ppb	1.704 ppb	3.023 ppb	7.257 ppb
Concentration per Run 3	124.421 %	0.901 ppb	1.367 ppb	880.435 ppb	3,465.573 ppb	3.553 ppb	1.776 ppb	3.028 ppb	7.511 ppb
Concentration RSD	1.4 %	8.1 %	2.1 %	4.0 %	4.0 %	0.5 %	4.9 %	3.1 %	4.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.216 %	2.453 ppb	0.345 ppb	332.742 ppb	4.786 ppb	97.026 %	0.009 ppb	0.031 ppb	104.183 %
Concentration per Run 1	99.433 %	2.361 ppb	0.343 ppb	315.199 ppb	4.607 ppb	98.032 %	0.009 ppb	0.035 ppb	104.938 %
Concentration per Run 2	99.871 %	2.577 ppb	0.340 ppb	342.583 ppb	4.711 ppb	95.724 %	0.011 ppb	0.028 ppb	103.685 %
Concentration per Run 3	101.343 %	2.422 ppb	0.352 ppb	340.443 ppb	5.041 ppb	97.322 %	0.009 ppb	0.030 ppb	103.926 %
Concentration RSD	1.0 %	4.5 %	1.8 %	4.6 %	4.7 %	1.2 %	12.8 %	11.2 %	0.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.153 ppb	62.866 ppb	103.557 %	107.440 %	0.133 ppb	1.655 ppb	146.698 %
Concentration per Run 1	1.131 ppb	60.151 ppb	104.915 %	101.901 %	0.131 ppb	1.721 ppb	150.282 %
Concentration per Run 2	1.171 ppb	63.479 ppb	102.154 %	99.416 %	0.156 ppb	1.790 ppb	161.461 %
Concentration per Run 3	1.156 ppb	64.968 ppb	103.601 %	121.002 %	0.112 ppb	1.454 ppb	128.351 %
Concentration RSD	1.8 %	3.9 %	1.3 %	11.0 %	16.6 %	10.7 %	11.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	58	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416475-01 2008TL	Rack	1		
Analysis started at:	4/1/2024 9:59:48 AM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.595 %	103.725 %	0.019 ppb	53.928 ppb	264,707.416 ppb	8,833.448 ppb	247.000 ppb	5,943.083 ppb	47,271.760 ppb
Concentration per Run 1	98.050 %	103.523 %	0.026 ppb	54.470 ppb	266,012.604 ppb	8,876.573 ppb	248.305 ppb	5,932.341 ppb	46,754.978 ppb
Concentration per Run 2	97.414 %	104.563 %	0.017 ppb	54.284 ppb	263,045.384 ppb	8,725.885 ppb	243.644 ppb	5,907.947 ppb	46,555.523 ppb
Concentration per Run 3	97.320 %	103.090 %	0.013 ppb	53.030 ppb	265,064.260 ppb	8,897.886 ppb	249.051 ppb	5,988.960 ppb	48,504.780 ppb
Concentration RSD	0.4 %	0.7 %	34.1 %	1.5 %	0.6 %	1.1 %	1.2 %	0.7 %	2.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	127.318 %	0.869 ppb	1.296 ppb	830.669 ppb	3,251.706 ppb	3.478 ppb	1.567 ppb	3.007 ppb	7.303 ppb
Concentration per Run 1	126.911 %	0.840 ppb	1.313 ppb	816.354 ppb	3,195.465 ppb	3.445 ppb	1.570 ppb	2.911 ppb	7.200 ppb
Concentration per Run 2	127.532 %	0.824 ppb	1.280 ppb	834.073 ppb	3,282.657 ppb	3.397 ppb	1.559 ppb	3.115 ppb	7.309 ppb
Concentration per Run 3	127.511 %	0.944 ppb	1.294 ppb	841.580 ppb	3,276.994 ppb	3.592 ppb	1.572 ppb	2.994 ppb	7.400 ppb
Concentration RSD	0.3 %	7.5 %	1.3 %	1.6 %	1.5 %	2.9 %	0.5 %	3.4 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.602 %	2.347 ppb	0.342 ppb	326.051 ppb	2.745 ppb	101.874 %	0.008 ppb	0.033 ppb	108.216 %
Concentration per Run 1	105.934 %	2.315 ppb	0.283 ppb	318.387 ppb	2.601 ppb	103.701 %	0.007 ppb	0.033 ppb	108.923 %
Concentration per Run 2	102.883 %	2.351 ppb	0.448 ppb	332.223 ppb	2.750 ppb	100.568 %	0.011 ppb	0.035 ppb	108.810 %
Concentration per Run 3	104.987 %	2.377 ppb	0.296 ppb	327.545 ppb	2.883 ppb	101.354 %	0.007 ppb	0.031 ppb	106.913 %
Concentration RSD	1.5 %	1.3 %	26.8 %	2.2 %	5.1 %	1.6 %	26.6 %	5.8 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.582 ppb	61.528 ppb	107.260 %	109.836 %	0.058 ppb	1.643 ppb	163.568 %
Concentration per Run 1	0.572 ppb	60.640 ppb	109.562 %	124.528 %	0.037 ppb	1.420 ppb	189.228 %
Concentration per Run 2	0.585 ppb	60.897 ppb	104.575 %	102.501 %	0.069 ppb	1.748 ppb	167.132 %
Concentration per Run 3	0.588 ppb	63.046 ppb	107.643 %	102.478 %	0.069 ppb	1.761 ppb	134.345 %
Concentration RSD	1.4 %	2.1 %	2.3 %	11.6 %	31.4 %	11.8 %	16.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 59
Analysis label: I2416304-02 2008TL
Analysis started at: 4/1/2024 10:04:26 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 36
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.958 %	106.902 %	0.021 ppb	23.205 ppb	190,598.991 ppb	3,167.747 ppb	345.286 ppb	1,369.493 ppb	3,599.415 ppb
Concentration per Run 1	101.863 %	104.996 %	0.026 ppb	23.163 ppb	194,468.091 ppb	3,212.233 ppb	348.394 ppb	1,402.426 ppb	3,660.109 ppb
Concentration per Run 2	100.444 %	107.681 %	0.020 ppb	23.390 ppb	187,481.652 ppb	3,122.610 ppb	343.517 ppb	1,358.203 ppb	3,587.126 ppb
Concentration per Run 3	100.569 %	108.028 %	0.018 ppb	23.061 ppb	189,847.230 ppb	3,168.398 ppb	343.948 ppb	1,347.850 ppb	3,551.012 ppb
Concentration RSD	0.8 %	1.6 %	19.3 %	0.7 %	1.9 %	1.4 %	0.8 %	2.1 %	1.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	125.743 %	2.515 ppb	3.094 ppb	41.546 ppb	943.747 ppb	0.419 ppb	2.960 ppb	37.344 ppb	100.663 ppb
Concentration per Run 1	125.670 %	2.448 ppb	3.090 ppb	41.487 ppb	943.893 ppb	0.422 ppb	2.870 ppb	36.834 ppb	100.758 ppb
Concentration per Run 2	125.184 %	2.613 ppb	3.008 ppb	41.539 ppb	935.602 ppb	0.421 ppb	2.998 ppb	37.294 ppb	99.524 ppb
Concentration per Run 3	126.375 %	2.485 ppb	3.183 ppb	41.614 ppb	951.747 ppb	0.414 ppb	3.012 ppb	37.903 ppb	101.706 ppb
Concentration RSD	0.5 %	3.4 %	2.8 %	0.2 %	0.9 %	1.0 %	2.7 %	1.4 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.448 %	0.670 ppb	0.110 ppb	26.432 ppb	1.384 ppb	105.334 %	0.047 ppb	0.231 ppb	111.428 %
Concentration per Run 1	108.854 %	0.601 ppb	0.086 ppb	26.363 ppb	1.296 ppb	106.665 %	0.044 ppb	0.230 ppb	113.693 %
Concentration per Run 2	111.159 %	0.712 ppb	0.080 ppb	26.412 ppb	1.431 ppb	104.148 %	0.046 ppb	0.230 ppb	109.372 %
Concentration per Run 3	108.330 %	0.697 ppb	0.163 ppb	26.520 ppb	1.424 ppb	105.191 %	0.051 ppb	0.233 ppb	111.220 %
Concentration RSD	1.4 %	9.0 %	42.2 %	0.3 %	5.5 %	1.2 %	7.2 %	0.7 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.781 ppb	16.523 ppb	107.471 %	125.315 %	0.038 ppb	2.456 ppb	156.559 %
Concentration per Run 1	0.763 ppb	16.063 ppb	108.140 %	126.739 %	0.026 ppb	2.423 ppb	188.866 %
Concentration per Run 2	0.802 ppb	16.841 ppb	105.820 %	121.690 %	0.045 ppb	2.565 ppb	140.821 %
Concentration per Run 3	0.779 ppb	16.666 ppb	108.454 %	127.515 %	0.043 ppb	2.379 ppb	139.989 %
Concentration RSD	2.5 %	2.5 %	1.3 %	2.5 %	27.1 %	4.0 %	17.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 60
Analysis label: I2416304-03 2008TL
Analysis started at: 4/1/2024 10:09:05 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 37
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.445 %	107.277 %	0.018 ppb	24.414 ppb	201,861.190 ppb	3,491.134 ppb	345.602 ppb	1,460.382 ppb	3,653.344 ppb
Concentration per Run 1	103.202 %	107.248 %	0.012 ppb	24.634 ppb	207,635.520 ppb	3,575.220 ppb	345.993 ppb	1,479.991 ppb	3,698.030 ppb
Concentration per Run 2	103.523 %	105.949 %	0.019 ppb	24.082 ppb	198,895.929 ppb	3,469.045 ppb	350.294 ppb	1,472.510 ppb	3,651.989 ppb
Concentration per Run 3	100.610 %	108.634 %	0.023 ppb	24.524 ppb	199,052.120 ppb	3,429.137 ppb	340.520 ppb	1,428.646 ppb	3,610.012 ppb
Concentration RSD	1.6 %	1.3 %	31.9 %	1.2 %	2.5 %	2.2 %	1.4 %	1.9 %	1.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	127.623 %	2.354 ppb	3.089 ppb	42.187 ppb	946.824 ppb	0.447 ppb	3.064 ppb	38.132 ppb	99.841 ppb
Concentration per Run 1	128.398 %	2.366 ppb	3.058 ppb	41.253 ppb	942.622 ppb	0.433 ppb	3.075 ppb	38.183 ppb	99.619 ppb
Concentration per Run 2	127.582 %	2.336 ppb	3.160 ppb	43.268 ppb	952.618 ppb	0.451 ppb	3.088 ppb	38.756 ppb	101.378 ppb
Concentration per Run 3	126.888 %	2.360 ppb	3.048 ppb	42.039 ppb	945.234 ppb	0.456 ppb	3.028 ppb	37.456 ppb	98.527 ppb
Concentration RSD	0.6 %	0.7 %	2.0 %	2.4 %	0.5 %	2.6 %	1.0 %	1.7 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.584 %	0.682 ppb	0.089 ppb	28.486 ppb	1.146 ppb	105.948 %	0.048 ppb	0.233 ppb	112.002 %
Concentration per Run 1	109.202 %	0.663 ppb	0.119 ppb	28.236 ppb	1.093 ppb	108.198 %	0.045 ppb	0.222 ppb	113.942 %
Concentration per Run 2	108.402 %	0.679 ppb	0.074 ppb	28.747 ppb	1.098 ppb	104.606 %	0.048 ppb	0.240 ppb	111.118 %
Concentration per Run 3	111.149 %	0.705 ppb	0.075 ppb	28.476 ppb	1.248 ppb	105.042 %	0.050 ppb	0.238 ppb	110.947 %
Concentration RSD	1.3 %	3.1 %	29.0 %	0.9 %	7.7 %	1.8 %	5.8 %	4.3 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.660 ppb	16.969 ppb	107.764 %	104.151 %	0.040 ppb	2.943 ppb	170.535 %
Concentration per Run 1	0.635 ppb	16.414 ppb	110.684 %	106.001 %	0.026 ppb	2.870 ppb	192.287 %
Concentration per Run 2	0.656 ppb	17.211 ppb	107.761 %	103.439 %	0.047 ppb	2.982 ppb	178.770 %
Concentration per Run 3	0.689 ppb	17.282 ppb	104.846 %	103.013 %	0.047 ppb	2.979 ppb	140.549 %
Concentration RSD	4.1 %	2.8 %	2.7 %	1.6 %	30.3 %	2.2 %	15.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	61	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416304-04 2008TL	Rack	1		
Analysis started at:	4/1/2024 10:13:41 AM	Vial	38		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.241 %	104.447 %	0.016 ppb	31.239 ppb	261,527.573 ppb	6,103.465 ppb	381.144 ppb	2,149.618 ppb	4,698.386 ppb
Concentration per Run 1	103.754 %	110.367 %	0.021 ppb	31.302 ppb	247,621.922 ppb	5,751.887 ppb	358.717 ppb	2,066.854 ppb	4,474.364 ppb
Concentration per Run 2	102.846 %	97.199 %	0.016 ppb	31.338 ppb	276,209.633 ppb	6,438.117 ppb	404.100 ppb	2,276.953 ppb	4,978.695 ppb
Concentration per Run 3	100.122 %	105.775 %	0.012 ppb	31.077 ppb	260,751.163 ppb	6,120.390 ppb	380.617 ppb	2,105.045 ppb	4,642.099 ppb
Concentration RSD	1.8 %	6.4 %	29.7 %	0.5 %	5.5 %	5.6 %	6.0 %	5.2 %	5.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	127.963 %	2.505 ppb	3.091 ppb	41.656 ppb	1,004.441 ppb	0.459 ppb	3.226 ppb	38.369 ppb	108.505 ppb
Concentration per Run 1	127.670 %	2.434 ppb	3.027 ppb	39.389 ppb	963.103 ppb	0.439 ppb	3.074 ppb	37.205 ppb	106.370 ppb
Concentration per Run 2	130.386 %	2.658 ppb	3.235 ppb	42.669 ppb	1,031.665 ppb	0.477 ppb	3.346 ppb	39.663 ppb	111.074 ppb
Concentration per Run 3	125.835 %	2.425 ppb	3.012 ppb	42.910 ppb	1,018.555 ppb	0.461 ppb	3.256 ppb	38.239 ppb	108.071 ppb
Concentration RSD	1.8 %	5.3 %	4.0 %	4.7 %	3.6 %	4.1 %	4.3 %	3.2 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	111.379 %	0.678 ppb	0.094 ppb	43.277 ppb	1.122 ppb	105.997 %	0.051 ppb	0.205 ppb	112.074 %
Concentration per Run 1	113.282 %	0.661 ppb	0.078 ppb	41.898 ppb	1.084 ppb	109.304 %	0.050 ppb	0.188 ppb	113.539 %
Concentration per Run 2	109.140 %	0.710 ppb	0.085 ppb	44.308 ppb	1.145 ppb	103.678 %	0.050 ppb	0.208 ppb	111.016 %
Concentration per Run 3	111.713 %	0.662 ppb	0.120 ppb	43.623 ppb	1.138 ppb	105.011 %	0.053 ppb	0.219 ppb	111.667 %
Concentration RSD	1.9 %	4.2 %	24.0 %	2.9 %	3.0 %	2.8 %	3.4 %	7.6 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.615 ppb	18.003 ppb	108.915 %	111.552 %	0.031 ppb	2.925 ppb	156.867 %
Concentration per Run 1	0.593 ppb	17.307 ppb	111.755 %	127.521 %	0.018 ppb	2.495 ppb	191.564 %
Concentration per Run 2	0.611 ppb	18.471 ppb	107.564 %	103.276 %	0.040 ppb	3.135 ppb	140.664 %
Concentration per Run 3	0.639 ppb	18.232 ppb	107.427 %	103.858 %	0.037 ppb	3.145 ppb	138.372 %
Concentration RSD	3.8 %	3.4 %	2.3 %	12.4 %	37.5 %	12.7 %	19.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 62
Analysis label: I2416307-01 2008TL
Analysis started at: 4/1/2024 10:18:18 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 39
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	108.199 %	115.132 %	0.011 ppb	9.167 ppb	6,239.058 ppb	564.398 ppb	135.384 ppb	419.803 ppb	823.876 ppb
Concentration per Run 1	109.432 %	118.511 %	0.010 ppb	9.033 ppb	6,095.326 ppb	539.413 ppb	129.941 ppb	423.272 ppb	838.320 ppb
Concentration per Run 2	108.672 %	110.107 %	0.011 ppb	9.075 ppb	6,394.766 ppb	588.152 ppb	143.176 ppb	424.682 ppb	833.040 ppb
Concentration per Run 3	106.492 %	116.778 %	0.011 ppb	9.393 ppb	6,227.082 ppb	565.629 ppb	133.035 ppb	411.456 ppb	800.268 ppb
Concentration RSD	1.4 %	3.9 %	8.3 %	2.1 %	2.4 %	4.3 %	5.1 %	1.7 %	2.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	126.167 %	0.776 ppb	1.391 ppb	7.266 ppb	208.044 ppb	0.196 ppb	0.599 ppb	78.043 ppb	54.504 ppb
Concentration per Run 1	126.435 %	0.753 ppb	1.383 ppb	7.174 ppb	207.990 ppb	0.206 ppb	0.619 ppb	77.928 ppb	53.938 ppb
Concentration per Run 2	125.764 %	0.851 ppb	1.386 ppb	7.265 ppb	206.686 ppb	0.188 ppb	0.583 ppb	78.016 ppb	54.339 ppb
Concentration per Run 3	126.302 %	0.726 ppb	1.403 ppb	7.358 ppb	209.454 ppb	0.192 ppb	0.596 ppb	78.186 ppb	55.234 ppb
Concentration RSD	0.3 %	8.5 %	0.8 %	1.3 %	0.7 %	4.7 %	3.1 %	0.2 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	115.001 %	0.711 ppb	0.164 ppb	5.282 ppb	0.374 ppb	115.225 %	0.010 ppb	0.115 ppb	118.414 %
Concentration per Run 1	114.563 %	0.706 ppb	0.155 ppb	5.232 ppb	0.332 ppb	118.315 %	0.012 ppb	0.117 ppb	121.166 %
Concentration per Run 2	116.715 %	0.720 ppb	0.150 ppb	5.316 ppb	0.375 ppb	112.997 %	0.009 ppb	0.118 ppb	117.170 %
Concentration per Run 3	113.725 %	0.707 ppb	0.188 ppb	5.296 ppb	0.414 ppb	114.362 %	0.008 ppb	0.111 ppb	116.906 %
Concentration RSD	1.3 %	1.1 %	12.3 %	0.8 %	11.0 %	2.4 %	23.0 %	3.4 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.563 ppb	8.850 ppb	110.949 %	120.558 %	0.025 ppb	4.465 ppb	194.335 %
Concentration per Run 1	0.541 ppb	8.726 ppb	113.594 %	131.495 %	0.013 ppb	4.058 ppb	213.484 %
Concentration per Run 2	0.582 ppb	8.910 ppb	108.517 %	105.533 %	0.034 ppb	5.072 ppb	189.179 %
Concentration per Run 3	0.568 ppb	8.913 ppb	110.736 %	124.647 %	0.027 ppb	4.267 ppb	180.342 %
Concentration RSD	3.7 %	1.2 %	2.3 %	11.2 %	42.3 %	12.0 %	8.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 63
Analysis label: I2416311-01 2008TL
Analysis started at: 4/1/2024 10:22:55 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 40
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	104.377 %	106.266 %	0.018 ppb	20.751 ppb	179,009.071 ppb	2,512.509 ppb	319.687 ppb	1,244.106 ppb	3,327.452 ppb
Concentration per Run 1	105.445 %	106.902 %	0.017 ppb	20.880 ppb	171,760.187 ppb	2,390.189 ppb	298.141 ppb	1,186.385 ppb	3,198.357 ppb
Concentration per Run 2	104.490 %	105.862 %	0.028 ppb	20.733 ppb	183,402.028 ppb	2,601.477 ppb	330.169 ppb	1,293.636 ppb	3,433.693 ppb
Concentration per Run 3	103.195 %	106.035 %	0.010 ppb	20.639 ppb	181,864.998 ppb	2,545.862 ppb	330.750 ppb	1,252.297 ppb	3,350.305 ppb
Concentration RSD	1.1 %	0.5 %	49.6 %	0.6 %	3.5 %	4.4 %	5.8 %	4.3 %	3.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	128.803 %	2.272 ppb	2.997 ppb	42.304 ppb	876.907 ppb	0.415 ppb	2.979 ppb	36.681 ppb	94.143 ppb
Concentration per Run 1	127.782 %	2.192 ppb	2.903 ppb	40.088 ppb	822.993 ppb	0.362 ppb	2.862 ppb	35.430 ppb	89.921 ppb
Concentration per Run 2	129.609 %	2.415 ppb	2.984 ppb	42.496 ppb	902.651 ppb	0.433 ppb	2.925 ppb	36.738 ppb	96.367 ppb
Concentration per Run 3	129.019 %	2.208 ppb	3.103 ppb	44.327 ppb	905.078 ppb	0.448 ppb	3.149 ppb	37.874 ppb	96.140 ppb
Concentration RSD	0.7 %	5.5 %	3.4 %	5.0 %	5.3 %	11.1 %	5.1 %	3.3 %	3.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	110.022 %	0.641 ppb	0.064 ppb	22.458 ppb	0.993 ppb	106.033 %	0.043 ppb	0.266 ppb	112.076 %
Concentration per Run 1	111.612 %	0.578 ppb	0.037 ppb	20.867 ppb	0.946 ppb	110.638 %	0.040 ppb	0.269 ppb	113.237 %
Concentration per Run 2	110.873 %	0.660 ppb	0.061 ppb	22.936 ppb	0.977 ppb	104.124 %	0.044 ppb	0.263 ppb	112.252 %
Concentration per Run 3	107.579 %	0.686 ppb	0.093 ppb	23.572 ppb	1.056 ppb	103.337 %	0.043 ppb	0.267 ppb	110.739 %
Concentration RSD	2.0 %	8.8 %	43.5 %	6.3 %	5.7 %	3.8 %	5.0 %	1.3 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.563 ppb	15.385 ppb	109.110 %	117.125 %	0.025 ppb	2.447 ppb	178.281 %
Concentration per Run 1	0.528 ppb	14.827 ppb	110.833 %	123.580 %	0.013 ppb	2.286 ppb	213.895 %
Concentration per Run 2	0.565 ppb	15.784 ppb	107.984 %	103.974 %	0.035 ppb	2.754 ppb	150.876 %
Concentration per Run 3	0.597 ppb	15.543 ppb	108.511 %	123.822 %	0.028 ppb	2.300 ppb	170.071 %
Concentration RSD	6.2 %	3.2 %	1.4 %	9.7 %	42.9 %	10.9 %	18.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 64
Analysis label: CCV
Analysis started at: 4/1/2024 10:27:31 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.620 %	109.587 %	61.228 ppb	61.127 ppb	6,298.082 ppb	6,046.152 ppb	58.042 ppb	6,101.727 ppb	6,143.320 ppb
Concentration per Run 1	103.413 %	109.761 %	58.019 ppb	58.762 ppb	6,346.508 ppb	6,142.877 ppb	57.505 ppb	6,157.671 ppb	6,077.570 ppb
Concentration per Run 2	99.604 %	111.927 %	61.864 ppb	61.483 ppb	6,280.808 ppb	6,003.590 ppb	59.064 ppb	6,139.717 ppb	6,229.397 ppb
Concentration per Run 3	92.841 %	107.075 %	63.802 ppb	63.138 ppb	6,266.932 ppb	5,991.988 ppb	57.558 ppb	6,007.794 ppb	6,122.994 ppb
Recovery Percentage 1			102.047 %	101.879 %	104.968 %	100.769 %	96.737 %	101.695 %	102.389 %
Concentration RSD	5.4 %	2.2 %	4.8 %	3.6 %	0.7 %	1.4 %	1.5 %	1.3 %	1.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	127.764 %	58.266 ppb	58.446 ppb	54.951 ppb	5,928.796 ppb	60.910 ppb	60.659 ppb	60.310 ppb	57.411 ppb
Concentration per Run 1	132.984 %	56.593 ppb	56.729 ppb	53.870 ppb	5,829.157 ppb	59.888 ppb	59.418 ppb	58.684 ppb	55.355 ppb
Concentration per Run 2	127.860 %	59.308 ppb	59.166 ppb	55.502 ppb	5,963.569 ppb	60.819 ppb	61.044 ppb	60.535 ppb	58.307 ppb
Concentration per Run 3	122.448 %	58.899 ppb	59.443 ppb	55.480 ppb	5,993.662 ppb	62.022 ppb	61.515 ppb	61.710 ppb	58.570 ppb
Recovery Percentage 1		97.111 %	97.410 %	91.585 %	98.813 %	101.516 %	101.099 %	100.516 %	95.685 %
Concentration RSD	4.1 %	2.5 %	2.6 %	1.7 %	1.5 %	1.8 %	1.8 %	2.5 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	110.523 %	59.714 ppb	58.314 ppb	58.298 ppb	57.250 ppb	111.872 %	57.068 ppb	58.528 ppb	114.947 %
Concentration per Run 1	114.747 %	57.758 ppb	57.140 ppb	57.364 ppb	53.173 ppb	117.500 %	54.540 ppb	56.318 ppb	122.678 %
Concentration per Run 2	110.417 %	60.156 ppb	59.121 ppb	59.920 ppb	58.719 ppb	111.357 %	57.840 ppb	59.046 ppb	115.921 %
Concentration per Run 3	106.405 %	61.227 ppb	58.680 ppb	57.608 ppb	59.858 ppb	106.758 %	58.825 ppb	60.220 ppb	106.242 %
Recovery Percentage 1		99.523 %	97.189 %	97.163 %	95.417 %		95.114 %	97.547 %	
Concentration RSD	3.8 %	3.0 %	1.8 %	2.4 %	6.2 %	4.8 %	3.9 %	3.4 %	7.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.814 ppb	61.630 ppb	109.887 %	125.106 %	56.070 ppb	57.239 ppb	200.741 %
Concentration per Run 1	56.819 ppb	58.671 ppb	114.963 %	129.572 %	49.576 ppb	54.929 ppb	239.550 %
Concentration per Run 2	59.952 ppb	62.446 ppb	109.553 %	126.817 %	56.373 ppb	57.005 ppb	189.329 %
Concentration per Run 3	62.672 ppb	63.774 ppb	105.143 %	118.929 %	62.261 ppb	59.781 ppb	173.344 %
Recovery Percentage 1	99.691 %	102.717 %			93.450 %	95.398 %	
Concentration RSD	4.9 %	4.3 %	4.5 %	4.4 %	11.3 %	4.3 %	17.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	65	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 10:32:13 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.951 %	107.450 %	0.009 ppb	1.883 ppb	52.150 ppb	-0.411 ppb	-0.389 ppb	3.088 ppb	-1.226 ppb
Concentration per Run 1	102.281 %	112.446 %	0.008 ppb	1.895 ppb	36.786 ppb	-0.530 ppb	-0.402 ppb	1.923 ppb	-1.345 ppb
Concentration per Run 2	101.052 %	102.397 %	0.007 ppb	1.893 ppb	68.967 ppb	-0.130 ppb	-0.371 ppb	5.963 ppb	-1.337 ppb
Concentration per Run 3	99.521 %	107.508 %	0.012 ppb	1.860 ppb	50.696 ppb	-0.572 ppb	-0.393 ppb	1.378 ppb	-0.997 ppb
Recovery Percentage 1			1.828 %	18.827 %	52.150 %	-0.587 %	-3.885 %	3.088 %	-1.226 %
Concentration RSD	1.4 %	4.7 %	26.6 %	1.1 %	30.9 %	59.4 %	4.0 %	81.1 %	16.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	119.164 %	-0.130 ppb	0.000 ppb	0.003 ppb	14.847 ppb	0.000 ppb	-0.007 ppb	0.005 ppb	-0.606 ppb
Concentration per Run 1	120.463 %	-0.142 ppb	0.003 ppb	-0.005 ppb	16.265 ppb	-0.001 ppb	-0.015 ppb	0.015 ppb	-0.602 ppb
Concentration per Run 2	118.615 %	-0.131 ppb	0.001 ppb	0.014 ppb	15.309 ppb	0.003 ppb	-0.003 ppb	0.007 ppb	-0.606 ppb
Concentration per Run 3	118.414 %	-0.117 ppb	-0.003 ppb	0.000 ppb	12.968 ppb	-0.002 ppb	-0.002 ppb	-0.007 ppb	-0.609 ppb
Recovery Percentage 1		-2.605 %	0.036 %	0.325 %	29.694 %	-0.041 %	-0.330 %	0.496 %	-12.113 %
Concentration RSD	0.9 %	9.7 %	773.0 %	294.7 %	11.4 %	1,350.6 %	110.3 %	222.3 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.617 %	0.104 ppb	0.284 ppb	0.001 ppb	1.222 ppb	109.913 %	0.005 ppb	0.003 ppb	112.042 %
Concentration per Run 1	108.979 %	0.087 ppb	0.211 ppb	0.000 ppb	1.204 ppb	111.772 %	0.009 ppb	0.006 ppb	111.934 %
Concentration per Run 2	107.115 %	0.110 ppb	0.304 ppb	0.000 ppb	1.256 ppb	108.439 %	0.006 ppb	0.001 ppb	112.545 %
Concentration per Run 3	109.758 %	0.115 ppb	0.336 ppb	0.002 ppb	1.204 ppb	109.529 %	0.001 ppb	0.002 ppb	111.648 %
Recovery Percentage 1		20.811 %	5.678 %	0.005 %	61.075 %		1.247 %	1.465 %	
Concentration RSD	1.3 %	14.3 %	22.8 %	243.8 %	2.4 %	1.5 %	78.7 %	93.2 %	0.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.127 ppb	0.003 ppb	106.823 %	122.448 %	0.442 ppb	0.015 ppb	185.135 %
Concentration per Run 1	0.117 ppb	0.003 ppb	108.550 %	123.957 %	0.398 ppb	0.019 ppb	205.820 %
Concentration per Run 2	0.124 ppb	-0.001 ppb	106.505 %	120.594 %	0.522 ppb	0.015 ppb	178.117 %
Concentration per Run 3	0.141 ppb	0.007 ppb	105.415 %	122.793 %	0.405 ppb	0.010 ppb	171.468 %
Recovery Percentage 1	3.179 %	0.630 %			44.178 %	1.476 %	
Concentration RSD	9.9 %	140.0 %	1.5 %	1.4 %	15.7 %	30.7 %	9.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 66
Analysis label: WG1902616-1 CT-6020TL
Analysis started at: 4/1/2024 10:41:52 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 44
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	111.008 %	111.869 %	0.000 ppb	1.681 ppb	6.866 ppb	0.729 ppb	1.570 ppb	-2.535 ppb	2.181 ppb
Concentration per Run 1	110.165 %	113.226 %	-0.002 ppb	1.745 ppb	15.346 ppb	0.818 ppb	1.539 ppb	-1.386 ppb	2.142 ppb
Concentration per Run 2	111.513 %	116.085 %	0.000 ppb	1.639 ppb	-1.550 ppb	0.633 ppb	1.617 ppb	-4.742 ppb	2.148 ppb
Concentration per Run 3	111.347 %	106.295 %	0.003 ppb	1.660 ppb	6.803 ppb	0.738 ppb	1.553 ppb	-1.478 ppb	2.253 ppb
Concentration RSD	0.7 %	4.5 %	531.3 %	3.4 %	123.0 %	12.7 %	2.6 %	75.4 %	2.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	128.436 %	-0.146 ppb	0.780 ppb	0.022 ppb	2.919 ppb	-0.003 ppb	0.031 ppb	0.026 ppb	-0.538 ppb
Concentration per Run 1	126.633 %	-0.138 ppb	0.778 ppb	0.019 ppb	2.578 ppb	-0.003 ppb	-0.001 ppb	0.029 ppb	-0.574 ppb
Concentration per Run 2	129.388 %	-0.149 ppb	0.731 ppb	0.031 ppb	2.866 ppb	-0.002 ppb	0.052 ppb	0.017 ppb	-0.539 ppb
Concentration per Run 3	129.286 %	-0.152 ppb	0.829 ppb	0.017 ppb	3.313 ppb	-0.004 ppb	0.041 ppb	0.031 ppb	-0.501 ppb
Concentration RSD	1.2 %	5.2 %	6.3 %	33.6 %	12.7 %	37.7 %	92.7 %	29.8 %	6.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	113.385 %	0.049 ppb	-0.015 ppb	0.004 ppb	0.189 ppb	116.385 %	-0.003 ppb	-0.002 ppb	120.284 %
Concentration per Run 1	119.034 %	0.050 ppb	-0.031 ppb	0.003 ppb	0.180 ppb	118.598 %	-0.002 ppb	-0.002 ppb	127.939 %
Concentration per Run 2	116.638 %	0.062 ppb	-0.005 ppb	0.003 ppb	0.191 ppb	116.703 %	-0.004 ppb	-0.002 ppb	119.771 %
Concentration per Run 3	104.482 %	0.036 ppb	-0.011 ppb	0.006 ppb	0.196 ppb	113.855 %	-0.002 ppb	-0.002 ppb	113.141 %
Concentration RSD	6.9 %	26.1 %	86.7 %	45.4 %	4.2 %	2.1 %	35.8 %	15.2 %	6.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.061 ppb	-0.003 ppb	110.747 %	126.879 %	0.067 ppb	-0.002 ppb	205.299 %
Concentration per Run 1	0.055 ppb	-0.003 ppb	113.503 %	130.443 %	0.055 ppb	-0.003 ppb	221.106 %
Concentration per Run 2	0.064 ppb	-0.009 ppb	112.150 %	128.632 %	0.071 ppb	-0.002 ppb	203.957 %
Concentration per Run 3	0.065 ppb	0.002 ppb	106.588 %	121.561 %	0.076 ppb	-0.002 ppb	190.833 %
Concentration RSD	9.2 %	177.5 %	3.3 %	3.7 %	16.9 %	22.3 %	7.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 67
Analysis label: xWG1902616-2d10 CT-6020TL
Analysis started at: 4/1/2024 10:46:31 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 45
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	106.140 %	106.209 %	4.692 ppb	94.137 ppb	868.722 ppb	998.514 ppb	185.523 ppb	1,032.884 ppb	997.130 ppb
Concentration per Run 1	107.048 %	109.414 %	4.740 ppb	95.168 ppb	863.101 ppb	999.898 ppb	186.998 ppb	1,033.694 ppb	997.760 ppb
Concentration per Run 2	106.897 %	106.728 %	4.730 ppb	93.445 ppb	868.189 ppb	991.332 ppb	183.996 ppb	1,029.175 ppb	1,010.135 ppb
Concentration per Run 3	104.476 %	102.483 %	4.607 ppb	93.799 ppb	874.875 ppb	1,004.310 ppb	185.574 ppb	1,035.782 ppb	983.496 ppb
Concentration RSD	1.4 %	3.3 %	1.6 %	1.0 %	0.7 %	0.7 %	0.8 %	0.3 %	1.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	127.102 %	46.891 ppb	19.094 ppb	45.299 ppb	101.851 ppb	49.654 ppb	50.135 ppb	24.898 ppb	46.765 ppb
Concentration per Run 1	127.147 %	46.719 ppb	18.967 ppb	45.205 ppb	97.247 ppb	48.720 ppb	49.380 ppb	24.308 ppb	46.155 ppb
Concentration per Run 2	128.324 %	46.254 ppb	19.060 ppb	45.015 ppb	105.413 ppb	49.088 ppb	49.374 ppb	24.395 ppb	46.193 ppb
Concentration per Run 3	125.837 %	47.701 ppb	19.255 ppb	45.678 ppb	102.892 ppb	51.153 ppb	51.649 ppb	25.991 ppb	47.947 ppb
Concentration RSD	1.0 %	1.6 %	0.8 %	0.8 %	4.1 %	2.6 %	2.6 %	3.8 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.466 %	11.765 ppb	11.752 ppb	93.767 ppb	90.824 ppb	111.973 %	4.626 ppb	5.033 ppb	114.590 %
Concentration per Run 1	111.402 %	11.542 ppb	11.598 ppb	95.121 ppb	85.659 ppb	114.268 %	4.541 ppb	4.955 ppb	117.765 %
Concentration per Run 2	112.811 %	11.587 ppb	11.859 ppb	94.089 ppb	92.729 ppb	112.961 %	4.686 ppb	5.125 ppb	116.535 %
Concentration per Run 3	104.186 %	12.165 ppb	11.798 ppb	92.093 ppb	94.084 ppb	108.690 %	4.650 ppb	5.019 ppb	109.470 %
Concentration RSD	4.2 %	3.0 %	1.2 %	1.6 %	5.0 %	2.6 %	1.6 %	1.7 %	3.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	31.542 ppb	198.409 ppb	109.714 %	126.293 %	9.841 ppb	45.796 ppb	217.051 %
Concentration per Run 1	29.890 ppb	194.533 ppb	112.686 %	129.351 %	9.690 ppb	45.597 ppb	271.305 %
Concentration per Run 2	31.637 ppb	201.763 ppb	110.927 %	129.398 %	9.682 ppb	44.219 ppb	196.858 %
Concentration per Run 3	33.098 ppb	198.931 ppb	105.529 %	120.129 %	10.151 ppb	47.572 ppb	182.990 %
Concentration RSD	5.1 %	1.8 %	3.4 %	4.2 %	2.7 %	3.7 %	21.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 68
Analysis label: WG1902616-3d10 CT-6020TL
Analysis started at: 4/1/2024 10:51:09 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 47
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.324 %	107.075 %	5.017 ppb	106.531 ppb	3,871.463 ppb	2,835.413 ppb	182.593 ppb	1,560.203 ppb	10,294.192 ppb
Concentration per Run 1	102.360 %	112.186 %	4.689 ppb	99.831 ppb	4,064.116 ppb	2,782.816 ppb	179.480 ppb	1,564.926 ppb	10,189.485 ppb
Concentration per Run 2	96.047 %	103.783 %	5.139 ppb	108.064 ppb	3,298.722 ppb	2,828.471 ppb	182.775 ppb	1,562.784 ppb	10,339.636 ppb
Concentration per Run 3	93.565 %	105.256 %	5.223 ppb	111.697 ppb	4,251.553 ppb	2,894.953 ppb	185.525 ppb	1,552.901 ppb	10,353.457 ppb
Concentration RSD	4.7 %	4.2 %	5.7 %	5.7 %	13.0 %	2.0 %	1.7 %	0.4 %	0.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	123.544 %	46.973 ppb	19.065 ppb	2,204.229 ppb	24,441.823 ppb	51.961 ppb	53.713 ppb	24.743 ppb	46.187 ppb
Concentration per Run 1	129.580 %	45.814 ppb	18.464 ppb	2,131.817 ppb	23,804.300 ppb	50.461 ppb	52.394 ppb	24.112 ppb	44.924 ppb
Concentration per Run 2	121.578 %	47.963 ppb	19.828 ppb	2,267.808 ppb	25,092.946 ppb	54.289 ppb	56.079 ppb	25.631 ppb	47.632 ppb
Concentration per Run 3	119.473 %	47.143 ppb	18.902 ppb	2,213.064 ppb	24,428.223 ppb	51.133 ppb	52.665 ppb	24.486 ppb	46.005 ppb
Concentration RSD	4.3 %	2.3 %	3.7 %	3.1 %	2.6 %	3.9 %	3.8 %	3.2 %	3.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.522 %	12.609 ppb	11.731 ppb	253.335 ppb	95.177 ppb	108.070 %	4.684 ppb	5.116 ppb	112.961 %
Concentration per Run 1	113.035 %	12.316 ppb	11.295 ppb	250.896 ppb	89.641 ppb	110.964 %	4.608 ppb	4.970 ppb	116.974 %
Concentration per Run 2	102.998 %	12.941 ppb	12.485 ppb	254.830 ppb	97.808 ppb	105.247 %	4.758 ppb	5.267 ppb	107.399 %
Concentration per Run 3	109.534 %	12.570 ppb	11.412 ppb	254.278 ppb	98.084 ppb	107.998 %	4.686 ppb	5.111 ppb	114.511 %
Concentration RSD	4.7 %	2.5 %	5.6 %	0.8 %	5.0 %	2.6 %	1.6 %	2.9 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	52.073 ppb	226.396 ppb	108.018 %	123.588 %	9.245 ppb	47.336 ppb	196.070 %
Concentration per Run 1	51.454 ppb	223.525 ppb	110.660 %	127.240 %	8.451 ppb	46.104 ppb	227.713 %
Concentration per Run 2	53.344 ppb	229.135 ppb	104.558 %	119.189 %	9.633 ppb	48.658 ppb	182.836 %
Concentration per Run 3	51.421 ppb	226.527 ppb	108.835 %	124.335 %	9.652 ppb	47.246 ppb	177.660 %
Concentration RSD	2.1 %	1.2 %	2.9 %	3.3 %	7.4 %	2.7 %	14.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	69	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1902616-4d10 CT-6020TL	Rack	1		
Analysis started at:	4/1/2024 10:55:48 AM	Vial	48		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.225 %	104.476 %	4.849 ppb	102.792 ppb	4,224.895 ppb	2,869.122 ppb	183.318 ppb	1,595.438 ppb	10,689.625 ppb
Concentration per Run 1	99.674 %	108.028 %	4.896 ppb	101.947 ppb	4,065.507 ppb	2,773.020 ppb	182.634 ppb	1,579.929 ppb	10,582.969 ppb
Concentration per Run 2	96.486 %	104.736 %	4.917 ppb	103.907 ppb	4,179.636 ppb	2,795.062 ppb	177.023 ppb	1,529.057 ppb	10,238.242 ppb
Concentration per Run 3	95.516 %	100.664 %	4.733 ppb	102.522 ppb	4,429.542 ppb	3,039.284 ppb	190.297 ppb	1,677.327 ppb	11,247.665 ppb
Concentration RSD	2.2 %	3.5 %	2.1 %	1.0 %	4.4 %	5.2 %	3.6 %	4.7 %	4.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	121.680 %	47.435 ppb	19.119 ppb	2,257.568 ppb	25,247.111 ppb	52.458 ppb	54.450 ppb	24.979 ppb	46.618 ppb
Concentration per Run 1	123.493 %	45.947 ppb	18.300 ppb	2,145.368 ppb	24,004.438 ppb	50.158 ppb	52.190 ppb	24.118 ppb	44.261 ppb
Concentration per Run 2	121.568 %	47.600 ppb	19.336 ppb	2,261.138 ppb	25,641.006 ppb	54.254 ppb	56.361 ppb	25.731 ppb	47.641 ppb
Concentration per Run 3	119.979 %	48.758 ppb	19.721 ppb	2,366.197 ppb	26,095.888 ppb	52.962 ppb	54.799 ppb	25.088 ppb	47.952 ppb
Concentration RSD	1.4 %	3.0 %	3.8 %	4.9 %	4.4 %	4.0 %	3.9 %	3.3 %	4.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	107.763 %	12.341 ppb	11.489 ppb	255.524 ppb	96.548 ppb	108.879 %	4.715 ppb	5.152 ppb	110.666 %
Concentration per Run 1	113.097 %	11.909 ppb	11.018 ppb	246.748 ppb	87.956 ppb	113.921 %	4.469 ppb	4.957 ppb	116.409 %
Concentration per Run 2	102.039 %	12.548 ppb	11.780 ppb	256.062 ppb	98.972 ppb	105.581 %	4.816 ppb	5.274 ppb	104.921 %
Concentration per Run 3	108.153 %	12.566 ppb	11.669 ppb	263.762 ppb	102.716 ppb	107.134 %	4.859 ppb	5.225 ppb	110.668 %
Concentration RSD	5.1 %	3.0 %	3.6 %	3.3 %	7.9 %	4.1 %	4.5 %	3.3 %	5.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	51.042 ppb	231.572 ppb	107.066 %	119.018 %	9.693 ppb	49.232 ppb	170.211 %
Concentration per Run 1	48.778 ppb	220.527 ppb	112.193 %	130.126 %	8.193 ppb	44.433 ppb	221.460 %
Concentration per Run 2	52.355 ppb	236.647 ppb	103.465 %	122.167 %	9.451 ppb	47.354 ppb	147.540 %
Concentration per Run 3	51.993 ppb	237.543 ppb	105.538 %	104.761 %	11.435 ppb	55.907 ppb	141.634 %
Concentration RSD	3.9 %	4.1 %	4.3 %	10.9 %	16.9 %	12.1 %	26.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	70	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	xL2414830-05 CT-6020TL	Rack	1		
Analysis started at:	4/1/2024 11:00:27 AM	Vial	46		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.141 %	97.141 %	0.042 ppb	53.176 ppb	30,740.438 ppb	21,146.430 ppb	20.818 ppb	5,568.689 ppb	92,341.238 ppb
Concentration per Run 1	88.104 %	100.318 %	0.034 ppb	51.864 ppb	30,631.541 ppb	21,212.826 ppb	20.753 ppb	5,764.339 ppb	94,324.341 ppb
Concentration per Run 2	85.749 %	92.694 %	0.044 ppb	53.945 ppb	30,698.551 ppb	20,789.998 ppb	20.756 ppb	5,380.014 ppb	90,111.977 ppb
Concentration per Run 3	84.569 %	98.412 %	0.048 ppb	53.720 ppb	30,891.223 ppb	21,436.468 ppb	20.946 ppb	5,561.713 ppb	92,587.398 ppb
Concentration RSD	2.1 %	4.1 %	16.5 %	2.1 %	0.4 %	1.6 %	0.5 %	3.5 %	2.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	117.706 %	3.875 ppb	1.147 ppb	21,357.702 ppb	249,100.420 ppb	31.956 ppb	46.323 ppb	1.077 ppb	1.410 ppb
Concentration per Run 1	117.807 %	3.864 ppb	1.079 ppb	20,982.172 ppb	241,352.342 ppb	31.083 ppb	46.051 ppb	1.067 ppb	1.401 ppb
Concentration per Run 2	117.966 %	3.978 ppb	1.157 ppb	21,372.152 ppb	252,595.231 ppb	32.556 ppb	48.187 ppb	1.114 ppb	1.351 ppb
Concentration per Run 3	117.346 %	3.782 ppb	1.206 ppb	21,718.783 ppb	253,353.686 ppb	32.228 ppb	44.732 ppb	1.050 ppb	1.480 ppb
Concentration RSD	0.3 %	2.5 %	5.6 %	1.7 %	2.7 %	2.4 %	3.8 %	3.1 %	4.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.234 %	3.432 ppb	0.522 ppb	1,903.435 ppb	3.328 ppb	100.124 %	0.004 ppb	0.000 ppb	106.765 %
Concentration per Run 1	103.876 %	3.435 ppb	0.466 ppb	1,901.920 ppb	3.104 ppb	105.472 %	0.005 ppb	0.000 ppb	113.894 %
Concentration per Run 2	97.984 %	3.540 ppb	0.504 ppb	1,852.165 ppb	3.354 ppb	97.618 %	0.003 ppb	0.000 ppb	101.656 %
Concentration per Run 3	104.842 %	3.320 ppb	0.595 ppb	1,956.220 ppb	3.525 ppb	97.284 %	0.003 ppb	-0.001 ppb	104.744 %
Concentration RSD	3.6 %	3.2 %	12.8 %	2.7 %	6.4 %	4.6 %	22.3 %	222.1 %	6.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.695 ppb	266.254 ppb	103.842 %	108.225 %	0.207 ppb	0.111 ppb	156.922 %
Concentration per Run 1	0.635 ppb	256.879 ppb	109.744 %	127.519 %	0.146 ppb	0.088 ppb	201.970 %
Concentration per Run 2	0.696 ppb	263.510 ppb	100.151 %	96.673 %	0.264 ppb	0.128 ppb	136.869 %
Concentration per Run 3	0.755 ppb	278.372 ppb	101.629 %	100.483 %	0.211 ppb	0.118 ppb	131.928 %
Concentration RSD	8.7 %	4.1 %	5.0 %	15.5 %	28.5 %	18.5 %	24.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 71
Analysis label: I2416311-02 2008TL
Analysis started at: 4/1/2024 11:05:06 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 41
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.640 %	93.734 %	0.022 ppb	21.642 ppb	176,903.560 ppb	2,469.596 ppb	293.892 ppb	1,178.648 ppb	3,213.845 ppb
Concentration per Run 1	90.359 %	92.001 %	0.020 ppb	21.764 ppb	179,097.931 ppb	2,469.886 ppb	300.070 ppb	1,180.976 ppb	3,269.070 ppb
Concentration per Run 2	88.154 %	96.159 %	0.017 ppb	21.533 ppb	169,309.583 ppb	2,357.194 ppb	277.729 ppb	1,121.624 ppb	3,025.909 ppb
Concentration per Run 3	87.406 %	93.041 %	0.029 ppb	21.630 ppb	182,303.167 ppb	2,581.709 ppb	303.876 ppb	1,233.345 ppb	3,346.556 ppb
Concentration RSD	1.7 %	2.3 %	29.9 %	0.5 %	3.8 %	4.5 %	4.8 %	4.7 %	5.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.787 %	2.305 ppb	2.987 ppb	43.005 ppb	929.046 ppb	0.403 ppb	3.046 ppb	36.652 ppb	95.926 ppb
Concentration per Run 1	111.697 %	2.338 ppb	3.088 ppb	43.073 ppb	928.079 ppb	0.376 ppb	2.900 ppb	35.993 ppb	94.483 ppb
Concentration per Run 2	110.616 %	2.228 ppb	2.886 ppb	41.352 ppb	911.637 ppb	0.403 ppb	2.988 ppb	36.486 ppb	96.114 ppb
Concentration per Run 3	110.048 %	2.350 ppb	2.988 ppb	44.590 ppb	947.422 ppb	0.429 ppb	3.248 ppb	37.476 ppb	97.181 ppb
Concentration RSD	0.8 %	2.9 %	3.4 %	3.8 %	1.9 %	6.6 %	5.9 %	2.1 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.467 %	0.577 ppb	0.070 ppb	21.893 ppb	1.856 ppb	96.413 %	0.038 ppb	0.251 ppb	100.464 %
Concentration per Run 1	98.611 %	0.572 ppb	0.124 ppb	21.801 ppb	1.774 ppb	97.069 %	0.035 ppb	0.241 ppb	103.208 %
Concentration per Run 2	95.042 %	0.529 ppb	0.009 ppb	21.261 ppb	1.831 ppb	94.984 %	0.037 ppb	0.264 ppb	95.293 %
Concentration per Run 3	98.748 %	0.629 ppb	0.078 ppb	22.617 ppb	1.963 ppb	97.186 %	0.042 ppb	0.248 ppb	102.892 %
Concentration RSD	2.2 %	8.6 %	82.3 %	3.1 %	5.2 %	1.3 %	9.0 %	4.7 %	4.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.825 ppb	15.520 ppb	100.406 %	104.318 %	0.087 ppb	2.555 ppb	146.198 %
Concentration per Run 1	0.788 ppb	15.466 ppb	101.837 %	99.871 %	0.068 ppb	2.648 ppb	176.523 %
Concentration per Run 2	0.815 ppb	15.186 ppb	99.262 %	96.953 %	0.104 ppb	2.698 ppb	131.062 %
Concentration per Run 3	0.873 ppb	15.907 ppb	100.118 %	116.130 %	0.089 ppb	2.319 ppb	131.009 %
Concentration RSD	5.3 %	2.3 %	1.3 %	9.9 %	20.5 %	8.1 %	18.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 72
Analysis label: I2416475-02 2008TL
Analysis started at: 4/1/2024 11:09:43 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 42
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	93.014 %	95.899 %	0.026 ppb	60.666 ppb	243,106.290 ppb	9,036.496 ppb	202.328 ppb	7,380.502 ppb	51,295.022 ppb
Concentration per Run 1	92.861 %	92.607 %	0.026 ppb	61.357 ppb	239,872.106 ppb	8,982.226 ppb	197.259 ppb	7,268.006 ppb	51,174.199 ppb
Concentration per Run 2	94.108 %	96.766 %	0.030 ppb	60.549 ppb	244,008.030 ppb	9,062.973 ppb	202.676 ppb	7,511.812 ppb	52,195.606 ppb
Concentration per Run 3	92.074 %	98.325 %	0.022 ppb	60.091 ppb	245,438.734 ppb	9,064.290 ppb	207.049 ppb	7,361.687 ppb	50,515.262 ppb
Concentration RSD	1.1 %	3.1 %	15.6 %	1.1 %	1.2 %	0.5 %	2.4 %	1.7 %	1.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	121.649 %	0.331 ppb	1.193 ppb	743.522 ppb	177.736 ppb	2.745 ppb	1.973 ppb	3.224 ppb	7.794 ppb
Concentration per Run 1	120.825 %	0.313 ppb	1.156 ppb	715.166 ppb	178.957 ppb	2.663 ppb	1.896 ppb	3.277 ppb	7.678 ppb
Concentration per Run 2	122.930 %	0.341 ppb	1.218 ppb	748.765 ppb	177.192 ppb	2.791 ppb	2.077 ppb	3.189 ppb	7.944 ppb
Concentration per Run 3	121.192 %	0.341 ppb	1.203 ppb	766.635 ppb	177.059 ppb	2.780 ppb	1.946 ppb	3.204 ppb	7.760 ppb
Concentration RSD	0.9 %	4.8 %	2.7 %	3.5 %	0.6 %	2.6 %	4.7 %	1.5 %	1.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.064 %	0.748 ppb	0.161 ppb	232.222 ppb	2.970 ppb	97.859 %	0.008 ppb	0.094 ppb	103.433 %
Concentration per Run 1	96.615 %	0.695 ppb	0.099 ppb	222.359 ppb	2.704 ppb	95.965 %	0.008 ppb	0.096 ppb	98.302 %
Concentration per Run 2	101.571 %	0.694 ppb	0.178 ppb	236.272 ppb	3.072 ppb	98.301 %	0.007 ppb	0.099 ppb	105.122 %
Concentration per Run 3	102.005 %	0.856 ppb	0.206 ppb	238.037 ppb	3.135 ppb	99.310 %	0.009 ppb	0.088 ppb	106.875 %
Concentration RSD	3.0 %	12.4 %	34.6 %	3.7 %	7.8 %	1.8 %	11.6 %	6.3 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.680 ppb	2.895 ppb	102.610 %	100.403 %	0.144 ppb	0.834 ppb	151.400 %
Concentration per Run 1	0.640 ppb	2.871 ppb	100.821 %	96.906 %	0.130 ppb	0.860 ppb	184.298 %
Concentration per Run 2	0.706 ppb	2.947 ppb	103.720 %	102.603 %	0.148 ppb	0.799 ppb	136.741 %
Concentration per Run 3	0.694 ppb	2.867 ppb	103.289 %	101.701 %	0.154 ppb	0.842 ppb	133.162 %
Concentration RSD	5.2 %	1.6 %	1.5 %	3.0 %	9.0 %	3.7 %	18.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	73	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416477-01 2008TL	Rack	1		
Analysis started at:	4/1/2024 11:14:58 AM	Vial	43		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.501 %	104.967 %	0.030 ppb	147.592 ppb	582,531.313 ppb	24,123.212 ppb	263.257 ppb	19,556.302 ppb	151,173.873 ppb
Concentration per Run 1	96.222 %	107.855 %	0.026 ppb	148.678 ppb	578,322.971 ppb	23,592.062 ppb	258.073 ppb	19,294.716 ppb	148,527.887 ppb
Concentration per Run 2	94.734 %	100.404 %	0.035 ppb	148.943 ppb	590,359.578 ppb	24,354.317 ppb	266.732 ppb	19,282.899 ppb	151,036.468 ppb
Concentration per Run 3	95.547 %	106.642 %	0.031 ppb	145.157 ppb	578,911.389 ppb	24,423.258 ppb	264.966 ppb	20,091.292 ppb	153,957.263 ppb
Concentration RSD	0.8 %	3.8 %	13.7 %	1.4 %	1.2 %	1.9 %	1.7 %	2.4 %	1.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	129.871 %	3.418 ppb	1.833 ppb	1,377.676 ppb	6,923.715 ppb	0.485 ppb	1.436 ppb	1.341 ppb	1.581 ppb
Concentration per Run 1	128.843 %	3.373 ppb	1.771 ppb	1,334.788 ppb	6,687.173 ppb	0.428 ppb	1.365 ppb	1.227 ppb	1.538 ppb
Concentration per Run 2	129.684 %	3.534 ppb	1.836 ppb	1,402.049 ppb	7,116.766 ppb	0.550 ppb	1.466 ppb	1.394 ppb	1.712 ppb
Concentration per Run 3	131.086 %	3.348 ppb	1.893 ppb	1,396.191 ppb	6,967.207 ppb	0.476 ppb	1.478 ppb	1.402 ppb	1.491 ppb
Concentration RSD	0.9 %	2.9 %	3.3 %	2.7 %	3.1 %	12.7 %	4.3 %	7.4 %	7.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.493 %	3.436 ppb	0.637 ppb	1,615.599 ppb	7.728 ppb	98.883 %	0.000 ppb	0.002 ppb	104.894 %
Concentration per Run 1	108.455 %	3.382 ppb	0.565 ppb	1,585.471 ppb	7.025 ppb	102.322 %	-0.002 ppb	0.002 ppb	109.635 %
Concentration per Run 2	100.233 %	3.486 ppb	0.675 ppb	1,593.505 ppb	8.028 ppb	96.410 %	-0.001 ppb	0.000 ppb	98.970 %
Concentration per Run 3	104.790 %	3.441 ppb	0.669 ppb	1,667.820 ppb	8.130 ppb	97.917 %	0.003 ppb	0.003 ppb	106.079 %
Concentration RSD	3.9 %	1.5 %	9.7 %	2.8 %	7.9 %	3.1 %	1,714.7 %	77.8 %	5.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.485 ppb	71.111 ppb	104.921 %	108.595 %	0.042 ppb	0.815 ppb	164.946 %
Concentration per Run 1	0.471 ppb	69.521 ppb	107.331 %	125.172 %	0.025 ppb	0.701 ppb	219.940 %
Concentration per Run 2	0.488 ppb	73.366 ppb	102.099 %	97.656 %	0.050 ppb	0.899 ppb	143.381 %
Concentration per Run 3	0.495 ppb	70.447 ppb	105.334 %	102.958 %	0.049 ppb	0.846 ppb	131.516 %
Concentration RSD	2.6 %	2.8 %	2.5 %	13.4 %	33.8 %	12.6 %	29.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 74
Analysis label: L2414830-01 CT-6020TL
Analysis started at: 4/1/2024 11:19:35 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 49
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.387 %	98.267 %	0.029 ppb	14.787 ppb	12,560.970 ppb	1,714.628 ppb	29.984 ppb	3,050.539 ppb	122,813.112 ppb
Concentration per Run 1	91.988 %	98.498 %	0.024 ppb	14.678 ppb	12,691.627 ppb	1,721.783 ppb	29.722 ppb	3,099.730 ppb	123,421.313 ppb
Concentration per Run 2	89.907 %	93.300 %	0.022 ppb	14.807 ppb	12,658.775 ppb	1,742.685 ppb	29.900 ppb	2,995.730 ppb	123,238.291 ppb
Concentration per Run 3	89.264 %	103.003 %	0.042 ppb	14.876 ppb	12,332.507 ppb	1,679.415 ppb	30.331 ppb	3,056.157 ppb	121,779.732 ppb
Concentration RSD	1.6 %	4.9 %	39.1 %	0.7 %	1.6 %	1.9 %	1.0 %	1.7 %	0.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	121.916 %	4.128 ppb	1.241 ppb	3,669.912 ppb	152,069.712 ppb	28.298 ppb	5.148 ppb	28.711 ppb	8.846 ppb
Concentration per Run 1	121.972 %	4.118 ppb	1.196 ppb	3,554.212 ppb	146,087.893 ppb	27.220 ppb	4.977 ppb	27.620 ppb	8.530 ppb
Concentration per Run 2	123.049 %	4.202 ppb	1.279 ppb	3,706.234 ppb	155,288.607 ppb	29.401 ppb	5.336 ppb	29.965 ppb	9.000 ppb
Concentration per Run 3	120.729 %	4.063 ppb	1.250 ppb	3,749.290 ppb	154,832.637 ppb	28.271 ppb	5.132 ppb	28.547 ppb	9.006 ppb
Concentration RSD	1.0 %	1.7 %	3.4 %	2.8 %	3.4 %	3.9 %	3.5 %	4.1 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.015 %	4.118 ppb	0.518 ppb	541.900 ppb	3.048 ppb	102.485 %	0.032 ppb	0.028 ppb	107.830 %
Concentration per Run 1	108.820 %	3.976 ppb	0.422 ppb	541.303 ppb	2.851 ppb	104.003 %	0.038 ppb	0.020 ppb	108.388 %
Concentration per Run 2	98.007 %	4.121 ppb	0.605 ppb	519.324 ppb	3.056 ppb	102.856 %	0.028 ppb	0.026 ppb	105.282 %
Concentration per Run 3	102.219 %	4.258 ppb	0.528 ppb	565.073 ppb	3.237 ppb	100.597 %	0.028 ppb	0.039 ppb	109.822 %
Concentration RSD	5.3 %	3.4 %	17.7 %	4.2 %	6.3 %	1.7 %	17.9 %	33.9 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.159 ppb	93.051 ppb	105.139 %	114.794 %	0.054 ppb	9.704 ppb	177.274 %
Concentration per Run 1	1.161 ppb	94.905 ppb	105.386 %	121.278 %	0.040 ppb	9.281 ppb	213.507 %
Concentration per Run 2	1.134 ppb	91.322 ppb	104.691 %	119.412 %	0.056 ppb	9.219 ppb	177.852 %
Concentration per Run 3	1.182 ppb	92.926 ppb	105.340 %	103.692 %	0.065 ppb	10.611 ppb	140.464 %
Concentration RSD	2.1 %	1.9 %	0.4 %	8.4 %	23.5 %	8.1 %	20.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 75
Analysis label: L2414830-03 CT-6020TL
Analysis started at: 4/1/2024 11:24:13 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 50
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	91.163 %	103.956 %	0.464 ppb	57.757 ppb	13,980.167 ppb	14,840.030 ppb	1,216.424 ppb	3,005.483 ppb	85,699.383 ppb
Concentration per Run 1	90.903 %	106.122 %	0.458 ppb	58.834 ppb	13,699.954 ppb	14,533.180 ppb	1,187.399 ppb	2,999.497 ppb	84,967.947 ppb
Concentration per Run 2	90.762 %	103.523 %	0.460 ppb	57.891 ppb	14,022.991 ppb	14,962.448 ppb	1,208.330 ppb	2,948.151 ppb	85,330.617 ppb
Concentration per Run 3	91.823 %	102.224 %	0.473 ppb	56.548 ppb	14,217.556 ppb	15,024.463 ppb	1,253.543 ppb	3,068.801 ppb	86,799.586 ppb
Concentration RSD	0.6 %	1.9 %	1.7 %	2.0 %	1.9 %	1.8 %	2.8 %	2.0 %	1.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.151 %	-0.074 ppb	1.153 ppb	9,115.957 ppb	35,773.338 ppb	67.586 ppb	106.767 ppb	4.378 ppb	974.437 ppb
Concentration per Run 1	114.065 %	-0.061 ppb	1.134 ppb	8,970.525 ppb	34,870.802 ppb	66.061 ppb	104.695 ppb	4.303 ppb	960.356 ppb
Concentration per Run 2	117.548 %	-0.082 ppb	1.200 ppb	9,287.740 ppb	36,714.653 ppb	68.333 ppb	108.390 ppb	4.482 ppb	985.768 ppb
Concentration per Run 3	116.842 %	-0.077 ppb	1.124 ppb	9,089.606 ppb	35,734.560 ppb	68.364 ppb	107.218 ppb	4.350 ppb	977.188 ppb
Concentration RSD	1.6 %	15.3 %	3.6 %	1.8 %	2.6 %	2.0 %	1.8 %	2.1 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.163 %	1.850 ppb	0.734 ppb	605.161 ppb	0.537 ppb	103.878 %	0.001 ppb	4.901 ppb	108.328 %
Concentration per Run 1	106.810 %	1.818 ppb	0.742 ppb	593.008 ppb	0.485 ppb	105.266 %	-0.002 ppb	4.765 ppb	109.418 %
Concentration per Run 2	103.057 %	1.861 ppb	0.782 ppb	613.913 ppb	0.597 ppb	103.351 %	0.002 ppb	4.984 ppb	106.846 %
Concentration per Run 3	105.623 %	1.872 ppb	0.679 ppb	608.562 ppb	0.529 ppb	103.017 %	0.001 ppb	4.953 ppb	108.719 %
Concentration RSD	1.8 %	1.5 %	7.1 %	1.8 %	10.5 %	1.2 %	276.9 %	2.4 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.194 ppb	37.139 ppb	106.721 %	111.500 %	0.119 ppb	0.216 ppb	158.336 %
Concentration per Run 1	0.174 ppb	35.929 ppb	108.275 %	106.415 %	0.108 ppb	0.230 ppb	192.152 %
Concentration per Run 2	0.198 ppb	37.443 ppb	105.333 %	123.695 %	0.107 ppb	0.190 ppb	143.517 %
Concentration per Run 3	0.210 ppb	38.045 ppb	106.554 %	104.391 %	0.140 ppb	0.229 ppb	139.340 %
Concentration RSD	9.3 %	2.9 %	1.4 %	9.5 %	15.7 %	10.6 %	18.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	76	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 11:28:50 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	92.019 %	100.231 %	59.477 ppb	60.135 ppb	6,502.270 ppb	6,266.137 ppb	61.393 ppb	6,291.462 ppb	6,297.889 ppb
Concentration per Run 1	92.557 %	98.412 %	60.082 ppb	60.818 ppb	6,483.702 ppb	6,294.277 ppb	60.957 ppb	6,293.147 ppb	6,381.285 ppb
Concentration per Run 2	93.046 %	99.625 %	59.123 ppb	59.450 ppb	6,526.138 ppb	6,269.094 ppb	62.800 ppb	6,390.183 ppb	6,194.079 ppb
Concentration per Run 3	90.454 %	102.657 %	59.227 ppb	60.137 ppb	6,496.969 ppb	6,235.041 ppb	60.421 ppb	6,191.057 ppb	6,318.302 ppb
Recovery Percentage 1			99.129 %	100.225 %	108.371 %	104.436 %	102.321 %	104.858 %	104.965 %
Concentration RSD	1.5 %	2.2 %	0.9 %	1.1 %	0.3 %	0.5 %	2.0 %	1.6 %	1.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.246 %	59.545 ppb	60.370 ppb	56.887 ppb	6,150.756 ppb	61.811 ppb	62.091 ppb	61.825 ppb	58.751 ppb
Concentration per Run 1	117.347 %	58.635 ppb	60.429 ppb	57.331 ppb	6,124.373 ppb	61.023 ppb	61.503 ppb	61.315 ppb	57.321 ppb
Concentration per Run 2	117.203 %	59.680 ppb	60.723 ppb	56.031 ppb	6,155.281 ppb	62.237 ppb	61.947 ppb	61.761 ppb	59.266 ppb
Concentration per Run 3	114.188 %	60.321 ppb	59.959 ppb	57.299 ppb	6,172.614 ppb	62.172 ppb	62.823 ppb	62.399 ppb	59.667 ppb
Recovery Percentage 1		99.242 %	100.617 %	94.811 %	102.513 %	103.018 %	103.485 %	103.042 %	97.919 %
Concentration RSD	1.5 %	1.4 %	0.6 %	1.3 %	0.4 %	1.1 %	1.1 %	0.9 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.289 %	60.739 ppb	59.970 ppb	59.653 ppb	58.647 ppb	107.080 %	57.789 ppb	60.303 ppb	110.670 %
Concentration per Run 1	106.277 %	60.031 ppb	58.073 ppb	58.196 ppb	54.679 ppb	110.144 %	56.136 ppb	58.747 ppb	115.947 %
Concentration per Run 2	103.423 %	61.108 ppb	60.564 ppb	60.089 ppb	60.103 ppb	105.351 %	58.319 ppb	61.021 ppb	108.385 %
Concentration per Run 3	103.168 %	61.077 ppb	61.272 ppb	60.673 ppb	61.158 ppb	105.744 %	58.912 ppb	61.140 ppb	107.680 %
Recovery Percentage 1		101.232 %	99.950 %	99.421 %	97.744 %		96.315 %	100.505 %	
Concentration RSD	1.7 %	1.0 %	2.8 %	2.2 %	5.9 %	2.5 %	2.5 %	2.2 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.935 ppb	61.462 ppb	106.763 %	110.890 %	62.841 ppb	59.225 ppb	182.189 %
Concentration per Run 1	57.701 ppb	59.546 ppb	110.089 %	106.937 %	60.786 ppb	61.148 ppb	223.179 %
Concentration per Run 2	61.000 ppb	62.418 ppb	104.887 %	121.992 %	57.922 ppb	53.533 ppb	180.219 %
Concentration per Run 3	61.103 ppb	62.422 ppb	105.313 %	103.741 %	69.816 ppb	62.995 ppb	143.169 %
Recovery Percentage 1	99.891 %	102.437 %			104.735 %	98.709 %	
Concentration RSD	3.2 %	2.7 %	2.7 %	8.8 %	9.9 %	8.5 %	22.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 77 User name ALPHALAB\Metals-Instrument Comment <Comment>
Analysis label: CCB Rack 0
Analysis started at: 4/1/2024 11:33:32 AM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	91.315 %	99.769 %	0.004 ppb	2.540 ppb	47.793 ppb	-0.661 ppb	-0.302 ppb	1.165 ppb	-2.297 ppb
Concentration per Run 1	92.881 %	98.672 %	0.008 ppb	2.529 ppb	45.854 ppb	-0.471 ppb	-0.333 ppb	6.489 ppb	-0.554 ppb
Concentration per Run 2	91.290 %	101.444 %	0.001 ppb	2.554 ppb	42.182 ppb	-0.727 ppb	-0.182 ppb	-5.635 ppb	-3.486 ppb
Concentration per Run 3	89.773 %	99.191 %	0.003 ppb	2.538 ppb	55.343 ppb	-0.784 ppb	-0.392 ppb	2.642 ppb	-2.850 ppb
Recovery Percentage 1			0.880 %	25.403 %	47.793 %	-0.944 %	-3.023 %	1.165 %	-2.297 %
Concentration RSD	1.7 %	1.5 %	81.3 %	0.5 %	14.2 %	25.3 %	35.9 %	531.8 %	67.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.193 %	-0.141 ppb	0.001 ppb	0.064 ppb	23.112 ppb	0.000 ppb	-0.010 ppb	0.011 ppb	-0.590 ppb
Concentration per Run 1	105.894 %	-0.138 ppb	-0.003 ppb	0.059 ppb	24.688 ppb	0.000 ppb	0.005 ppb	0.020 ppb	-0.576 ppb
Concentration per Run 2	102.626 %	-0.153 ppb	0.006 ppb	0.044 ppb	23.504 ppb	0.000 ppb	-0.017 ppb	0.008 ppb	-0.590 ppb
Concentration per Run 3	104.058 %	-0.133 ppb	0.001 ppb	0.088 ppb	21.145 ppb	0.000 ppb	-0.017 ppb	0.005 ppb	-0.602 ppb
Recovery Percentage 1		-2.822 %	0.118 %	6.381 %	46.224 %	0.046 %	-0.476 %	1.095 %	-11.793 %
Concentration RSD	1.6 %	7.6 %	367.8 %	35.3 %	7.8 %	8.5 %	133.2 %	71.2 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.106 %	0.106 ppb	0.300 ppb	0.003 ppb	1.271 ppb	105.862 %	0.007 ppb	0.004 ppb	107.158 %
Concentration per Run 1	102.690 %	0.087 ppb	0.343 ppb	0.005 ppb	1.331 ppb	108.247 %	0.011 ppb	0.002 ppb	111.322 %
Concentration per Run 2	102.136 %	0.145 ppb	0.353 ppb	0.003 ppb	1.223 ppb	104.374 %	0.006 ppb	0.006 ppb	107.113 %
Concentration per Run 3	101.492 %	0.086 ppb	0.202 ppb	0.002 ppb	1.258 ppb	104.966 %	0.004 ppb	0.004 ppb	103.037 %
Recovery Percentage 1		21.156 %	5.991 %	0.033 %	63.531 %		1.688 %	2.081 %	
Concentration RSD	0.6 %	32.1 %	28.2 %	54.6 %	4.3 %	2.0 %	52.1 %	44.5 %	3.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.149 ppb	0.014 ppb	100.603 %	104.715 %	0.538 ppb	0.023 ppb	156.246 %
Concentration per Run 1	0.130 ppb	0.017 ppb	102.444 %	118.400 %	0.417 ppb	0.021 ppb	203.786 %
Concentration per Run 2	0.160 ppb	0.015 ppb	99.810 %	97.804 %	0.652 ppb	0.025 ppb	134.303 %
Concentration per Run 3	0.157 ppb	0.009 ppb	99.556 %	97.942 %	0.546 ppb	0.024 ppb	130.650 %
Recovery Percentage 1	3.723 %	2.719 %			53.822 %	2.348 %	
Concentration RSD	11.1 %	29.1 %	1.6 %	11.3 %	21.8 %	10.0 %	26.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	78	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1902644-1 CT-6020SL	Rack	1		
Analysis started at:	4/1/2024 11:42:41 AM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.067 %	107.335 %	0.003 ppb	1.995 ppb	14.413 ppb	1.229 ppb	0.793 ppb	-1.806 ppb	2.897 ppb
Concentration per Run 1	103.519 %	104.909 %	0.005 ppb	1.976 ppb	14.217 ppb	1.187 ppb	0.954 ppb	-6.041 ppb	4.071 ppb
Concentration per Run 2	99.011 %	108.288 %	-0.001 ppb	2.006 ppb	13.919 ppb	1.276 ppb	0.706 ppb	1.285 ppb	2.259 ppb
Concentration per Run 3	97.671 %	108.808 %	0.006 ppb	2.002 ppb	15.105 ppb	1.224 ppb	0.720 ppb	-0.663 ppb	2.361 ppb
Concentration RSD	3.1 %	2.0 %	130.4 %	0.8 %	4.3 %	3.6 %	17.6 %	210.1 %	35.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	117.652 %	-0.154 ppb	0.027 ppb	0.055 ppb	6.228 ppb	0.000 ppb	0.006 ppb	0.009 ppb	-0.563 ppb
Concentration per Run 1	118.395 %	-0.162 ppb	0.023 ppb	0.063 ppb	5.863 ppb	-0.001 ppb	0.015 ppb	-0.008 ppb	-0.628 ppb
Concentration per Run 2	117.797 %	-0.152 ppb	0.025 ppb	0.056 ppb	6.126 ppb	0.001 ppb	-0.009 ppb	0.010 ppb	-0.542 ppb
Concentration per Run 3	116.765 %	-0.147 ppb	0.032 ppb	0.047 ppb	6.694 ppb	0.000 ppb	0.013 ppb	0.024 ppb	-0.519 ppb
Concentration RSD	0.7 %	5.2 %	16.9 %	13.9 %	6.8 %	30,793.7 %	214.1 %	184.8 %	10.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.750 %	0.056 ppb	-0.011 ppb	0.009 ppb	0.218 ppb	111.907 %	-0.004 ppb	0.000 ppb	114.314 %
Concentration per Run 1	112.608 %	0.042 ppb	-0.012 ppb	0.007 ppb	0.171 ppb	116.003 %	-0.003 ppb	0.000 ppb	119.569 %
Concentration per Run 2	108.140 %	0.061 ppb	-0.014 ppb	0.009 ppb	0.236 ppb	109.219 %	-0.004 ppb	0.000 ppb	111.207 %
Concentration per Run 3	105.500 %	0.066 ppb	-0.007 ppb	0.011 ppb	0.247 ppb	110.498 %	-0.004 ppb	-0.001 ppb	112.167 %
Concentration RSD	3.3 %	21.8 %	32.7 %	22.2 %	18.7 %	3.2 %	11.5 %	277.7 %	4.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.080 ppb	0.004 ppb	109.276 %	119.162 %	0.081 ppb	-0.002 ppb	217.308 %
Concentration per Run 1	0.065 ppb	-0.008 ppb	112.692 %	128.811 %	0.059 ppb	-0.006 ppb	247.195 %
Concentration per Run 2	0.086 ppb	0.016 ppb	106.976 %	124.405 %	0.082 ppb	-0.002 ppb	208.871 %
Concentration per Run 3	0.091 ppb	0.003 ppb	108.159 %	104.271 %	0.103 ppb	0.002 ppb	195.856 %
Concentration RSD	17.4 %	316.7 %	2.8 %	11.0 %	26.8 %	218.4 %	12.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	79	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	xWG1902616-2d5 CT-6020SL	Rack	1		
Analysis started at:	4/1/2024 11:51:18 AM	Vial	60		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.107 %	106.902 %	9.899 ppb	195.409 ppb	1,750.531 ppb	2,037.233 ppb	375.165 ppb	2,085.451 ppb	2,056.729 ppb
Concentration per Run 1	100.920 %	109.587 %	9.852 ppb	192.189 ppb	1,745.383 ppb	2,019.223 ppb	368.143 ppb	2,100.982 ppb	2,134.613 ppb
Concentration per Run 2	97.757 %	105.342 %	9.871 ppb	195.484 ppb	1,745.087 ppb	2,040.401 ppb	374.998 ppb	2,068.980 ppb	2,000.907 ppb
Concentration per Run 3	95.644 %	105.775 %	9.974 ppb	198.553 ppb	1,761.124 ppb	2,052.073 ppb	382.354 ppb	2,086.392 ppb	2,034.668 ppb
Concentration RSD	2.7 %	2.2 %	0.7 %	1.6 %	0.5 %	0.8 %	1.9 %	0.8 %	3.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.233 %	96.447 ppb	39.253 ppb	92.647 ppb	210.742 ppb	100.332 ppb	101.264 ppb	50.275 ppb	96.655 ppb
Concentration per Run 1	118.318 %	97.250 ppb	39.729 ppb	92.020 ppb	204.722 ppb	100.605 ppb	102.793 ppb	51.438 ppb	98.536 ppb
Concentration per Run 2	116.736 %	96.301 ppb	39.331 ppb	93.525 ppb	214.151 ppb	101.613 ppb	101.343 ppb	50.029 ppb	96.290 ppb
Concentration per Run 3	113.644 %	95.790 ppb	38.700 ppb	92.397 ppb	213.355 ppb	98.780 ppb	99.657 ppb	49.357 ppb	95.140 ppb
Concentration RSD	2.0 %	0.8 %	1.3 %	0.8 %	2.5 %	1.4 %	1.6 %	2.1 %	1.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.028 %	23.942 ppb	23.551 ppb	196.371 ppb	206.807 ppb	110.729 %	9.502 ppb	10.451 ppb	112.918 %
Concentration per Run 1	105.937 %	24.108 ppb	23.360 ppb	195.467 ppb	206.071 ppb	112.489 %	9.492 ppb	10.443 ppb	112.431 %
Concentration per Run 2	108.580 %	23.892 ppb	23.939 ppb	196.682 ppb	208.393 ppb	109.465 %	9.451 ppb	10.498 ppb	114.108 %
Concentration per Run 3	109.568 %	23.826 ppb	23.352 ppb	196.965 ppb	205.958 ppb	110.234 %	9.564 ppb	10.411 ppb	112.216 %
Concentration RSD	1.7 %	0.6 %	1.4 %	0.4 %	0.7 %	1.4 %	0.6 %	0.4 %	0.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	85.909 ppb	415.464 ppb	108.850 %	119.564 %	21.732 ppb	109.808 ppb	166.716 %
Concentration per Run 1	85.824 ppb	417.600 ppb	110.187 %	126.904 %	20.556 ppb	103.245 ppb	181.002 %
Concentration per Run 2	84.897 ppb	409.535 ppb	107.905 %	106.458 %	24.227 ppb	122.046 ppb	172.933 %
Concentration per Run 3	87.006 ppb	419.257 ppb	108.459 %	125.331 %	20.411 ppb	104.132 ppb	146.212 %
Concentration RSD	1.2 %	1.3 %	1.1 %	9.5 %	10.0 %	9.7 %	10.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 80
Analysis label: WG1902644-2d10 CT-6020SL
Analysis started at: 4/1/2024 11:55:55 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 54
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.652 %	111.436 %	4.840 ppb	96.918 ppb	819.816 ppb	967.384 ppb	180.704 ppb	990.481 ppb	1,007.401 ppb
Concentration per Run 1	98.440 %	112.446 %	4.849 ppb	95.726 ppb	807.960 ppb	970.326 ppb	179.464 ppb	982.423 ppb	996.967 ppb
Concentration per Run 2	98.506 %	107.595 %	4.930 ppb	97.274 ppb	851.708 ppb	992.778 ppb	182.182 ppb	1,019.752 ppb	1,078.440 ppb
Concentration per Run 3	96.012 %	114.266 %	4.740 ppb	97.755 ppb	799.779 ppb	939.047 ppb	180.467 ppb	969.267 ppb	946.797 ppb
Concentration RSD	1.5 %	3.1 %	2.0 %	1.1 %	3.4 %	2.8 %	0.8 %	2.6 %	6.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	115.106 %	46.094 ppb	18.641 ppb	45.256 ppb	103.008 ppb	49.007 ppb	48.953 ppb	24.587 ppb	46.590 ppb
Concentration per Run 1	115.494 %	45.689 ppb	18.644 ppb	44.859 ppb	102.367 ppb	48.933 ppb	48.452 ppb	24.271 ppb	45.872 ppb
Concentration per Run 2	115.713 %	46.976 ppb	18.893 ppb	46.487 ppb	104.938 ppb	50.090 ppb	50.253 ppb	24.816 ppb	46.905 ppb
Concentration per Run 3	114.112 %	45.616 ppb	18.387 ppb	44.423 ppb	101.720 ppb	47.997 ppb	48.153 ppb	24.675 ppb	46.995 ppb
Concentration RSD	0.8 %	1.7 %	1.4 %	2.4 %	1.7 %	2.1 %	2.3 %	1.2 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	111.056 %	11.742 ppb	11.733 ppb	94.308 ppb	96.870 ppb	111.909 %	4.665 ppb	5.125 ppb	114.463 %
Concentration per Run 1	112.730 %	11.714 ppb	11.197 ppb	92.059 ppb	90.993 ppb	114.439 %	4.568 ppb	5.054 ppb	117.147 %
Concentration per Run 2	109.784 %	11.916 ppb	11.912 ppb	95.488 ppb	98.874 ppb	110.146 %	4.739 ppb	5.183 ppb	113.711 %
Concentration per Run 3	110.655 %	11.596 ppb	12.092 ppb	95.376 ppb	100.743 ppb	111.141 %	4.689 ppb	5.137 ppb	112.530 %
Concentration RSD	1.4 %	1.4 %	4.0 %	2.1 %	5.3 %	2.0 %	1.9 %	1.3 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	44.062 ppb	202.005 ppb	108.803 %	126.737 %	9.836 ppb	46.083 ppb	190.196 %
Concentration per Run 1	42.141 ppb	196.290 ppb	110.887 %	127.446 %	9.706 ppb	45.767 ppb	216.413 %
Concentration per Run 2	44.582 ppb	204.216 ppb	106.573 %	125.029 %	10.050 ppb	46.795 ppb	178.822 %
Concentration per Run 3	45.462 ppb	205.509 ppb	108.948 %	127.736 %	9.751 ppb	45.686 ppb	175.352 %
Concentration RSD	3.9 %	2.5 %	2.0 %	1.2 %	1.9 %	1.3 %	12.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	81	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1902616-2d20 CT-6020TL	Rack	2		
Analysis started at:	4/1/2024 12:02:00 PM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	99.092 %	107.710 %	2.335 ppb	50.741 ppb	421.838 ppb	499.066 ppb	90.286 ppb	509.959 ppb	555.221 ppb
Concentration per Run 1	101.112 %	109.847 %	2.316 ppb	49.902 ppb	386.397 ppb	491.905 ppb	88.500 ppb	501.315 ppb	545.290 ppb
Concentration per Run 2	98.937 %	107.422 %	2.273 ppb	51.000 ppb	433.704 ppb	505.402 ppb	90.122 ppb	507.352 ppb	550.102 ppb
Concentration per Run 3	97.228 %	105.862 %	2.416 ppb	51.320 ppb	445.415 ppb	499.891 ppb	92.236 ppb	521.211 ppb	570.270 ppb
Concentration RSD	2.0 %	1.9 %	3.2 %	1.5 %	7.4 %	1.4 %	2.1 %	2.0 %	2.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	118.322 %	22.971 ppb	9.352 ppb	22.841 ppb	54.125 ppb	24.528 ppb	24.618 ppb	12.279 ppb	23.647 ppb
Concentration per Run 1	120.507 %	22.085 ppb	9.168 ppb	22.393 ppb	52.948 ppb	24.138 ppb	24.727 ppb	12.071 ppb	23.591 ppb
Concentration per Run 2	118.863 %	22.953 ppb	9.266 ppb	22.595 ppb	53.952 ppb	24.613 ppb	24.340 ppb	12.489 ppb	23.545 ppb
Concentration per Run 3	115.595 %	23.874 ppb	9.623 ppb	23.533 ppb	55.476 ppb	24.832 ppb	24.786 ppb	12.276 ppb	23.806 ppb
Concentration RSD	2.1 %	3.9 %	2.6 %	2.7 %	2.4 %	1.4 %	1.0 %	1.7 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.917 %	5.813 ppb	5.812 ppb	47.506 ppb	47.297 ppb	111.021 %	2.323 ppb	2.527 ppb	114.025 %
Concentration per Run 1	112.952 %	5.678 ppb	5.485 ppb	46.108 ppb	45.149 ppb	114.432 %	2.324 ppb	2.522 ppb	116.860 %
Concentration per Run 2	108.967 %	5.854 ppb	6.061 ppb	48.061 ppb	47.705 ppb	108.923 %	2.328 ppb	2.511 ppb	113.164 %
Concentration per Run 3	107.832 %	5.906 ppb	5.891 ppb	48.350 ppb	49.037 ppb	109.707 %	2.316 ppb	2.548 ppb	112.052 %
Concentration RSD	2.4 %	2.1 %	5.1 %	2.6 %	4.2 %	2.7 %	0.3 %	0.8 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	20.407 ppb	100.588 ppb	108.198 %	119.695 %	5.229 ppb	22.170 ppb	188.916 %
Concentration per Run 1	19.725 ppb	99.007 ppb	110.738 %	127.573 %	4.815 ppb	20.862 ppb	233.025 %
Concentration per Run 2	20.756 ppb	102.576 ppb	105.902 %	106.074 %	5.918 ppb	24.747 ppb	184.941 %
Concentration per Run 3	20.740 ppb	100.181 ppb	107.953 %	125.439 %	4.955 ppb	20.901 ppb	148.781 %
Concentration RSD	2.9 %	1.8 %	2.2 %	9.9 %	11.5 %	10.1 %	22.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	82	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1902644-3d10 CT-6020SL	Rack	1		
Analysis started at:	4/1/2024 12:06:39 PM	Vial	56		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.468 %	106.613 %	5.171 ppb	108.900 ppb	3,802.942 ppb	2,806.989 ppb	193.697 ppb	1,612.842 ppb	10,484.915 ppb
Concentration per Run 1	92.392 %	109.674 %	5.026 ppb	107.666 ppb	3,971.746 ppb	2,686.164 ppb	184.288 ppb	1,586.906 ppb	10,243.303 ppb
Concentration per Run 2	88.035 %	106.815 %	5.264 ppb	109.167 ppb	3,191.141 ppb	2,791.894 ppb	189.082 ppb	1,572.600 ppb	10,493.500 ppb
Concentration per Run 3	87.977 %	103.350 %	5.224 ppb	109.867 ppb	4,245.938 ppb	2,942.907 ppb	207.721 ppb	1,679.019 ppb	10,717.942 ppb
Concentration RSD	2.8 %	3.0 %	2.5 %	1.0 %	14.4 %	4.6 %	6.4 %	3.6 %	2.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.276 %	48.645 ppb	19.644 ppb	2,264.188 ppb	23,643.670 ppb	53.371 ppb	54.268 ppb	25.009 ppb	47.301 ppb
Concentration per Run 1	110.800 %	48.051 ppb	19.768 ppb	2,259.497 ppb	23,826.832 ppb	53.928 ppb	54.880 ppb	25.691 ppb	47.447 ppb
Concentration per Run 2	107.046 %	48.392 ppb	19.494 ppb	2,210.457 ppb	23,420.736 ppb	53.605 ppb	55.587 ppb	25.355 ppb	47.639 ppb
Concentration per Run 3	106.982 %	49.492 ppb	19.672 ppb	2,322.610 ppb	23,683.443 ppb	52.579 ppb	52.337 ppb	23.980 ppb	46.817 ppb
Concentration RSD	2.0 %	1.5 %	0.7 %	2.5 %	0.9 %	1.3 %	3.1 %	3.6 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.894 %	12.487 ppb	12.289 ppb	258.967 ppb	95.832 ppb	106.960 %	4.808 ppb	5.336 ppb	111.328 %
Concentration per Run 1	102.852 %	12.582 ppb	12.496 ppb	255.972 ppb	93.083 ppb	106.949 %	4.914 ppb	5.497 ppb	109.360 %
Concentration per Run 2	103.824 %	12.526 ppb	11.945 ppb	254.275 ppb	96.370 ppb	106.094 %	4.796 ppb	5.254 ppb	109.915 %
Concentration per Run 3	111.007 %	12.354 ppb	12.426 ppb	266.653 ppb	98.044 ppb	107.837 %	4.713 ppb	5.256 ppb	114.710 %
Concentration RSD	4.2 %	1.0 %	2.4 %	2.6 %	2.6 %	0.8 %	2.1 %	2.6 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	54.283 ppb	239.357 ppb	107.170 %	117.728 %	9.584 ppb	49.591 ppb	173.031 %
Concentration per Run 1	54.187 ppb	238.739 ppb	106.860 %	102.786 %	10.254 ppb	56.682 ppb	207.584 %
Concentration per Run 2	54.242 ppb	237.871 ppb	105.455 %	123.272 %	9.156 ppb	46.232 ppb	174.681 %
Concentration per Run 3	54.421 ppb	241.461 ppb	109.196 %	127.127 %	9.341 ppb	45.859 ppb	136.828 %
Concentration RSD	0.2 %	0.8 %	1.8 %	11.1 %	6.1 %	12.4 %	20.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 83
Analysis label: WG1902644-4d10 CT-6020SL
Analysis started at: 4/1/2024 12:11:17 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 57
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.295 %	103.927 %	5.352 ppb	111.087 ppb	4,246.964 ppb	2,915.217 ppb	195.680 ppb	1,608.412 ppb	10,777.814 ppb
Concentration per Run 1	93.318 %	99.711 %	4.914 ppb	103.932 ppb	4,446.456 ppb	3,039.480 ppb	197.290 ppb	1,677.217 ppb	11,316.686 ppb
Concentration per Run 2	86.149 %	103.436 %	5.426 ppb	110.827 ppb	4,100.651 ppb	2,787.935 ppb	187.588 ppb	1,531.023 ppb	10,183.551 ppb
Concentration per Run 3	82.420 %	108.634 %	5.715 ppb	118.501 ppb	4,193.783 ppb	2,918.236 ppb	202.162 ppb	1,616.995 ppb	10,833.203 ppb
Concentration RSD	6.3 %	4.3 %	7.6 %	6.6 %	4.2 %	4.3 %	3.8 %	4.6 %	5.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.404 %	49.548 ppb	19.731 ppb	2,290.386 ppb	24,032.833 ppb	53.759 ppb	54.813 ppb	25.760 ppb	48.041 ppb
Concentration per Run 1	106.484 %	52.521 ppb	21.049 ppb	2,388.550 ppb	25,142.960 ppb	56.595 ppb	57.114 ppb	27.101 ppb	50.456 ppb
Concentration per Run 2	98.806 %	47.974 ppb	18.956 ppb	2,157.833 ppb	23,172.983 ppb	52.300 ppb	53.145 ppb	25.440 ppb	46.541 ppb
Concentration per Run 3	98.922 %	48.149 ppb	19.187 ppb	2,324.774 ppb	23,782.556 ppb	52.383 ppb	54.179 ppb	24.739 ppb	47.126 ppb
Concentration RSD	4.3 %	5.2 %	5.8 %	5.2 %	4.2 %	4.6 %	3.8 %	4.7 %	4.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.472 %	12.657 ppb	12.658 ppb	263.370 ppb	100.374 ppb	102.425 %	5.006 ppb	5.502 ppb	105.239 %
Concentration per Run 1	99.101 %	13.214 ppb	12.788 ppb	269.162 ppb	99.655 ppb	100.185 %	5.182 ppb	5.670 ppb	101.666 %
Concentration per Run 2	106.919 %	12.200 ppb	12.361 ppb	254.350 ppb	99.936 ppb	102.446 %	4.994 ppb	5.454 ppb	103.572 %
Concentration per Run 3	110.396 %	12.556 ppb	12.825 ppb	266.596 ppb	101.531 ppb	104.644 %	4.842 ppb	5.382 ppb	110.479 %
Concentration RSD	5.5 %	4.1 %	2.0 %	3.0 %	1.0 %	2.2 %	3.4 %	2.7 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	54.912 ppb	254.518 ppb	94.809 %	106.295 %	10.803 ppb	54.891 ppb	146.152 %
Concentration per Run 1	55.379 ppb	250.790 ppb	97.766 %	96.761 %	11.272 ppb	60.411 ppb	188.580 %
Concentration per Run 2	54.306 ppb	243.869 ppb	101.492 %	119.123 %	9.600 ppb	47.858 ppb	123.853 %
Concentration per Run 3	55.050 ppb	268.894 ppb	85.168 %	103.000 %	11.537 ppb	56.403 ppb	126.023 %
Concentration RSD	1.0 %	5.1 %	9.0 %	10.9 %	9.7 %	11.7 %	25.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	84	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2414830-03d5 CT-6020TL	Rack	2		
Analysis started at:	4/1/2024 12:15:56 PM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.288 %	103.408 %	0.096 ppb	15.279 ppb	2,507.705 ppb	2,692.630 ppb	252.469 ppb	625.367 ppb	18,037.616 ppb
Concentration per Run 1	91.679 %	102.743 %	0.096 ppb	14.967 ppb	2,336.495 ppb	2,680.101 ppb	249.206 ppb	629.187 ppb	18,202.434 ppb
Concentration per Run 2	89.731 %	104.909 %	0.079 ppb	15.270 ppb	2,864.693 ppb	2,656.771 ppb	249.766 ppb	623.659 ppb	17,753.821 ppb
Concentration per Run 3	86.455 %	102.570 %	0.115 ppb	15.599 ppb	2,321.928 ppb	2,741.018 ppb	258.434 ppb	623.256 ppb	18,156.592 ppb
Concentration RSD	3.0 %	1.3 %	18.7 %	2.1 %	12.3 %	1.6 %	2.0 %	0.5 %	1.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.546 %	-0.131 ppb	0.237 ppb	1,864.996 ppb	6,029.200 ppb	13.905 ppb	21.847 ppb	0.925 ppb	207.879 ppb
Concentration per Run 1	110.058 %	-0.123 ppb	0.248 ppb	1,887.480 ppb	6,116.078 ppb	14.211 ppb	22.632 ppb	0.944 ppb	210.357 ppb
Concentration per Run 2	107.434 %	-0.136 ppb	0.227 ppb	1,841.049 ppb	5,884.724 ppb	13.412 ppb	21.141 ppb	0.930 ppb	205.988 ppb
Concentration per Run 3	105.147 %	-0.133 ppb	0.235 ppb	1,866.458 ppb	6,086.796 ppb	14.093 ppb	21.768 ppb	0.901 ppb	207.291 ppb
Concentration RSD	2.3 %	5.1 %	4.6 %	1.2 %	2.1 %	3.1 %	3.4 %	2.4 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.627 %	0.432 ppb	0.210 ppb	106.826 ppb	2.802 ppb	103.802 %	-0.002 ppb	1.016 ppb	109.617 %
Concentration per Run 1	102.510 %	0.451 ppb	0.145 ppb	104.891 ppb	2.667 ppb	104.609 %	-0.002 ppb	1.008 ppb	106.352 %
Concentration per Run 2	105.890 %	0.420 ppb	0.230 ppb	108.595 ppb	2.839 ppb	104.011 %	-0.002 ppb	0.988 ppb	113.014 %
Concentration per Run 3	105.481 %	0.424 ppb	0.253 ppb	106.991 ppb	2.901 ppb	102.787 %	-0.003 ppb	1.051 ppb	109.485 %
Concentration RSD	1.8 %	4.0 %	27.2 %	1.7 %	4.3 %	0.9 %	34.5 %	3.2 %	3.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.883 ppb	7.587 ppb	102.925 %	108.862 %	0.221 ppb	0.059 ppb	184.578 %
Concentration per Run 1	0.847 ppb	7.656 ppb	103.783 %	100.947 %	0.208 ppb	0.069 ppb	198.910 %
Concentration per Run 2	0.863 ppb	7.544 ppb	103.097 %	104.214 %	0.263 ppb	0.064 ppb	181.156 %
Concentration per Run 3	0.939 ppb	7.562 ppb	101.896 %	121.427 %	0.192 ppb	0.043 ppb	173.666 %
Concentration RSD	5.5 %	0.8 %	0.9 %	10.1 %	16.9 %	23.3 %	7.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 85
Analysis label: L2414830-05d10 CT-6020TL
Analysis started at: 4/1/2024 12:20:34 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 2
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.032 %	106.526 %	0.008 ppb	8.477 ppb	2,479.937 ppb	1,886.131 ppb	2.157 ppb	572.736 ppb	9,849.038 ppb
Concentration per Run 1	88.808 %	101.617 %	0.012 ppb	8.107 ppb	2,509.123 ppb	1,915.881 ppb	2.004 ppb	558.702 ppb	9,933.231 ppb
Concentration per Run 2	83.567 %	110.367 %	0.009 ppb	8.452 ppb	2,467.057 ppb	1,881.759 ppb	2.210 ppb	614.272 ppb	10,187.833 ppb
Concentration per Run 3	79.720 %	107.595 %	0.002 ppb	8.872 ppb	2,463.631 ppb	1,860.752 ppb	2.258 ppb	545.233 ppb	9,426.049 ppb
Concentration RSD	5.4 %	4.2 %	65.0 %	4.5 %	1.0 %	1.5 %	6.2 %	6.4 %	3.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.305 %	0.239 ppb	0.124 ppb	2,203.829 ppb	24,708.403 ppb	3.356 ppb	4.673 ppb	0.119 ppb	-0.375 ppb
Concentration per Run 1	104.391 %	0.253 ppb	0.136 ppb	2,224.265 ppb	25,119.924 ppb	3.482 ppb	4.594 ppb	0.115 ppb	-0.404 ppb
Concentration per Run 2	98.603 %	0.242 ppb	0.109 ppb	2,203.633 ppb	24,321.545 ppb	3.174 ppb	4.526 ppb	0.115 ppb	-0.358 ppb
Concentration per Run 3	94.922 %	0.221 ppb	0.127 ppb	2,183.589 ppb	24,683.739 ppb	3.412 ppb	4.898 ppb	0.126 ppb	-0.362 ppb
Concentration RSD	4.8 %	6.7 %	10.9 %	0.9 %	1.6 %	4.8 %	4.2 %	5.5 %	6.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.560 %	0.395 ppb	0.024 ppb	167.638 ppb	0.913 ppb	100.649 %	-0.003 ppb	0.000 ppb	107.221 %
Concentration per Run 1	99.257 %	0.393 ppb	0.027 ppb	165.925 ppb	0.796 ppb	99.423 %	-0.004 ppb	0.000 ppb	103.863 %
Concentration per Run 2	107.196 %	0.401 ppb	0.006 ppb	171.001 ppb	0.943 ppb	102.397 %	-0.003 ppb	0.000 ppb	112.407 %
Concentration per Run 3	101.227 %	0.390 ppb	0.039 ppb	165.986 ppb	1.001 ppb	100.127 %	-0.004 ppb	-0.001 ppb	105.394 %
Concentration RSD	4.0 %	1.4 %	69.0 %	1.7 %	11.6 %	1.5 %	11.1 %	216.2 %	4.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.597 ppb	27.885 ppb	102.091 %	119.881 %	0.066 ppb	0.009 ppb	156.709 %
Concentration per Run 1	0.555 ppb	27.976 ppb	99.956 %	116.928 %	0.047 ppb	0.012 ppb	196.741 %
Concentration per Run 2	0.593 ppb	27.373 ppb	105.346 %	123.622 %	0.075 ppb	0.007 ppb	140.070 %
Concentration per Run 3	0.643 ppb	28.305 ppb	100.970 %	119.093 %	0.077 ppb	0.009 ppb	133.315 %
Concentration RSD	7.4 %	1.7 %	2.8 %	2.8 %	25.7 %	24.4 %	22.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 86
Analysis label: CCV
Analysis started at: 4/1/2024 12:25:12 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.086 %	105.371 %	61.246 ppb	61.750 ppb	6,138.928 ppb	6,025.133 ppb	58.276 ppb	6,290.265 ppb	6,334.246 ppb
Concentration per Run 1	89.283 %	105.082 %	59.520 ppb	59.962 ppb	6,000.515 ppb	5,855.735 ppb	55.615 ppb	6,112.171 ppb	6,203.693 ppb
Concentration per Run 2	85.214 %	107.248 %	61.789 ppb	62.453 ppb	6,305.007 ppb	6,254.186 ppb	62.263 ppb	6,651.838 ppb	6,674.486 ppb
Concentration per Run 3	83.760 %	103.783 %	62.429 ppb	62.834 ppb	6,111.261 ppb	5,965.479 ppb	56.950 ppb	6,106.787 ppb	6,124.559 ppb
Recovery Percentage 1			102.077 %	102.916 %	102.315 %	100.419 %	97.127 %	104.838 %	105.571 %
Concentration RSD	3.3 %	1.7 %	2.5 %	2.5 %	2.5 %	3.4 %	6.0 %	5.0 %	4.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.180 %	59.096 ppb	58.869 ppb	55.688 ppb	5,967.919 ppb	60.700 ppb	60.406 ppb	60.597 ppb	58.443 ppb
Concentration per Run 1	114.038 %	58.288 ppb	57.825 ppb	54.529 ppb	5,889.325 ppb	60.423 ppb	60.028 ppb	60.281 ppb	57.981 ppb
Concentration per Run 2	108.244 %	60.217 ppb	59.708 ppb	56.731 ppb	5,927.307 ppb	60.579 ppb	59.769 ppb	59.554 ppb	58.391 ppb
Concentration per Run 3	108.259 %	58.781 ppb	59.075 ppb	55.804 ppb	6,087.123 ppb	61.097 ppb	61.421 ppb	61.956 ppb	58.955 ppb
Recovery Percentage 1		98.493 %	98.116 %	92.813 %	99.465 %	101.166 %	100.677 %	100.995 %	97.404 %
Concentration RSD	3.0 %	1.7 %	1.6 %	2.0 %	1.8 %	0.6 %	1.5 %	2.0 %	0.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.211 %	60.323 ppb	60.714 ppb	61.093 ppb	59.135 ppb	104.900 %	57.864 ppb	60.520 ppb	109.275 %
Concentration per Run 1	103.352 %	59.169 ppb	58.064 ppb	58.891 ppb	55.101 ppb	107.443 %	57.383 ppb	59.103 ppb	108.477 %
Concentration per Run 2	106.457 %	61.946 ppb	64.581 ppb	64.618 ppb	61.137 ppb	103.922 %	58.211 ppb	61.961 ppb	111.586 %
Concentration per Run 3	102.825 %	59.855 ppb	59.497 ppb	59.771 ppb	61.167 ppb	103.334 %	57.999 ppb	60.497 ppb	107.760 %
Recovery Percentage 1		100.539 %	101.190 %	101.822 %	98.558 %		96.440 %	100.867 %	
Concentration RSD	1.9 %	2.4 %	5.6 %	5.0 %	5.9 %	2.1 %	0.7 %	2.4 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.637 ppb	63.351 ppb	104.179 %	122.981 %	55.840 ppb	60.143 ppb	166.275 %
Concentration per Run 1	60.753 ppb	61.311 ppb	105.082 %	123.711 %	51.221 ppb	59.313 ppb	210.190 %
Concentration per Run 2	62.572 ppb	65.871 ppb	104.241 %	124.962 %	56.189 ppb	60.980 ppb	145.672 %
Concentration per Run 3	61.585 ppb	62.872 ppb	103.215 %	120.271 %	60.110 ppb	60.135 ppb	142.963 %
Recovery Percentage 1	102.728 %	105.586 %			93.066 %	100.238 %	
Concentration RSD	1.5 %	3.7 %	0.9 %	2.0 %	8.0 %	1.4 %	22.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 87
Analysis label: CCB
Analysis started at: 4/1/2024 12:29:54 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.935 %	101.559 %	0.010 ppb	2.961 ppb	14.752 ppb	-0.253 ppb	-0.344 ppb	5.667 ppb	-0.740 ppb
Concentration per Run 1	89.635 %	96.852 %	0.007 ppb	2.628 ppb	20.990 ppb	-0.520 ppb	-0.305 ppb	6.457 ppb	-0.093 ppb
Concentration per Run 2	80.788 %	107.768 %	0.009 ppb	3.035 ppb	9.743 ppb	-0.451 ppb	-0.342 ppb	7.974 ppb	0.760 ppb
Concentration per Run 3	75.382 %	100.058 %	0.013 ppb	3.218 ppb	13.522 ppb	0.211 ppb	-0.385 ppb	2.570 ppb	-2.885 ppb
Recovery Percentage 1			1.997 %	29.605 %	14.752 %	-0.362 %	-3.441 %	5.667 %	-0.740 %
Concentration RSD	8.8 %	5.5 %	29.9 %	10.2 %	38.8 %	159.5 %	11.6 %	49.2 %	257.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.742 %	-0.138 ppb	0.009 ppb	0.100 ppb	18.882 ppb	0.001 ppb	-0.016 ppb	-0.018 ppb	-0.675 ppb
Concentration per Run 1	99.384 %	-0.151 ppb	0.011 ppb	0.127 ppb	23.245 ppb	0.002 ppb	-0.004 ppb	-0.007 ppb	-0.660 ppb
Concentration per Run 2	87.319 %	-0.119 ppb	0.015 ppb	0.077 ppb	17.403 ppb	-0.001 ppb	-0.019 ppb	-0.026 ppb	-0.706 ppb
Concentration per Run 3	85.523 %	-0.144 ppb	0.001 ppb	0.096 ppb	15.997 ppb	0.002 ppb	-0.025 ppb	-0.020 ppb	-0.658 ppb
Recovery Percentage 1		-2.762 %	0.914 %	9.984 %	37.764 %	0.204 %	-0.787 %	-1.779 %	-13.490 %
Concentration RSD	8.3 %	12.2 %	76.3 %	25.0 %	20.4 %	140.9 %	69.3 %	53.8 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.509 %	0.135 ppb	0.295 ppb	0.011 ppb	1.488 ppb	102.351 %	0.003 ppb	0.007 ppb	104.677 %
Concentration per Run 1	98.131 %	0.170 ppb	0.286 ppb	0.017 ppb	1.572 ppb	100.870 %	0.008 ppb	0.011 ppb	101.999 %
Concentration per Run 2	105.292 %	0.122 ppb	0.287 ppb	0.010 ppb	1.423 ppb	102.256 %	0.000 ppb	0.006 ppb	107.378 %
Concentration per Run 3	101.103 %	0.113 ppb	0.310 ppb	0.007 ppb	1.470 ppb	103.928 %	0.000 ppb	0.005 ppb	104.654 %
Recovery Percentage 1		26.985 %	5.892 %	0.114 %	74.409 %		0.670 %	3.674 %	
Concentration RSD	3.5 %	22.6 %	4.6 %	45.9 %	5.1 %	1.5 %	181.3 %	46.0 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.375 ppb	0.012 ppb	92.864 %	104.602 %	0.560 ppb	0.018 ppb	144.562 %
Concentration per Run 1	0.356 ppb	0.015 ppb	97.811 %	95.813 %	0.557 ppb	0.028 ppb	184.665 %
Concentration per Run 2	0.360 ppb	0.005 ppb	97.404 %	118.868 %	0.560 ppb	0.010 ppb	124.265 %
Concentration per Run 3	0.407 ppb	0.017 ppb	83.377 %	99.125 %	0.564 ppb	0.017 ppb	124.757 %
Recovery Percentage 1	9.365 %	2.435 %			56.041 %	1.830 %	
Concentration RSD	7.5 %	52.4 %	8.9 %	11.9 %	0.7 %	48.9 %	24.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 88
Analysis label: wg1901982-1 2008SL
Analysis started at: 4/1/2024 12:45:22 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 4
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.868 %	104.476 %	0.001 ppb	2.126 ppb	5.056 ppb	1.617 ppb	2.396 ppb	-1.381 ppb	9.059 ppb
Concentration per Run 1	102.262 %	100.491 %	0.009 ppb	2.109 ppb	4.959 ppb	1.484 ppb	2.265 ppb	-4.080 ppb	7.935 ppb
Concentration per Run 2	99.047 %	106.988 %	-0.005 ppb	2.129 ppb	-2.474 ppb	1.723 ppb	2.455 ppb	-1.528 ppb	9.024 ppb
Concentration per Run 3	95.296 %	105.949 %	-0.001 ppb	2.140 ppb	12.682 ppb	1.646 ppb	2.467 ppb	1.467 ppb	10.218 ppb
Concentration RSD	3.5 %	3.3 %	625.7 %	0.7 %	149.9 %	7.5 %	4.7 %	201.1 %	12.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.055 %	-0.160 ppb	0.053 ppb	0.163 ppb	5.324 ppb	0.002 ppb	0.045 ppb	0.150 ppb	-0.198 ppb
Concentration per Run 1	107.657 %	-0.160 ppb	0.062 ppb	0.186 ppb	4.434 ppb	0.000 ppb	0.055 ppb	0.151 ppb	-0.218 ppb
Concentration per Run 2	105.452 %	-0.144 ppb	0.056 ppb	0.128 ppb	5.371 ppb	0.004 ppb	0.053 ppb	0.139 ppb	-0.187 ppb
Concentration per Run 3	102.057 %	-0.175 ppb	0.042 ppb	0.175 ppb	6.168 ppb	0.002 ppb	0.026 ppb	0.162 ppb	-0.189 ppb
Concentration RSD	2.7 %	9.7 %	19.4 %	18.7 %	16.3 %	86.2 %	35.9 %	7.6 %	8.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.227 %	0.068 ppb	-0.046 ppb	0.025 ppb	0.210 ppb	106.079 %	-0.004 ppb	0.001 ppb	105.338 %
Concentration per Run 1	96.031 %	0.058 ppb	-0.061 ppb	0.027 ppb	0.189 ppb	101.793 %	-0.002 ppb	0.001 ppb	97.757 %
Concentration per Run 2	105.450 %	0.055 ppb	-0.024 ppb	0.023 ppb	0.203 ppb	108.359 %	-0.004 ppb	0.001 ppb	110.112 %
Concentration per Run 3	102.200 %	0.089 ppb	-0.052 ppb	0.025 ppb	0.237 ppb	108.084 %	-0.005 ppb	0.001 ppb	108.146 %
Concentration RSD	4.7 %	28.0 %	42.9 %	8.0 %	11.7 %	3.5 %	40.2 %	35.5 %	6.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.212 ppb	0.059 ppb	101.593 %	105.005 %	0.079 ppb	0.012 ppb	187.949 %
Concentration per Run 1	0.207 ppb	0.069 ppb	97.553 %	92.431 %	0.090 ppb	0.021 ppb	226.964 %
Concentration per Run 2	0.218 ppb	0.057 ppb	103.491 %	102.939 %	0.083 ppb	0.010 ppb	189.056 %
Concentration per Run 3	0.211 ppb	0.051 ppb	103.737 %	119.646 %	0.064 ppb	0.006 ppb	147.827 %
Concentration RSD	2.6 %	15.6 %	3.4 %	13.1 %	17.4 %	64.7 %	21.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 89
Analysis label: wg1901982-2d10 2008SL
Analysis started at: 4/1/2024 12:50:00 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 5
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.073 %	104.563 %	4.903 ppb	96.228 ppb	834.773 ppb	998.002 ppb	187.708 ppb	992.579 ppb	962.798 ppb
Concentration per Run 1	95.860 %	103.003 %	5.073 ppb	97.609 ppb	830.654 ppb	992.510 ppb	185.577 ppb	982.100 ppb	950.457 ppb
Concentration per Run 2	95.061 %	104.129 %	4.790 ppb	94.968 ppb	857.759 ppb	1,017.140 ppb	190.841 ppb	1,000.362 ppb	970.100 ppb
Concentration per Run 3	94.298 %	106.555 %	4.846 ppb	96.107 ppb	815.906 ppb	984.356 ppb	186.705 ppb	995.275 ppb	967.836 ppb
Concentration RSD	0.8 %	1.7 %	3.1 %	1.4 %	2.5 %	1.7 %	1.5 %	0.9 %	1.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	112.306 %	47.586 ppb	19.542 ppb	46.528 ppb	107.731 ppb	50.426 ppb	50.935 ppb	25.356 ppb	48.423 ppb
Concentration per Run 1	113.603 %	47.215 ppb	19.661 ppb	45.947 ppb	109.266 ppb	51.422 ppb	52.061 ppb	25.839 ppb	48.563 ppb
Concentration per Run 2	111.712 %	48.063 ppb	19.719 ppb	47.315 ppb	107.620 ppb	50.456 ppb	50.624 ppb	25.524 ppb	48.631 ppb
Concentration per Run 3	111.602 %	47.480 ppb	19.245 ppb	46.323 ppb	106.307 ppb	49.399 ppb	50.118 ppb	24.705 ppb	48.077 ppb
Concentration RSD	1.0 %	0.9 %	1.3 %	1.5 %	1.4 %	2.0 %	2.0 %	2.3 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.364 %	12.090 ppb	11.468 ppb	97.247 ppb	95.389 ppb	105.621 %	4.844 ppb	5.319 ppb	109.603 %
Concentration per Run 1	102.021 %	11.874 ppb	11.117 ppb	95.039 ppb	92.866 ppb	104.794 %	4.846 ppb	5.336 ppb	106.816 %
Concentration per Run 2	105.046 %	11.879 ppb	11.503 ppb	98.088 ppb	96.008 ppb	107.602 %	4.816 ppb	5.199 ppb	112.843 %
Concentration per Run 3	106.027 %	12.518 ppb	11.786 ppb	98.614 ppb	97.293 ppb	104.468 %	4.869 ppb	5.422 ppb	109.150 %
Concentration RSD	2.0 %	3.1 %	2.9 %	2.0 %	2.4 %	1.6 %	0.5 %	2.1 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	40.854 ppb	207.488 ppb	104.640 %	108.852 %	11.382 ppb	54.607 ppb	212.823 %
Concentration per Run 1	40.565 ppb	208.014 ppb	103.884 %	98.987 %	12.173 ppb	58.942 ppb	259.695 %
Concentration per Run 2	40.131 ppb	203.588 ppb	105.034 %	103.257 %	11.929 ppb	57.434 ppb	197.938 %
Concentration per Run 3	41.865 ppb	210.862 ppb	105.001 %	124.312 %	10.044 ppb	47.445 ppb	180.836 %
Concentration RSD	2.2 %	1.8 %	0.6 %	12.5 %	10.2 %	11.4 %	19.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	90	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1901982-3d10 2008SL	Rack	2		
Analysis started at:	4/1/2024 12:54:38 PM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.120 %	109.443 %	5.147 ppb	102.435 ppb	1,300.077 ppb	1,030.472 ppb	182.078 ppb	1,033.218 ppb	1,060.180 ppb
Concentration per Run 1	93.347 %	108.375 %	5.058 ppb	99.647 ppb	1,253.940 ppb	1,001.985 ppb	174.826 ppb	1,014.526 ppb	1,049.247 ppb
Concentration per Run 2	89.131 %	111.580 %	5.214 ppb	103.111 ppb	1,277.546 ppb	1,014.357 ppb	183.426 ppb	1,049.450 ppb	1,056.768 ppb
Concentration per Run 3	87.881 %	108.375 %	5.168 ppb	104.547 ppb	1,368.743 ppb	1,075.076 ppb	187.982 ppb	1,035.678 ppb	1,074.525 ppb
Concentration RSD	3.2 %	1.7 %	1.6 %	2.5 %	4.7 %	3.8 %	3.7 %	1.7 %	1.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.523 %	46.705 ppb	19.298 ppb	46.555 ppb	108.149 ppb	50.012 ppb	50.465 ppb	29.645 ppb	51.809 ppb
Concentration per Run 1	110.607 %	46.410 ppb	19.328 ppb	44.749 ppb	105.825 ppb	49.265 ppb	50.589 ppb	29.563 ppb	51.254 ppb
Concentration per Run 2	107.523 %	46.557 ppb	18.846 ppb	46.589 ppb	108.479 ppb	49.425 ppb	49.478 ppb	28.922 ppb	51.395 ppb
Concentration per Run 3	107.438 %	47.149 ppb	19.721 ppb	48.328 ppb	110.143 ppb	51.346 ppb	51.329 ppb	30.450 ppb	52.779 ppb
Concentration RSD	1.7 %	0.8 %	2.3 %	3.8 %	2.0 %	2.3 %	1.8 %	2.6 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.821 %	12.011 ppb	11.484 ppb	96.250 ppb	95.981 ppb	108.800 %	4.833 ppb	5.292 ppb	109.238 %
Concentration per Run 1	105.536 %	11.964 ppb	11.230 ppb	93.478 ppb	92.139 ppb	109.786 %	4.836 ppb	5.322 ppb	107.091 %
Concentration per Run 2	109.218 %	11.820 ppb	11.790 ppb	96.180 ppb	96.001 ppb	109.974 %	4.787 ppb	5.197 ppb	112.226 %
Concentration per Run 3	105.709 %	12.249 ppb	11.433 ppb	99.092 ppb	99.804 ppb	106.640 %	4.877 ppb	5.357 ppb	108.396 %
Concentration RSD	1.9 %	1.8 %	2.5 %	2.9 %	4.0 %	1.7 %	0.9 %	1.6 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	47.794 ppb	206.978 ppb	105.885 %	110.420 %	11.131 ppb	53.565 ppb	192.877 %
Concentration per Run 1	47.865 ppb	205.282 ppb	105.136 %	122.482 %	9.939 ppb	48.322 ppb	213.153 %
Concentration per Run 2	47.174 ppb	206.694 ppb	107.425 %	104.618 %	11.675 ppb	56.396 ppb	187.662 %
Concentration per Run 3	48.343 ppb	208.956 ppb	105.095 %	104.159 %	11.779 ppb	55.977 ppb	177.816 %
Concentration RSD	1.2 %	0.9 %	1.3 %	9.5 %	9.3 %	8.5 %	9.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 91
Analysis label: wg1901982-4 2008SL
Analysis started at: 4/1/2024 12:59:17 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 8
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.683 %	105.025 %	0.006 ppb	9.853 ppb	6,053.636 ppb	483.223 ppb	10.081 ppb	401.874 ppb	779.330 ppb
Concentration per Run 1	96.800 %	105.169 %	0.007 ppb	9.703 ppb	5,887.305 ppb	463.094 ppb	10.015 ppb	391.296 ppb	760.009 ppb
Concentration per Run 2	95.970 %	101.964 %	0.008 ppb	9.902 ppb	6,238.525 ppb	496.407 ppb	10.176 ppb	416.722 ppb	823.619 ppb
Concentration per Run 3	94.279 %	107.941 %	0.003 ppb	9.953 ppb	6,035.077 ppb	490.168 ppb	10.053 ppb	397.603 ppb	754.362 ppb
Concentration RSD	1.3 %	2.8 %	50.5 %	1.3 %	2.9 %	3.7 %	0.8 %	3.3 %	4.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	120.169 %	0.345 ppb	0.198 ppb	4.609 ppb	14.439 ppb	0.114 ppb	0.337 ppb	45.426 ppb	42.101 ppb
Concentration per Run 1	119.049 %	0.439 ppb	0.209 ppb	4.731 ppb	13.888 ppb	0.121 ppb	0.320 ppb	45.296 ppb	42.102 ppb
Concentration per Run 2	123.032 %	0.309 ppb	0.200 ppb	4.689 ppb	14.950 ppb	0.118 ppb	0.387 ppb	46.363 ppb	42.789 ppb
Concentration per Run 3	118.426 %	0.285 ppb	0.185 ppb	4.407 ppb	14.477 ppb	0.105 ppb	0.306 ppb	44.618 ppb	41.411 ppb
Concentration RSD	2.1 %	24.0 %	6.3 %	3.8 %	3.7 %	7.4 %	12.9 %	1.9 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.378 %	0.463 ppb	0.203 ppb	4.759 ppb	2.957 ppb	109.856 %	-0.003 ppb	0.087 ppb	112.596 %
Concentration per Run 1	102.980 %	0.461 ppb	0.228 ppb	4.617 ppb	3.052 ppb	109.739 %	-0.003 ppb	0.085 ppb	108.572 %
Concentration per Run 2	104.879 %	0.467 ppb	0.162 ppb	4.871 ppb	2.975 ppb	109.315 %	-0.003 ppb	0.090 ppb	113.426 %
Concentration per Run 3	108.273 %	0.461 ppb	0.218 ppb	4.790 ppb	2.843 ppb	110.512 %	-0.004 ppb	0.088 ppb	115.789 %
Concentration RSD	2.5 %	0.7 %	17.5 %	2.7 %	3.6 %	0.6 %	14.1 %	3.1 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	2.620 ppb	4.569 ppb	105.827 %	123.364 %	0.111 ppb	0.243 ppb	193.239 %
Concentration per Run 1	2.698 ppb	4.448 ppb	104.430 %	122.203 %	0.103 ppb	0.246 ppb	212.466 %
Concentration per Run 2	2.643 ppb	4.558 ppb	106.663 %	122.638 %	0.127 ppb	0.248 ppb	181.296 %
Concentration per Run 3	2.519 ppb	4.700 ppb	106.387 %	125.252 %	0.104 ppb	0.235 ppb	185.953 %
Concentration RSD	3.5 %	2.8 %	1.2 %	1.3 %	11.9 %	2.9 %	8.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 92
Analysis label: L2416307-01 2008SL
Analysis started at: 4/1/2024 1:03:55 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 6
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	92.206 %	106.266 %	0.003 ppb	9.919 ppb	6,131.173 ppb	483.897 ppb	13.071 ppb	406.931 ppb	794.277 ppb
Concentration per Run 1	93.798 %	102.310 %	0.005 ppb	9.723 ppb	6,156.842 ppb	477.256 ppb	12.884 ppb	397.057 ppb	791.126 ppb
Concentration per Run 2	93.177 %	105.169 %	0.003 ppb	9.890 ppb	6,316.476 ppb	501.022 ppb	13.436 ppb	415.099 ppb	803.389 ppb
Concentration per Run 3	89.644 %	111.320 %	0.002 ppb	10.145 ppb	5,920.202 ppb	473.413 ppb	12.894 ppb	408.636 ppb	788.317 ppb
Concentration RSD	2.4 %	4.3 %	59.3 %	2.1 %	3.3 %	3.1 %	2.4 %	2.2 %	1.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.445 %	0.297 ppb	0.200 ppb	4.875 ppb	13.793 ppb	0.101 ppb	0.337 ppb	45.164 ppb	41.691 ppb
Concentration per Run 1	109.399 %	0.308 ppb	0.196 ppb	4.803 ppb	12.996 ppb	0.108 ppb	0.372 ppb	46.694 ppb	42.443 ppb
Concentration per Run 2	107.724 %	0.331 ppb	0.208 ppb	4.900 ppb	14.332 ppb	0.101 ppb	0.329 ppb	43.947 ppb	41.073 ppb
Concentration per Run 3	105.213 %	0.254 ppb	0.195 ppb	4.921 ppb	14.049 ppb	0.093 ppb	0.310 ppb	44.852 ppb	41.556 ppb
Concentration RSD	2.0 %	13.3 %	3.6 %	1.3 %	5.1 %	7.1 %	9.4 %	3.1 %	1.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.133 %	0.444 ppb	0.163 ppb	4.712 ppb	0.935 ppb	109.819 %	-0.002 ppb	0.098 ppb	110.115 %
Concentration per Run 1	101.853 %	0.417 ppb	0.159 ppb	4.609 ppb	0.886 ppb	107.233 %	-0.003 ppb	0.099 ppb	106.107 %
Concentration per Run 2	108.997 %	0.460 ppb	0.176 ppb	4.736 ppb	0.922 ppb	111.057 %	-0.002 ppb	0.087 ppb	111.068 %
Concentration per Run 3	107.550 %	0.454 ppb	0.154 ppb	4.790 ppb	0.997 ppb	111.166 %	-0.003 ppb	0.107 ppb	113.172 %
Concentration RSD	3.6 %	5.3 %	7.1 %	2.0 %	6.1 %	2.0 %	32.2 %	10.3 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.328 ppb	4.589 ppb	105.459 %	122.475 %	0.055 ppb	0.238 ppb	184.813 %
Concentration per Run 1	1.304 ppb	4.545 ppb	102.312 %	116.976 %	0.040 ppb	0.249 ppb	209.665 %
Concentration per Run 2	1.322 ppb	4.575 ppb	106.729 %	124.639 %	0.062 ppb	0.230 ppb	178.554 %
Concentration per Run 3	1.358 ppb	4.647 ppb	107.337 %	125.810 %	0.063 ppb	0.233 ppb	166.221 %
Concentration RSD	2.1 %	1.1 %	2.6 %	3.9 %	23.2 %	4.3 %	12.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 93
Analysis label: L2415732-01 CT-6020TL
Analysis started at: 4/1/2024 1:08:34 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 51
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.663 %	94.369 %	0.031 ppb	94.184 ppb	212,366.356 ppb	6,232.576 ppb	773.418 ppb	2,536.336 ppb	29,426.618 ppb
Concentration per Run 1	83.064 %	88.622 %	0.021 ppb	89.171 ppb	218,187.481 ppb	6,367.512 ppb	780.129 ppb	2,586.402 ppb	30,067.933 ppb
Concentration per Run 2	79.675 %	97.112 %	0.029 ppb	95.636 ppb	209,093.504 ppb	6,154.937 ppb	775.001 ppb	2,495.296 ppb	28,897.057 ppb
Concentration per Run 3	76.250 %	97.372 %	0.044 ppb	97.745 ppb	209,818.084 ppb	6,175.279 ppb	765.123 ppb	2,527.308 ppb	29,314.863 ppb
Concentration RSD	4.3 %	5.3 %	37.8 %	4.7 %	2.4 %	1.9 %	1.0 %	1.8 %	2.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.070 %	2.021 ppb	2.222 ppb	1,299.731 ppb	2,298.621 ppb	0.816 ppb	1.192 ppb	5.707 ppb	3.668 ppb
Concentration per Run 1	102.341 %	1.950 ppb	2.289 ppb	1,317.529 ppb	2,354.625 ppb	0.856 ppb	1.350 ppb	5.876 ppb	3.670 ppb
Concentration per Run 2	97.800 %	1.948 ppb	2.175 ppb	1,283.521 ppb	2,234.645 ppb	0.768 ppb	1.035 ppb	5.548 ppb	3.672 ppb
Concentration per Run 3	97.070 %	2.163 ppb	2.201 ppb	1,298.142 ppb	2,306.593 ppb	0.823 ppb	1.190 ppb	5.696 ppb	3.662 ppb
Concentration RSD	2.9 %	6.1 %	2.7 %	1.3 %	2.6 %	5.4 %	13.2 %	2.9 %	0.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.513 %	0.907 ppb	0.159 ppb	129.567 ppb	0.875 ppb	93.774 %	0.008 ppb	0.019 ppb	96.811 %
Concentration per Run 1	91.338 %	0.936 ppb	0.250 ppb	126.183 ppb	0.790 ppb	92.822 %	0.010 ppb	0.025 ppb	93.423 %
Concentration per Run 2	97.651 %	0.888 ppb	0.115 ppb	130.376 ppb	0.915 ppb	94.548 %	0.008 ppb	0.020 ppb	97.920 %
Concentration per Run 3	94.550 %	0.898 ppb	0.112 ppb	132.143 ppb	0.922 ppb	93.953 %	0.006 ppb	0.012 ppb	99.091 %
Concentration RSD	3.3 %	2.8 %	49.5 %	2.4 %	8.5 %	0.9 %	26.2 %	35.4 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.495 ppb	29.231 ppb	92.131 %	96.774 %	0.048 ppb	1.382 ppb	146.173 %
Concentration per Run 1	0.474 ppb	30.705 ppb	79.909 %	94.642 %	0.035 ppb	1.396 ppb	179.233 %
Concentration per Run 2	0.508 ppb	29.031 ppb	96.964 %	97.073 %	0.055 ppb	1.396 ppb	133.170 %
Concentration per Run 3	0.503 ppb	27.957 ppb	99.520 %	98.606 %	0.053 ppb	1.354 ppb	126.116 %
Concentration RSD	3.7 %	4.7 %	11.6 %	2.1 %	22.6 %	1.7 %	19.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	94	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2415732-04 CT-6020TL	Rack	1		
Analysis started at:	4/1/2024 1:13:11 PM	Vial	52		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	91.824 %	107.970 %	0.037 ppb	49.368 ppb	6,823.311 ppb	3,096.828 ppb	640.332 ppb	788.747 ppb	27,553.394 ppb
Concentration per Run 1	92.987 %	107.855 %	0.039 ppb	48.725 ppb	6,552.627 ppb	2,936.535 ppb	598.664 ppb	744.038 ppb	25,818.114 ppb
Concentration per Run 2	92.270 %	107.595 %	0.039 ppb	49.298 ppb	6,929.014 ppb	3,182.180 ppb	661.656 ppb	787.954 ppb	27,851.799 ppb
Concentration per Run 3	90.215 %	108.461 %	0.034 ppb	50.083 ppb	6,988.293 ppb	3,171.769 ppb	660.675 ppb	834.249 ppb	28,990.268 ppb
Concentration RSD	1.6 %	0.4 %	8.0 %	1.4 %	3.5 %	4.5 %	5.6 %	5.7 %	5.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	114.594 %	2.228 ppb	2.655 ppb	185.591 ppb	1,378.372 ppb	1.018 ppb	3.656 ppb	14.156 ppb	22.828 ppb
Concentration per Run 1	115.290 %	2.033 ppb	2.481 ppb	174.471 ppb	1,323.506 ppb	0.978 ppb	3.549 ppb	13.927 ppb	21.969 ppb
Concentration per Run 2	115.021 %	2.396 ppb	2.815 ppb	191.592 ppb	1,410.506 ppb	1.058 ppb	3.765 ppb	14.430 ppb	23.585 ppb
Concentration per Run 3	113.472 %	2.256 ppb	2.670 ppb	190.709 ppb	1,401.103 ppb	1.019 ppb	3.655 ppb	14.109 ppb	22.931 ppb
Concentration RSD	0.9 %	8.2 %	6.3 %	5.2 %	3.5 %	3.9 %	3.0 %	1.8 %	3.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.314 %	0.395 ppb	0.135 ppb	81.743 ppb	0.457 ppb	105.949 %	0.041 ppb	0.415 ppb	111.086 %
Concentration per Run 1	102.755 %	0.369 ppb	0.095 ppb	76.476 ppb	0.418 ppb	107.915 %	0.040 ppb	0.385 ppb	111.738 %
Concentration per Run 2	102.490 %	0.406 ppb	0.120 ppb	84.632 ppb	0.476 ppb	106.351 %	0.043 ppb	0.458 ppb	111.341 %
Concentration per Run 3	104.698 %	0.409 ppb	0.190 ppb	84.120 ppb	0.477 ppb	103.582 %	0.039 ppb	0.403 ppb	110.180 %
Concentration RSD	1.2 %	5.7 %	36.7 %	5.6 %	7.5 %	2.1 %	4.9 %	9.2 %	0.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.453 ppb	21.607 ppb	105.917 %	110.950 %	0.047 ppb	1.728 ppb	189.197 %
Concentration per Run 1	0.425 ppb	20.634 ppb	106.497 %	124.674 %	0.028 ppb	1.487 ppb	216.369 %
Concentration per Run 2	0.465 ppb	22.010 ppb	107.561 %	104.923 %	0.052 ppb	1.845 ppb	198.835 %
Concentration per Run 3	0.468 ppb	22.177 ppb	103.693 %	103.253 %	0.061 ppb	1.853 ppb	152.386 %
Concentration RSD	5.3 %	3.9 %	1.9 %	10.7 %	35.5 %	12.1 %	17.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	95	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2414830-06d10 CT-6020SL	Rack	1		
Analysis started at:	4/1/2024 1:17:49 PM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.811 %	104.245 %	0.005 ppb	7.510 ppb	2,377.140 ppb	1,807.607 ppb	2.306 ppb	551.442 ppb	9,223.995 ppb
Concentration per Run 1	88.224 %	100.491 %	0.008 ppb	7.365 ppb	2,418.801 ppb	1,837.560 ppb	2.441 ppb	553.659 ppb	9,083.516 ppb
Concentration per Run 2	84.296 %	108.028 %	0.006 ppb	7.701 ppb	2,321.773 ppb	1,763.646 ppb	2.290 ppb	545.834 ppb	9,199.837 ppb
Concentration per Run 3	81.915 %	104.216 %	0.002 ppb	7.465 ppb	2,390.846 ppb	1,821.616 ppb	2.188 ppb	554.832 ppb	9,388.632 ppb
Concentration RSD	3.8 %	3.6 %	61.2 %	2.3 %	2.1 %	2.2 %	5.5 %	0.9 %	1.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.076 %	0.228 ppb	0.045 ppb	2,132.680 ppb	23,058.603 ppb	3.220 ppb	4.641 ppb	0.149 ppb	-0.130 ppb
Concentration per Run 1	110.982 %	0.271 ppb	0.059 ppb	2,085.331 ppb	22,291.872 ppb	3.147 ppb	4.466 ppb	0.150 ppb	-0.105 ppb
Concentration per Run 2	105.912 %	0.226 ppb	0.049 ppb	2,126.190 ppb	23,140.560 ppb	3.242 ppb	4.855 ppb	0.145 ppb	-0.161 ppb
Concentration per Run 3	104.334 %	0.187 ppb	0.028 ppb	2,186.519 ppb	23,743.378 ppb	3.269 ppb	4.603 ppb	0.152 ppb	-0.124 ppb
Concentration RSD	3.2 %	18.3 %	34.8 %	2.4 %	3.2 %	2.0 %	4.3 %	2.6 %	22.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.212 %	0.333 ppb	0.022 ppb	153.943 ppb	0.227 ppb	103.299 %	-0.003 ppb	-0.002 ppb	108.197 %
Concentration per Run 1	104.196 %	0.320 ppb	0.047 ppb	148.409 ppb	0.149 ppb	106.116 %	-0.002 ppb	-0.001 ppb	112.346 %
Concentration per Run 2	99.354 %	0.350 ppb	0.032 ppb	157.479 ppb	0.252 ppb	102.150 %	-0.003 ppb	-0.001 ppb	105.931 %
Concentration per Run 3	100.085 %	0.329 ppb	-0.014 ppb	155.940 ppb	0.281 ppb	101.631 %	-0.003 ppb	-0.002 ppb	106.313 %
Concentration RSD	2.6 %	4.7 %	145.2 %	3.2 %	30.7 %	2.4 %	14.5 %	44.4 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.253 ppb	26.167 ppb	102.518 %	115.056 %	0.025 ppb	-0.001 ppb	199.699 %
Concentration per Run 1	0.223 ppb	25.079 ppb	104.785 %	123.288 %	0.014 ppb	-0.003 ppb	240.411 %
Concentration per Run 2	0.260 ppb	26.940 ppb	100.921 %	101.685 %	0.033 ppb	0.004 ppb	183.227 %
Concentration per Run 3	0.276 ppb	26.482 ppb	101.848 %	120.196 %	0.028 ppb	-0.004 ppb	175.459 %
Concentration RSD	10.8 %	3.7 %	2.0 %	10.2 %	40.4 %	462.7 %	17.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	96	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2414830-02 CT-6020SL	Rack	1		
Analysis started at:	4/1/2024 1:22:28 PM	Vial	58		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.218 %	103.061 %	0.022 ppb	15.317 ppb	12,264.884 ppb	1,682.673 ppb	17.210 ppb	3,091.766 ppb	127,211.095 ppb
Concentration per Run 1	84.073 %	102.137 %	0.021 ppb	14.842 ppb	12,470.651 ppb	1,724.496 ppb	18.073 ppb	3,125.991 ppb	128,743.190 ppb
Concentration per Run 2	81.431 %	104.649 %	0.017 ppb	15.347 ppb	11,973.700 ppb	1,632.908 ppb	17.190 ppb	3,129.039 ppb	127,540.660 ppb
Concentration per Run 3	78.149 %	102.397 %	0.027 ppb	15.760 ppb	12,350.303 ppb	1,690.614 ppb	16.368 ppb	3,020.269 ppb	125,349.434 ppb
Concentration RSD	3.7 %	1.3 %	22.3 %	3.0 %	2.1 %	2.8 %	5.0 %	2.0 %	1.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.375 %	4.161 ppb	0.554 ppb	3,803.180 ppb	155,292.842 ppb	28.243 ppb	4.959 ppb	2.774 ppb	0.716 ppb
Concentration per Run 1	107.533 %	4.378 ppb	0.573 ppb	3,816.214 ppb	156,607.651 ppb	28.636 ppb	5.017 ppb	2.863 ppb	0.709 ppb
Concentration per Run 2	103.446 %	4.011 ppb	0.553 ppb	3,782.338 ppb	154,874.395 ppb	28.281 ppb	4.986 ppb	2.775 ppb	0.783 ppb
Concentration per Run 3	102.146 %	4.093 ppb	0.536 ppb	3,810.987 ppb	154,396.480 ppb	27.812 ppb	4.874 ppb	2.684 ppb	0.657 ppb
Concentration RSD	2.7 %	4.6 %	3.4 %	0.5 %	0.7 %	1.5 %	1.5 %	3.2 %	8.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.152 %	3.730 ppb	0.448 ppb	579.377 ppb	3.001 ppb	99.015 %	0.002 ppb	0.000 ppb	105.733 %
Concentration per Run 1	101.444 %	3.849 ppb	0.466 ppb	582.788 ppb	2.898 ppb	97.998 %	0.004 ppb	0.001 ppb	105.555 %
Concentration per Run 2	99.118 %	3.706 ppb	0.443 ppb	582.123 ppb	3.046 ppb	99.281 %	0.002 ppb	-0.001 ppb	105.934 %
Concentration per Run 3	99.896 %	3.636 ppb	0.435 ppb	573.221 ppb	3.059 ppb	99.767 %	0.001 ppb	-0.001 ppb	105.710 %
Concentration RSD	1.2 %	2.9 %	3.6 %	0.9 %	3.0 %	0.9 %	72.9 %	510.3 %	0.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.657 ppb	97.132 ppb	100.847 %	112.387 %	0.026 ppb	0.585 ppb	146.539 %
Concentration per Run 1	0.656 ppb	98.296 ppb	99.004 %	116.593 %	0.016 ppb	0.560 ppb	193.154 %
Concentration per Run 2	0.667 ppb	97.489 ppb	101.423 %	100.239 %	0.035 ppb	0.656 ppb	126.429 %
Concentration per Run 3	0.648 ppb	95.613 ppb	102.114 %	120.329 %	0.028 ppb	0.539 ppb	120.034 %
Concentration RSD	1.4 %	1.4 %	1.6 %	9.5 %	37.2 %	10.7 %	27.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 97
Analysis label: L2414830-04 CT-6020SL
Analysis started at: 4/1/2024 1:27:07 PM

User name ALPHALAB\Metals-Instrument
Rack 1
Vial 59

Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.788 %	102.137 %	0.401 ppb	56.767 ppb	13,643.036 ppb	14,804.883 ppb	1,034.048 ppb	3,008.718 ppb	85,511.069 ppb
Concentration per Run 1	83.977 %	100.231 %	0.399 ppb	59.740 ppb	13,575.118 ppb	14,941.777 ppb	1,053.811 ppb	3,023.952 ppb	86,752.081 ppb
Concentration per Run 2	87.369 %	107.681 %	0.399 ppb	56.477 ppb	12,925.118 ppb	14,068.739 ppb	962.229 ppb	2,821.699 ppb	80,280.302 ppb
Concentration per Run 3	89.017 %	98.498 %	0.405 ppb	54.085 ppb	14,428.872 ppb	15,404.132 ppb	1,086.104 ppb	3,180.503 ppb	89,500.824 ppb
Concentration RSD	3.0 %	4.8 %	0.8 %	5.0 %	5.5 %	4.6 %	6.2 %	6.0 %	5.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	113.196 %	-0.108 ppb	0.459 ppb	9,230.037 ppb	36,980.436 ppb	66.069 ppb	100.559 ppb	4.200 ppb	910.817 ppb
Concentration per Run 1	106.924 %	-0.114 ppb	0.470 ppb	9,318.559 ppb	37,116.857 ppb	65.838 ppb	101.115 ppb	4.183 ppb	922.819 ppb
Concentration per Run 2	114.963 %	-0.126 ppb	0.434 ppb	8,743.513 ppb	35,119.060 ppb	63.453 ppb	95.898 ppb	3.897 ppb	860.788 ppb
Concentration per Run 3	117.701 %	-0.082 ppb	0.473 ppb	9,628.040 ppb	38,705.391 ppb	68.917 ppb	104.666 ppb	4.520 ppb	948.845 ppb
Concentration RSD	4.9 %	21.4 %	4.7 %	4.9 %	4.9 %	4.1 %	4.4 %	7.4 %	5.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.592 %	1.850 ppb	0.686 ppb	601.104 ppb	0.644 ppb	100.127 %	-0.004 ppb	4.517 ppb	106.895 %
Concentration per Run 1	99.721 %	1.903 ppb	0.672 ppb	600.114 ppb	0.583 ppb	99.634 %	-0.004 ppb	4.621 ppb	106.033 %
Concentration per Run 2	102.836 %	1.776 ppb	0.578 ppb	569.784 ppb	0.628 ppb	104.232 %	-0.005 ppb	4.190 ppb	111.273 %
Concentration per Run 3	96.219 %	1.871 ppb	0.807 ppb	633.414 ppb	0.719 ppb	96.515 %	-0.004 ppb	4.741 ppb	103.381 %
Concentration RSD	3.3 %	3.6 %	16.8 %	5.3 %	10.8 %	3.9 %	12.5 %	6.4 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.218 ppb	35.254 ppb	103.817 %	110.186 %	0.113 ppb	0.150 ppb	186.758 %
Concentration per Run 1	0.201 ppb	35.607 ppb	103.236 %	101.838 %	0.107 ppb	0.163 ppb	198.336 %
Concentration per Run 2	0.207 ppb	33.350 ppb	107.279 %	127.936 %	0.101 ppb	0.119 ppb	185.620 %
Concentration per Run 3	0.248 ppb	36.805 ppb	100.937 %	100.782 %	0.131 ppb	0.169 ppb	176.317 %
Concentration RSD	11.7 %	5.0 %	3.1 %	14.0 %	14.0 %	18.4 %	5.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 98
Analysis label: CCV
Analysis started at: 4/1/2024 1:31:46 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.593 %	102.368 %	60.463 ppb	61.601 ppb	6,184.222 ppb	6,034.495 ppb	57.582 ppb	6,208.051 ppb	6,315.292 ppb
Concentration per Run 1	85.543 %	101.444 %	60.150 ppb	61.191 ppb	6,096.736 ppb	5,979.168 ppb	56.610 ppb	6,184.510 ppb	6,334.052 ppb
Concentration per Run 2	85.364 %	101.617 %	60.672 ppb	62.356 ppb	6,265.022 ppb	6,091.194 ppb	58.800 ppb	6,281.239 ppb	6,312.351 ppb
Concentration per Run 3	82.871 %	104.043 %	60.568 ppb	61.257 ppb	6,190.909 ppb	6,033.123 ppb	57.336 ppb	6,158.404 ppb	6,299.474 ppb
Recovery Percentage 1			100.772 %	102.669 %	103.070 %	100.575 %	95.970 %	103.468 %	105.255 %
Concentration RSD	1.8 %	1.4 %	0.5 %	1.1 %	1.4 %	0.9 %	1.9 %	1.0 %	0.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.550 %	59.252 ppb	59.884 ppb	56.953 ppb	6,106.224 ppb	61.529 ppb	61.867 ppb	62.318 ppb	58.658 ppb
Concentration per Run 1	109.069 %	57.960 ppb	59.008 ppb	55.526 ppb	5,991.197 ppb	60.784 ppb	60.673 ppb	62.271 ppb	58.158 ppb
Concentration per Run 2	108.714 %	59.875 ppb	60.267 ppb	57.649 ppb	6,155.551 ppb	62.169 ppb	62.218 ppb	62.587 ppb	59.659 ppb
Concentration per Run 3	104.866 %	59.922 ppb	60.378 ppb	57.685 ppb	6,171.923 ppb	61.634 ppb	62.711 ppb	62.095 ppb	58.156 ppb
Recovery Percentage 1		98.754 %	99.807 %	94.922 %	101.770 %	102.548 %	103.112 %	103.863 %	97.763 %
Concentration RSD	2.2 %	1.9 %	1.3 %	2.2 %	1.6 %	1.1 %	1.7 %	0.4 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.620 %	61.073 ppb	60.707 ppb	60.606 ppb	59.363 ppb	103.187 %	58.566 ppb	61.087 ppb	106.836 %
Concentration per Run 1	99.325 %	61.149 ppb	59.524 ppb	59.865 ppb	56.481 ppb	105.550 %	57.296 ppb	59.875 ppb	110.679 %
Concentration per Run 2	99.141 %	61.504 ppb	61.350 ppb	60.963 ppb	60.889 ppb	101.432 %	59.380 ppb	61.593 ppb	105.208 %
Concentration per Run 3	100.394 %	60.565 ppb	61.246 ppb	60.991 ppb	60.720 ppb	102.580 %	59.021 ppb	61.793 ppb	104.622 %
Recovery Percentage 1		101.788 %	101.178 %	101.010 %	98.939 %		97.609 %	101.811 %	
Concentration RSD	0.7 %	0.8 %	1.7 %	1.1 %	4.2 %	2.1 %	1.9 %	1.7 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.686 ppb	63.390 ppb	102.094 %	107.844 %	63.859 ppb	61.270 ppb	173.673 %
Concentration per Run 1	59.627 ppb	62.645 ppb	101.911 %	102.410 %	61.122 ppb	63.805 ppb	206.756 %
Concentration per Run 2	62.261 ppb	63.046 ppb	101.735 %	120.573 %	56.812 ppb	54.003 ppb	171.832 %
Concentration per Run 3	63.170 ppb	64.478 ppb	102.636 %	100.549 %	73.644 ppb	66.000 ppb	142.431 %
Recovery Percentage 1	102.810 %	105.650 %			106.432 %	102.116 %	
Concentration RSD	3.0 %	1.5 %	0.5 %	10.3 %	13.7 %	10.4 %	18.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	99	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 1:36:28 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	85.338 %	99.365 %	0.009 ppb	2.428 ppb	15.946 ppb	-0.536 ppb	-0.352 ppb	2.975 ppb	-2.259 ppb
Concentration per Run 1	87.558 %	102.657 %	0.008 ppb	2.385 ppb	7.191 ppb	-0.240 ppb	-0.350 ppb	6.298 ppb	-1.474 ppb
Concentration per Run 2	84.525 %	95.293 %	0.006 ppb	2.345 ppb	20.792 ppb	-0.647 ppb	-0.339 ppb	-0.897 ppb	-4.568 ppb
Concentration per Run 3	83.932 %	100.144 %	0.013 ppb	2.553 ppb	19.857 ppb	-0.721 ppb	-0.366 ppb	3.524 ppb	-0.734 ppb
Recovery Percentage 1			1.773 %	24.276 %	15.946 %	-0.766 %	-3.516 %	2.975 %	-2.259 %
Concentration RSD	2.3 %	3.8 %	36.3 %	4.5 %	47.6 %	48.3 %	3.8 %	122.0 %	90.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.176 %	-0.144 ppb	0.003 ppb	0.033 ppb	23.610 ppb	0.000 ppb	-0.008 ppb	-0.008 ppb	-0.663 ppb
Concentration per Run 1	100.588 %	-0.162 ppb	0.013 ppb	0.039 ppb	25.307 ppb	-0.001 ppb	-0.011 ppb	-0.003 ppb	-0.667 ppb
Concentration per Run 2	98.574 %	-0.143 ppb	-0.003 ppb	0.044 ppb	23.583 ppb	0.002 ppb	-0.016 ppb	-0.012 ppb	-0.654 ppb
Concentration per Run 3	98.367 %	-0.127 ppb	-0.001 ppb	0.015 ppb	21.938 ppb	0.000 ppb	0.004 ppb	-0.010 ppb	-0.667 ppb
Recovery Percentage 1		-2.879 %	0.296 %	3.260 %	47.219 %	0.059 %	-0.384 %	-0.827 %	-13.256 %
Concentration RSD	1.2 %	12.1 %	302.4 %	46.8 %	7.1 %	452.5 %	138.2 %	57.0 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.185 %	0.107 ppb	0.305 ppb	0.004 ppb	1.257 ppb	104.630 %	0.002 ppb	0.005 ppb	105.178 %
Concentration per Run 1	101.201 %	0.084 ppb	0.281 ppb	0.005 ppb	1.255 ppb	105.181 %	0.006 ppb	0.006 ppb	104.260 %
Concentration per Run 2	100.779 %	0.078 ppb	0.296 ppb	0.004 ppb	1.225 ppb	104.321 %	0.000 ppb	0.007 ppb	106.665 %
Concentration per Run 3	98.574 %	0.159 ppb	0.339 ppb	0.004 ppb	1.293 ppb	104.389 %	-0.001 ppb	0.002 ppb	104.608 %
Recovery Percentage 1		21.446 %	6.103 %	0.040 %	62.875 %		0.388 %	2.513 %	
Concentration RSD	1.4 %	42.0 %	9.9 %	13.1 %	2.7 %	0.5 %	228.6 %	44.1 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.184 ppb	0.010 ppb	102.215 %	119.344 %	0.489 ppb	0.006 ppb	160.870 %
Concentration per Run 1	0.180 ppb	0.010 ppb	102.056 %	119.617 %	0.431 ppb	0.010 ppb	199.935 %
Concentration per Run 2	0.177 ppb	0.010 ppb	102.203 %	120.271 %	0.556 ppb	0.006 ppb	142.072 %
Concentration per Run 3	0.194 ppb	0.011 ppb	102.387 %	118.143 %	0.479 ppb	0.003 ppb	140.603 %
Recovery Percentage 1	4.594 %	2.051 %			48.856 %	0.636 %	
Concentration RSD	4.9 %	7.9 %	0.2 %	0.9 %	12.9 %	54.6 %	21.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	100	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2414830-04d10 CT-6020SL	Rack	2		
Analysis started at:	4/1/2024 1:49:46 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.666 %	104.909 %	0.041 ppb	8.326 ppb	1,106.803 ppb	1,298.877 ppb	105.677 ppb	301.238 ppb	8,718.287 ppb
Concentration per Run 1	90.586 %	106.815 %	0.041 ppb	8.281 ppb	1,053.984 ppb	1,250.351 ppb	102.570 ppb	289.771 ppb	8,388.830 ppb
Concentration per Run 2	91.292 %	102.224 %	0.042 ppb	8.388 ppb	1,142.824 ppb	1,331.273 ppb	107.530 ppb	311.509 ppb	8,877.429 ppb
Concentration per Run 3	90.121 %	105.689 %	0.041 ppb	8.308 ppb	1,123.600 ppb	1,315.008 ppb	106.932 ppb	302.433 ppb	8,888.604 ppb
Concentration RSD	0.7 %	2.3 %	1.7 %	0.7 %	4.2 %	3.3 %	2.6 %	3.6 %	3.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	112.374 %	-0.135 ppb	0.047 ppb	938.078 ppb	3,077.939 ppb	6.746 ppb	10.496 ppb	0.540 ppb	94.913 ppb
Concentration per Run 1	110.907 %	-0.131 ppb	0.051 ppb	922.081 ppb	3,017.968 ppb	6.670 ppb	10.423 ppb	0.600 ppb	92.499 ppb
Concentration per Run 2	113.945 %	-0.141 ppb	0.041 ppb	963.371 ppb	3,137.175 ppb	6.909 ppb	10.514 ppb	0.528 ppb	97.256 ppb
Concentration per Run 3	112.269 %	-0.133 ppb	0.050 ppb	928.780 ppb	3,078.673 ppb	6.659 ppb	10.552 ppb	0.491 ppb	94.984 ppb
Concentration RSD	1.4 %	3.7 %	11.8 %	2.4 %	1.9 %	2.1 %	0.6 %	10.3 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.296 %	0.216 ppb	0.106 ppb	49.010 ppb	0.373 ppb	109.918 %	-0.003 ppb	0.431 ppb	117.248 %
Concentration per Run 1	104.146 %	0.244 ppb	0.124 ppb	47.583 ppb	0.439 ppb	112.878 %	-0.002 ppb	0.404 ppb	124.698 %
Concentration per Run 2	103.694 %	0.229 ppb	0.090 ppb	49.213 ppb	0.332 ppb	110.759 %	-0.003 ppb	0.446 ppb	115.997 %
Concentration per Run 3	105.047 %	0.173 ppb	0.105 ppb	50.234 ppb	0.348 ppb	106.118 %	-0.003 ppb	0.444 ppb	111.050 %
Concentration RSD	0.7 %	17.3 %	15.6 %	2.7 %	15.6 %	3.1 %	15.8 %	5.5 %	5.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.132 ppb	3.249 ppb	115.647 %	135.659 %	0.123 ppb	0.014 ppb	296.504 %
Concentration per Run 1	0.121 ppb	2.909 ppb	128.345 %	150.532 %	0.158 ppb	0.012 ppb	449.606 %
Concentration per Run 2	0.129 ppb	3.281 ppb	112.817 %	133.089 %	0.113 ppb	0.014 ppb	240.120 %
Concentration per Run 3	0.145 ppb	3.556 ppb	105.780 %	123.357 %	0.098 ppb	0.017 ppb	199.787 %
Concentration RSD	9.5 %	10.0 %	10.0 %	10.1 %	25.3 %	16.0 %	45.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 101
Analysis label: CCV
Analysis started at: 4/1/2024 1:54:24 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.007 %	104.389 %	59.584 ppb	59.603 ppb	6,396.333 ppb	6,184.804 ppb	58.242 ppb	6,200.516 ppb	6,196.049 ppb
Concentration per Run 1	88.821 %	107.248 %	59.477 ppb	59.486 ppb	6,281.599 ppb	6,066.823 ppb	56.384 ppb	6,066.229 ppb	6,092.987 ppb
Concentration per Run 2	87.945 %	104.736 %	59.657 ppb	59.846 ppb	6,399.783 ppb	6,176.557 ppb	57.023 ppb	6,318.648 ppb	6,228.830 ppb
Concentration per Run 3	87.255 %	101.184 %	59.619 ppb	59.476 ppb	6,507.616 ppb	6,311.031 ppb	61.319 ppb	6,216.670 ppb	6,266.331 ppb
Recovery Percentage 1			99.307 %	99.338 %	106.606 %	103.080 %	97.070 %	103.342 %	103.267 %
Concentration RSD	0.9 %	2.9 %	0.2 %	0.4 %	1.8 %	2.0 %	4.6 %	2.0 %	1.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	112.325 %	59.194 ppb	59.528 ppb	56.099 ppb	5,943.837 ppb	60.593 ppb	60.775 ppb	61.113 ppb	58.220 ppb
Concentration per Run 1	112.520 %	57.076 ppb	58.547 ppb	54.878 ppb	5,819.736 ppb	59.669 ppb	59.980 ppb	60.432 ppb	57.372 ppb
Concentration per Run 2	112.382 %	60.416 ppb	59.804 ppb	55.905 ppb	5,970.359 ppb	61.001 ppb	61.070 ppb	60.963 ppb	59.011 ppb
Concentration per Run 3	112.072 %	60.089 ppb	60.231 ppb	57.513 ppb	6,041.417 ppb	61.110 ppb	61.276 ppb	61.942 ppb	58.277 ppb
Recovery Percentage 1		98.657 %	99.213 %	93.498 %	99.064 %	100.989 %	101.292 %	101.854 %	97.033 %
Concentration RSD	0.2 %	3.1 %	1.5 %	2.4 %	1.9 %	1.3 %	1.1 %	1.3 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.910 %	60.454 ppb	58.794 ppb	60.525 ppb	58.842 ppb	105.407 %	59.354 ppb	61.277 ppb	108.889 %
Concentration per Run 1	106.003 %	59.234 ppb	56.458 ppb	59.029 ppb	55.908 ppb	107.690 %	59.005 ppb	60.890 ppb	110.675 %
Concentration per Run 2	101.739 %	61.177 ppb	60.200 ppb	61.761 ppb	59.331 ppb	103.656 %	59.535 ppb	61.346 ppb	108.245 %
Concentration per Run 3	100.987 %	60.950 ppb	59.722 ppb	60.787 ppb	61.286 ppb	104.875 %	59.521 ppb	61.595 ppb	107.747 %
Recovery Percentage 1		100.756 %	97.989 %	100.876 %	98.069 %		98.923 %	102.129 %	
Concentration RSD	2.6 %	1.8 %	3.5 %	2.3 %	4.6 %	2.0 %	0.5 %	0.6 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.611 ppb	61.920 ppb	103.924 %	115.780 %	60.523 ppb	58.038 ppb	191.635 %
Concentration per Run 1	60.334 ppb	61.388 ppb	105.342 %	122.169 %	52.273 ppb	55.172 ppb	220.388 %
Concentration per Run 2	60.833 ppb	61.779 ppb	103.552 %	121.601 %	57.688 ppb	54.928 ppb	182.519 %
Concentration per Run 3	60.665 ppb	62.594 ppb	102.879 %	103.569 %	71.608 ppb	64.013 ppb	171.999 %
Recovery Percentage 1	101.018 %	103.201 %			100.872 %	96.730 %	
Concentration RSD	0.4 %	1.0 %	1.2 %	9.1 %	16.5 %	8.9 %	13.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 102
Analysis label: CCB
Analysis started at: 4/1/2024 1:59:06 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.462 %	102.483 %	0.010 ppb	2.245 ppb	3.798 ppb	-0.262 ppb	-0.351 ppb	1.432 ppb	-1.483 ppb
Concentration per Run 1	88.123 %	102.483 %	0.007 ppb	2.283 ppb	1.874 ppb	0.004 ppb	-0.391 ppb	0.886 ppb	0.253 ppb
Concentration per Run 2	88.708 %	101.530 %	0.012 ppb	2.254 ppb	3.728 ppb	-0.604 ppb	-0.414 ppb	6.765 ppb	-1.458 ppb
Concentration per Run 3	88.554 %	103.436 %	0.010 ppb	2.199 ppb	5.793 ppb	-0.187 ppb	-0.247 ppb	-3.353 ppb	-3.244 ppb
Recovery Percentage 1			1.934 %	22.455 %	3.798 %	-0.375 %	-3.505 %	1.432 %	-1.483 %
Concentration RSD	0.3 %	0.9 %	29.1 %	1.9 %	51.6 %	118.7 %	25.9 %	354.7 %	117.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.546 %	-0.150 ppb	0.003 ppb	0.025 ppb	16.778 ppb	-0.001 ppb	-0.011 ppb	-0.018 ppb	-0.672 ppb
Concentration per Run 1	102.146 %	-0.155 ppb	-0.002 ppb	0.026 ppb	16.768 ppb	-0.002 ppb	-0.003 ppb	-0.007 ppb	-0.687 ppb
Concentration per Run 2	102.984 %	-0.153 ppb	0.004 ppb	0.021 ppb	17.543 ppb	0.001 ppb	-0.014 ppb	-0.019 ppb	-0.676 ppb
Concentration per Run 3	102.509 %	-0.143 ppb	0.008 ppb	0.028 ppb	16.023 ppb	-0.002 ppb	-0.015 ppb	-0.027 ppb	-0.652 ppb
Recovery Percentage 1		-3.008 %	0.316 %	2.514 %	33.556 %	-0.205 %	-0.533 %	-1.758 %	-13.430 %
Concentration RSD	0.4 %	4.5 %	160.4 %	14.1 %	4.5 %	168.5 %	61.0 %	56.3 %	2.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.071 %	0.128 ppb	0.277 ppb	0.003 ppb	1.313 ppb	106.127 %	0.002 ppb	0.005 ppb	108.105 %
Concentration per Run 1	101.671 %	0.122 ppb	0.210 ppb	0.003 ppb	1.302 ppb	107.366 %	0.004 ppb	0.005 ppb	109.675 %
Concentration per Run 2	101.907 %	0.127 ppb	0.315 ppb	0.003 ppb	1.379 ppb	105.184 %	0.003 ppb	0.005 ppb	106.739 %
Concentration per Run 3	102.636 %	0.135 ppb	0.307 ppb	0.004 ppb	1.259 ppb	105.831 %	0.000 ppb	0.006 ppb	107.901 %
Recovery Percentage 1		25.572 %	5.546 %	0.032 %	65.673 %		0.595 %	2.627 %	
Concentration RSD	0.5 %	5.2 %	21.1 %	18.2 %	4.6 %	1.1 %	81.2 %	19.5 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.134 ppb	0.006 ppb	103.265 %	109.119 %	0.569 ppb	0.010 ppb	182.784 %
Concentration per Run 1	0.115 ppb	0.005 ppb	103.231 %	122.884 %	0.444 ppb	0.007 ppb	204.007 %
Concentration per Run 2	0.135 ppb	0.010 ppb	102.315 %	101.695 %	0.680 ppb	0.014 ppb	173.349 %
Concentration per Run 3	0.152 ppb	0.003 ppb	104.248 %	102.777 %	0.584 ppb	0.009 ppb	170.997 %
Recovery Percentage 1	3.354 %	1.192 %			56.942 %	1.016 %	
Concentration RSD	13.8 %	57.0 %	0.9 %	10.9 %	20.9 %	37.9 %	10.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 103
Analysis label: WG1902455-1 6020TL
Analysis started at: 4/1/2024 2:10:37 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	103.327 %	110.656 %	0.000 ppb	1.691 ppb	-13.938 ppb	0.548 ppb	0.850 ppb	-0.989 ppb	3.527 ppb
Concentration per Run 1	100.414 %	112.966 %	0.004 ppb	1.713 ppb	-20.255 ppb	0.248 ppb	0.674 ppb	-3.417 ppb	3.620 ppb
Concentration per Run 2	104.385 %	111.320 %	-0.001 ppb	1.691 ppb	-15.186 ppb	0.558 ppb	0.911 ppb	-0.091 ppb	1.991 ppb
Concentration per Run 3	105.181 %	107.681 %	-0.004 ppb	1.670 ppb	-6.372 ppb	0.838 ppb	0.964 ppb	0.541 ppb	4.971 ppb
Concentration RSD	2.5 %	2.4 %	2,440.0 %	1.3 %	50.4 %	53.8 %	18.1 %	215.0 %	42.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	118.609 %	-0.162 ppb	0.795 ppb	0.135 ppb	3.181 ppb	0.000 ppb	0.038 ppb	0.008 ppb	-0.617 ppb
Concentration per Run 1	113.351 %	-0.171 ppb	0.757 ppb	0.144 ppb	2.734 ppb	0.000 ppb	0.020 ppb	0.002 ppb	-0.639 ppb
Concentration per Run 2	118.896 %	-0.168 ppb	0.789 ppb	0.159 ppb	3.394 ppb	-0.003 ppb	0.047 ppb	0.020 ppb	-0.623 ppb
Concentration per Run 3	123.579 %	-0.148 ppb	0.840 ppb	0.100 ppb	3.416 ppb	0.004 ppb	0.046 ppb	0.003 ppb	-0.590 ppb
Concentration RSD	4.3 %	7.5 %	5.2 %	23.0 %	12.2 %	1,148.0 %	39.6 %	127.5 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.649 %	0.062 ppb	-0.020 ppb	0.008 ppb	0.178 ppb	111.138 %	-0.005 ppb	-0.001 ppb	114.144 %
Concentration per Run 1	109.641 %	0.054 ppb	-0.055 ppb	0.007 ppb	0.147 ppb	113.476 %	-0.005 ppb	-0.001 ppb	117.660 %
Concentration per Run 2	105.907 %	0.083 ppb	-0.016 ppb	0.007 ppb	0.189 ppb	111.745 %	-0.005 ppb	-0.001 ppb	115.306 %
Concentration per Run 3	104.399 %	0.050 ppb	0.011 ppb	0.009 ppb	0.199 ppb	108.191 %	-0.005 ppb	-0.001 ppb	109.466 %
Concentration RSD	2.5 %	28.9 %	165.4 %	12.9 %	15.5 %	2.4 %	2.9 %	30.8 %	3.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.060 ppb	0.012 ppb	107.592 %	125.556 %	0.075 ppb	-0.009 ppb	222.726 %
Concentration per Run 1	0.054 ppb	0.006 ppb	111.777 %	128.161 %	0.068 ppb	-0.008 ppb	246.725 %
Concentration per Run 2	0.063 ppb	0.015 ppb	107.418 %	127.892 %	0.077 ppb	-0.010 ppb	220.546 %
Concentration per Run 3	0.063 ppb	0.014 ppb	103.580 %	120.615 %	0.081 ppb	-0.008 ppb	200.906 %
Concentration RSD	8.8 %	41.9 %	3.8 %	3.4 %	8.8 %	12.5 %	10.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 104
Analysis label: I2416511-05 6020TL
Analysis started at: 4/1/2024 2:15:16 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 19
Comment FB

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.725 %	110.540 %	0.002 ppb	1.858 ppb	-11.404 ppb	2.060 ppb	2.145 ppb	-2.978 ppb	28.130 ppb
Concentration per Run 1	97.349 %	110.021 %	0.006 ppb	1.819 ppb	-11.232 ppb	1.357 ppb	2.077 ppb	-4.502 ppb	27.877 ppb
Concentration per Run 2	95.600 %	108.548 %	0.002 ppb	1.891 ppb	-7.981 ppb	2.391 ppb	2.237 ppb	-1.140 ppb	31.310 ppb
Concentration per Run 3	94.225 %	113.053 %	-0.003 ppb	1.864 ppb	-15.000 ppb	2.432 ppb	2.122 ppb	-3.293 ppb	25.201 ppb
Concentration RSD	1.6 %	2.1 %	229.4 %	2.0 %	30.8 %	29.6 %	3.8 %	57.2 %	10.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	112.583 %	-0.133 ppb	0.834 ppb	0.075 ppb	5.102 ppb	0.001 ppb	0.051 ppb	0.248 ppb	-0.400 ppb
Concentration per Run 1	114.554 %	-0.144 ppb	0.807 ppb	0.064 ppb	4.517 ppb	0.000 ppb	0.073 ppb	0.212 ppb	-0.426 ppb
Concentration per Run 2	112.631 %	-0.126 ppb	0.874 ppb	0.101 ppb	5.131 ppb	0.002 ppb	0.040 ppb	0.236 ppb	-0.370 ppb
Concentration per Run 3	110.565 %	-0.128 ppb	0.821 ppb	0.061 ppb	5.657 ppb	0.002 ppb	0.042 ppb	0.296 ppb	-0.405 ppb
Concentration RSD	1.8 %	7.5 %	4.3 %	29.5 %	11.2 %	89.0 %	35.8 %	17.5 %	7.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	107.630 %	0.051 ppb	0.018 ppb	0.018 ppb	0.153 ppb	114.169 %	-0.005 ppb	-0.001 ppb	115.521 %
Concentration per Run 1	109.224 %	0.070 ppb	-0.006 ppb	0.019 ppb	0.124 ppb	113.974 %	-0.005 ppb	-0.001 ppb	118.531 %
Concentration per Run 2	105.267 %	0.053 ppb	0.059 ppb	0.016 ppb	0.162 ppb	113.958 %	-0.005 ppb	-0.001 ppb	113.852 %
Concentration per Run 3	108.397 %	0.029 ppb	0.001 ppb	0.019 ppb	0.172 ppb	114.574 %	-0.004 ppb	-0.001 ppb	114.181 %
Concentration RSD	1.9 %	41.2 %	200.3 %	10.2 %	16.6 %	0.3 %	6.7 %	31.9 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.066 ppb	0.013 ppb	108.144 %	127.118 %	0.055 ppb	0.001 ppb	213.847 %
Concentration per Run 1	0.061 ppb	0.016 ppb	109.862 %	127.185 %	0.035 ppb	0.002 ppb	241.595 %
Concentration per Run 2	0.062 ppb	0.012 ppb	107.558 %	127.150 %	0.063 ppb	-0.001 ppb	204.069 %
Concentration per Run 3	0.073 ppb	0.012 ppb	107.012 %	127.019 %	0.066 ppb	0.001 ppb	195.877 %
Concentration RSD	10.4 %	16.9 %	1.4 %	0.1 %	30.6 %	179.5 %	11.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 105
Analysis label: WG1902455-2d10 6020TL
Analysis started at: 4/1/2024 2:19:55 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 11
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.179 %	109.674 %	5.095 ppb	100.226 ppb	835.661 ppb	1,008.311 ppb	184.823 ppb	1,044.871 ppb	1,021.603 ppb
Concentration per Run 1	88.209 %	107.768 %	5.227 ppb	101.884 ppb	857.110 ppb	1,022.346 ppb	187.862 ppb	1,050.051 ppb	1,012.174 ppb
Concentration per Run 2	88.630 %	112.273 %	5.077 ppb	100.024 ppb	803.199 ppb	984.390 ppb	180.444 ppb	1,016.935 ppb	1,044.555 ppb
Concentration per Run 3	87.698 %	108.981 %	4.982 ppb	98.769 ppb	846.676 ppb	1,018.198 ppb	186.164 ppb	1,067.627 ppb	1,008.080 ppb
Concentration RSD	0.5 %	2.1 %	2.4 %	1.6 %	3.4 %	2.1 %	2.1 %	2.5 %	2.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.378 %	47.071 ppb	19.368 ppb	46.508 ppb	105.012 ppb	49.833 ppb	50.580 ppb	25.138 ppb	47.446 ppb
Concentration per Run 1	105.784 %	47.137 ppb	19.605 ppb	45.991 ppb	103.959 ppb	49.481 ppb	49.899 ppb	24.538 ppb	46.520 ppb
Concentration per Run 2	105.399 %	46.669 ppb	18.911 ppb	45.728 ppb	103.721 ppb	49.362 ppb	50.119 ppb	25.054 ppb	47.139 ppb
Concentration per Run 3	107.952 %	47.407 ppb	19.587 ppb	47.804 ppb	107.355 ppb	50.657 ppb	51.723 ppb	25.822 ppb	48.679 ppb
Concentration RSD	1.3 %	0.8 %	2.0 %	2.4 %	1.9 %	1.4 %	2.0 %	2.6 %	2.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.335 %	11.997 ppb	11.728 ppb	97.507 ppb	93.936 ppb	110.346 %	4.771 ppb	5.305 ppb	112.158 %
Concentration per Run 1	109.639 %	11.745 ppb	11.421 ppb	94.727 ppb	88.102 ppb	114.139 %	4.663 ppb	5.122 ppb	115.618 %
Concentration per Run 2	106.631 %	12.125 ppb	11.523 ppb	97.759 ppb	94.621 ppb	108.644 %	4.819 ppb	5.536 ppb	109.879 %
Concentration per Run 3	102.735 %	12.121 ppb	12.241 ppb	100.035 ppb	99.085 ppb	108.255 %	4.832 ppb	5.256 ppb	110.977 %
Concentration RSD	3.3 %	1.8 %	3.8 %	2.7 %	5.9 %	3.0 %	2.0 %	4.0 %	2.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	35.325 ppb	204.304 ppb	106.516 %	111.758 %	11.420 ppb	54.269 ppb	210.231 %
Concentration per Run 1	33.733 ppb	199.349 ppb	107.755 %	107.239 %	11.737 ppb	56.224 ppb	251.378 %
Concentration per Run 2	36.108 ppb	206.742 ppb	106.054 %	102.489 %	12.269 ppb	58.404 ppb	196.267 %
Concentration per Run 3	36.133 ppb	206.823 ppb	105.738 %	125.545 %	10.254 ppb	48.179 ppb	183.047 %
Concentration RSD	3.9 %	2.1 %	1.0 %	10.9 %	9.1 %	9.9 %	17.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 106
Analysis label: WG1902455-3d10 6020TL
Analysis started at: 4/1/2024 2:24:35 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 13
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.497 %	105.054 %	4.811 ppb	97.463 ppb	1,036.694 ppb	1,281.693 ppb	671.473 ppb	1,160.111 ppb	1,986.556 ppb
Concentration per Run 1	90.042 %	105.776 %	4.662 ppb	97.327 ppb	1,013.999 ppb	1,246.810 ppb	657.375 ppb	1,166.530 ppb	1,996.216 ppb
Concentration per Run 2	88.347 %	103.177 %	4.839 ppb	97.021 ppb	1,056.795 ppb	1,312.545 ppb	685.474 ppb	1,161.243 ppb	1,997.890 ppb
Concentration per Run 3	87.101 %	106.209 %	4.931 ppb	98.042 ppb	1,039.289 ppb	1,285.726 ppb	671.569 ppb	1,152.560 ppb	1,965.563 ppb
Concentration RSD	1.7 %	1.6 %	2.8 %	0.5 %	2.1 %	2.6 %	2.1 %	0.6 %	0.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.813 %	47.037 ppb	19.559 ppb	62.414 ppb	1,215.456 ppb	49.067 ppb	49.339 ppb	24.743 ppb	53.877 ppb
Concentration per Run 1	107.887 %	46.384 ppb	19.088 ppb	60.296 ppb	1,167.497 ppb	47.446 ppb	48.291 ppb	23.968 ppb	52.993 ppb
Concentration per Run 2	107.820 %	47.372 ppb	19.901 ppb	63.768 ppb	1,240.731 ppb	50.530 ppb	50.153 ppb	25.023 ppb	54.684 ppb
Concentration per Run 3	104.733 %	47.355 ppb	19.688 ppb	63.179 ppb	1,238.139 ppb	49.226 ppb	49.574 ppb	25.237 ppb	53.954 ppb
Concentration RSD	1.7 %	1.2 %	2.2 %	3.0 %	3.4 %	3.2 %	1.9 %	2.7 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.460 %	11.033 ppb	10.021 ppb	97.037 ppb	86.213 ppb	109.205 %	4.622 ppb	5.137 ppb	110.718 %
Concentration per Run 1	108.134 %	10.860 ppb	9.370 ppb	95.098 ppb	82.064 ppb	112.063 %	4.550 ppb	5.139 ppb	113.735 %
Concentration per Run 2	104.565 %	11.339 ppb	10.036 ppb	98.405 ppb	86.711 ppb	107.465 %	4.679 ppb	5.087 ppb	108.570 %
Concentration per Run 3	103.680 %	10.900 ppb	10.656 ppb	97.610 ppb	89.863 ppb	108.086 %	4.635 ppb	5.185 ppb	109.848 %
Concentration RSD	2.2 %	2.4 %	6.4 %	1.8 %	4.6 %	2.3 %	1.4 %	1.0 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	40.363 ppb	201.689 ppb	105.764 %	125.079 %	9.158 ppb	46.263 ppb	192.450 %
Concentration per Run 1	39.731 ppb	195.963 ppb	107.524 %	127.102 %	8.667 ppb	45.267 ppb	216.618 %
Concentration per Run 2	40.859 ppb	205.102 ppb	105.149 %	123.484 %	9.388 ppb	47.155 ppb	183.971 %
Concentration per Run 3	40.499 ppb	204.003 ppb	104.620 %	124.653 %	9.418 ppb	46.367 ppb	176.762 %
Concentration RSD	1.4 %	2.5 %	1.5 %	1.5 %	4.6 %	2.1 %	11.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 107
Analysis label: WG1902455-5d10 6020TL
Analysis started at: 4/1/2024 2:29:14 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 15
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.660 %	105.169 %	48.479 ppb	54.572 ppb	5,289.370 ppb	5,228.816 ppb	377.935 ppb	5,130.268 ppb	5,972.840 ppb
Concentration per Run 1	85.008 %	111.060 %	48.370 ppb	54.501 ppb	5,145.668 ppb	5,067.670 ppb	361.918 ppb	4,878.556 ppb	5,791.976 ppb
Concentration per Run 2	85.686 %	102.830 %	48.416 ppb	54.441 ppb	5,325.202 ppb	5,298.440 ppb	388.332 ppb	5,292.073 ppb	6,003.301 ppb
Concentration per Run 3	83.284 %	101.617 %	48.651 ppb	54.773 ppb	5,397.240 ppb	5,320.337 ppb	383.554 ppb	5,220.175 ppb	6,123.243 ppb
Concentration RSD	1.5 %	4.9 %	0.3 %	0.3 %	2.4 %	2.7 %	3.7 %	4.3 %	2.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.842 %	48.609 ppb	47.990 ppb	62.912 ppb	5,947.917 ppb	49.378 ppb	49.293 ppb	49.432 ppb	54.893 ppb
Concentration per Run 1	106.153 %	47.487 ppb	47.011 ppb	61.004 ppb	5,739.010 ppb	47.876 ppb	47.685 ppb	48.375 ppb	53.372 ppb
Concentration per Run 2	106.672 %	49.141 ppb	48.802 ppb	63.732 ppb	6,057.638 ppb	50.142 ppb	50.557 ppb	50.208 ppb	55.857 ppb
Concentration per Run 3	104.700 %	49.200 ppb	48.156 ppb	64.001 ppb	6,047.103 ppb	50.117 ppb	49.638 ppb	49.713 ppb	55.451 ppb
Concentration RSD	1.0 %	2.0 %	1.9 %	2.6 %	3.0 %	2.6 %	3.0 %	1.9 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.626 %	48.917 ppb	47.910 ppb	54.967 ppb	49.210 ppb	106.326 %	0.959 ppb	48.507 ppb	108.563 %
Concentration per Run 1	104.780 %	48.651 ppb	47.190 ppb	53.963 ppb	46.434 ppb	109.903 %	0.938 ppb	47.364 ppb	111.940 %
Concentration per Run 2	101.188 %	49.120 ppb	48.904 ppb	55.791 ppb	50.264 ppb	104.423 %	0.971 ppb	48.906 ppb	108.862 %
Concentration per Run 3	101.909 %	48.982 ppb	47.635 ppb	55.147 ppb	50.933 ppb	104.653 %	0.969 ppb	49.250 ppb	104.888 %
Concentration RSD	1.9 %	0.5 %	1.9 %	1.7 %	4.9 %	2.9 %	1.9 %	2.1 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	49.852 ppb	52.611 ppb	104.209 %	116.723 %	47.561 ppb	46.841 ppb	183.496 %
Concentration per Run 1	48.360 ppb	51.405 ppb	106.928 %	125.414 %	39.797 ppb	43.580 ppb	222.661 %
Concentration per Run 2	49.651 ppb	52.208 ppb	102.676 %	122.167 %	46.516 ppb	44.318 ppb	181.889 %
Concentration per Run 3	51.546 ppb	54.221 ppb	103.024 %	102.587 %	56.368 ppb	52.627 ppb	145.937 %
Concentration RSD	3.2 %	2.8 %	2.3 %	10.6 %	17.5 %	10.7 %	20.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 108
Analysis label: WG1902455-4 6020TL
Analysis started at: 4/1/2024 2:33:52 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 14
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.204 %	108.490 %	0.263 ppb	23.469 ppb	2,290.548 ppb	2,946.028 ppb	3,673.886 ppb	1,490.680 ppb	10,142.367 ppb
Concentration per Run 1	91.127 %	114.266 %	0.260 ppb	23.322 ppb	2,525.477 ppb	2,748.319 ppb	3,470.582 ppb	1,390.445 ppb	9,809.204 ppb
Concentration per Run 2	90.667 %	103.436 %	0.266 ppb	23.841 ppb	2,203.223 ppb	3,086.150 ppb	3,818.422 ppb	1,529.614 ppb	10,142.381 ppb
Concentration per Run 3	88.819 %	107.768 %	0.262 ppb	23.243 ppb	2,142.944 ppb	3,003.615 ppb	3,732.653 ppb	1,551.981 ppb	10,475.517 ppb
Concentration RSD	1.4 %	5.0 %	1.1 %	1.4 %	9.0 %	6.0 %	4.9 %	5.9 %	3.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	127.572 %	11.141 ppb	8.924 ppb	181.525 ppb	13,209.517 ppb	7.550 ppb	3.830 ppb	6.268 ppb	81.332 ppb
Concentration per Run 1	125.535 %	10.637 ppb	8.541 ppb	172.936 ppb	11,795.461 ppb	7.220 ppb	3.850 ppb	6.152 ppb	79.183 ppb
Concentration per Run 2	129.879 %	11.328 ppb	9.100 ppb	187.256 ppb	12,421.544 ppb	7.781 ppb	3.750 ppb	6.274 ppb	82.425 ppb
Concentration per Run 3	127.301 %	11.458 ppb	9.133 ppb	184.383 ppb	15,411.547 ppb	7.650 ppb	3.891 ppb	6.379 ppb	82.389 ppb
Concentration RSD	1.7 %	4.0 %	3.7 %	4.2 %	14.6 %	3.9 %	1.9 %	1.8 %	2.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.041 %	3.342 ppb	0.778 ppb	41.391 ppb	2.150 ppb	108.255 %	0.009 ppb	0.353 ppb	110.531 %
Concentration per Run 1	105.083 %	3.234 ppb	0.725 ppb	40.540 ppb	2.177 ppb	109.531 %	0.010 ppb	0.353 ppb	112.197 %
Concentration per Run 2	104.355 %	3.322 ppb	0.801 ppb	41.665 ppb	2.090 ppb	106.673 %	0.008 ppb	0.342 ppb	109.735 %
Concentration per Run 3	102.686 %	3.471 ppb	0.807 ppb	41.968 ppb	2.182 ppb	108.562 %	0.010 ppb	0.364 ppb	109.662 %
Concentration RSD	1.2 %	3.6 %	5.9 %	1.8 %	2.4 %	1.3 %	9.9 %	3.1 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.743 ppb	24.748 ppb	107.632 %	119.293 %	0.554 ppb	3.617 ppb	190.518 %
Concentration per Run 1	0.724 ppb	24.276 ppb	108.325 %	127.492 %	0.451 ppb	3.335 ppb	204.943 %
Concentration per Run 2	0.743 ppb	24.761 ppb	107.674 %	104.138 %	0.729 ppb	4.127 ppb	188.596 %
Concentration per Run 3	0.761 ppb	25.208 ppb	106.897 %	126.248 %	0.482 ppb	3.389 ppb	178.016 %
Concentration RSD	2.5 %	1.9 %	0.7 %	11.0 %	27.5 %	12.2 %	7.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 109
Analysis label: I2416511-01 6020TL
Analysis started at: 4/1/2024 2:38:31 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 12
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.427 %	105.573 %	0.251 ppb	23.783 ppb	2,101.166 ppb	2,925.572 ppb	3,417.644 ppb	1,480.727 ppb	10,179.758 ppb
Concentration per Run 1	89.714 %	102.310 %	0.246 ppb	23.363 ppb	2,210.399 ppb	3,043.829 ppb	3,502.488 ppb	1,530.342 ppb	10,424.210 ppb
Concentration per Run 2	87.631 %	110.887 %	0.241 ppb	23.851 ppb	2,005.251 ppb	2,845.086 ppb	3,323.086 ppb	1,449.445 ppb	10,144.639 ppb
Concentration per Run 3	84.936 %	103.523 %	0.267 ppb	24.134 ppb	2,087.847 ppb	2,887.802 ppb	3,427.358 ppb	1,462.395 ppb	9,970.425 ppb
Concentration RSD	2.7 %	4.4 %	5.6 %	1.6 %	4.9 %	3.6 %	2.6 %	2.9 %	2.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	125.223 %	10.479 ppb	8.312 ppb	179.939 ppb	12,858.272 ppb	7.375 ppb	3.650 ppb	5.914 ppb	78.872 ppb
Concentration per Run 1	126.919 %	10.831 ppb	8.441 ppb	183.181 ppb	14,953.064 ppb	7.443 ppb	3.748 ppb	6.101 ppb	80.667 ppb
Concentration per Run 2	126.121 %	10.471 ppb	8.325 ppb	181.339 ppb	12,060.339 ppb	7.562 ppb	3.740 ppb	5.920 ppb	80.340 ppb
Concentration per Run 3	122.628 %	10.137 ppb	8.169 ppb	175.298 ppb	11,561.412 ppb	7.122 ppb	3.463 ppb	5.723 ppb	75.610 ppb
Concentration RSD	1.8 %	3.3 %	1.6 %	2.3 %	14.2 %	3.1 %	4.5 %	3.2 %	3.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.548 %	3.309 ppb	0.569 ppb	40.837 ppb	0.940 ppb	108.282 %	0.008 ppb	0.341 ppb	111.299 %
Concentration per Run 1	102.565 %	3.382 ppb	0.601 ppb	41.600 ppb	0.867 ppb	106.084 %	0.009 ppb	0.343 ppb	108.144 %
Concentration per Run 2	103.690 %	3.362 ppb	0.567 ppb	41.724 ppb	0.960 ppb	106.247 %	0.007 ppb	0.352 ppb	110.229 %
Concentration per Run 3	110.387 %	3.183 ppb	0.540 ppb	39.187 ppb	0.992 ppb	112.516 %	0.007 ppb	0.328 ppb	115.524 %
Concentration RSD	4.0 %	3.3 %	5.4 %	3.5 %	6.9 %	3.4 %	16.9 %	3.6 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.480 ppb	23.920 ppb	108.107 %	127.097 %	0.173 ppb	3.171 ppb	198.330 %
Concentration per Run 1	0.481 ppb	24.579 ppb	104.603 %	124.893 %	0.131 ppb	3.241 ppb	209.472 %
Concentration per Run 2	0.490 ppb	24.113 ppb	106.026 %	124.839 %	0.201 ppb	3.247 ppb	182.698 %
Concentration per Run 3	0.470 ppb	23.069 ppb	113.691 %	131.558 %	0.188 ppb	3.027 ppb	202.820 %
Concentration RSD	2.1 %	3.2 %	4.5 %	3.0 %	21.7 %	4.0 %	7.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 110
Analysis label: I2416511-02 6020TL
Analysis started at: 4/1/2024 2:43:11 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 17
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.363 %	108.721 %	0.413 ppb	118.854 ppb	4,477.114 ppb	4,953.353 ppb	5,665.463 ppb	4,751.489 ppb	31,956.735 ppb
Concentration per Run 1	89.093 %	104.043 %	0.381 ppb	117.191 ppb	4,589.707 ppb	5,007.723 ppb	5,736.015 ppb	4,760.500 ppb	32,091.430 ppb
Concentration per Run 2	88.055 %	109.154 %	0.425 ppb	119.304 ppb	4,423.059 ppb	4,879.852 ppb	5,661.538 ppb	4,768.273 ppb	31,782.323 ppb
Concentration per Run 3	87.940 %	112.966 %	0.432 ppb	120.065 ppb	4,418.576 ppb	4,972.483 ppb	5,598.835 ppb	4,725.692 ppb	31,996.453 ppb
Concentration RSD	0.7 %	4.1 %	6.7 %	1.3 %	2.2 %	1.3 %	1.2 %	0.5 %	0.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	122.926 %	18.209 ppb	16.685 ppb	217.610 ppb	32,158.454 ppb	8.051 ppb	26.037 ppb	10.957 ppb	2,622.847 ppb
Concentration per Run 1	122.702 %	18.122 ppb	16.907 ppb	218.523 ppb	32,284.208 ppb	8.033 ppb	25.885 ppb	10.600 ppb	2,589.734 ppb
Concentration per Run 2	122.990 %	18.360 ppb	16.438 ppb	215.342 ppb	32,152.445 ppb	8.023 ppb	26.148 ppb	11.189 ppb	2,636.223 ppb
Concentration per Run 3	123.085 %	18.145 ppb	16.710 ppb	218.964 ppb	32,038.708 ppb	8.099 ppb	26.079 ppb	11.083 ppb	2,642.583 ppb
Concentration RSD	0.2 %	0.7 %	1.4 %	0.9 %	0.4 %	0.5 %	0.5 %	2.9 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.555 %	4.713 ppb	0.519 ppb	700.839 ppb	1.119 ppb	107.602 %	0.015 ppb	0.871 ppb	111.216 %
Concentration per Run 1	105.622 %	4.571 ppb	0.445 ppb	694.124 ppb	1.043 ppb	108.197 %	0.016 ppb	0.876 ppb	112.574 %
Concentration per Run 2	106.037 %	4.877 ppb	0.457 ppb	699.125 ppb	1.178 ppb	107.545 %	0.014 ppb	0.893 ppb	110.751 %
Concentration per Run 3	105.006 %	4.691 ppb	0.654 ppb	709.268 ppb	1.137 ppb	107.064 %	0.016 ppb	0.845 ppb	110.325 %
Concentration RSD	0.5 %	3.3 %	22.6 %	1.1 %	6.2 %	0.5 %	6.1 %	2.8 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.514 ppb	90.251 ppb	107.155 %	120.503 %	0.140 ppb	6.925 ppb	201.254 %
Concentration per Run 1	0.488 ppb	88.255 ppb	106.239 %	107.124 %	0.121 ppb	7.705 ppb	226.881 %
Concentration per Run 2	0.524 ppb	91.349 ppb	108.344 %	128.067 %	0.145 ppb	6.434 ppb	193.853 %
Concentration per Run 3	0.529 ppb	91.149 ppb	106.882 %	126.319 %	0.152 ppb	6.637 ppb	183.029 %
Concentration RSD	4.3 %	1.9 %	1.0 %	9.6 %	11.6 %	9.9 %	11.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 111
Analysis label: I2416511-03 6020TL
Analysis started at: 4/1/2024 2:47:50 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 18
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.380 %	106.960 %	0.175 ppb	23.142 ppb	2,087.558 ppb	2,830.600 ppb	2,466.292 ppb	1,434.943 ppb	10,044.677 ppb
Concentration per Run 1	89.568 %	106.988 %	0.184 ppb	23.949 ppb	2,076.782 ppb	2,824.680 ppb	2,450.400 ppb	1,453.599 ppb	10,228.406 ppb
Concentration per Run 2	90.691 %	105.776 %	0.173 ppb	22.766 ppb	2,117.407 ppb	2,886.094 ppb	2,515.943 ppb	1,437.346 ppb	10,001.961 ppb
Concentration per Run 3	90.881 %	108.115 %	0.167 ppb	22.712 ppb	2,068.486 ppb	2,781.027 ppb	2,432.532 ppb	1,413.885 ppb	9,903.663 ppb
Concentration RSD	0.8 %	1.1 %	5.1 %	3.0 %	1.3 %	1.9 %	1.8 %	1.4 %	1.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	120.769 %	7.478 ppb	6.131 ppb	173.637 ppb	10,828.981 ppb	6.647 ppb	2.978 ppb	4.731 ppb	66.998 ppb
Concentration per Run 1	118.821 %	7.545 ppb	6.138 ppb	172.857 ppb	10,823.701 ppb	6.694 ppb	2.991 ppb	4.711 ppb	66.484 ppb
Concentration per Run 2	121.715 %	7.654 ppb	6.318 ppb	176.477 ppb	10,948.793 ppb	6.806 ppb	3.065 ppb	4.791 ppb	68.432 ppb
Concentration per Run 3	121.771 %	7.235 ppb	5.937 ppb	171.576 ppb	10,714.449 ppb	6.442 ppb	2.878 ppb	4.690 ppb	66.080 ppb
Concentration RSD	1.4 %	2.9 %	3.1 %	1.5 %	1.1 %	2.8 %	3.2 %	1.1 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.916 %	2.998 ppb	0.419 ppb	40.441 ppb	0.558 ppb	109.597 %	0.005 ppb	0.284 ppb	113.045 %
Concentration per Run 1	106.170 %	3.028 ppb	0.482 ppb	39.816 ppb	0.506 ppb	111.671 %	0.004 ppb	0.263 ppb	115.620 %
Concentration per Run 2	103.084 %	2.980 ppb	0.354 ppb	41.234 ppb	0.544 ppb	107.698 %	0.007 ppb	0.291 ppb	111.699 %
Concentration per Run 3	105.495 %	2.986 ppb	0.422 ppb	40.271 ppb	0.624 ppb	109.423 %	0.003 ppb	0.300 ppb	111.815 %
Concentration RSD	1.5 %	0.9 %	15.2 %	1.8 %	10.8 %	1.8 %	39.2 %	6.8 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.288 ppb	20.618 ppb	106.803 %	127.517 %	0.083 ppb	2.338 ppb	175.938 %
Concentration per Run 1	0.274 ppb	20.379 ppb	106.700 %	129.028 %	0.058 ppb	2.304 ppb	205.034 %
Concentration per Run 2	0.293 ppb	21.028 ppb	106.568 %	125.537 %	0.095 ppb	2.391 ppb	181.114 %
Concentration per Run 3	0.297 ppb	20.445 ppb	107.142 %	127.984 %	0.095 ppb	2.318 ppb	141.665 %
Concentration RSD	4.3 %	1.7 %	0.3 %	1.4 %	26.0 %	2.0 %	18.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 112
Analysis label: WG1902455-6d5 6020TL
Analysis started at: 4/1/2024 2:52:29 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 16
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	85.371 %	106.035 %	0.051 ppb	6.899 ppb	435.186 ppb	600.214 ppb	681.270 ppb	300.723 ppb	2,060.731 ppb
Concentration per Run 1	86.792 %	105.342 %	0.062 ppb	6.635 ppb	424.626 ppb	583.564 ppb	680.359 ppb	303.186 ppb	2,015.997 ppb
Concentration per Run 2	86.454 %	109.327 %	0.047 ppb	6.865 ppb	430.131 ppb	599.897 ppb	671.010 ppb	297.570 ppb	2,011.882 ppb
Concentration per Run 3	82.866 %	103.436 %	0.043 ppb	7.195 ppb	450.802 ppb	617.179 ppb	692.442 ppb	301.413 ppb	2,154.315 ppb
Concentration RSD	2.5 %	2.8 %	20.2 %	4.1 %	3.2 %	2.8 %	1.6 %	1.0 %	3.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.196 %	2.179 ppb	1.624 ppb	35.479 ppb	2,395.647 ppb	1.476 ppb	0.732 ppb	1.194 ppb	15.712 ppb
Concentration per Run 1	107.878 %	2.305 ppb	1.590 ppb	34.970 ppb	2,360.049 ppb	1.484 ppb	0.645 ppb	1.112 ppb	15.480 ppb
Concentration per Run 2	106.450 %	2.071 ppb	1.592 ppb	35.589 ppb	2,427.761 ppb	1.451 ppb	0.805 ppb	1.273 ppb	15.743 ppb
Concentration per Run 3	104.261 %	2.162 ppb	1.691 ppb	35.878 ppb	2,399.131 ppb	1.492 ppb	0.748 ppb	1.196 ppb	15.915 ppb
Concentration RSD	1.7 %	5.4 %	3.6 %	1.3 %	1.4 %	1.5 %	11.1 %	6.8 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.805 %	0.695 ppb	0.051 ppb	8.051 ppb	0.263 ppb	110.933 %	-0.001 ppb	0.066 ppb	112.822 %
Concentration per Run 1	107.753 %	0.677 ppb	0.024 ppb	7.903 ppb	0.238 ppb	112.340 %	0.000 ppb	0.063 ppb	114.601 %
Concentration per Run 2	105.443 %	0.688 ppb	0.066 ppb	8.014 ppb	0.275 ppb	111.386 %	-0.002 ppb	0.075 ppb	112.651 %
Concentration per Run 3	104.221 %	0.719 ppb	0.061 ppb	8.237 ppb	0.277 ppb	109.072 %	-0.001 ppb	0.060 ppb	111.213 %
Concentration RSD	1.7 %	3.1 %	45.1 %	2.1 %	8.4 %	1.5 %	105.6 %	11.6 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.192 ppb	4.730 ppb	107.335 %	118.246 %	0.055 ppb	0.675 ppb	192.711 %
Concentration per Run 1	0.173 ppb	4.723 ppb	109.442 %	126.781 %	0.033 ppb	0.627 ppb	235.825 %
Concentration per Run 2	0.189 ppb	4.779 ppb	106.585 %	104.214 %	0.073 ppb	0.765 ppb	189.834 %
Concentration per Run 3	0.214 ppb	4.688 ppb	105.978 %	123.741 %	0.061 ppb	0.635 ppb	152.473 %
Concentration RSD	10.8 %	1.0 %	1.7 %	10.4 %	36.5 %	11.4 %	21.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 113
Analysis label: CCV
Analysis started at: 4/1/2024 2:57:07 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	83.478 %	104.274 %	58.708 ppb	59.038 ppb	6,259.434 ppb	6,099.622 ppb	57.114 ppb	6,358.045 ppb	6,449.380 ppb
Concentration per Run 1	82.123 %	100.144 %	60.918 ppb	60.712 ppb	6,626.408 ppb	6,413.967 ppb	57.611 ppb	6,530.963 ppb	6,696.102 ppb
Concentration per Run 2	83.781 %	104.129 %	58.443 ppb	58.784 ppb	6,280.572 ppb	6,164.867 ppb	58.564 ppb	6,404.028 ppb	6,403.290 ppb
Concentration per Run 3	84.531 %	108.548 %	56.763 ppb	57.618 ppb	5,871.321 ppb	5,720.033 ppb	55.168 ppb	6,139.143 ppb	6,248.748 ppb
Recovery Percentage 1			97.846 %	98.397 %	104.324 %	101.660 %	95.191 %	105.967 %	107.490 %
Concentration RSD	1.5 %	4.0 %	3.6 %	2.6 %	6.0 %	5.8 %	3.1 %	3.1 %	3.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.614 %	58.766 ppb	59.034 ppb	56.433 ppb	5,963.741 ppb	60.671 ppb	60.469 ppb	60.721 ppb	57.177 ppb
Concentration per Run 1	108.608 %	59.909 ppb	60.940 ppb	57.610 ppb	6,111.317 ppb	62.428 ppb	62.667 ppb	61.650 ppb	59.009 ppb
Concentration per Run 2	112.222 %	59.010 ppb	58.860 ppb	56.162 ppb	5,889.135 ppb	60.388 ppb	60.702 ppb	61.266 ppb	57.571 ppb
Concentration per Run 3	114.013 %	57.380 ppb	57.302 ppb	55.529 ppb	5,890.771 ppb	59.198 ppb	58.038 ppb	59.248 ppb	54.952 ppb
Recovery Percentage 1		97.944 %	98.391 %	94.056 %	99.396 %	101.119 %	100.781 %	101.202 %	95.295 %
Concentration RSD	2.5 %	2.2 %	3.1 %	1.9 %	2.1 %	2.7 %	3.8 %	2.1 %	3.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.009 %	59.842 ppb	59.322 ppb	59.148 ppb	57.407 ppb	107.483 %	58.029 ppb	60.197 ppb	110.166 %
Concentration per Run 1	102.022 %	60.737 ppb	60.027 ppb	59.698 ppb	56.341 ppb	106.770 %	58.561 ppb	60.610 ppb	110.141 %
Concentration per Run 2	102.836 %	60.344 ppb	58.913 ppb	59.552 ppb	58.299 ppb	107.510 %	58.909 ppb	61.479 ppb	108.810 %
Concentration per Run 3	104.169 %	58.446 ppb	59.028 ppb	58.193 ppb	57.581 ppb	108.169 %	56.617 ppb	58.501 ppb	111.549 %
Recovery Percentage 1		99.737 %	98.871 %	98.580 %	95.679 %		96.715 %	100.328 %	
Concentration RSD	1.1 %	2.0 %	1.0 %	1.4 %	1.7 %	0.7 %	2.1 %	2.5 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.048 ppb	60.370 ppb	104.922 %	117.767 %	59.567 ppb	56.417 ppb	179.811 %
Concentration per Run 1	59.204 ppb	60.786 ppb	102.790 %	102.780 %	63.187 ppb	63.993 ppb	203.388 %
Concentration per Run 2	60.203 ppb	60.915 ppb	104.788 %	124.239 %	57.256 ppb	53.184 ppb	147.690 %
Concentration per Run 3	57.738 ppb	59.410 ppb	107.188 %	126.281 %	58.257 ppb	52.075 ppb	188.357 %
Recovery Percentage 1	98.414 %	100.617 %			99.278 %	94.029 %	
Concentration RSD	2.1 %	1.4 %	2.1 %	11.1 %	5.3 %	11.7 %	16.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 114
Analysis label: CCB
Analysis started at: 4/1/2024 3:01:50 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	82.268 %	102.830 %	0.008 ppb	2.683 ppb	8.951 ppb	-0.400 ppb	-0.322 ppb	0.821 ppb	-2.265 ppb
Concentration per Run 1	83.854 %	104.736 %	0.006 ppb	2.681 ppb	4.027 ppb	-0.491 ppb	-0.345 ppb	0.910 ppb	-3.492 ppb
Concentration per Run 2	82.042 %	102.830 %	0.005 ppb	2.671 ppb	5.827 ppb	-0.234 ppb	-0.330 ppb	0.710 ppb	-1.361 ppb
Concentration per Run 3	80.908 %	100.924 %	0.013 ppb	2.697 ppb	16.998 ppb	-0.474 ppb	-0.292 ppb	0.843 ppb	-1.942 ppb
Recovery Percentage 1			1.591 %	26.830 %	8.951 %	-0.571 %	-3.223 %	0.821 %	-2.265 %
Concentration RSD	1.8 %	1.9 %	59.4 %	0.5 %	78.5 %	35.9 %	8.4 %	12.4 %	48.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.230 %	-0.135 ppb	0.005 ppb	0.013 ppb	18.487 ppb	-0.001 ppb	-0.009 ppb	-0.015 ppb	-0.636 ppb
Concentration per Run 1	97.842 %	-0.133 ppb	-0.002 ppb	0.004 ppb	21.361 ppb	0.000 ppb	-0.014 ppb	-0.016 ppb	-0.651 ppb
Concentration per Run 2	97.455 %	-0.139 ppb	0.002 ppb	0.036 ppb	17.193 ppb	-0.002 ppb	0.007 ppb	-0.017 ppb	-0.635 ppb
Concentration per Run 3	96.393 %	-0.134 ppb	0.015 ppb	-0.001 ppb	16.906 ppb	0.000 ppb	-0.022 ppb	-0.010 ppb	-0.621 ppb
Recovery Percentage 1		-2.707 %	0.490 %	1.297 %	36.973 %	-0.143 %	-0.469 %	-1.451 %	-12.715 %
Concentration RSD	0.8 %	2.2 %	176.8 %	153.2 %	13.5 %	162.0 %	157.8 %	28.6 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.837 %	0.092 ppb	0.319 ppb	0.003 ppb	1.212 ppb	106.089 %	0.002 ppb	0.007 ppb	107.853 %
Concentration per Run 1	99.771 %	0.093 ppb	0.325 ppb	0.003 ppb	1.175 ppb	106.934 %	0.007 ppb	0.011 ppb	109.930 %
Concentration per Run 2	97.885 %	0.076 ppb	0.272 ppb	0.002 ppb	1.212 ppb	104.398 %	0.001 ppb	0.007 ppb	106.408 %
Concentration per Run 3	98.855 %	0.108 ppb	0.360 ppb	0.003 ppb	1.248 ppb	106.936 %	-0.001 ppb	0.002 ppb	107.219 %
Recovery Percentage 1		18.435 %	6.387 %	0.026 %	60.576 %		0.595 %	3.492 %	
Concentration RSD	1.0 %	17.4 %	13.9 %	27.6 %	3.0 %	1.4 %	155.2 %	65.0 %	1.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.159 ppb	0.013 ppb	101.490 %	106.849 %	0.572 ppb	0.008 ppb	186.364 %
Concentration per Run 1	0.145 ppb	0.012 ppb	103.559 %	122.246 %	0.443 ppb	0.005 ppb	212.610 %
Concentration per Run 2	0.153 ppb	0.009 ppb	99.552 %	98.797 %	0.694 ppb	0.010 ppb	174.444 %
Concentration per Run 3	0.180 ppb	0.019 ppb	101.359 %	99.504 %	0.578 ppb	0.008 ppb	172.038 %
Recovery Percentage 1	3.984 %	2.600 %			57.178 %	0.760 %	
Concentration RSD	11.4 %	39.6 %	2.0 %	12.5 %	22.0 %	35.1 %	12.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 115
Analysis label: LDR Check - 10/1 ppm
Analysis started at: 4/1/2024 3:06:32 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 27
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	91.133 %	115.305 %	0.013 ppb	2.550 ppb	-1.251 ppb	4.468 ppb	1.114 ppb	1.117 ppb	9.371 ppb
Concentration per Run 1	95.121 %	114.612 %	0.006 ppb	2.501 ppb	-5.350 ppb	3.722 ppb	1.108 ppb	1.295 ppb	6.190 ppb
Concentration per Run 2	90.369 %	113.313 %	0.020 ppb	2.503 ppb	10.040 ppb	4.725 ppb	1.211 ppb	0.526 ppb	13.667 ppb
Concentration per Run 3	87.908 %	117.991 %	0.014 ppb	2.646 ppb	-8.444 ppb	4.956 ppb	1.023 ppb	1.531 ppb	8.257 ppb
Concentration RSD	4.0 %	2.1 %	52.4 %	3.3 %	791.1 %	14.7 %	8.5 %	47.0 %	41.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	119.031 %	-0.156 ppb	0.016 ppb	10,641.930 ppb	7.880 ppb	0.194 ppb	0.077 ppb	12,682.519 ppb	11,449.758 ppb
Concentration per Run 1	121.750 %	-0.153 ppb	0.015 ppb	10,409.561 ppb	8.327 ppb	0.193 ppb	0.120 ppb	12,386.919 ppb	11,220.579 ppb
Concentration per Run 2	118.788 %	-0.153 ppb	0.020 ppb	10,921.676 ppb	7.969 ppb	0.195 ppb	0.053 ppb	12,822.680 ppb	11,662.840 ppb
Concentration per Run 3	116.554 %	-0.162 ppb	0.013 ppb	10,594.554 ppb	7.344 ppb	0.194 ppb	0.057 ppb	12,837.958 ppb	11,465.853 ppb
Concentration RSD	2.2 %	3.1 %	22.7 %	2.4 %	6.3 %	0.7 %	49.2 %	2.0 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	120.135 %	939.655 ppb	0.053 ppb	0.232 ppb	0.384 ppb	124.376 %	0.036 ppb	0.019 ppb	127.765 %
Concentration per Run 1	118.616 %	937.754 ppb	-0.029 ppb	0.230 ppb	0.336 ppb	124.035 %	0.034 ppb	0.020 ppb	127.706 %
Concentration per Run 2	120.006 %	941.118 ppb	0.037 ppb	0.237 ppb	0.387 ppb	123.611 %	0.038 ppb	0.023 ppb	126.657 %
Concentration per Run 3	121.782 %	940.094 ppb	0.152 ppb	0.230 ppb	0.430 ppb	125.481 %	0.036 ppb	0.015 ppb	128.932 %
Concentration RSD	1.3 %	0.2 %	170.9 %	1.7 %	12.3 %	0.8 %	6.1 %	19.1 %	0.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.131 ppb	11,297.721 ppb	115.232 %	134.585 %	0.156 ppb	9,542.112 ppb	198.689 %
Concentration per Run 1	0.118 ppb	11,036.246 ppb	114.032 %	132.429 %	0.112 ppb	9,491.901 ppb	223.119 %
Concentration per Run 2	0.126 ppb	11,457.220 ppb	116.708 %	135.655 %	0.177 ppb	9,563.234 ppb	191.109 %
Concentration per Run 3	0.148 ppb	11,399.696 ppb	114.954 %	135.671 %	0.177 ppb	9,571.201 ppb	181.837 %
Concentration RSD	11.7 %	2.0 %	1.2 %	1.4 %	24.1 %	0.5 %	10.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	116	User name	ALPHALAB\Metals-Instrument	Comment	FB
Analysis label:	I2416581-04 6020TL	Rack	2		
Analysis started at:	4/1/2024 3:20:07 PM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.238 %	112.966 %	0.003 ppb	4.795 ppb	176.190 ppb	8.517 ppb	1.521 ppb	2.597 ppb	44.331 ppb
Concentration per Run 1	101.680 %	117.644 %	0.007 ppb	4.445 ppb	163.602 ppb	7.664 ppb	1.497 ppb	2.939 ppb	41.050 ppb
Concentration per Run 2	96.118 %	111.926 %	-0.001 ppb	4.747 ppb	175.562 ppb	9.270 ppb	1.691 ppb	0.552 ppb	47.976 ppb
Concentration per Run 3	87.915 %	109.327 %	0.002 ppb	5.193 ppb	189.407 ppb	8.616 ppb	1.375 ppb	4.299 ppb	43.966 ppb
Concentration RSD	7.3 %	3.8 %	160.6 %	7.9 %	7.3 %	9.5 %	10.5 %	73.0 %	7.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	114.683 %	-0.149 ppb	0.883 ppb	0.185 ppb	4.435 ppb	0.001 ppb	0.047 ppb	0.195 ppb	0.150 ppb
Concentration per Run 1	119.748 %	-0.151 ppb	0.887 ppb	0.177 ppb	4.101 ppb	0.002 ppb	0.039 ppb	0.172 ppb	0.153 ppb
Concentration per Run 2	115.069 %	-0.149 ppb	0.892 ppb	0.178 ppb	4.705 ppb	0.001 ppb	0.033 ppb	0.220 ppb	0.186 ppb
Concentration per Run 3	109.232 %	-0.146 ppb	0.870 ppb	0.200 ppb	4.498 ppb	0.000 ppb	0.069 ppb	0.194 ppb	0.110 ppb
Concentration RSD	4.6 %	1.6 %	1.3 %	6.9 %	6.9 %	96.8 %	42.1 %	12.1 %	25.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.526 %	0.202 ppb	-0.044 ppb	0.216 ppb	0.135 ppb	115.456 %	-0.004 ppb	-0.001 ppb	119.227 %
Concentration per Run 1	107.689 %	0.200 ppb	-0.077 ppb	0.218 ppb	0.117 ppb	115.516 %	-0.003 ppb	0.000 ppb	120.892 %
Concentration per Run 2	110.901 %	0.192 ppb	-0.035 ppb	0.214 ppb	0.143 ppb	115.528 %	-0.004 ppb	-0.002 ppb	118.181 %
Concentration per Run 3	109.987 %	0.215 ppb	-0.019 ppb	0.217 ppb	0.145 ppb	115.323 %	-0.004 ppb	0.000 ppb	118.607 %
Concentration RSD	1.5 %	5.9 %	68.7 %	1.0 %	11.5 %	0.1 %	24.8 %	138.2 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.079 ppb	0.275 ppb	107.451 %	127.926 %	0.060 ppb	0.184 ppb	225.508 %
Concentration per Run 1	0.078 ppb	0.238 ppb	107.018 %	125.412 %	0.061 ppb	0.202 ppb	257.068 %
Concentration per Run 2	0.080 ppb	0.289 ppb	107.164 %	127.784 %	0.060 ppb	0.185 ppb	216.402 %
Concentration per Run 3	0.080 ppb	0.298 ppb	108.171 %	130.582 %	0.059 ppb	0.167 ppb	203.055 %
Concentration RSD	1.7 %	11.9 %	0.6 %	2.0 %	1.8 %	9.6 %	12.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 117
Analysis label: I2416749-27 6020TL
Analysis started at: 4/1/2024 3:24:47 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 24
Comment FB

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	94.268 %	112.158 %	0.009 ppb	2.089 ppb	-11.029 ppb	1.179 ppb	1.644 ppb	0.788 ppb	6.114 ppb
Concentration per Run 1	95.224 %	115.305 %	0.012 ppb	2.084 ppb	-15.587 ppb	1.122 ppb	1.346 ppb	4.084 ppb	7.368 ppb
Concentration per Run 2	93.401 %	111.840 %	0.005 ppb	2.217 ppb	-8.825 ppb	1.212 ppb	1.828 ppb	-2.598 ppb	4.161 ppb
Concentration per Run 3	94.179 %	109.328 %	0.012 ppb	1.966 ppb	-8.675 ppb	1.203 ppb	1.758 ppb	0.878 ppb	6.811 ppb
Concentration RSD	1.0 %	2.7 %	44.5 %	6.0 %	35.8 %	4.2 %	15.9 %	424.0 %	28.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	113.278 %	-0.162 ppb	0.810 ppb	0.048 ppb	3.265 ppb	0.002 ppb	0.045 ppb	0.348 ppb	-0.047 ppb
Concentration per Run 1	114.734 %	-0.160 ppb	0.798 ppb	0.062 ppb	2.890 ppb	0.002 ppb	0.029 ppb	0.328 ppb	-0.083 ppb
Concentration per Run 2	111.621 %	-0.169 ppb	0.816 ppb	0.028 ppb	3.497 ppb	0.003 ppb	0.066 ppb	0.355 ppb	-0.036 ppb
Concentration per Run 3	113.480 %	-0.156 ppb	0.816 ppb	0.055 ppb	3.408 ppb	0.001 ppb	0.040 ppb	0.360 ppb	-0.023 ppb
Concentration RSD	1.4 %	4.0 %	1.3 %	37.1 %	10.1 %	44.0 %	41.9 %	5.0 %	66.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.257 %	0.162 ppb	-0.032 ppb	0.012 ppb	0.112 ppb	116.646 %	-0.004 ppb	-0.001 ppb	117.117 %
Concentration per Run 1	106.905 %	0.154 ppb	-0.039 ppb	0.011 ppb	0.096 ppb	118.458 %	-0.004 ppb	-0.001 ppb	119.340 %
Concentration per Run 2	109.839 %	0.179 ppb	-0.052 ppb	0.012 ppb	0.137 ppb	117.220 %	-0.004 ppb	0.000 ppb	116.886 %
Concentration per Run 3	108.028 %	0.152 ppb	-0.005 ppb	0.013 ppb	0.104 ppb	114.259 %	-0.004 ppb	-0.001 ppb	115.126 %
Concentration RSD	1.4 %	9.3 %	76.9 %	8.0 %	19.5 %	1.8 %	10.6 %	79.3 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.073 ppb	0.013 ppb	108.254 %	127.554 %	0.042 ppb	0.125 ppb	205.956 %
Concentration per Run 1	0.070 ppb	0.009 ppb	108.627 %	128.275 %	0.026 ppb	0.129 ppb	228.455 %
Concentration per Run 2	0.071 ppb	0.013 ppb	108.032 %	127.035 %	0.050 ppb	0.124 ppb	201.377 %
Concentration per Run 3	0.078 ppb	0.016 ppb	108.102 %	127.354 %	0.049 ppb	0.122 ppb	188.037 %
Concentration RSD	6.1 %	30.9 %	0.3 %	0.5 %	31.9 %	3.0 %	10.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	118	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416581-01 6020TL	Rack	2		
Analysis started at:	4/1/2024 3:29:27 PM	Vial	20		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.110 %	107.162 %	0.062 ppb	78.617 ppb	75,229.876 ppb	23,932.388 ppb	736.117 ppb	2,791.191 ppb	172,392.931 ppb
Concentration per Run 1	91.461 %	101.790 %	0.055 ppb	78.311 ppb	77,360.011 ppb	24,644.588 ppb	741.170 ppb	2,828.238 ppb	178,022.138 ppb
Concentration per Run 2	91.356 %	110.454 %	0.071 ppb	78.095 ppb	73,853.854 ppb	23,319.210 ppb	724.707 ppb	2,771.409 ppb	167,632.777 ppb
Concentration per Run 3	87.512 %	109.241 %	0.060 ppb	79.446 ppb	74,475.761 ppb	23,833.367 ppb	742.474 ppb	2,773.925 ppb	171,523.878 ppb
Concentration RSD	2.5 %	4.4 %	13.0 %	0.9 %	2.5 %	2.8 %	1.3 %	1.2 %	3.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.976 %	3.791 ppb	29.231 ppb	273.655 ppb	1,185.301 ppb	1.463 ppb	18.198 ppb	3.605 ppb	4.974 ppb
Concentration per Run 1	113.727 %	3.807 ppb	29.503 ppb	276.546 ppb	1,194.818 ppb	1.423 ppb	18.302 ppb	3.617 ppb	5.010 ppb
Concentration per Run 2	111.344 %	3.686 ppb	28.975 ppb	273.110 ppb	1,182.109 ppb	1.471 ppb	18.117 ppb	3.576 ppb	4.959 ppb
Concentration per Run 3	107.859 %	3.881 ppb	29.216 ppb	271.310 ppb	1,178.977 ppb	1.496 ppb	18.175 ppb	3.622 ppb	4.954 ppb
Concentration RSD	2.7 %	2.6 %	0.9 %	1.0 %	0.7 %	2.5 %	0.5 %	0.7 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.912 %	0.948 ppb	0.289 ppb	233.096 ppb	3.110 ppb	99.453 %	0.000 ppb	0.018 ppb	105.132 %
Concentration per Run 1	100.536 %	0.999 ppb	0.299 ppb	253.560 ppb	2.938 ppb	99.098 %	0.000 ppb	0.017 ppb	104.754 %
Concentration per Run 2	99.207 %	0.946 ppb	0.299 ppb	223.248 ppb	3.202 ppb	98.737 %	-0.002 ppb	0.018 ppb	104.909 %
Concentration per Run 3	99.993 %	0.898 ppb	0.269 ppb	222.481 ppb	3.191 ppb	100.523 %	0.000 ppb	0.018 ppb	105.733 %
Concentration RSD	0.7 %	5.4 %	6.0 %	7.6 %	4.8 %	0.9 %	231.4 %	3.6 %	0.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.180 ppb	102.034 ppb	101.817 %	108.410 %	0.061 ppb	0.702 ppb	184.875 %
Concentration per Run 1	0.176 ppb	101.112 ppb	103.133 %	101.420 %	0.050 ppb	0.742 ppb	201.083 %
Concentration per Run 2	0.180 ppb	103.155 ppb	101.006 %	123.211 %	0.057 ppb	0.612 ppb	178.588 %
Concentration per Run 3	0.183 ppb	101.834 ppb	101.313 %	100.600 %	0.076 ppb	0.752 ppb	174.954 %
Concentration RSD	1.9 %	1.0 %	1.1 %	11.8 %	21.8 %	11.2 %	7.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	119	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416581-02 6020TL	Rack	2		
Analysis started at:	4/1/2024 3:34:06 PM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.398 %	102.310 %	0.194 ppb	97.101 ppb	17,498.338 ppb	15,454.964 ppb	2,080.537 ppb	1,950.123 ppb	132,426.227 ppb
Concentration per Run 1	89.251 %	100.404 %	0.202 ppb	97.553 ppb	17,754.727 ppb	15,463.286 ppb	2,093.181 ppb	1,921.371 ppb	134,510.459 ppb
Concentration per Run 2	88.639 %	104.216 %	0.184 ppb	97.016 ppb	17,180.149 ppb	15,210.350 ppb	2,058.694 ppb	1,956.621 ppb	130,341.822 ppb
Concentration per Run 3	87.303 %	102.310 %	0.196 ppb	96.734 ppb	17,560.137 ppb	15,691.256 ppb	2,089.737 ppb	1,972.377 ppb	132,426.398 ppb
Concentration RSD	1.1 %	1.9 %	4.6 %	0.4 %	1.7 %	1.6 %	0.9 %	1.3 %	1.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.108 %	5.683 ppb	7.720 ppb	215.194 ppb	2,465.869 ppb	2.689 ppb	7.208 ppb	7.569 ppb	10.526 ppb
Concentration per Run 1	107.233 %	5.574 ppb	7.871 ppb	213.726 ppb	2,422.979 ppb	2.648 ppb	7.199 ppb	7.531 ppb	10.379 ppb
Concentration per Run 2	107.234 %	5.834 ppb	7.591 ppb	213.384 ppb	2,458.100 ppb	2.734 ppb	7.073 ppb	7.631 ppb	10.524 ppb
Concentration per Run 3	106.856 %	5.642 ppb	7.699 ppb	218.472 ppb	2,516.528 ppb	2.685 ppb	7.352 ppb	7.546 ppb	10.675 ppb
Concentration RSD	0.2 %	2.4 %	1.8 %	1.3 %	1.9 %	1.6 %	1.9 %	0.7 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.345 %	2.716 ppb	0.883 ppb	209.717 ppb	1.758 ppb	97.677 %	0.006 ppb	0.025 ppb	103.913 %
Concentration per Run 1	98.885 %	2.675 ppb	0.863 ppb	206.473 ppb	1.647 ppb	98.636 %	0.006 ppb	0.022 ppb	106.726 %
Concentration per Run 2	97.058 %	2.750 ppb	0.909 ppb	210.515 ppb	1.747 ppb	97.190 %	0.006 ppb	0.029 ppb	102.433 %
Concentration per Run 3	96.092 %	2.722 ppb	0.876 ppb	212.162 ppb	1.879 ppb	97.204 %	0.005 ppb	0.026 ppb	102.580 %
Concentration RSD	1.5 %	1.4 %	2.7 %	1.4 %	6.7 %	0.9 %	11.6 %	13.9 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.194 ppb	170.504 ppb	94.802 %	106.518 %	0.079 ppb	1.608 ppb	168.544 %
Concentration per Run 1	0.182 ppb	161.946 ppb	101.037 %	119.760 %	0.057 ppb	1.395 ppb	193.307 %
Concentration per Run 2	0.198 ppb	167.691 ppb	100.528 %	100.500 %	0.088 ppb	1.741 ppb	175.979 %
Concentration per Run 3	0.204 ppb	181.876 ppb	82.842 %	99.296 %	0.094 ppb	1.689 ppb	136.347 %
Concentration RSD	5.7 %	6.0 %	10.9 %	10.8 %	25.2 %	11.6 %	17.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 120
Analysis label: I2416581-03 6020TL
Analysis started at: 4/1/2024 3:38:45 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 22
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.348 %	102.743 %	0.273 ppb	120.450 ppb	23,175.328 ppb	29,093.533 ppb	3,024.808 ppb	6,366.824 ppb	112,503.479 ppb
Concentration per Run 1	86.943 %	105.082 %	0.308 ppb	122.136 ppb	22,996.384 ppb	28,935.290 ppb	2,989.873 ppb	6,316.056 ppb	112,383.479 ppb
Concentration per Run 2	86.414 %	99.018 %	0.280 ppb	119.923 ppb	23,709.274 ppb	29,765.618 ppb	3,109.178 ppb	6,546.757 ppb	114,013.848 ppb
Concentration per Run 3	85.687 %	104.130 %	0.231 ppb	119.292 ppb	22,820.326 ppb	28,579.690 ppb	2,975.373 ppb	6,237.658 ppb	111,113.110 ppb
Concentration RSD	0.7 %	3.2 %	14.3 %	1.2 %	2.0 %	2.1 %	2.4 %	2.5 %	1.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.258 %	7.335 ppb	8.025 ppb	8,522.862 ppb	3,621.572 ppb	5.392 ppb	14.079 ppb	10.359 ppb	16.316 ppb
Concentration per Run 1	107.101 %	7.312 ppb	7.935 ppb	8,415.119 ppb	3,604.648 ppb	5.270 ppb	14.226 ppb	10.622 ppb	16.419 ppb
Concentration per Run 2	107.430 %	7.521 ppb	8.264 ppb	8,720.808 ppb	3,670.443 ppb	5.591 ppb	14.446 ppb	10.250 ppb	16.647 ppb
Concentration per Run 3	107.241 %	7.173 ppb	7.877 ppb	8,432.659 ppb	3,589.624 ppb	5.315 ppb	13.566 ppb	10.205 ppb	15.880 ppb
Concentration RSD	0.2 %	2.4 %	2.6 %	2.0 %	1.2 %	3.2 %	3.3 %	2.2 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.543 %	1.469 ppb	0.498 ppb	278.562 ppb	2.747 ppb	96.406 %	0.009 ppb	0.111 ppb	102.799 %
Concentration per Run 1	93.573 %	1.444 ppb	0.509 ppb	277.819 ppb	2.579 ppb	95.627 %	0.012 ppb	0.119 ppb	103.030 %
Concentration per Run 2	93.774 %	1.469 ppb	0.467 ppb	281.759 ppb	2.914 ppb	95.739 %	0.006 ppb	0.109 ppb	102.734 %
Concentration per Run 3	96.282 %	1.495 ppb	0.518 ppb	276.108 ppb	2.749 ppb	97.851 %	0.009 ppb	0.104 ppb	102.632 %
Concentration RSD	1.6 %	1.7 %	5.5 %	1.0 %	6.1 %	1.3 %	31.0 %	6.8 %	0.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.158 ppb	223.755 ppb	99.444 %	112.951 %	0.113 ppb	3.117 ppb	173.085 %
Concentration per Run 1	0.155 ppb	219.707 ppb	99.942 %	120.231 %	0.094 ppb	2.893 ppb	193.354 %
Concentration per Run 2	0.158 ppb	224.795 ppb	99.335 %	118.593 %	0.113 ppb	2.966 ppb	164.876 %
Concentration per Run 3	0.162 ppb	226.762 ppb	99.053 %	100.029 %	0.132 ppb	3.494 ppb	161.023 %
Concentration RSD	2.1 %	1.6 %	0.5 %	9.9 %	16.4 %	10.5 %	10.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	121	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416752-05 6020TL	Rack	2		
Analysis started at:	4/1/2024 3:43:27 PM	Vial	25		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	78.672 %	102.974 %	2.075 ppb	340.129 ppb	1,014,369.241 ppb	60,350.808 ppb	19,157.698 ppb	40,047.760 ppb	233,395.036 ppb
Concentration per Run 1	81.898 %	98.412 %	2.067 ppb	336.554 ppb	1,058,773.250 ppb	63,267.721 ppb	19,799.398 ppb	41,020.313 ppb	241,078.402 ppb
Concentration per Run 2	78.240 %	103.090 %	2.056 ppb	338.240 ppb	1,023,301.511 ppb	60,539.610 ppb	19,073.060 ppb	39,655.624 ppb	232,582.931 ppb
Concentration per Run 3	75.879 %	107.422 %	2.101 ppb	345.593 ppb	961,032.964 ppb	57,245.092 ppb	18,600.636 ppb	39,467.342 ppb	226,523.776 ppb
Concentration RSD	3.9 %	4.4 %	1.1 %	1.4 %	4.9 %	5.0 %	3.2 %	2.1 %	3.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	130.707 %	80.012 ppb	299.198 ppb	6,535.293 ppb	143,575.520 ppb	21.666 ppb	67.969 ppb	65.389 ppb	1,531.288 ppb
Concentration per Run 1	134.497 %	81.985 ppb	304.708 ppb	6,650.930 ppb	144,149.049 ppb	21.980 ppb	69.457 ppb	65.283 ppb	1,544.207 ppb
Concentration per Run 2	127.553 %	80.169 ppb	301.210 ppb	6,518.555 ppb	145,091.850 ppb	21.779 ppb	68.097 ppb	66.440 ppb	1,539.367 ppb
Concentration per Run 3	130.070 %	77.883 ppb	291.675 ppb	6,436.394 ppb	141,485.663 ppb	21.238 ppb	66.352 ppb	64.444 ppb	1,510.289 ppb
Concentration RSD	2.7 %	2.6 %	2.3 %	1.7 %	1.3 %	1.8 %	2.3 %	1.5 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.162 %	10.026 ppb	3.630 ppb	3,440.090 ppb	21.726 ppb	90.280 %	0.117 ppb	2.027 ppb	98.314 %
Concentration per Run 1	92.823 %	10.184 ppb	3.903 ppb	3,438.196 ppb	20.883 ppb	90.484 %	0.124 ppb	2.043 ppb	98.258 %
Concentration per Run 2	94.565 %	9.903 ppb	3.550 ppb	3,486.745 ppb	22.026 ppb	88.390 %	0.115 ppb	2.021 ppb	98.149 %
Concentration per Run 3	98.099 %	9.991 ppb	3.437 ppb	3,395.330 ppb	22.271 ppb	91.966 %	0.112 ppb	2.017 ppb	98.536 %
Concentration RSD	2.8 %	1.4 %	6.7 %	1.3 %	3.4 %	2.0 %	5.2 %	0.7 %	0.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.575 ppb	1,733.977 ppb	84.295 %	95.447 %	0.152 ppb	535.715 ppb	140.635 %
Concentration per Run 1	0.566 ppb	1,703.600 ppb	85.124 %	96.478 %	0.135 ppb	530.752 ppb	182.150 %
Concentration per Run 2	0.563 ppb	1,744.620 ppb	82.453 %	93.919 %	0.161 ppb	538.859 ppb	119.049 %
Concentration per Run 3	0.596 ppb	1,753.711 ppb	85.307 %	95.945 %	0.160 ppb	537.534 ppb	120.707 %
Concentration RSD	3.2 %	1.5 %	1.9 %	1.4 %	9.8 %	0.8 %	25.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 122
Analysis label: I2416851-01 6020TL
Analysis started at: 4/1/2024 3:48:06 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 26
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.018 %	105.198 %	0.006 ppb	23.136 ppb	65,076.531 ppb	3,909.321 ppb	60.832 ppb	10,592.513 ppb	13,351.084 ppb
Concentration per Run 1	87.507 %	111.580 %	0.005 ppb	23.680 ppb	62,323.079 ppb	3,751.500 ppb	56.961 ppb	10,275.701 ppb	13,274.370 ppb
Concentration per Run 2	87.606 %	100.404 %	0.003 ppb	23.072 ppb	67,256.067 ppb	4,046.659 ppb	63.687 ppb	10,927.993 ppb	13,468.202 ppb
Concentration per Run 3	88.942 %	103.610 %	0.009 ppb	22.657 ppb	65,650.446 ppb	3,929.805 ppb	61.847 ppb	10,573.844 ppb	13,310.679 ppb
Concentration RSD	0.9 %	5.5 %	58.7 %	2.2 %	3.9 %	3.8 %	5.7 %	3.1 %	0.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.981 %	-0.029 ppb	0.984 ppb	15.983 ppb	810.178 ppb	0.360 ppb	2.996 ppb	41.973 ppb	72.055 ppb
Concentration per Run 1	109.516 %	-0.022 ppb	0.973 ppb	15.404 ppb	803.380 ppb	0.341 ppb	2.972 ppb	41.277 ppb	71.562 ppb
Concentration per Run 2	111.212 %	-0.011 ppb	1.001 ppb	16.276 ppb	823.569 ppb	0.368 ppb	3.015 ppb	42.851 ppb	72.131 ppb
Concentration per Run 3	112.215 %	-0.055 ppb	0.978 ppb	16.269 ppb	803.584 ppb	0.370 ppb	3.002 ppb	41.790 ppb	72.472 ppb
Concentration RSD	1.2 %	78.0 %	1.5 %	3.1 %	1.4 %	4.4 %	0.7 %	1.9 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.303 %	0.317 ppb	0.261 ppb	38.747 ppb	1.076 ppb	107.321 %	0.268 ppb	0.071 ppb	111.938 %
Concentration per Run 1	105.019 %	0.330 ppb	0.262 ppb	38.337 ppb	1.093 ppb	109.340 %	0.262 ppb	0.064 ppb	114.771 %
Concentration per Run 2	104.308 %	0.290 ppb	0.300 ppb	38.832 ppb	1.075 ppb	106.815 %	0.265 ppb	0.077 ppb	111.451 %
Concentration per Run 3	103.583 %	0.332 ppb	0.222 ppb	39.072 ppb	1.059 ppb	105.810 %	0.276 ppb	0.072 ppb	109.592 %
Concentration RSD	0.7 %	7.4 %	15.0 %	1.0 %	1.6 %	1.7 %	2.8 %	9.4 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.242 ppb	11.329 ppb	104.627 %	124.706 %	0.030 ppb	1.580 ppb	195.456 %
Concentration per Run 1	0.230 ppb	11.078 ppb	106.104 %	125.912 %	0.016 ppb	1.563 ppb	210.146 %
Concentration per Run 2	0.243 ppb	11.254 ppb	104.913 %	124.453 %	0.034 ppb	1.588 ppb	190.742 %
Concentration per Run 3	0.253 ppb	11.656 ppb	102.864 %	123.753 %	0.039 ppb	1.588 ppb	185.479 %
Concentration RSD	4.7 %	2.6 %	1.6 %	0.9 %	40.7 %	0.9 %	6.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 123
Analysis label: zLDR Check Ca 50ppm
Analysis started at: 4/1/2024 3:57:18 PM
User name ALPHALAB\Metals-Instrument
Rack 4
Vial 3
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	99.601 %	118.713 %	0.003 ppb	3.674 ppb	52.239 ppb	27.262 ppb	3.895 ppb	14.112 ppb	56,869.461 ppb
Concentration per Run 1	101.341 %	123.622 %	0.002 ppb	3.630 ppb	39.683 ppb	24.888 ppb	4.012 ppb	8.403 ppb	56,568.893 ppb
Concentration per Run 2	98.393 %	117.558 %	-0.002 ppb	3.674 ppb	58.808 ppb	28.185 ppb	3.921 ppb	20.037 ppb	57,709.656 ppb
Concentration per Run 3	99.068 %	114.959 %	0.008 ppb	3.717 ppb	58.225 ppb	28.715 ppb	3.754 ppb	13.896 ppb	56,329.835 ppb
Concentration RSD	1.6 %	3.7 %	192.3 %	1.2 %	20.8 %	7.6 %	3.4 %	41.2 %	1.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	126.115 %	-0.101 ppb	0.187 ppb	0.470 ppb	23.327 ppb	0.016 ppb	0.132 ppb	0.313 ppb	1.175 ppb
Concentration per Run 1	125.940 %	-0.105 ppb	0.174 ppb	0.453 ppb	21.460 ppb	0.017 ppb	0.097 ppb	0.349 ppb	1.069 ppb
Concentration per Run 2	125.641 %	-0.084 ppb	0.193 ppb	0.511 ppb	24.429 ppb	0.014 ppb	0.139 ppb	0.313 ppb	1.293 ppb
Concentration per Run 3	126.766 %	-0.113 ppb	0.195 ppb	0.445 ppb	24.090 ppb	0.017 ppb	0.159 ppb	0.278 ppb	1.164 ppb
Concentration RSD	0.5 %	14.7 %	6.2 %	7.7 %	7.0 %	11.1 %	24.1 %	11.4 %	9.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	116.914 %	0.120 ppb	-0.020 ppb	0.298 ppb	0.155 ppb	120.936 %	0.007 ppb	0.004 ppb	124.092 %
Concentration per Run 1	115.942 %	0.102 ppb	-0.046 ppb	0.297 ppb	0.145 ppb	121.890 %	0.005 ppb	0.002 ppb	128.111 %
Concentration per Run 2	116.544 %	0.118 ppb	-0.052 ppb	0.301 ppb	0.152 ppb	121.053 %	0.009 ppb	0.007 ppb	122.877 %
Concentration per Run 3	118.255 %	0.140 ppb	0.038 ppb	0.296 ppb	0.166 ppb	119.864 %	0.007 ppb	0.002 ppb	121.288 %
Concentration RSD	1.0 %	16.0 %	251.4 %	0.8 %	7.0 %	0.8 %	25.9 %	77.9 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.082 ppb	0.099 ppb	111.910 %	131.877 %	0.025 ppb	0.135 ppb	217.675 %
Concentration per Run 1	0.078 ppb	0.090 ppb	114.598 %	134.075 %	0.019 ppb	0.136 ppb	265.842 %
Concentration per Run 2	0.074 ppb	0.104 ppb	110.948 %	130.697 %	0.026 ppb	0.136 ppb	201.044 %
Concentration per Run 3	0.094 ppb	0.104 ppb	110.184 %	130.859 %	0.029 ppb	0.132 ppb	186.138 %
Concentration RSD	12.7 %	7.7 %	2.1 %	1.4 %	19.6 %	1.5 %	19.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 124
Analysis label: WG1902455-2d10 6020TL
Analysis started at: 4/1/2024 4:11:50 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 11
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.817 %	118.857 %	4.909 ppb	97.944 ppb	860.933 ppb	1,019.840 ppb	181.685 ppb	1,060.729 ppb	1,020.241 ppb
Concentration per Run 1	97.834 %	121.023 %	4.815 ppb	97.479 ppb	853.060 ppb	995.114 ppb	179.677 ppb	1,057.881 ppb	1,004.007 ppb
Concentration per Run 2	97.226 %	118.424 %	4.873 ppb	97.823 ppb	847.797 ppb	1,002.300 ppb	181.312 ppb	1,078.152 ppb	1,037.997 ppb
Concentration per Run 3	92.391 %	117.124 %	5.040 ppb	98.531 ppb	881.941 ppb	1,062.107 ppb	184.068 ppb	1,046.155 ppb	1,018.719 ppb
Concentration RSD	3.1 %	1.7 %	2.4 %	0.5 %	2.1 %	3.6 %	1.2 %	1.5 %	1.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.743 %	46.981 ppb	19.128 ppb	45.551 ppb	108.045 ppb	49.916 ppb	50.707 ppb	25.110 ppb	47.455 ppb
Concentration per Run 1	119.272 %	46.074 ppb	18.640 ppb	44.241 ppb	105.842 ppb	49.543 ppb	50.805 ppb	25.043 ppb	46.898 ppb
Concentration per Run 2	117.959 %	47.318 ppb	19.378 ppb	45.773 ppb	110.727 ppb	49.935 ppb	50.363 ppb	25.173 ppb	46.994 ppb
Concentration per Run 3	112.999 %	47.553 ppb	19.367 ppb	46.639 ppb	107.567 ppb	50.268 ppb	50.955 ppb	25.115 ppb	48.473 ppb
Concentration RSD	2.8 %	1.7 %	2.2 %	2.7 %	2.3 %	0.7 %	0.6 %	0.3 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	110.836 %	12.144 ppb	11.802 ppb	97.563 ppb	101.692 ppb	117.142 %	4.810 ppb	5.281 ppb	118.598 %
Concentration per Run 1	111.794 %	11.929 ppb	11.416 ppb	94.957 ppb	100.587 ppb	120.398 %	4.722 ppb	5.200 ppb	120.991 %
Concentration per Run 2	111.079 %	12.111 ppb	11.905 ppb	98.199 ppb	101.489 ppb	115.664 %	4.896 ppb	5.335 ppb	117.513 %
Concentration per Run 3	109.636 %	12.393 ppb	12.084 ppb	99.533 ppb	103.001 ppb	115.363 %	4.814 ppb	5.308 ppb	117.289 %
Concentration RSD	1.0 %	1.9 %	2.9 %	2.4 %	1.2 %	2.4 %	1.8 %	1.3 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	41.058 ppb	200.105 ppb	108.370 %	122.285 %	10.861 ppb	51.655 ppb	191.869 %
Concentration per Run 1	39.760 ppb	196.382 ppb	109.476 %	107.160 %	12.243 ppb	58.544 ppb	199.829 %
Concentration per Run 2	41.088 ppb	200.460 ppb	107.224 %	131.039 %	10.058 ppb	47.414 ppb	187.810 %
Concentration per Run 3	42.326 ppb	203.473 ppb	108.411 %	128.655 %	10.283 ppb	49.007 ppb	187.969 %
Concentration RSD	3.1 %	1.8 %	1.0 %	10.8 %	11.1 %	11.7 %	3.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	125	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 4:18:23 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.882 %	106.469 %	61.770 ppb	62.979 ppb	6,530.692 ppb	6,371.586 ppb	58.894 ppb	6,471.246 ppb	6,501.255 ppb
Concentration per Run 1	90.740 %	109.154 %	59.294 ppb	60.506 ppb	6,426.100 ppb	6,271.098 ppb	57.392 ppb	6,482.977 ppb	6,421.855 ppb
Concentration per Run 2	86.191 %	105.169 %	61.830 ppb	63.107 ppb	6,671.394 ppb	6,403.667 ppb	61.274 ppb	6,490.507 ppb	6,609.619 ppb
Concentration per Run 3	83.714 %	105.082 %	64.187 ppb	65.324 ppb	6,494.583 ppb	6,439.994 ppb	58.016 ppb	6,440.255 ppb	6,472.292 ppb
Recovery Percentage 1			102.950 %	104.965 %	108.845 %	106.193 %	98.157 %	107.854 %	108.354 %
Concentration RSD	4.1 %	2.2 %	4.0 %	3.8 %	1.9 %	1.4 %	3.5 %	0.4 %	1.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.154 %	59.579 ppb	59.544 ppb	56.086 ppb	6,067.674 ppb	62.484 ppb	62.154 ppb	62.303 ppb	58.519 ppb
Concentration per Run 1	112.429 %	58.169 ppb	57.790 ppb	54.307 ppb	5,930.745 ppb	61.864 ppb	62.049 ppb	62.935 ppb	58.401 ppb
Concentration per Run 2	106.758 %	61.220 ppb	61.039 ppb	58.214 ppb	6,259.854 ppb	64.159 ppb	63.119 ppb	63.133 ppb	59.464 ppb
Concentration per Run 3	105.274 %	59.349 ppb	59.803 ppb	55.737 ppb	6,012.423 ppb	61.427 ppb	61.294 ppb	60.839 ppb	57.691 ppb
Recovery Percentage 1		99.299 %	99.240 %	93.477 %	101.128 %	104.139 %	103.590 %	103.838 %	97.531 %
Concentration RSD	3.5 %	2.6 %	2.8 %	3.5 %	2.8 %	2.3 %	1.5 %	2.0 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.524 %	61.259 ppb	59.732 ppb	60.751 ppb	61.496 ppb	108.185 %	60.617 ppb	62.494 ppb	109.645 %
Concentration per Run 1	107.347 %	60.960 ppb	58.383 ppb	60.124 ppb	58.228 ppb	110.426 %	59.939 ppb	61.044 ppb	113.445 %
Concentration per Run 2	103.060 %	62.910 ppb	60.507 ppb	61.403 ppb	62.859 ppb	107.657 %	61.304 ppb	63.670 ppb	108.343 %
Concentration per Run 3	106.165 %	59.908 ppb	60.307 ppb	60.726 ppb	63.402 ppb	106.473 %	60.607 ppb	62.770 ppb	107.149 %
Recovery Percentage 1		102.099 %	99.554 %	101.252 %	102.494 %		101.028 %	104.157 %	
Concentration RSD	2.1 %	2.5 %	2.0 %	1.1 %	4.6 %	1.9 %	1.1 %	2.1 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	64.172 ppb	63.981 ppb	101.883 %	108.081 %	65.499 ppb	62.692 ppb	181.653 %
Concentration per Run 1	62.929 ppb	62.849 ppb	103.194 %	119.735 %	54.682 ppb	56.922 ppb	227.672 %
Concentration per Run 2	65.085 ppb	64.632 ppb	101.851 %	102.646 %	69.084 ppb	65.472 ppb	179.382 %
Concentration per Run 3	64.500 ppb	64.462 ppb	100.605 %	101.861 %	72.730 ppb	65.681 ppb	137.905 %
Recovery Percentage 1	106.953 %	106.635 %			109.164 %	104.486 %	
Concentration RSD	1.7 %	1.5 %	1.3 %	9.3 %	14.6 %	8.0 %	24.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 126
Analysis label: CCB
Analysis started at: 4/1/2024 4:23:05 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.456 %	104.245 %	0.008 ppb	3.462 ppb	28.320 ppb	0.009 ppb	-0.322 ppb	2.972 ppb	0.889 ppb
Concentration per Run 1	88.784 %	102.570 %	0.009 ppb	3.546 ppb	35.792 ppb	0.006 ppb	-0.275 ppb	5.881 ppb	0.828 ppb
Concentration per Run 2	89.018 %	103.696 %	0.003 ppb	3.508 ppb	25.967 ppb	-0.007 ppb	-0.288 ppb	-0.784 ppb	1.584 ppb
Concentration per Run 3	90.565 %	106.469 %	0.012 ppb	3.331 ppb	23.201 ppb	0.026 ppb	-0.402 ppb	3.819 ppb	0.255 ppb
Recovery Percentage 1			1.674 %	34.620 %	28.320 %	0.012 %	-3.216 %	2.972 %	0.889 %
Concentration RSD	1.1 %	1.9 %	53.8 %	3.3 %	23.4 %	193.3 %	21.8 %	114.8 %	74.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.407 %	-0.149 ppb	0.004 ppb	0.078 ppb	14.877 ppb	0.001 ppb	-0.005 ppb	0.018 ppb	-0.655 ppb
Concentration per Run 1	106.002 %	-0.157 ppb	0.000 ppb	0.088 ppb	17.288 ppb	0.001 ppb	-0.014 ppb	0.007 ppb	-0.669 ppb
Concentration per Run 2	109.545 %	-0.143 ppb	0.012 ppb	0.051 ppb	13.587 ppb	-0.001 ppb	-0.001 ppb	0.016 ppb	-0.636 ppb
Concentration per Run 3	112.673 %	-0.146 ppb	0.002 ppb	0.095 ppb	13.758 ppb	0.002 ppb	0.000 ppb	0.033 ppb	-0.658 ppb
Recovery Percentage 1		-2.975 %	0.423 %	7.771 %	29.755 %	0.133 %	-0.242 %	1.835 %	-13.091 %
Concentration RSD	3.1 %	5.1 %	153.6 %	30.5 %	14.0 %	163.6 %	163.2 %	71.2 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.732 %	0.147 ppb	0.246 ppb	0.009 ppb	1.527 ppb	108.770 %	0.005 ppb	0.007 ppb	109.175 %
Concentration per Run 1	100.826 %	0.172 ppb	0.233 ppb	0.010 ppb	1.546 ppb	108.721 %	0.008 ppb	0.009 ppb	110.571 %
Concentration per Run 2	102.470 %	0.143 ppb	0.299 ppb	0.009 ppb	1.475 ppb	108.629 %	0.003 ppb	0.006 ppb	109.021 %
Concentration per Run 3	104.901 %	0.127 ppb	0.204 ppb	0.010 ppb	1.559 ppb	108.960 %	0.002 ppb	0.005 ppb	107.932 %
Recovery Percentage 1		29.483 %	4.911 %	0.095 %	76.326 %		1.156 %	3.423 %	
Concentration RSD	2.0 %	15.7 %	19.8 %	5.6 %	3.0 %	0.2 %	72.6 %	29.0 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.879 ppb	0.017 ppb	101.755 %	101.137 %	0.692 ppb	0.090 ppb	171.197 %
Concentration per Run 1	0.886 ppb	0.018 ppb	100.915 %	100.633 %	0.638 ppb	0.095 ppb	198.830 %
Concentration per Run 2	0.854 ppb	0.020 ppb	100.678 %	100.324 %	0.803 ppb	0.091 ppb	141.882 %
Concentration per Run 3	0.896 ppb	0.013 ppb	103.673 %	102.455 %	0.635 ppb	0.084 ppb	172.878 %
Recovery Percentage 1	21.966 %	3.409 %			69.182 %	8.991 %	
Concentration RSD	2.5 %	20.5 %	1.6 %	1.1 %	13.9 %	6.3 %	16.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 127
Analysis label: WG1902455-2d50 6020TL
Analysis started at: 4/1/2024 4:31:37 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 28
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.202 %	109.385 %	1.043 ppb	22.723 ppb	184.883 ppb	208.141 ppb	37.639 ppb	218.772 ppb	216.235 ppb
Concentration per Run 1	90.286 %	112.013 %	1.062 ppb	22.758 ppb	174.178 ppb	208.694 ppb	37.248 ppb	211.223 ppb	223.769 ppb
Concentration per Run 2	89.803 %	108.548 %	1.053 ppb	22.616 ppb	186.783 ppb	206.554 ppb	38.062 ppb	220.852 ppb	206.852 ppb
Concentration per Run 3	87.516 %	107.595 %	1.013 ppb	22.796 ppb	193.689 ppb	209.175 ppb	37.608 ppb	224.241 ppb	218.084 ppb
Concentration RSD	1.7 %	2.1 %	2.5 %	0.4 %	5.4 %	0.7 %	1.1 %	3.1 %	4.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.745 %	9.388 ppb	3.989 ppb	9.507 ppb	26.386 ppb	10.319 ppb	10.372 ppb	5.249 ppb	9.470 ppb
Concentration per Run 1	105.585 %	9.160 ppb	3.892 ppb	9.471 ppb	26.206 ppb	10.410 ppb	10.342 ppb	5.122 ppb	9.365 ppb
Concentration per Run 2	106.449 %	9.359 ppb	3.995 ppb	9.259 ppb	25.284 ppb	10.287 ppb	10.373 ppb	5.455 ppb	9.638 ppb
Concentration per Run 3	105.202 %	9.644 ppb	4.080 ppb	9.791 ppb	27.669 ppb	10.261 ppb	10.400 ppb	5.169 ppb	9.407 ppb
Concentration RSD	0.6 %	2.6 %	2.4 %	2.8 %	4.6 %	0.8 %	0.3 %	3.4 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.345 %	2.557 ppb	2.497 ppb	19.845 ppb	19.039 ppb	110.427 %	0.977 ppb	1.050 ppb	112.833 %
Concentration per Run 1	104.538 %	2.492 ppb	2.370 ppb	19.608 ppb	18.266 ppb	113.353 %	0.959 ppb	0.974 ppb	116.027 %
Concentration per Run 2	100.894 %	2.595 ppb	2.498 ppb	19.890 ppb	19.168 ppb	106.832 %	0.991 ppb	1.115 ppb	109.662 %
Concentration per Run 3	104.603 %	2.584 ppb	2.624 ppb	20.036 ppb	19.681 ppb	111.096 %	0.979 ppb	1.063 ppb	112.810 %
Concentration RSD	2.1 %	2.2 %	5.1 %	1.1 %	3.8 %	3.0 %	1.6 %	6.8 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	7.006 ppb	40.945 ppb	103.244 %	117.422 %	2.299 ppb	9.550 ppb	214.761 %
Concentration per Run 1	6.801 ppb	39.501 ppb	105.922 %	127.502 %	2.023 ppb	8.621 ppb	262.913 %
Concentration per Run 2	7.128 ppb	42.476 ppb	100.206 %	99.805 %	2.689 ppb	11.149 ppb	197.914 %
Concentration per Run 3	7.088 ppb	40.858 ppb	103.605 %	124.958 %	2.184 ppb	8.881 ppb	183.455 %
Concentration RSD	2.6 %	3.6 %	2.8 %	13.0 %	15.1 %	14.6 %	19.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 128
Analysis label: WG1902455-6d25 6020TL
Analysis started at: 4/1/2024 4:38:35 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 31
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	90.975 %	109.963 %	0.014 ppb	3.259 ppb	91.836 ppb	120.421 ppb	135.681 ppb	60.981 ppb	407.640 ppb
Concentration per Run 1	93.331 %	105.082 %	0.013 ppb	3.175 ppb	110.949 ppb	125.554 ppb	142.043 ppb	66.438 ppb	421.695 ppb
Concentration per Run 2	90.114 %	116.431 %	0.018 ppb	3.304 ppb	65.572 ppb	112.626 ppb	127.051 ppb	57.066 ppb	386.513 ppb
Concentration per Run 3	89.479 %	108.375 %	0.010 ppb	3.298 ppb	98.987 ppb	123.082 ppb	137.949 ppb	59.440 ppb	414.712 ppb
Concentration RSD	2.3 %	5.3 %	30.8 %	2.2 %	25.6 %	5.7 %	5.7 %	8.0 %	4.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.902 %	0.313 ppb	0.331 ppb	7.288 ppb	485.546 ppb	0.299 ppb	0.169 ppb	0.243 ppb	2.775 ppb
Concentration per Run 1	106.747 %	0.280 ppb	0.329 ppb	7.326 ppb	487.803 ppb	0.323 ppb	0.151 ppb	0.229 ppb	2.872 ppb
Concentration per Run 2	103.974 %	0.288 ppb	0.334 ppb	6.883 ppb	461.331 ppb	0.261 ppb	0.210 ppb	0.252 ppb	2.613 ppb
Concentration per Run 3	106.984 %	0.370 ppb	0.329 ppb	7.656 ppb	507.504 ppb	0.313 ppb	0.145 ppb	0.247 ppb	2.839 ppb
Concentration RSD	1.6 %	15.9 %	0.9 %	5.3 %	4.8 %	11.2 %	21.4 %	5.1 %	5.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.726 %	0.241 ppb	0.024 ppb	1.647 ppb	0.416 ppb	109.449 %	-0.003 ppb	0.011 ppb	111.607 %
Concentration per Run 1	103.189 %	0.251 ppb	0.031 ppb	1.688 ppb	0.381 ppb	108.115 %	-0.002 ppb	0.013 ppb	108.266 %
Concentration per Run 2	107.030 %	0.197 ppb	0.011 ppb	1.551 ppb	0.358 ppb	113.502 %	-0.004 ppb	0.009 ppb	116.438 %
Concentration per Run 3	100.960 %	0.275 ppb	0.031 ppb	1.702 ppb	0.507 ppb	106.731 %	-0.002 ppb	0.012 ppb	110.117 %
Concentration RSD	3.0 %	16.6 %	48.1 %	5.1 %	19.3 %	3.3 %	51.4 %	18.9 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.810 ppb	1.003 ppb	103.236 %	117.358 %	0.066 ppb	0.184 ppb	202.426 %
Concentration per Run 1	0.830 ppb	1.076 ppb	100.314 %	119.952 %	0.047 ppb	0.183 ppb	221.134 %
Concentration per Run 2	0.762 ppb	0.867 ppb	107.613 %	129.824 %	0.064 ppb	0.157 ppb	195.456 %
Concentration per Run 3	0.838 ppb	1.067 ppb	101.780 %	102.296 %	0.085 ppb	0.212 ppb	190.687 %
Concentration RSD	5.2 %	11.7 %	3.7 %	11.9 %	28.7 %	14.9 %	8.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 129
Analysis label: WG1902455-4d5 6020TL
Analysis started at: 4/1/2024 4:43:15 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 30
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.153 %	109.154 %	0.043 ppb	6.621 ppb	446.866 ppb	625.386 ppb	764.081 ppb	310.827 ppb	2,083.371 ppb
Concentration per Run 1	89.499 %	113.746 %	0.038 ppb	6.552 ppb	421.324 ppb	602.382 ppb	729.405 ppb	293.961 ppb	2,028.952 ppb
Concentration per Run 2	88.622 %	104.216 %	0.048 ppb	6.579 ppb	474.251 ppb	645.622 ppb	796.569 ppb	325.931 ppb	2,166.268 ppb
Concentration per Run 3	86.337 %	109.501 %	0.042 ppb	6.734 ppb	445.022 ppb	628.154 ppb	766.270 ppb	312.590 ppb	2,054.893 ppb
Concentration RSD	1.9 %	4.4 %	11.6 %	1.5 %	5.9 %	3.5 %	4.4 %	5.2 %	3.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.255 %	2.146 ppb	1.783 ppb	36.630 ppb	2,514.687 ppb	1.580 ppb	0.863 ppb	1.351 ppb	16.438 ppb
Concentration per Run 1	111.323 %	2.102 ppb	1.714 ppb	35.721 ppb	2,437.875 ppb	1.492 ppb	0.805 ppb	1.292 ppb	16.038 ppb
Concentration per Run 2	109.495 %	2.177 ppb	1.890 ppb	37.541 ppb	2,595.855 ppb	1.651 ppb	0.916 ppb	1.381 ppb	16.814 ppb
Concentration per Run 3	109.948 %	2.160 ppb	1.746 ppb	36.629 ppb	2,510.331 ppb	1.598 ppb	0.867 ppb	1.382 ppb	16.461 ppb
Concentration RSD	0.9 %	1.8 %	5.3 %	2.5 %	3.1 %	5.1 %	6.4 %	3.8 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.244 %	0.690 ppb	0.101 ppb	8.308 ppb	0.260 ppb	111.261 %	-0.001 ppb	0.070 ppb	113.243 %
Concentration per Run 1	108.334 %	0.658 ppb	0.091 ppb	8.102 ppb	0.217 ppb	113.938 %	-0.002 ppb	0.065 ppb	115.533 %
Concentration per Run 2	104.707 %	0.764 ppb	0.102 ppb	8.435 ppb	0.266 ppb	109.589 %	0.000 ppb	0.064 ppb	111.806 %
Concentration per Run 3	105.692 %	0.647 ppb	0.109 ppb	8.386 ppb	0.297 ppb	110.255 %	-0.002 ppb	0.080 ppb	112.389 %
Concentration RSD	1.8 %	9.4 %	9.0 %	2.2 %	15.6 %	2.1 %	98.9 %	13.2 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.438 ppb	4.947 ppb	104.893 %	119.276 %	0.053 ppb	0.771 ppb	196.045 %
Concentration per Run 1	0.417 ppb	4.899 ppb	106.840 %	127.052 %	0.035 ppb	0.711 ppb	221.062 %
Concentration per Run 2	0.469 ppb	4.945 ppb	103.218 %	103.470 %	0.068 ppb	0.887 ppb	186.564 %
Concentration per Run 3	0.428 ppb	4.996 ppb	104.620 %	127.306 %	0.056 ppb	0.715 ppb	180.508 %
Concentration RSD	6.3 %	1.0 %	1.7 %	11.5 %	31.7 %	13.1 %	11.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	130	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416511-01d5 6020TL	Rack	2		
Analysis started at:	4/1/2024 4:47:54 PM	Vial	29		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.207 %	106.238 %	0.061 ppb	6.854 ppb	458.811 ppb	620.190 ppb	703.492 ppb	315.021 ppb	2,171.605 ppb
Concentration per Run 1	88.800 %	102.657 %	0.057 ppb	6.683 ppb	475.161 ppb	634.306 ppb	710.867 ppb	320.345 ppb	2,289.667 ppb
Concentration per Run 2	85.351 %	109.154 %	0.070 ppb	7.018 ppb	454.067 ppb	616.736 ppb	698.336 ppb	313.087 ppb	2,092.019 ppb
Concentration per Run 3	84.471 %	106.902 %	0.056 ppb	6.861 ppb	447.204 ppb	609.527 ppb	701.274 ppb	311.632 ppb	2,133.131 ppb
Concentration RSD	2.7 %	3.1 %	12.6 %	2.4 %	3.2 %	2.1 %	0.9 %	1.5 %	4.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.586 %	2.211 ppb	1.741 ppb	36.525 ppb	2,466.534 ppb	1.543 ppb	0.778 ppb	1.267 ppb	16.411 ppb
Concentration per Run 1	106.948 %	2.206 ppb	1.772 ppb	36.841 ppb	2,468.576 ppb	1.556 ppb	0.789 ppb	1.287 ppb	16.728 ppb
Concentration per Run 2	105.069 %	2.219 ppb	1.744 ppb	36.481 ppb	2,461.925 ppb	1.576 ppb	0.792 ppb	1.249 ppb	16.250 ppb
Concentration per Run 3	104.740 %	2.207 ppb	1.707 ppb	36.252 ppb	2,469.100 ppb	1.497 ppb	0.753 ppb	1.264 ppb	16.256 ppb
Concentration RSD	1.1 %	0.3 %	1.9 %	0.8 %	0.2 %	2.7 %	2.8 %	1.5 %	1.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.242 %	0.762 ppb	0.110 ppb	8.444 ppb	0.217 ppb	109.641 %	-0.001 ppb	0.073 ppb	111.009 %
Concentration per Run 1	102.974 %	0.782 ppb	0.054 ppb	8.471 ppb	0.201 ppb	109.663 %	-0.002 ppb	0.072 ppb	112.304 %
Concentration per Run 2	102.501 %	0.773 ppb	0.196 ppb	8.450 ppb	0.211 ppb	110.074 %	-0.001 ppb	0.076 ppb	110.019 %
Concentration per Run 3	104.251 %	0.729 ppb	0.081 ppb	8.412 ppb	0.240 ppb	109.185 %	-0.001 ppb	0.071 ppb	110.704 %
Concentration RSD	0.9 %	3.7 %	68.1 %	0.4 %	9.4 %	0.4 %	48.6 %	4.3 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.302 ppb	4.949 ppb	102.429 %	109.489 %	0.048 ppb	0.791 ppb	162.373 %
Concentration per Run 1	0.291 ppb	5.034 ppb	101.993 %	102.760 %	0.036 ppb	0.836 ppb	201.332 %
Concentration per Run 2	0.298 ppb	4.974 ppb	102.825 %	102.283 %	0.060 ppb	0.843 ppb	144.332 %
Concentration per Run 3	0.318 ppb	4.840 ppb	102.469 %	123.424 %	0.049 ppb	0.695 ppb	141.455 %
Concentration RSD	4.6 %	2.0 %	0.4 %	11.0 %	25.6 %	10.6 %	20.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	131	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416511-02d100 6020TL	Rack	2		
Analysis started at:	4/1/2024 4:52:33 PM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	82.671 %	105.978 %	0.010 ppb	3.740 ppb	53.866 ppb	53.197 ppb	60.546 ppb	57.378 ppb	352.352 ppb
Concentration per Run 1	85.770 %	104.389 %	0.009 ppb	3.638 ppb	56.274 ppb	53.631 ppb	61.766 ppb	55.504 ppb	339.060 ppb
Concentration per Run 2	83.484 %	107.508 %	0.009 ppb	3.641 ppb	49.333 ppb	52.453 ppb	59.382 ppb	58.673 ppb	350.361 ppb
Concentration per Run 3	78.761 %	106.035 %	0.011 ppb	3.941 ppb	55.990 ppb	53.508 ppb	60.490 ppb	57.956 ppb	367.636 ppb
Concentration RSD	4.3 %	1.5 %	12.6 %	4.7 %	7.3 %	1.2 %	2.0 %	2.9 %	4.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.756 %	0.188 ppb	0.182 ppb	2.329 ppb	287.585 ppb	0.087 ppb	0.302 ppb	0.113 ppb	25.457 ppb
Concentration per Run 1	97.120 %	0.204 ppb	0.181 ppb	2.200 ppb	277.467 ppb	0.089 ppb	0.293 ppb	0.073 ppb	25.122 ppb
Concentration per Run 2	94.855 %	0.206 ppb	0.190 ppb	2.344 ppb	288.249 ppb	0.082 ppb	0.338 ppb	0.129 ppb	25.372 ppb
Concentration per Run 3	92.295 %	0.155 ppb	0.174 ppb	2.442 ppb	297.038 ppb	0.089 ppb	0.273 ppb	0.136 ppb	25.877 ppb
Concentration RSD	2.5 %	15.2 %	4.5 %	5.2 %	3.4 %	4.7 %	11.2 %	30.9 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.812 %	0.143 ppb	-0.041 ppb	6.155 ppb	0.127 ppb	106.862 %	-0.004 ppb	0.010 ppb	108.582 %
Concentration per Run 1	102.926 %	0.148 ppb	-0.044 ppb	6.015 ppb	0.120 ppb	109.450 %	-0.004 ppb	0.009 ppb	112.555 %
Concentration per Run 2	100.705 %	0.129 ppb	-0.012 ppb	6.206 ppb	0.117 ppb	106.187 %	-0.004 ppb	0.010 ppb	106.993 %
Concentration per Run 3	98.804 %	0.153 ppb	-0.067 ppb	6.242 ppb	0.142 ppb	104.948 %	-0.003 ppb	0.011 ppb	106.198 %
Concentration RSD	2.0 %	8.8 %	66.7 %	2.0 %	10.7 %	2.2 %	12.3 %	6.1 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.203 ppb	0.979 ppb	93.894 %	105.631 %	0.038 ppb	0.119 ppb	159.997 %
Concentration per Run 1	0.165 ppb	0.931 ppb	100.497 %	119.569 %	0.018 ppb	0.099 ppb	211.803 %
Concentration per Run 2	0.208 ppb	0.931 ppb	100.706 %	100.253 %	0.045 ppb	0.126 ppb	136.515 %
Concentration per Run 3	0.236 ppb	1.076 ppb	80.480 %	97.071 %	0.051 ppb	0.131 ppb	131.672 %
Concentration RSD	17.6 %	8.6 %	12.4 %	11.5 %	45.8 %	14.3 %	28.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 132
Analysis label: I2416511-03d5 6020TL
Analysis started at: 4/1/2024 4:57:12 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 33
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.881 %	108.634 %	0.042 ppb	6.121 ppb	421.477 ppb	568.538 ppb	483.992 ppb	290.000 ppb	2,027.506 ppb
Concentration per Run 1	88.233 %	109.414 %	0.047 ppb	6.169 ppb	414.963 ppb	559.799 ppb	470.445 ppb	284.310 ppb	1,998.464 ppb
Concentration per Run 2	88.412 %	109.501 %	0.036 ppb	6.150 ppb	418.174 ppb	573.630 ppb	493.124 ppb	288.613 ppb	2,074.999 ppb
Concentration per Run 3	86.998 %	106.988 %	0.042 ppb	6.045 ppb	431.294 ppb	572.186 ppb	488.407 ppb	297.078 ppb	2,009.055 ppb
Concentration RSD	0.9 %	1.3 %	12.7 %	1.1 %	2.1 %	1.3 %	2.5 %	2.2 %	2.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.697 %	1.397 ppb	1.224 ppb	34.719 ppb	2,177.825 ppb	1.356 ppb	0.573 ppb	0.942 ppb	13.154 ppb
Concentration per Run 1	108.833 %	1.345 ppb	1.198 ppb	33.575 ppb	2,128.527 ppb	1.292 ppb	0.545 ppb	0.937 ppb	12.841 ppb
Concentration per Run 2	112.311 %	1.428 ppb	1.265 ppb	35.080 ppb	2,196.577 ppb	1.405 ppb	0.562 ppb	0.907 ppb	13.426 ppb
Concentration per Run 3	110.947 %	1.418 ppb	1.207 ppb	35.503 ppb	2,208.369 ppb	1.372 ppb	0.612 ppb	0.983 ppb	13.194 ppb
Concentration RSD	1.6 %	3.2 %	3.0 %	2.9 %	2.0 %	4.3 %	6.1 %	4.1 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.319 %	0.669 ppb	0.040 ppb	8.004 ppb	0.150 ppb	110.378 %	-0.002 ppb	0.057 ppb	112.351 %
Concentration per Run 1	104.428 %	0.644 ppb	0.035 ppb	7.880 ppb	0.143 ppb	111.508 %	-0.002 ppb	0.057 ppb	113.633 %
Concentration per Run 2	102.996 %	0.673 ppb	0.055 ppb	8.096 ppb	0.156 ppb	109.722 %	-0.001 ppb	0.064 ppb	110.998 %
Concentration per Run 3	105.534 %	0.689 ppb	0.031 ppb	8.035 ppb	0.152 ppb	109.905 %	-0.002 ppb	0.050 ppb	112.423 %
Concentration RSD	1.2 %	3.4 %	31.6 %	1.4 %	4.5 %	0.9 %	25.0 %	12.8 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.178 ppb	4.046 ppb	103.335 %	117.681 %	0.033 ppb	0.538 ppb	194.983 %
Concentration per Run 1	0.169 ppb	3.955 ppb	105.347 %	125.743 %	0.020 ppb	0.487 ppb	219.623 %
Concentration per Run 2	0.176 ppb	4.096 ppb	102.044 %	122.297 %	0.034 ppb	0.516 ppb	185.844 %
Concentration per Run 3	0.188 ppb	4.088 ppb	102.614 %	105.002 %	0.045 ppb	0.611 ppb	179.483 %
Concentration RSD	5.2 %	2.0 %	1.7 %	9.4 %	36.7 %	12.0 %	11.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 133
Analysis label: I2416581-01d100 6020TL
Analysis started at: 4/1/2024 5:01:50 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 34
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.377 %	106.555 %	0.004 ppb	2.954 ppb	613.139 ppb	207.944 ppb	7.617 ppb	30.112 ppb	1,723.306 ppb
Concentration per Run 1	82.528 %	108.375 %	-0.002 ppb	2.952 ppb	591.423 ppb	206.945 ppb	7.569 ppb	28.636 ppb	1,723.212 ppb
Concentration per Run 2	82.310 %	103.436 %	0.003 ppb	2.923 ppb	640.107 ppb	210.773 ppb	7.316 ppb	30.274 ppb	1,743.546 ppb
Concentration per Run 3	79.293 %	107.855 %	0.011 ppb	2.986 ppb	607.886 ppb	206.114 ppb	7.965 ppb	31.424 ppb	1,703.160 ppb
Concentration RSD	2.2 %	2.5 %	173.3 %	1.1 %	4.0 %	1.2 %	4.3 %	4.7 %	1.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.161 %	-0.050 ppb	0.305 ppb	2.914 ppb	22.020 ppb	0.016 ppb	0.213 ppb	0.043 ppb	0.005 ppb
Concentration per Run 1	95.711 %	-0.031 ppb	0.281 ppb	2.862 ppb	23.458 ppb	0.016 ppb	0.224 ppb	0.030 ppb	-0.010 ppb
Concentration per Run 2	95.934 %	-0.052 ppb	0.329 ppb	2.865 ppb	22.497 ppb	0.016 ppb	0.226 ppb	0.066 ppb	0.007 ppb
Concentration per Run 3	93.838 %	-0.069 ppb	0.306 ppb	3.015 ppb	20.105 ppb	0.015 ppb	0.188 ppb	0.032 ppb	0.018 ppb
Concentration RSD	1.2 %	37.2 %	7.9 %	3.0 %	7.8 %	4.3 %	10.2 %	47.6 %	285.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.498 %	0.047 ppb	-0.042 ppb	2.184 ppb	0.124 ppb	104.891 %	-0.003 ppb	-0.001 ppb	107.912 %
Concentration per Run 1	101.073 %	0.044 ppb	-0.033 ppb	2.123 ppb	0.078 ppb	109.345 %	-0.004 ppb	-0.001 ppb	111.139 %
Concentration per Run 2	100.148 %	0.045 ppb	-0.050 ppb	2.208 ppb	0.122 ppb	103.289 %	-0.004 ppb	-0.001 ppb	105.168 %
Concentration per Run 3	97.272 %	0.053 ppb	-0.044 ppb	2.220 ppb	0.171 ppb	102.040 %	-0.002 ppb	0.000 ppb	107.428 %
Concentration RSD	2.0 %	10.0 %	20.4 %	2.4 %	37.7 %	3.7 %	25.0 %	95.6 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.133 ppb	1.055 ppb	94.859 %	105.877 %	0.028 ppb	0.034 ppb	172.002 %
Concentration per Run 1	0.121 ppb	0.954 ppb	104.029 %	102.160 %	0.018 ppb	0.039 ppb	206.566 %
Concentration per Run 2	0.135 ppb	1.087 ppb	98.922 %	118.791 %	0.027 ppb	0.024 ppb	173.146 %
Concentration per Run 3	0.144 ppb	1.123 ppb	81.626 %	96.679 %	0.038 ppb	0.038 ppb	136.293 %
Concentration RSD	8.5 %	8.5 %	12.4 %	10.9 %	36.1 %	24.8 %	20.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 134
Analysis label: I2416581-02d5 6020TL
Analysis started at: 4/1/2024 5:06:30 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 35
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.240 %	107.999 %	0.038 ppb	21.084 ppb	3,240.565 ppb	2,685.649 ppb	415.039 ppb	383.296 ppb	26,598.426 ppb
Concentration per Run 1	87.840 %	111.493 %	0.036 ppb	20.867 ppb	3,355.607 ppb	2,617.082 ppb	408.008 ppb	366.250 ppb	25,791.725 ppb
Concentration per Run 2	87.356 %	105.689 %	0.037 ppb	20.896 ppb	3,548.130 ppb	2,721.358 ppb	420.609 ppb	406.411 ppb	27,160.667 ppb
Concentration per Run 3	86.522 %	106.815 %	0.039 ppb	21.489 ppb	2,817.959 ppb	2,718.505 ppb	416.500 ppb	377.225 ppb	26,842.886 ppb
Concentration RSD	0.8 %	2.9 %	4.8 %	1.7 %	11.7 %	2.2 %	1.5 %	5.4 %	2.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.864 %	1.085 ppb	1.586 ppb	43.586 ppb	505.062 ppb	0.558 ppb	1.505 ppb	1.591 ppb	1.824 ppb
Concentration per Run 1	106.412 %	1.016 ppb	1.590 ppb	42.054 ppb	487.879 ppb	0.520 ppb	1.474 ppb	1.557 ppb	1.807 ppb
Concentration per Run 2	109.441 %	1.177 ppb	1.554 ppb	44.532 ppb	516.276 ppb	0.580 ppb	1.467 ppb	1.717 ppb	1.889 ppb
Concentration per Run 3	107.739 %	1.060 ppb	1.614 ppb	44.171 ppb	511.030 ppb	0.575 ppb	1.572 ppb	1.500 ppb	1.776 ppb
Concentration RSD	1.4 %	7.7 %	1.9 %	3.1 %	3.0 %	6.0 %	3.9 %	7.1 %	3.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.788 %	0.598 ppb	0.161 ppb	41.765 ppb	0.406 ppb	104.596 %	-0.004 ppb	0.006 ppb	108.237 %
Concentration per Run 1	101.275 %	0.627 ppb	0.174 ppb	40.863 ppb	0.368 ppb	106.695 %	-0.004 ppb	0.002 ppb	109.942 %
Concentration per Run 2	98.971 %	0.594 ppb	0.132 ppb	42.419 ppb	0.415 ppb	103.606 %	-0.003 ppb	0.005 ppb	106.774 %
Concentration per Run 3	102.118 %	0.573 ppb	0.178 ppb	42.014 ppb	0.436 ppb	103.486 %	-0.005 ppb	0.009 ppb	107.996 %
Concentration RSD	1.6 %	4.6 %	15.7 %	1.9 %	8.6 %	1.7 %	31.6 %	62.7 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.137 ppb	34.268 ppb	100.680 %	101.048 %	0.035 ppb	0.360 ppb	171.737 %
Concentration per Run 1	0.127 ppb	33.896 ppb	101.167 %	101.206 %	0.024 ppb	0.360 ppb	206.400 %
Concentration per Run 2	0.138 ppb	34.328 ppb	100.169 %	101.341 %	0.038 ppb	0.354 ppb	170.612 %
Concentration per Run 3	0.145 ppb	34.580 ppb	100.704 %	100.599 %	0.042 ppb	0.366 ppb	138.199 %
Concentration RSD	6.9 %	1.0 %	0.5 %	0.4 %	27.7 %	1.7 %	19.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 135
Analysis label: I2416581-02d50 6020TL
Analysis started at: 4/1/2024 5:11:10 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 36
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.324 %	107.624 %	0.009 ppb	4.063 ppb	288.740 ppb	277.482 ppb	42.474 ppb	46.616 ppb	2,704.551 ppb
Concentration per Run 1	88.079 %	107.768 %	0.008 ppb	4.125 ppb	287.118 ppb	273.176 ppb	41.922 ppb	39.668 ppb	2,696.755 ppb
Concentration per Run 2	85.879 %	107.768 %	0.007 ppb	4.037 ppb	279.243 ppb	282.056 ppb	41.901 ppb	51.828 ppb	2,703.859 ppb
Concentration per Run 3	85.015 %	107.335 %	0.012 ppb	4.028 ppb	299.859 ppb	277.214 ppb	43.600 ppb	48.352 ppb	2,713.039 ppb
Concentration RSD	1.8 %	0.2 %	28.2 %	1.3 %	3.6 %	1.6 %	2.3 %	13.4 %	0.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.890 %	0.253 ppb	0.148 ppb	4.478 ppb	54.272 ppb	0.066 ppb	0.147 ppb	0.156 ppb	-0.262 ppb
Concentration per Run 1	102.742 %	0.231 ppb	0.147 ppb	4.392 ppb	53.141 ppb	0.069 ppb	0.148 ppb	0.156 ppb	-0.260 ppb
Concentration per Run 2	102.037 %	0.254 ppb	0.133 ppb	4.624 ppb	54.508 ppb	0.068 ppb	0.134 ppb	0.165 ppb	-0.248 ppb
Concentration per Run 3	103.891 %	0.274 ppb	0.163 ppb	4.416 ppb	55.168 ppb	0.061 ppb	0.159 ppb	0.147 ppb	-0.277 ppb
Concentration RSD	0.9 %	8.6 %	10.2 %	2.8 %	1.9 %	6.7 %	8.5 %	5.8 %	5.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.546 %	0.113 ppb	-0.020 ppb	4.153 ppb	0.112 ppb	106.975 %	-0.005 ppb	0.000 ppb	110.422 %
Concentration per Run 1	104.058 %	0.131 ppb	-0.054 ppb	4.069 ppb	0.095 ppb	108.510 %	-0.004 ppb	0.001 ppb	112.807 %
Concentration per Run 2	101.024 %	0.121 ppb	-0.015 ppb	4.206 ppb	0.104 ppb	106.077 %	-0.005 ppb	-0.001 ppb	108.733 %
Concentration per Run 3	102.555 %	0.086 ppb	0.007 ppb	4.184 ppb	0.136 ppb	106.338 %	-0.005 ppb	-0.001 ppb	109.727 %
Concentration RSD	1.5 %	20.9 %	150.2 %	1.8 %	19.1 %	1.2 %	15.4 %	307.3 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.092 ppb	3.329 ppb	100.534 %	113.577 %	0.022 ppb	0.050 ppb	177.859 %
Concentration per Run 1	0.093 ppb	3.300 ppb	101.107 %	119.233 %	0.011 ppb	0.048 ppb	212.173 %
Concentration per Run 2	0.091 ppb	3.354 ppb	100.184 %	121.757 %	0.022 ppb	0.040 ppb	177.064 %
Concentration per Run 3	0.094 ppb	3.333 ppb	100.312 %	99.740 %	0.032 ppb	0.063 ppb	144.340 %
Concentration RSD	1.8 %	0.8 %	0.5 %	10.6 %	49.3 %	22.4 %	19.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 136
Analysis label: I2416581-03d5 6020TL
Analysis started at: 4/1/2024 5:15:50 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 37
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	82.293 %	104.043 %	0.054 ppb	26.688 ppb	4,777.952 ppb	5,189.942 ppb	618.088 ppb	1,305.032 ppb	22,788.886 ppb
Concentration per Run 1	84.054 %	106.209 %	0.058 ppb	26.843 ppb	4,748.772 ppb	5,214.452 ppb	622.124 ppb	1,324.772 ppb	22,948.513 ppb
Concentration per Run 2	82.619 %	104.389 %	0.053 ppb	26.870 ppb	4,798.348 ppb	5,142.296 ppb	608.529 ppb	1,305.556 ppb	22,621.343 ppb
Concentration per Run 3	80.207 %	101.531 %	0.051 ppb	26.351 ppb	4,786.736 ppb	5,213.078 ppb	623.610 ppb	1,284.768 ppb	22,796.801 ppb
Concentration RSD	2.4 %	2.3 %	6.8 %	1.1 %	0.5 %	0.8 %	1.3 %	1.5 %	0.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.282 %	1.474 ppb	1.631 ppb	1,734.630 ppb	740.603 ppb	1.134 ppb	2.906 ppb	2.104 ppb	3.079 ppb
Concentration per Run 1	96.693 %	1.531 ppb	1.565 ppb	1,692.769 ppb	742.361 ppb	1.143 ppb	3.000 ppb	2.112 ppb	3.014 ppb
Concentration per Run 2	96.752 %	1.485 ppb	1.625 ppb	1,758.235 ppb	739.098 ppb	1.144 ppb	2.901 ppb	2.038 ppb	3.174 ppb
Concentration per Run 3	95.401 %	1.407 ppb	1.704 ppb	1,752.887 ppb	740.350 ppb	1.113 ppb	2.818 ppb	2.162 ppb	3.049 ppb
Concentration RSD	0.8 %	4.2 %	4.3 %	2.1 %	0.2 %	1.6 %	3.1 %	3.0 %	2.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.406 %	0.341 ppb	0.062 ppb	55.013 ppb	0.600 ppb	103.375 %	-0.003 ppb	0.023 ppb	105.613 %
Concentration per Run 1	99.735 %	0.386 ppb	0.078 ppb	53.832 ppb	0.598 ppb	108.039 %	-0.003 ppb	0.019 ppb	109.697 %
Concentration per Run 2	96.822 %	0.358 ppb	0.053 ppb	55.946 ppb	0.607 ppb	101.574 %	-0.004 ppb	0.032 ppb	104.007 %
Concentration per Run 3	98.660 %	0.279 ppb	0.054 ppb	55.260 ppb	0.596 ppb	100.513 %	-0.002 ppb	0.020 ppb	103.135 %
Concentration RSD	1.5 %	16.3 %	22.5 %	2.0 %	0.9 %	3.9 %	24.1 %	30.4 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.104 ppb	45.078 ppb	99.904 %	105.973 %	0.037 ppb	0.695 ppb	162.360 %
Concentration per Run 1	0.104 ppb	44.127 ppb	103.301 %	100.822 %	0.029 ppb	0.727 ppb	203.507 %
Concentration per Run 2	0.099 ppb	45.658 ppb	98.044 %	120.669 %	0.036 ppb	0.606 ppb	145.702 %
Concentration per Run 3	0.110 ppb	45.448 ppb	98.366 %	96.427 %	0.047 ppb	0.753 ppb	137.872 %
Concentration RSD	5.4 %	1.8 %	2.9 %	12.2 %	24.8 %	11.2 %	22.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 137
Analysis label: CCV
Analysis started at: 4/1/2024 5:20:30 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.276 %	101.733 %	60.224 ppb	59.824 ppb	6,267.481 ppb	6,073.614 ppb	56.114 ppb	6,427.817 ppb	6,401.534 ppb
Concentration per Run 1	80.777 %	102.657 %	59.943 ppb	59.289 ppb	6,221.627 ppb	6,074.244 ppb	55.537 ppb	6,492.768 ppb	6,468.618 ppb
Concentration per Run 2	79.033 %	97.979 %	60.427 ppb	59.825 ppb	6,389.950 ppb	6,160.802 ppb	58.059 ppb	6,427.230 ppb	6,378.569 ppb
Concentration per Run 3	78.017 %	104.563 %	60.302 ppb	60.358 ppb	6,190.867 ppb	5,985.797 ppb	54.745 ppb	6,363.452 ppb	6,357.417 ppb
Recovery Percentage 1			100.373 %	99.707 %	104.458 %	101.227 %	93.523 %	107.130 %	106.692 %
Concentration RSD	1.8 %	3.3 %	0.4 %	0.9 %	1.7 %	1.4 %	3.1 %	1.0 %	0.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.067 %	58.726 ppb	58.883 ppb	55.469 ppb	5,907.095 ppb	60.186 ppb	60.654 ppb	60.832 ppb	58.445 ppb
Concentration per Run 1	104.108 %	58.379 ppb	57.572 ppb	54.522 ppb	5,800.563 ppb	59.982 ppb	60.144 ppb	60.578 ppb	58.108 ppb
Concentration per Run 2	102.771 %	59.369 ppb	60.452 ppb	56.705 ppb	5,991.502 ppb	60.339 ppb	60.800 ppb	60.713 ppb	58.357 ppb
Concentration per Run 3	102.321 %	58.431 ppb	58.625 ppb	55.180 ppb	5,929.220 ppb	60.236 ppb	61.018 ppb	61.205 ppb	58.870 ppb
Recovery Percentage 1		97.877 %	98.138 %	92.449 %	98.452 %	100.309 %	101.090 %	101.387 %	97.408 %
Concentration RSD	0.9 %	0.9 %	2.5 %	2.0 %	1.6 %	0.3 %	0.7 %	0.5 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.290 %	60.440 ppb	59.383 ppb	60.198 ppb	57.575 ppb	101.783 %	59.581 ppb	61.885 ppb	102.549 %
Concentration per Run 1	97.542 %	60.278 ppb	57.487 ppb	59.540 ppb	54.963 ppb	102.220 %	59.623 ppb	61.004 ppb	103.888 %
Concentration per Run 2	96.335 %	60.419 ppb	59.911 ppb	60.108 ppb	58.442 ppb	102.025 %	59.440 ppb	62.264 ppb	102.460 %
Concentration per Run 3	94.994 %	60.622 ppb	60.752 ppb	60.947 ppb	59.321 ppb	101.106 %	59.679 ppb	62.386 ppb	101.301 %
Recovery Percentage 1		100.733 %	98.972 %	100.330 %	95.959 %		99.301 %	103.141 %	
Concentration RSD	1.3 %	0.3 %	2.9 %	1.2 %	4.0 %	0.6 %	0.2 %	1.2 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.191 ppb	65.882 ppb	87.642 %	99.044 %	56.580 ppb	64.435 ppb	163.446 %
Concentration per Run 1	59.313 ppb	61.386 ppb	99.643 %	99.750 %	38.802 ppb	63.753 ppb	207.456 %
Concentration per Run 2	62.022 ppb	68.261 ppb	81.887 %	99.594 %	63.365 ppb	64.527 ppb	144.361 %
Concentration per Run 3	62.237 ppb	67.998 ppb	81.398 %	97.787 %	67.573 ppb	65.025 ppb	138.521 %
Recovery Percentage 1	101.985 %	109.803 %			94.300 %	107.392 %	
Concentration RSD	2.7 %	5.9 %	11.9 %	1.1 %	27.5 %	1.0 %	23.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	138	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 5:25:13 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.194 %	99.191 %	0.012 ppb	2.551 ppb	12.797 ppb	-0.369 ppb	-0.246 ppb	5.023 ppb	-0.340 ppb
Concentration per Run 1	78.162 %	97.632 %	0.012 ppb	2.804 ppb	17.557 ppb	-0.181 ppb	0.043 ppb	9.221 ppb	1.294 ppb
Concentration per Run 2	79.819 %	97.892 %	0.013 ppb	2.644 ppb	10.580 ppb	-0.519 ppb	-0.452 ppb	5.200 ppb	-0.211 ppb
Concentration per Run 3	85.600 %	102.050 %	0.010 ppb	2.206 ppb	10.254 ppb	-0.407 ppb	-0.330 ppb	0.648 ppb	-2.102 ppb
Recovery Percentage 1			2.356 %	25.513 %	12.797 %	-0.527 %	-2.462 %	5.023 %	-0.340 %
Concentration RSD	4.8 %	2.5 %	12.8 %	12.1 %	32.2 %	46.7 %	104.7 %	85.4 %	500.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.619 %	-0.137 ppb	0.001 ppb	0.057 ppb	14.097 ppb	0.002 ppb	-0.007 ppb	-0.020 ppb	-0.731 ppb
Concentration per Run 1	82.995 %	-0.146 ppb	0.002 ppb	0.057 ppb	20.300 ppb	0.009 ppb	0.001 ppb	-0.016 ppb	-0.720 ppb
Concentration per Run 2	88.237 %	-0.118 ppb	-0.006 ppb	0.069 ppb	11.573 ppb	0.000 ppb	-0.020 ppb	-0.020 ppb	-0.732 ppb
Concentration per Run 3	100.625 %	-0.148 ppb	0.007 ppb	0.045 ppb	10.417 ppb	-0.003 ppb	-0.002 ppb	-0.024 ppb	-0.741 ppb
Recovery Percentage 1		-2.742 %	0.085 %	5.675 %	28.193 %	0.458 %	-0.337 %	-1.990 %	-14.621 %
Concentration RSD	10.0 %	12.4 %	761.9 %	21.3 %	38.3 %	266.4 %	168.1 %	20.6 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.775 %	0.120 ppb	0.295 ppb	0.006 ppb	1.249 ppb	96.724 %	0.005 ppb	0.008 ppb	95.995 %
Concentration per Run 1	88.410 %	0.130 ppb	0.303 ppb	0.008 ppb	1.329 ppb	96.674 %	0.009 ppb	0.010 ppb	96.903 %
Concentration per Run 2	94.364 %	0.121 ppb	0.259 ppb	0.004 ppb	1.173 ppb	95.490 %	0.006 ppb	0.009 ppb	95.245 %
Concentration per Run 3	92.550 %	0.108 ppb	0.322 ppb	0.006 ppb	1.247 ppb	98.006 %	0.001 ppb	0.004 ppb	95.835 %
Recovery Percentage 1		23.938 %	5.892 %	0.061 %	62.461 %		1.243 %	3.931 %	
Concentration RSD	3.3 %	9.2 %	11.0 %	29.8 %	6.2 %	1.3 %	78.5 %	40.8 %	0.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.120 ppb	0.011 ppb	90.454 %	91.745 %	0.651 ppb	0.045 ppb	140.451 %
Concentration per Run 1	0.119 ppb	0.007 ppb	90.057 %	90.623 %	0.416 ppb	0.054 ppb	185.773 %
Concentration per Run 2	0.114 ppb	0.019 ppb	90.128 %	91.172 %	0.846 ppb	0.045 ppb	117.967 %
Concentration per Run 3	0.127 ppb	0.008 ppb	91.178 %	93.441 %	0.691 ppb	0.037 ppb	117.614 %
Recovery Percentage 1	2.995 %	2.263 %			65.090 %	4.517 %	
Concentration RSD	5.4 %	56.9 %	0.7 %	1.6 %	33.4 %	18.2 %	27.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 139
Analysis label: I2416581-03d50 6020TL
Analysis started at: 4/1/2024 5:35:14 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 38
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.856 %	105.400 %	0.008 ppb	5.602 ppb	355.218 ppb	507.088 ppb	61.029 ppb	126.996 ppb	2,238.653 ppb
Concentration per Run 1	82.162 %	108.201 %	0.008 ppb	5.447 ppb	341.919 ppb	499.290 ppb	60.702 ppb	118.171 ppb	2,207.826 ppb
Concentration per Run 2	82.507 %	106.988 %	0.013 ppb	5.649 ppb	341.371 ppb	494.615 ppb	60.561 ppb	131.660 ppb	2,210.094 ppb
Concentration per Run 3	80.899 %	101.011 %	0.004 ppb	5.710 ppb	382.365 ppb	527.360 ppb	61.824 ppb	131.157 ppb	2,298.038 ppb
Concentration RSD	1.0 %	3.7 %	53.1 %	2.5 %	6.6 %	3.5 %	1.1 %	6.0 %	2.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.551 %	0.027 ppb	0.172 ppb	148.394 ppb	80.916 ppb	0.114 ppb	0.338 ppb	0.291 ppb	0.455 ppb
Concentration per Run 1	96.434 %	0.035 ppb	0.167 ppb	148.072 ppb	82.476 ppb	0.122 ppb	0.342 ppb	0.280 ppb	0.482 ppb
Concentration per Run 2	96.736 %	0.033 ppb	0.172 ppb	146.706 ppb	77.549 ppb	0.113 ppb	0.360 ppb	0.277 ppb	0.438 ppb
Concentration per Run 3	96.483 %	0.013 ppb	0.176 ppb	150.404 ppb	82.724 ppb	0.108 ppb	0.312 ppb	0.318 ppb	0.444 ppb
Concentration RSD	0.2 %	46.1 %	2.6 %	1.3 %	3.6 %	5.9 %	7.1 %	7.8 %	5.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.445 %	0.112 ppb	0.043 ppb	5.428 ppb	0.456 ppb	102.700 %	0.011 ppb	0.008 ppb	107.707 %
Concentration per Run 1	94.086 %	0.142 ppb	0.046 ppb	5.349 ppb	0.579 ppb	105.919 %	0.011 ppb	0.008 ppb	117.875 %
Concentration per Run 2	96.054 %	0.102 ppb	0.046 ppb	5.444 ppb	0.433 ppb	101.956 %	0.010 ppb	0.008 ppb	101.753 %
Concentration per Run 3	96.194 %	0.093 ppb	0.037 ppb	5.492 ppb	0.356 ppb	100.224 %	0.011 ppb	0.007 ppb	103.491 %
Concentration RSD	1.2 %	23.1 %	12.4 %	1.3 %	24.8 %	2.8 %	6.1 %	9.5 %	8.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.087 ppb	4.692 ppb	105.582 %	115.199 %	0.193 ppb	0.590 ppb	244.718 %
Concentration per Run 1	0.078 ppb	4.099 ppb	119.855 %	146.560 %	0.193 ppb	0.453 ppb	384.558 %
Concentration per Run 2	0.089 ppb	5.003 ppb	99.555 %	100.155 %	0.212 ppb	0.656 ppb	206.395 %
Concentration per Run 3	0.093 ppb	4.974 ppb	97.335 %	98.881 %	0.173 ppb	0.660 ppb	143.202 %
Concentration RSD	8.9 %	10.9 %	11.8 %	23.6 %	10.1 %	20.1 %	51.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 140
Analysis label: I2416752-05d50 6020TL
Analysis started at: 4/1/2024 5:39:53 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 39
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	78.940 %	100.347 %	0.052 ppb	10.692 ppb	20,889.848 ppb	1,096.816 ppb	342.238 ppb	944.786 ppb	6,186.792 ppb
Concentration per Run 1	81.104 %	97.372 %	0.049 ppb	10.418 ppb	21,792.380 ppb	1,155.776 ppb	349.132 ppb	960.424 ppb	6,345.008 ppb
Concentration per Run 2	79.156 %	105.169 %	0.052 ppb	10.816 ppb	19,801.059 ppb	1,034.968 ppb	333.816 ppb	924.019 ppb	5,971.016 ppb
Concentration per Run 3	76.561 %	98.498 %	0.055 ppb	10.844 ppb	21,076.105 ppb	1,099.704 ppb	343.767 ppb	949.917 ppb	6,244.353 ppb
Concentration RSD	2.9 %	4.2 %	5.5 %	2.2 %	4.8 %	5.5 %	2.3 %	2.0 %	3.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.970 %	1.954 ppb	8.207 ppb	141.316 ppb	2,754.596 ppb	0.466 ppb	1.546 ppb	1.499 ppb	32.414 ppb
Concentration per Run 1	96.238 %	1.948 ppb	8.266 ppb	142.840 ppb	2,755.515 ppb	0.456 ppb	1.625 ppb	1.440 ppb	32.011 ppb
Concentration per Run 2	95.963 %	1.890 ppb	7.979 ppb	137.355 ppb	2,703.505 ppb	0.486 ppb	1.522 ppb	1.453 ppb	32.535 ppb
Concentration per Run 3	92.710 %	2.024 ppb	8.376 ppb	143.755 ppb	2,804.768 ppb	0.455 ppb	1.493 ppb	1.603 ppb	32.697 ppb
Concentration RSD	2.1 %	3.4 %	2.5 %	2.4 %	1.8 %	3.7 %	4.5 %	6.0 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.297 %	0.277 ppb	0.049 ppb	55.971 ppb	0.577 ppb	98.886 %	-0.001 ppb	0.045 ppb	102.584 %
Concentration per Run 1	95.029 %	0.303 ppb	0.034 ppb	55.575 ppb	0.602 ppb	101.387 %	0.002 ppb	0.040 ppb	104.151 %
Concentration per Run 2	94.564 %	0.246 ppb	0.077 ppb	56.061 ppb	0.536 ppb	97.846 %	-0.003 ppb	0.049 ppb	101.246 %
Concentration per Run 3	93.298 %	0.281 ppb	0.037 ppb	56.277 ppb	0.593 ppb	97.426 %	-0.002 ppb	0.046 ppb	102.357 %
Concentration RSD	1.0 %	10.4 %	48.8 %	0.6 %	6.2 %	2.2 %	406.6 %	10.0 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.070 ppb	27.989 ppb	97.957 %	105.770 %	0.071 ppb	9.629 ppb	185.341 %
Concentration per Run 1	0.067 ppb	27.813 ppb	98.397 %	99.953 %	0.054 ppb	10.102 ppb	208.099 %
Concentration per Run 2	0.072 ppb	28.220 ppb	98.212 %	98.315 %	0.085 ppb	10.355 ppb	175.818 %
Concentration per Run 3	0.070 ppb	27.934 ppb	97.262 %	119.043 %	0.075 ppb	8.430 ppb	172.106 %
Concentration RSD	3.5 %	0.7 %	0.6 %	10.9 %	22.4 %	10.9 %	10.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 141
Analysis label: I2416851-01d5 6020TL
Analysis started at: 4/1/2024 5:44:33 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 40
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.669 %	99.163 %	0.007 ppb	6.147 ppb	13,150.968 ppb	790.139 ppb	12.496 ppb	2,095.234 ppb	2,688.003 ppb
Concentration per Run 1	82.368 %	100.664 %	0.009 ppb	5.974 ppb	13,075.500 ppb	799.689 ppb	12.852 ppb	2,089.521 ppb	2,694.067 ppb
Concentration per Run 2	78.779 %	97.979 %	0.006 ppb	6.105 ppb	13,302.622 ppb	791.206 ppb	12.495 ppb	2,071.678 ppb	2,653.929 ppb
Concentration per Run 3	77.860 %	98.845 %	0.006 ppb	6.363 ppb	13,074.783 ppb	779.521 ppb	12.142 ppb	2,124.503 ppb	2,716.013 ppb
Concentration RSD	3.0 %	1.4 %	27.0 %	3.2 %	1.0 %	1.3 %	2.8 %	1.3 %	1.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.599 %	-0.109 ppb	0.213 ppb	3.394 ppb	160.573 ppb	0.074 ppb	0.631 ppb	8.783 ppb	14.664 ppb
Concentration per Run 1	94.073 %	-0.119 ppb	0.195 ppb	3.283 ppb	161.304 ppb	0.074 ppb	0.675 ppb	8.794 ppb	14.825 ppb
Concentration per Run 2	90.695 %	-0.101 ppb	0.219 ppb	3.342 ppb	158.712 ppb	0.074 ppb	0.614 ppb	8.677 ppb	14.507 ppb
Concentration per Run 3	90.030 %	-0.109 ppb	0.225 ppb	3.558 ppb	161.703 ppb	0.074 ppb	0.605 ppb	8.878 ppb	14.659 ppb
Concentration RSD	2.4 %	8.4 %	7.4 %	4.3 %	1.0 %	0.5 %	6.1 %	1.1 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.737 %	0.098 ppb	0.003 ppb	7.735 ppb	0.205 ppb	99.520 %	0.054 ppb	0.015 ppb	101.858 %
Concentration per Run 1	95.636 %	0.109 ppb	-0.006 ppb	7.725 ppb	0.197 ppb	98.602 %	0.057 ppb	0.017 ppb	101.038 %
Concentration per Run 2	96.879 %	0.108 ppb	0.014 ppb	7.669 ppb	0.223 ppb	99.759 %	0.051 ppb	0.014 ppb	101.294 %
Concentration per Run 3	94.696 %	0.077 ppb	0.001 ppb	7.812 ppb	0.194 ppb	100.199 %	0.055 ppb	0.014 ppb	103.242 %
Concentration RSD	1.1 %	18.3 %	376.1 %	0.9 %	7.6 %	0.8 %	6.1 %	13.0 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.087 ppb	2.357 ppb	97.096 %	97.660 %	0.058 ppb	0.390 ppb	158.201 %
Concentration per Run 1	0.082 ppb	2.308 ppb	95.920 %	96.443 %	0.040 ppb	0.397 ppb	191.304 %
Concentration per Run 2	0.087 ppb	2.447 ppb	97.237 %	97.272 %	0.066 ppb	0.399 ppb	143.111 %
Concentration per Run 3	0.090 ppb	2.315 ppb	98.130 %	99.266 %	0.068 ppb	0.375 ppb	140.187 %
Concentration RSD	4.6 %	3.3 %	1.1 %	1.5 %	27.2 %	3.4 %	18.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 142
Analysis label: CCV
Analysis started at: 4/1/2024 5:49:36 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.997 %	98.527 %	60.418 ppb	58.655 ppb	6,427.981 ppb	6,231.734 ppb	58.521 ppb	6,345.213 ppb	6,487.321 ppb
Concentration per Run 1	81.427 %	103.003 %	60.377 ppb	58.073 ppb	6,147.423 ppb	5,915.064 ppb	55.476 ppb	6,135.693 ppb	6,324.360 ppb
Concentration per Run 2	79.832 %	96.333 %	60.440 ppb	59.056 ppb	6,557.914 ppb	6,387.209 ppb	59.548 ppb	6,385.384 ppb	6,376.154 ppb
Concentration per Run 3	78.733 %	96.246 %	60.436 ppb	58.837 ppb	6,578.607 ppb	6,392.930 ppb	60.540 ppb	6,514.561 ppb	6,761.450 ppb
Recovery Percentage 1			100.696 %	97.758 %	107.133 %	103.862 %	97.536 %	105.754 %	108.122 %
Concentration RSD	1.7 %	3.9 %	0.1 %	0.9 %	3.8 %	4.4 %	4.6 %	3.0 %	3.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.296 %	59.591 ppb	59.764 ppb	56.008 ppb	6,020.474 ppb	61.001 ppb	61.187 ppb	61.552 ppb	58.649 ppb
Concentration per Run 1	105.342 %	58.082 ppb	59.571 ppb	55.626 ppb	5,943.093 ppb	60.105 ppb	60.356 ppb	60.978 ppb	58.726 ppb
Concentration per Run 2	105.435 %	60.244 ppb	58.800 ppb	55.168 ppb	5,965.536 ppb	60.420 ppb	60.494 ppb	60.827 ppb	57.510 ppb
Concentration per Run 3	105.110 %	60.448 ppb	60.921 ppb	57.232 ppb	6,152.793 ppb	62.478 ppb	62.712 ppb	62.851 ppb	59.712 ppb
Recovery Percentage 1		99.319 %	99.607 %	93.347 %	100.341 %	101.668 %	101.979 %	102.587 %	97.749 %
Concentration RSD	0.2 %	2.2 %	1.8 %	1.9 %	1.9 %	2.1 %	2.2 %	1.8 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.989 %	61.073 ppb	60.031 ppb	60.325 ppb	58.890 ppb	100.774 %	59.016 ppb	61.510 ppb	102.732 %
Concentration per Run 1	96.198 %	60.885 ppb	59.023 ppb	59.781 ppb	56.743 ppb	102.886 %	58.683 ppb	61.282 ppb	104.179 %
Concentration per Run 2	97.027 %	60.469 ppb	59.070 ppb	60.147 ppb	58.331 ppb	100.258 %	58.593 ppb	60.933 ppb	102.702 %
Concentration per Run 3	94.743 %	61.867 ppb	62.000 ppb	61.048 ppb	61.595 ppb	99.180 %	59.773 ppb	62.315 ppb	101.314 %
Recovery Percentage 1		101.789 %	100.052 %	100.542 %	98.149 %		98.360 %	102.516 %	
Concentration RSD	1.2 %	1.2 %	2.8 %	1.1 %	4.2 %	1.9 %	1.1 %	1.2 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.222 ppb	63.239 ppb	98.356 %	113.213 %	58.498 ppb	57.114 ppb	189.042 %
Concentration per Run 1	59.979 ppb	61.865 ppb	99.279 %	99.641 %	60.354 ppb	63.657 ppb	210.365 %
Concentration per Run 2	61.210 ppb	62.691 ppb	99.546 %	122.559 %	55.530 ppb	52.342 ppb	179.423 %
Concentration per Run 3	62.478 ppb	65.160 ppb	96.243 %	117.439 %	59.611 ppb	55.344 ppb	177.337 %
Recovery Percentage 1	102.037 %	105.398 %			97.497 %	95.190 %	
Concentration RSD	2.0 %	2.7 %	1.9 %	10.6 %	4.4 %	10.3 %	9.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 143
Analysis label: CCB
Analysis started at: 4/1/2024 5:54:18 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.655 %	100.578 %	0.007 ppb	2.632 ppb	3.383 ppb	-0.053 ppb	-0.409 ppb	-0.853 ppb	-1.015 ppb
Concentration per Run 1	81.000 %	102.570 %	0.004 ppb	2.649 ppb	-5.571 ppb	0.198 ppb	-0.363 ppb	2.472 ppb	0.089 ppb
Concentration per Run 2	79.750 %	103.350 %	0.007 ppb	2.575 ppb	-3.009 ppb	0.085 ppb	-0.418 ppb	-6.391 ppb	-1.822 ppb
Concentration per Run 3	78.217 %	95.813 %	0.009 ppb	2.673 ppb	18.729 ppb	-0.442 ppb	-0.446 ppb	1.360 ppb	-1.311 ppb
Recovery Percentage 1			1.310 %	26.322 %	3.383 %	-0.076 %	-4.089 %	-0.853 %	-1.015 %
Concentration RSD	1.7 %	4.1 %	37.2 %	1.9 %	394.6 %	645.3 %	10.4 %	566.0 %	97.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.861 %	-0.142 ppb	0.000 ppb	0.028 ppb	15.413 ppb	0.002 ppb	-0.005 ppb	-0.020 ppb	-0.698 ppb
Concentration per Run 1	93.610 %	-0.132 ppb	0.000 ppb	0.028 ppb	15.532 ppb	0.003 ppb	-0.010 ppb	-0.032 ppb	-0.715 ppb
Concentration per Run 2	91.508 %	-0.151 ppb	-0.004 ppb	0.025 ppb	16.206 ppb	0.000 ppb	-0.011 ppb	-0.009 ppb	-0.702 ppb
Concentration per Run 3	90.465 %	-0.144 ppb	0.004 ppb	0.030 ppb	14.499 ppb	0.003 ppb	0.005 ppb	-0.019 ppb	-0.678 ppb
Recovery Percentage 1		-2.847 %	0.026 %	2.765 %	30.825 %	0.407 %	-0.256 %	-2.002 %	-13.966 %
Concentration RSD	1.7 %	6.6 %	1,493.0 %	8.3 %	5.6 %	100.1 %	179.2 %	55.8 %	2.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.338 %	0.119 ppb	0.302 ppb	0.004 ppb	1.308 ppb	99.074 %	0.002 ppb	0.007 ppb	101.122 %
Concentration per Run 1	98.216 %	0.113 ppb	0.321 ppb	0.005 ppb	1.372 ppb	101.429 %	0.005 ppb	0.009 ppb	103.612 %
Concentration per Run 2	92.669 %	0.113 ppb	0.367 ppb	0.004 ppb	1.272 ppb	97.734 %	0.000 ppb	0.007 ppb	99.368 %
Concentration per Run 3	92.128 %	0.132 ppb	0.217 ppb	0.004 ppb	1.281 ppb	98.059 %	0.000 ppb	0.006 ppb	100.386 %
Recovery Percentage 1		23.892 %	6.034 %	0.044 %	65.418 %		0.479 %	3.500 %	
Concentration RSD	3.6 %	9.3 %	25.6 %	11.7 %	4.3 %	2.1 %	152.5 %	20.6 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.096 ppb	0.011 ppb	89.980 %	109.208 %	0.668 ppb	0.031 ppb	158.244 %
Concentration per Run 1	0.076 ppb	0.009 ppb	98.606 %	119.035 %	0.541 ppb	0.030 ppb	200.349 %
Concentration per Run 2	0.104 ppb	0.010 ppb	77.810 %	95.016 %	0.846 ppb	0.040 ppb	137.823 %
Concentration per Run 3	0.109 ppb	0.014 ppb	93.523 %	113.573 %	0.618 ppb	0.023 ppb	136.560 %
Recovery Percentage 1	2.402 %	2.216 %			66.809 %	3.103 %	
Concentration RSD	18.3 %	26.0 %	12.0 %	11.5 %	23.8 %	27.2 %	23.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 144
Analysis label: wg1902498-1 6020TL
Analysis started at: 4/1/2024 6:25:27 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 41
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	94.477 %	110.252 %	0.004 ppb	1.724 ppb	-22.286 ppb	0.974 ppb	1.052 ppb	-5.555 ppb	8.407 ppb
Concentration per Run 1	95.876 %	113.053 %	0.003 ppb	1.729 ppb	-28.315 ppb	1.070 ppb	1.038 ppb	-6.463 ppb	10.714 ppb
Concentration per Run 2	94.185 %	107.422 %	0.013 ppb	1.759 ppb	-14.792 ppb	0.744 ppb	0.997 ppb	-4.108 ppb	5.845 ppb
Concentration per Run 3	93.368 %	110.280 %	-0.004 ppb	1.684 ppb	-23.751 ppb	1.108 ppb	1.122 ppb	-6.093 ppb	8.662 ppb
Concentration RSD	1.4 %	2.6 %	236.6 %	2.2 %	30.9 %	20.5 %	6.1 %	22.8 %	29.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.451 %	-0.160 ppb	0.013 ppb	0.030 ppb	1.644 ppb	0.000 ppb	0.040 ppb	0.032 ppb	0.586 ppb
Concentration per Run 1	104.648 %	-0.148 ppb	0.018 ppb	0.024 ppb	1.160 ppb	-0.002 ppb	0.039 ppb	0.046 ppb	0.520 ppb
Concentration per Run 2	105.990 %	-0.171 ppb	0.019 ppb	0.024 ppb	2.144 ppb	0.000 ppb	0.047 ppb	0.009 ppb	0.647 ppb
Concentration per Run 3	105.717 %	-0.161 ppb	0.003 ppb	0.042 ppb	1.629 ppb	0.002 ppb	0.034 ppb	0.040 ppb	0.592 ppb
Concentration RSD	0.7 %	7.1 %	68.5 %	34.8 %	30.0 %	1,190.0 %	16.2 %	62.8 %	10.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.871 %	0.080 ppb	-0.004 ppb	0.009 ppb	0.069 ppb	104.832 %	-0.004 ppb	0.000 ppb	108.358 %
Concentration per Run 1	101.203 %	0.079 ppb	-0.012 ppb	0.009 ppb	0.057 ppb	106.830 %	-0.003 ppb	0.001 ppb	111.045 %
Concentration per Run 2	99.859 %	0.088 ppb	-0.020 ppb	0.010 ppb	0.057 ppb	104.258 %	-0.004 ppb	0.000 ppb	107.347 %
Concentration per Run 3	101.550 %	0.074 ppb	0.021 ppb	0.007 ppb	0.095 ppb	103.407 %	-0.003 ppb	-0.001 ppb	106.683 %
Concentration RSD	0.9 %	8.8 %	567.4 %	14.2 %	31.6 %	1.7 %	20.2 %	523.1 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.034 ppb	0.012 ppb	100.914 %	114.458 %	0.072 ppb	0.017 ppb	255.253 %
Concentration per Run 1	0.031 ppb	0.009 ppb	102.318 %	121.728 %	0.101 ppb	0.017 ppb	311.266 %
Concentration per Run 2	0.030 ppb	0.010 ppb	100.776 %	121.259 %	0.054 ppb	0.012 ppb	239.961 %
Concentration per Run 3	0.042 ppb	0.016 ppb	99.647 %	100.387 %	0.061 ppb	0.022 ppb	214.532 %
Concentration RSD	20.2 %	34.7 %	1.3 %	10.6 %	34.8 %	28.0 %	19.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 145
Analysis label: wg1902498-2d10 6020TL
Analysis started at: 4/1/2024 6:34:17 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 42
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.630 %	107.941 %	5.108 ppb	101.873 ppb	830.325 ppb	983.477 ppb	181.525 ppb	1,015.282 ppb	1,021.274 ppb
Concentration per Run 1	88.231 %	109.501 %	5.152 ppb	101.410 ppb	810.708 ppb	957.179 ppb	180.139 ppb	996.222 ppb	1,010.319 ppb
Concentration per Run 2	87.336 %	109.154 %	5.094 ppb	102.182 ppb	820.310 ppb	979.630 ppb	179.139 ppb	1,004.808 ppb	985.300 ppb
Concentration per Run 3	87.322 %	105.169 %	5.077 ppb	102.026 ppb	859.956 ppb	1,013.621 ppb	185.298 ppb	1,044.817 ppb	1,068.202 ppb
Concentration RSD	0.6 %	2.2 %	0.8 %	0.4 %	3.1 %	2.9 %	1.8 %	2.6 %	4.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.258 %	47.675 ppb	19.573 ppb	46.762 ppb	104.400 ppb	50.088 ppb	50.202 ppb	25.238 ppb	48.068 ppb
Concentration per Run 1	103.871 %	47.451 ppb	19.307 ppb	45.831 ppb	101.312 ppb	49.219 ppb	49.843 ppb	24.852 ppb	46.840 ppb
Concentration per Run 2	102.729 %	48.456 ppb	19.562 ppb	46.402 ppb	104.982 ppb	49.944 ppb	49.408 ppb	25.031 ppb	47.926 ppb
Concentration per Run 3	103.174 %	47.116 ppb	19.850 ppb	48.052 ppb	106.906 ppb	51.102 ppb	51.355 ppb	25.831 ppb	49.439 ppb
Concentration RSD	0.6 %	1.5 %	1.4 %	2.5 %	2.7 %	1.9 %	2.0 %	2.1 %	2.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.132 %	12.242 ppb	12.028 ppb	98.256 ppb	104.833 ppb	103.264 %	4.864 ppb	5.357 ppb	105.392 %
Concentration per Run 1	102.658 %	12.279 ppb	11.808 ppb	96.001 ppb	102.692 ppb	106.956 %	4.837 ppb	5.311 ppb	107.560 %
Concentration per Run 2	101.794 %	12.066 ppb	11.723 ppb	97.491 ppb	105.176 ppb	102.641 %	4.843 ppb	5.258 ppb	106.011 %
Concentration per Run 3	98.945 %	12.382 ppb	12.553 ppb	101.276 ppb	106.630 ppb	100.195 %	4.911 ppb	5.502 ppb	102.606 %
Concentration RSD	1.9 %	1.3 %	3.8 %	2.8 %	1.9 %	3.3 %	0.8 %	2.4 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	43.461 ppb	211.932 ppb	102.797 %	123.691 %	10.324 ppb	48.646 ppb	189.433 %
Concentration per Run 1	42.472 ppb	207.944 ppb	104.384 %	125.037 %	10.255 ppb	48.253 ppb	196.728 %
Concentration per Run 2	43.479 ppb	212.440 ppb	102.724 %	123.789 %	10.356 ppb	48.396 ppb	187.553 %
Concentration per Run 3	44.432 ppb	215.411 ppb	101.282 %	122.246 %	10.360 ppb	49.289 ppb	184.017 %
Concentration RSD	2.3 %	1.8 %	1.5 %	1.1 %	0.6 %	1.2 %	3.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 146
Analysis label: wg1902498-2d100 6020TL
Analysis started at: 4/1/2024 6:41:18 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 17
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	85.314 %	108.490 %	0.568 ppb	13.721 ppb	78.471 ppb	110.640 ppb	20.579 ppb	110.761 ppb	132.127 ppb
Concentration per Run 1	88.374 %	109.154 %	0.559 ppb	13.440 ppb	72.400 ppb	112.331 ppb	20.535 ppb	107.479 ppb	132.325 ppb
Concentration per Run 2	85.199 %	111.840 %	0.603 ppb	13.575 ppb	72.188 ppb	107.893 ppb	19.874 ppb	109.704 ppb	118.700 ppb
Concentration per Run 3	82.369 %	104.476 %	0.543 ppb	14.147 ppb	90.823 ppb	111.696 ppb	21.327 ppb	115.099 ppb	145.355 ppb
Concentration RSD	3.5 %	3.4 %	5.4 %	2.7 %	13.6 %	2.2 %	3.5 %	3.5 %	10.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.539 %	5.221 ppb	2.163 ppb	5.275 ppb	15.034 ppb	5.654 ppb	5.754 ppb	2.852 ppb	9.091 ppb
Concentration per Run 1	99.003 %	5.243 ppb	2.088 ppb	5.068 ppb	14.384 ppb	5.630 ppb	5.444 ppb	2.782 ppb	8.794 ppb
Concentration per Run 2	98.281 %	5.156 ppb	2.186 ppb	5.250 ppb	15.303 ppb	5.677 ppb	5.944 ppb	2.886 ppb	9.292 ppb
Concentration per Run 3	95.334 %	5.266 ppb	2.214 ppb	5.506 ppb	15.416 ppb	5.654 ppb	5.873 ppb	2.888 ppb	9.187 ppb
Concentration RSD	2.0 %	1.1 %	3.1 %	4.2 %	3.8 %	0.4 %	4.7 %	2.1 %	2.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.475 %	1.414 ppb	1.428 ppb	11.063 ppb	11.738 ppb	102.226 %	0.536 ppb	0.587 ppb	105.659 %
Concentration per Run 1	101.873 %	1.332 ppb	1.416 ppb	10.774 ppb	11.133 ppb	105.147 %	0.515 ppb	0.551 ppb	109.168 %
Concentration per Run 2	97.021 %	1.501 ppb	1.369 ppb	11.270 ppb	11.923 ppb	101.085 %	0.545 ppb	0.599 ppb	104.331 %
Concentration per Run 3	99.531 %	1.409 ppb	1.501 ppb	11.145 ppb	12.158 ppb	100.447 %	0.548 ppb	0.612 ppb	103.479 %
Concentration RSD	2.4 %	6.0 %	4.7 %	2.3 %	4.6 %	2.5 %	3.4 %	5.5 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	6.407 ppb	23.682 ppb	101.658 %	120.202 %	1.171 ppb	4.945 ppb	211.550 %
Concentration per Run 1	6.305 ppb	22.919 ppb	105.458 %	121.880 %	1.117 ppb	4.889 ppb	242.422 %
Concentration per Run 2	6.540 ppb	23.999 ppb	99.957 %	120.013 %	1.178 ppb	4.916 ppb	185.851 %
Concentration per Run 3	6.376 ppb	24.128 ppb	99.559 %	118.712 %	1.217 ppb	5.029 ppb	206.377 %
Concentration RSD	1.9 %	2.8 %	3.2 %	1.3 %	4.3 %	1.5 %	13.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 147
Analysis label: wg1902498-3d10 6020TL
Analysis started at: 4/1/2024 6:45:58 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 44
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	83.145 %	103.003 %	5.146 ppb	102.538 ppb	1,561.663 ppb	1,127.339 ppb	239.679 ppb	2,854.964 ppb	2,785.858 ppb
Concentration per Run 1	83.996 %	105.776 %	5.220 ppb	102.407 ppb	1,539.380 ppb	1,101.449 ppb	237.168 ppb	2,891.152 ppb	2,761.561 ppb
Concentration per Run 2	83.656 %	100.751 %	5.023 ppb	102.546 ppb	1,591.978 ppb	1,159.253 ppb	243.316 ppb	2,816.945 ppb	2,748.807 ppb
Concentration per Run 3	81.783 %	102.483 %	5.196 ppb	102.661 ppb	1,553.632 ppb	1,121.314 ppb	238.552 ppb	2,856.796 ppb	2,847.207 ppb
Concentration RSD	1.4 %	2.5 %	2.1 %	0.1 %	1.7 %	2.6 %	1.3 %	1.3 %	1.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.985 %	48.403 ppb	21.699 ppb	50.512 ppb	239.880 ppb	49.812 ppb	50.290 ppb	25.859 ppb	59.721 ppb
Concentration per Run 1	98.221 %	47.898 ppb	21.458 ppb	49.714 ppb	237.325 ppb	50.024 ppb	50.038 ppb	25.906 ppb	59.226 ppb
Concentration per Run 2	97.926 %	49.025 ppb	21.909 ppb	50.423 ppb	236.353 ppb	49.400 ppb	50.565 ppb	25.696 ppb	59.534 ppb
Concentration per Run 3	94.808 %	48.287 ppb	21.729 ppb	51.399 ppb	245.962 ppb	50.012 ppb	50.269 ppb	25.975 ppb	60.404 ppb
Concentration RSD	1.9 %	1.2 %	1.0 %	1.7 %	2.2 %	0.7 %	0.5 %	0.6 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.658 %	12.105 ppb	11.936 ppb	118.505 ppb	95.863 ppb	100.502 %	4.767 ppb	5.309 ppb	104.469 %
Concentration per Run 1	98.978 %	12.105 ppb	11.873 ppb	117.064 ppb	90.239 ppb	102.207 %	4.695 ppb	5.216 ppb	107.813 %
Concentration per Run 2	98.202 %	12.123 ppb	12.029 ppb	118.328 ppb	96.958 ppb	100.317 %	4.721 ppb	5.367 ppb	103.170 %
Concentration per Run 3	95.796 %	12.086 ppb	11.905 ppb	120.124 ppb	100.391 ppb	98.981 %	4.885 ppb	5.345 ppb	102.423 %
Concentration RSD	1.7 %	0.2 %	0.7 %	1.3 %	5.4 %	1.6 %	2.2 %	1.5 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	41.864 ppb	210.564 ppb	100.975 %	121.487 %	9.883 ppb	47.881 ppb	175.044 %
Concentration per Run 1	40.049 ppb	204.478 ppb	102.687 %	124.516 %	9.563 ppb	46.532 ppb	207.552 %
Concentration per Run 2	42.413 ppb	213.140 ppb	100.588 %	120.479 %	9.957 ppb	48.855 ppb	178.684 %
Concentration per Run 3	43.130 ppb	214.073 ppb	99.650 %	119.467 %	10.128 ppb	48.257 ppb	138.894 %
Concentration RSD	3.9 %	2.5 %	1.5 %	2.2 %	2.9 %	2.5 %	19.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 148
Analysis label: wg1902498-4d10 6020TL
Analysis started at: 4/1/2024 6:50:38 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 45
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	82.268 %	101.964 %	4.723 ppb	95.807 ppb	1,458.720 ppb	1,046.949 ppb	223.500 ppb	2,646.368 ppb	2,622.372 ppb
Concentration per Run 1	84.020 %	108.115 %	4.786 ppb	94.644 ppb	1,375.226 ppb	1,002.157 ppb	209.225 ppb	2,529.362 ppb	2,557.561 ppb
Concentration per Run 2	82.496 %	97.805 %	4.577 ppb	94.642 ppb	1,523.771 ppb	1,088.705 ppb	234.615 ppb	2,756.491 ppb	2,681.893 ppb
Concentration per Run 3	80.286 %	99.971 %	4.805 ppb	98.135 ppb	1,477.164 ppb	1,049.985 ppb	226.661 ppb	2,653.252 ppb	2,627.662 ppb
Concentration RSD	2.3 %	5.3 %	2.7 %	2.1 %	5.2 %	4.1 %	5.8 %	4.3 %	2.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.733 %	45.007 ppb	20.332 ppb	47.603 ppb	224.274 ppb	46.694 ppb	47.300 ppb	24.296 ppb	56.077 ppb
Concentration per Run 1	97.295 %	43.425 ppb	19.478 ppb	45.480 ppb	213.200 ppb	44.981 ppb	45.912 ppb	23.745 ppb	54.606 ppb
Concentration per Run 2	96.613 %	46.350 ppb	21.171 ppb	49.244 ppb	226.147 ppb	47.709 ppb	48.837 ppb	24.961 ppb	57.422 ppb
Concentration per Run 3	96.289 %	45.246 ppb	20.347 ppb	48.086 ppb	233.475 ppb	47.393 ppb	47.153 ppb	24.184 ppb	56.204 ppb
Concentration RSD	0.5 %	3.3 %	4.2 %	4.0 %	4.6 %	3.2 %	3.1 %	2.5 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.277 %	11.418 ppb	11.327 ppb	111.269 ppb	91.315 ppb	99.699 %	4.423 ppb	4.888 ppb	103.918 %
Concentration per Run 1	98.575 %	11.029 ppb	11.143 ppb	107.986 ppb	85.776 ppb	103.749 %	4.268 ppb	4.703 ppb	108.207 %
Concentration per Run 2	96.760 %	11.585 ppb	11.438 ppb	112.499 ppb	92.892 ppb	97.391 %	4.534 ppb	4.969 ppb	101.238 %
Concentration per Run 3	96.496 %	11.639 ppb	11.400 ppb	113.323 ppb	95.278 ppb	97.958 %	4.467 ppb	4.992 ppb	102.308 %
Concentration RSD	1.2 %	3.0 %	1.4 %	2.6 %	5.4 %	3.5 %	3.1 %	3.3 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	41.404 ppb	197.829 ppb	101.111 %	120.916 %	9.229 ppb	44.988 ppb	188.224 %
Concentration per Run 1	38.928 ppb	189.513 ppb	103.510 %	122.407 %	8.852 ppb	43.778 ppb	211.681 %
Concentration per Run 2	42.733 ppb	201.896 ppb	98.791 %	118.793 %	9.448 ppb	46.285 ppb	182.873 %
Concentration per Run 3	42.551 ppb	202.079 ppb	101.031 %	121.548 %	9.388 ppb	44.900 ppb	170.118 %
Concentration RSD	5.2 %	3.6 %	2.3 %	1.6 %	3.6 %	2.8 %	11.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 149
Analysis label: wg1902498-3d100 6020TL
Analysis started at: 4/1/2024 6:55:17 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 18
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	82.586 %	103.061 %	0.506 ppb	13.334 ppb	149.426 ppb	113.417 ppb	23.819 ppb	286.979 ppb	291.209 ppb
Concentration per Run 1	78.626 %	106.555 %	0.562 ppb	14.031 ppb	134.386 ppb	108.019 ppb	22.937 ppb	277.006 ppb	300.967 ppb
Concentration per Run 2	84.736 %	102.743 %	0.488 ppb	13.195 ppb	153.736 ppb	111.989 ppb	22.929 ppb	293.592 ppb	280.054 ppb
Concentration per Run 3	84.396 %	99.884 %	0.467 ppb	12.775 ppb	160.156 ppb	120.243 ppb	25.591 ppb	290.337 ppb	292.606 ppb
Concentration RSD	4.2 %	3.2 %	9.9 %	4.8 %	9.0 %	5.5 %	6.4 %	3.1 %	3.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.386 %	4.789 ppb	2.196 ppb	5.150 ppb	27.473 ppb	5.055 ppb	5.166 ppb	2.555 ppb	5.642 ppb
Concentration per Run 1	97.671 %	4.697 ppb	2.126 ppb	4.908 ppb	24.990 ppb	4.890 ppb	5.105 ppb	2.564 ppb	5.424 ppb
Concentration per Run 2	101.258 %	4.694 ppb	2.188 ppb	5.301 ppb	28.656 ppb	5.149 ppb	5.150 ppb	2.417 ppb	5.775 ppb
Concentration per Run 3	99.231 %	4.977 ppb	2.274 ppb	5.241 ppb	28.773 ppb	5.127 ppb	5.243 ppb	2.686 ppb	5.728 ppb
Concentration RSD	1.8 %	3.4 %	3.4 %	4.1 %	7.8 %	2.8 %	1.4 %	5.3 %	3.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.022 %	1.251 ppb	1.224 ppb	11.941 ppb	11.847 ppb	101.180 %	0.490 ppb	0.551 ppb	103.746 %
Concentration per Run 1	99.087 %	1.303 ppb	1.231 ppb	11.674 ppb	11.454 ppb	104.007 %	0.457 ppb	0.536 ppb	108.569 %
Concentration per Run 2	97.683 %	1.204 ppb	1.144 ppb	11.886 ppb	11.894 ppb	101.560 %	0.516 ppb	0.534 ppb	103.382 %
Concentration per Run 3	97.298 %	1.245 ppb	1.298 ppb	12.262 ppb	12.192 ppb	97.973 %	0.498 ppb	0.584 ppb	99.286 %
Concentration RSD	1.0 %	4.0 %	6.3 %	2.5 %	3.1 %	3.0 %	6.2 %	5.2 %	4.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	6.498 ppb	21.188 ppb	101.352 %	105.628 %	1.237 ppb	5.066 ppb	176.341 %
Concentration per Run 1	6.256 ppb	20.276 ppb	104.505 %	100.369 %	1.273 ppb	5.331 ppb	213.052 %
Concentration per Run 2	6.623 ppb	21.361 ppb	101.394 %	98.713 %	1.338 ppb	5.385 ppb	178.437 %
Concentration per Run 3	6.614 ppb	21.929 ppb	98.159 %	117.802 %	1.099 ppb	4.483 ppb	137.534 %
Concentration RSD	3.2 %	4.0 %	3.1 %	10.0 %	10.0 %	10.0 %	21.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 150
Analysis label: wg1902498-4d100 6020TL
Analysis started at: 4/1/2024 6:59:58 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 19
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.274 %	103.003 %	0.523 ppb	12.909 ppb	152.941 ppb	117.906 ppb	24.846 ppb	285.994 ppb	283.360 ppb
Concentration per Run 1	78.671 %	102.830 %	0.526 ppb	13.179 ppb	151.043 ppb	118.938 ppb	24.630 ppb	299.739 ppb	284.464 ppb
Concentration per Run 2	80.627 %	108.461 %	0.508 ppb	12.650 ppb	131.152 ppb	108.767 ppb	23.948 ppb	274.613 ppb	286.376 ppb
Concentration per Run 3	81.524 %	97.719 %	0.534 ppb	12.898 ppb	176.627 ppb	126.012 ppb	25.959 ppb	283.629 ppb	279.241 ppb
Concentration RSD	1.8 %	5.2 %	2.6 %	2.1 %	14.9 %	7.4 %	4.1 %	4.5 %	1.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.627 %	4.813 ppb	2.193 ppb	5.267 ppb	24.543 ppb	5.063 ppb	5.117 ppb	2.690 ppb	5.599 ppb
Concentration per Run 1	86.074 %	4.865 ppb	2.150 ppb	5.055 ppb	22.713 ppb	5.089 ppb	5.113 ppb	2.685 ppb	5.497 ppb
Concentration per Run 2	89.325 %	4.856 ppb	2.212 ppb	5.394 ppb	25.895 ppb	4.981 ppb	4.987 ppb	2.606 ppb	5.811 ppb
Concentration per Run 3	90.483 %	4.719 ppb	2.217 ppb	5.353 ppb	25.020 ppb	5.120 ppb	5.253 ppb	2.778 ppb	5.489 ppb
Concentration RSD	2.6 %	1.7 %	1.7 %	3.5 %	6.7 %	1.4 %	2.6 %	3.2 %	3.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.116 %	1.252 ppb	1.219 ppb	12.175 ppb	10.457 ppb	99.474 %	0.482 ppb	0.555 ppb	101.975 %
Concentration per Run 1	99.102 %	1.220 ppb	1.195 ppb	11.936 ppb	9.823 ppb	101.956 %	0.482 ppb	0.538 ppb	104.617 %
Concentration per Run 2	96.272 %	1.277 ppb	1.204 ppb	12.333 ppb	10.447 ppb	98.718 %	0.481 ppb	0.574 ppb	102.472 %
Concentration per Run 3	95.974 %	1.258 ppb	1.256 ppb	12.255 ppb	11.100 ppb	97.748 %	0.483 ppb	0.555 ppb	98.835 %
Concentration RSD	1.8 %	2.3 %	2.7 %	1.7 %	6.1 %	2.2 %	0.2 %	3.3 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	5.326 ppb	22.747 ppb	91.777 %	103.258 %	1.220 ppb	5.216 ppb	153.985 %
Concentration per Run 1	5.200 ppb	21.628 ppb	99.387 %	119.108 %	1.014 ppb	4.503 ppb	209.264 %
Concentration per Run 2	5.247 ppb	21.936 ppb	96.589 %	96.228 %	1.305 ppb	5.500 ppb	128.271 %
Concentration per Run 3	5.531 ppb	24.677 ppb	79.353 %	94.439 %	1.340 ppb	5.646 ppb	124.419 %
Concentration RSD	3.4 %	7.4 %	11.8 %	13.3 %	14.7 %	11.9 %	31.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 151
Analysis label: wg1902498-5d10 6020TL
Analysis started at: 4/1/2024 7:04:39 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 46
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.455 %	102.888 %	48.552 ppb	53.164 ppb	5,795.349 ppb	4,903.648 ppb	100.077 ppb	6,561.175 ppb	6,557.443 ppb
Concentration per Run 1	80.813 %	107.335 %	48.527 ppb	53.298 ppb	5,607.533 ppb	4,730.723 ppb	97.689 ppb	6,510.933 ppb	6,396.259 ppb
Concentration per Run 2	80.715 %	100.491 %	48.722 ppb	52.958 ppb	5,902.758 ppb	5,040.804 ppb	102.185 ppb	6,658.725 ppb	6,658.230 ppb
Concentration per Run 3	76.838 %	100.837 %	48.409 ppb	53.236 ppb	5,875.758 ppb	4,939.417 ppb	100.358 ppb	6,513.865 ppb	6,617.841 ppb
Concentration RSD	2.9 %	3.7 %	0.3 %	0.3 %	2.8 %	3.2 %	2.3 %	1.3 %	2.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.843 %	47.552 ppb	49.412 ppb	49.354 ppb	4,911.582 ppb	48.521 ppb	48.604 ppb	48.930 ppb	57.820 ppb
Concentration per Run 1	99.554 %	45.835 ppb	47.560 ppb	47.268 ppb	4,785.771 ppb	47.899 ppb	47.149 ppb	47.809 ppb	56.036 ppb
Concentration per Run 2	101.258 %	48.178 ppb	50.964 ppb	50.863 ppb	5,053.965 ppb	49.477 ppb	50.205 ppb	50.269 ppb	59.271 ppb
Concentration per Run 3	98.717 %	48.643 ppb	49.712 ppb	49.930 ppb	4,895.010 ppb	48.185 ppb	48.457 ppb	48.712 ppb	58.153 ppb
Concentration RSD	1.3 %	3.2 %	3.5 %	3.8 %	2.7 %	1.7 %	3.2 %	2.5 %	2.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.386 %	47.887 ppb	48.037 ppb	70.679 ppb	47.309 ppb	99.136 %	0.764 ppb	48.602 ppb	102.559 %
Concentration per Run 1	100.230 %	45.969 ppb	46.020 ppb	67.664 ppb	43.764 ppb	102.936 %	0.724 ppb	46.149 ppb	107.450 %
Concentration per Run 2	94.909 %	49.585 ppb	49.381 ppb	72.055 ppb	48.805 ppb	97.806 %	0.789 ppb	49.485 ppb	100.556 %
Concentration per Run 3	97.020 %	48.105 ppb	48.709 ppb	72.318 ppb	49.358 ppb	96.666 %	0.780 ppb	50.173 ppb	99.669 %
Concentration RSD	2.8 %	3.8 %	3.7 %	3.7 %	6.5 %	3.4 %	4.6 %	4.4 %	4.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	50.038 ppb	51.619 ppb	101.440 %	120.174 %	43.919 ppb	43.485 ppb	190.584 %
Concentration per Run 1	47.560 ppb	48.782 ppb	105.913 %	123.893 %	38.707 ppb	41.540 ppb	222.555 %
Concentration per Run 2	51.163 ppb	53.483 ppb	99.517 %	118.285 %	44.979 ppb	44.258 ppb	178.848 %
Concentration per Run 3	51.391 ppb	52.594 ppb	98.891 %	118.343 %	48.071 ppb	44.656 ppb	170.350 %
Concentration RSD	4.3 %	4.8 %	3.8 %	2.7 %	10.9 %	3.9 %	14.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 152
Analysis label: wg1902498-6d5 6020TL
Analysis started at: 4/1/2024 7:09:19 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 47
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	76.911 %	98.729 %	0.014 ppb	5.641 ppb	1,466.469 ppb	257.590 ppb	110.808 ppb	3,666.430 ppb	3,651.879 ppb
Concentration per Run 1	80.736 %	95.726 %	0.003 ppb	5.376 ppb	1,505.378 ppb	259.488 ppb	113.317 ppb	3,731.437 ppb	3,675.055 ppb
Concentration per Run 2	76.400 %	101.531 %	0.018 ppb	5.759 ppb	1,444.307 ppb	258.885 ppb	109.750 ppb	3,598.064 ppb	3,618.367 ppb
Concentration per Run 3	73.597 %	98.932 %	0.019 ppb	5.787 ppb	1,449.721 ppb	254.398 ppb	109.359 ppb	3,669.790 ppb	3,662.215 ppb
Concentration RSD	4.7 %	2.9 %	66.8 %	4.1 %	2.3 %	1.1 %	2.0 %	1.8 %	0.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.558 %	0.221 ppb	4.521 ppb	7.794 ppb	312.082 ppb	0.216 ppb	0.358 ppb	1.398 ppb	23.095 ppb
Concentration per Run 1	94.843 %	0.233 ppb	4.490 ppb	7.831 ppb	314.470 ppb	0.223 ppb	0.373 ppb	1.333 ppb	23.060 ppb
Concentration per Run 2	89.185 %	0.241 ppb	4.567 ppb	7.856 ppb	306.545 ppb	0.218 ppb	0.374 ppb	1.392 ppb	23.297 ppb
Concentration per Run 3	87.646 %	0.191 ppb	4.507 ppb	7.693 ppb	315.230 ppb	0.205 ppb	0.328 ppb	1.469 ppb	22.928 ppb
Concentration RSD	4.2 %	12.1 %	0.9 %	1.1 %	1.5 %	4.3 %	7.2 %	4.9 %	0.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.224 %	0.179 ppb	0.264 ppb	42.205 ppb	2.072 ppb	98.263 %	-0.002 ppb	0.007 ppb	102.656 %
Concentration per Run 1	96.904 %	0.211 ppb	0.299 ppb	41.335 ppb	1.990 ppb	101.986 %	-0.001 ppb	0.007 ppb	105.424 %
Concentration per Run 2	94.281 %	0.178 ppb	0.249 ppb	42.722 ppb	2.118 ppb	96.626 %	-0.003 ppb	0.007 ppb	102.275 %
Concentration per Run 3	94.486 %	0.149 ppb	0.243 ppb	42.559 ppb	2.108 ppb	96.177 %	-0.002 ppb	0.005 ppb	100.268 %
Concentration RSD	1.5 %	17.2 %	11.7 %	1.8 %	3.4 %	3.3 %	37.9 %	16.7 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.896 ppb	3.723 ppb	94.319 %	105.915 %	0.539 ppb	0.770 ppb	168.814 %
Concentration per Run 1	0.841 ppb	3.552 ppb	100.737 %	122.924 %	0.405 ppb	0.648 ppb	197.220 %
Concentration per Run 2	0.911 ppb	4.011 ppb	81.393 %	97.308 %	0.668 ppb	0.836 ppb	170.115 %
Concentration per Run 3	0.935 ppb	3.606 ppb	100.825 %	97.513 %	0.545 ppb	0.825 ppb	139.108 %
Concentration RSD	5.4 %	6.7 %	11.9 %	13.9 %	24.5 %	13.8 %	17.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 153
Analysis label: L2416561-01 6020TL
Analysis started at: 4/1/2024 7:13:59 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 43
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	76.055 %	94.138 %	0.035 ppb	18.457 ppb	9,243.226 ppb	1,291.716 ppb	549.364 ppb	17,604.533 ppb	18,488.581 ppb
Concentration per Run 1	77.842 %	94.773 %	0.029 ppb	18.063 ppb	9,121.962 ppb	1,284.642 ppb	545.216 ppb	17,323.718 ppb	18,076.891 ppb
Concentration per Run 2	75.890 %	94.167 %	0.043 ppb	18.634 ppb	9,232.372 ppb	1,284.792 ppb	550.202 ppb	17,449.836 ppb	18,623.475 ppb
Concentration per Run 3	74.434 %	93.474 %	0.033 ppb	18.673 ppb	9,375.343 ppb	1,305.715 ppb	552.675 ppb	18,040.045 ppb	18,765.378 ppb
Concentration RSD	2.2 %	0.7 %	21.3 %	1.9 %	1.4 %	0.9 %	0.7 %	2.2 %	2.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	83.199 %	1.717 ppb	22.907 ppb	39.201 ppb	1,505.991 ppb	1.061 ppb	2.034 ppb	6.827 ppb	114.608 ppb
Concentration per Run 1	84.829 %	1.728 ppb	22.261 ppb	38.681 ppb	1,476.670 ppb	1.059 ppb	1.995 ppb	6.496 ppb	111.409 ppb
Concentration per Run 2	82.489 %	1.681 ppb	22.826 ppb	38.874 ppb	1,519.713 ppb	1.085 ppb	2.185 ppb	6.977 ppb	115.737 ppb
Concentration per Run 3	82.279 %	1.741 ppb	23.634 ppb	40.047 ppb	1,521.590 ppb	1.037 ppb	1.921 ppb	7.008 ppb	116.678 ppb
Concentration RSD	1.7 %	1.8 %	3.0 %	1.9 %	1.7 %	2.3 %	6.7 %	4.2 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.113 %	0.531 ppb	0.343 ppb	215.051 ppb	2.940 ppb	91.578 %	0.008 ppb	0.020 ppb	96.250 %
Concentration per Run 1	93.670 %	0.526 ppb	0.291 ppb	208.190 ppb	2.765 ppb	93.469 %	0.005 ppb	0.018 ppb	99.249 %
Concentration per Run 2	90.152 %	0.591 ppb	0.454 ppb	216.269 ppb	2.944 ppb	92.661 %	0.010 ppb	0.018 ppb	96.103 %
Concentration per Run 3	89.516 %	0.478 ppb	0.283 ppb	220.693 ppb	3.110 ppb	88.604 %	0.009 ppb	0.025 ppb	93.396 %
Concentration RSD	2.5 %	10.6 %	28.1 %	2.9 %	5.9 %	2.8 %	33.8 %	20.2 %	3.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.981 ppb	19.144 ppb	89.548 %	94.112 %	0.199 ppb	4.002 ppb	147.545 %
Concentration per Run 1	1.871 ppb	17.709 ppb	96.634 %	96.997 %	0.146 ppb	3.854 ppb	179.145 %
Concentration per Run 2	1.943 ppb	18.984 ppb	94.877 %	92.610 %	0.231 ppb	4.122 ppb	135.212 %
Concentration per Run 3	2.131 ppb	20.737 ppb	77.133 %	92.729 %	0.222 ppb	4.030 ppb	128.277 %
Concentration RSD	6.8 %	7.9 %	12.0 %	2.7 %	23.4 %	3.4 %	18.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	154	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 7:18:39 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	76.079 %	96.333 %	60.667 ppb	60.626 ppb	6,277.657 ppb	6,089.041 ppb	57.340 ppb	6,137.340 ppb	6,224.469 ppb
Concentration per Run 1	78.141 %	97.892 %	59.169 ppb	60.149 ppb	6,212.744 ppb	5,895.524 ppb	56.587 ppb	6,056.465 ppb	6,018.379 ppb
Concentration per Run 2	75.477 %	90.442 %	61.482 ppb	60.768 ppb	6,599.287 ppb	6,472.952 ppb	61.340 ppb	6,408.118 ppb	6,589.022 ppb
Concentration per Run 3	74.618 %	100.664 %	61.350 ppb	60.959 ppb	6,020.940 ppb	5,898.645 ppb	54.092 ppb	5,947.436 ppb	6,066.007 ppb
Recovery Percentage 1			101.111 %	101.043 %	104.628 %	101.484 %	95.566 %	102.289 %	103.741 %
Concentration RSD	2.4 %	5.5 %	2.1 %	0.7 %	4.7 %	5.5 %	6.4 %	3.9 %	5.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.671 %	59.429 ppb	59.971 ppb	56.906 ppb	6,022.807 ppb	61.335 ppb	61.669 ppb	61.604 ppb	58.774 ppb
Concentration per Run 1	97.870 %	58.388 ppb	58.452 ppb	55.641 ppb	5,849.390 ppb	59.634 ppb	60.253 ppb	59.341 ppb	56.756 ppb
Concentration per Run 2	94.597 %	62.116 ppb	62.423 ppb	58.980 ppb	6,273.385 ppb	64.602 ppb	65.083 ppb	64.556 ppb	61.426 ppb
Concentration per Run 3	94.546 %	57.782 ppb	59.039 ppb	56.096 ppb	5,945.647 ppb	59.770 ppb	59.672 ppb	60.915 ppb	58.140 ppb
Recovery Percentage 1		99.048 %	99.952 %	94.843 %	100.380 %	102.225 %	102.782 %	102.673 %	97.957 %
Concentration RSD	2.0 %	3.9 %	3.6 %	3.2 %	3.7 %	4.6 %	4.8 %	4.3 %	4.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.728 %	61.302 ppb	60.918 ppb	60.119 ppb	59.623 ppb	94.144 %	58.222 ppb	61.162 ppb	97.685 %
Concentration per Run 1	93.813 %	61.000 ppb	58.607 ppb	59.308 ppb	57.104 ppb	94.839 %	57.915 ppb	60.815 ppb	97.754 %
Concentration per Run 2	90.791 %	62.193 ppb	63.484 ppb	61.243 ppb	61.291 ppb	93.855 %	59.081 ppb	62.111 ppb	97.522 %
Concentration per Run 3	93.581 %	60.714 ppb	60.664 ppb	59.806 ppb	60.474 ppb	93.737 %	57.669 ppb	60.559 ppb	97.779 %
Recovery Percentage 1		102.170 %	101.530 %	100.198 %	99.372 %		97.036 %	101.936 %	
Concentration RSD	1.8 %	1.3 %	4.0 %	1.7 %	3.7 %	0.6 %	1.3 %	1.4 %	0.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.437 ppb	65.639 ppb	91.718 %	108.900 %	60.484 ppb	57.563 ppb	175.397 %
Concentration per Run 1	61.417 ppb	63.836 ppb	97.411 %	116.732 %	51.439 ppb	53.219 ppb	212.779 %
Concentration per Run 2	62.792 ppb	64.036 ppb	97.595 %	115.480 %	56.804 ppb	54.187 ppb	180.061 %
Concentration per Run 3	63.102 ppb	69.045 ppb	80.148 %	94.490 %	73.208 ppb	65.284 ppb	133.351 %
Recovery Percentage 1	104.062 %	109.398 %			100.806 %	95.939 %	
Concentration RSD	1.4 %	4.5 %	10.9 %	11.5 %	18.8 %	11.6 %	22.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	155	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 7:23:22 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	75.438 %	95.437 %	0.006 ppb	2.415 ppb	7.372 ppb	0.287 ppb	-0.451 ppb	3.113 ppb	-1.236 ppb
Concentration per Run 1	75.274 %	99.798 %	0.004 ppb	2.460 ppb	-4.725 ppb	0.174 ppb	-0.472 ppb	4.312 ppb	-1.227 ppb
Concentration per Run 2	74.981 %	95.466 %	0.011 ppb	2.388 ppb	11.856 ppb	0.695 ppb	-0.363 ppb	1.363 ppb	-0.325 ppb
Concentration per Run 3	76.057 %	91.048 %	0.004 ppb	2.398 ppb	14.984 ppb	-0.008 ppb	-0.520 ppb	3.665 ppb	-2.155 ppb
Recovery Percentage 1			1.291 %	24.153 %	7.372 %	0.410 %	-4.515 %	3.113 %	-1.236 %
Concentration RSD	0.7 %	4.6 %	61.3 %	1.6 %	143.7 %	127.1 %	17.9 %	49.8 %	74.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.463 %	-0.118 ppb	0.005 ppb	0.016 ppb	15.605 ppb	0.002 ppb	-0.006 ppb	0.004 ppb	-0.720 ppb
Concentration per Run 1	87.151 %	-0.132 ppb	0.019 ppb	0.001 ppb	17.048 ppb	0.004 ppb	-0.002 ppb	0.017 ppb	-0.717 ppb
Concentration per Run 2	87.544 %	-0.095 ppb	-0.003 ppb	0.023 ppb	16.036 ppb	0.002 ppb	-0.002 ppb	-0.005 ppb	-0.702 ppb
Concentration per Run 3	90.693 %	-0.126 ppb	0.000 ppb	0.025 ppb	13.731 ppb	-0.001 ppb	-0.012 ppb	0.000 ppb	-0.742 ppb
Recovery Percentage 1		-2.355 %	0.507 %	1.633 %	31.210 %	0.384 %	-0.279 %	0.417 %	-14.410 %
Concentration RSD	2.2 %	17.0 %	236.0 %	81.8 %	10.9 %	143.9 %	102.1 %	282.1 %	2.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.019 %	0.117 ppb	0.292 ppb	0.012 ppb	1.425 ppb	95.257 %	0.003 ppb	0.009 ppb	97.855 %
Concentration per Run 1	94.123 %	0.123 ppb	0.297 ppb	0.015 ppb	1.357 ppb	99.222 %	0.003 ppb	0.010 ppb	100.684 %
Concentration per Run 2	89.908 %	0.106 ppb	0.316 ppb	0.015 ppb	1.461 ppb	95.259 %	0.007 ppb	0.013 ppb	97.343 %
Concentration per Run 3	92.026 %	0.120 ppb	0.263 ppb	0.007 ppb	1.456 ppb	91.291 %	0.000 ppb	0.004 ppb	95.538 %
Recovery Percentage 1		23.303 %	5.835 %	0.121 %	71.233 %		0.853 %	4.611 %	
Concentration RSD	2.3 %	8.0 %	9.1 %	37.7 %	4.1 %	4.2 %	89.6 %	48.8 %	2.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.268 ppb	0.012 ppb	84.781 %	93.913 %	0.699 ppb	0.031 ppb	155.428 %
Concentration per Run 1	0.241 ppb	0.016 ppb	80.734 %	95.383 %	0.620 ppb	0.036 ppb	199.207 %
Concentration per Run 2	0.279 ppb	0.014 ppb	78.909 %	93.273 %	0.797 ppb	0.030 ppb	135.132 %
Concentration per Run 3	0.283 ppb	0.007 ppb	94.700 %	93.083 %	0.679 ppb	0.027 ppb	131.945 %
Recovery Percentage 1	6.690 %	2.494 %			69.861 %	3.082 %	
Concentration RSD	8.7 %	42.3 %	10.2 %	1.4 %	12.9 %	16.3 %	24.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 156
Analysis label: L2416335-01 6020TL
Analysis started at: 4/1/2024 7:28:05 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 48
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.703 %	104.129 %	0.043 ppb	20.725 ppb	49,062.795 ppb	39,102.019 ppb	607.205 ppb	7,424.772 ppb	62,203.393 ppb
Concentration per Run 1	79.546 %	106.209 %	0.037 ppb	20.690 ppb	47,462.031 ppb	37,569.626 ppb	584.535 ppb	7,237.168 ppb	61,041.658 ppb
Concentration per Run 2	80.907 %	104.130 %	0.057 ppb	20.543 ppb	49,834.607 ppb	39,461.045 ppb	607.813 ppb	7,464.000 ppb	62,480.912 ppb
Concentration per Run 3	78.655 %	102.050 %	0.034 ppb	20.943 ppb	49,891.746 ppb	40,275.387 ppb	629.268 ppb	7,573.148 ppb	63,087.607 ppb
Concentration RSD	1.4 %	2.0 %	28.5 %	1.0 %	2.8 %	3.6 %	3.7 %	2.3 %	1.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.392 %	5.710 ppb	9.280 ppb	42.387 ppb	1,232.834 ppb	0.575 ppb	1.950 ppb	5.957 ppb	29.039 ppb
Concentration per Run 1	94.855 %	5.559 ppb	9.202 ppb	41.192 ppb	1,178.205 ppb	0.532 ppb	1.879 ppb	5.755 ppb	28.572 ppb
Concentration per Run 2	99.235 %	5.950 ppb	9.290 ppb	43.454 ppb	1,267.729 ppb	0.627 ppb	1.985 ppb	5.962 ppb	29.144 ppb
Concentration per Run 3	92.085 %	5.620 ppb	9.350 ppb	42.516 ppb	1,252.568 ppb	0.565 ppb	1.986 ppb	6.153 ppb	29.401 ppb
Concentration RSD	3.8 %	3.7 %	0.8 %	2.7 %	3.9 %	8.4 %	3.1 %	3.3 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.718 %	0.837 ppb	0.104 ppb	157.407 ppb	2.847 ppb	92.719 %	0.005 ppb	0.027 ppb	98.395 %
Concentration per Run 1	97.229 %	0.829 ppb	0.080 ppb	152.382 ppb	2.634 ppb	95.132 %	0.004 ppb	0.026 ppb	100.665 %
Concentration per Run 2	94.264 %	0.833 ppb	0.132 ppb	159.795 ppb	2.867 ppb	92.779 %	0.005 ppb	0.031 ppb	99.632 %
Concentration per Run 3	92.662 %	0.848 ppb	0.100 ppb	160.042 ppb	3.040 ppb	90.247 %	0.006 ppb	0.024 ppb	94.888 %
Concentration RSD	2.4 %	1.2 %	25.1 %	2.8 %	7.1 %	2.6 %	21.4 %	12.6 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.182 ppb	28.484 ppb	99.443 %	110.732 %	0.253 ppb	1.011 ppb	144.455 %
Concentration per Run 1	1.119 ppb	27.559 ppb	101.814 %	120.161 %	0.183 ppb	0.923 ppb	181.088 %
Concentration per Run 2	1.201 ppb	28.484 ppb	98.451 %	98.230 %	0.318 ppb	1.139 ppb	127.978 %
Concentration per Run 3	1.225 ppb	29.407 ppb	98.065 %	113.805 %	0.259 ppb	0.972 ppb	124.298 %
Concentration RSD	4.7 %	3.2 %	2.1 %	10.2 %	26.6 %	11.2 %	22.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 157
Analysis label: L2416561-02 6020TL
Analysis started at: 4/1/2024 7:32:45 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 49
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.204 %	98.585 %	0.008 ppb	491.506 ppb	50,433.757 ppb	68,988.930 ppb	6.903 ppb	4,744.430 ppb	140,096.537 ppb
Concentration per Run 1	81.201 %	98.585 %	0.006 ppb	491.013 ppb	50,817.716 ppb	69,019.314 ppb	7.130 ppb	4,889.951 ppb	144,555.536 ppb
Concentration per Run 2	80.116 %	97.805 %	0.009 ppb	490.329 ppb	50,883.773 ppb	70,099.482 ppb	7.086 ppb	4,715.909 ppb	139,001.955 ppb
Concentration per Run 3	79.296 %	99.365 %	0.010 ppb	493.177 ppb	49,599.782 ppb	67,847.993 ppb	6.491 ppb	4,627.430 ppb	136,732.119 ppb
Concentration RSD	1.2 %	0.8 %	22.3 %	0.3 %	1.4 %	1.6 %	5.2 %	2.8 %	2.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.656 %	2.298 ppb	0.088 ppb	82.893 ppb	378.521 ppb	0.278 ppb	1.028 ppb	0.267 ppb	-0.310 ppb
Concentration per Run 1	91.402 %	2.446 ppb	0.092 ppb	81.917 ppb	381.561 ppb	0.271 ppb	1.003 ppb	0.261 ppb	-0.317 ppb
Concentration per Run 2	90.148 %	2.253 ppb	0.095 ppb	84.333 ppb	382.923 ppb	0.275 ppb	1.062 ppb	0.283 ppb	-0.284 ppb
Concentration per Run 3	90.417 %	2.196 ppb	0.077 ppb	82.428 ppb	371.078 ppb	0.289 ppb	1.020 ppb	0.258 ppb	-0.328 ppb
Concentration RSD	0.7 %	5.7 %	10.9 %	1.5 %	1.7 %	3.4 %	2.9 %	5.1 %	7.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.636 %	0.798 ppb	0.211 ppb	149.943 ppb	0.719 ppb	89.200 %	0.003 ppb	0.009 ppb	92.728 %
Concentration per Run 1	91.344 %	0.805 ppb	0.167 ppb	151.830 ppb	0.660 ppb	89.439 %	0.003 ppb	0.008 ppb	92.966 %
Concentration per Run 2	92.040 %	0.770 ppb	0.209 ppb	149.686 ppb	0.728 ppb	88.899 %	0.003 ppb	0.013 ppb	92.291 %
Concentration per Run 3	94.523 %	0.818 ppb	0.256 ppb	148.314 ppb	0.771 ppb	89.263 %	0.003 ppb	0.007 ppb	92.927 %
Concentration RSD	1.8 %	3.1 %	21.1 %	1.2 %	7.8 %	0.3 %	3.5 %	32.4 %	0.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.168 ppb	49.586 ppb	84.382 %	99.634 %	0.145 ppb	0.038 ppb	132.735 %
Concentration per Run 1	0.160 ppb	46.735 ppb	95.220 %	93.446 %	0.112 ppb	0.043 ppb	169.689 %
Concentration per Run 2	0.165 ppb	51.420 ppb	78.449 %	112.069 %	0.146 ppb	0.030 ppb	115.545 %
Concentration per Run 3	0.178 ppb	50.604 ppb	79.476 %	93.387 %	0.176 ppb	0.043 ppb	112.972 %
Concentration RSD	5.8 %	5.0 %	11.1 %	10.8 %	22.3 %	19.8 %	24.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 158
Analysis label: L2416561-03 6020TL
Analysis started at: 4/1/2024 7:37:25 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 50
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	78.993 %	95.235 %	0.002 ppb	173.388 ppb	27,788.740 ppb	25,108.829 ppb	14.293 ppb	3,045.694 ppb	56,304.057 ppb
Concentration per Run 1	82.283 %	98.412 %	0.001 ppb	169.773 ppb	27,621.937 ppb	24,727.218 ppb	14.742 ppb	3,087.239 ppb	57,492.496 ppb
Concentration per Run 2	78.602 %	92.434 %	-0.002 ppb	173.408 ppb	28,019.710 ppb	25,516.037 ppb	14.589 ppb	3,015.442 ppb	55,697.035 ppb
Concentration per Run 3	76.095 %	94.860 %	0.007 ppb	176.982 ppb	27,724.572 ppb	25,083.232 ppb	13.549 ppb	3,034.400 ppb	55,722.641 ppb
Concentration RSD	3.9 %	3.2 %	218.9 %	2.1 %	0.7 %	1.6 %	4.5 %	1.2 %	1.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.861 %	2.100 ppb	1.274 ppb	37.033 ppb	37.868 ppb	0.210 ppb	0.502 ppb	0.461 ppb	22.826 ppb
Concentration per Run 1	94.550 %	2.056 ppb	1.290 ppb	36.311 ppb	37.518 ppb	0.212 ppb	0.618 ppb	0.424 ppb	23.452 ppb
Concentration per Run 2	92.296 %	2.156 ppb	1.227 ppb	37.090 ppb	39.682 ppb	0.204 ppb	0.502 ppb	0.471 ppb	22.401 ppb
Concentration per Run 3	88.736 %	2.089 ppb	1.306 ppb	37.698 ppb	36.403 ppb	0.213 ppb	0.387 ppb	0.489 ppb	22.625 ppb
Concentration RSD	3.2 %	2.4 %	3.3 %	1.9 %	4.4 %	2.2 %	23.1 %	7.2 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.927 %	0.626 ppb	1.579 ppb	89.905 ppb	0.789 ppb	90.774 %	0.003 ppb	0.015 ppb	97.093 %
Concentration per Run 1	91.293 %	0.633 ppb	1.611 ppb	90.258 ppb	0.773 ppb	91.862 %	0.004 ppb	0.005 ppb	98.129 %
Concentration per Run 2	94.938 %	0.602 ppb	1.502 ppb	89.362 ppb	0.765 ppb	90.374 %	0.003 ppb	0.022 ppb	97.429 %
Concentration per Run 3	92.548 %	0.643 ppb	1.624 ppb	90.096 ppb	0.830 ppb	90.088 %	0.004 ppb	0.017 ppb	95.720 %
Concentration RSD	2.0 %	3.4 %	4.3 %	0.5 %	4.5 %	1.0 %	18.7 %	57.0 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.618 ppb	66.351 ppb	97.510 %	95.394 %	0.105 ppb	1.161 ppb	151.477 %
Concentration per Run 1	0.593 ppb	66.147 ppb	97.052 %	92.934 %	0.074 ppb	1.199 ppb	186.062 %
Concentration per Run 2	0.636 ppb	66.124 ppb	97.543 %	97.567 %	0.116 ppb	1.129 ppb	136.170 %
Concentration per Run 3	0.626 ppb	66.782 ppb	97.935 %	95.682 %	0.123 ppb	1.157 ppb	132.198 %
Concentration RSD	3.6 %	0.6 %	0.5 %	2.4 %	25.4 %	3.0 %	19.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 159
Analysis label: L2416561-04 6020TL
Analysis started at: 4/1/2024 7:42:06 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 51
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	74.996 %	100.664 %	0.042 ppb	22.218 ppb	9,146.860 ppb	1,327.556 ppb	491.147 ppb	16,939.013 ppb	17,741.875 ppb
Concentration per Run 1	80.123 %	102.657 %	0.030 ppb	20.889 ppb	8,914.166 ppb	1,288.085 ppb	481.797 ppb	16,448.535 ppb	17,284.351 ppb
Concentration per Run 2	75.518 %	102.224 %	0.049 ppb	21.511 ppb	9,110.250 ppb	1,327.545 ppb	490.701 ppb	16,707.762 ppb	17,679.158 ppb
Concentration per Run 3	69.347 %	97.112 %	0.048 ppb	24.253 ppb	9,416.165 ppb	1,367.036 ppb	500.942 ppb	17,660.743 ppb	18,262.117 ppb
Concentration RSD	7.2 %	3.1 %	24.2 %	8.1 %	2.8 %	3.0 %	2.0 %	3.8 %	2.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.370 %	1.623 ppb	21.847 ppb	33.949 ppb	1,328.136 ppb	0.951 ppb	1.725 ppb	7.343 ppb	104.258 ppb
Concentration per Run 1	92.614 %	1.590 ppb	21.293 ppb	32.690 ppb	1,276.964 ppb	0.888 ppb	1.612 ppb	7.036 ppb	101.389 ppb
Concentration per Run 2	87.377 %	1.533 ppb	21.832 ppb	33.611 ppb	1,339.905 ppb	1.003 ppb	1.736 ppb	7.482 ppb	106.008 ppb
Concentration per Run 3	85.119 %	1.746 ppb	22.416 ppb	35.548 ppb	1,367.537 ppb	0.962 ppb	1.827 ppb	7.511 ppb	105.376 ppb
Concentration RSD	4.4 %	6.8 %	2.6 %	4.3 %	3.5 %	6.1 %	6.3 %	3.6 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.609 %	0.518 ppb	0.204 ppb	203.087 ppb	2.525 ppb	92.362 %	0.012 ppb	0.014 ppb	97.427 %
Concentration per Run 1	94.169 %	0.473 ppb	0.130 ppb	195.759 ppb	2.311 ppb	96.694 %	0.009 ppb	0.015 ppb	100.650 %
Concentration per Run 2	89.663 %	0.535 ppb	0.265 ppb	206.080 ppb	2.567 ppb	90.243 %	0.011 ppb	0.014 ppb	95.363 %
Concentration per Run 3	87.996 %	0.545 ppb	0.216 ppb	207.422 ppb	2.698 ppb	90.148 %	0.017 ppb	0.012 ppb	96.267 %
Concentration RSD	3.5 %	7.5 %	33.4 %	3.1 %	7.8 %	4.1 %	32.4 %	9.5 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.810 ppb	17.939 ppb	92.198 %	102.359 %	0.082 ppb	3.435 ppb	170.887 %
Concentration per Run 1	1.754 ppb	16.839 ppb	99.650 %	119.435 %	0.043 ppb	2.870 ppb	201.712 %
Concentration per Run 2	1.845 ppb	19.409 ppb	80.039 %	93.698 %	0.102 ppb	3.746 ppb	175.420 %
Concentration per Run 3	1.831 ppb	17.569 ppb	96.906 %	93.945 %	0.101 ppb	3.688 ppb	135.529 %
Concentration RSD	2.7 %	7.4 %	11.5 %	14.4 %	41.1 %	14.3 %	19.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 160
Analysis label: L2416646-01 6020TL
Analysis started at: 4/1/2024 7:46:46 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 52
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	75.474 %	97.257 %	0.009 ppb	10.709 ppb	27,269.609 ppb	16,818.405 ppb	2.721 ppb	5,609.521 ppb	50,759.060 ppb
Concentration per Run 1	78.887 %	97.892 %	0.006 ppb	10.161 ppb	26,652.060 ppb	16,501.541 ppb	2.703 ppb	5,602.270 ppb	50,659.158 ppb
Concentration per Run 2	74.965 %	95.813 %	0.014 ppb	10.763 ppb	27,706.639 ppb	16,787.291 ppb	2.582 ppb	5,570.915 ppb	50,793.273 ppb
Concentration per Run 3	72.569 %	98.065 %	0.006 ppb	11.205 ppb	27,450.128 ppb	17,166.383 ppb	2.879 ppb	5,655.379 ppb	50,824.747 ppb
Concentration RSD	4.2 %	1.3 %	56.8 %	4.9 %	2.0 %	2.0 %	5.5 %	0.8 %	0.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.370 %	0.043 ppb	0.218 ppb	353.550 ppb	1,531.506 ppb	2.075 ppb	3.538 ppb	0.175 ppb	1.584 ppb
Concentration per Run 1	88.989 %	0.033 ppb	0.226 ppb	348.222 ppb	1,511.521 ppb	2.065 ppb	3.501 ppb	0.173 ppb	1.488 ppb
Concentration per Run 2	85.636 %	0.049 ppb	0.219 ppb	360.161 ppb	1,539.078 ppb	2.078 ppb	3.559 ppb	0.185 ppb	1.597 ppb
Concentration per Run 3	84.486 %	0.048 ppb	0.211 ppb	352.267 ppb	1,543.918 ppb	2.082 ppb	3.553 ppb	0.167 ppb	1.667 ppb
Concentration RSD	2.7 %	20.5 %	3.4 %	1.7 %	1.1 %	0.4 %	0.9 %	5.3 %	5.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.382 %	1.066 ppb	0.089 ppb	257.762 ppb	0.430 ppb	91.527 %	0.001 ppb	0.044 ppb	95.952 %
Concentration per Run 1	93.463 %	1.034 ppb	0.084 ppb	254.100 ppb	0.413 ppb	93.837 %	0.001 ppb	0.045 ppb	98.290 %
Concentration per Run 2	92.183 %	1.025 ppb	0.068 ppb	256.768 ppb	0.433 ppb	91.602 %	0.003 ppb	0.048 ppb	96.931 %
Concentration per Run 3	91.498 %	1.140 ppb	0.115 ppb	262.418 ppb	0.445 ppb	89.143 %	0.000 ppb	0.038 ppb	92.635 %
Concentration RSD	1.1 %	6.0 %	26.6 %	1.6 %	3.7 %	2.6 %	114.5 %	12.1 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.108 ppb	47.671 ppb	97.755 %	102.513 %	0.071 ppb	0.048 ppb	154.460 %
Concentration per Run 1	0.098 ppb	47.519 ppb	100.290 %	96.739 %	0.053 ppb	0.053 ppb	190.570 %
Concentration per Run 2	0.108 ppb	46.677 ppb	97.666 %	117.314 %	0.069 ppb	0.035 ppb	138.899 %
Concentration per Run 3	0.116 ppb	48.817 ppb	95.308 %	93.485 %	0.092 ppb	0.056 ppb	133.911 %
Concentration RSD	8.3 %	2.3 %	2.5 %	12.6 %	27.3 %	23.8 %	20.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 161
Analysis label: L2416646-02 6020TL
Analysis started at: 4/1/2024 7:51:26 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 53
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.601 %	99.422 %	-0.003 ppb	9.395 ppb	55,235.865 ppb	17,332.198 ppb	1.738 ppb	5,492.988 ppb	55,662.596 ppb
Concentration per Run 1	82.094 %	102.570 %	0.000 ppb	9.120 ppb	53,653.320 ppb	16,875.830 ppb	1.897 ppb	5,330.081 ppb	54,173.258 ppb
Concentration per Run 2	78.699 %	97.026 %	-0.002 ppb	9.414 ppb	56,419.728 ppb	17,907.924 ppb	1.678 ppb	5,617.277 ppb	56,778.333 ppb
Concentration per Run 3	78.009 %	98.672 %	-0.008 ppb	9.651 ppb	55,634.547 ppb	17,212.842 ppb	1.638 ppb	5,531.604 ppb	56,036.197 ppb
Concentration RSD	2.7 %	2.9 %	125.2 %	2.8 %	2.6 %	3.0 %	8.0 %	2.7 %	2.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.866 %	-0.047 ppb	0.040 ppb	0.048 ppb	8.953 ppb	0.024 ppb	0.372 ppb	0.095 ppb	-0.010 ppb
Concentration per Run 1	95.916 %	-0.035 ppb	0.042 ppb	0.059 ppb	10.575 ppb	0.022 ppb	0.382 ppb	0.097 ppb	-0.054 ppb
Concentration per Run 2	92.576 %	-0.049 ppb	0.035 ppb	0.061 ppb	9.594 ppb	0.022 ppb	0.359 ppb	0.101 ppb	0.024 ppb
Concentration per Run 3	93.106 %	-0.059 ppb	0.042 ppb	0.024 ppb	6.690 ppb	0.029 ppb	0.374 ppb	0.085 ppb	0.000 ppb
Concentration RSD	1.9 %	26.2 %	10.3 %	43.2 %	22.6 %	17.4 %	3.2 %	8.7 %	403.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.547 %	0.341 ppb	0.126 ppb	329.227 ppb	0.310 ppb	90.876 %	-0.002 ppb	0.000 ppb	97.249 %
Concentration per Run 1	94.850 %	0.354 ppb	0.096 ppb	317.849 ppb	0.291 ppb	94.345 %	-0.003 ppb	-0.001 ppb	100.288 %
Concentration per Run 2	91.161 %	0.358 ppb	0.120 ppb	333.204 ppb	0.291 ppb	89.366 %	-0.001 ppb	0.000 ppb	95.557 %
Concentration per Run 3	91.630 %	0.311 ppb	0.163 ppb	336.628 ppb	0.347 ppb	88.919 %	0.000 ppb	0.000 ppb	95.901 %
Concentration RSD	2.2 %	7.6 %	27.0 %	3.0 %	10.4 %	3.3 %	92.2 %	227.1 %	2.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.095 ppb	22.144 ppb	97.662 %	102.666 %	0.048 ppb	0.044 ppb	158.798 %
Concentration per Run 1	0.085 ppb	21.707 ppb	99.778 %	118.287 %	0.026 ppb	0.032 ppb	203.296 %
Concentration per Run 2	0.090 ppb	22.582 ppb	96.934 %	94.210 %	0.058 ppb	0.048 ppb	140.251 %
Concentration per Run 3	0.110 ppb	22.143 ppb	96.275 %	95.501 %	0.061 ppb	0.053 ppb	132.848 %
Concentration RSD	14.1 %	2.0 %	1.9 %	13.2 %	39.6 %	24.7 %	24.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 162
Analysis label: L2416669-01 6020TL
Analysis started at: 4/1/2024 7:56:06 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 54
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	83.133 %	103.408 %	0.004 ppb	45.036 ppb	18,283.004 ppb	57,267.629 ppb	4.502 ppb	3,827.055 ppb	119,902.201 ppb
Concentration per Run 1	86.107 %	104.823 %	0.003 ppb	44.137 ppb	17,915.336 ppb	56,392.671 ppb	4.440 ppb	3,765.376 ppb	119,646.585 ppb
Concentration per Run 2	82.532 %	101.530 %	0.000 ppb	45.165 ppb	18,572.379 ppb	58,122.737 ppb	4.532 ppb	3,921.419 ppb	121,352.251 ppb
Concentration per Run 3	80.760 %	103.870 %	0.008 ppb	45.806 ppb	18,361.296 ppb	57,287.480 ppb	4.534 ppb	3,794.370 ppb	118,707.767 ppb
Concentration RSD	3.3 %	1.6 %	116.7 %	1.9 %	1.8 %	1.5 %	1.2 %	2.2 %	1.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.586 %	-0.064 ppb	0.758 ppb	0.560 ppb	46.602 ppb	0.017 ppb	3.164 ppb	1.547 ppb	26.376 ppb
Concentration per Run 1	104.214 %	-0.060 ppb	0.741 ppb	0.517 ppb	47.231 ppb	0.011 ppb	3.170 ppb	1.574 ppb	26.451 ppb
Concentration per Run 2	102.221 %	-0.074 ppb	0.806 ppb	0.644 ppb	46.044 ppb	0.021 ppb	3.233 ppb	1.617 ppb	26.681 ppb
Concentration per Run 3	101.321 %	-0.057 ppb	0.727 ppb	0.520 ppb	46.533 ppb	0.018 ppb	3.090 ppb	1.450 ppb	25.998 ppb
Concentration RSD	1.4 %	14.1 %	5.5 %	12.9 %	1.3 %	30.9 %	2.3 %	5.6 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.124 %	0.157 ppb	0.156 ppb	1,227.061 ppb	2.182 ppb	94.985 %	0.002 ppb	0.027 ppb	100.883 %
Concentration per Run 1	96.151 %	0.145 ppb	0.133 ppb	1,218.974 ppb	2.023 ppb	94.531 %	0.000 ppb	0.027 ppb	102.042 %
Concentration per Run 2	96.137 %	0.187 ppb	0.224 ppb	1,239.222 ppb	2.219 ppb	93.868 %	0.002 ppb	0.028 ppb	99.776 %
Concentration per Run 3	99.084 %	0.137 ppb	0.109 ppb	1,222.987 ppb	2.302 ppb	96.557 %	0.003 ppb	0.027 ppb	100.830 %
Concentration RSD	1.7 %	17.1 %	38.9 %	0.9 %	6.6 %	1.5 %	96.7 %	2.1 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.177 ppb	11.598 ppb	102.313 %	99.130 %	0.073 ppb	0.041 ppb	163.593 %
Concentration per Run 1	0.160 ppb	11.267 ppb	102.843 %	98.632 %	0.056 ppb	0.038 ppb	184.975 %
Concentration per Run 2	0.189 ppb	11.983 ppb	99.616 %	98.473 %	0.080 ppb	0.041 ppb	169.340 %
Concentration per Run 3	0.182 ppb	11.545 ppb	104.479 %	100.285 %	0.084 ppb	0.043 ppb	136.465 %
Concentration RSD	8.4 %	3.1 %	2.4 %	1.0 %	20.6 %	6.1 %	15.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 163
Analysis label: L2416737-01 6020TL
Analysis started at: 4/1/2024 8:00:46 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 55
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.121 %	105.602 %	0.000 ppb	137.493 ppb	9,619.590 ppb	51,919.771 ppb	5.677 ppb	5,716.139 ppb	176,490.398 ppb
Concentration per Run 1	80.433 %	106.295 %	0.005 ppb	138.945 ppb	9,816.833 ppb	52,545.449 ppb	5.370 ppb	5,895.168 ppb	182,314.186 ppb
Concentration per Run 2	78.205 %	107.768 %	0.000 ppb	137.747 ppb	9,339.534 ppb	50,566.251 ppb	5.466 ppb	5,422.179 ppb	169,615.132 ppb
Concentration per Run 3	78.727 %	102.743 %	-0.005 ppb	135.786 ppb	9,702.403 ppb	52,647.613 ppb	6.196 ppb	5,831.069 ppb	177,541.875 ppb
Concentration RSD	1.5 %	2.4 %	3,048.5 %	1.2 %	2.6 %	2.3 %	8.0 %	4.5 %	3.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.754 %	0.194 ppb	0.231 ppb	9.943 ppb	20.391 ppb	0.165 ppb	0.622 ppb	0.696 ppb	-0.006 ppb
Concentration per Run 1	99.408 %	0.186 ppb	0.224 ppb	10.251 ppb	21.878 ppb	0.197 ppb	0.621 ppb	0.746 ppb	0.046 ppb
Concentration per Run 2	99.470 %	0.189 ppb	0.254 ppb	9.715 ppb	19.307 ppb	0.132 ppb	0.583 ppb	0.647 ppb	-0.029 ppb
Concentration per Run 3	100.384 %	0.205 ppb	0.215 ppb	9.861 ppb	19.989 ppb	0.165 ppb	0.663 ppb	0.694 ppb	-0.035 ppb
Concentration RSD	0.5 %	5.4 %	8.8 %	2.8 %	6.5 %	19.6 %	6.4 %	7.2 %	722.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.722 %	0.314 ppb	1.468 ppb	1,626.433 ppb	5.832 ppb	97.470 %	0.005 ppb	0.013 ppb	104.261 %
Concentration per Run 1	96.164 %	0.376 ppb	1.386 ppb	1,687.033 ppb	5.827 ppb	95.111 %	0.004 ppb	0.020 ppb	98.987 %
Concentration per Run 2	101.823 %	0.276 ppb	1.563 ppb	1,544.592 ppb	5.490 ppb	102.078 %	0.004 ppb	0.009 ppb	108.792 %
Concentration per Run 3	98.178 %	0.289 ppb	1.457 ppb	1,647.675 ppb	6.179 ppb	95.222 %	0.006 ppb	0.011 ppb	105.005 %
Concentration RSD	2.9 %	17.3 %	6.1 %	4.5 %	5.9 %	4.1 %	26.6 %	43.7 %	4.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.161 ppb	56.517 ppb	97.441 %	107.791 %	0.040 ppb	0.131 ppb	176.786 %
Concentration per Run 1	0.168 ppb	62.886 ppb	81.350 %	94.614 %	0.029 ppb	0.148 ppb	180.555 %
Concentration per Run 2	0.150 ppb	51.619 ppb	107.880 %	128.936 %	0.040 ppb	0.098 ppb	175.578 %
Concentration per Run 3	0.164 ppb	55.046 ppb	103.092 %	99.823 %	0.052 ppb	0.146 ppb	174.226 %
Concentration RSD	5.8 %	10.2 %	14.5 %	17.2 %	28.0 %	21.6 %	1.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 164
Analysis label: L2416737-02 6020TL
Analysis started at: 4/1/2024 8:05:26 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 56
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.175 %	105.054 %	0.008 ppb	338.485 ppb	8,985.704 ppb	45,596.457 ppb	2.749 ppb	980.724 ppb	252,520.318 ppb
Concentration per Run 1	79.203 %	99.884 %	0.005 ppb	346.141 ppb	9,503.771 ppb	48,179.611 ppb	2.993 ppb	1,009.719 ppb	260,772.645 ppb
Concentration per Run 2	80.202 %	106.815 %	0.005 ppb	335.529 ppb	8,818.885 ppb	44,745.372 ppb	2.645 ppb	996.483 ppb	255,692.151 ppb
Concentration per Run 3	81.119 %	108.461 %	0.012 ppb	333.786 ppb	8,634.455 ppb	43,864.388 ppb	2.609 ppb	935.971 ppb	241,096.159 ppb
Concentration RSD	1.2 %	4.3 %	52.5 %	2.0 %	5.1 %	5.0 %	7.7 %	4.0 %	4.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.184 %	0.083 ppb	0.371 ppb	147.158 ppb	18.158 ppb	0.639 ppb	1.182 ppb	0.959 ppb	0.229 ppb
Concentration per Run 1	102.353 %	0.110 ppb	0.403 ppb	150.847 ppb	19.226 ppb	0.677 ppb	1.144 ppb	0.938 ppb	0.210 ppb
Concentration per Run 2	103.705 %	0.087 ppb	0.363 ppb	149.134 ppb	17.077 ppb	0.618 ppb	1.173 ppb	0.998 ppb	0.301 ppb
Concentration per Run 3	103.495 %	0.052 ppb	0.346 ppb	141.492 ppb	18.172 ppb	0.623 ppb	1.229 ppb	0.941 ppb	0.175 ppb
Concentration RSD	0.7 %	35.3 %	7.8 %	3.4 %	5.9 %	5.1 %	3.6 %	3.5 %	28.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.736 %	0.359 ppb	0.810 ppb	1,993.777 ppb	1.636 ppb	93.343 %	0.016 ppb	0.048 ppb	102.156 %
Concentration per Run 1	96.989 %	0.418 ppb	0.978 ppb	2,020.963 ppb	1.553 ppb	91.499 %	0.013 ppb	0.055 ppb	101.229 %
Concentration per Run 2	96.069 %	0.342 ppb	0.696 ppb	2,039.387 ppb	1.683 ppb	91.568 %	0.019 ppb	0.043 ppb	98.337 %
Concentration per Run 3	100.149 %	0.318 ppb	0.758 ppb	1,920.981 ppb	1.672 ppb	96.962 %	0.014 ppb	0.045 ppb	106.902 %
Concentration RSD	2.2 %	14.5 %	18.3 %	3.2 %	4.4 %	3.4 %	19.7 %	13.2 %	4.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.150 ppb	74.446 ppb	102.338 %	112.417 %	0.034 ppb	0.050 ppb	162.855 %
Concentration per Run 1	0.152 ppb	75.522 ppb	99.711 %	95.709 %	0.027 ppb	0.060 ppb	181.702 %
Concentration per Run 2	0.151 ppb	76.550 ppb	100.074 %	116.393 %	0.036 ppb	0.044 ppb	131.303 %
Concentration per Run 3	0.149 ppb	71.266 ppb	107.230 %	125.149 %	0.039 ppb	0.045 ppb	175.560 %
Concentration RSD	1.1 %	3.8 %	4.1 %	13.4 %	18.7 %	18.1 %	16.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 165
Analysis label: L2416737-03 6020TL
Analysis started at: 4/1/2024 8:10:06 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 57
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	97.105 %	134.336 %	0.001 ppb	722.748 ppb	8,139.349 ppb	31,753.533 ppb	9.122 ppb	8,247.038 ppb	285,140.183 ppb
Concentration per Run 1	98.186 %	135.404 %	0.000 ppb	726.224 ppb	8,138.238 ppb	31,554.539 ppb	8.423 ppb	8,239.525 ppb	289,173.953 ppb
Concentration per Run 2	96.447 %	130.813 %	0.001 ppb	723.554 ppb	8,237.200 ppb	32,545.949 ppb	9.861 ppb	8,497.048 ppb	287,824.134 ppb
Concentration per Run 3	96.682 %	136.790 %	0.001 ppb	718.465 ppb	8,042.609 ppb	31,160.112 ppb	9.082 ppb	8,004.542 ppb	278,422.462 ppb
Concentration RSD	1.0 %	2.3 %	58.5 %	0.5 %	1.2 %	2.2 %	7.9 %	3.0 %	2.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	120.103 %	0.039 ppb	0.253 ppb	3,219.588 ppb	87,595.972 ppb	1.472 ppb	0.274 ppb	0.209 ppb	0.534 ppb
Concentration per Run 1	119.278 %	0.033 ppb	0.268 ppb	3,181.338 ppb	85,770.722 ppb	1.414 ppb	0.251 ppb	0.195 ppb	0.453 ppb
Concentration per Run 2	121.019 %	0.049 ppb	0.224 ppb	3,270.050 ppb	89,521.555 ppb	1.459 ppb	0.287 ppb	0.244 ppb	0.588 ppb
Concentration per Run 3	120.013 %	0.034 ppb	0.266 ppb	3,207.378 ppb	87,495.639 ppb	1.542 ppb	0.284 ppb	0.188 ppb	0.560 ppb
Concentration RSD	0.7 %	23.6 %	9.9 %	1.4 %	2.1 %	4.4 %	7.2 %	14.7 %	13.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.048 %	7.762 ppb	0.096 ppb	3,890.184 ppb	2.088 ppb	93.862 %	0.013 ppb	0.000 ppb	102.013 %
Concentration per Run 1	97.619 %	7.609 ppb	0.079 ppb	3,824.745 ppb	1.947 ppb	95.267 %	0.015 ppb	0.000 ppb	103.922 %
Concentration per Run 2	98.574 %	7.724 ppb	0.097 ppb	3,919.362 ppb	2.060 ppb	93.762 %	0.017 ppb	0.000 ppb	100.214 %
Concentration per Run 3	97.951 %	7.953 ppb	0.111 ppb	3,926.445 ppb	2.255 ppb	92.559 %	0.009 ppb	0.000 ppb	101.902 %
Concentration RSD	0.5 %	2.3 %	17.0 %	1.5 %	7.5 %	1.4 %	30.0 %	2,498.4 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.066 ppb	95.351 ppb	97.105 %	113.247 %	0.025 ppb	0.041 ppb	176.900 %
Concentration per Run 1	0.064 ppb	90.385 ppb	104.627 %	121.830 %	0.013 ppb	0.035 ppb	211.231 %
Concentration per Run 2	0.067 ppb	103.211 ppb	84.984 %	99.406 %	0.034 ppb	0.053 ppb	179.905 %
Concentration per Run 3	0.067 ppb	92.457 ppb	101.705 %	118.506 %	0.029 ppb	0.035 ppb	139.563 %
Concentration RSD	2.8 %	7.2 %	10.9 %	10.7 %	43.9 %	25.5 %	20.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	166	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 8:14:46 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	77.374 %	100.982 %	59.066 ppb	69.644 ppb	6,161.260 ppb	5,940.531 ppb	57.570 ppb	6,000.360 ppb	6,033.622 ppb
Concentration per Run 1	78.722 %	101.877 %	59.251 ppb	71.261 ppb	6,114.528 ppb	5,899.586 ppb	56.734 ppb	5,913.489 ppb	5,980.941 ppb
Concentration per Run 2	76.063 %	100.058 %	59.222 ppb	69.107 ppb	6,122.778 ppb	5,964.082 ppb	58.085 ppb	6,029.261 ppb	6,043.175 ppb
Concentration per Run 3	77.338 %	101.011 %	58.725 ppb	68.564 ppb	6,246.475 ppb	5,957.927 ppb	57.891 ppb	6,058.330 ppb	6,076.750 ppb
Recovery Percentage 1			98.443 %	116.073 %	102.688 %	99.009 %	95.950 %	100.006 %	100.560 %
Concentration RSD	1.7 %	0.9 %	0.5 %	2.0 %	1.2 %	0.6 %	1.3 %	1.3 %	0.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.366 %	58.811 ppb	59.108 ppb	56.641 ppb	6,048.228 ppb	61.151 ppb	60.628 ppb	61.193 ppb	58.123 ppb
Concentration per Run 1	102.484 %	57.690 ppb	57.873 ppb	54.627 ppb	5,977.485 ppb	60.394 ppb	59.457 ppb	59.901 ppb	57.416 ppb
Concentration per Run 2	101.738 %	59.564 ppb	59.828 ppb	57.208 ppb	6,096.187 ppb	60.976 ppb	61.520 ppb	61.521 ppb	58.303 ppb
Concentration per Run 3	102.877 %	59.179 ppb	59.623 ppb	58.088 ppb	6,071.012 ppb	62.083 ppb	60.908 ppb	62.156 ppb	58.651 ppb
Recovery Percentage 1		98.019 %	98.513 %	94.401 %	100.804 %	101.918 %	101.047 %	101.988 %	96.872 %
Concentration RSD	0.6 %	1.7 %	1.8 %	3.2 %	1.0 %	1.4 %	1.7 %	1.9 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.068 %	60.597 ppb	59.939 ppb	59.968 ppb	58.683 ppb	97.385 %	58.075 ppb	60.268 ppb	100.830 %
Concentration per Run 1	97.317 %	59.571 ppb	56.894 ppb	58.873 ppb	54.918 ppb	100.583 %	57.261 ppb	59.196 ppb	103.959 %
Concentration per Run 2	96.049 %	60.851 ppb	61.277 ppb	60.676 ppb	60.382 ppb	95.543 %	58.696 ppb	60.911 ppb	97.594 %
Concentration per Run 3	94.837 %	61.368 ppb	61.647 ppb	60.357 ppb	60.748 ppb	96.028 %	58.268 ppb	60.697 ppb	100.937 %
Recovery Percentage 1		100.994 %	99.899 %	99.947 %	97.804 %		96.792 %	100.446 %	
Concentration RSD	1.3 %	1.5 %	4.4 %	1.6 %	5.6 %	2.9 %	1.3 %	1.6 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.145 ppb	62.725 ppb	102.392 %	98.288 %	61.436 ppb	64.569 ppb	170.691 %
Concentration per Run 1	60.124 ppb	61.135 ppb	104.781 %	100.063 %	54.156 ppb	62.471 ppb	206.967 %
Concentration per Run 2	63.664 ppb	63.712 ppb	101.789 %	96.722 %	62.867 ppb	66.518 ppb	171.705 %
Concentration per Run 3	62.647 ppb	63.327 ppb	100.606 %	98.081 %	67.286 ppb	64.718 ppb	133.402 %
Recovery Percentage 1	103.575 %	104.541 %			102.394 %	107.615 %	
Concentration RSD	2.9 %	2.2 %	2.1 %	1.7 %	10.9 %	3.1 %	21.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 167
Analysis label: CCB
Analysis started at: 4/1/2024 8:19:29 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	75.900 %	100.664 %	0.006 ppb	7.063 ppb	0.938 ppb	0.136 ppb	-0.430 ppb	-0.514 ppb	0.781 ppb
Concentration per Run 1	77.171 %	102.137 %	0.006 ppb	7.041 ppb	-5.931 ppb	0.448 ppb	-0.404 ppb	1.284 ppb	0.616 ppb
Concentration per Run 2	75.947 %	97.026 %	0.000 ppb	7.034 ppb	6.270 ppb	0.004 ppb	-0.468 ppb	0.278 ppb	-0.514 ppb
Concentration per Run 3	74.581 %	102.830 %	0.013 ppb	7.115 ppb	2.475 ppb	-0.044 ppb	-0.420 ppb	-3.106 ppb	2.242 ppb
Recovery Percentage 1			1.267 %	70.633 %	0.938 %	0.194 %	-4.303 %	-0.514 %	0.781 %
Concentration RSD	1.7 %	3.1 %	107.7 %	0.6 %	665.6 %	199.4 %	7.7 %	447.0 %	177.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.750 %	-0.111 ppb	0.011 ppb	0.038 ppb	24.397 ppb	0.002 ppb	-0.012 ppb	0.030 ppb	-0.707 ppb
Concentration per Run 1	92.321 %	-0.121 ppb	0.014 ppb	0.025 ppb	26.575 ppb	0.003 ppb	-0.002 ppb	0.024 ppb	-0.706 ppb
Concentration per Run 2	90.335 %	-0.106 ppb	0.012 ppb	0.047 ppb	24.227 ppb	0.004 ppb	-0.005 ppb	0.032 ppb	-0.724 ppb
Concentration per Run 3	89.593 %	-0.106 ppb	0.008 ppb	0.042 ppb	22.390 ppb	0.000 ppb	-0.029 ppb	0.034 ppb	-0.690 ppb
Recovery Percentage 1		-2.217 %	1.136 %	3.829 %	48.794 %	0.446 %	-0.597 %	3.022 %	-14.133 %
Concentration RSD	1.6 %	7.9 %	28.4 %	30.4 %	8.6 %	101.8 %	127.0 %	17.7 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.196 %	0.085 ppb	0.274 ppb	0.012 ppb	1.217 ppb	98.488 %	0.007 ppb	0.005 ppb	101.227 %
Concentration per Run 1	98.591 %	0.078 ppb	0.319 ppb	0.017 ppb	1.238 ppb	100.231 %	0.015 ppb	0.009 ppb	102.235 %
Concentration per Run 2	94.214 %	0.103 ppb	0.232 ppb	0.010 ppb	1.162 ppb	96.744 %	0.005 ppb	0.003 ppb	99.677 %
Concentration per Run 3	95.783 %	0.072 ppb	0.272 ppb	0.009 ppb	1.250 ppb	98.491 %	0.002 ppb	0.002 ppb	101.770 %
Recovery Percentage 1		16.918 %	5.487 %	0.117 %	60.827 %		1.863 %	2.469 %	
Concentration RSD	2.3 %	19.0 %	16.0 %	36.5 %	3.9 %	1.8 %	89.7 %	78.9 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.100 ppb	0.006 ppb	100.496 %	102.802 %	0.607 ppb	0.043 ppb	158.580 %
Concentration per Run 1	0.087 ppb	0.002 ppb	102.867 %	117.960 %	0.450 ppb	0.039 ppb	200.211 %
Concentration per Run 2	0.098 ppb	0.000 ppb	98.637 %	94.314 %	0.739 ppb	0.050 ppb	135.328 %
Concentration per Run 3	0.114 ppb	0.015 ppb	99.983 %	96.132 %	0.633 ppb	0.041 ppb	140.201 %
Recovery Percentage 1	2.492 %	1.130 %			60.733 %	4.325 %	
Concentration RSD	13.3 %	137.6 %	2.2 %	12.8 %	24.1 %	14.2 %	22.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 168
Analysis label: wg1902788-7d10 6020TL
Analysis started at: 4/1/2024 8:24:13 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 2
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	76.346 %	101.444 %	5.015 ppb	105.022 ppb	1,127.331 ppb	1,051.688 ppb	180.265 ppb	1,095.566 ppb	1,279.790 ppb
Concentration per Run 1	78.929 %	99.798 %	5.023 ppb	103.811 ppb	1,130.019 ppb	1,072.797 ppb	182.767 ppb	1,102.260 ppb	1,319.927 ppb
Concentration per Run 2	76.244 %	97.719 %	5.015 ppb	105.432 ppb	1,159.111 ppb	1,056.384 ppb	184.145 ppb	1,099.752 ppb	1,301.832 ppb
Concentration per Run 3	73.865 %	106.815 %	5.007 ppb	105.823 ppb	1,092.862 ppb	1,025.883 ppb	173.884 ppb	1,084.685 ppb	1,217.610 ppb
Concentration RSD	3.3 %	4.7 %	0.2 %	1.0 %	2.9 %	2.3 %	3.1 %	0.9 %	4.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.846 %	46.426 ppb	18.925 ppb	46.026 ppb	109.841 ppb	48.671 ppb	48.644 ppb	24.486 ppb	46.762 ppb
Concentration per Run 1	95.700 %	46.362 ppb	18.722 ppb	44.887 ppb	107.960 ppb	48.039 ppb	48.531 ppb	24.090 ppb	45.971 ppb
Concentration per Run 2	94.171 %	46.508 ppb	19.228 ppb	46.093 ppb	111.924 ppb	49.328 ppb	49.003 ppb	24.659 ppb	47.754 ppb
Concentration per Run 3	91.666 %	46.407 ppb	18.823 ppb	47.097 ppb	109.639 ppb	48.646 ppb	48.396 ppb	24.710 ppb	46.560 ppb
Concentration RSD	2.2 %	0.2 %	1.4 %	2.4 %	1.8 %	1.3 %	0.7 %	1.4 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.652 %	11.789 ppb	11.492 ppb	96.051 ppb	92.901 ppb	99.768 %	4.653 ppb	5.208 ppb	103.562 %
Concentration per Run 1	101.347 %	11.477 ppb	11.172 ppb	93.928 ppb	87.558 ppb	101.136 %	4.570 ppb	5.008 ppb	105.635 %
Concentration per Run 2	99.926 %	11.654 ppb	11.380 ppb	96.223 ppb	94.135 ppb	100.480 %	4.719 ppb	5.380 ppb	101.986 %
Concentration per Run 3	97.681 %	12.236 ppb	11.925 ppb	98.004 ppb	97.011 ppb	97.690 %	4.670 ppb	5.235 ppb	103.065 %
Concentration RSD	1.9 %	3.4 %	3.4 %	2.1 %	5.2 %	1.8 %	1.6 %	3.6 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	37.934 ppb	204.703 ppb	104.518 %	107.104 %	11.081 ppb	52.936 ppb	184.421 %
Concentration per Run 1	36.756 ppb	199.760 ppb	105.969 %	101.211 %	11.551 ppb	55.820 ppb	206.788 %
Concentration per Run 2	38.461 ppb	208.711 ppb	105.089 %	99.916 %	11.804 ppb	56.860 ppb	178.898 %
Concentration per Run 3	38.585 ppb	205.638 ppb	102.496 %	120.185 %	9.889 ppb	46.128 ppb	167.579 %
Concentration RSD	2.7 %	2.2 %	1.7 %	10.6 %	9.4 %	11.2 %	10.9 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 169
Analysis label: wg1902788-8d10 6020TL
Analysis started at: 4/1/2024 8:28:53 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 3
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	77.757 %	101.790 %	4.892 ppb	101.100 ppb	1,109.107 ppb	1,031.121 ppb	182.652 ppb	1,108.672 ppb	1,277.674 ppb
Concentration per Run 1	76.612 %	102.050 %	4.957 ppb	103.487 ppb	1,079.172 ppb	988.165 ppb	181.051 ppb	1,090.803 ppb	1,246.769 ppb
Concentration per Run 2	77.226 %	101.531 %	4.929 ppb	101.551 ppb	1,126.740 ppb	1,054.459 ppb	184.625 ppb	1,098.631 ppb	1,334.255 ppb
Concentration per Run 3	79.433 %	101.790 %	4.790 ppb	98.261 ppb	1,121.410 ppb	1,050.738 ppb	182.278 ppb	1,136.583 ppb	1,251.998 ppb
Concentration RSD	1.9 %	0.3 %	1.8 %	2.6 %	2.3 %	3.6 %	1.0 %	2.2 %	3.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.498 %	46.996 ppb	18.852 ppb	45.558 ppb	106.009 ppb	48.453 ppb	48.964 ppb	24.828 ppb	46.518 ppb
Concentration per Run 1	93.619 %	46.072 ppb	18.628 ppb	44.743 ppb	103.053 ppb	47.525 ppb	47.960 ppb	24.705 ppb	45.706 ppb
Concentration per Run 2	96.859 %	47.744 ppb	19.028 ppb	46.033 ppb	105.731 ppb	49.136 ppb	49.792 ppb	24.916 ppb	47.684 ppb
Concentration per Run 3	96.015 %	47.172 ppb	18.899 ppb	45.896 ppb	109.244 ppb	48.699 ppb	49.140 ppb	24.862 ppb	46.164 ppb
Concentration RSD	1.8 %	1.8 %	1.1 %	1.6 %	2.9 %	1.7 %	1.9 %	0.4 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.032 %	11.869 ppb	11.716 ppb	96.079 ppb	94.194 ppb	99.454 %	4.614 ppb	5.141 ppb	102.763 %
Concentration per Run 1	101.190 %	11.622 ppb	11.160 ppb	93.762 ppb	89.644 ppb	101.358 %	4.536 ppb	5.044 ppb	103.812 %
Concentration per Run 2	97.960 %	11.923 ppb	11.807 ppb	97.142 ppb	95.588 ppb	98.851 %	4.647 ppb	5.189 ppb	101.864 %
Concentration per Run 3	97.947 %	12.062 ppb	12.181 ppb	97.332 ppb	97.349 ppb	98.152 %	4.658 ppb	5.190 ppb	102.611 %
Concentration RSD	1.9 %	1.9 %	4.4 %	2.1 %	4.3 %	1.7 %	1.5 %	1.6 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	43.005 ppb	210.875 ppb	97.160 %	105.763 %	10.978 ppb	52.824 ppb	163.452 %
Concentration per Run 1	41.902 ppb	203.760 ppb	102.451 %	98.576 %	11.470 ppb	56.092 ppb	207.898 %
Concentration per Run 2	42.462 ppb	205.237 ppb	104.699 %	119.183 %	9.538 ppb	46.107 ppb	143.863 %
Concentration per Run 3	44.652 ppb	223.629 ppb	84.329 %	99.529 %	11.925 ppb	56.273 ppb	138.594 %
Concentration RSD	3.4 %	5.2 %	11.5 %	11.0 %	11.5 %	11.0 %	23.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 170
Analysis label: wg1902788-7d50 6020TL
Analysis started at: 4/1/2024 8:33:34 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 20
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	75.823 %	100.809 %	1.035 ppb	25.096 ppb	238.441 ppb	218.929 ppb	36.949 ppb	229.943 ppb	264.306 ppb
Concentration per Run 1	78.255 %	103.870 %	1.017 ppb	24.651 ppb	218.203 ppb	208.510 ppb	35.728 ppb	210.505 ppb	273.131 ppb
Concentration per Run 2	75.978 %	105.169 %	0.983 ppb	25.014 ppb	215.711 ppb	212.044 ppb	36.133 ppb	231.439 ppb	240.702 ppb
Concentration per Run 3	73.234 %	93.387 %	1.104 ppb	25.623 ppb	281.408 ppb	236.235 ppb	38.984 ppb	247.885 ppb	279.085 ppb
Concentration RSD	3.3 %	6.4 %	6.0 %	2.0 %	15.6 %	6.9 %	4.8 %	8.1 %	7.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.875 %	9.349 ppb	3.873 ppb	9.622 ppb	26.711 ppb	10.007 ppb	9.910 ppb	5.051 ppb	9.075 ppb
Concentration per Run 1	88.560 %	9.151 ppb	3.645 ppb	9.367 ppb	24.301 ppb	9.483 ppb	9.805 ppb	4.842 ppb	8.833 ppb
Concentration per Run 2	87.059 %	8.869 ppb	3.748 ppb	9.248 ppb	26.824 ppb	9.859 ppb	9.504 ppb	4.868 ppb	8.811 ppb
Concentration per Run 3	85.005 %	10.027 ppb	4.226 ppb	10.251 ppb	29.007 ppb	10.677 ppb	10.421 ppb	5.443 ppb	9.581 ppb
Concentration RSD	2.1 %	6.5 %	8.0 %	5.7 %	8.8 %	6.1 %	4.7 %	6.7 %	4.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.527 %	2.414 ppb	2.392 ppb	19.473 ppb	20.953 ppb	100.517 %	0.933 ppb	1.033 ppb	102.905 %
Concentration per Run 1	103.696 %	2.351 ppb	2.180 ppb	18.549 ppb	19.499 ppb	103.993 %	0.921 ppb	0.978 ppb	106.039 %
Concentration per Run 2	101.021 %	2.368 ppb	2.535 ppb	19.266 ppb	20.752 ppb	101.982 %	0.911 ppb	1.038 ppb	105.823 %
Concentration per Run 3	93.865 %	2.522 ppb	2.460 ppb	20.603 ppb	22.608 ppb	95.576 %	0.966 ppb	1.084 ppb	96.854 %
Concentration RSD	5.1 %	3.9 %	7.8 %	5.4 %	7.5 %	4.4 %	3.2 %	5.2 %	5.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10.132 ppb	41.110 ppb	103.607 %	111.698 %	2.224 ppb	9.127 ppb	182.523 %
Concentration per Run 1	9.907 ppb	39.522 ppb	105.832 %	120.750 %	1.959 ppb	8.347 ppb	204.639 %
Concentration per Run 2	9.794 ppb	39.220 ppb	106.293 %	100.026 %	2.504 ppb	10.028 ppb	177.347 %
Concentration per Run 3	10.694 ppb	44.589 ppb	98.695 %	114.317 %	2.208 ppb	9.006 ppb	165.584 %
Concentration RSD	4.8 %	7.3 %	4.1 %	9.5 %	12.3 %	9.3 %	11.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 171
Analysis label: wg1902788-8d50 6020TL
Analysis started at: 4/1/2024 8:38:15 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 21
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	79.839 %	106.584 %	0.937 ppb	22.839 ppb	210.572 ppb	204.433 ppb	34.869 ppb	216.567 ppb	274.091 ppb
Concentration per Run 1	78.556 %	112.620 %	0.900 ppb	23.451 ppb	188.943 ppb	188.322 ppb	32.485 ppb	205.062 ppb	275.522 ppb
Concentration per Run 2	80.686 %	102.743 %	0.967 ppb	22.721 ppb	227.885 ppb	214.478 ppb	35.768 ppb	224.203 ppb	283.730 ppb
Concentration per Run 3	80.274 %	104.389 %	0.942 ppb	22.346 ppb	214.887 ppb	210.498 ppb	36.353 ppb	220.437 ppb	263.021 ppb
Concentration RSD	1.4 %	5.0 %	3.6 %	2.5 %	9.4 %	6.9 %	6.0 %	4.7 %	3.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.873 %	9.119 ppb	3.705 ppb	8.977 ppb	24.112 ppb	9.682 ppb	9.738 ppb	4.988 ppb	8.907 ppb
Concentration per Run 1	96.326 %	9.015 ppb	3.542 ppb	8.621 ppb	20.234 ppb	9.269 ppb	9.547 ppb	4.916 ppb	8.617 ppb
Concentration per Run 2	98.318 %	9.336 ppb	3.863 ppb	9.163 ppb	24.754 ppb	9.999 ppb	9.936 ppb	5.124 ppb	9.300 ppb
Concentration per Run 3	98.974 %	9.008 ppb	3.709 ppb	9.146 ppb	27.348 ppb	9.779 ppb	9.731 ppb	4.923 ppb	8.804 ppb
Concentration RSD	1.4 %	2.1 %	4.3 %	3.4 %	14.9 %	3.9 %	2.0 %	2.4 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.376 %	2.393 ppb	2.380 ppb	18.885 ppb	19.037 ppb	101.107 %	0.901 ppb	1.016 ppb	103.214 %
Concentration per Run 1	100.582 %	2.358 ppb	2.242 ppb	18.351 ppb	17.962 ppb	104.629 %	0.879 ppb	0.988 ppb	108.094 %
Concentration per Run 2	95.960 %	2.549 ppb	2.539 ppb	19.492 ppb	19.874 ppb	98.368 %	0.916 ppb	1.052 ppb	97.806 %
Concentration per Run 3	101.585 %	2.273 ppb	2.359 ppb	18.812 ppb	19.274 ppb	100.323 %	0.909 ppb	1.009 ppb	103.740 %
Concentration RSD	3.0 %	5.9 %	6.3 %	3.0 %	5.1 %	3.2 %	2.2 %	3.2 %	5.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	8.690 ppb	40.260 ppb	104.035 %	110.770 %	2.160 ppb	9.020 ppb	174.739 %
Concentration per Run 1	8.181 ppb	38.580 ppb	107.167 %	118.587 %	1.913 ppb	8.259 ppb	214.248 %
Concentration per Run 2	9.114 ppb	42.090 ppb	101.555 %	115.370 %	2.064 ppb	8.651 ppb	145.463 %
Concentration per Run 3	8.777 ppb	40.111 ppb	103.383 %	98.352 %	2.502 ppb	10.150 ppb	164.507 %
Concentration RSD	5.4 %	4.4 %	2.8 %	9.8 %	14.1 %	11.1 %	20.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 172
Analysis label: wg1902788-9d10 6020TL
Analysis started at: 4/1/2024 8:42:56 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 4
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	75.669 %	96.044 %	48.741 ppb	55.074 ppb	5,595.483 ppb	5,167.766 ppb	49.758 ppb	5,176.520 ppb	5,344.544 ppb
Concentration per Run 1	76.627 %	101.097 %	48.461 ppb	54.580 ppb	5,342.383 ppb	4,950.555 ppb	47.148 ppb	5,078.176 ppb	5,049.666 ppb
Concentration per Run 2	76.084 %	94.946 %	48.334 ppb	55.180 ppb	5,658.488 ppb	5,289.206 ppb	50.592 ppb	5,215.174 ppb	5,431.845 ppb
Concentration per Run 3	74.296 %	92.088 %	49.428 ppb	55.462 ppb	5,785.577 ppb	5,263.536 ppb	51.535 ppb	5,236.210 ppb	5,552.120 ppb
Concentration RSD	1.6 %	4.8 %	1.2 %	0.8 %	4.1 %	3.6 %	4.6 %	1.7 %	4.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.647 %	48.868 ppb	48.510 ppb	46.077 ppb	4,897.253 ppb	49.604 ppb	49.843 ppb	49.299 ppb	48.036 ppb
Concentration per Run 1	96.359 %	46.457 ppb	46.170 ppb	43.776 ppb	4,617.190 ppb	47.735 ppb	47.493 ppb	47.776 ppb	45.699 ppb
Concentration per Run 2	97.135 %	49.306 ppb	48.919 ppb	46.272 ppb	4,995.652 ppb	50.207 ppb	50.154 ppb	49.423 ppb	49.035 ppb
Concentration per Run 3	96.449 %	50.842 ppb	50.440 ppb	48.182 ppb	5,078.916 ppb	50.870 ppb	51.882 ppb	50.699 ppb	49.374 ppb
Concentration RSD	0.4 %	4.6 %	4.5 %	4.8 %	5.0 %	3.3 %	4.4 %	3.0 %	4.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.343 %	48.809 ppb	48.185 ppb	52.610 ppb	49.233 ppb	98.564 %	3.302 ppb	49.564 ppb	101.808 %
Concentration per Run 1	102.863 %	46.728 ppb	45.341 ppb	50.730 ppb	45.180 ppb	101.545 %	3.197 ppb	48.471 ppb	105.156 %
Concentration per Run 2	96.984 %	49.380 ppb	49.045 ppb	53.320 ppb	50.811 ppb	98.101 %	3.331 ppb	49.889 ppb	101.162 %
Concentration per Run 3	95.181 %	50.319 ppb	50.169 ppb	53.780 ppb	51.709 ppb	96.046 %	3.377 ppb	50.333 ppb	99.105 %
Concentration RSD	4.1 %	3.8 %	5.2 %	3.1 %	7.2 %	2.8 %	2.8 %	2.0 %	3.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	51.454 ppb	51.639 ppb	104.326 %	99.770 %	53.031 ppb	52.537 ppb	173.771 %
Concentration per Run 1	49.986 ppb	50.590 ppb	107.785 %	103.452 %	46.417 ppb	50.196 ppb	208.172 %
Concentration per Run 2	51.845 ppb	52.443 ppb	102.573 %	97.392 %	55.693 ppb	54.843 ppb	176.705 %
Concentration per Run 3	52.530 ppb	51.883 ppb	102.621 %	98.465 %	56.982 ppb	52.571 ppb	136.436 %
Concentration RSD	2.6 %	1.8 %	2.9 %	3.2 %	10.9 %	4.4 %	20.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	173	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1902788-10d5 6020TL	Rack	3		
Analysis started at:	4/1/2024 8:47:37 PM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	74.388 %	98.874 %	0.013 ppb	5.384 ppb	616.849 ppb	162.861 ppb	2.599 ppb	258.542 ppb	731.749 ppb
Concentration per Run 1	74.875 %	91.308 %	0.009 ppb	5.305 ppb	701.195 ppb	172.500 ppb	3.451 ppb	287.202 ppb	806.320 ppb
Concentration per Run 2	74.489 %	107.508 %	0.011 ppb	5.484 ppb	536.958 ppb	151.370 ppb	2.037 ppb	235.525 ppb	674.328 ppb
Concentration per Run 3	73.800 %	97.805 %	0.018 ppb	5.362 ppb	612.394 ppb	164.713 ppb	2.308 ppb	252.898 ppb	714.599 ppb
Concentration RSD	0.7 %	8.2 %	38.4 %	1.7 %	13.3 %	6.6 %	28.9 %	10.2 %	9.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.202 %	-0.064 ppb	0.090 ppb	0.590 ppb	12.621 ppb	0.009 ppb	0.004 ppb	0.026 ppb	-0.557 ppb
Concentration per Run 1	91.927 %	-0.068 ppb	0.116 ppb	0.629 ppb	15.366 ppb	0.013 ppb	0.016 ppb	0.040 ppb	-0.552 ppb
Concentration per Run 2	92.837 %	-0.080 ppb	0.069 ppb	0.529 ppb	10.686 ppb	0.007 ppb	-0.009 ppb	0.020 ppb	-0.568 ppb
Concentration per Run 3	91.842 %	-0.044 ppb	0.084 ppb	0.613 ppb	11.812 ppb	0.006 ppb	0.007 ppb	0.019 ppb	-0.550 ppb
Concentration RSD	0.6 %	28.3 %	26.8 %	9.1 %	19.4 %	42.7 %	281.2 %	43.7 %	1.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.582 %	0.118 ppb	0.257 ppb	3.112 ppb	1.585 ppb	98.634 %	-0.001 ppb	0.007 ppb	101.691 %
Concentration per Run 1	91.405 %	0.139 ppb	0.262 ppb	3.398 ppb	1.672 ppb	93.272 %	0.002 ppb	0.012 ppb	94.678 %
Concentration per Run 2	101.068 %	0.086 ppb	0.225 ppb	2.974 ppb	1.469 ppb	99.239 %	-0.002 ppb	0.006 ppb	101.268 %
Concentration per Run 3	100.274 %	0.130 ppb	0.284 ppb	2.965 ppb	1.613 ppb	103.392 %	-0.002 ppb	0.004 ppb	109.127 %
Concentration RSD	5.5 %	24.1 %	11.5 %	7.9 %	6.6 %	5.2 %	223.0 %	63.2 %	7.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.698 ppb	2.334 ppb	103.045 %	111.955 %	0.556 ppb	0.024 ppb	180.611 %
Concentration per Run 1	0.748 ppb	2.536 ppb	96.516 %	91.560 %	0.601 ppb	0.042 ppb	187.537 %
Concentration per Run 2	0.649 ppb	2.257 ppb	102.784 %	118.900 %	0.576 ppb	0.015 ppb	155.789 %
Concentration per Run 3	0.696 ppb	2.208 ppb	109.835 %	125.404 %	0.491 ppb	0.014 ppb	198.507 %
Concentration RSD	7.1 %	7.6 %	6.5 %	16.0 %	10.4 %	67.4 %	12.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 174
Analysis label: L2417074-01 6020TL
Analysis started at: 4/1/2024 8:52:17 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	81.929 %	101.675 %	0.016 ppb	9.516 ppb	3,589.525 ppb	810.609 ppb	10.865 ppb	1,301.622 ppb	3,618.688 ppb
Concentration per Run 1	82.111 %	101.530 %	0.016 ppb	9.679 ppb	3,918.857 ppb	817.865 ppb	11.289 ppb	1,302.072 ppb	3,678.265 ppb
Concentration per Run 2	82.167 %	99.278 %	0.014 ppb	9.338 ppb	3,106.568 ppb	815.681 ppb	10.311 ppb	1,339.863 ppb	3,634.008 ppb
Concentration per Run 3	81.510 %	104.216 %	0.017 ppb	9.531 ppb	3,743.148 ppb	798.279 ppb	10.994 ppb	1,262.930 ppb	3,543.792 ppb
Concentration RSD	0.4 %	2.4 %	10.5 %	1.8 %	11.9 %	1.3 %	4.6 %	3.0 %	1.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.633 %	0.216 ppb	0.471 ppb	2.694 ppb	8.590 ppb	0.030 ppb	0.054 ppb	0.171 ppb	0.964 ppb
Concentration per Run 1	101.288 %	0.128 ppb	0.469 ppb	2.711 ppb	7.032 ppb	0.036 ppb	0.070 ppb	0.176 ppb	0.939 ppb
Concentration per Run 2	103.496 %	0.314 ppb	0.481 ppb	2.742 ppb	10.403 ppb	0.024 ppb	0.046 ppb	0.175 ppb	1.030 ppb
Concentration per Run 3	103.114 %	0.208 ppb	0.464 ppb	2.629 ppb	8.335 ppb	0.030 ppb	0.046 ppb	0.162 ppb	0.923 ppb
Concentration RSD	1.2 %	43.3 %	1.8 %	2.2 %	19.8 %	20.8 %	26.1 %	4.7 %	6.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.088 %	0.113 ppb	0.129 ppb	15.340 ppb	0.547 ppb	100.861 %	-0.003 ppb	0.015 ppb	105.878 %
Concentration per Run 1	100.675 %	0.102 ppb	0.078 ppb	15.128 ppb	0.508 ppb	102.006 %	-0.003 ppb	0.013 ppb	106.956 %
Concentration per Run 2	100.117 %	0.117 ppb	0.101 ppb	15.653 ppb	0.583 ppb	98.634 %	-0.002 ppb	0.015 ppb	103.926 %
Concentration per Run 3	102.472 %	0.121 ppb	0.207 ppb	15.240 ppb	0.549 ppb	101.944 %	-0.004 ppb	0.015 ppb	106.751 %
Concentration RSD	1.2 %	8.9 %	53.4 %	1.8 %	6.9 %	1.9 %	26.0 %	9.3 %	1.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.429 ppb	11.244 ppb	105.791 %	114.739 %	0.199 ppb	0.018 ppb	152.216 %
Concentration per Run 1	0.391 ppb	11.098 ppb	107.024 %	122.840 %	0.127 ppb	0.015 ppb	184.496 %
Concentration per Run 2	0.436 ppb	11.339 ppb	103.983 %	98.381 %	0.265 ppb	0.025 ppb	135.137 %
Concentration per Run 3	0.460 ppb	11.295 ppb	106.366 %	122.997 %	0.204 ppb	0.013 ppb	137.014 %
Concentration RSD	8.1 %	1.1 %	1.5 %	12.3 %	34.6 %	38.1 %	18.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 175
Analysis label: L2416753-01 6020TL
Analysis started at: 4/1/2024 8:56:58 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 58
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	78.842 %	105.140 %	0.038 ppb	3.384 ppb	29.435 ppb	708.800 ppb	378.663 ppb	95.538 ppb	2,023.534 ppb
Concentration per Run 1	79.630 %	103.090 %	0.045 ppb	3.303 ppb	34.379 ppb	715.491 ppb	386.046 ppb	92.098 ppb	2,040.795 ppb
Concentration per Run 2	78.573 %	109.327 %	0.038 ppb	3.396 ppb	17.493 ppb	702.118 ppb	367.187 ppb	91.787 ppb	1,944.697 ppb
Concentration per Run 3	78.322 %	103.003 %	0.031 ppb	3.453 ppb	36.434 ppb	708.789 ppb	382.756 ppb	102.728 ppb	2,085.109 ppb
Concentration RSD	0.9 %	3.4 %	18.1 %	2.2 %	35.3 %	0.9 %	2.7 %	6.5 %	3.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.767 %	1.413 ppb	1.143 ppb	24.080 ppb	781.609 ppb	0.471 ppb	0.949 ppb	0.537 ppb	1.402 ppb
Concentration per Run 1	98.576 %	1.462 ppb	1.151 ppb	23.646 ppb	768.031 ppb	0.454 ppb	0.907 ppb	0.523 ppb	1.368 ppb
Concentration per Run 2	96.028 %	1.361 ppb	1.113 ppb	24.080 ppb	780.072 ppb	0.477 ppb	0.951 ppb	0.513 ppb	1.348 ppb
Concentration per Run 3	95.696 %	1.415 ppb	1.164 ppb	24.514 ppb	796.723 ppb	0.482 ppb	0.988 ppb	0.574 ppb	1.490 ppb
Concentration RSD	1.6 %	3.6 %	2.3 %	1.8 %	1.8 %	3.2 %	4.3 %	6.1 %	5.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.865 %	0.243 ppb	0.052 ppb	3.079 ppb	0.592 ppb	103.635 %	-0.002 ppb	0.009 ppb	106.504 %
Concentration per Run 1	106.516 %	0.243 ppb	0.035 ppb	3.018 ppb	0.489 ppb	106.222 %	-0.002 ppb	0.014 ppb	108.014 %
Concentration per Run 2	103.725 %	0.246 ppb	0.102 ppb	3.100 ppb	0.603 ppb	101.718 %	-0.001 ppb	0.007 ppb	106.661 %
Concentration per Run 3	101.355 %	0.241 ppb	0.020 ppb	3.118 ppb	0.685 ppb	102.966 %	-0.003 ppb	0.007 ppb	104.837 %
Concentration RSD	2.5 %	1.0 %	84.0 %	1.7 %	16.6 %	2.2 %	65.8 %	43.7 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.313 ppb	5.316 ppb	108.519 %	123.139 %	0.114 ppb	0.409 ppb	190.863 %
Concentration per Run 1	0.296 ppb	5.267 ppb	111.387 %	126.539 %	0.075 ppb	0.399 ppb	212.162 %
Concentration per Run 2	0.305 ppb	5.417 ppb	105.692 %	121.919 %	0.132 ppb	0.416 ppb	184.824 %
Concentration per Run 3	0.338 ppb	5.266 ppb	108.478 %	120.959 %	0.136 ppb	0.413 ppb	175.602 %
Concentration RSD	7.0 %	1.6 %	2.6 %	2.4 %	30.1 %	2.2 %	10.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 176
Analysis label: L2416941-01 6020TL
Analysis started at: 4/1/2024 9:01:38 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 59
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	73.090 %	100.318 %	0.560 ppb	40.099 ppb	13,127.639 ppb	19,883.408 ppb	17,929.963 ppb	5,735.604 ppb	64,824.413 ppb
Concentration per Run 1	74.643 %	103.610 %	0.538 ppb	39.420 ppb	12,738.317 ppb	19,386.897 ppb	17,303.396 ppb	5,609.258 ppb	62,839.634 ppb
Concentration per Run 2	72.082 %	92.954 %	0.588 ppb	40.712 ppb	14,069.711 ppb	21,224.591 ppb	19,107.736 ppb	6,129.585 ppb	68,864.781 ppb
Concentration per Run 3	72.546 %	104.389 %	0.554 ppb	40.167 ppb	12,574.887 ppb	19,038.734 ppb	17,378.758 ppb	5,467.968 ppb	62,768.823 ppb
Concentration RSD	1.9 %	6.4 %	4.6 %	1.6 %	6.2 %	5.9 %	5.7 %	6.1 %	5.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.283 %	47.511 ppb	29.618 ppb	395.949 ppb	29,250.672 ppb	13.570 ppb	24.708 ppb	60.641 ppb	356.119 ppb
Concentration per Run 1	107.020 %	45.905 ppb	28.803 ppb	380.267 ppb	27,887.898 ppb	13.058 ppb	23.932 ppb	58.456 ppb	344.550 ppb
Concentration per Run 2	103.576 %	50.678 ppb	31.196 ppb	414.608 ppb	31,215.620 ppb	14.306 ppb	26.094 ppb	64.220 ppb	371.914 ppb
Concentration per Run 3	105.252 %	45.950 ppb	28.855 ppb	392.972 ppb	28,648.500 ppb	13.347 ppb	24.097 ppb	59.247 ppb	351.894 ppb
Concentration RSD	1.6 %	5.8 %	4.6 %	4.4 %	6.0 %	4.8 %	4.9 %	5.2 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.780 %	6.384 ppb	1.285 ppb	147.647 ppb	2.576 ppb	90.211 %	0.117 ppb	0.376 ppb	93.759 %
Concentration per Run 1	99.144 %	6.102 ppb	1.139 ppb	141.648 ppb	2.381 ppb	94.133 %	0.106 ppb	0.364 ppb	99.515 %
Concentration per Run 2	91.708 %	6.640 ppb	1.392 ppb	155.386 ppb	2.762 ppb	86.033 %	0.124 ppb	0.389 ppb	89.361 %
Concentration per Run 3	96.488 %	6.409 ppb	1.322 ppb	145.907 ppb	2.585 ppb	90.467 %	0.122 ppb	0.375 ppb	92.402 %
Concentration RSD	3.9 %	4.2 %	10.2 %	4.8 %	7.4 %	4.5 %	8.4 %	3.4 %	5.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.541 ppb	157.335 ppb	101.535 %	95.656 %	0.371 ppb	64.976 ppb	173.263 %
Concentration per Run 1	1.433 ppb	148.544 ppb	106.939 %	99.435 %	0.317 ppb	61.484 ppb	216.852 %
Concentration per Run 2	1.577 ppb	162.086 ppb	97.484 %	91.299 %	0.410 ppb	69.268 ppb	176.361 %
Concentration per Run 3	1.612 ppb	161.375 ppb	100.182 %	96.234 %	0.388 ppb	64.176 ppb	126.574 %
Concentration RSD	6.2 %	4.8 %	4.8 %	4.3 %	13.0 %	6.1 %	26.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 177
Analysis label: L2416941-02 6020TL
Analysis started at: 4/1/2024 9:06:19 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 60
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	77.775 %	108.028 %	1.177 ppb	58.522 ppb	17,715.353 ppb	37,142.865 ppb	39,581.214 ppb	12,204.122 ppb	100,418.540 ppb
Concentration per Run 1	78.586 %	108.028 %	1.152 ppb	58.438 ppb	17,609.394 ppb	36,422.189 ppb	39,201.608 ppb	12,270.841 ppb	100,101.604 ppb
Concentration per Run 2	77.351 %	104.996 %	1.202 ppb	58.922 ppb	18,082.513 ppb	38,526.658 ppb	40,361.871 ppb	12,141.950 ppb	100,077.305 ppb
Concentration per Run 3	77.388 %	111.060 %	1.177 ppb	58.206 ppb	17,454.154 ppb	36,479.747 ppb	39,180.162 ppb	12,199.575 ppb	101,076.712 ppb
Concentration RSD	0.9 %	2.8 %	2.1 %	0.6 %	1.8 %	3.2 %	1.7 %	0.5 %	0.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	129.362 %	93.866 ppb	58.482 ppb	1,079.568 ppb	73,552.251 ppb	38.552 ppb	51.549 ppb	128.946 ppb	357.221 ppb
Concentration per Run 1	129.612 %	93.631 ppb	57.777 ppb	1,079.822 ppb	73,299.556 ppb	38.810 ppb	52.331 ppb	129.307 ppb	358.645 ppb
Concentration per Run 2	129.025 %	94.715 ppb	59.228 ppb	1,090.101 ppb	74,160.677 ppb	38.493 ppb	51.814 ppb	128.665 ppb	358.137 ppb
Concentration per Run 3	129.450 %	93.252 ppb	58.441 ppb	1,068.780 ppb	73,196.520 ppb	38.352 ppb	50.504 ppb	128.865 ppb	354.882 ppb
Concentration RSD	0.2 %	0.8 %	1.2 %	1.0 %	0.7 %	0.6 %	1.8 %	0.3 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.425 %	11.310 ppb	2.035 ppb	262.739 ppb	3.311 ppb	91.599 %	0.294 ppb	0.782 ppb	97.327 %
Concentration per Run 1	99.330 %	11.146 ppb	1.968 ppb	260.679 ppb	3.171 ppb	91.708 %	0.296 ppb	0.805 ppb	98.928 %
Concentration per Run 2	98.315 %	11.326 ppb	2.094 ppb	263.075 ppb	3.341 ppb	92.468 %	0.297 ppb	0.759 ppb	97.809 %
Concentration per Run 3	97.630 %	11.458 ppb	2.043 ppb	264.463 ppb	3.420 ppb	90.621 %	0.288 ppb	0.782 ppb	95.245 %
Concentration RSD	0.9 %	1.4 %	3.1 %	0.7 %	3.8 %	1.0 %	1.7 %	2.9 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.081 ppb	285.340 ppb	105.984 %	103.736 %	0.567 ppb	194.194 ppb	167.384 %
Concentration per Run 1	1.038 ppb	282.014 ppb	106.763 %	117.993 %	0.474 ppb	169.123 ppb	200.937 %
Concentration per Run 2	1.105 ppb	288.903 ppb	104.475 %	96.125 %	0.617 ppb	207.759 ppb	168.575 %
Concentration per Run 3	1.098 ppb	285.103 ppb	106.714 %	97.089 %	0.611 ppb	205.702 ppb	132.641 %
Concentration RSD	3.4 %	1.2 %	1.2 %	11.9 %	14.2 %	11.2 %	20.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 178
Analysis label: CCV
Analysis started at: 4/1/2024 9:10:59 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	71.534 %	99.769 %	61.193 ppb	61.892 ppb	6,272.846 ppb	6,016.297 ppb	58.110 ppb	6,035.080 ppb	6,028.984 ppb
Concentration per Run 1	72.878 %	95.813 %	60.680 ppb	61.313 ppb	6,465.561 ppb	6,263.949 ppb	60.019 ppb	6,236.403 ppb	6,243.361 ppb
Concentration per Run 2	71.549 %	102.570 %	61.286 ppb	62.029 ppb	6,142.535 ppb	5,929.679 ppb	57.174 ppb	5,890.526 ppb	5,911.913 ppb
Concentration per Run 3	70.176 %	100.924 %	61.611 ppb	62.334 ppb	6,210.441 ppb	5,855.263 ppb	57.137 ppb	5,978.310 ppb	5,931.679 ppb
Recovery Percentage 1			101.988 %	103.153 %	104.547 %	100.272 %	96.850 %	100.585 %	100.483 %
Concentration RSD	1.9 %	3.5 %	0.8 %	0.8 %	2.7 %	3.6 %	2.8 %	3.0 %	3.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.820 %	59.702 ppb	60.108 ppb	56.770 ppb	6,084.860 ppb	62.155 ppb	61.923 ppb	62.047 ppb	58.604 ppb
Concentration per Run 1	91.682 %	62.060 ppb	62.209 ppb	58.196 ppb	6,284.131 ppb	64.155 ppb	64.218 ppb	64.167 ppb	59.826 ppb
Concentration per Run 2	90.255 %	58.845 ppb	59.909 ppb	56.902 ppb	6,043.282 ppb	61.585 ppb	60.989 ppb	61.214 ppb	58.512 ppb
Concentration per Run 3	90.522 %	58.200 ppb	58.206 ppb	55.211 ppb	5,927.168 ppb	60.726 ppb	60.563 ppb	60.759 ppb	57.475 ppb
Recovery Percentage 1		99.503 %	100.180 %	94.616 %	101.414 %	103.592 %	103.206 %	103.411 %	97.674 %
Concentration RSD	0.8 %	3.5 %	3.3 %	2.6 %	3.0 %	2.9 %	3.2 %	3.0 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.439 %	61.334 ppb	59.668 ppb	60.029 ppb	60.986 ppb	95.764 %	60.213 ppb	63.089 ppb	96.942 %
Concentration per Run 1	96.082 %	62.742 ppb	59.495 ppb	61.054 ppb	59.829 ppb	95.272 %	61.712 ppb	64.876 ppb	96.150 %
Concentration per Run 2	98.201 %	60.949 ppb	60.091 ppb	60.104 ppb	61.131 ppb	95.027 %	59.655 ppb	62.337 ppb	97.496 %
Concentration per Run 3	98.033 %	60.311 ppb	59.416 ppb	58.930 ppb	62.000 ppb	96.995 %	59.270 ppb	62.055 ppb	97.181 %
Recovery Percentage 1		102.223 %	99.446 %	100.049 %	101.644 %		100.354 %	105.149 %	
Concentration RSD	1.2 %	2.1 %	0.6 %	1.8 %	1.8 %	1.1 %	2.2 %	2.5 %	0.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	64.806 ppb	65.154 ppb	101.693 %	109.469 %	61.003 ppb	58.959 ppb	140.973 %
Concentration per Run 1	65.416 ppb	65.857 ppb	100.794 %	115.497 %	52.917 ppb	55.673 ppb	182.321 %
Concentration per Run 2	64.728 ppb	65.028 ppb	101.374 %	95.601 %	70.616 ppb	66.943 ppb	120.798 %
Concentration per Run 3	64.274 ppb	64.576 ppb	102.912 %	117.308 %	59.475 ppb	54.262 ppb	119.801 %
Recovery Percentage 1	108.010 %	108.589 %			101.671 %	98.266 %	
Concentration RSD	0.9 %	1.0 %	1.1 %	11.0 %	14.7 %	11.8 %	25.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 179
Analysis label: CCB
Analysis started at: 4/1/2024 9:15:42 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	71.802 %	101.646 %	0.012 ppb	3.009 ppb	10.891 ppb	2.099 ppb	1.338 ppb	-0.240 ppb	7.475 ppb
Concentration per Run 1	74.084 %	104.389 %	0.004 ppb	3.000 ppb	10.989 ppb	3.150 ppb	1.755 ppb	2.999 ppb	9.786 ppb
Concentration per Run 2	71.460 %	101.617 %	0.016 ppb	3.029 ppb	4.217 ppb	1.635 ppb	1.183 ppb	0.181 ppb	6.147 ppb
Concentration per Run 3	69.862 %	98.932 %	0.015 ppb	2.997 ppb	17.467 ppb	1.513 ppb	1.076 ppb	-3.900 ppb	6.494 ppb
Recovery Percentage 1			2.331 %	30.089 %	10.891 %	2.999 %	13.382 %	-0.240 %	7.475 %
Concentration RSD	3.0 %	2.7 %	53.7 %	0.6 %	60.8 %	43.4 %	27.3 %	1,446.7 %	26.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.187 %	-0.096 ppb	0.014 ppb	0.118 ppb	25.764 ppb	0.008 ppb	-0.003 ppb	0.004 ppb	-0.662 ppb
Concentration per Run 1	92.626 %	-0.099 ppb	0.018 ppb	0.131 ppb	28.523 ppb	0.008 ppb	0.000 ppb	-0.014 ppb	-0.664 ppb
Concentration per Run 2	88.063 %	-0.094 ppb	0.007 ppb	0.106 ppb	24.462 ppb	0.009 ppb	0.001 ppb	0.005 ppb	-0.688 ppb
Concentration per Run 3	86.872 %	-0.096 ppb	0.018 ppb	0.118 ppb	24.306 ppb	0.008 ppb	-0.012 ppb	0.020 ppb	-0.635 ppb
Recovery Percentage 1		-1.920 %	1.438 %	11.815 %	51.528 %	1.641 %	-0.165 %	0.356 %	-13.248 %
Concentration RSD	3.4 %	2.5 %	42.8 %	10.5 %	9.3 %	7.6 %	220.0 %	481.8 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.040 %	0.132 ppb	0.332 ppb	0.044 ppb	1.199 ppb	99.294 %	0.008 ppb	0.009 ppb	100.676 %
Concentration per Run 1	93.907 %	0.149 ppb	0.301 ppb	0.060 ppb	1.199 ppb	99.181 %	0.015 ppb	0.015 ppb	98.697 %
Concentration per Run 2	98.163 %	0.109 ppb	0.357 ppb	0.040 ppb	1.252 ppb	96.033 %	0.004 ppb	0.004 ppb	98.494 %
Concentration per Run 3	96.050 %	0.140 ppb	0.339 ppb	0.033 ppb	1.145 ppb	102.668 %	0.004 ppb	0.009 ppb	104.836 %
Recovery Percentage 1		26.473 %	6.650 %	0.444 %	59.947 %		1.889 %	4.651 %	
Concentration RSD	2.2 %	15.9 %	8.6 %	31.2 %	4.4 %	3.3 %	80.0 %	57.2 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.174 ppb	0.035 ppb	104.210 %	102.581 %	0.692 ppb	0.047 ppb	181.132 %
Concentration per Run 1	0.167 ppb	0.045 ppb	103.371 %	113.936 %	0.536 ppb	0.046 ppb	200.076 %
Concentration per Run 2	0.175 ppb	0.043 ppb	101.450 %	94.786 %	0.838 ppb	0.049 ppb	161.775 %
Concentration per Run 3	0.181 ppb	0.018 ppb	107.808 %	99.021 %	0.701 ppb	0.046 ppb	181.546 %
Recovery Percentage 1	4.357 %	7.081 %			69.178 %	4.704 %	
Concentration RSD	4.1 %	42.6 %	3.1 %	9.8 %	21.9 %	3.6 %	10.6 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 180
Analysis label: L2415362-02 6020TL
Analysis started at: 4/1/2024 9:20:26 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 6
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	78.620 %	104.765 %	0.028 ppb	84.638 ppb	149,662.450 ppb	39,057.198 ppb	326.632 ppb	9,836.362 ppb	129,329.228 ppb
Concentration per Run 1	81.565 %	103.090 %	0.023 ppb	81.802 ppb	148,200.652 ppb	39,005.007 ppb	325.408 ppb	9,894.633 ppb	128,902.129 ppb
Concentration per Run 2	77.725 %	103.696 %	0.031 ppb	85.304 ppb	151,919.404 ppb	39,239.473 ppb	327.842 ppb	9,890.842 ppb	130,894.232 ppb
Concentration per Run 3	76.570 %	107.508 %	0.028 ppb	86.806 ppb	148,867.295 ppb	38,927.113 ppb	326.645 ppb	9,723.610 ppb	128,191.322 ppb
Concentration RSD	3.3 %	2.3 %	15.0 %	3.0 %	1.3 %	0.4 %	0.4 %	1.0 %	1.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.000 %	1.084 ppb	1.718 ppb	125.687 ppb	2,295.220 ppb	0.369 ppb	1.654 ppb	1.813 ppb	12.922 ppb
Concentration per Run 1	109.493 %	1.024 ppb	1.754 ppb	124.954 ppb	2,259.652 ppb	0.367 ppb	1.660 ppb	1.771 ppb	12.720 ppb
Concentration per Run 2	105.158 %	1.119 ppb	1.718 ppb	128.299 ppb	2,323.475 ppb	0.367 ppb	1.674 ppb	1.887 ppb	12.991 ppb
Concentration per Run 3	106.349 %	1.109 ppb	1.683 ppb	123.809 ppb	2,302.532 ppb	0.373 ppb	1.628 ppb	1.782 ppb	13.055 ppb
Concentration RSD	2.1 %	4.8 %	2.1 %	1.9 %	1.4 %	1.0 %	1.4 %	3.5 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.087 %	4.378 ppb	0.212 ppb	2,281.516 ppb	0.825 ppb	97.839 %	0.004 ppb	0.035 ppb	104.035 %
Concentration per Run 1	100.946 %	4.398 ppb	0.127 ppb	2,246.148 ppb	0.809 ppb	98.539 %	0.003 ppb	0.036 ppb	105.164 %
Concentration per Run 2	102.429 %	4.401 ppb	0.284 ppb	2,294.317 ppb	0.868 ppb	97.631 %	0.003 ppb	0.032 ppb	103.254 %
Concentration per Run 3	102.887 %	4.335 ppb	0.224 ppb	2,304.084 ppb	0.798 ppb	97.348 %	0.005 ppb	0.038 ppb	103.685 %
Concentration RSD	1.0 %	0.8 %	37.6 %	1.4 %	4.6 %	0.6 %	43.0 %	8.6 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.186 ppb	130.108 ppb	110.499 %	109.312 %	0.224 ppb	1.288 ppb	147.007 %
Concentration per Run 1	0.180 ppb	127.912 ppb	110.395 %	123.987 %	0.139 ppb	1.126 ppb	179.988 %
Concentration per Run 2	0.186 ppb	132.022 ppb	109.610 %	100.978 %	0.275 ppb	1.415 ppb	133.065 %
Concentration per Run 3	0.192 ppb	130.391 ppb	111.491 %	102.971 %	0.258 ppb	1.324 ppb	127.969 %
Concentration RSD	3.3 %	1.6 %	0.9 %	11.7 %	32.9 %	11.5 %	19.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 181
Analysis label: L2415362-03 6020TL
Analysis started at: 4/1/2024 9:25:07 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 7
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.052 %	106.295 %	0.053 ppb	80.475 ppb	198,001.016 ppb	26,652.813 ppb	434.193 ppb	9,912.977 ppb	112,632.701 ppb
Concentration per Run 1	82.173 %	106.642 %	0.048 ppb	78.671 ppb	194,184.357 ppb	26,116.167 ppb	428.909 ppb	9,894.884 ppb	113,228.393 ppb
Concentration per Run 2	80.581 %	110.021 %	0.049 ppb	81.105 ppb	192,127.566 ppb	25,986.953 ppb	424.042 ppb	9,646.930 ppb	109,514.804 ppb
Concentration per Run 3	77.402 %	102.224 %	0.063 ppb	81.648 ppb	207,691.124 ppb	27,855.320 ppb	449.629 ppb	10,197.119 ppb	115,154.905 ppb
Concentration RSD	3.0 %	3.7 %	14.9 %	2.0 %	4.3 %	3.9 %	3.1 %	2.8 %	2.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.328 %	2.287 ppb	1.089 ppb	244.177 ppb	8,620.626 ppb	0.561 ppb	1.757 ppb	1.963 ppb	7.674 ppb
Concentration per Run 1	103.443 %	2.416 ppb	1.063 ppb	237.148 ppb	8,404.162 ppb	0.547 ppb	1.800 ppb	1.858 ppb	7.498 ppb
Concentration per Run 2	101.721 %	2.200 ppb	1.049 ppb	238.472 ppb	8,524.085 ppb	0.559 ppb	1.735 ppb	1.935 ppb	7.776 ppb
Concentration per Run 3	98.820 %	2.244 ppb	1.154 ppb	256.912 ppb	8,933.632 ppb	0.576 ppb	1.736 ppb	2.097 ppb	7.747 ppb
Concentration RSD	2.3 %	5.0 %	5.2 %	4.5 %	3.2 %	2.6 %	2.1 %	6.2 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.422 %	1.688 ppb	0.276 ppb	1,470.955 ppb	0.504 ppb	95.365 %	0.002 ppb	0.011 ppb	100.799 %
Concentration per Run 1	101.640 %	1.657 ppb	0.190 ppb	1,436.199 ppb	0.411 ppb	98.895 %	0.001 ppb	0.010 ppb	104.937 %
Concentration per Run 2	100.904 %	1.708 ppb	0.307 ppb	1,467.518 ppb	0.540 ppb	94.899 %	0.003 ppb	0.010 ppb	100.695 %
Concentration per Run 3	98.722 %	1.700 ppb	0.330 ppb	1,509.150 ppb	0.560 ppb	92.302 %	0.002 ppb	0.013 ppb	96.765 %
Concentration RSD	1.5 %	1.6 %	27.2 %	2.5 %	16.1 %	3.5 %	37.3 %	14.3 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.152 ppb	133.487 ppb	107.012 %	106.153 %	0.130 ppb	2.078 ppb	153.444 %
Concentration per Run 1	0.130 ppb	127.251 ppb	112.237 %	102.234 %	0.092 ppb	2.145 ppb	195.877 %
Concentration per Run 2	0.154 ppb	132.964 ppb	105.819 %	119.223 %	0.133 ppb	1.813 ppb	134.891 %
Concentration per Run 3	0.171 ppb	140.247 ppb	102.980 %	97.001 %	0.166 ppb	2.276 ppb	129.564 %
Concentration RSD	13.5 %	4.9 %	4.4 %	10.9 %	28.5 %	11.5 %	24.0 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 182
Analysis label: L2415362-04 6020TL
Analysis started at: 4/1/2024 9:29:47 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 8
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	84.552 %	112.851 %	0.018 ppb	97.219 ppb	177,535.033 ppb	39,032.810 ppb	96.155 ppb	10,709.557 ppb	124,752.228 ppb
Concentration per Run 1	87.635 %	111.667 %	0.016 ppb	94.071 ppb	178,829.321 ppb	39,342.972 ppb	98.272 ppb	10,774.728 ppb	126,791.928 ppb
Concentration per Run 2	83.746 %	115.132 %	0.019 ppb	98.760 ppb	175,809.977 ppb	38,406.449 ppb	94.066 ppb	10,513.588 ppb	123,428.720 ppb
Concentration per Run 3	82.276 %	111.753 %	0.019 ppb	98.825 ppb	177,965.801 ppb	39,349.010 ppb	96.129 ppb	10,840.357 ppb	124,036.036 ppb
Concentration RSD	3.3 %	1.8 %	9.8 %	2.8 %	0.9 %	1.4 %	2.2 %	1.6 %	1.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.955 %	0.726 ppb	0.597 ppb	237.586 ppb	7,270.194 ppb	0.236 ppb	0.829 ppb	0.777 ppb	6.363 ppb
Concentration per Run 1	113.155 %	0.757 ppb	0.612 ppb	242.525 ppb	7,428.975 ppb	0.240 ppb	0.855 ppb	0.783 ppb	6.502 ppb
Concentration per Run 2	109.536 %	0.716 ppb	0.584 ppb	233.307 ppb	7,114.225 ppb	0.209 ppb	0.782 ppb	0.770 ppb	6.200 ppb
Concentration per Run 3	107.175 %	0.706 ppb	0.593 ppb	236.925 ppb	7,267.383 ppb	0.257 ppb	0.850 ppb	0.780 ppb	6.386 ppb
Concentration RSD	2.7 %	3.7 %	2.4 %	2.0 %	2.2 %	10.3 %	4.9 %	0.9 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.268 %	1.389 ppb	0.144 ppb	3,317.584 ppb	0.923 ppb	97.772 %	0.003 ppb	0.004 ppb	104.737 %
Concentration per Run 1	101.095 %	1.424 ppb	0.151 ppb	3,326.013 ppb	0.888 ppb	98.735 %	0.004 ppb	0.003 ppb	105.075 %
Concentration per Run 2	104.302 %	1.336 ppb	0.094 ppb	3,299.977 ppb	0.934 ppb	97.232 %	0.002 ppb	0.004 ppb	104.904 %
Concentration per Run 3	104.408 %	1.406 ppb	0.186 ppb	3,326.762 ppb	0.947 ppb	97.349 %	0.003 ppb	0.004 ppb	104.231 %
Concentration RSD	1.8 %	3.3 %	32.6 %	0.5 %	3.4 %	0.9 %	36.0 %	26.6 %	0.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.162 ppb	224.111 ppb	110.449 %	115.797 %	0.089 ppb	0.734 ppb	160.946 %
Concentration per Run 1	0.157 ppb	219.843 ppb	110.714 %	121.882 %	0.055 ppb	0.690 ppb	189.288 %
Concentration per Run 2	0.162 ppb	222.765 ppb	110.684 %	101.929 %	0.117 ppb	0.822 ppb	162.870 %
Concentration per Run 3	0.165 ppb	229.725 ppb	109.949 %	123.580 %	0.096 ppb	0.689 ppb	130.679 %
Concentration RSD	2.6 %	2.3 %	0.4 %	10.4 %	35.2 %	10.4 %	18.2 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 183
Analysis label: L2415362-05 6020TL
Analysis started at: 4/1/2024 9:34:28 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	82.283 %	109.270 %	0.017 ppb	84.307 ppb	152,327.204 ppb	39,786.446 ppb	210.941 ppb	10,258.594 ppb	130,485.617 ppb
Concentration per Run 1	86.203 %	108.115 %	0.015 ppb	82.865 ppb	154,662.196 ppb	40,197.733 ppb	213.762 ppb	10,315.705 ppb	131,101.287 ppb
Concentration per Run 2	80.431 %	108.808 %	0.017 ppb	84.550 ppb	152,206.524 ppb	39,675.439 ppb	208.356 ppb	10,487.763 ppb	131,787.554 ppb
Concentration per Run 3	80.216 %	110.887 %	0.017 ppb	85.505 ppb	150,112.892 ppb	39,486.165 ppb	210.704 ppb	9,972.314 ppb	128,568.011 ppb
Concentration RSD	4.1 %	1.3 %	7.0 %	1.6 %	1.5 %	0.9 %	1.3 %	2.6 %	1.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	115.269 %	0.819 ppb	1.094 ppb	122.315 ppb	2,125.619 ppb	0.273 ppb	1.080 ppb	1.083 ppb	11.488 ppb
Concentration per Run 1	120.282 %	0.740 ppb	1.052 ppb	121.428 ppb	2,129.123 ppb	0.268 ppb	1.094 ppb	1.137 ppb	11.545 ppb
Concentration per Run 2	112.629 %	0.834 ppb	1.103 ppb	124.750 ppb	2,156.866 ppb	0.273 ppb	1.104 ppb	1.149 ppb	11.596 ppb
Concentration per Run 3	112.895 %	0.882 ppb	1.126 ppb	120.766 ppb	2,090.868 ppb	0.279 ppb	1.042 ppb	0.964 ppb	11.324 ppb
Concentration RSD	3.8 %	8.8 %	3.5 %	1.7 %	1.6 %	2.1 %	3.1 %	9.5 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.179 %	4.102 ppb	0.221 ppb	2,358.464 ppb	0.535 ppb	100.777 %	0.008 ppb	0.026 ppb	104.598 %
Concentration per Run 1	103.958 %	4.159 ppb	0.271 ppb	2,367.104 ppb	0.562 ppb	99.756 %	0.006 ppb	0.022 ppb	104.092 %
Concentration per Run 2	103.765 %	4.146 ppb	0.234 ppb	2,364.934 ppb	0.470 ppb	100.299 %	0.009 ppb	0.023 ppb	100.288 %
Concentration per Run 3	107.815 %	4.000 ppb	0.158 ppb	2,343.352 ppb	0.573 ppb	102.276 %	0.008 ppb	0.034 ppb	109.414 %
Concentration RSD	2.2 %	2.1 %	26.2 %	0.6 %	10.6 %	1.3 %	18.1 %	26.6 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.113 ppb	134.257 ppb	110.495 %	108.776 %	0.076 ppb	1.089 ppb	146.744 %
Concentration per Run 1	0.105 ppb	134.583 ppb	108.441 %	121.544 %	0.041 ppb	0.965 ppb	184.647 %
Concentration per Run 2	0.122 ppb	137.611 ppb	110.141 %	100.276 %	0.090 ppb	1.183 ppb	126.595 %
Concentration per Run 3	0.113 ppb	130.576 ppb	112.903 %	104.507 %	0.096 ppb	1.118 ppb	128.990 %
Concentration RSD	7.5 %	2.6 %	2.0 %	10.3 %	39.6 %	10.3 %	22.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 184
Analysis label: L2415362-06 6020TL
Analysis started at: 4/1/2024 9:39:09 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.752 %	117.355 %	0.013 ppb	81.250 ppb	159,222.212 ppb	30,555.773 ppb	72.606 ppb	11,649.178 ppb	122,347.201 ppb
Concentration per Run 1	91.037 %	119.117 %	0.013 ppb	81.244 ppb	156,251.537 ppb	29,838.320 ppb	70.899 ppb	11,061.703 ppb	119,037.555 ppb
Concentration per Run 2	89.592 %	117.211 %	0.015 ppb	80.729 ppb	162,442.828 ppb	30,745.338 ppb	72.881 ppb	11,917.508 ppb	123,871.949 ppb
Concentration per Run 3	88.627 %	115.738 %	0.011 ppb	81.777 ppb	158,972.270 ppb	31,083.662 ppb	74.037 ppb	11,968.324 ppb	124,132.100 ppb
Concentration RSD	1.4 %	1.4 %	16.6 %	0.6 %	1.9 %	2.1 %	2.2 %	4.4 %	2.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	115.569 %	0.506 ppb	0.500 ppb	198.454 ppb	6,627.940 ppb	0.184 ppb	1.000 ppb	0.341 ppb	0.052 ppb
Concentration per Run 1	114.591 %	0.475 ppb	0.491 ppb	192.035 ppb	6,429.099 ppb	0.181 ppb	0.948 ppb	0.338 ppb	0.059 ppb
Concentration per Run 2	116.695 %	0.487 ppb	0.520 ppb	200.694 ppb	6,696.591 ppb	0.176 ppb	1.065 ppb	0.351 ppb	0.036 ppb
Concentration per Run 3	115.420 %	0.554 ppb	0.489 ppb	202.634 ppb	6,758.130 ppb	0.195 ppb	0.987 ppb	0.333 ppb	0.062 ppb
Concentration RSD	0.9 %	8.4 %	3.5 %	2.8 %	2.6 %	5.3 %	6.0 %	2.8 %	27.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.512 %	0.542 ppb	0.164 ppb	1,625.047 ppb	0.498 ppb	99.253 %	0.014 ppb	0.003 ppb	105.086 %
Concentration per Run 1	108.963 %	0.478 ppb	0.162 ppb	1,570.226 ppb	0.460 ppb	101.695 %	0.016 ppb	0.004 ppb	107.495 %
Concentration per Run 2	103.967 %	0.531 ppb	0.200 ppb	1,650.739 ppb	0.492 ppb	97.792 %	0.012 ppb	0.003 ppb	103.680 %
Concentration per Run 3	103.607 %	0.617 ppb	0.130 ppb	1,654.178 ppb	0.542 ppb	98.271 %	0.013 ppb	0.003 ppb	104.083 %
Concentration RSD	2.8 %	12.9 %	21.2 %	2.9 %	8.3 %	2.1 %	16.1 %	16.0 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.115 ppb	132.481 ppb	110.863 %	117.149 %	0.056 ppb	0.191 ppb	156.195 %
Concentration per Run 1	0.104 ppb	127.836 ppb	113.525 %	128.480 %	0.031 ppb	0.162 ppb	196.928 %
Concentration per Run 2	0.127 ppb	136.606 ppb	108.706 %	121.438 %	0.061 ppb	0.185 ppb	139.446 %
Concentration per Run 3	0.115 ppb	133.001 ppb	110.357 %	101.529 %	0.074 ppb	0.225 ppb	132.210 %
Concentration RSD	10.0 %	3.3 %	2.2 %	11.9 %	40.2 %	16.8 %	22.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 185
Analysis label: L2417074-02 6020TL
Analysis started at: 4/1/2024 9:43:50 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 11
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	78.735 %	108.201 %	0.007 ppb	26.511 ppb	12,301.286 ppb	6,096.484 ppb	107.398 ppb	2,845.738 ppb	26,447.683 ppb
Concentration per Run 1	82.104 %	114.959 %	0.015 ppb	25.430 ppb	11,963.510 ppb	5,886.423 ppb	104.789 ppb	2,834.981 ppb	26,374.578 ppb
Concentration per Run 2	78.863 %	101.617 %	0.003 ppb	26.711 ppb	12,728.255 ppb	6,360.691 ppb	113.547 ppb	2,916.441 ppb	27,262.191 ppb
Concentration per Run 3	75.237 %	108.028 %	0.004 ppb	27.391 ppb	12,212.095 ppb	6,042.338 ppb	103.859 ppb	2,785.793 ppb	25,706.278 ppb
Concentration RSD	4.4 %	6.2 %	85.9 %	3.8 %	3.2 %	4.0 %	5.0 %	2.3 %	3.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.228 %	0.490 ppb	1.252 ppb	6,012.577 ppb	253.684 ppb	0.835 ppb	0.930 ppb	1.128 ppb	0.259 ppb
Concentration per Run 1	106.894 %	0.459 ppb	1.298 ppb	6,119.461 ppb	264.872 ppb	0.876 ppb	0.968 ppb	1.200 ppb	0.289 ppb
Concentration per Run 2	100.211 %	0.516 ppb	1.249 ppb	5,942.902 ppb	246.578 ppb	0.785 ppb	0.928 ppb	1.058 ppb	0.249 ppb
Concentration per Run 3	96.579 %	0.495 ppb	1.210 ppb	5,975.366 ppb	249.601 ppb	0.845 ppb	0.895 ppb	1.127 ppb	0.238 ppb
Concentration RSD	5.2 %	5.9 %	3.5 %	1.6 %	3.9 %	5.5 %	3.9 %	6.3 %	10.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.777 %	0.246 ppb	0.036 ppb	83.254 ppb	1.385 ppb	100.069 %	0.012 ppb	0.024 ppb	102.956 %
Concentration per Run 1	99.397 %	0.288 ppb	0.066 ppb	86.290 ppb	1.329 ppb	98.402 %	0.015 ppb	0.024 ppb	101.151 %
Concentration per Run 2	103.427 %	0.197 ppb	0.033 ppb	83.043 ppb	1.503 ppb	98.515 %	0.012 ppb	0.027 ppb	98.903 %
Concentration per Run 3	102.506 %	0.254 ppb	0.010 ppb	80.429 ppb	1.322 ppb	103.290 %	0.011 ppb	0.020 ppb	108.813 %
Concentration RSD	2.1 %	18.6 %	77.7 %	3.5 %	7.4 %	2.8 %	18.5 %	15.9 %	5.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.123 ppb	18.942 ppb	107.263 %	114.130 %	0.124 ppb	0.199 ppb	161.098 %
Concentration per Run 1	0.121 ppb	19.638 ppb	103.258 %	98.644 %	0.121 ppb	0.237 ppb	179.767 %
Concentration per Run 2	0.133 ppb	19.454 ppb	105.710 %	118.721 %	0.128 ppb	0.189 ppb	132.109 %
Concentration per Run 3	0.114 ppb	17.733 ppb	112.820 %	125.026 %	0.123 ppb	0.172 ppb	171.419 %
Concentration RSD	7.7 %	5.5 %	4.6 %	12.1 %	3.1 %	16.7 %	15.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 186
Analysis label: L2417074-03 6020TL
Analysis started at: 4/1/2024 9:48:30 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 12
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	82.711 %	105.285 %	0.007 ppb	24.045 ppb	10,533.828 ppb	5,776.164 ppb	2.487 ppb	1,709.595 ppb	16,838.564 ppb
Concentration per Run 1	83.854 %	100.404 %	0.006 ppb	23.487 ppb	10,932.132 ppb	6,068.774 ppb	2.547 ppb	1,759.687 ppb	17,191.684 ppb
Concentration per Run 2	82.877 %	107.508 %	0.009 ppb	24.213 ppb	10,219.538 ppb	5,629.023 ppb	2.729 ppb	1,683.689 ppb	16,697.484 ppb
Concentration per Run 3	81.400 %	107.941 %	0.006 ppb	24.435 ppb	10,449.813 ppb	5,630.694 ppb	2.186 ppb	1,685.410 ppb	16,626.525 ppb
Concentration RSD	1.5 %	4.0 %	20.5 %	2.1 %	3.5 %	4.4 %	11.1 %	2.5 %	1.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.585 %	0.073 ppb	0.485 ppb	20.269 ppb	14.849 ppb	0.053 ppb	0.429 ppb	0.373 ppb	-0.331 ppb
Concentration per Run 1	104.459 %	0.071 ppb	0.488 ppb	20.797 ppb	14.043 ppb	0.069 ppb	0.443 ppb	0.389 ppb	-0.353 ppb
Concentration per Run 2	103.624 %	0.071 ppb	0.465 ppb	19.669 ppb	14.748 ppb	0.046 ppb	0.451 ppb	0.345 ppb	-0.294 ppb
Concentration per Run 3	102.674 %	0.077 ppb	0.503 ppb	20.341 ppb	15.757 ppb	0.043 ppb	0.393 ppb	0.385 ppb	-0.347 ppb
Concentration RSD	0.9 %	4.6 %	3.9 %	2.8 %	5.8 %	26.8 %	7.3 %	6.4 %	9.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.227 %	0.148 ppb	-0.010 ppb	64.610 ppb	0.142 ppb	99.502 %	0.005 ppb	0.005 ppb	104.641 %
Concentration per Run 1	102.034 %	0.148 ppb	-0.028 ppb	64.974 ppb	0.117 ppb	98.913 %	0.010 ppb	0.004 ppb	105.308 %
Concentration per Run 2	102.262 %	0.135 ppb	0.003 ppb	64.169 ppb	0.160 ppb	99.242 %	0.002 ppb	0.004 ppb	103.217 %
Concentration per Run 3	102.384 %	0.159 ppb	-0.005 ppb	64.687 ppb	0.149 ppb	100.351 %	0.004 ppb	0.006 ppb	105.399 %
Concentration RSD	0.2 %	8.1 %	166.2 %	0.6 %	16.0 %	0.8 %	77.7 %	29.5 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.078 ppb	17.777 ppb	108.438 %	113.851 %	0.052 ppb	0.015 ppb	179.689 %
Concentration per Run 1	0.069 ppb	17.690 ppb	106.733 %	119.410 %	0.032 ppb	0.014 ppb	192.990 %
Concentration per Run 2	0.085 ppb	17.923 ppb	109.315 %	121.242 %	0.054 ppb	0.010 ppb	174.983 %
Concentration per Run 3	0.081 ppb	17.717 ppb	109.266 %	100.901 %	0.071 ppb	0.022 ppb	171.096 %
Concentration RSD	10.5 %	0.7 %	1.4 %	9.9 %	36.8 %	40.5 %	6.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 187
Analysis label: L2417074-04 6020TL
Analysis started at: 4/1/2024 9:53:11 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 13
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	77.283 %	106.815 %	0.013 ppb	26.135 ppb	11,041.272 ppb	5,344.909 ppb	232.867 ppb	1,929.314 ppb	17,465.342 ppb
Concentration per Run 1	81.883 %	105.862 %	0.017 ppb	25.106 ppb	11,248.536 ppb	5,539.341 ppb	230.784 ppb	1,974.348 ppb	17,762.156 ppb
Concentration per Run 2	77.141 %	105.949 %	0.009 ppb	26.096 ppb	10,780.271 ppb	5,243.112 ppb	237.041 ppb	1,946.155 ppb	17,286.936 ppb
Concentration per Run 3	72.825 %	108.634 %	0.014 ppb	27.204 ppb	11,095.008 ppb	5,252.273 ppb	230.776 ppb	1,867.439 ppb	17,346.934 ppb
Concentration RSD	5.9 %	1.5 %	29.8 %	4.0 %	2.2 %	3.2 %	1.6 %	2.9 %	1.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.248 %	0.571 ppb	0.434 ppb	7.439 ppb	246.309 ppb	0.113 ppb	0.318 ppb	0.642 ppb	0.207 ppb
Concentration per Run 1	97.209 %	0.521 ppb	0.442 ppb	7.378 ppb	245.041 ppb	0.111 ppb	0.269 ppb	0.666 ppb	0.146 ppb
Concentration per Run 2	93.768 %	0.548 ppb	0.406 ppb	7.474 ppb	244.863 ppb	0.107 ppb	0.341 ppb	0.659 ppb	0.224 ppb
Concentration per Run 3	88.768 %	0.644 ppb	0.454 ppb	7.464 ppb	249.024 ppb	0.123 ppb	0.345 ppb	0.600 ppb	0.250 ppb
Concentration RSD	4.6 %	11.3 %	5.8 %	0.7 %	1.0 %	7.2 %	13.4 %	5.6 %	26.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.002 %	0.303 ppb	0.047 ppb	74.149 ppb	0.145 ppb	100.362 %	0.003 ppb	0.003 ppb	104.413 %
Concentration per Run 1	103.424 %	0.319 ppb	0.029 ppb	73.156 ppb	0.142 ppb	103.064 %	0.005 ppb	0.004 ppb	106.704 %
Concentration per Run 2	101.313 %	0.307 ppb	0.060 ppb	74.043 ppb	0.137 ppb	99.351 %	0.003 ppb	0.005 ppb	103.401 %
Concentration per Run 3	98.269 %	0.284 ppb	0.052 ppb	75.250 ppb	0.156 ppb	98.669 %	0.001 ppb	0.001 ppb	103.134 %
Concentration RSD	2.6 %	6.0 %	34.9 %	1.4 %	6.8 %	2.4 %	66.6 %	54.9 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.067 ppb	18.173 ppb	107.523 %	122.454 %	0.045 ppb	0.191 ppb	182.448 %
Concentration per Run 1	0.061 ppb	18.341 ppb	109.337 %	123.801 %	0.031 ppb	0.186 ppb	199.449 %
Concentration per Run 2	0.069 ppb	18.150 ppb	106.617 %	121.615 %	0.049 ppb	0.198 ppb	179.990 %
Concentration per Run 3	0.071 ppb	18.027 ppb	106.614 %	121.948 %	0.054 ppb	0.189 ppb	167.904 %
Concentration RSD	8.2 %	0.9 %	1.5 %	1.0 %	27.2 %	3.2 %	8.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 188
Analysis label: L2417074-05 6020TL
Analysis started at: 4/1/2024 9:57:52 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 14
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	77.456 %	101.531 %	0.005 ppb	20.081 ppb	13,243.453 ppb	5,363.176 ppb	18.986 ppb	2,217.887 ppb	11,735.657 ppb
Concentration per Run 1	78.337 %	101.097 %	0.002 ppb	20.112 ppb	13,350.653 ppb	5,424.302 ppb	17.961 ppb	2,286.959 ppb	11,719.068 ppb
Concentration per Run 2	78.438 %	102.137 %	-0.001 ppb	19.938 ppb	12,951.059 ppb	5,201.521 ppb	18.598 ppb	2,156.378 ppb	11,645.006 ppb
Concentration per Run 3	75.594 %	101.357 %	0.013 ppb	20.193 ppb	13,428.646 ppb	5,463.705 ppb	20.400 ppb	2,210.324 ppb	11,842.896 ppb
Concentration RSD	2.1 %	0.5 %	158.8 %	0.6 %	1.9 %	2.6 %	6.7 %	3.0 %	0.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.536 %	0.228 ppb	0.785 ppb	3.392 ppb	30.455 ppb	0.081 ppb	0.332 ppb	0.378 ppb	0.062 ppb
Concentration per Run 1	88.850 %	0.241 ppb	0.777 ppb	3.333 ppb	30.354 ppb	0.082 ppb	0.351 ppb	0.391 ppb	0.141 ppb
Concentration per Run 2	90.520 %	0.215 ppb	0.759 ppb	3.353 ppb	27.214 ppb	0.080 ppb	0.342 ppb	0.380 ppb	0.009 ppb
Concentration per Run 3	89.237 %	0.229 ppb	0.817 ppb	3.491 ppb	33.797 ppb	0.080 ppb	0.304 ppb	0.364 ppb	0.037 ppb
Concentration RSD	1.0 %	5.9 %	3.8 %	2.5 %	10.8 %	1.5 %	7.6 %	3.6 %	111.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.741 %	0.177 ppb	0.055 ppb	89.027 ppb	0.066 ppb	94.988 %	0.003 ppb	0.006 ppb	98.426 %
Concentration per Run 1	96.671 %	0.216 ppb	0.045 ppb	89.531 ppb	0.069 ppb	95.046 %	0.002 ppb	0.010 ppb	101.489 %
Concentration per Run 2	98.410 %	0.123 ppb	0.032 ppb	87.675 ppb	0.050 ppb	95.377 %	0.003 ppb	0.002 ppb	97.980 %
Concentration per Run 3	95.142 %	0.191 ppb	0.089 ppb	89.874 ppb	0.078 ppb	94.539 %	0.004 ppb	0.006 ppb	95.808 %
Concentration RSD	1.7 %	27.4 %	54.7 %	1.3 %	21.5 %	0.4 %	29.8 %	64.7 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.091 ppb	26.582 ppb	103.001 %	102.518 %	0.037 ppb	0.088 ppb	151.044 %
Concentration per Run 1	0.077 ppb	26.056 ppb	102.266 %	95.032 %	0.026 ppb	0.097 ppb	194.923 %
Concentration per Run 2	0.090 ppb	26.616 ppb	104.169 %	116.697 %	0.034 ppb	0.069 ppb	133.117 %
Concentration per Run 3	0.106 ppb	27.074 ppb	102.567 %	95.826 %	0.051 ppb	0.099 ppb	125.093 %
Concentration RSD	16.3 %	1.9 %	1.0 %	12.0 %	34.9 %	18.8 %	25.3 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 189
Analysis label: L2417074-06 6020TL
Analysis started at: 4/1/2024 10:02:34 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 15
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.012 %	106.584 %	0.012 ppb	8.694 ppb	3,407.968 ppb	764.079 ppb	9.172 ppb	1,194.384 ppb	2,954.340 ppb
Concentration per Run 1	81.078 %	103.783 %	0.011 ppb	8.720 ppb	3,640.919 ppb	769.898 ppb	9.293 ppb	1,216.073 ppb	2,890.823 ppb
Concentration per Run 2	79.568 %	115.305 %	0.017 ppb	8.663 ppb	2,677.684 ppb	707.845 ppb	7.507 ppb	1,132.450 ppb	2,819.052 ppb
Concentration per Run 3	79.390 %	100.664 %	0.006 ppb	8.698 ppb	3,905.301 ppb	814.495 ppb	10.715 ppb	1,234.628 ppb	3,153.145 ppb
Concentration RSD	1.2 %	7.2 %	45.4 %	0.3 %	19.0 %	7.0 %	17.5 %	4.6 %	6.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.448 %	0.168 ppb	0.471 ppb	2.573 ppb	10.366 ppb	0.027 ppb	0.057 ppb	0.069 ppb	-0.075 ppb
Concentration per Run 1	97.399 %	0.169 ppb	0.466 ppb	2.438 ppb	8.113 ppb	0.020 ppb	0.033 ppb	0.070 ppb	-0.150 ppb
Concentration per Run 2	98.059 %	0.190 ppb	0.453 ppb	2.155 ppb	7.823 ppb	0.029 ppb	0.067 ppb	0.064 ppb	-0.038 ppb
Concentration per Run 3	99.887 %	0.146 ppb	0.493 ppb	3.127 ppb	15.163 ppb	0.031 ppb	0.073 ppb	0.072 ppb	-0.038 ppb
Concentration RSD	1.3 %	13.1 %	4.3 %	19.4 %	40.1 %	23.4 %	37.7 %	6.1 %	86.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.977 %	0.090 ppb	0.017 ppb	14.856 ppb	0.058 ppb	99.560 %	0.001 ppb	0.016 ppb	103.182 %
Concentration per Run 1	101.536 %	0.116 ppb	0.061 ppb	14.177 ppb	0.057 ppb	101.985 %	-0.001 ppb	0.018 ppb	104.832 %
Concentration per Run 2	100.463 %	0.073 ppb	-0.022 ppb	14.573 ppb	0.051 ppb	97.895 %	-0.001 ppb	0.013 ppb	101.969 %
Concentration per Run 3	100.932 %	0.079 ppb	0.013 ppb	15.818 ppb	0.067 ppb	98.800 %	0.004 ppb	0.016 ppb	102.745 %
Concentration RSD	0.5 %	26.0 %	243.0 %	5.8 %	14.4 %	2.2 %	386.2 %	14.1 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.053 ppb	10.270 ppb	107.561 %	99.133 %	0.038 ppb	0.023 ppb	195.182 %
Concentration per Run 1	0.044 ppb	10.224 ppb	110.143 %	100.901 %	0.022 ppb	0.019 ppb	216.028 %
Concentration per Run 2	0.051 ppb	10.169 ppb	106.490 %	97.628 %	0.044 ppb	0.016 ppb	189.272 %
Concentration per Run 3	0.065 ppb	10.418 ppb	106.050 %	98.869 %	0.049 ppb	0.034 ppb	180.245 %
Concentration RSD	19.5 %	1.3 %	2.1 %	1.7 %	38.2 %	41.0 %	9.5 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	190	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 10:07:15 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	73.337 %	100.693 %	59.921 ppb	60.901 ppb	6,195.857 ppb	5,877.344 ppb	56.937 ppb	5,787.636 ppb	5,812.987 ppb
Concentration per Run 1	74.782 %	104.996 %	59.898 ppb	61.026 ppb	6,045.303 ppb	5,731.013 ppb	54.584 ppb	5,682.573 ppb	5,692.629 ppb
Concentration per Run 2	73.649 %	101.011 %	60.038 ppb	60.499 ppb	6,145.806 ppb	5,764.174 ppb	56.829 ppb	5,678.863 ppb	5,877.521 ppb
Concentration per Run 3	71.580 %	96.073 %	59.829 ppb	61.178 ppb	6,396.462 ppb	6,136.844 ppb	59.399 ppb	6,001.473 ppb	5,868.810 ppb
Recovery Percentage 1			99.869 %	101.502 %	103.264 %	97.956 %	94.895 %	96.461 %	96.883 %
Concentration RSD	2.2 %	4.4 %	0.2 %	0.6 %	2.9 %	3.8 %	4.2 %	3.2 %	1.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.993 %	57.980 ppb	57.840 ppb	54.985 ppb	5,830.922 ppb	59.713 ppb	60.032 ppb	60.688 ppb	56.792 ppb
Concentration per Run 1	95.627 %	57.913 ppb	57.468 ppb	54.717 ppb	5,836.961 ppb	60.239 ppb	60.911 ppb	60.460 ppb	56.941 ppb
Concentration per Run 2	94.247 %	57.033 ppb	56.547 ppb	53.703 ppb	5,738.871 ppb	58.747 ppb	59.404 ppb	60.546 ppb	56.889 ppb
Concentration per Run 3	92.105 %	58.994 ppb	59.504 ppb	56.534 ppb	5,916.933 ppb	60.154 ppb	59.782 ppb	61.057 ppb	56.545 ppb
Recovery Percentage 1		96.633 %	96.399 %	91.641 %	97.182 %	99.522 %	100.054 %	101.146 %	94.653 %
Concentration RSD	1.9 %	1.7 %	2.6 %	2.6 %	1.5 %	1.4 %	1.3 %	0.5 %	0.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.901 %	59.262 ppb	58.725 ppb	58.562 ppb	58.299 ppb	94.517 %	57.732 ppb	60.365 ppb	97.030 %
Concentration per Run 1	96.813 %	59.141 ppb	59.161 ppb	58.706 ppb	56.135 ppb	96.728 %	57.287 ppb	59.851 ppb	99.996 %
Concentration per Run 2	95.869 %	59.491 ppb	58.631 ppb	58.416 ppb	58.785 ppb	93.746 %	57.497 ppb	60.181 ppb	97.680 %
Concentration per Run 3	95.020 %	59.155 ppb	58.385 ppb	58.565 ppb	59.978 ppb	93.077 %	58.411 ppb	61.063 ppb	93.413 %
Recovery Percentage 1		98.771 %	97.876 %	97.604 %	97.166 %		96.220 %	100.608 %	
Concentration RSD	0.9 %	0.3 %	0.7 %	0.2 %	3.4 %	2.1 %	1.0 %	1.0 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.562 ppb	61.272 ppb	103.698 %	103.395 %	63.009 ppb	60.915 ppb	180.508 %
Concentration per Run 1	61.572 ppb	61.444 ppb	105.370 %	97.046 %	60.372 ppb	64.697 ppb	222.021 %
Concentration per Run 2	60.424 ppb	60.043 ppb	103.045 %	118.625 %	55.442 ppb	51.779 ppb	179.579 %
Concentration per Run 3	62.690 ppb	62.329 ppb	102.679 %	94.514 %	73.214 ppb	66.270 ppb	139.923 %
Recovery Percentage 1	102.603 %	102.120 %			105.015 %	101.525 %	
Concentration RSD	1.8 %	1.9 %	1.4 %	12.8 %	14.6 %	13.1 %	22.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	191	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 10:11:58 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	73.262 %	95.351 %	0.011 ppb	2.559 ppb	29.101 ppb	0.293 ppb	-0.291 ppb	2.019 ppb	0.800 ppb
Concentration per Run 1	74.877 %	93.560 %	0.004 ppb	2.436 ppb	35.413 ppb	0.378 ppb	-0.205 ppb	6.172 ppb	3.017 ppb
Concentration per Run 2	72.049 %	95.899 %	0.024 ppb	2.708 ppb	23.196 ppb	0.217 ppb	-0.322 ppb	-0.113 ppb	-0.503 ppb
Concentration per Run 3	72.859 %	96.592 %	0.006 ppb	2.534 ppb	28.693 ppb	0.283 ppb	-0.348 ppb	-0.003 ppb	-0.115 ppb
Recovery Percentage 1			2.248 %	25.590 %	29.101 %	0.418 %	-2.913 %	2.019 %	0.800 %
Concentration RSD	2.0 %	1.7 %	94.9 %	5.4 %	21.0 %	27.6 %	26.2 %	178.2 %	241.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.525 %	-0.063 ppb	0.001 ppb	0.095 ppb	14.602 ppb	0.001 ppb	-0.002 ppb	-0.002 ppb	-0.743 ppb
Concentration per Run 1	89.977 %	-0.066 ppb	0.003 ppb	0.121 ppb	15.889 ppb	0.001 ppb	-0.015 ppb	-0.004 ppb	-0.729 ppb
Concentration per Run 2	85.749 %	-0.044 ppb	-0.004 ppb	0.080 ppb	14.826 ppb	-0.001 ppb	0.009 ppb	-0.004 ppb	-0.764 ppb
Concentration per Run 3	89.849 %	-0.079 ppb	0.005 ppb	0.084 ppb	13.092 ppb	0.001 ppb	0.000 ppb	0.001 ppb	-0.736 ppb
Recovery Percentage 1		-1.258 %	0.124 %	9.480 %	29.205 %	0.126 %	-0.103 %	-0.226 %	-14.855 %
Concentration RSD	2.7 %	27.7 %	369.9 %	23.7 %	9.7 %	232.0 %	580.4 %	128.2 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.088 %	0.106 ppb	0.328 ppb	0.036 ppb	1.183 ppb	92.751 %	0.005 ppb	0.007 ppb	93.334 %
Concentration per Run 1	91.141 %	0.085 ppb	0.320 ppb	0.050 ppb	1.248 ppb	92.141 %	0.008 ppb	0.011 ppb	92.396 %
Concentration per Run 2	92.057 %	0.097 ppb	0.304 ppb	0.031 ppb	1.175 ppb	93.747 %	0.006 ppb	0.004 ppb	94.885 %
Concentration per Run 3	90.066 %	0.136 ppb	0.361 ppb	0.028 ppb	1.126 ppb	92.366 %	0.002 ppb	0.006 ppb	92.719 %
Recovery Percentage 1		21.228 %	6.563 %	0.364 %	59.150 %		1.309 %	3.439 %	
Concentration RSD	1.1 %	25.2 %	8.9 %	33.2 %	5.2 %	0.9 %	65.8 %	47.3 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.091 ppb	0.010 ppb	99.559 %	98.843 %	0.620 ppb	0.025 ppb	146.527 %
Concentration per Run 1	0.084 ppb	0.012 ppb	98.081 %	91.078 %	0.611 ppb	0.039 ppb	181.619 %
Concentration per Run 2	0.087 ppb	0.013 ppb	100.758 %	112.988 %	0.619 ppb	0.015 ppb	128.387 %
Concentration per Run 3	0.102 ppb	0.006 ppb	99.838 %	92.462 %	0.631 ppb	0.021 ppb	129.575 %
Recovery Percentage 1	2.271 %	2.074 %			62.043 %	2.507 %	
Concentration RSD	10.6 %	34.7 %	1.4 %	12.4 %	1.6 %	48.5 %	20.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 192
Analysis label: L2417074-07 6020TL
Analysis started at: 4/1/2024 10:16:41 PM
User name ALPHALAB\Metals-Instrument
Rack 3
Vial 16
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	75.225 %	99.856 %	0.005 ppb	2.493 ppb	61.973 ppb	8.373 ppb	71.319 ppb	124.325 ppb	65.643 ppb
Concentration per Run 1	77.849 %	100.664 %	0.007 ppb	2.473 ppb	63.493 ppb	8.635 ppb	71.253 ppb	122.420 ppb	64.606 ppb
Concentration per Run 2	74.882 %	100.837 %	0.001 ppb	2.488 ppb	54.355 ppb	8.680 ppb	71.804 ppb	122.742 ppb	67.234 ppb
Concentration per Run 3	72.943 %	98.065 %	0.006 ppb	2.519 ppb	68.072 ppb	7.804 ppb	70.900 ppb	127.813 ppb	65.089 ppb
Concentration RSD	3.3 %	1.6 %	68.8 %	0.9 %	11.3 %	5.9 %	0.6 %	2.4 %	2.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.440 %	-0.068 ppb	0.354 ppb	1.302 ppb	11.435 ppb	0.038 ppb	0.456 ppb	1.523 ppb	4.702 ppb
Concentration per Run 1	91.173 %	-0.093 ppb	0.344 ppb	1.255 ppb	10.005 ppb	0.036 ppb	0.419 ppb	1.578 ppb	4.817 ppb
Concentration per Run 2	88.254 %	-0.070 ppb	0.375 ppb	1.322 ppb	11.917 ppb	0.035 ppb	0.465 ppb	1.519 ppb	4.700 ppb
Concentration per Run 3	85.894 %	-0.042 ppb	0.343 ppb	1.328 ppb	12.383 ppb	0.043 ppb	0.483 ppb	1.471 ppb	4.588 ppb
Concentration RSD	3.0 %	36.9 %	5.2 %	3.1 %	11.0 %	11.0 %	7.2 %	3.5 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.088 %	0.076 ppb	0.034 ppb	0.121 ppb	0.291 ppb	97.302 %	-0.001 ppb	0.006 ppb	98.760 %
Concentration per Run 1	94.150 %	0.132 ppb	0.021 ppb	0.127 ppb	0.255 ppb	98.966 %	-0.001 ppb	0.003 ppb	101.026 %
Concentration per Run 2	94.352 %	0.022 ppb	0.062 ppb	0.120 ppb	0.256 ppb	96.644 %	-0.001 ppb	0.009 ppb	97.903 %
Concentration per Run 3	93.761 %	0.073 ppb	0.019 ppb	0.114 ppb	0.361 ppb	96.296 %	-0.001 ppb	0.005 ppb	97.349 %
Concentration RSD	0.3 %	72.4 %	71.8 %	5.5 %	20.8 %	1.5 %	43.1 %	49.0 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.176 ppb	0.488 ppb	97.699 %	103.159 %	0.210 ppb	0.035 ppb	154.381 %
Concentration per Run 1	0.175 ppb	0.463 ppb	106.280 %	117.618 %	0.127 ppb	0.029 ppb	189.707 %
Concentration per Run 2	0.175 ppb	0.502 ppb	83.358 %	95.517 %	0.255 ppb	0.037 ppb	138.072 %
Concentration per Run 3	0.176 ppb	0.500 ppb	103.459 %	96.341 %	0.249 ppb	0.039 ppb	135.365 %
Concentration RSD	0.4 %	4.5 %	12.8 %	12.1 %	34.3 %	15.7 %	19.8 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	193	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 10:21:22 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	72.702 %	96.997 %	57.625 ppb	59.318 ppb	6,105.008 ppb	5,882.984 ppb	56.720 ppb	5,906.876 ppb	5,848.607 ppb
Concentration per Run 1	73.045 %	99.278 %	58.821 ppb	59.796 ppb	6,082.536 ppb	5,794.920 ppb	55.328 ppb	5,943.996 ppb	5,890.379 ppb
Concentration per Run 2	72.110 %	100.144 %	57.837 ppb	59.267 ppb	5,915.789 ppb	5,722.484 ppb	55.287 ppb	5,799.056 ppb	5,688.562 ppb
Concentration per Run 3	72.951 %	91.568 %	56.216 ppb	58.892 ppb	6,316.699 ppb	6,131.547 ppb	59.545 ppb	5,977.575 ppb	5,966.878 ppb
Recovery Percentage 1			96.041 %	98.864 %	101.750 %	98.050 %	94.533 %	98.448 %	97.477 %
Concentration RSD	0.7 %	4.9 %	2.3 %	0.8 %	3.3 %	3.7 %	4.3 %	1.6 %	2.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.974 %	58.288 ppb	58.354 ppb	55.032 ppb	5,892.414 ppb	59.741 ppb	59.492 ppb	59.977 ppb	57.612 ppb
Concentration per Run 1	94.284 %	58.516 ppb	58.865 ppb	54.675 ppb	5,891.090 ppb	60.217 ppb	59.537 ppb	59.907 ppb	57.787 ppb
Concentration per Run 2	98.473 %	57.400 ppb	57.687 ppb	55.003 ppb	5,897.625 ppb	59.944 ppb	60.095 ppb	60.239 ppb	58.114 ppb
Concentration per Run 3	98.164 %	58.948 ppb	58.510 ppb	55.417 ppb	5,888.527 ppb	59.062 ppb	58.842 ppb	59.785 ppb	56.936 ppb
Recovery Percentage 1		97.146 %	97.257 %	91.719 %	98.207 %	99.569 %	99.153 %	99.962 %	96.020 %
Concentration RSD	2.4 %	1.4 %	1.0 %	0.7 %	0.1 %	1.0 %	1.1 %	0.4 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.011 %	59.256 ppb	58.296 ppb	58.964 ppb	59.128 ppb	92.135 %	57.937 ppb	60.718 ppb	95.464 %
Concentration per Run 1	94.379 %	58.843 ppb	56.745 ppb	58.029 ppb	56.043 ppb	94.304 %	56.954 ppb	59.555 ppb	99.248 %
Concentration per Run 2	92.182 %	60.189 ppb	59.337 ppb	59.266 ppb	60.022 ppb	91.738 %	58.530 ppb	60.997 ppb	93.876 %
Concentration per Run 3	92.470 %	58.735 ppb	58.807 ppb	59.597 ppb	61.318 ppb	90.362 %	58.327 ppb	61.602 ppb	93.268 %
Recovery Percentage 1		98.760 %	97.161 %	98.273 %	98.546 %		96.562 %	101.197 %	
Concentration RSD	1.3 %	1.4 %	2.3 %	1.4 %	4.6 %	2.2 %	1.5 %	1.7 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.181 ppb	61.360 ppb	101.505 %	94.267 %	60.266 ppb	65.061 ppb	174.805 %
Concentration per Run 1	59.260 ppb	59.011 ppb	103.386 %	96.329 %	54.200 ppb	63.685 ppb	215.716 %
Concentration per Run 2	62.478 ppb	63.916 ppb	100.701 %	92.772 %	62.000 ppb	66.409 ppb	174.925 %
Concentration per Run 3	61.804 ppb	61.152 ppb	100.427 %	93.701 %	64.599 ppb	65.089 ppb	133.774 %
Recovery Percentage 1	101.968 %	102.266 %			100.444 %	108.435 %	
Concentration RSD	2.8 %	4.0 %	1.6 %	2.0 %	9.0 %	2.1 %	23.4 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index:	194	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 10:26:05 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	71.970 %	96.766 %	0.013 ppb	2.553 ppb	10.528 ppb	0.196 ppb	-0.299 ppb	0.514 ppb	0.184 ppb
Concentration per Run 1	73.009 %	93.734 %	0.006 ppb	2.486 ppb	17.330 ppb	0.779 ppb	-0.314 ppb	3.294 ppb	-0.693 ppb
Concentration per Run 2	71.996 %	98.585 %	0.013 ppb	2.525 ppb	5.695 ppb	-0.321 ppb	-0.247 ppb	-0.587 ppb	1.136 ppb
Concentration per Run 3	70.904 %	97.979 %	0.019 ppb	2.647 ppb	8.560 ppb	0.131 ppb	-0.337 ppb	-1.165 ppb	0.109 ppb
Recovery Percentage 1			2.555 %	25.526 %	10.528 %	0.281 %	-2.993 %	0.514 %	0.184 %
Concentration RSD	1.5 %	2.7 %	52.7 %	3.3 %	57.6 %	281.5 %	15.6 %	471.7 %	498.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.663 %	-0.115 ppb	0.017 ppb	0.055 ppb	15.294 ppb	0.004 ppb	-0.015 ppb	-0.004 ppb	-0.758 ppb
Concentration per Run 1	87.957 %	-0.100 ppb	0.029 ppb	0.039 ppb	18.354 ppb	0.001 ppb	-0.015 ppb	-0.001 ppb	-0.743 ppb
Concentration per Run 2	86.192 %	-0.127 ppb	0.003 ppb	0.036 ppb	13.875 ppb	0.010 ppb	-0.018 ppb	-0.006 ppb	-0.752 ppb
Concentration per Run 3	85.841 %	-0.119 ppb	0.019 ppb	0.089 ppb	13.653 ppb	0.001 ppb	-0.010 ppb	-0.005 ppb	-0.779 ppb
Recovery Percentage 1		-2.309 %	1.689 %	5.486 %	30.589 %	0.781 %	-0.725 %	-0.389 %	-15.156 %
Concentration RSD	1.3 %	12.1 %	79.2 %	54.5 %	17.3 %	129.5 %	28.2 %	55.1 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.241 %	0.126 ppb	0.242 ppb	0.020 ppb	1.220 ppb	93.600 %	0.005 ppb	0.007 ppb	94.227 %
Concentration per Run 1	91.171 %	0.129 ppb	0.162 ppb	0.026 ppb	1.284 ppb	93.000 %	0.013 ppb	0.016 ppb	94.283 %
Concentration per Run 2	89.947 %	0.153 ppb	0.337 ppb	0.017 ppb	1.154 ppb	93.208 %	0.003 ppb	0.002 ppb	94.055 %
Concentration per Run 3	92.605 %	0.096 ppb	0.226 ppb	0.016 ppb	1.223 ppb	94.592 %	0.001 ppb	0.002 ppb	94.342 %
Recovery Percentage 1		25.191 %	4.834 %	0.195 %	61.017 %		1.346 %	3.278 %	
Concentration RSD	1.5 %	22.7 %	36.5 %	27.1 %	5.3 %	0.9 %	118.3 %	120.0 %	0.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.087 ppb	0.009 ppb	101.485 %	100.625 %	0.666 ppb	0.020 ppb	161.548 %
Concentration per Run 1	0.076 ppb	0.002 ppb	102.206 %	95.000 %	0.630 ppb	0.031 ppb	191.845 %
Concentration per Run 2	0.087 ppb	0.014 ppb	99.686 %	111.479 %	0.683 ppb	0.014 ppb	130.127 %
Concentration per Run 3	0.099 ppb	0.010 ppb	102.561 %	95.396 %	0.685 ppb	0.017 ppb	162.670 %
Recovery Percentage 1	2.187 %	1.730 %			66.601 %	2.042 %	
Concentration RSD	12.7 %	74.7 %	1.5 %	9.3 %	4.7 %	44.3 %	19.1 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 195
Analysis label: CCV
Analysis started at: 4/1/2024 10:30:49 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	67.106 %	95.726 %	63.163 ppb	63.847 ppb	6,128.939 ppb	5,893.321 ppb	56.633 ppb	5,842.912 ppb	5,846.092 ppb
Concentration per Run 1	71.156 %	97.545 %	59.931 ppb	60.763 ppb	5,909.791 ppb	5,700.837 ppb	54.327 ppb	5,770.691 ppb	5,655.323 ppb
Concentration per Run 2	64.974 %	94.253 %	64.352 ppb	65.007 ppb	6,240.822 ppb	5,942.470 ppb	58.778 ppb	5,977.947 ppb	6,077.390 ppb
Concentration per Run 3	65.187 %	95.380 %	65.206 ppb	65.769 ppb	6,236.204 ppb	6,036.655 ppb	56.795 ppb	5,780.099 ppb	5,805.563 ppb
Recovery Percentage 1			105.271 %	106.411 %	102.149 %	98.222 %	94.389 %	97.382 %	97.435 %
Concentration RSD	5.2 %	1.7 %	4.5 %	4.2 %	3.1 %	2.9 %	3.9 %	2.0 %	3.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.750 %	58.083 ppb	59.006 ppb	55.349 ppb	5,909.184 ppb	59.673 ppb	59.533 ppb	59.869 ppb	57.454 ppb
Concentration per Run 1	91.077 %	55.812 ppb	57.425 ppb	52.670 ppb	5,733.306 ppb	58.131 ppb	57.895 ppb	58.104 ppb	55.747 ppb
Concentration per Run 2	84.997 %	59.227 ppb	59.406 ppb	55.059 ppb	5,906.571 ppb	59.659 ppb	60.270 ppb	60.981 ppb	58.022 ppb
Concentration per Run 3	87.176 %	59.208 ppb	60.186 ppb	58.319 ppb	6,087.674 ppb	61.227 ppb	60.433 ppb	60.523 ppb	58.593 ppb
Recovery Percentage 1		96.805 %	98.343 %	92.249 %	98.486 %	99.454 %	99.221 %	99.782 %	95.756 %
Concentration RSD	3.5 %	3.4 %	2.4 %	5.1 %	3.0 %	2.6 %	2.4 %	2.6 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.389 %	59.419 ppb	58.827 ppb	58.635 ppb	59.722 ppb	92.301 %	58.081 ppb	60.716 ppb	94.068 %
Concentration per Run 1	95.032 %	57.288 ppb	55.887 ppb	56.220 ppb	56.148 ppb	95.085 %	56.634 ppb	58.904 ppb	97.893 %
Concentration per Run 2	90.568 %	60.791 ppb	59.696 ppb	59.256 ppb	60.764 ppb	92.249 %	59.114 ppb	61.711 ppb	92.526 %
Concentration per Run 3	88.566 %	60.178 ppb	60.899 ppb	60.429 ppb	62.253 ppb	89.568 %	58.494 ppb	61.533 ppb	91.786 %
Recovery Percentage 1		99.032 %	98.046 %	97.725 %	99.536 %		96.801 %	101.193 %	
Concentration RSD	3.6 %	3.1 %	4.4 %	3.7 %	5.3 %	3.0 %	2.2 %	2.6 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.851 ppb	61.395 ppb	102.089 %	94.736 %	67.971 ppb	64.733 ppb	167.068 %
Concentration per Run 1	59.217 ppb	59.743 ppb	105.194 %	96.559 %	60.378 ppb	63.027 ppb	200.050 %
Concentration per Run 2	62.302 ppb	60.806 ppb	101.728 %	93.943 %	68.979 ppb	65.442 ppb	170.157 %
Concentration per Run 3	64.034 ppb	63.638 ppb	99.344 %	93.706 %	74.557 ppb	65.730 ppb	130.998 %
Recovery Percentage 1	103.085 %	102.326 %			113.285 %	107.889 %	
Concentration RSD	3.9 %	3.3 %	2.9 %	1.7 %	10.5 %	2.3 %	20.7 %

Alpha ICPMSQ Data with SRD

4/2/2024 5:35:23 AM

Analysis index: 196 User name ALPHALAB\Metals-Instrument Comment <Comment>
Analysis label: CCB Rack 0
Analysis started at: 4/1/2024 10:35:32 PM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	69.167 %	91.914 %	0.008 ppb	2.549 ppb	21.281 ppb	0.266 ppb	-0.336 ppb	1.738 ppb	-0.788 ppb
Concentration per Run 1	71.372 %	94.860 %	0.005 ppb	2.497 ppb	16.277 ppb	0.295 ppb	-0.435 ppb	1.284 ppb	-3.533 ppb
Concentration per Run 2	70.365 %	89.229 %	0.011 ppb	2.451 ppb	26.734 ppb	0.091 ppb	-0.343 ppb	4.158 ppb	-0.357 ppb
Concentration per Run 3	65.764 %	91.654 %	0.007 ppb	2.698 ppb	20.833 ppb	0.413 ppb	-0.229 ppb	-0.226 ppb	1.526 ppb
Recovery Percentage 1			1.544 %	25.486 %	21.281 %	0.380 %	-3.359 %	1.738 %	-0.788 %
Concentration RSD	4.3 %	3.1 %	41.5 %	5.2 %	24.6 %	61.1 %	30.6 %	128.1 %	324.5 %

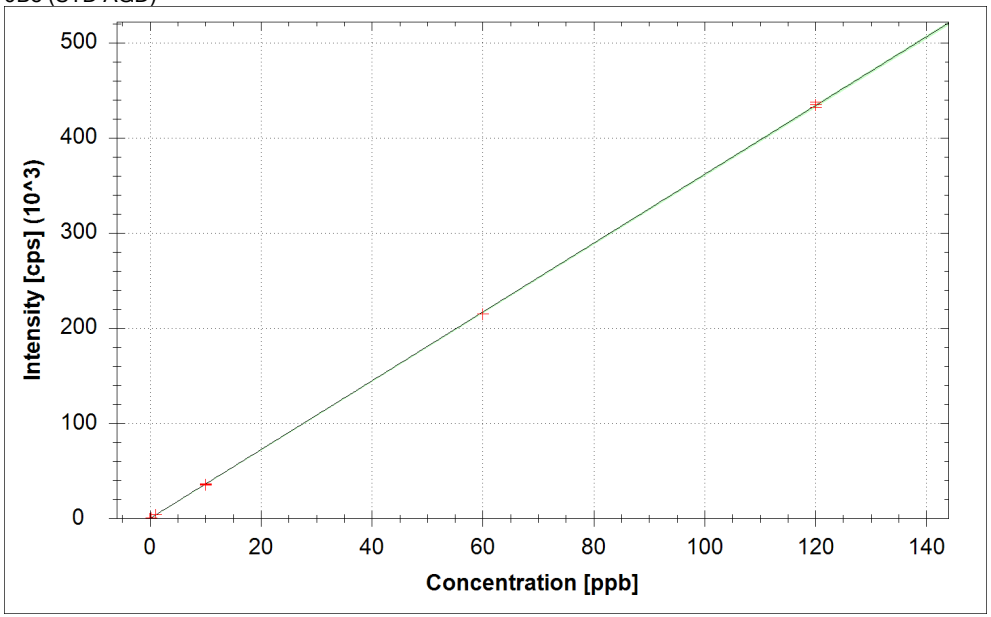
Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	81.801 %	-0.112 ppb	0.012 ppb	0.042 ppb	16.694 ppb	0.004 ppb	-0.001 ppb	-0.014 ppb	-0.738 ppb
Concentration per Run 1	84.227 %	-0.120 ppb	-0.001 ppb	0.011 ppb	17.054 ppb	0.002 ppb	0.006 ppb	-0.008 ppb	-0.741 ppb
Concentration per Run 2	84.718 %	-0.119 ppb	0.017 ppb	0.037 ppb	15.819 ppb	0.010 ppb	0.000 ppb	-0.015 ppb	-0.730 ppb
Concentration per Run 3	76.457 %	-0.097 ppb	0.020 ppb	0.079 ppb	17.209 ppb	0.000 ppb	-0.007 ppb	-0.020 ppb	-0.743 ppb
Recovery Percentage 1		-2.238 %	1.197 %	4.232 %	33.388 %	0.830 %	-0.032 %	-1.428 %	-14.765 %
Concentration RSD	5.7 %	11.5 %	95.2 %	81.8 %	4.6 %	131.2 %	1,018.1 %	40.2 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.189 %	0.138 ppb	0.313 ppb	0.014 ppb	1.296 ppb	92.292 %	0.005 ppb	0.008 ppb	92.780 %
Concentration per Run 1	91.673 %	0.146 ppb	0.339 ppb	0.014 ppb	1.370 ppb	94.234 %	0.009 ppb	0.012 ppb	93.753 %
Concentration per Run 2	87.785 %	0.108 ppb	0.351 ppb	0.014 ppb	1.278 ppb	90.481 %	0.004 ppb	0.009 ppb	94.270 %
Concentration per Run 3	88.107 %	0.161 ppb	0.248 ppb	0.013 ppb	1.239 ppb	92.160 %	0.002 ppb	0.005 ppb	90.317 %
Recovery Percentage 1		27.684 %	6.258 %	0.137 %	64.791 %		1.336 %	4.219 %	
Concentration RSD	2.4 %	19.7 %	18.0 %	4.9 %	5.2 %	2.0 %	64.6 %	42.5 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.086 ppb	0.006 ppb	100.867 %	100.280 %	0.721 ppb	0.021 ppb	166.410 %
Concentration per Run 1	0.073 ppb	0.011 ppb	103.122 %	114.400 %	0.533 ppb	0.016 ppb	196.824 %
Concentration per Run 2	0.080 ppb	0.005 ppb	99.698 %	93.209 %	0.879 ppb	0.025 ppb	167.308 %
Concentration per Run 3	0.104 ppb	0.002 ppb	99.780 %	93.232 %	0.752 ppb	0.023 ppb	135.097 %
Recovery Percentage 1	2.145 %	1.211 %			72.133 %	2.128 %	
Concentration RSD	19.1 %	76.3 %	1.9 %	12.2 %	24.3 %	23.7 %	18.6 %

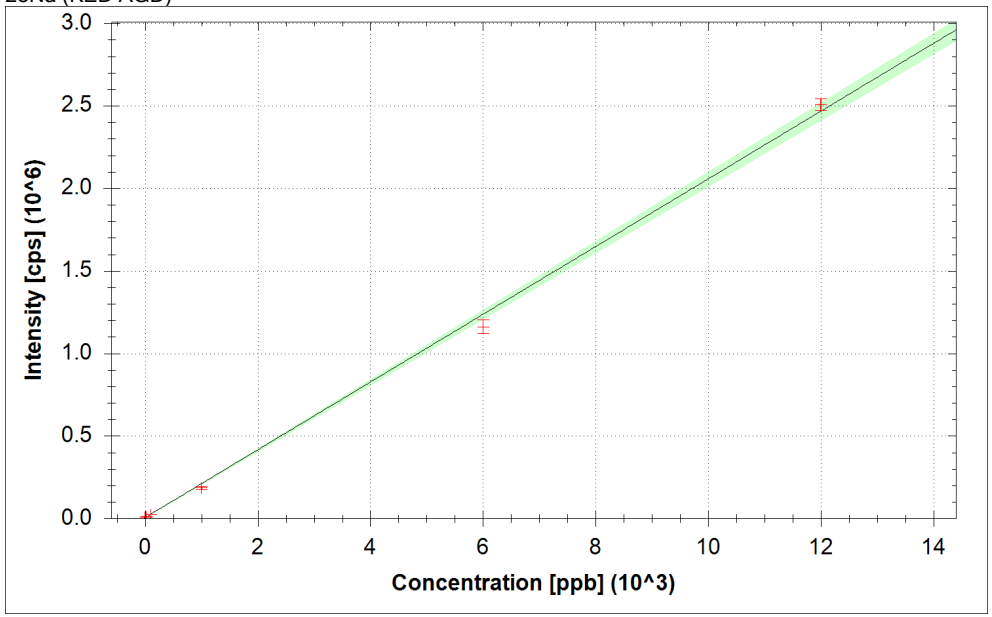
Calibration Curves:

9Be (STD AGD)



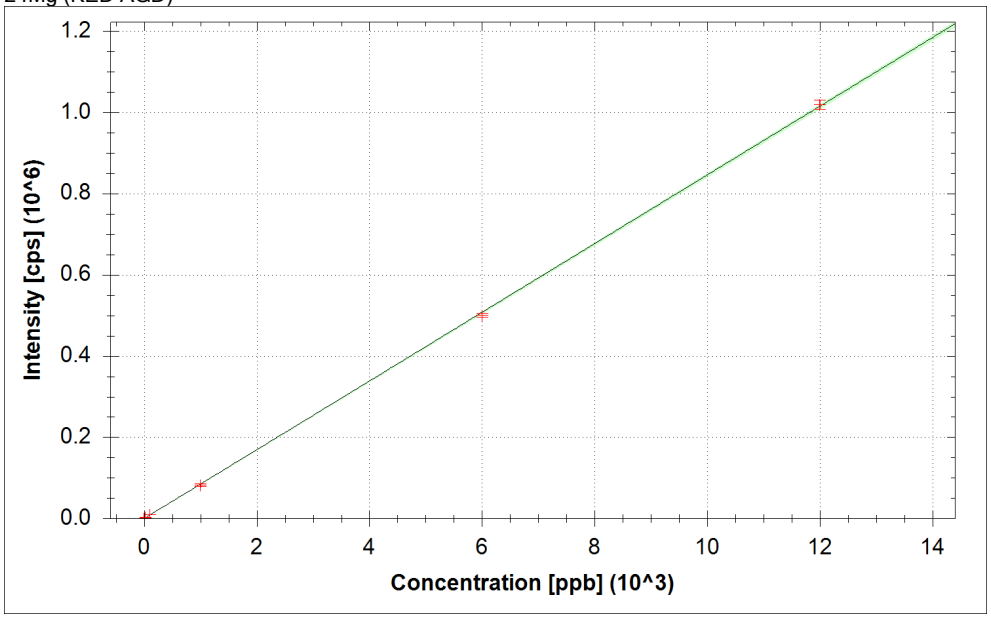
f(x) = 3614.0050*x + 23.5197
R² = 1.0000
BEC = 0.007 ppb
LoD = 0.0065 ppb

23Na (KED AGD)



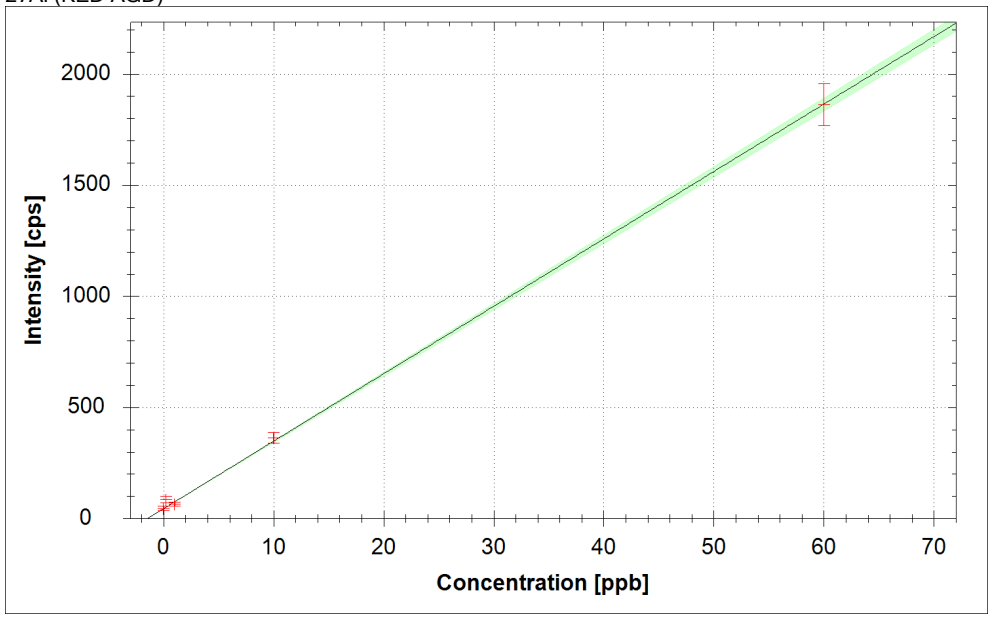
f(x) = 205.0887*x + 5682.6392
R² = 0.9984
BEC = 27.708 ppb
LoD = 2.1646 ppb

24Mg (KED AGD)



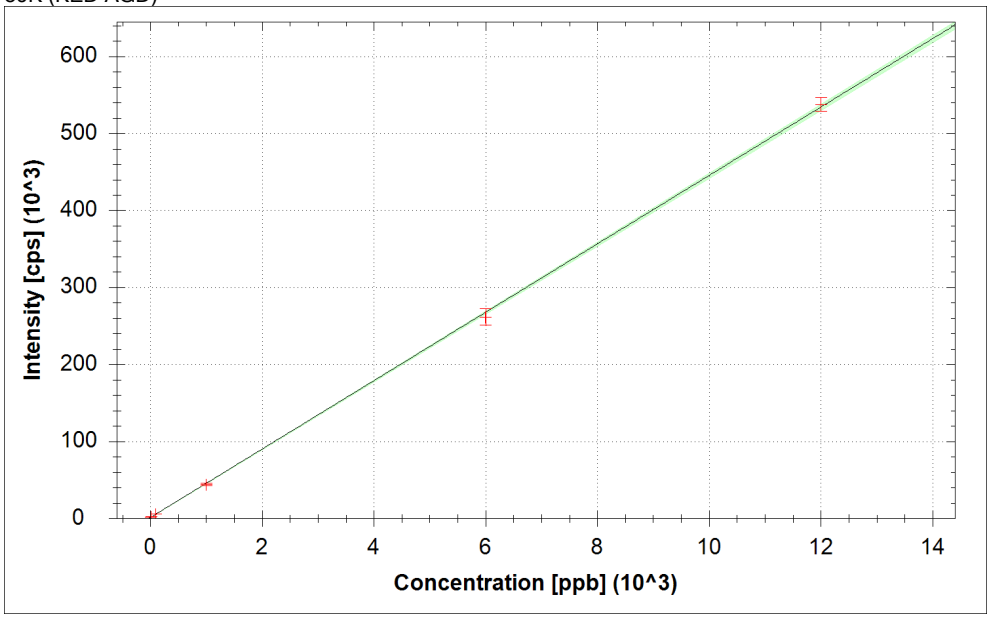
f(x) = 84.5784*x + 133.5849
R² = 0.9999
BEC = 1.579 ppb
LoD = 0.5835 ppb

27Al (KED AGD)



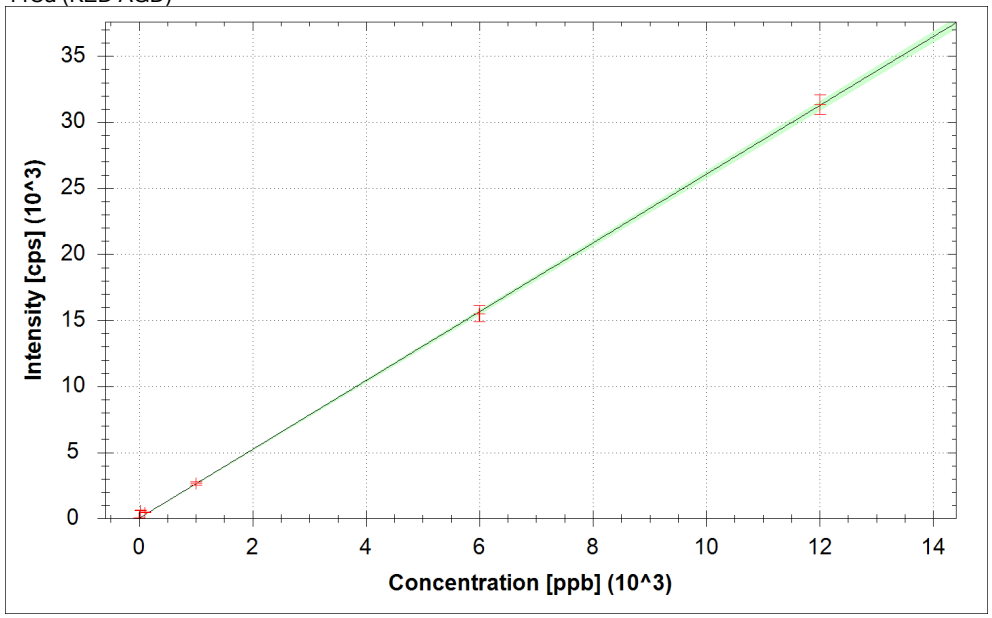
f(x) = 30.3386*x + 43.9422
R² = 0.9994
BEC = 1.448 ppb
LoD = 1.0084 ppb

39K (KED AGD)



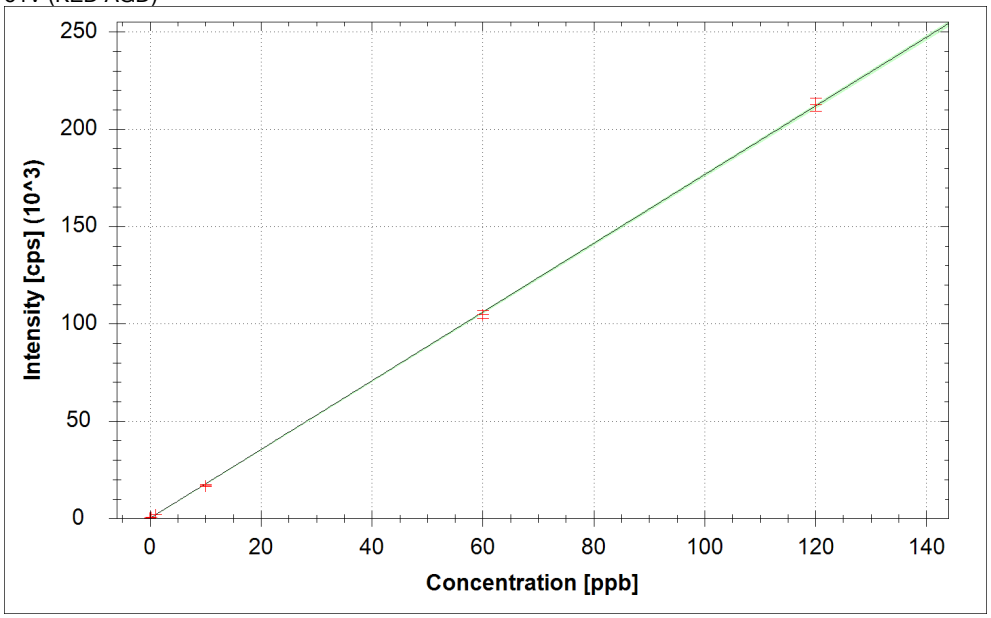
f(x) = 44.4024*x + 1207.4230
R² = 0.9998
BEC = 27.193 ppb
LoD = 3.5850 ppb

44Ca (KED AGD)



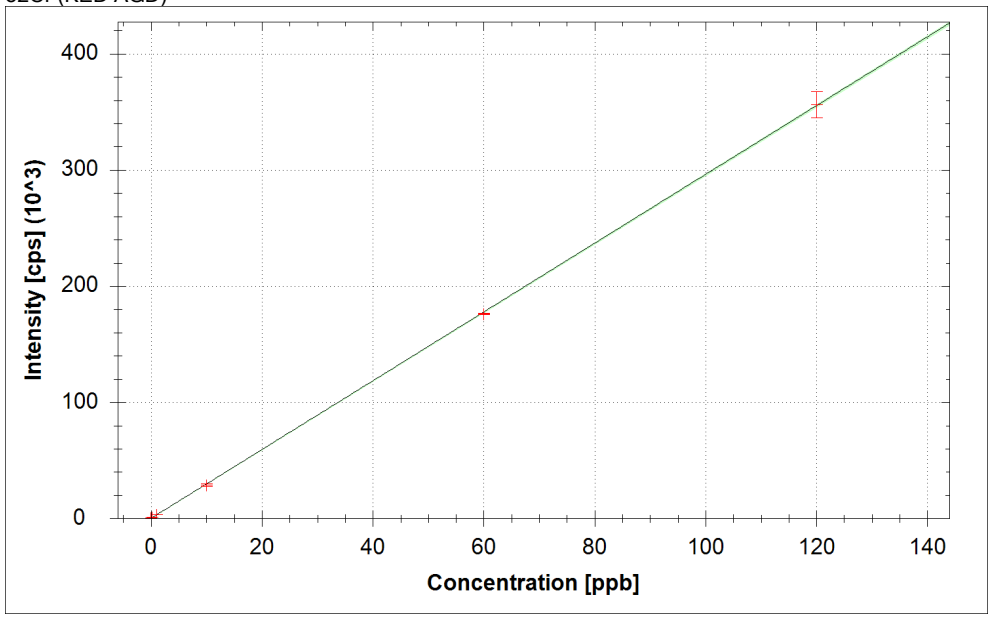
f(x) = 2.6035*x + 16.5740
R² = 0.9996
BEC = 6.366 ppb
LoD = 4.4489 ppb

51V (KED AGD)



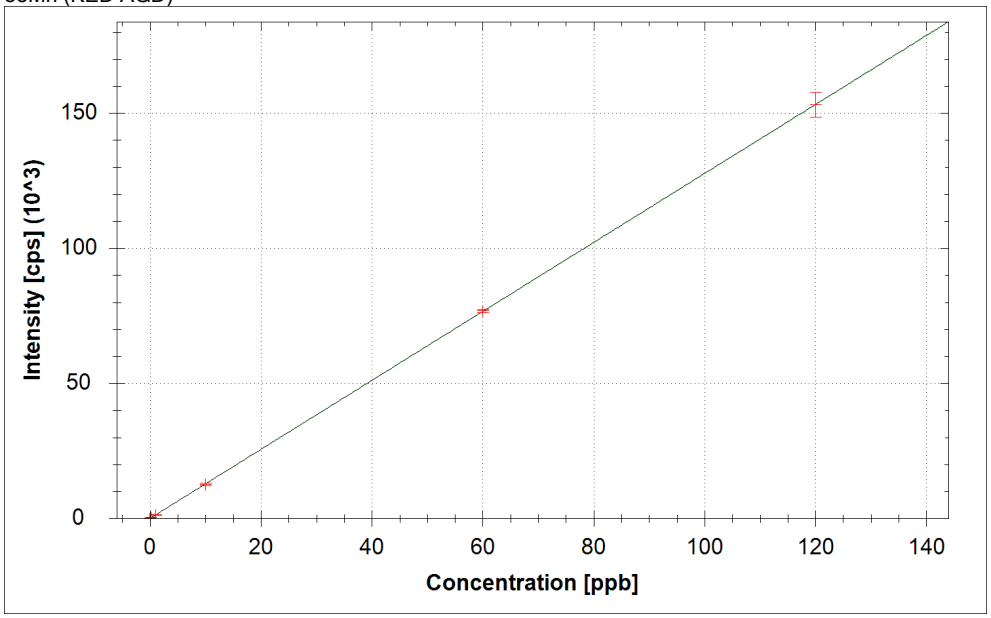
f(x) = 1763.9876*x + 139.8945
R² = 0.9999
BEC = 0.079 ppb
LoD = 0.0679 ppb

52Cr (KED AGD)



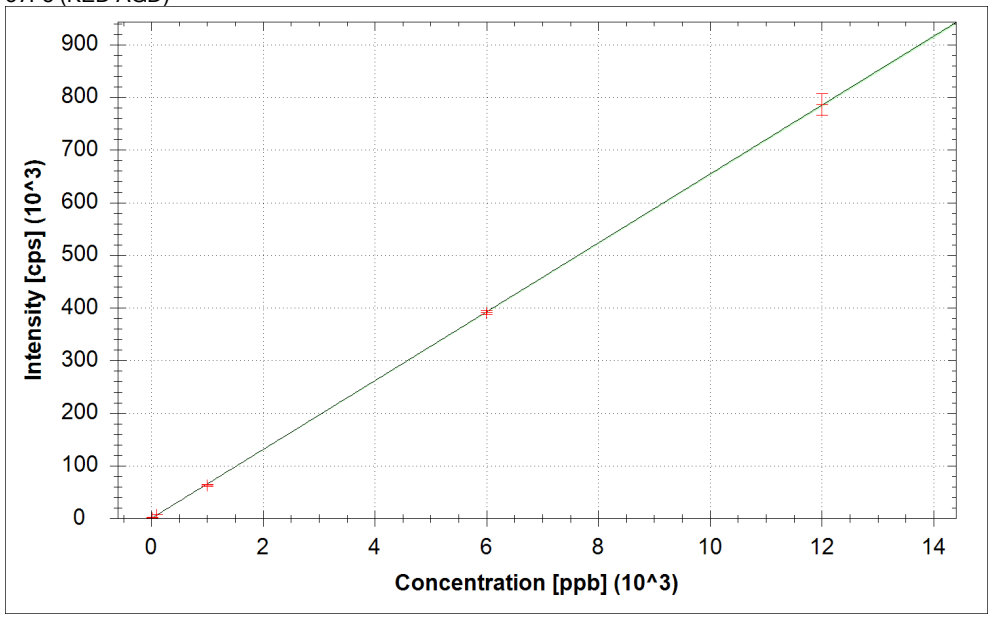
f(x) = 2960.1035*x + 137.8903
R² = 1.0000
BEC = 0.047 ppb
LoD = 0.0122 ppb

55Mn (KED AGD)



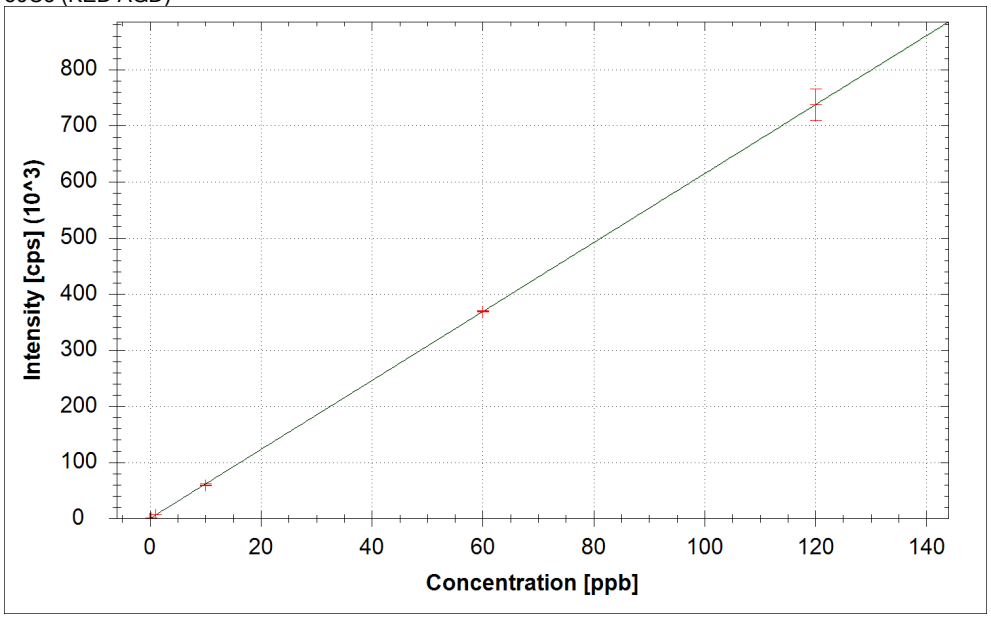
f(x) = 1276.3400*x + 39.8867
R² = 1.0000
BEC = 0.031 ppb
LoD = 0.0301 ppb

57Fe (KED AGD)



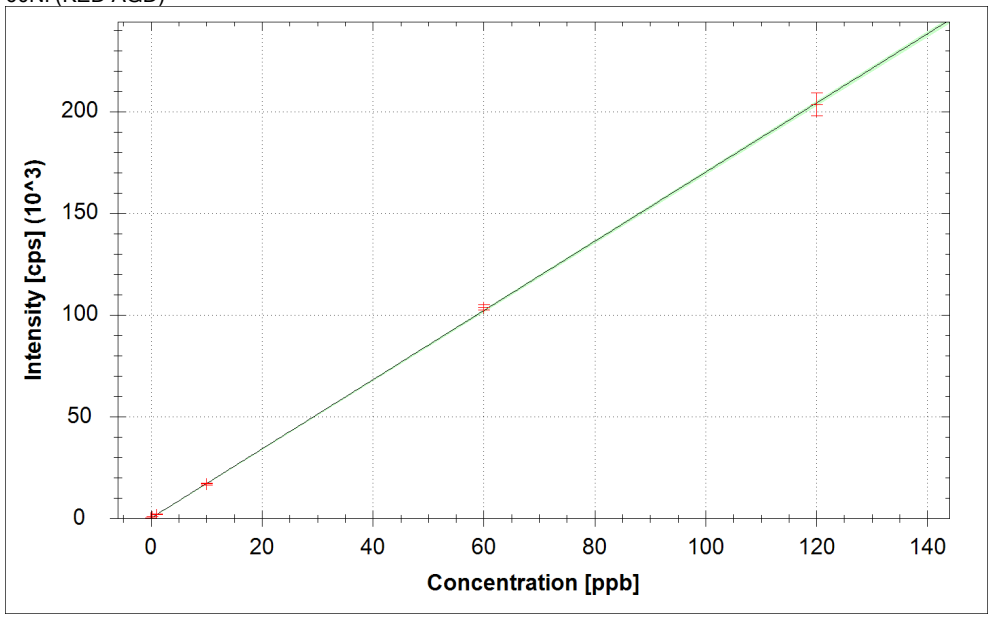
f(x) = 65.3930*x + 64.3698
R² = 1.0000
BEC = 0.984 ppb
LoD = 0.9204 ppb

59Co (KED AGD)



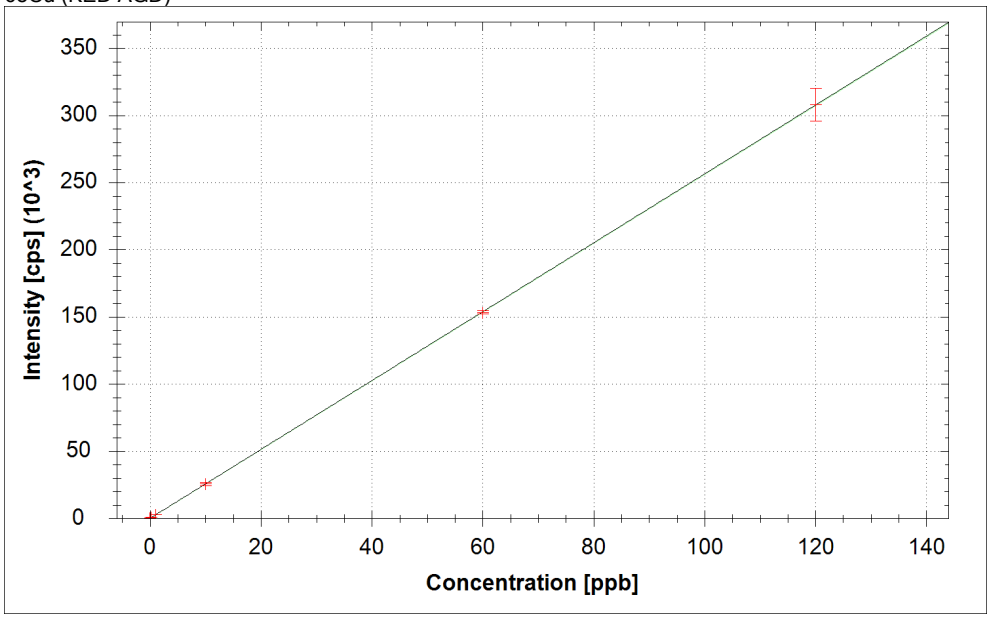
f(x) = 6145.3956*x + 2.2509
R² = 1.0000
BEC = 0.000 ppb
LoD = 0.0019 ppb

60Ni (KED AGD)



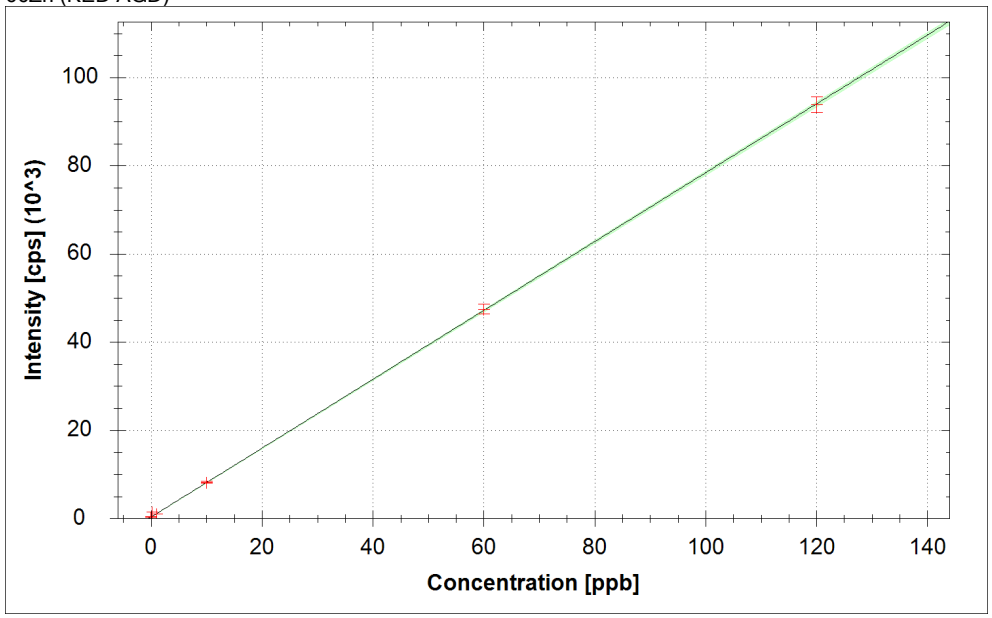
f(x) = 1699.9283*x + 175.6826
R² = 0.9999
BEC = 0.103 ppb
LoD = 0.0307 ppb

65Cu (KED AGD)



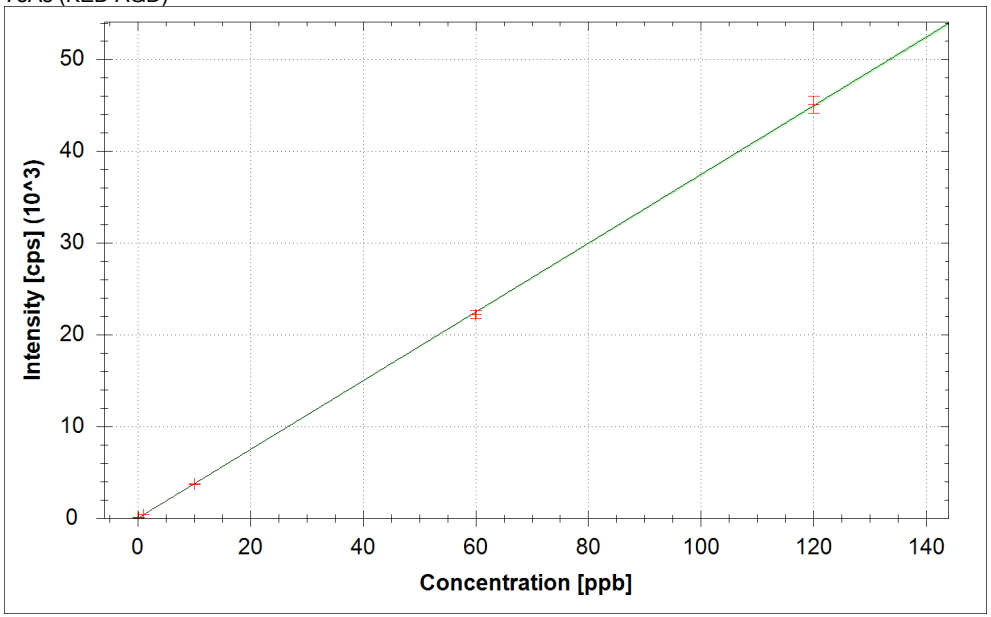
f(x) = 2562.3589*x + 113.1889
R² = 1.0000
BEC = 0.044 ppb
LoD = 0.0270 ppb

66Zn (KED AGD)



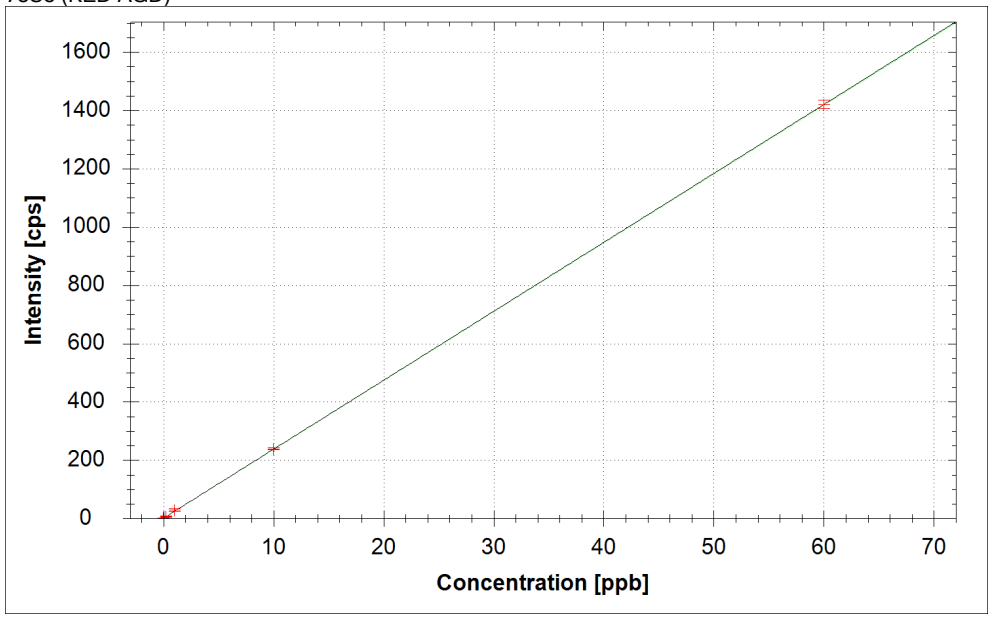
f(x) = 780.3908*x + 328.0493
R² = 0.9999
BEC = 0.420 ppb
LoD = 0.0273 ppb

75As (KED AGD)



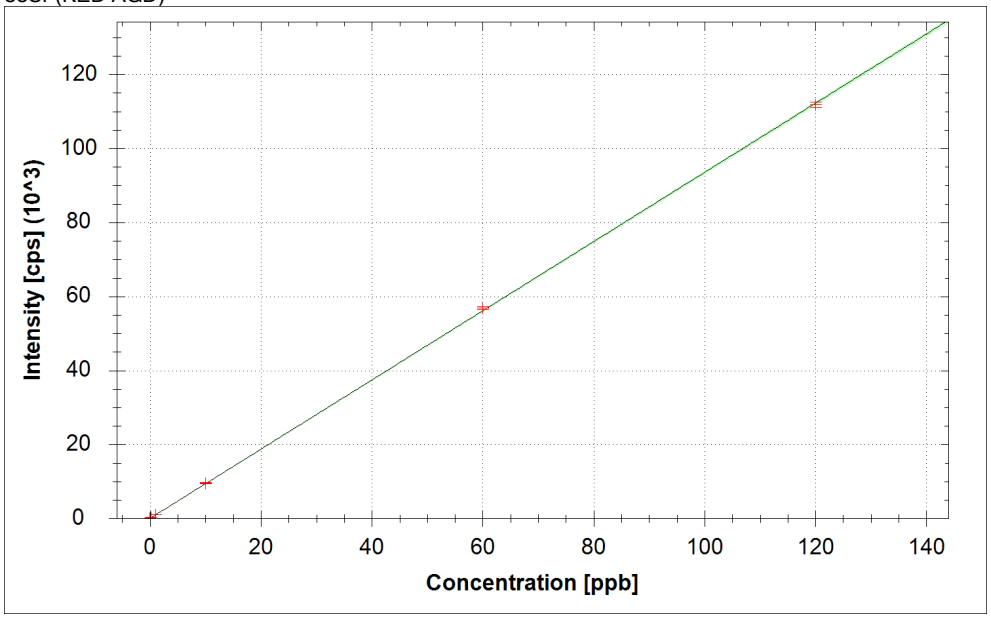
f(x) = 374.2488*x + 29.4405
R² = 0.9999
BEC = 0.079 ppb
LoD = 0.0129 ppb

78Se (KED AGD)



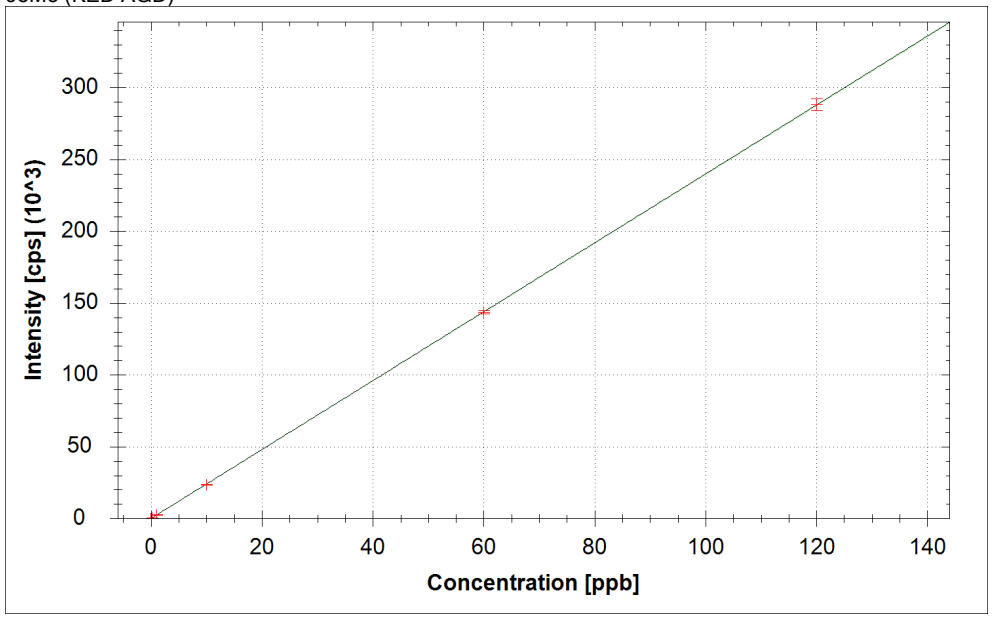
f(x) = 23.6536*x + 0.9244
R² = 1.0000
BEC = 0.039 ppb
LoD = 0.0948 ppb

88Sr (KED AGD)



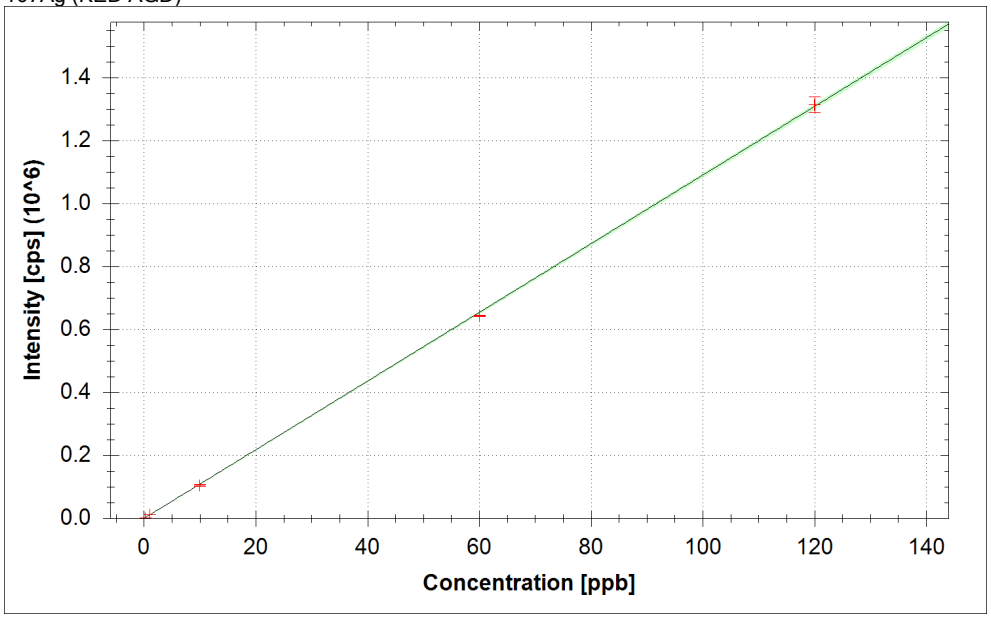
f(x) = 934.7226*x + 38.7775
R² = 0.9999
BEC = 0.041 ppb
LoD = 0.0145 ppb

95Mo (KED AGD)



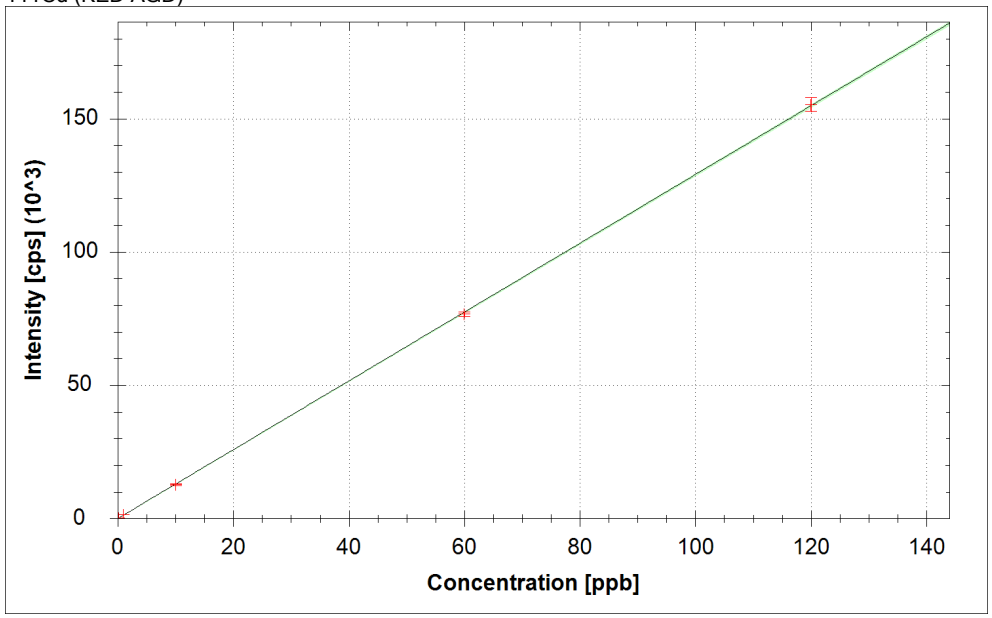
f(x) = 2398.3083*x + 9.0003
R² = 1.0000
BEC = 0.004 ppb
LoD = 0.0098 ppb

107Ag (KED AGD)



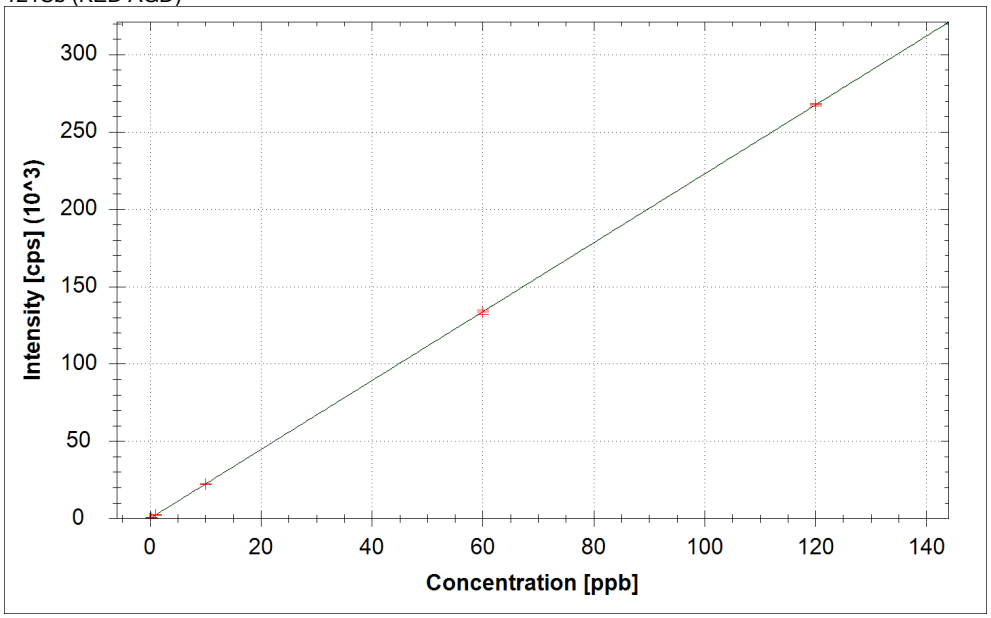
f(x) = 10901.1920*x + 11.1348
R² = 0.9999
BEC = 0.001 ppb
LoD = 0.0006 ppb

111Cd (KED AGD)



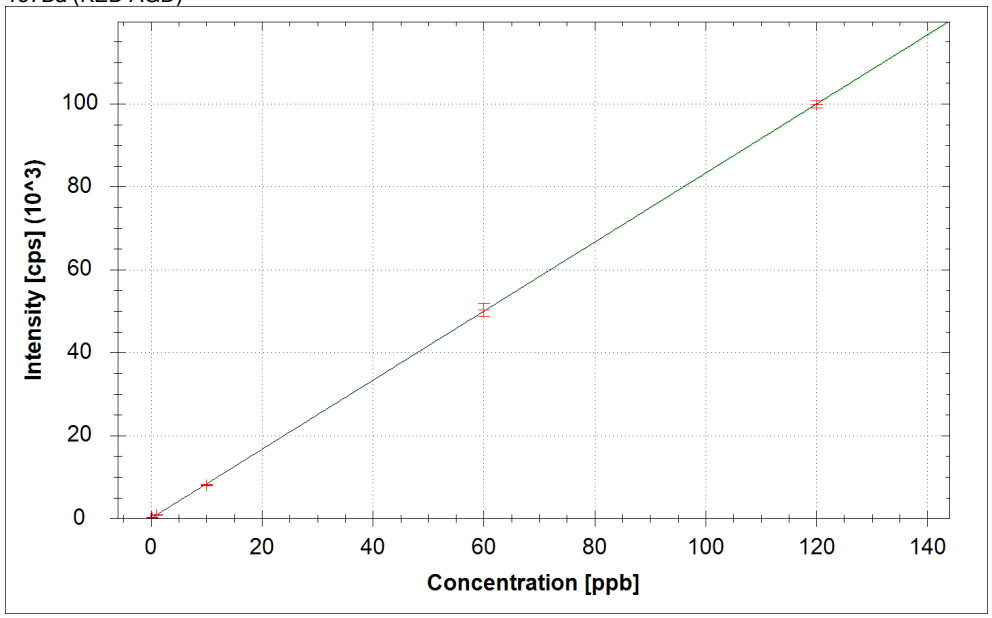
f(x) = 1290.0276*x
R² = 1.0000
BEC = 0.000 ppb
LoD = 0.0000 ppb

121Sb (KED AGD)



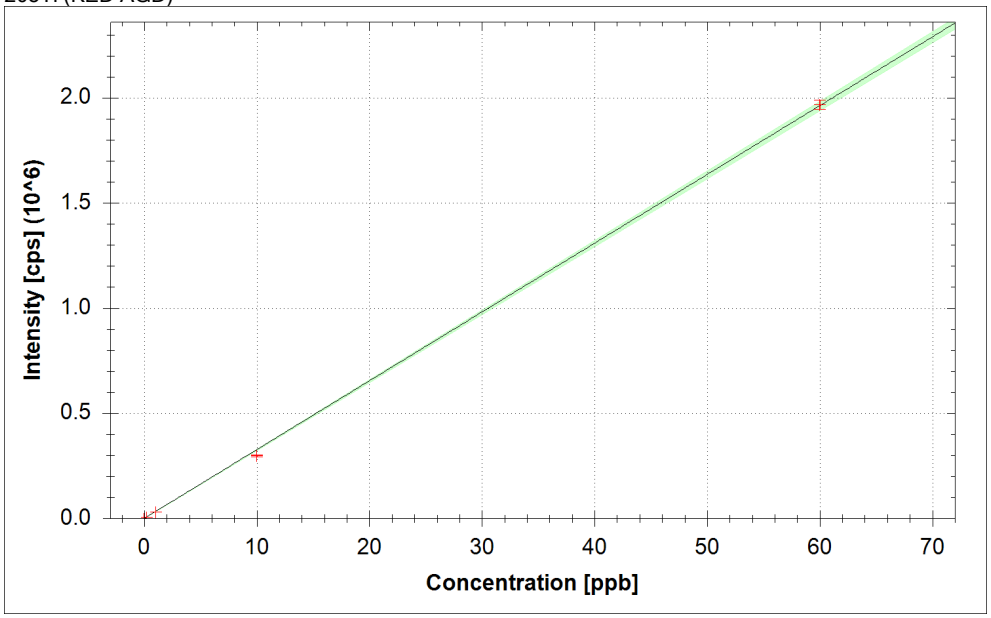
f(x) = 2227.9944*x + 9.7805
R² = 1.0000
BEC = 0.004 ppb
LoD = 0.0052 ppb

137Ba (KED AGD)



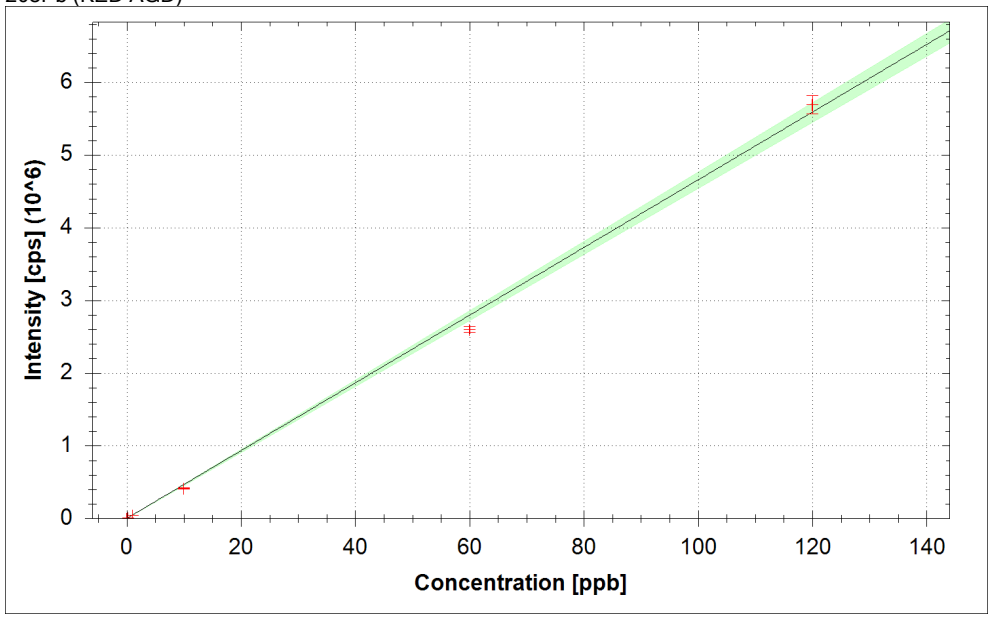
f(x) = 832.5629*x + 14.3180
R² = 1.0000
BEC = 0.017 ppb
LoD = 0.0371 ppb

205Tl (KED AGD)



f(x) = 32703.2380*x + 254.3976
R² = 0.9997
BEC = 0.008 ppb
LoD = 0.0080 ppb

208Pb (KED AGD)



f(x) = 46563.0371*x + 818.3483
R² = 0.9980
BEC = 0.018 ppb
LoD = 0.0030 ppb

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 5:59:02 AM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	98.963 %	1.2 %		0.000 %
6Li (KED AGD)	104.970 %	2.5 %		0.000 %
9Be (STD AGD)	0.202 ppb	2.3 %	0.200 ppb	1.225 %
23Na (KED AGD)	16.256 ppb	10.8 %	20.000 ppb	18.721 %
24Mg (KED AGD)	22.200 ppb	11.1 %	20.000 ppb	11.000 %
27Al (KED AGD)	1.350 ppb	37.0 %	0.200 ppb	575.190 %
39K (KED AGD)	17.019 ppb	9.9 %	20.000 ppb	14.907 %
44Ca (KED AGD)	222.676 ppb	5.6 %	20.000 ppb	1,013.382 %
45Sc (STD AGD)	99.572 %	0.3 %		0.000 %
51V (KED AGD)	0.205 ppb	11.9 %	0.200 ppb	2.641 %
52Cr (KED AGD)	0.221 ppb	8.6 %	0.200 ppb	10.288 %
55Mn (KED AGD)	0.227 ppb	2.2 %	0.200 ppb	13.615 %
57Fe (KED AGD)	21.782 ppb	5.8 %	20.000 ppb	8.911 %
59Co (KED AGD)	0.195 ppb	2.6 %	0.200 ppb	2.521 %
60Ni (KED AGD)	0.409 ppb	16.3 %	0.200 ppb	104.606 %
65Cu (KED AGD)	0.229 ppb	17.8 %	0.200 ppb	14.463 %
66Zn (KED AGD)	1.431 ppb	2.7 %	0.200 ppb	615.650 %
74Ge (KED AGD)	99.518 %	2.0 %		0.000 %
75As (KED AGD)	0.231 ppb	10.2 %	0.200 ppb	15.561 %
78Se (KED AGD)	0.222 ppb	32.5 %	0.200 ppb	11.233 %
88Sr (KED AGD)	0.312 ppb	5.7 %	0.200 ppb	55.780 %
95Mo (KED AGD)	0.184 ppb	11.2 %	0.200 ppb	7.994 %
103Rh (KED AGD)	102.321 %	1.4 %		0.000 %
107Ag (KED AGD)	0.206 ppb	5.4 %	0.200 ppb	3.002 %
111Cd (KED AGD)	0.198 ppb	4.7 %	0.200 ppb	0.978 %
115In (KED AGD)	103.862 %	0.5 %		0.000 %
121Sb (KED AGD)	0.220 ppb	8.4 %	0.200 ppb	9.842 %
137Ba (KED AGD)	0.210 ppb	4.9 %	0.200 ppb	4.897 %
159Tb (KED AGD)	101.934 %	0.9 %		0.000 %
175Lu (KED AGD)	100.286 %	1.9 %		0.000 %
205Tl (KED AGD)	0.192 ppb	2.5 %	0.200 ppb	4.188 %
208Pb (KED AGD)	0.190 ppb	1.5 %	0.200 ppb	5.018 %
209Bi (KED AGD)	102.596 %	1.2 %		0.000 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 6:03:29 AM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	98.191 %	1.7 %		0.000 %
6Li (KED AGD)	100.265 %	1.8 %		0.000 %
9Be (STD AGD)	1.059 ppb	0.9 %	1.000 ppb	5.890 %
23Na (KED AGD)	91.221 ppb	0.9 %	100.000 ppb	8.779 %
24Mg (KED AGD)	102.255 ppb	0.4 %	100.000 ppb	2.255 %
27Al (KED AGD)	0.671 ppb	43.4 %	1.000 ppb	32.862 %
39K (KED AGD)	97.029 ppb	3.7 %	100.000 ppb	2.971 %
44Ca (KED AGD)	168.262 ppb	1.9 %	100.000 ppb	68.262 %
45Sc (STD AGD)	96.394 %	2.7 %		0.000 %
51V (KED AGD)	1.017 ppb	6.0 %	1.000 ppb	1.682 %
52Cr (KED AGD)	1.025 ppb	3.8 %	1.000 ppb	2.457 %
55Mn (KED AGD)	1.044 ppb	9.7 %	1.000 ppb	4.448 %
57Fe (KED AGD)	104.054 ppb	1.1 %	100.000 ppb	4.054 %
59Co (KED AGD)	1.107 ppb	5.2 %	1.000 ppb	10.736 %
60Ni (KED AGD)	1.043 ppb	8.6 %	1.000 ppb	4.345 %
65Cu (KED AGD)	1.079 ppb	3.7 %	1.000 ppb	7.897 %
66Zn (KED AGD)	0.911 ppb	4.0 %	1.000 ppb	8.926 %
74Ge (KED AGD)	98.332 %	2.7 %		0.000 %
75As (KED AGD)	1.018 ppb	8.6 %	1.000 ppb	1.773 %
78Se (KED AGD)	1.138 ppb	16.1 %	1.000 ppb	13.752 %
88Sr (KED AGD)	1.066 ppb	3.1 %	1.000 ppb	6.578 %
95Mo (KED AGD)	1.004 ppb	3.4 %	1.000 ppb	0.428 %
103Rh (KED AGD)	100.963 %	2.8 %		0.000 %
107Ag (KED AGD)	1.042 ppb	2.3 %	1.000 ppb	4.230 %
111Cd (KED AGD)	1.058 ppb	2.5 %	1.000 ppb	5.813 %
115In (KED AGD)	102.013 %	2.1 %		0.000 %
121Sb (KED AGD)	1.030 ppb	4.1 %	1.000 ppb	2.967 %
137Ba (KED AGD)	1.004 ppb	7.3 %	1.000 ppb	0.354 %
159Tb (KED AGD)	101.747 %	2.3 %		0.000 %
175Lu (KED AGD)	100.333 %	1.7 %		0.000 %
205Tl (KED AGD)	0.957 ppb	0.5 %	1.000 ppb	4.311 %
208Pb (KED AGD)	0.953 ppb	1.4 %	1.000 ppb	4.730 %
209Bi (KED AGD)	100.762 %	2.6 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 10/1000 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 6:07:57 AM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	85.742 %	3.7 %		0.000 %
6Li (KED AGD)	97.250 %	4.9 %		0.000 %
9Be (STD AGD)	9.921 ppb	1.7 %	10.000 ppb	0.791 %
23Na (KED AGD)	869.153 ppb	5.4 %	1,000.000 ppb	13.085 %
24Mg (KED AGD)	967.210 ppb	4.9 %	1,000.000 ppb	3.279 %
27Al (KED AGD)	10.453 ppb	7.6 %	10.000 ppb	4.533 %
39K (KED AGD)	968.310 ppb	4.4 %	1,000.000 ppb	3.169 %
44Ca (KED AGD)	1,012.444 ppb	5.1 %	1,000.000 ppb	1.244 %
45Sc (STD AGD)	85.872 %	3.6 %		0.000 %
51V (KED AGD)	9.510 ppb	4.0 %	10.000 ppb	4.896 %
52Cr (KED AGD)	9.660 ppb	3.5 %	10.000 ppb	3.403 %
55Mn (KED AGD)	9.793 ppb	3.3 %	10.000 ppb	2.068 %
57Fe (KED AGD)	957.917 ppb	2.8 %	1,000.000 ppb	4.208 %
59Co (KED AGD)	9.703 ppb	3.3 %	10.000 ppb	2.970 %
60Ni (KED AGD)	9.801 ppb	2.3 %	10.000 ppb	1.988 %
65Cu (KED AGD)	9.939 ppb	4.3 %	10.000 ppb	0.611 %
66Zn (KED AGD)	10.027 ppb	3.0 %	10.000 ppb	0.269 %
74Ge (KED AGD)	94.446 %	0.7 %		0.000 %
75As (KED AGD)	9.895 ppb	1.0 %	10.000 ppb	1.054 %
78Se (KED AGD)	10.053 ppb	1.6 %	10.000 ppb	0.531 %
88Sr (KED AGD)	10.141 ppb	1.8 %	10.000 ppb	1.410 %
95Mo (KED AGD)	9.815 ppb	1.1 %	10.000 ppb	1.850 %
103Rh (KED AGD)	95.242 %	1.3 %		0.000 %
107Ag (KED AGD)	9.645 ppb	2.6 %	10.000 ppb	3.553 %
111Cd (KED AGD)	9.773 ppb	2.9 %	10.000 ppb	2.270 %
115In (KED AGD)	97.837 %	1.8 %		0.000 %
121Sb (KED AGD)	9.936 ppb	1.4 %	10.000 ppb	0.637 %
137Ba (KED AGD)	9.690 ppb	2.0 %	10.000 ppb	3.100 %
159Tb (KED AGD)	97.363 %	0.8 %		0.000 %
175Lu (KED AGD)	96.791 %	0.6 %		0.000 %
205Tl (KED AGD)	9.088 ppb	1.8 %	10.000 ppb	9.119 %
208Pb (KED AGD)	8.859 ppb	1.7 %	10.000 ppb	11.407 %
209Bi (KED AGD)	97.288 %	1.1 %		0.000 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 6:12:25 AM
Total Dilution Factor 166.6666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	88.380 %	1.5 %		0.000 %
6Li (KED AGD)	87.806 %	8.7 %		0.000 %
9Be (STD AGD)	59.423 ppb	0.1 %	60.000 ppb	0.961 %
23Na (KED AGD)	5,632.061 ppb	3.7 %	6,000.000 ppb	6.132 %
24Mg (KED AGD)	5,907.425 ppb	1.0 %	6,000.000 ppb	1.543 %
27Al (KED AGD)	59.926 ppb	5.2 %	60.000 ppb	0.123 %
39K (KED AGD)	5,860.190 ppb	4.2 %	6,000.000 ppb	2.330 %
44Ca (KED AGD)	5,947.007 ppb	3.9 %	6,000.000 ppb	0.883 %
45Sc (STD AGD)	93.360 %	1.3 %		0.000 %
51V (KED AGD)	59.244 ppb	1.9 %	60.000 ppb	1.259 %
52Cr (KED AGD)	59.471 ppb	0.3 %	60.000 ppb	0.881 %
55Mn (KED AGD)	60.136 ppb	0.8 %	60.000 ppb	0.226 %
57Fe (KED AGD)	5,971.986 ppb	0.9 %	6,000.000 ppb	0.467 %
59Co (KED AGD)	60.021 ppb	0.4 %	60.000 ppb	0.035 %
60Ni (KED AGD)	60.940 ppb	1.2 %	60.000 ppb	1.567 %
65Cu (KED AGD)	59.742 ppb	0.8 %	60.000 ppb	0.431 %
66Zn (KED AGD)	60.384 ppb	2.3 %	60.000 ppb	0.641 %
74Ge (KED AGD)	85.256 %	7.8 %		0.000 %
75As (KED AGD)	59.257 ppb	1.9 %	60.000 ppb	1.239 %
78Se (KED AGD)	59.989 ppb	1.0 %	60.000 ppb	0.019 %
88Sr (KED AGD)	60.781 ppb	0.6 %	60.000 ppb	1.302 %
95Mo (KED AGD)	59.793 ppb	0.7 %	60.000 ppb	0.345 %
103Rh (KED AGD)	87.753 %	7.7 %		0.000 %
107Ag (KED AGD)	58.976 ppb	0.4 %	60.000 ppb	1.706 %
111Cd (KED AGD)	59.383 ppb	1.2 %	60.000 ppb	1.028 %
115In (KED AGD)	89.553 %	8.1 %		0.000 %
121Sb (KED AGD)	59.818 ppb	1.2 %	60.000 ppb	0.304 %
137Ba (KED AGD)	60.403 ppb	3.2 %	60.000 ppb	0.672 %
159Tb (KED AGD)	89.902 %	7.8 %		0.000 %
175Lu (KED AGD)	88.485 %	7.8 %		0.000 %
205Tl (KED AGD)	60.153 ppb	1.1 %	60.000 ppb	0.255 %
208Pb (KED AGD)	55.741 ppb	1.6 %	60.000 ppb	7.099 %
209Bi (KED AGD)	88.178 %	8.1 %		0.000 %

Standards:

Analysis Index: 8
Analysis Name: 120/12000 Cal
Analysis Type: STD
Analysis Started at: 4/1/2024 6:16:53 AM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	85.708 %	2.4 %		0.000 %
6Li (KED AGD)	86.017 %	3.5 %		0.000 %
9Be (STD AGD)	120.294 ppb	0.6 %	120.000 ppb	0.245 %
23Na (KED AGD)	12,194.953 ppb	1.5 %	12,000.000 ppb	1.625 %
24Mg (KED AGD)	12,048.998 ppb	1.1 %	12,000.000 ppb	0.408 %
27Al (KED AGD)	121.282 ppb	0.4 %	120.000 ppb	1.068 %
39K (KED AGD)	12,072.575 ppb	1.7 %	12,000.000 ppb	0.605 %
44Ca (KED AGD)	12,024.553 ppb	2.4 %	12,000.000 ppb	0.205 %
45Sc (STD AGD)	93.496 %	1.8 %		0.000 %
51V (KED AGD)	120.418 ppb	1.6 %	120.000 ppb	0.349 %
52Cr (KED AGD)	120.293 ppb	3.1 %	120.000 ppb	0.244 %
55Mn (KED AGD)	119.949 ppb	3.0 %	120.000 ppb	0.043 %
57Fe (KED AGD)	12,017.477 ppb	2.6 %	12,000.000 ppb	0.146 %
59Co (KED AGD)	120.013 ppb	3.8 %	120.000 ppb	0.011 %
60Ni (KED AGD)	119.546 ppb	2.8 %	120.000 ppb	0.379 %
65Cu (KED AGD)	120.134 ppb	3.9 %	120.000 ppb	0.111 %
66Zn (KED AGD)	119.804 ppb	1.9 %	120.000 ppb	0.163 %
74Ge (KED AGD)	86.486 %	2.8 %		0.000 %
75As (KED AGD)	120.380 ppb	2.1 %	120.000 ppb	0.317 %
78Se (KED AGD)	119.121 ppb	3.1 %	120.000 ppb	0.733 %
88Sr (KED AGD)	119.597 ppb	0.6 %	120.000 ppb	0.336 %
95Mo (KED AGD)	120.119 ppb	1.4 %	120.000 ppb	0.099 %
103Rh (KED AGD)	86.375 %	1.8 %		0.000 %
107Ag (KED AGD)	120.541 ppb	1.9 %	120.000 ppb	0.451 %
111Cd (KED AGD)	120.327 ppb	1.7 %	120.000 ppb	0.272 %
115In (KED AGD)	87.682 %	1.3 %		0.000 %
121Sb (KED AGD)	120.096 ppb	0.3 %	120.000 ppb	0.080 %
137Ba (KED AGD)	119.824 ppb	0.9 %	120.000 ppb	0.147 %
159Tb (KED AGD)	90.306 %	1.9 %		0.000 %
175Lu (KED AGD)	88.850 %	1.1 %		0.000 %
205Tl (KED AGD)	141.963 ppb	1.3 %	120.000 ppb	18.303 %
208Pb (KED AGD)	122.225 ppb	2.2 %	120.000 ppb	1.854 %
209Bi (KED AGD)	87.892 %	1.2 %		0.000 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	1	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/1/2024 5:45:39 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.905 %	100.066 %	-0.001 ppb	0.077 ppb	-0.527 ppb	-0.276 ppb	-0.316 ppb	1.241 ppb	99.901 %
Concentration per Run 1	99.871 %	92.246 %	-0.002 ppb	0.367 ppb	-0.397 ppb	-0.062 ppb	-0.916 ppb	2.748 ppb	101.587 %
Concentration per Run 2	97.964 %	100.895 %	-0.002 ppb	-0.135 ppb	-0.796 ppb	-0.399 ppb	-1.754 ppb	0.606 ppb	100.678 %
Concentration per Run 3	95.881 %	107.058 %	0.002 ppb	-0.002 ppb	-0.388 ppb	-0.367 ppb	1.721 ppb	0.371 ppb	97.437 %
Concentration RSD	2.0 %	7.4 %	278.1 %	339.8 %	44.1 %	67.3 %	573.3 %	105.5 %	2.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.001 ppb	0.042 ppb	0.051 ppb	0.244 ppb	0.004 ppb	0.016 ppb	0.013 ppb	-0.002 ppb	99.602 %
Concentration per Run 1	-0.016 ppb	0.067 ppb	0.051 ppb	0.084 ppb	0.003 ppb	0.024 ppb	0.016 ppb	0.014 ppb	96.445 %
Concentration per Run 2	0.023 ppb	0.037 ppb	0.037 ppb	0.748 ppb	0.003 ppb	0.014 ppb	0.021 ppb	0.004 ppb	99.751 %
Concentration per Run 3	-0.010 ppb	0.023 ppb	0.064 ppb	-0.100 ppb	0.005 ppb	0.010 ppb	0.004 ppb	-0.023 ppb	102.611 %
Concentration RSD	1,823.2 %	53.9 %	27.4 %	182.6 %	30.6 %	43.1 %	65.7 %	1,188.2 %	3.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.002 ppb	0.002 ppb	0.001 ppb	0.009 ppb	101.256 %	0.000 ppb	0.000 ppb	104.776 %	0.003 ppb
Concentration per Run 1	-0.005 ppb	0.021 ppb	-0.001 ppb	0.013 ppb	100.937 %	0.001 ppb	0.000 ppb	104.452 %	0.004 ppb
Concentration per Run 2	0.019 ppb	-0.015 ppb	0.004 ppb	0.002 ppb	101.918 %	0.001 ppb	0.000 ppb	106.065 %	0.003 ppb
Concentration per Run 3	-0.009 ppb	0.000 ppb	0.000 ppb	0.013 ppb	100.911 %	0.000 ppb	0.000 ppb	103.812 %	0.001 ppb
Concentration RSD	860.5 %	970.1 %	353.1 %	70.2 %	0.6 %	185.3 %	N/A	1.1 %	65.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.012 ppb	102.954 %	103.234 %	0.011 ppb	0.021 ppb	107.978 %
Concentration per Run 1	0.010 ppb	102.257 %	102.399 %	0.009 ppb	0.023 ppb	112.251 %
Concentration per Run 2	0.025 ppb	102.872 %	103.949 %	0.010 ppb	0.020 ppb	107.070 %
Concentration per Run 3	0.002 ppb	103.735 %	103.352 %	0.012 ppb	0.019 ppb	104.612 %
Concentration RSD	94.3 %	0.7 %	0.8 %	17.6 %	10.5 %	3.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	2	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CAL LOT #M24-1045	Rack	0		
Analysis started at:	4/1/2024 5:50:05 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.108 %	100.000 %	0.001 ppb	0.574 ppb	-0.521 ppb	-0.309 ppb	-1.033 ppb	1.777 ppb	97.730 %
Concentration per Run 1	96.735 %	102.286 %	0.000 ppb	0.567 ppb	-0.491 ppb	-0.406 ppb	-3.911 ppb	4.776 ppb	97.931 %
Concentration per Run 2	97.564 %	101.988 %	0.002 ppb	-0.429 ppb	-0.800 ppb	-0.142 ppb	0.353 ppb	-1.853 ppb	98.518 %
Concentration per Run 3	97.024 %	95.726 %	0.001 ppb	1.583 ppb	-0.273 ppb	-0.380 ppb	0.460 ppb	2.408 ppb	96.742 %
Concentration RSD	0.4 %	3.7 %	136.2 %	175.3 %	50.8 %	47.1 %	241.4 %	189.0 %	0.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.006 ppb	0.013 ppb	0.020 ppb	0.598 ppb	0.007 ppb	0.004 ppb	0.018 ppb	0.042 ppb	98.696 %
Concentration per Run 1	0.004 ppb	0.020 ppb	0.032 ppb	0.243 ppb	0.007 ppb	0.007 ppb	0.019 ppb	0.046 ppb	98.830 %
Concentration per Run 2	0.031 ppb	0.005 ppb	0.006 ppb	0.144 ppb	0.011 ppb	0.031 ppb	0.008 ppb	0.049 ppb	98.506 %
Concentration per Run 3	-0.052 ppb	0.013 ppb	0.022 ppb	1.408 ppb	0.003 ppb	-0.027 ppb	0.027 ppb	0.029 ppb	98.752 %
Concentration RSD	714.7 %	56.3 %	66.9 %	117.5 %	55.1 %	831.9 %	52.1 %	25.9 %	0.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.002 ppb	0.000 ppb	0.000 ppb	0.003 ppb	98.219 %	0.000 ppb	0.000 ppb	100.954 %	0.001 ppb
Concentration per Run 1	0.007 ppb	0.024 ppb	-0.001 ppb	-0.004 ppb	96.892 %	0.000 ppb	0.000 ppb	98.071 %	-0.001 ppb
Concentration per Run 2	-0.002 ppb	-0.005 ppb	-0.001 ppb	0.005 ppb	98.660 %	-0.001 ppb	0.001 ppb	102.291 %	0.003 ppb
Concentration per Run 3	0.000 ppb	-0.020 ppb	0.003 ppb	0.007 ppb	99.104 %	0.000 ppb	0.000 ppb	102.502 %	0.001 ppb
Concentration RSD	254.6 %	5,244.6 %	532.6 %	208.2 %	1.2 %	246.8 %	173.2 %	2.5 %	182.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.008 ppb	100.748 %	99.971 %	0.002 ppb	0.014 ppb	101.301 %
Concentration per Run 1	-0.013 ppb	99.740 %	97.664 %	-0.001 ppb	0.013 ppb	100.452 %
Concentration per Run 2	0.026 ppb	100.594 %	100.399 %	0.002 ppb	0.015 ppb	101.528 %
Concentration per Run 3	0.010 ppb	101.911 %	101.851 %	0.005 ppb	0.014 ppb	101.924 %
Concentration RSD	255.0 %	1.1 %	2.1 %	148.8 %	7.9 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	3	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Blank EJF ICPMSQ2	Rack	4		
Analysis started at:	4/1/2024 5:54:31 AM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.0 %	0.3 %	0.0 %	0.1 %	0.2 %	0.0 %	0.2 %	0.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.3 %	0.1 %	0.3 %	0.3 %	1.7 %	0.1 %	0.2 %	0.0 %	0.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb
Concentration per Run	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb
Concentration RSD	0.1 %	0.8 %	0.1 %	0.9 %	0.0 %	0.2 %		0.0 %	0.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.7 %	0.0 %	0.0 %	0.3 %	0.1 %	0.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	4	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	0.2/20 Cal	Rack	0		
Analysis started at:	4/1/2024 5:59:02 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.963 %	104.970 %	0.202 ppb	16.256 ppb	22.200 ppb	1.350 ppb	17.019 ppb	222.676 ppb	99.572 %
Concentration per Run 1	100.286 %	107.555 %	0.197 ppb	14.933 ppb	19.473 ppb	0.930 ppb	15.986 ppb	237.141 ppb	99.898 %
Concentration per Run 2	97.981 %	102.286 %	0.206 ppb	18.256 ppb	24.300 ppb	1.903 ppb	16.099 ppb	214.952 ppb	99.322 %
Concentration per Run 3	98.623 %	105.070 %	0.204 ppb	15.578 ppb	22.827 ppb	1.218 ppb	18.970 ppb	215.936 ppb	99.496 %
Concentration RSD	1.2 %	2.5 %	2.3 %	10.8 %	11.1 %	37.0 %	9.9 %	5.6 %	0.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.205 ppb	0.221 ppb	0.227 ppb	21.782 ppb	0.195 ppb	0.409 ppb	0.229 ppb	1.431 ppb	99.518 %
Concentration per Run 1	0.179 ppb	0.229 ppb	0.224 ppb	20.351 ppb	0.199 ppb	0.350 ppb	0.206 ppb	1.389 ppb	97.314 %
Concentration per Run 2	0.228 ppb	0.199 ppb	0.233 ppb	22.701 ppb	0.189 ppb	0.395 ppb	0.204 ppb	1.440 ppb	100.206 %
Concentration per Run 3	0.209 ppb	0.234 ppb	0.224 ppb	22.295 ppb	0.197 ppb	0.482 ppb	0.276 ppb	1.465 ppb	101.033 %
Concentration RSD	11.9 %	8.6 %	2.2 %	5.8 %	2.6 %	16.3 %	17.8 %	2.7 %	2.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.231 ppb	0.222 ppb	0.312 ppb	0.184 ppb	102.321 %	0.206 ppb	0.198 ppb	103.862 %	0.220 ppb
Concentration per Run 1	0.221 ppb	0.297 ppb	0.328 ppb	0.160 ppb	100.845 %	0.203 ppb	0.201 ppb	103.222 %	0.201 ppb
Concentration per Run 2	0.214 ppb	0.153 ppb	0.293 ppb	0.193 ppb	102.409 %	0.197 ppb	0.206 ppb	104.157 %	0.221 ppb
Concentration per Run 3	0.258 ppb	0.217 ppb	0.313 ppb	0.199 ppb	103.709 %	0.218 ppb	0.188 ppb	104.206 %	0.238 ppb
Concentration RSD	10.2 %	32.5 %	5.7 %	11.2 %	1.4 %	5.4 %	4.7 %	0.5 %	8.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.210 ppb	101.934 %	100.286 %	0.192 ppb	0.190 ppb	102.596 %
Concentration per Run 1	0.221 ppb	101.637 %	98.119 %	0.186 ppb	0.193 ppb	101.215 %
Concentration per Run 2	0.201 ppb	101.200 %	101.421 %	0.194 ppb	0.187 ppb	102.945 %
Concentration per Run 3	0.207 ppb	102.964 %	101.318 %	0.195 ppb	0.190 ppb	103.626 %
Concentration RSD	4.9 %	0.9 %	1.9 %	2.5 %	1.5 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	5	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	1/100 Cal	Rack	0		
Analysis started at:	4/1/2024 6:03:29 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.191 %	100.265 %	1.059 ppb	91.221 ppb	102.255 ppb	0.671 ppb	97.029 ppb	168.262 ppb	96.394 %
Concentration per Run 1	99.296 %	98.409 %	1.048 ppb	92.143 ppb	101.896 ppb	0.986 ppb	100.600 ppb	171.777 ppb	98.169 %
Concentration per Run 2	99.054 %	100.398 %	1.066 ppb	91.049 ppb	102.233 ppb	0.412 ppb	93.337 ppb	165.818 ppb	97.660 %
Concentration per Run 3	96.223 %	101.988 %	1.063 ppb	90.472 ppb	102.636 ppb	0.616 ppb	97.149 ppb	167.190 ppb	93.351 %
Concentration RSD	1.7 %	1.8 %	0.9 %	0.9 %	0.4 %	43.4 %	3.7 %	1.9 %	2.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.017 ppb	1.025 ppb	1.044 ppb	104.054 ppb	1.107 ppb	1.043 ppb	1.079 ppb	0.911 ppb	98.332 %
Concentration per Run 1	1.042 ppb	1.069 ppb	1.152 ppb	102.735 ppb	1.173 ppb	1.147 ppb	1.064 ppb	0.938 ppb	95.402 %
Concentration per Run 2	1.061 ppb	0.996 ppb	0.952 ppb	104.506 ppb	1.070 ppb	0.998 ppb	1.124 ppb	0.925 ppb	100.452 %
Concentration per Run 3	0.948 ppb	1.008 ppb	1.030 ppb	104.921 ppb	1.079 ppb	0.986 ppb	1.049 ppb	0.870 ppb	99.141 %
Concentration RSD	6.0 %	3.8 %	9.7 %	1.1 %	5.2 %	8.6 %	3.7 %	4.0 %	2.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.018 ppb	1.138 ppb	1.066 ppb	1.004 ppb	100.963 %	1.042 ppb	1.058 ppb	102.013 %	1.030 ppb
Concentration per Run 1	1.036 ppb	1.349 ppb	1.099 ppb	1.015 ppb	97.835 %	1.060 ppb	1.034 ppb	99.516 %	1.052 ppb
Concentration per Run 2	1.095 ppb	1.030 ppb	1.034 ppb	0.966 ppb	103.419 %	1.052 ppb	1.053 ppb	103.483 %	0.981 ppb
Concentration per Run 3	0.922 ppb	1.033 ppb	1.064 ppb	1.032 ppb	101.635 %	1.016 ppb	1.087 ppb	103.042 %	1.056 ppb
Concentration RSD	8.6 %	16.1 %	3.1 %	3.4 %	2.8 %	2.3 %	2.5 %	2.1 %	4.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.004 ppb	101.747 %	100.333 %	0.957 ppb	0.953 ppb	100.762 %
Concentration per Run 1	0.926 ppb	99.081 %	98.419 %	0.961 ppb	0.965 ppb	97.739 %
Concentration per Run 2	1.073 ppb	103.632 %	101.502 %	0.951 ppb	0.955 ppb	102.050 %
Concentration per Run 3	1.011 ppb	102.527 %	101.078 %	0.958 ppb	0.939 ppb	102.497 %
Concentration RSD	7.3 %	2.3 %	1.7 %	0.5 %	1.4 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	6	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	10/1000 Cal	Rack	0		
Analysis started at:	4/1/2024 6:07:57 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.742 %	97.250 %	9.921 ppb	869.153 ppb	967.210 ppb	10.453 ppb	968.310 ppb	1,012.444 ppb	85.872 %
Concentration per Run 1	88.990 %	96.521 %	9.740 ppb	892.592 ppb	977.705 ppb	10.030 ppb	968.263 ppb	984.655 ppb	89.070 %
Concentration per Run 2	85.572 %	92.843 %	9.952 ppb	899.475 ppb	1,008.283 ppb	11.364 ppb	1,011.413 ppb	1,072.395 ppb	85.680 %
Concentration per Run 3	82.663 %	102.386 %	10.070 ppb	815.392 ppb	915.643 ppb	9.965 ppb	925.255 ppb	980.282 ppb	82.866 %
Concentration RSD	3.7 %	4.9 %	1.7 %	5.4 %	4.9 %	7.6 %	4.4 %	5.1 %	3.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	9.510 ppb	9.660 ppb	9.793 ppb	957.917 ppb	9.703 ppb	9.801 ppb	9.939 ppb	10.027 ppb	94.446 %
Concentration per Run 1	9.737 ppb	9.794 ppb	9.841 ppb	972.907 ppb	10.035 ppb	9.937 ppb	10.432 ppb	10.239 ppb	95.164 %
Concentration per Run 2	9.718 ppb	9.914 ppb	10.090 ppb	973.497 ppb	9.669 ppb	9.924 ppb	9.737 ppb	10.158 ppb	93.762 %
Concentration per Run 3	9.076 ppb	9.271 ppb	9.448 ppb	927.349 ppb	9.405 ppb	9.542 ppb	9.648 ppb	9.683 ppb	94.411 %
Concentration RSD	4.0 %	3.5 %	3.3 %	2.8 %	3.3 %	2.3 %	4.3 %	3.0 %	0.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	9.895 ppb	10.053 ppb	10.141 ppb	9.815 ppb	95.242 %	9.645 ppb	9.773 ppb	97.837 %	9.936 ppb
Concentration per Run 1	10.002 ppb	10.237 ppb	10.097 ppb	9.934 ppb	96.675 %	9.932 ppb	10.072 ppb	96.041 %	10.093 ppb
Concentration per Run 2	9.877 ppb	9.980 ppb	10.346 ppb	9.777 ppb	94.543 %	9.450 ppb	9.516 ppb	99.576 %	9.901 ppb
Concentration per Run 3	9.805 ppb	9.942 ppb	9.980 ppb	9.734 ppb	94.509 %	9.552 ppb	9.731 ppb	97.894 %	9.816 ppb
Concentration RSD	1.0 %	1.6 %	1.8 %	1.1 %	1.3 %	2.6 %	2.9 %	1.8 %	1.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	9.690 ppb	97.363 %	96.791 %	9.088 ppb	8.859 ppb	97.288 %
Concentration per Run 1	9.908 ppb	97.082 %	96.428 %	9.274 ppb	8.992 ppb	97.987 %
Concentration per Run 2	9.548 ppb	96.716 %	97.517 %	8.980 ppb	8.896 ppb	96.082 %
Concentration per Run 3	9.614 ppb	98.290 %	96.429 %	9.011 ppb	8.689 ppb	97.796 %
Concentration RSD	2.0 %	0.8 %	0.6 %	1.8 %	1.7 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	7	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/1/2024 6:12:25 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.380 %	87.806 %	59.423 ppb	5,632.061 ppb	5,907.425 ppb	59.926 ppb	5,860.190 ppb	5,947.007 ppb	93.360 %
Concentration per Run 1	89.907 %	88.469 %	59.486 ppb	5,592.915 ppb	5,969.456 ppb	63.272 ppb	6,137.586 ppb	6,206.948 ppb	94.093 %
Concentration per Run 2	87.470 %	79.821 %	59.349 ppb	5,444.661 ppb	5,895.667 ppb	59.425 ppb	5,674.867 ppb	5,758.392 ppb	91.985 %
Concentration per Run 3	87.765 %	95.129 %	59.435 ppb	5,858.608 ppb	5,857.151 ppb	57.081 ppb	5,768.118 ppb	5,875.680 ppb	94.002 %
Concentration RSD	1.5 %	8.7 %	0.1 %	3.7 %	1.0 %	5.2 %	4.2 %	3.9 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	59.244 ppb	59.471 ppb	60.136 ppb	5,971.986 ppb	60.021 ppb	60.940 ppb	59.742 ppb	60.384 ppb	85.256 %
Concentration per Run 1	59.428 ppb	59.555 ppb	59.638 ppb	5,940.422 ppb	60.260 ppb	61.758 ppb	60.114 ppb	60.631 ppb	85.117 %
Concentration per Run 2	58.031 ppb	59.258 ppb	60.168 ppb	5,942.313 ppb	59.774 ppb	60.806 ppb	59.869 ppb	61.617 ppb	78.641 %
Concentration per Run 3	60.274 ppb	59.601 ppb	60.602 ppb	6,033.222 ppb	60.029 ppb	60.257 ppb	59.241 ppb	58.905 ppb	92.010 %
Concentration RSD	1.9 %	0.3 %	0.8 %	0.9 %	0.4 %	1.2 %	0.8 %	2.3 %	7.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	59.257 ppb	59.989 ppb	60.781 ppb	59.793 ppb	87.753 %	58.976 ppb	59.383 ppb	89.553 %	59.818 ppb
Concentration per Run 1	60.509 ppb	59.292 ppb	61.230 ppb	60.128 ppb	88.753 %	59.271 ppb	59.910 ppb	91.747 %	60.452 ppb
Concentration per Run 2	58.883 ppb	60.267 ppb	60.589 ppb	59.943 ppb	80.586 %	58.779 ppb	59.635 ppb	81.468 %	59.954 ppb
Concentration per Run 3	58.378 ppb	60.407 ppb	60.524 ppb	59.308 ppb	93.920 %	58.879 ppb	58.604 ppb	95.444 %	59.047 ppb
Concentration RSD	1.9 %	1.0 %	0.6 %	0.7 %	7.7 %	0.4 %	1.2 %	8.1 %	1.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.403 ppb	89.902 %	88.485 %	60.153 ppb	55.741 ppb	88.178 %
Concentration per Run 1	62.624 ppb	90.924 %	90.885 %	60.892 ppb	56.699 ppb	88.535 %
Concentration per Run 2	59.346 ppb	82.476 %	80.719 %	59.831 ppb	55.531 ppb	80.850 %
Concentration per Run 3	59.240 ppb	96.305 %	93.851 %	59.735 ppb	54.993 ppb	95.148 %
Concentration RSD	3.2 %	7.8 %	7.8 %	1.1 %	1.6 %	8.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	8	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	120/12000 Cal	Rack	0		
Analysis started at:	4/1/2024 6:16:53 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.708 %	86.017 %	120.294 ppb	12,194.953 ppb	12,048.998 ppb	121.282 ppb	12,072.575 ppb	12,024.553 ppb	93.496 %
Concentration per Run 1	87.419 %	89.165 %	120.131 ppb	12,396.487 ppb	12,169.205 ppb	121.582 ppb	12,290.689 ppb	12,345.646 ppb	94.818 %
Concentration per Run 2	86.326 %	85.686 %	119.618 ppb	12,054.111 ppb	12,064.436 ppb	121.547 ppb	12,029.455 ppb	11,808.124 ppb	94.005 %
Concentration per Run 3	83.379 %	83.200 %	121.134 ppb	12,134.260 ppb	11,913.353 ppb	120.717 ppb	11,897.583 ppb	11,919.889 ppb	91.666 %
Concentration RSD	2.4 %	3.5 %	0.6 %	1.5 %	1.1 %	0.4 %	1.7 %	2.4 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	120.418 ppb	120.293 ppb	119.949 ppb	12,017.477 ppb	120.013 ppb	119.546 ppb	120.134 ppb	119.804 ppb	86.486 %
Concentration per Run 1	122.149 ppb	124.344 ppb	123.270 ppb	12,320.490 ppb	123.877 ppb	122.373 ppb	123.826 ppb	120.473 ppb	89.249 %
Concentration per Run 2	120.824 ppb	119.652 ppb	120.477 ppb	12,040.724 ppb	121.132 ppb	120.379 ppb	121.735 ppb	121.707 ppb	85.025 %
Concentration per Run 3	118.282 ppb	116.882 ppb	116.100 ppb	11,691.218 ppb	115.032 ppb	115.885 ppb	114.840 ppb	117.233 ppb	85.186 %
Concentration RSD	1.6 %	3.1 %	3.0 %	2.6 %	3.8 %	2.8 %	3.9 %	1.9 %	2.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	120.380 ppb	119.121 ppb	119.597 ppb	120.119 ppb	86.375 %	120.541 ppb	120.327 ppb	87.682 %	120.096 ppb
Concentration per Run 1	122.476 ppb	121.374 ppb	119.671 ppb	120.722 ppb	87.036 %	123.099 ppb	122.650 ppb	88.170 %	120.505 ppb
Concentration per Run 2	121.019 ppb	121.162 ppb	120.261 ppb	118.178 ppb	87.470 %	118.657 ppb	119.126 ppb	88.486 %	120.022 ppb
Concentration per Run 3	117.646 ppb	114.826 ppb	118.860 ppb	121.456 ppb	84.618 %	119.868 ppb	119.205 ppb	86.390 %	119.761 ppb
Concentration RSD	2.1 %	3.1 %	0.6 %	1.4 %	1.8 %	1.9 %	1.7 %	1.3 %	0.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	119.824 ppb	90.306 %	88.850 %	141.963 ppb	122.225 ppb	87.892 %
Concentration per Run 1	120.996 ppb	91.518 %	89.781 %	143.754 ppb	125.241 ppb	88.859 %
Concentration per Run 2	119.134 ppb	91.084 %	89.009 %	140.117 ppb	121.408 ppb	88.091 %
Concentration per Run 3	119.341 ppb	88.317 %	87.759 %	142.018 ppb	120.026 ppb	86.725 %
Concentration RSD	0.9 %	1.9 %	1.1 %	1.3 %	2.2 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	9	User name	ALPHALAB\a2-icpmsq2	Comment	Sr Inteference Check
Analysis label:	Sr 200ppb	Rack	4		
Analysis started at:	4/1/2024 6:21:39 AM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	87.028 %	92.876 %	0.012 ppb	2.945 ppb	2.248 ppb	-0.029 ppb	-1.989 ppb	0.495 ppb	86.450 %
Concentration per Run 1	89.534 %	89.761 %	0.014 ppb	3.549 ppb	1.794 ppb	-0.035 ppb	3.021 ppb	74.731 ppb	89.244 %
Concentration per Run 2	86.925 %	92.843 %	0.013 ppb	1.766 ppb	2.642 ppb	0.127 ppb	-3.977 ppb	-76.869 ppb	86.789 %
Concentration per Run 3	84.626 %	96.024 %	0.010 ppb	3.520 ppb	2.306 ppb	-0.179 ppb	-5.011 ppb	3.622 ppb	83.318 %
Concentration RSD	2.8 %	3.4 %	18.7 %	34.7 %	19.0 %	529.6 %	219.7 %	15,330.9 %	3.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.003 ppb	0.126 ppb	0.070 ppb	7.115 ppb	0.007 ppb	-0.009 ppb	0.019 ppb	0.363 ppb	91.417 %
Concentration per Run 1	-0.010 ppb	0.137 ppb	0.107 ppb	5.345 ppb	0.006 ppb	-0.018 ppb	0.001 ppb	0.342 ppb	86.051 %
Concentration per Run 2	-0.011 ppb	0.105 ppb	0.046 ppb	8.639 ppb	0.005 ppb	-0.020 ppb	0.022 ppb	0.377 ppb	94.771 %
Concentration per Run 3	0.029 ppb	0.137 ppb	0.058 ppb	7.360 ppb	0.010 ppb	0.009 ppb	0.034 ppb	0.369 ppb	93.428 %
Concentration RSD	874.8 %	14.5 %	45.7 %	23.3 %	35.9 %	172.7 %	88.0 %	5.0 %	5.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.043 ppb	0.209 ppb	183.998 ppb	0.300 ppb	93.459 %	0.009 ppb	0.008 ppb	94.794 %	0.031 ppb
Concentration per Run 1	0.053 ppb	0.178 ppb	175.608 ppb	0.281 ppb	90.094 %	0.008 ppb	0.008 ppb	87.987 %	0.034 ppb
Concentration per Run 2	0.015 ppb	0.192 ppb	186.720 ppb	0.273 ppb	96.957 %	0.009 ppb	0.012 ppb	98.527 %	0.027 ppb
Concentration per Run 3	0.060 ppb	0.258 ppb	189.666 ppb	0.348 ppb	93.327 %	0.009 ppb	0.004 ppb	97.869 %	0.031 ppb
Concentration RSD	56.2 %	20.5 %	4.0 %	13.6 %	3.7 %	6.2 %	45.6 %	6.2 %	10.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.048 ppb	94.965 %	92.707 %	0.556 ppb	0.016 ppb	95.642 %
Concentration per Run 1	0.069 ppb	89.244 %	87.299 %	0.386 ppb	0.016 ppb	90.149 %
Concentration per Run 2	0.044 ppb	99.321 %	95.649 %	0.682 ppb	0.015 ppb	96.950 %
Concentration per Run 3	0.032 ppb	96.332 %	95.174 %	0.602 ppb	0.015 ppb	99.826 %
Concentration RSD	38.7 %	5.5 %	5.1 %	27.5 %	2.6 %	5.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	10	User name	ALPHALAB\a2-icpmsq2	Comment	ICV
Analysis label:	ICV	Rack	0		
Analysis started at:	4/1/2024 6:26:10 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.097 %	88.071 %	49.007 ppb	4,540.309 ppb	4,903.565 ppb	49.064 ppb	4,832.854 ppb	4,918.945 ppb	89.156 %
Concentration per Run 1	90.813 %	90.358 %	48.221 ppb	4,508.808 ppb	4,890.253 ppb	49.456 ppb	4,846.280 ppb	5,069.896 ppb	90.380 %
Concentration per Run 2	88.024 %	91.053 %	48.899 ppb	4,389.676 ppb	4,761.246 ppb	48.729 ppb	4,635.446 ppb	4,735.852 ppb	89.659 %
Concentration per Run 3	85.453 %	82.803 %	49.899 ppb	4,722.443 ppb	5,059.197 ppb	49.007 ppb	5,016.834 ppb	4,951.087 ppb	87.429 %
Recovery Percentage 1			98.013 %	90.806 %	98.071 %	98.129 %	96.657 %	98.379 %	
Concentration RSD	3.0 %	5.2 %	1.7 %	3.7 %	3.0 %	0.7 %	4.0 %	3.4 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	48.732 ppb	48.131 ppb	49.232 ppb	4,978.668 ppb	49.287 ppb	49.983 ppb	49.663 ppb	50.608 ppb	89.370 %
Concentration per Run 1	48.275 ppb	47.867 ppb	48.076 ppb	4,973.966 ppb	49.794 ppb	50.286 ppb	49.150 ppb	51.071 ppb	90.486 %
Concentration per Run 2	49.220 ppb	48.455 ppb	50.354 ppb	5,016.140 ppb	49.253 ppb	50.311 ppb	50.473 ppb	50.764 ppb	89.482 %
Concentration per Run 3	48.700 ppb	48.072 ppb	49.266 ppb	4,945.896 ppb	48.814 ppb	49.351 ppb	49.366 ppb	49.988 ppb	88.141 %
Recovery Percentage 1	97.464 %	96.262 %	98.464 %	99.573 %	98.574 %	99.965 %	99.326 %	101.216 %	
Concentration RSD	1.0 %	0.6 %	2.3 %	0.7 %	1.0 %	1.1 %	1.4 %	1.1 %	1.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	49.129 ppb	49.589 ppb	50.121 ppb	48.780 ppb	90.305 %	47.712 ppb	48.840 ppb	91.379 %	48.883 ppb
Concentration per Run 1	49.601 ppb	48.730 ppb	48.968 ppb	48.628 ppb	90.123 %	48.253 ppb	49.579 ppb	88.897 %	49.323 ppb
Concentration per Run 2	49.511 ppb	50.081 ppb	50.959 ppb	48.943 ppb	91.702 %	47.428 ppb	48.257 ppb	94.075 %	48.343 ppb
Concentration per Run 3	48.275 ppb	49.958 ppb	50.437 ppb	48.767 ppb	89.088 %	47.457 ppb	48.682 ppb	91.166 %	48.982 ppb
Recovery Percentage 1	98.258 %	99.179 %	100.243 %	97.559 %		95.425 %	97.679 %		97.765 %
Concentration RSD	1.5 %	1.5 %	2.1 %	0.3 %	1.5 %	1.0 %	1.4 %	2.8 %	1.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	48.943 ppb	92.851 %	90.521 %	48.301 ppb	45.751 ppb	91.954 %
Concentration per Run 1	49.675 ppb	92.570 %	89.841 %	48.106 ppb	45.714 ppb	92.287 %
Concentration per Run 2	48.530 ppb	93.681 %	91.256 %	48.390 ppb	45.845 ppb	92.571 %
Concentration per Run 3	48.623 ppb	92.303 %	90.464 %	48.407 ppb	45.692 ppb	91.004 %
Recovery Percentage 1	97.886 %			96.602 %	91.501 %	
Concentration RSD	1.3 %	0.8 %	0.8 %	0.4 %	0.2 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	11	User name	ALPHALAB\a2-icpmsq2	Comment	ICB
Analysis label:	ICB	Rack	0		
Analysis started at:	4/1/2024 6:30:40 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.819 %	87.541 %	0.006 ppb	-0.431 ppb	-1.099 ppb	-0.670 ppb	-2.629 ppb	3.211 ppb	82.661 %
Concentration per Run 1	86.289 %	85.487 %	0.007 ppb	-0.290 ppb	-1.207 ppb	-0.618 ppb	-2.039 ppb	7.560 ppb	82.347 %
Concentration per Run 2	86.811 %	89.861 %	0.005 ppb	-1.233 ppb	-1.317 ppb	-0.717 ppb	-2.226 ppb	1.525 ppb	83.464 %
Concentration per Run 3	84.357 %	87.276 %	0.007 ppb	0.231 ppb	-0.773 ppb	-0.675 ppb	-3.622 ppb	0.548 ppb	82.173 %
Recovery Percentage 1			1.258 %	-0.431 %	-1.570 %	-6.698 %	-2.629 %	3.211 %	
Concentration RSD	1.5 %	2.5 %	17.9 %	172.3 %	26.2 %	7.4 %	32.9 %	118.3 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.022 ppb	-0.004 ppb	0.052 ppb	4.647 ppb	0.004 ppb	-0.051 ppb	-0.012 ppb	-0.088 ppb	87.748 %
Concentration per Run 1	-0.016 ppb	0.006 ppb	0.038 ppb	5.124 ppb	0.005 ppb	-0.061 ppb	0.006 ppb	-0.061 ppb	82.767 %
Concentration per Run 2	-0.033 ppb	-0.010 ppb	0.067 ppb	4.203 ppb	0.003 ppb	-0.043 ppb	-0.027 ppb	-0.120 ppb	90.582 %
Concentration per Run 3	-0.016 ppb	-0.006 ppb	0.051 ppb	4.614 ppb	0.004 ppb	-0.051 ppb	-0.015 ppb	-0.085 ppb	89.893 %
Recovery Percentage 1	-0.433 %	-0.354 %	5.177 %	9.294 %	0.838 %	-2.572 %	-1.205 %	-1.769 %	
Concentration RSD	46.5 %	239.2 %	28.5 %	9.9 %	20.2 %	17.9 %	138.0 %	33.9 %	4.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.045 ppb	0.193 ppb	0.000 ppb	0.150 ppb	90.139 %	0.002 ppb	0.003 ppb	90.426 %	0.033 ppb
Concentration per Run 1	0.031 ppb	0.171 ppb	0.004 ppb	0.142 ppb	89.657 %	0.002 ppb	0.005 ppb	87.733 %	0.026 ppb
Concentration per Run 2	0.061 ppb	0.155 ppb	-0.001 ppb	0.135 ppb	92.346 %	0.003 ppb	0.001 ppb	92.294 %	0.037 ppb
Concentration per Run 3	0.043 ppb	0.255 ppb	-0.003 ppb	0.172 ppb	88.415 %	0.002 ppb	0.002 ppb	91.251 %	0.035 ppb
Recovery Percentage 1	9.030 %	3.869 %	0.002 %	7.482 %		0.534 %	1.348 %		0.818 %
Concentration RSD	33.6 %	27.7 %	2,032.3 %	12.8 %	2.2 %	21.2 %	67.3 %	2.6 %	17.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.012 ppb	91.526 %	90.142 %	0.435 ppb	0.008 ppb	90.966 %
Concentration per Run 1	0.014 ppb	90.090 %	88.528 %	0.305 ppb	0.009 ppb	88.875 %
Concentration per Run 2	0.000 ppb	94.120 %	90.954 %	0.524 ppb	0.006 ppb	91.995 %
Concentration per Run 3	0.022 ppb	90.368 %	90.943 %	0.478 ppb	0.008 ppb	92.029 %
Recovery Percentage 1	2.453 %			43.546 %	0.784 %	
Concentration RSD	92.9 %	2.5 %	1.5 %	26.6 %	20.9 %	2.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	12	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/1/2024 6:38:31 AM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	64.429 %	82.438 %	0.037 ppb	244,094.141 ppb	95,371.276 ppb	90,728.248 ppb	100,417.253 ppb	277,529.449 ppb	68.015 %
Concentration per Run 1	66.550 %	75.844 %	0.037 ppb	260,848.375 ppb	100,297.920 ppb	95,274.687 ppb	104,814.610 ppb	291,099.772 ppb	69.360 %
Concentration per Run 2	63.935 %	79.920 %	0.033 ppb	243,600.676 ppb	95,042.231 ppb	93,645.113 ppb	102,080.387 ppb	278,972.252 ppb	67.718 %
Concentration per Run 3	62.802 %	91.551 %	0.040 ppb	227,833.372 ppb	90,773.678 ppb	83,264.944 ppb	94,356.761 ppb	262,516.323 ppb	66.966 %
Recovery Percentage 1			3.666 %	97.638 %	95.371 %	90.728 %	100.417 %	92.510 %	
Concentration RSD	3.0 %	9.9 %	9.7 %	6.8 %	5.0 %	7.2 %	5.4 %	5.2 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.069 ppb	1.521 ppb	4.374 ppb	258,075.798 ppb	2.031 ppb	2.632 ppb	1.061 ppb	1.819 ppb	83.110 %
Concentration per Run 1	0.102 ppb	1.632 ppb	4.692 ppb	270,158.973 ppb	2.024 ppb	2.894 ppb	1.079 ppb	1.893 ppb	77.877 %
Concentration per Run 2	0.048 ppb	1.451 ppb	4.294 ppb	258,320.856 ppb	2.080 ppb	2.629 ppb	1.067 ppb	1.861 ppb	84.657 %
Concentration per Run 3	0.057 ppb	1.481 ppb	4.136 ppb	245,747.564 ppb	1.990 ppb	2.372 ppb	1.036 ppb	1.704 ppb	86.794 %
Recovery Percentage 1	1.383 %	46.098 %	76.744 %	103.230 %	70.777 %	43.148 %	129.379 %	15.958 %	
Concentration RSD	41.5 %	6.4 %	6.5 %	4.7 %	2.2 %	9.9 %	2.1 %	5.6 %	5.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.388 ppb	2.974 ppb	2.738 ppb	2,383.580 ppb	79.541 %	0.029 ppb	0.555 ppb	90.557 %	0.181 ppb
Concentration per Run 1	0.405 ppb	3.240 ppb	2.860 ppb	2,487.806 ppb	75.143 %	0.033 ppb	0.575 ppb	85.398 %	0.186 ppb
Concentration per Run 2	0.367 ppb	2.892 ppb	2.729 ppb	2,377.408 ppb	79.294 %	0.035 ppb	0.547 ppb	91.297 %	0.166 ppb
Concentration per Run 3	0.391 ppb	2.791 ppb	2.626 ppb	2,285.527 ppb	84.188 %	0.020 ppb	0.544 ppb	94.975 %	0.191 ppb
Recovery Percentage 1	23.789 %	23.055 %	547.693 %	119.179 %		3.623 %	138.834 %		2.262 %
Concentration RSD	5.0 %	7.9 %	4.3 %	4.2 %	5.7 %	28.4 %	3.1 %	5.3 %	7.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.319 ppb	78.136 %	72.749 %	0.136 ppb	1.487 ppb	76.196 %
Concentration per Run 1	1.394 ppb	75.142 %	70.411 %	0.099 ppb	1.507 ppb	74.216 %
Concentration per Run 2	1.223 ppb	77.840 %	71.798 %	0.155 ppb	1.526 ppb	75.164 %
Concentration per Run 3	1.340 ppb	81.426 %	76.038 %	0.155 ppb	1.427 ppb	79.207 %
Recovery Percentage 1	70.171 %			6.800 %	47.952 %	
Concentration RSD	6.6 %	4.0 %	4.0 %	23.7 %	3.5 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	13	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	LDR Check -10/1ppm	Rack	4		
Analysis started at:	4/1/2024 6:43:03 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	87.283 %	101.955 %	0.010 ppb	26.243 ppb	2.661 ppb	2.557 ppb	10.663 ppb	9.348 ppb	96.182 %
Concentration per Run 1	90.375 %	96.024 %	0.006 ppb	34.895 ppb	1.275 ppb	2.003 ppb	16.063 ppb	11.289 ppb	98.702 %
Concentration per Run 2	86.438 %	100.099 %	0.015 ppb	24.716 ppb	3.554 ppb	2.698 ppb	7.776 ppb	13.541 ppb	95.388 %
Concentration per Run 3	85.035 %	109.742 %	0.008 ppb	19.118 ppb	3.154 ppb	2.969 ppb	8.149 ppb	3.213 ppb	94.457 %
Concentration RSD	3.2 %	6.9 %	48.5 %	30.5 %	45.7 %	19.5 %	43.9 %	58.1 %	2.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.049 ppb	0.420 ppb	10,644.654 ppb	28.736 ppb	0.040 ppb	0.097 ppb	11,202.703 ppb	10,606.560 ppb	106.469 %
Concentration per Run 1	-0.056 ppb	0.440 ppb	10,710.659 ppb	27.257 ppb	0.045 ppb	0.113 ppb	11,349.298 ppb	10,852.959 ppb	98.441 %
Concentration per Run 2	-0.037 ppb	0.418 ppb	10,766.062 ppb	33.290 ppb	0.034 ppb	0.085 ppb	11,402.244 ppb	10,475.319 ppb	110.614 %
Concentration per Run 3	-0.055 ppb	0.403 ppb	10,457.240 ppb	25.661 ppb	0.041 ppb	0.092 ppb	10,856.566 ppb	10,491.402 ppb	110.352 %
Concentration RSD	21.9 %	4.4 %	1.5 %	14.0 %	14.4 %	15.1 %	2.7 %	2.0 %	6.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	910.185 ppb	0.048 ppb	0.210 ppb	2.008 ppb	106.035 %	0.039 ppb	0.020 ppb	106.346 %	0.013 ppb
Concentration per Run 1	902.362 ppb	0.015 ppb	0.212 ppb	1.822 ppb	100.268 %	0.042 ppb	0.016 ppb	101.864 %	0.014 ppb
Concentration per Run 2	946.583 ppb	0.064 ppb	0.202 ppb	2.043 ppb	106.798 %	0.034 ppb	0.019 ppb	105.149 %	0.013 ppb
Concentration per Run 3	881.609 ppb	0.066 ppb	0.216 ppb	2.158 ppb	111.037 %	0.042 ppb	0.025 ppb	112.025 %	0.012 ppb
Concentration RSD	3.6 %	59.7 %	3.5 %	8.5 %	5.1 %	11.7 %	22.5 %	4.9 %	6.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10,941.372 ppb	101.599 %	100.123 %	0.064 ppb	10,528.031 ppb	97.779 %
Concentration per Run 1	11,064.036 ppb	96.288 %	94.488 %	0.033 ppb	10,667.318 ppb	93.408 %
Concentration per Run 2	10,887.140 ppb	100.870 %	99.906 %	0.072 ppb	10,594.738 ppb	96.763 %
Concentration per Run 3	10,872.939 ppb	107.637 %	105.976 %	0.086 ppb	10,322.037 ppb	103.164 %
Concentration RSD	1.0 %	5.6 %	5.7 %	43.7 %	1.7 %	5.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	14	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/1/2024 6:47:33 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.698 %	99.669 %	0.008 ppb	6.979 ppb	-0.704 ppb	-0.651 ppb	3.459 ppb	1.012 ppb	93.486 %
Concentration per Run 1	92.039 %	97.117 %	0.007 ppb	6.250 ppb	-0.595 ppb	-0.646 ppb	5.137 ppb	1.698 ppb	94.644 %
Concentration per Run 2	91.044 %	100.696 %	0.007 ppb	6.935 ppb	-1.034 ppb	-0.688 ppb	4.319 ppb	1.133 ppb	94.982 %
Concentration per Run 3	89.009 %	101.193 %	0.009 ppb	7.754 ppb	-0.484 ppb	-0.619 ppb	0.921 ppb	0.205 ppb	90.832 %
Concentration RSD	1.7 %	2.2 %	13.6 %	10.8 %	41.3 %	5.4 %	64.6 %	74.5 %	2.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.053 ppb	0.007 ppb	0.740 ppb	6.152 ppb	0.004 ppb	-0.004 ppb	0.826 ppb	1.064 ppb	98.363 %
Concentration per Run 1	-0.059 ppb	0.018 ppb	0.772 ppb	5.079 ppb	0.001 ppb	0.005 ppb	1.042 ppb	1.269 ppb	93.182 %
Concentration per Run 2	-0.057 ppb	0.011 ppb	0.804 ppb	6.918 ppb	0.006 ppb	-0.019 ppb	0.825 ppb	1.005 ppb	102.337 %
Concentration per Run 3	-0.042 ppb	-0.007 ppb	0.642 ppb	6.460 ppb	0.004 ppb	0.003 ppb	0.613 ppb	0.917 ppb	99.571 %
Concentration RSD	18.4 %	180.1 %	11.6 %	15.6 %	73.3 %	358.8 %	25.9 %	17.2 %	4.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.450 ppb	0.035 ppb	-0.003 ppb	0.411 ppb	96.496 %	0.001 ppb	0.001 ppb	94.991 %	0.004 ppb
Concentration per Run 1	0.464 ppb	0.059 ppb	-0.003 ppb	0.274 ppb	93.074 %	0.000 ppb	0.000 ppb	88.512 %	0.003 ppb
Concentration per Run 2	0.497 ppb	0.010 ppb	-0.003 ppb	0.387 ppb	95.651 %	0.001 ppb	0.001 ppb	95.947 %	0.003 ppb
Concentration per Run 3	0.389 ppb	0.038 ppb	-0.003 ppb	0.572 ppb	100.765 %	0.001 ppb	0.002 ppb	100.515 %	0.005 ppb
Concentration RSD	12.4 %	69.2 %	0.5 %	36.6 %	4.1 %	162.2 %	98.4 %	6.4 %	24.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.702 ppb	97.076 %	94.129 %	0.051 ppb	1.182 ppb	92.318 %
Concentration per Run 1	0.807 ppb	92.120 %	88.674 %	0.024 ppb	1.480 ppb	86.769 %
Concentration per Run 2	0.676 ppb	98.099 %	93.752 %	0.062 ppb	1.151 ppb	91.933 %
Concentration per Run 3	0.623 ppb	101.008 %	99.961 %	0.068 ppb	0.915 ppb	98.252 %
Concentration RSD	13.5 %	4.7 %	6.0 %	46.9 %	24.0 %	6.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	15	User name	ALPHALAB\a2-icpmsq2	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 6:51:59 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.789 %	108.913 %	55.342 ppb	5,782.602 ppb	5,659.537 ppb	56.390 ppb	5,587.144 ppb	5,469.029 ppb	99.590 %
Concentration per Run 1	98.423 %	105.567 %	55.371 ppb	5,907.556 ppb	5,797.405 ppb	57.002 ppb	5,733.062 ppb	5,624.262 ppb	101.733 %
Concentration per Run 2	97.800 %	113.917 %	54.731 ppb	5,606.413 ppb	5,432.102 ppb	54.040 ppb	5,366.386 ppb	5,369.281 ppb	100.249 %
Concentration per Run 3	94.144 %	107.257 %	55.923 ppb	5,833.838 ppb	5,749.103 ppb	58.128 ppb	5,661.985 ppb	5,413.544 ppb	96.788 %
Recovery Percentage 1			92.236 %	96.377 %	94.326 %	93.983 %	93.119 %	91.150 %	
Concentration RSD	2.4 %	4.1 %	1.1 %	2.7 %	3.5 %	3.7 %	3.5 %	2.5 %	2.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	54.199 ppb	55.690 ppb	56.735 ppb	5,798.914 ppb	58.561 ppb	58.412 ppb	58.923 ppb	55.118 ppb	250.208 %
Concentration per Run 1	55.037 ppb	57.854 ppb	57.371 ppb	5,806.892 ppb	58.714 ppb	58.235 ppb	59.693 ppb	55.516 ppb	284.204 %
Concentration per Run 2	52.457 ppb	52.838 ppb	55.058 ppb	5,888.619 ppb	59.620 ppb	60.110 ppb	59.790 ppb	56.274 ppb	247.441 %
Concentration per Run 3	55.104 ppb	56.377 ppb	57.775 ppb	5,701.230 ppb	57.350 ppb	56.891 ppb	57.285 ppb	53.563 ppb	218.978 %
Recovery Percentage 1	90.332 %	92.816 %	94.558 %	96.649 %	97.602 %	97.353 %	98.205 %	91.863 %	
Concentration RSD	2.8 %	4.6 %	2.6 %	1.6 %	2.0 %	2.8 %	2.4 %	2.5 %	13.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	55.299 ppb	53.867 ppb	55.874 ppb	56.788 ppb	106.384 %	58.234 ppb	56.729 ppb	106.263 %	56.986 ppb
Concentration per Run 1	55.617 ppb	54.062 ppb	56.808 ppb	59.138 ppb	105.760 %	59.650 ppb	57.309 ppb	104.905 %	58.680 ppb
Concentration per Run 2	57.472 ppb	55.369 ppb	54.877 ppb	55.268 ppb	105.139 %	57.224 ppb	56.545 ppb	104.216 %	57.046 ppb
Concentration per Run 3	52.809 ppb	52.169 ppb	55.937 ppb	55.958 ppb	108.253 %	57.829 ppb	56.335 ppb	109.667 %	55.231 ppb
Recovery Percentage 1	92.166 %	89.778 %	93.123 %	94.647 %		97.057 %	94.549 %		94.977 %
Concentration RSD	4.2 %	3.0 %	1.7 %	3.6 %	1.5 %	2.2 %	0.9 %	2.8 %	3.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.590 ppb	110.391 %	106.462 %	59.596 ppb	55.411 ppb	103.737 %
Concentration per Run 1	59.779 ppb	110.017 %	105.643 %	59.386 ppb	55.808 ppb	102.081 %
Concentration per Run 2	58.376 ppb	109.367 %	105.239 %	60.001 ppb	55.778 ppb	103.814 %
Concentration per Run 3	57.615 ppb	111.790 %	108.503 %	59.399 ppb	54.647 ppb	105.316 %
Recovery Percentage 1	97.650 %			99.326 %	92.352 %	
Concentration RSD	1.9 %	1.1 %	1.7 %	0.6 %	1.2 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	16	User name	ALPHALAB\a2-icpmsq2	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 6:56:30 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.800 %	101.624 %	0.006 ppb	0.892 ppb	-0.442 ppb	-0.621 ppb	-3.969 ppb	1.188 ppb	97.693 %
Concentration per Run 1	98.883 %	102.386 %	0.007 ppb	2.288 ppb	-0.272 ppb	-0.511 ppb	-3.311 ppb	0.944 ppb	100.638 %
Concentration per Run 2	97.635 %	99.702 %	0.004 ppb	0.343 ppb	-0.316 ppb	-0.730 ppb	-4.023 ppb	4.730 ppb	95.806 %
Concentration per Run 3	96.881 %	102.783 %	0.006 ppb	0.045 ppb	-0.737 ppb	-0.622 ppb	-4.573 ppb	-2.110 ppb	96.637 %
Recovery Percentage 1			1.111 %	0.892 %	-0.631 %	-6.210 %	-3.969 %	1.188 %	
Concentration RSD	1.0 %	1.6 %	32.2 %	136.6 %	58.2 %	17.6 %	15.9 %	288.4 %	2.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.035 ppb	-0.001 ppb	0.061 ppb	6.516 ppb	0.003 ppb	-0.024 ppb	0.106 ppb	-0.030 ppb	189.998 %
Concentration per Run 1	-0.031 ppb	0.013 ppb	0.035 ppb	5.720 ppb	0.006 ppb	-0.016 ppb	0.112 ppb	-0.030 ppb	157.958 %
Concentration per Run 2	-0.049 ppb	0.000 ppb	0.058 ppb	6.024 ppb	0.002 ppb	-0.018 ppb	0.117 ppb	-0.018 ppb	191.602 %
Concentration per Run 3	-0.024 ppb	-0.016 ppb	0.091 ppb	7.805 ppb	0.003 ppb	-0.038 ppb	0.091 ppb	-0.042 ppb	220.435 %
Recovery Percentage 1	-0.694 %	-0.119 %	6.137 %	13.032 %	0.692 %	-1.209 %	10.644 %	-0.604 %	
Concentration RSD	36.9 %	1,213.1 %	45.6 %	17.3 %	63.1 %	50.7 %	12.9 %	38.8 %	16.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.097 ppb	0.145 ppb	0.004 ppb	0.287 ppb	104.200 %	0.005 ppb	0.008 ppb	103.655 %	0.018 ppb
Concentration per Run 1	0.081 ppb	0.105 ppb	0.004 ppb	0.249 ppb	103.706 %	0.005 ppb	0.008 ppb	102.973 %	0.020 ppb
Concentration per Run 2	0.108 ppb	0.218 ppb	0.006 ppb	0.264 ppb	100.672 %	0.006 ppb	0.009 ppb	99.724 %	0.017 ppb
Concentration per Run 3	0.103 ppb	0.113 ppb	0.004 ppb	0.349 ppb	108.223 %	0.005 ppb	0.008 ppb	108.266 %	0.018 ppb
Recovery Percentage 1	19.405 %	2.910 %	0.044 %	14.358 %		1.364 %	4.158 %		0.451 %
Concentration RSD	14.9 %	43.5 %	24.2 %	18.7 %	3.6 %	8.4 %	10.5 %	4.2 %	9.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.030 ppb	105.692 %	102.534 %	0.409 ppb	0.068 ppb	103.174 %
Concentration per Run 1	0.033 ppb	104.128 %	100.924 %	0.290 ppb	0.072 ppb	101.880 %
Concentration per Run 2	0.022 ppb	103.064 %	98.064 %	0.510 ppb	0.069 ppb	101.555 %
Concentration per Run 3	0.034 ppb	109.885 %	108.613 %	0.429 ppb	0.065 ppb	106.087 %
Recovery Percentage 1	5.970 %			40.946 %	6.842 %	
Concentration RSD	22.0 %	3.5 %	5.3 %	27.3 %	5.4 %	2.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	17	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901631-7d10 6020TL	Rack	1		
Analysis started at:	4/1/2024 7:08:57 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.244 %	106.395 %	4.736 ppb	2,948.151 ppb	1,972.812 ppb	183.440 ppb	1,104.246 ppb	6,927.412 ppb	97.355 %
Concentration per Run 1	101.031 %	106.163 %	4.645 ppb	2,895.245 ppb	1,959.423 ppb	177.100 ppb	1,099.664 ppb	7,020.709 ppb	97.003 %
Concentration per Run 2	99.370 %	103.877 %	4.755 ppb	3,169.836 ppb	2,073.828 ppb	198.313 ppb	1,196.012 ppb	7,229.375 ppb	97.578 %
Concentration per Run 3	97.332 %	109.145 %	4.809 ppb	2,779.371 ppb	1,885.185 ppb	174.906 ppb	1,017.062 ppb	6,532.151 ppb	97.486 %
Concentration RSD	1.9 %	2.5 %	1.8 %	6.8 %	4.8 %	7.0 %	8.1 %	5.2 %	0.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	44.825 ppb	18.077 ppb	919.156 ppb	336.146 ppb	45.395 ppb	45.323 ppb	22.847 ppb	44.163 ppb	109.522 %
Concentration per Run 1	45.795 ppb	18.521 ppb	923.923 ppb	337.089 ppb	46.842 ppb	47.114 ppb	23.549 ppb	44.570 ppb	106.276 %
Concentration per Run 2	45.906 ppb	18.288 ppb	943.424 ppb	344.291 ppb	45.478 ppb	46.001 ppb	22.614 ppb	45.007 ppb	111.264 %
Concentration per Run 3	42.773 ppb	17.423 ppb	890.120 ppb	327.058 ppb	43.866 ppb	42.855 ppb	22.379 ppb	42.912 ppb	111.026 %
Concentration RSD	4.0 %	3.2 %	2.9 %	2.6 %	3.3 %	4.9 %	2.7 %	2.5 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	10.363 ppb	10.487 ppb	132.268 ppb	91.827 ppb	105.411 %	4.733 ppb	5.001 ppb	106.601 %	43.279 ppb
Concentration per Run 1	10.583 ppb	10.687 ppb	132.237 ppb	93.233 ppb	103.839 %	4.888 ppb	5.019 ppb	101.930 %	43.998 ppb
Concentration per Run 2	10.500 ppb	11.015 ppb	135.696 ppb	92.762 ppb	107.061 %	4.651 ppb	5.008 ppb	111.526 %	42.859 ppb
Concentration per Run 3	10.005 ppb	9.759 ppb	128.871 ppb	89.485 ppb	105.332 %	4.661 ppb	4.978 ppb	106.347 %	42.981 ppb
Concentration RSD	3.0 %	6.2 %	2.6 %	2.2 %	1.5 %	2.8 %	0.4 %	4.5 %	1.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	198.344 ppb	110.752 %	110.139 %	11.760 ppb	48.399 ppb	107.517 %
Concentration per Run 1	203.321 ppb	108.317 %	108.209 %	11.895 ppb	48.606 ppb	107.340 %
Concentration per Run 2	196.868 ppb	113.152 %	113.998 %	11.707 ppb	48.370 ppb	108.103 %
Concentration per Run 3	194.842 ppb	110.786 %	108.211 %	11.680 ppb	48.221 ppb	107.108 %
Concentration RSD	2.2 %	2.2 %	3.0 %	1.0 %	0.4 %	0.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	18	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901631-8d10 6020TL	Rack	1		
Analysis started at:	4/1/2024 7:13:24 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.624 %	104.540 %	4.796 ppb	2,939.139 ppb	1,997.349 ppb	186.843 ppb	1,083.041 ppb	6,929.834 ppb	97.633 %
Concentration per Run 1	101.173 %	100.795 %	4.786 ppb	2,918.746 ppb	1,987.021 ppb	183.477 ppb	1,061.458 ppb	6,823.420 ppb	98.388 %
Concentration per Run 2	99.598 %	107.754 %	4.787 ppb	2,964.753 ppb	2,023.196 ppb	195.515 ppb	1,121.920 ppb	7,064.849 ppb	98.622 %
Concentration per Run 3	98.102 %	105.070 %	4.815 ppb	2,933.919 ppb	1,981.829 ppb	181.537 ppb	1,065.745 ppb	6,901.232 ppb	95.890 %
Concentration RSD	1.5 %	3.4 %	0.3 %	0.8 %	1.1 %	4.1 %	3.1 %	1.8 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	44.617 ppb	18.233 ppb	930.418 ppb	344.040 ppb	45.354 ppb	45.324 ppb	22.925 ppb	45.203 ppb	108.938 %
Concentration per Run 1	44.052 ppb	18.396 ppb	919.390 ppb	349.528 ppb	45.395 ppb	45.212 ppb	23.095 ppb	44.898 ppb	107.896 %
Concentration per Run 2	44.722 ppb	18.087 ppb	935.367 ppb	342.135 ppb	44.534 ppb	44.029 ppb	22.486 ppb	44.498 ppb	111.880 %
Concentration per Run 3	45.078 ppb	18.217 ppb	936.497 ppb	340.456 ppb	46.133 ppb	46.730 ppb	23.194 ppb	46.213 ppb	107.039 %
Concentration RSD	1.2 %	0.8 %	1.0 %	1.4 %	1.8 %	3.0 %	1.7 %	2.0 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.027 ppb	10.641 ppb	131.427 ppb	91.834 ppb	106.334 %	4.739 ppb	5.119 ppb	107.471 %	43.494 ppb
Concentration per Run 1	11.117 ppb	10.495 ppb	129.051 ppb	91.374 ppb	103.842 %	4.853 ppb	5.169 ppb	103.129 %	43.441 ppb
Concentration per Run 2	10.897 ppb	11.215 ppb	136.015 ppb	92.093 ppb	107.376 %	4.620 ppb	5.114 ppb	112.063 %	44.132 ppb
Concentration per Run 3	11.067 ppb	10.212 ppb	129.214 ppb	92.036 ppb	107.783 %	4.745 ppb	5.073 ppb	107.221 %	42.908 ppb
Concentration RSD	1.0 %	4.9 %	3.0 %	0.4 %	2.0 %	2.5 %	0.9 %	4.2 %	1.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	195.135 ppb	109.799 %	108.171 %	11.683 ppb	48.424 ppb	106.364 %
Concentration per Run 1	195.948 ppb	105.650 %	104.045 %	11.464 ppb	47.951 ppb	105.375 %
Concentration per Run 2	198.299 ppb	113.093 %	112.624 %	11.829 ppb	49.214 ppb	106.547 %
Concentration per Run 3	191.159 ppb	110.654 %	107.845 %	11.754 ppb	48.108 ppb	107.169 %
Concentration RSD	1.9 %	3.5 %	4.0 %	1.6 %	1.4 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	19	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901631-9d10 6020TL	Rack	1		
Analysis started at:	4/1/2024 7:17:51 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.510 %	98.376 %	46.612 ppb	7,058.308 ppb	5,821.712 ppb	50.119 ppb	4,821.601 ppb	10,845.742 ppb	96.672 %
Concentration per Run 1	96.738 %	97.117 %	46.691 ppb	6,926.470 ppb	5,780.359 ppb	49.340 ppb	4,757.963 ppb	10,743.754 ppb	96.796 %
Concentration per Run 2	96.242 %	98.608 %	46.360 ppb	7,082.740 ppb	5,932.081 ppb	50.099 ppb	4,921.023 ppb	11,197.451 ppb	98.201 %
Concentration per Run 3	93.551 %	99.404 %	46.785 ppb	7,165.714 ppb	5,752.696 ppb	50.917 ppb	4,785.816 ppb	10,596.021 ppb	95.020 %
Concentration RSD	1.8 %	1.2 %	0.5 %	1.7 %	1.7 %	1.6 %	1.8 %	2.9 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	45.932 ppb	46.068 ppb	928.015 ppb	4,949.958 ppb	46.713 ppb	46.892 ppb	45.448 ppb	46.339 ppb	101.901 %
Concentration per Run 1	45.992 ppb	46.533 ppb	916.464 ppb	4,933.441 ppb	47.605 ppb	47.651 ppb	45.781 ppb	46.808 ppb	100.131 %
Concentration per Run 2	45.917 ppb	45.865 ppb	939.251 ppb	5,010.762 ppb	46.670 ppb	46.869 ppb	46.332 ppb	46.971 ppb	101.503 %
Concentration per Run 3	45.887 ppb	45.806 ppb	928.331 ppb	4,905.669 ppb	45.863 ppb	46.157 ppb	44.231 ppb	45.238 ppb	104.069 %
Concentration RSD	0.1 %	0.9 %	1.2 %	1.1 %	1.9 %	1.6 %	2.4 %	2.1 %	2.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	45.068 ppb	44.203 ppb	89.050 ppb	47.162 ppb	101.809 %	2.943 ppb	46.332 ppb	104.572 %	46.992 ppb
Concentration per Run 1	45.508 ppb	43.714 ppb	88.392 ppb	47.661 ppb	99.618 %	2.966 ppb	47.365 ppb	100.183 %	47.450 ppb
Concentration per Run 2	45.468 ppb	45.270 ppb	90.756 ppb	47.520 ppb	102.488 %	2.932 ppb	45.467 ppb	108.013 %	46.610 ppb
Concentration per Run 3	44.227 ppb	43.624 ppb	88.000 ppb	46.305 ppb	103.321 %	2.930 ppb	46.163 ppb	105.520 %	46.915 ppb
Concentration RSD	1.6 %	2.1 %	1.7 %	1.6 %	1.9 %	0.7 %	2.1 %	3.8 %	0.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	51.511 ppb	106.462 %	105.481 %	46.687 ppb	44.439 ppb	102.953 %
Concentration per Run 1	52.177 ppb	103.839 %	102.667 %	47.708 ppb	45.301 ppb	99.604 %
Concentration per Run 2	51.242 ppb	107.476 %	107.877 %	45.245 ppb	43.739 ppb	104.609 %
Concentration per Run 3	51.114 ppb	108.070 %	105.900 %	47.107 ppb	44.276 ppb	104.646 %
Concentration RSD	1.1 %	2.2 %	2.5 %	2.8 %	1.8 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	20	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901631-10d50 6020TL	Rack	1		
Analysis started at:	4/1/2024 7:22:18 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.810 %	106.925 %	0.005 ppb	389.696 ppb	206.090 ppb	0.688 ppb	30.503 ppb	1,166.603 ppb	94.607 %
Concentration per Run 1	97.307 %	106.362 %	0.006 ppb	386.254 ppb	205.100 ppb	0.777 ppb	29.190 ppb	1,142.677 ppb	95.740 %
Concentration per Run 2	96.091 %	108.151 %	0.002 ppb	380.909 ppb	199.495 ppb	0.525 ppb	25.715 ppb	1,145.044 ppb	94.111 %
Concentration per Run 3	94.031 %	106.263 %	0.008 ppb	401.923 ppb	213.673 ppb	0.761 ppb	36.603 ppb	1,212.090 ppb	93.970 %
Concentration RSD	1.7 %	1.0 %	51.3 %	2.8 %	3.5 %	20.5 %	18.2 %	3.4 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.035 ppb	0.006 ppb	167.580 ppb	53.789 ppb	0.083 ppb	0.083 ppb	0.042 ppb	-0.012 ppb	107.064 %
Concentration per Run 1	-0.044 ppb	0.005 ppb	164.093 ppb	54.079 ppb	0.095 ppb	0.091 ppb	0.036 ppb	-0.052 ppb	107.255 %
Concentration per Run 2	-0.043 ppb	0.004 ppb	169.003 ppb	55.797 ppb	0.079 ppb	0.114 ppb	0.048 ppb	0.034 ppb	104.015 %
Concentration per Run 3	-0.017 ppb	0.008 ppb	169.643 ppb	51.491 ppb	0.076 ppb	0.044 ppb	0.041 ppb	-0.019 ppb	109.922 %
Concentration RSD	44.9 %	42.3 %	1.8 %	4.0 %	12.0 %	42.9 %	14.3 %	350.9 %	2.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.062 ppb	0.092 ppb	7.870 ppb	0.239 ppb	103.334 %	0.001 ppb	0.009 ppb	103.657 %	0.233 ppb
Concentration per Run 1	0.086 ppb	0.019 ppb	7.684 ppb	0.195 ppb	101.854 %	0.002 ppb	0.006 ppb	100.480 %	0.197 ppb
Concentration per Run 2	0.046 ppb	0.076 ppb	7.783 ppb	0.262 ppb	103.483 %	0.001 ppb	0.012 ppb	102.505 %	0.236 ppb
Concentration per Run 3	0.055 ppb	0.181 ppb	8.144 ppb	0.261 ppb	104.665 %	0.002 ppb	0.009 ppb	107.986 %	0.265 ppb
Concentration RSD	33.7 %	89.4 %	3.1 %	15.9 %	1.4 %	38.0 %	33.1 %	3.7 %	14.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.029 ppb	106.166 %	102.800 %	0.356 ppb	0.049 ppb	103.839 %
Concentration per Run 1	1.072 ppb	103.886 %	99.658 %	0.251 ppb	0.045 ppb	101.070 %
Concentration per Run 2	1.037 ppb	106.319 %	101.251 %	0.433 ppb	0.053 ppb	103.414 %
Concentration per Run 3	0.979 ppb	108.294 %	107.492 %	0.384 ppb	0.048 ppb	107.032 %
Concentration RSD	4.6 %	2.1 %	4.0 %	26.4 %	8.4 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	21	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416487-08d10 6020TL	Rack	1		
Analysis started at:	4/1/2024 7:26:46 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.531 %	101.193 %	0.005 ppb	1,974.876 ppb	1,040.883 ppb	2.419 ppb	155.247 ppb	5,928.353 ppb	92.960 %
Concentration per Run 1	95.978 %	96.918 %	0.005 ppb	2,012.270 ppb	1,058.175 ppb	2.054 ppb	164.646 ppb	6,007.775 ppb	93.561 %
Concentration per Run 2	95.567 %	105.766 %	0.004 ppb	1,857.446 ppb	960.248 ppb	1.759 ppb	138.252 ppb	5,664.385 ppb	93.503 %
Concentration per Run 3	92.048 %	100.895 %	0.006 ppb	2,054.913 ppb	1,104.225 ppb	3.443 ppb	162.844 ppb	6,112.901 ppb	91.815 %
Concentration RSD	2.3 %	4.4 %	19.4 %	5.3 %	7.1 %	37.2 %	9.5 %	4.0 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.015 ppb	0.029 ppb	839.365 ppb	240.527 ppb	0.386 ppb	0.419 ppb	0.056 ppb	0.127 ppb	103.096 %
Concentration per Run 1	-0.007 ppb	0.038 ppb	850.419 ppb	244.419 ppb	0.409 ppb	0.508 ppb	0.068 ppb	0.200 ppb	99.997 %
Concentration per Run 2	-0.016 ppb	0.024 ppb	824.461 ppb	235.353 ppb	0.387 ppb	0.391 ppb	0.054 ppb	0.068 ppb	100.509 %
Concentration per Run 3	-0.022 ppb	0.026 ppb	843.216 ppb	241.810 ppb	0.362 ppb	0.358 ppb	0.048 ppb	0.112 ppb	108.784 %
Concentration RSD	51.8 %	25.8 %	1.6 %	1.9 %	6.1 %	18.9 %	18.8 %	53.2 %	4.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.069 ppb	0.050 ppb	39.195 ppb	0.102 ppb	101.107 %	0.000 ppb	0.030 ppb	103.061 %	0.120 ppb
Concentration per Run 1	0.073 ppb	0.079 ppb	39.143 ppb	0.081 ppb	98.015 %	0.001 ppb	0.027 ppb	101.069 %	0.092 ppb
Concentration per Run 2	0.063 ppb	0.012 ppb	38.675 ppb	0.117 ppb	101.073 %	0.001 ppb	0.026 ppb	100.577 %	0.124 ppb
Concentration per Run 3	0.071 ppb	0.058 ppb	39.767 ppb	0.107 ppb	104.234 %	0.000 ppb	0.038 ppb	107.537 %	0.144 ppb
Concentration RSD	7.5 %	69.1 %	1.4 %	18.5 %	3.1 %	125.1 %	22.4 %	3.8 %	21.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	4.699 ppb	102.768 %	101.507 %	0.113 ppb	0.033 ppb	99.910 %
Concentration per Run 1	4.386 ppb	100.815 %	99.042 %	0.066 ppb	0.045 ppb	98.195 %
Concentration per Run 2	4.812 ppb	103.091 %	100.868 %	0.134 ppb	0.033 ppb	98.630 %
Concentration per Run 3	4.899 ppb	104.398 %	104.612 %	0.140 ppb	0.019 ppb	102.904 %
Concentration RSD	5.8 %	1.8 %	2.8 %	36.3 %	39.6 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 22
Analysis label: I2416277-02d10 6020TL
Analysis started at: 4/1/2024 7:31:13 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 6
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.242 %	99.006 %	0.011 ppb	23,862.256 ppb	467.077 ppb	88.679 ppb	1,376.561 ppb	7,434.667 ppb	94.517 %
Concentration per Run 1	96.493 %	95.328 %	0.012 ppb	24,071.147 ppb	461.585 ppb	86.660 ppb	1,367.840 ppb	7,526.266 ppb	95.388 %
Concentration per Run 2	95.702 %	96.223 %	0.010 ppb	24,164.801 ppb	467.969 ppb	89.002 ppb	1,379.223 ppb	7,304.695 ppb	95.678 %
Concentration per Run 3	93.532 %	105.467 %	0.012 ppb	23,350.822 ppb	471.678 ppb	90.374 ppb	1,382.619 ppb	7,473.039 ppb	92.485 %
Concentration RSD	1.6 %	5.7 %	10.9 %	1.9 %	1.1 %	2.1 %	0.6 %	1.6 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.027 ppb	0.192 ppb	4.414 ppb	33.447 ppb	0.023 ppb	0.027 ppb	0.089 ppb	0.147 ppb	101.431 %
Concentration per Run 1	-0.021 ppb	0.223 ppb	4.649 ppb	32.008 ppb	0.025 ppb	0.030 ppb	0.101 ppb	0.133 ppb	97.192 %
Concentration per Run 2	-0.037 ppb	0.177 ppb	4.244 ppb	35.893 ppb	0.022 ppb	0.039 ppb	0.066 ppb	0.134 ppb	99.899 %
Concentration per Run 3	-0.023 ppb	0.176 ppb	4.350 ppb	32.438 ppb	0.023 ppb	0.010 ppb	0.099 ppb	0.174 ppb	107.204 %
Concentration RSD	33.8 %	13.9 %	4.8 %	6.4 %	8.4 %	55.1 %	22.4 %	15.7 %	5.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.088 ppb	0.636 ppb	64.412 ppb	0.076 ppb	100.227 %	0.002 ppb	0.007 ppb	102.378 %	0.071 ppb
Concentration per Run 1	0.112 ppb	0.714 ppb	65.245 ppb	0.059 ppb	96.796 %	0.002 ppb	0.006 ppb	97.172 %	0.056 ppb
Concentration per Run 2	0.091 ppb	0.620 ppb	63.128 ppb	0.099 ppb	100.456 %	0.001 ppb	0.007 ppb	102.866 %	0.068 ppb
Concentration per Run 3	0.063 ppb	0.574 ppb	64.865 ppb	0.071 ppb	103.429 %	0.001 ppb	0.007 ppb	107.096 %	0.090 ppb
Concentration RSD	27.7 %	11.2 %	1.8 %	26.6 %	3.3 %	27.9 %	5.2 %	4.9 %	24.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	2.308 ppb	104.473 %	101.866 %	0.077 ppb	0.033 ppb	98.542 %
Concentration per Run 1	2.296 ppb	102.262 %	98.372 %	0.043 ppb	0.033 ppb	96.607 %
Concentration per Run 2	2.248 ppb	101.515 %	100.539 %	0.087 ppb	0.032 ppb	99.156 %
Concentration per Run 3	2.381 ppb	109.641 %	106.686 %	0.102 ppb	0.034 ppb	99.863 %
Concentration RSD	2.9 %	4.3 %	4.2 %	40.0 %	2.8 %	1.7 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 23
Analysis label: I2416277-03d10 6020TL
Analysis started at: 4/1/2024 7:35:41 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 7
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.740 %	99.801 %	0.006 ppb	29,211.783 ppb	246.798 ppb	58.771 ppb	558.259 ppb	1,297.163 ppb	91.676 %
Concentration per Run 1	95.536 %	92.147 %	0.005 ppb	30,515.253 ppb	257.065 ppb	63.256 ppb	582.536 ppb	1,321.529 ppb	93.648 %
Concentration per Run 2	92.044 %	102.286 %	0.005 ppb	28,910.221 ppb	246.067 ppb	57.883 ppb	563.528 ppb	1,328.003 ppb	89.734 %
Concentration per Run 3	93.639 %	104.970 %	0.008 ppb	28,209.875 ppb	237.261 ppb	55.173 ppb	528.714 ppb	1,241.958 ppb	91.647 %
Concentration RSD	1.9 %	6.8 %	33.3 %	4.0 %	4.0 %	7.0 %	4.9 %	3.7 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.005 ppb	32.751 ppb	97.062 ppb	15.844 ppb	0.061 ppb	0.113 ppb	0.092 ppb	0.435 ppb	112.584 %
Concentration per Run 1	0.020 ppb	33.926 ppb	100.851 ppb	17.702 ppb	0.063 ppb	0.109 ppb	0.095 ppb	0.452 ppb	108.963 %
Concentration per Run 2	-0.017 ppb	32.391 ppb	95.586 ppb	15.720 ppb	0.052 ppb	0.122 ppb	0.114 ppb	0.364 ppb	111.577 %
Concentration per Run 3	0.011 ppb	31.936 ppb	94.750 ppb	14.110 ppb	0.067 ppb	0.109 ppb	0.068 ppb	0.489 ppb	117.214 %
Concentration RSD	407.5 %	3.2 %	3.4 %	11.4 %	12.5 %	6.8 %	24.7 %	14.8 %	3.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.040 ppb	0.365 ppb	6.351 ppb	0.054 ppb	98.842 %	0.003 ppb	0.124 ppb	99.479 %	0.075 ppb
Concentration per Run 1	0.063 ppb	0.384 ppb	6.517 ppb	0.035 ppb	96.661 %	0.003 ppb	0.130 ppb	98.254 %	0.065 ppb
Concentration per Run 2	0.044 ppb	0.365 ppb	6.361 ppb	0.053 ppb	98.597 %	0.001 ppb	0.120 ppb	100.030 %	0.070 ppb
Concentration per Run 3	0.013 ppb	0.347 ppb	6.174 ppb	0.073 ppb	101.268 %	0.003 ppb	0.121 ppb	100.153 %	0.091 ppb
Concentration RSD	63.3 %	5.1 %	2.7 %	34.8 %	2.3 %	39.1 %	4.3 %	1.1 %	18.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	3.760 ppb	101.914 %	99.440 %	0.071 ppb	0.027 ppb	98.380 %
Concentration per Run 1	3.905 ppb	98.602 %	95.461 %	0.045 ppb	0.025 ppb	98.468 %
Concentration per Run 2	3.763 ppb	102.053 %	101.414 %	0.077 ppb	0.024 ppb	100.123 %
Concentration per Run 3	3.612 ppb	105.088 %	101.445 %	0.090 ppb	0.030 ppb	96.550 %
Concentration RSD	3.9 %	3.2 %	3.5 %	32.7 %	11.7 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 24
Analysis label: I2416277-04d10 6020TL
Analysis started at: 4/1/2024 7:40:09 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 8
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.313 %	105.070 %	0.010 ppb	22,081.499 ppb	430.090 ppb	81.037 ppb	1,194.121 ppb	6,533.128 ppb	94.752 %
Concentration per Run 1	98.142 %	103.181 %	0.014 ppb	22,454.882 ppb	435.375 ppb	83.153 ppb	1,240.479 ppb	6,870.899 ppb	97.023 %
Concentration per Run 2	96.915 %	101.193 %	0.009 ppb	22,473.678 ppb	427.841 ppb	82.038 ppb	1,213.229 ppb	6,530.696 ppb	94.645 %
Concentration per Run 3	93.883 %	110.835 %	0.009 ppb	21,315.936 ppb	427.055 ppb	77.920 ppb	1,128.654 ppb	6,197.790 ppb	92.589 %
Concentration RSD	2.3 %	4.8 %	27.7 %	3.0 %	1.1 %	3.4 %	4.9 %	5.2 %	2.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.026 ppb	0.135 ppb	4.179 ppb	10.225 ppb	0.019 ppb	-0.003 ppb	0.063 ppb	0.107 ppb	113.409 %
Concentration per Run 1	-0.026 ppb	0.141 ppb	4.214 ppb	10.508 ppb	0.018 ppb	-0.022 ppb	0.082 ppb	0.126 ppb	107.548 %
Concentration per Run 2	-0.025 ppb	0.133 ppb	4.189 ppb	9.769 ppb	0.021 ppb	-0.001 ppb	0.055 ppb	0.105 ppb	117.972 %
Concentration per Run 3	-0.026 ppb	0.130 ppb	4.135 ppb	10.400 ppb	0.018 ppb	0.014 ppb	0.052 ppb	0.091 ppb	114.707 %
Concentration RSD	1.1 %	4.3 %	1.0 %	3.9 %	8.3 %	584.8 %	26.9 %	16.1 %	4.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.052 ppb	0.521 ppb	57.032 ppb	0.037 ppb	99.746 %	0.001 ppb	0.012 ppb	100.959 %	0.041 ppb
Concentration per Run 1	0.065 ppb	0.319 ppb	56.983 ppb	0.021 ppb	97.442 %	0.001 ppb	0.012 ppb	98.092 %	0.031 ppb
Concentration per Run 2	0.014 ppb	0.607 ppb	56.220 ppb	0.059 ppb	100.876 %	0.000 ppb	0.012 ppb	101.368 %	0.047 ppb
Concentration per Run 3	0.077 ppb	0.638 ppb	57.892 ppb	0.031 ppb	100.919 %	0.001 ppb	0.013 ppb	103.419 %	0.045 ppb
Concentration RSD	64.0 %	33.8 %	1.5 %	53.6 %	2.0 %	161.5 %	6.0 %	2.7 %	20.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	2.350 ppb	105.107 %	101.446 %	0.048 ppb	0.018 ppb	99.414 %
Concentration per Run 1	2.339 ppb	102.402 %	98.245 %	0.024 ppb	0.019 ppb	97.494 %
Concentration per Run 2	2.448 ppb	105.891 %	102.743 %	0.057 ppb	0.020 ppb	98.875 %
Concentration per Run 3	2.262 ppb	107.027 %	103.350 %	0.063 ppb	0.015 ppb	101.873 %
Concentration RSD	4.0 %	2.3 %	2.7 %	43.4 %	13.0 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	25	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 7:44:38 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.323 %	101.657 %	58.107 ppb	5,573.955 ppb	5,494.243 ppb	54.482 ppb	5,504.731 ppb	5,466.606 ppb	98.161 %
Concentration per Run 1	98.055 %	100.000 %	57.419 ppb	5,445.884 ppb	5,370.184 ppb	54.554 ppb	5,514.641 ppb	5,348.044 ppb	98.540 %
Concentration per Run 2	95.153 %	102.386 %	58.449 ppb	5,617.821 ppb	5,535.461 ppb	54.976 ppb	5,461.532 ppb	5,511.297 ppb	99.338 %
Concentration per Run 3	92.761 %	102.585 %	58.454 ppb	5,658.159 ppb	5,577.084 ppb	53.918 ppb	5,538.019 ppb	5,540.477 ppb	96.607 %
Recovery Percentage 1			96.845 %	92.899 %	91.571 %	90.804 %	91.746 %	91.110 %	
Concentration RSD	2.8 %	1.4 %	1.0 %	2.0 %	2.0 %	1.0 %	0.7 %	1.9 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	54.936 ppb	56.085 ppb	56.730 ppb	5,751.439 ppb	57.165 ppb	58.626 ppb	57.871 ppb	57.245 ppb	109.638 %
Concentration per Run 1	53.469 ppb	55.091 ppb	54.937 ppb	5,490.332 ppb	55.013 ppb	56.913 ppb	56.309 ppb	54.512 ppb	107.453 %
Concentration per Run 2	55.048 ppb	56.915 ppb	58.491 ppb	5,875.981 ppb	58.654 ppb	59.412 ppb	58.611 ppb	58.001 ppb	111.617 %
Concentration per Run 3	56.290 ppb	56.249 ppb	56.762 ppb	5,888.004 ppb	57.829 ppb	59.552 ppb	58.694 ppb	59.222 ppb	109.844 %
Recovery Percentage 1	91.559 %	93.475 %	94.550 %	95.857 %	95.275 %	97.710 %	96.452 %	95.408 %	
Concentration RSD	2.6 %	1.6 %	3.1 %	3.9 %	3.3 %	2.5 %	2.3 %	4.3 %	1.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	56.437 ppb	56.846 ppb	54.976 ppb	57.414 ppb	100.786 %	59.416 ppb	59.082 ppb	101.358 %	59.660 ppb
Concentration per Run 1	53.565 ppb	53.882 ppb	54.325 ppb	58.055 ppb	101.958 %	59.392 ppb	59.286 ppb	101.661 %	60.136 ppb
Concentration per Run 2	57.866 ppb	58.169 ppb	55.080 ppb	56.403 ppb	100.611 %	59.669 ppb	58.967 ppb	101.696 %	59.071 ppb
Concentration per Run 3	57.878 ppb	58.486 ppb	55.521 ppb	57.783 ppb	99.790 %	59.186 ppb	58.994 ppb	100.716 %	59.772 ppb
Recovery Percentage 1	94.061 %	94.743 %	91.626 %	95.690 %		99.026 %	98.470 %		99.433 %
Concentration RSD	4.4 %	4.5 %	1.1 %	1.5 %	1.1 %	0.4 %	0.3 %	0.5 %	0.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.638 ppb	103.407 %	102.561 %	60.119 ppb	56.297 ppb	100.585 %
Concentration per Run 1	59.054 ppb	102.150 %	102.142 %	59.997 ppb	56.960 ppb	99.032 %
Concentration per Run 2	58.619 ppb	104.547 %	103.704 %	59.008 ppb	56.085 ppb	101.165 %
Concentration per Run 3	58.241 ppb	103.525 %	101.838 %	61.352 ppb	55.845 ppb	101.558 %
Recovery Percentage 1	97.730 %			100.199 %	93.828 %	
Concentration RSD	0.7 %	1.2 %	1.0 %	2.0 %	1.0 %	1.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	26	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 7:49:09 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.517 %	104.341 %	0.011 ppb	-2.476 ppb	-0.430 ppb	-0.727 ppb	-3.388 ppb	0.057 ppb	93.891 %
Concentration per Run 1	98.581 %	105.467 %	0.012 ppb	-0.842 ppb	-1.132 ppb	-0.679 ppb	-4.580 ppb	-0.777 ppb	94.218 %
Concentration per Run 2	98.816 %	107.157 %	0.012 ppb	-4.003 ppb	-0.258 ppb	-0.794 ppb	-4.095 ppb	2.033 ppb	95.404 %
Concentration per Run 3	95.154 %	100.398 %	0.009 ppb	-2.583 ppb	0.099 ppb	-0.708 ppb	-1.490 ppb	-1.084 ppb	92.052 %
Recovery Percentage 1			2.159 %	-2.476 %	-0.615 %	-7.266 %	-3.388 %	0.057 %	
Concentration RSD	2.1 %	3.4 %	17.5 %	63.9 %	147.1 %	8.2 %	49.0 %	3,002.8 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.036 ppb	0.008 ppb	0.075 ppb	6.332 ppb	0.009 ppb	-0.014 ppb	0.014 ppb	-0.110 ppb	108.454 %
Concentration per Run 1	-0.033 ppb	0.013 ppb	0.038 ppb	6.050 ppb	0.004 ppb	-0.026 ppb	0.022 ppb	-0.105 ppb	105.915 %
Concentration per Run 2	-0.033 ppb	0.007 ppb	0.066 ppb	6.830 ppb	0.010 ppb	0.020 ppb	-0.007 ppb	-0.090 ppb	107.988 %
Concentration per Run 3	-0.042 ppb	0.004 ppb	0.120 ppb	6.115 ppb	0.012 ppb	-0.035 ppb	0.026 ppb	-0.135 ppb	111.458 %
Recovery Percentage 1	-0.717 %	0.798 %	7.483 %	12.663 %	1.746 %	-0.692 %	1.390 %	-2.198 %	
Concentration RSD	13.9 %	59.5 %	55.4 %	6.8 %	49.4 %	216.3 %	130.4 %	20.7 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.038 ppb	0.129 ppb	0.007 ppb	0.158 ppb	103.383 %	0.010 ppb	0.008 ppb	102.236 %	0.054 ppb
Concentration per Run 1	0.053 ppb	0.131 ppb	0.007 ppb	0.123 ppb	101.750 %	0.007 ppb	0.010 ppb	100.861 %	0.044 ppb
Concentration per Run 2	0.024 ppb	0.120 ppb	0.004 ppb	0.128 ppb	104.695 %	0.010 ppb	0.008 ppb	102.931 %	0.050 ppb
Concentration per Run 3	0.037 ppb	0.137 ppb	0.010 ppb	0.222 ppb	103.704 %	0.011 ppb	0.005 ppb	102.915 %	0.068 ppb
Recovery Percentage 1	7.593 %	2.589 %	0.069 %	7.886 %		2.388 %	3.869 %		1.354 %
Concentration RSD	38.7 %	7.1 %	44.9 %	35.4 %	1.4 %	21.0 %	33.8 %	1.2 %	23.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.019 ppb	103.773 %	101.020 %	0.427 ppb	0.016 ppb	101.899 %
Concentration per Run 1	0.006 ppb	102.852 %	99.836 %	0.298 ppb	0.015 ppb	100.222 %
Concentration per Run 2	0.037 ppb	103.400 %	101.413 %	0.520 ppb	0.018 ppb	102.004 %
Concentration per Run 3	0.014 ppb	105.067 %	101.812 %	0.463 ppb	0.017 ppb	103.472 %
Recovery Percentage 1	3.808 %			42.702 %	1.648 %	
Concentration RSD	84.4 %	1.1 %	1.0 %	27.0 %	8.1 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 27
Analysis label: wg1902788-1 6020TL
Analysis started at: 4/1/2024 7:55:01 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.208 %	105.368 %	0.004 ppb	-1.766 ppb	0.690 ppb	-0.111 ppb	-2.736 ppb	2.713 ppb	96.462 %
Concentration per Run 1	102.010 %	98.409 %	0.006 ppb	-0.543 ppb	0.894 ppb	0.051 ppb	-1.729 ppb	5.984 ppb	97.637 %
Concentration per Run 2	100.502 %	111.631 %	-0.001 ppb	-2.701 ppb	0.175 ppb	-0.354 ppb	-4.982 ppb	2.041 ppb	97.589 %
Concentration per Run 3	98.112 %	106.064 %	0.006 ppb	-2.053 ppb	1.002 ppb	-0.031 ppb	-1.496 ppb	0.114 ppb	94.160 %
Concentration RSD	2.0 %	6.3 %	100.8 %	62.7 %	65.1 %	192.3 %	71.2 %	110.3 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.059 ppb	0.023 ppb	1.373 ppb	0.378 ppb	0.001 ppb	-0.032 ppb	0.008 ppb	0.017 ppb	111.735 %
Concentration per Run 1	-0.058 ppb	0.030 ppb	1.510 ppb	0.049 ppb	0.001 ppb	-0.046 ppb	0.015 ppb	-0.015 ppb	111.912 %
Concentration per Run 2	-0.059 ppb	0.018 ppb	1.174 ppb	0.093 ppb	0.002 ppb	-0.021 ppb	0.008 ppb	0.073 ppb	114.239 %
Concentration per Run 3	-0.058 ppb	0.020 ppb	1.436 ppb	0.992 ppb	0.000 ppb	-0.031 ppb	0.001 ppb	-0.009 ppb	109.054 %
Concentration RSD	1.0 %	28.0 %	12.8 %	140.9 %	158.6 %	39.1 %	82.8 %	294.5 %	2.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.003 ppb	0.044 ppb	104.269 %	0.000 ppb	0.001 ppb	104.424 %	0.025 ppb
Concentration per Run 1	0.011 ppb	-0.010 ppb	0.004 ppb	0.035 ppb	104.592 %	0.000 ppb	0.003 ppb	102.349 %	0.025 ppb
Concentration per Run 2	-0.028 ppb	-0.012 ppb	0.003 ppb	0.032 ppb	105.132 %	-0.001 ppb	0.001 ppb	105.749 %	0.016 ppb
Concentration per Run 3	0.017 ppb	0.022 ppb	0.002 ppb	0.065 ppb	103.083 %	0.000 ppb	0.000 ppb	105.172 %	0.034 ppb
Concentration RSD	10,420.6 %	19,615.9 %	27.8 %	41.0 %	1.0 %	136.2 %	115.4 %	1.7 %	36.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.014 ppb	106.533 %	105.423 %	0.102 ppb	0.000 ppb	103.375 %
Concentration per Run 1	0.018 ppb	104.113 %	104.627 %	0.052 ppb	0.001 ppb	103.999 %
Concentration per Run 2	0.009 ppb	107.933 %	106.322 %	0.120 ppb	0.000 ppb	102.526 %
Concentration per Run 3	0.017 ppb	107.553 %	105.320 %	0.134 ppb	-0.002 ppb	103.601 %
Concentration RSD	32.7 %	2.0 %	0.8 %	43.0 %	1,039.8 %	0.7 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	28	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1902788-2d10 6020TL	Rack	1		
Analysis started at:	4/1/2024 7:59:30 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.782 %	94.731 %	4.743 ppb	872.168 ppb	906.743 ppb	180.338 ppb	899.624 ppb	828.528 ppb	91.185 %
Concentration per Run 1	94.831 %	92.147 %	4.705 ppb	884.269 ppb	913.609 ppb	180.125 ppb	922.149 ppb	780.029 ppb	92.665 %
Concentration per Run 2	91.964 %	97.415 %	4.745 ppb	851.628 ppb	888.294 ppb	177.068 ppb	862.454 ppb	802.478 ppb	91.002 %
Concentration per Run 3	91.550 %	94.632 %	4.780 ppb	880.608 ppb	918.326 ppb	183.820 ppb	914.269 ppb	903.077 ppb	89.887 %
Concentration RSD	1.9 %	2.8 %	0.8 %	2.1 %	1.8 %	1.9 %	3.6 %	7.9 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	45.025 ppb	18.645 ppb	46.317 ppb	98.708 ppb	44.887 ppb	45.810 ppb	23.084 ppb	45.440 ppb	103.915 %
Concentration per Run 1	46.547 ppb	19.227 ppb	48.164 ppb	99.042 ppb	45.461 ppb	45.605 ppb	23.028 ppb	45.067 ppb	101.704 %
Concentration per Run 2	43.194 ppb	18.008 ppb	44.361 ppb	97.667 ppb	44.810 ppb	45.250 ppb	23.335 ppb	45.605 ppb	106.358 %
Concentration per Run 3	45.335 ppb	18.699 ppb	46.427 ppb	99.416 ppb	44.390 ppb	46.574 ppb	22.890 ppb	45.649 ppb	103.682 %
Concentration RSD	3.8 %	3.3 %	4.1 %	0.9 %	1.2 %	1.5 %	1.0 %	0.7 %	2.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	9.993 ppb	9.796 ppb	83.898 ppb	87.064 ppb	98.831 %	4.606 ppb	4.985 ppb	97.401 %	40.453 ppb
Concentration per Run 1	10.132 ppb	9.477 ppb	85.257 ppb	88.183 ppb	98.059 %	4.659 ppb	5.014 ppb	94.239 %	41.258 ppb
Concentration per Run 2	9.518 ppb	10.100 ppb	82.408 ppb	86.140 ppb	98.906 %	4.628 ppb	5.014 ppb	98.346 %	39.905 ppb
Concentration per Run 3	10.330 ppb	9.809 ppb	84.029 ppb	86.869 ppb	99.529 %	4.529 ppb	4.926 ppb	99.620 %	40.196 ppb
Concentration RSD	4.2 %	3.2 %	1.7 %	1.2 %	0.7 %	1.5 %	1.0 %	2.9 %	1.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	185.821 ppb	100.024 %	97.203 %	11.506 ppb	47.320 ppb	96.170 %
Concentration per Run 1	188.371 ppb	96.831 %	94.909 %	11.510 ppb	47.353 ppb	94.870 %
Concentration per Run 2	182.999 ppb	101.075 %	98.495 %	11.613 ppb	47.618 ppb	96.040 %
Concentration per Run 3	186.093 ppb	102.167 %	98.205 %	11.395 ppb	46.989 ppb	97.600 %
Concentration RSD	1.5 %	2.8 %	2.0 %	0.9 %	0.7 %	1.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 29
Analysis label: wg1902788-3d10 6020TL
Analysis started at: 4/1/2024 8:04:00 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 12
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.254 %	98.807 %	4.778 ppb	3,593.135 ppb	4,390.022 ppb	209.506 ppb	1,691.332 ppb	13,410.660 ppb	89.158 %
Concentration per Run 1	93.246 %	97.217 %	4.784 ppb	3,621.648 ppb	4,426.533 ppb	212.914 ppb	1,702.600 ppb	13,680.053 ppb	91.318 %
Concentration per Run 2	92.254 %	94.831 %	4.683 ppb	3,785.557 ppb	4,584.813 ppb	216.473 ppb	1,739.538 ppb	13,518.525 ppb	88.645 %
Concentration per Run 3	91.262 %	104.374 %	4.867 ppb	3,372.200 ppb	4,158.721 ppb	199.130 ppb	1,631.859 ppb	13,033.403 ppb	87.512 %
Concentration RSD	1.1 %	5.0 %	1.9 %	5.8 %	4.9 %	4.4 %	3.2 %	2.5 %	2.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	42.125 ppb	17.298 ppb	53.033 ppb	175.692 ppb	43.270 ppb	43.797 ppb	22.096 ppb	44.068 ppb	101.770 %
Concentration per Run 1	42.483 ppb	17.690 ppb	54.538 ppb	176.912 ppb	44.600 ppb	45.825 ppb	22.562 ppb	45.423 ppb	99.234 %
Concentration per Run 2	42.792 ppb	17.565 ppb	52.987 ppb	178.769 ppb	44.024 ppb	44.728 ppb	22.637 ppb	45.151 ppb	101.622 %
Concentration per Run 3	41.101 ppb	16.640 ppb	51.572 ppb	171.394 ppb	41.185 ppb	40.837 ppb	21.088 ppb	41.629 ppb	104.455 %
Concentration RSD	2.1 %	3.3 %	2.8 %	2.2 %	4.2 %	6.0 %	4.0 %	4.8 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.476 ppb	9.770 ppb	406.206 ppb	86.213 ppb	97.241 %	4.543 ppb	4.985 ppb	97.922 %	42.718 ppb
Concentration per Run 1	11.928 ppb	10.399 ppb	418.083 ppb	87.290 ppb	94.497 %	4.706 ppb	5.117 ppb	94.606 %	44.584 ppb
Concentration per Run 2	11.772 ppb	9.659 ppb	410.362 ppb	87.544 ppb	97.588 %	4.507 ppb	5.016 ppb	98.129 %	42.623 ppb
Concentration per Run 3	10.727 ppb	9.250 ppb	390.174 ppb	83.804 ppb	99.638 %	4.415 ppb	4.821 ppb	101.033 %	40.947 ppb
Concentration RSD	5.7 %	6.0 %	3.5 %	2.4 %	2.7 %	3.3 %	3.0 %	3.3 %	4.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	338.729 ppb	100.224 %	98.163 %	10.931 ppb	45.015 ppb	98.173 %
Concentration per Run 1	351.787 ppb	95.542 %	95.603 %	11.424 ppb	46.899 ppb	93.321 %
Concentration per Run 2	338.276 ppb	102.173 %	99.210 %	11.123 ppb	45.797 ppb	97.368 %
Concentration per Run 3	326.126 ppb	102.955 %	99.675 %	10.245 ppb	42.349 ppb	103.831 %
Concentration RSD	3.8 %	4.1 %	2.3 %	5.6 %	5.3 %	5.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	30	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1902788-4d10 6020TL	Rack	1		
Analysis started at:	4/1/2024 8:08:30 AM	Vial	13		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.992 %	102.386 %	4.613 ppb	3,580.156 ppb	4,268.680 ppb	208.530 ppb	1,665.448 ppb	13,357.515 ppb	93.699 %
Concentration per Run 1	94.877 %	99.304 %	4.681 ppb	3,595.834 ppb	4,396.304 ppb	211.001 ppb	1,635.298 ppb	13,521.095 ppb	94.437 %
Concentration per Run 2	93.887 %	99.901 %	4.597 ppb	3,770.138 ppb	4,344.555 ppb	212.334 ppb	1,718.478 ppb	13,586.008 ppb	92.762 %
Concentration per Run 3	93.212 %	107.953 %	4.560 ppb	3,374.495 ppb	4,065.182 ppb	202.255 ppb	1,642.568 ppb	12,965.441 ppb	93.898 %
Concentration RSD	0.9 %	4.7 %	1.3 %	5.5 %	4.2 %	2.6 %	2.8 %	2.6 %	0.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	42.545 ppb	17.147 ppb	53.370 ppb	183.406 ppb	43.720 ppb	43.586 ppb	22.248 ppb	44.876 ppb	101.661 %
Concentration per Run 1	41.982 ppb	16.871 ppb	53.626 ppb	181.205 ppb	43.836 ppb	44.177 ppb	22.423 ppb	44.798 ppb	101.336 %
Concentration per Run 2	43.990 ppb	17.698 ppb	55.243 ppb	194.113 ppb	44.779 ppb	44.991 ppb	22.821 ppb	46.006 ppb	99.914 %
Concentration per Run 3	41.663 ppb	16.873 ppb	51.240 ppb	174.900 ppb	42.544 ppb	41.591 ppb	21.500 ppb	43.823 ppb	103.735 %
Concentration RSD	3.0 %	2.8 %	3.8 %	5.3 %	2.6 %	4.1 %	3.0 %	2.4 %	1.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.785 ppb	10.185 ppb	403.294 ppb	86.696 ppb	98.814 %	4.488 ppb	4.881 ppb	98.244 %	42.697 ppb
Concentration per Run 1	11.838 ppb	9.930 ppb	402.316 ppb	86.993 ppb	98.414 %	4.615 ppb	4.965 ppb	96.092 %	43.316 ppb
Concentration per Run 2	12.148 ppb	10.381 ppb	407.067 ppb	86.267 ppb	98.743 %	4.381 ppb	4.845 ppb	99.210 %	42.796 ppb
Concentration per Run 3	11.368 ppb	10.245 ppb	400.498 ppb	86.827 ppb	99.285 %	4.467 ppb	4.834 ppb	99.431 %	41.979 ppb
Concentration RSD	3.3 %	2.3 %	0.8 %	0.4 %	0.4 %	2.6 %	1.5 %	1.9 %	1.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	340.511 ppb	101.343 %	99.519 %	11.160 ppb	46.480 ppb	97.208 %
Concentration per Run 1	346.833 ppb	99.508 %	97.691 %	11.048 ppb	46.506 ppb	96.302 %
Concentration per Run 2	341.692 ppb	101.186 %	99.719 %	11.152 ppb	46.243 ppb	98.230 %
Concentration per Run 3	333.006 ppb	103.334 %	101.147 %	11.279 ppb	46.692 ppb	97.092 %
Concentration RSD	2.1 %	1.9 %	1.7 %	1.0 %	0.5 %	1.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	31	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1902788-5d10 6020TL	Rack	1		
Analysis started at:	4/1/2024 8:12:55 AM	Vial	14		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.461 %	98.343 %	47.939 ppb	7,651.109 ppb	8,173.630 ppb	85.730 ppb	5,316.569 ppb	17,484.072 ppb	91.814 %
Concentration per Run 1	92.321 %	89.861 %	47.150 ppb	8,210.331 ppb	8,687.464 ppb	91.870 ppb	5,553.729 ppb	18,043.319 ppb	93.444 %
Concentration per Run 2	89.478 %	101.889 %	48.246 ppb	7,456.547 ppb	7,931.350 ppb	81.168 ppb	5,253.908 ppb	17,184.240 ppb	91.327 %
Concentration per Run 3	86.585 %	103.280 %	48.421 ppb	7,286.450 ppb	7,902.075 ppb	84.152 ppb	5,142.070 ppb	17,224.657 ppb	90.672 %
Concentration RSD	3.2 %	7.5 %	1.4 %	6.4 %	5.4 %	6.4 %	4.0 %	2.8 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	44.577 ppb	45.027 ppb	56.064 ppb	4,672.486 ppb	46.390 ppb	46.629 ppb	45.791 ppb	47.223 ppb	98.049 %
Concentration per Run 1	44.829 ppb	46.220 ppb	58.214 ppb	4,769.036 ppb	47.302 ppb	47.560 ppb	45.875 ppb	47.616 ppb	97.737 %
Concentration per Run 2	44.286 ppb	44.416 ppb	54.828 ppb	4,653.597 ppb	46.982 ppb	46.995 ppb	45.783 ppb	47.693 ppb	96.776 %
Concentration per Run 3	44.616 ppb	44.444 ppb	55.148 ppb	4,594.824 ppb	44.885 ppb	45.332 ppb	45.714 ppb	46.359 ppb	99.634 %
Concentration RSD	0.6 %	2.3 %	3.3 %	1.9 %	2.8 %	2.5 %	0.2 %	1.6 %	1.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	45.699 ppb	44.499 ppb	385.222 ppb	48.323 ppb	95.319 %	0.824 ppb	47.144 ppb	97.319 %	48.100 ppb
Concentration per Run 1	46.023 ppb	44.593 ppb	388.889 ppb	48.657 ppb	94.524 %	0.818 ppb	48.027 ppb	96.099 %	48.168 ppb
Concentration per Run 2	46.252 ppb	43.541 ppb	385.833 ppb	48.044 ppb	95.994 %	0.830 ppb	46.909 ppb	96.839 %	48.379 ppb
Concentration per Run 3	44.821 ppb	45.365 ppb	380.945 ppb	48.268 ppb	95.440 %	0.823 ppb	46.498 ppb	99.020 %	47.752 ppb
Concentration RSD	1.7 %	2.1 %	1.0 %	0.6 %	0.8 %	0.8 %	1.7 %	1.6 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	211.573 ppb	98.092 %	96.082 %	47.210 ppb	45.247 ppb	94.561 %
Concentration per Run 1	213.538 ppb	96.631 %	93.468 %	48.309 ppb	46.291 ppb	91.879 %
Concentration per Run 2	213.147 ppb	98.831 %	98.645 %	46.568 ppb	44.945 ppb	95.444 %
Concentration per Run 3	208.034 ppb	98.812 %	96.133 %	46.751 ppb	44.506 ppb	96.359 %
Concentration RSD	1.5 %	1.3 %	2.7 %	2.0 %	2.1 %	2.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 32
Analysis label: wg1902788-6d5 6020TL
Analysis started at: 4/1/2024 8:17:22 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 15
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.725 %	100.066 %	0.011 ppb	6,075.539 ppb	7,238.777 ppb	76.859 ppb	1,699.275 ppb	25,288.278 ppb	94.303 %
Concentration per Run 1	95.662 %	91.948 %	0.012 ppb	6,387.266 ppb	7,567.495 ppb	82.759 ppb	1,766.734 ppb	25,536.335 ppb	95.564 %
Concentration per Run 2	93.748 %	103.380 %	0.012 ppb	5,827.784 ppb	6,987.085 ppb	72.439 ppb	1,693.909 ppb	25,402.586 ppb	94.413 %
Concentration per Run 3	91.766 %	104.871 %	0.009 ppb	6,011.568 ppb	7,161.751 ppb	75.378 ppb	1,637.183 ppb	24,925.913 ppb	92.934 %
Concentration RSD	2.1 %	7.1 %	14.1 %	4.7 %	4.1 %	6.9 %	3.8 %	1.3 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.276 ppb	0.179 ppb	19.517 ppb	182.754 ppb	0.756 ppb	1.273 ppb	0.441 ppb	2.309 ppb	104.645 %
Concentration per Run 1	0.256 ppb	0.212 ppb	19.937 ppb	187.298 ppb	0.769 ppb	1.230 ppb	0.459 ppb	2.368 ppb	102.835 %
Concentration per Run 2	0.270 ppb	0.165 ppb	19.072 ppb	180.724 ppb	0.711 ppb	1.258 ppb	0.416 ppb	2.164 ppb	107.448 %
Concentration per Run 3	0.302 ppb	0.159 ppb	19.543 ppb	180.238 ppb	0.787 ppb	1.331 ppb	0.450 ppb	2.395 ppb	103.651 %
Concentration RSD	8.5 %	16.3 %	2.2 %	2.2 %	5.2 %	4.1 %	5.1 %	5.5 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	2.362 ppb	0.163 ppb	650.532 ppb	0.552 ppb	96.077 %	0.001 ppb	0.007 ppb	95.911 %	0.318 ppb
Concentration per Run 1	2.322 ppb	0.188 ppb	653.707 ppb	0.530 ppb	93.132 %	0.001 ppb	0.007 ppb	94.099 %	0.269 ppb
Concentration per Run 2	2.360 ppb	0.073 ppb	639.628 ppb	0.563 ppb	97.943 %	0.001 ppb	0.012 ppb	96.127 %	0.316 ppb
Concentration per Run 3	2.404 ppb	0.227 ppb	658.262 ppb	0.564 ppb	97.155 %	0.000 ppb	0.003 ppb	97.506 %	0.371 ppb
Concentration RSD	1.7 %	49.1 %	1.5 %	3.5 %	2.7 %	64.0 %	60.0 %	1.8 %	16.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	330.217 ppb	98.309 %	96.275 %	0.410 ppb	0.279 ppb	91.511 %
Concentration per Run 1	333.383 ppb	93.066 %	91.269 %	0.280 ppb	0.284 ppb	89.736 %
Concentration per Run 2	327.098 ppb	100.972 %	98.274 %	0.498 ppb	0.276 ppb	92.133 %
Concentration per Run 3	330.171 ppb	100.891 %	99.284 %	0.452 ppb	0.275 ppb	92.666 %
Concentration RSD	1.0 %	4.6 %	4.5 %	28.0 %	1.8 %	1.7 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	33	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2415362-01 6020TL	Rack	1		
Analysis started at:	4/1/2024 8:21:48 AM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.000 %	99.205 %	0.032 ppb	31,839.505 ppb	37,896.739 ppb	387.564 ppb	9,092.230 ppb	125,060.624 ppb	92.625 %
Concentration per Run 1	93.260 %	95.427 %	0.031 ppb	32,875.509 ppb	39,516.930 ppb	399.496 ppb	9,531.830 ppb	132,602.197 ppb	92.492 %
Concentration per Run 2	92.955 %	98.807 %	0.032 ppb	31,702.815 ppb	37,876.252 ppb	386.013 ppb	8,980.028 ppb	124,081.297 ppb	94.176 %
Concentration per Run 3	89.784 %	103.380 %	0.032 ppb	30,940.192 ppb	36,297.035 ppb	377.184 ppb	8,764.832 ppb	118,498.379 ppb	91.207 %
Concentration RSD	2.1 %	4.0 %	2.8 %	3.1 %	4.2 %	2.9 %	4.4 %	5.7 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.647 ppb	1.056 ppb	101.812 ppb	917.970 ppb	3.966 ppb	6.768 ppb	2.433 ppb	11.177 ppb	97.389 %
Concentration per Run 1	1.756 ppb	1.129 ppb	106.855 ppb	966.729 ppb	4.043 ppb	6.944 ppb	2.505 ppb	11.410 ppb	93.461 %
Concentration per Run 2	1.614 ppb	1.094 ppb	103.681 ppb	925.314 ppb	4.107 ppb	6.751 ppb	2.468 ppb	11.417 ppb	94.190 %
Concentration per Run 3	1.572 ppb	0.945 ppb	94.899 ppb	861.866 ppb	3.749 ppb	6.609 ppb	2.327 ppb	10.704 ppb	104.515 %
Concentration RSD	5.8 %	9.2 %	6.1 %	5.8 %	4.8 %	2.5 %	3.9 %	3.7 %	6.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.989 ppb	0.440 ppb	3,861.542 ppb	1.794 ppb	90.856 %	0.007 ppb	0.023 ppb	94.500 %	0.709 ppb
Concentration per Run 1	12.552 ppb	0.348 ppb	3,818.390 ppb	1.729 ppb	86.446 %	0.007 ppb	0.016 ppb	88.491 %	0.713 ppb
Concentration per Run 2	11.934 ppb	0.431 ppb	3,953.853 ppb	1.974 ppb	91.674 %	0.008 ppb	0.029 ppb	95.521 %	0.694 ppb
Concentration per Run 3	11.479 ppb	0.540 ppb	3,812.384 ppb	1.678 ppb	94.448 %	0.007 ppb	0.024 ppb	99.487 %	0.720 ppb
Concentration RSD	4.5 %	21.9 %	2.1 %	8.8 %	4.5 %	4.3 %	26.4 %	5.9 %	1.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1,694.437 ppb	96.518 %	94.752 %	0.180 ppb	1.377 ppb	85.990 %
Concentration per Run 1	1,711.667 ppb	91.870 %	89.651 %	0.112 ppb	1.375 ppb	83.757 %
Concentration per Run 2	1,707.069 ppb	95.893 %	94.224 %	0.213 ppb	1.366 ppb	85.528 %
Concentration per Run 3	1,664.574 ppb	101.792 %	100.382 %	0.213 ppb	1.390 ppb	88.684 %
Concentration RSD	1.5 %	5.2 %	5.7 %	32.4 %	0.9 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	34	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417426-12 6020TL	Rack	1		
Analysis started at:	4/1/2024 8:27:29 AM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.966 %	101.027 %	0.003 ppb	-3.551 ppb	1.858 ppb	1.883 ppb	30.005 ppb	24.878 ppb	97.683 %
Concentration per Run 1	101.302 %	96.322 %	0.003 ppb	-2.158 ppb	2.463 ppb	2.083 ppb	33.965 ppb	26.297 ppb	98.788 %
Concentration per Run 2	99.452 %	107.157 %	0.002 ppb	-5.347 ppb	1.851 ppb	1.760 ppb	26.402 ppb	23.398 ppb	99.500 %
Concentration per Run 3	96.144 %	99.602 %	0.003 ppb	-3.148 ppb	1.261 ppb	1.806 ppb	29.648 ppb	24.939 ppb	94.761 %
Concentration RSD	2.6 %	5.5 %	35.4 %	46.0 %	32.3 %	9.3 %	12.6 %	5.8 %	2.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.025 ppb	0.057 ppb	0.072 ppb	2.747 ppb	0.004 ppb	0.258 ppb	0.115 ppb	-0.026 ppb	101.028 %
Concentration per Run 1	0.016 ppb	0.061 ppb	0.058 ppb	2.188 ppb	0.006 ppb	0.262 ppb	0.135 ppb	0.014 ppb	100.722 %
Concentration per Run 2	0.045 ppb	0.046 ppb	0.075 ppb	2.874 ppb	0.002 ppb	0.225 ppb	0.088 ppb	-0.050 ppb	101.688 %
Concentration per Run 3	0.015 ppb	0.063 ppb	0.083 ppb	3.179 ppb	0.003 ppb	0.287 ppb	0.121 ppb	-0.041 ppb	100.673 %
Concentration RSD	67.4 %	16.7 %	17.9 %	18.5 %	63.9 %	12.2 %	21.1 %	136.5 %	0.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.032 ppb	0.001 ppb	0.244 ppb	0.054 ppb	98.679 %	0.000 ppb	0.001 ppb	98.985 %	0.078 ppb
Concentration per Run 1	0.012 ppb	-0.020 ppb	0.233 ppb	0.062 ppb	96.751 %	0.000 ppb	0.000 ppb	95.521 %	0.058 ppb
Concentration per Run 2	0.033 ppb	-0.018 ppb	0.244 ppb	0.052 ppb	99.891 %	-0.001 ppb	0.001 ppb	98.138 %	0.085 ppb
Concentration per Run 3	0.052 ppb	0.039 ppb	0.255 ppb	0.049 ppb	99.396 %	0.000 ppb	0.001 ppb	103.295 %	0.091 ppb
Concentration RSD	61.5 %	6,613.3 %	4.5 %	12.1 %	1.7 %	121.1 %	86.6 %	4.0 %	23.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.252 ppb	99.746 %	98.594 %	0.066 ppb	0.010 ppb	96.030 %
Concentration per Run 1	0.229 ppb	96.756 %	96.029 %	0.033 ppb	0.013 ppb	94.433 %
Concentration per Run 2	0.260 ppb	101.398 %	98.135 %	0.076 ppb	0.010 ppb	95.029 %
Concentration per Run 3	0.269 ppb	101.083 %	101.620 %	0.089 ppb	0.009 ppb	98.627 %
Concentration RSD	8.4 %	2.6 %	2.9 %	44.0 %	22.2 %	2.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	35	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 8:32:25 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.003 %	94.731 %	58.926 ppb	5,459.279 ppb	5,780.579 ppb	56.724 ppb	5,650.416 ppb	5,588.300 ppb	93.585 %
Concentration per Run 1	89.033 %	89.364 %	58.395 ppb	5,312.114 ppb	5,746.606 ppb	55.715 ppb	5,639.773 ppb	5,647.500 ppb	90.766 %
Concentration per Run 2	90.176 %	94.334 %	59.595 ppb	5,343.245 ppb	5,817.023 ppb	56.020 ppb	5,600.060 ppb	5,507.187 ppb	96.937 %
Concentration per Run 3	90.799 %	100.497 %	58.789 ppb	5,722.479 ppb	5,778.109 ppb	58.438 ppb	5,711.414 ppb	5,610.213 ppb	93.051 %
Recovery Percentage 1			98.210 %	90.988 %	96.343 %	94.540 %	94.174 %	93.138 %	
Concentration RSD	1.0 %	5.9 %	1.0 %	4.2 %	0.6 %	2.6 %	1.0 %	1.3 %	3.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	57.408 ppb	56.943 ppb	57.071 ppb	5,644.981 ppb	56.757 ppb	57.092 ppb	56.919 ppb	58.335 ppb	96.644 %
Concentration per Run 1	56.527 ppb	56.676 ppb	56.662 ppb	5,575.230 ppb	56.989 ppb	56.546 ppb	56.670 ppb	58.444 ppb	94.526 %
Concentration per Run 2	57.957 ppb	57.849 ppb	57.449 ppb	5,701.430 ppb	57.466 ppb	59.789 ppb	58.306 ppb	58.185 ppb	95.461 %
Concentration per Run 3	57.738 ppb	56.304 ppb	57.104 ppb	5,658.283 ppb	55.817 ppb	54.940 ppb	55.779 ppb	58.375 ppb	99.944 %
Recovery Percentage 1	95.679 %	94.905 %	95.119 %	94.083 %	94.596 %	95.153 %	94.864 %	97.225 %	
Concentration RSD	1.3 %	1.4 %	0.7 %	1.1 %	1.5 %	4.3 %	2.3 %	0.2 %	3.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	56.481 ppb	57.021 ppb	57.070 ppb	58.454 ppb	93.336 %	58.753 ppb	59.238 ppb	95.646 %	60.212 ppb
Concentration per Run 1	56.171 ppb	53.710 ppb	55.827 ppb	58.433 ppb	90.194 %	60.049 ppb	59.451 ppb	92.141 %	60.683 ppb
Concentration per Run 2	57.232 ppb	58.284 ppb	56.558 ppb	58.559 ppb	94.594 %	58.712 ppb	59.646 ppb	93.681 %	60.767 ppb
Concentration per Run 3	56.041 ppb	59.068 ppb	58.826 ppb	58.370 ppb	95.219 %	57.498 ppb	58.617 ppb	101.116 %	59.185 ppb
Recovery Percentage 1	94.135 %	95.034 %	95.117 %	97.424 %		97.921 %	98.730 %		100.353 %
Concentration RSD	1.2 %	5.1 %	2.7 %	0.2 %	2.9 %	2.2 %	0.9 %	5.0 %	1.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.267 ppb	98.270 %	95.765 %	58.330 ppb	54.717 ppb	95.796 %
Concentration per Run 1	58.597 ppb	94.732 %	91.202 %	58.861 ppb	54.808 ppb	92.439 %
Concentration per Run 2	57.790 ppb	99.403 %	96.911 %	57.694 ppb	54.647 ppb	96.125 %
Concentration per Run 3	58.414 ppb	100.675 %	99.182 %	58.437 ppb	54.697 ppb	98.822 %
Recovery Percentage 1	97.112 %			97.217 %	91.195 %	
Concentration RSD	0.7 %	3.2 %	4.3 %	1.0 %	0.2 %	3.3 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	36	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 8:36:56 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.360 %	91.451 %	0.007 ppb	-4.385 ppb	-0.901 ppb	-0.711 ppb	-4.556 ppb	1.020 ppb	78.887 %
Concentration per Run 1	81.886 %	84.493 %	0.007 ppb	-3.014 ppb	-0.860 ppb	-0.725 ppb	-1.885 ppb	-0.839 ppb	80.963 %
Concentration per Run 2	80.304 %	96.819 %	0.007 ppb	-5.138 ppb	-0.763 ppb	-0.742 ppb	-7.219 ppb	2.559 ppb	79.334 %
Concentration per Run 3	75.890 %	93.042 %	0.007 ppb	-5.002 ppb	-1.082 ppb	-0.666 ppb	-4.565 ppb	1.340 ppb	76.364 %
Recovery Percentage 1			1.334 %	-4.385 %	-1.288 %	-7.110 %	-4.556 %	1.020 %	
Concentration RSD	3.9 %	6.9 %	2.1 %	27.1 %	18.2 %	5.6 %	58.5 %	168.8 %	3.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.020 ppb	-0.004 ppb	0.023 ppb	5.107 ppb	0.002 ppb	-0.044 ppb	0.017 ppb	-0.107 ppb	97.582 %
Concentration per Run 1	-0.010 ppb	-0.004 ppb	0.008 ppb	5.355 ppb	0.002 ppb	-0.049 ppb	0.016 ppb	-0.096 ppb	96.213 %
Concentration per Run 2	-0.028 ppb	-0.008 ppb	0.040 ppb	5.182 ppb	0.003 ppb	-0.050 ppb	0.010 ppb	-0.104 ppb	95.586 %
Concentration per Run 3	-0.022 ppb	-0.001 ppb	0.022 ppb	4.784 ppb	0.002 ppb	-0.032 ppb	0.024 ppb	-0.121 ppb	100.948 %
Recovery Percentage 1	-0.396 %	-0.420 %	2.309 %	10.214 %	0.453 %	-2.190 %	1.667 %	-2.146 %	
Concentration RSD	47.3 %	84.3 %	68.3 %	5.7 %	29.2 %	22.8 %	40.1 %	12.0 %	3.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.026 ppb	0.137 ppb	0.003 ppb	0.191 ppb	94.470 %	0.003 ppb	0.003 ppb	94.320 %	0.060 ppb
Concentration per Run 1	-0.007 ppb	0.085 ppb	0.000 ppb	0.155 ppb	94.132 %	0.003 ppb	0.003 ppb	92.433 %	0.036 ppb
Concentration per Run 2	0.052 ppb	0.104 ppb	0.003 ppb	0.183 ppb	95.452 %	0.003 ppb	0.002 ppb	93.761 %	0.065 ppb
Concentration per Run 3	0.032 ppb	0.221 ppb	0.005 ppb	0.234 ppb	93.824 %	0.002 ppb	0.002 ppb	96.767 %	0.080 ppb
Recovery Percentage 1	5.121 %	2.734 %	0.026 %	9.525 %		0.663 %	1.281 %		1.503 %
Concentration RSD	116.5 %	53.9 %	86.6 %	21.2 %	0.9 %	19.7 %	26.1 %	2.4 %	37.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.010 ppb	95.586 %	94.429 %	0.428 ppb	0.006 ppb	94.852 %
Concentration per Run 1	0.017 ppb	94.435 %	92.604 %	0.289 ppb	0.006 ppb	93.253 %
Concentration per Run 2	0.008 ppb	97.493 %	95.265 %	0.527 ppb	0.004 ppb	95.561 %
Concentration per Run 3	0.004 ppb	94.830 %	95.418 %	0.467 ppb	0.007 ppb	95.743 %
Recovery Percentage 1	1.914 %			42.764 %	0.565 %	
Concentration RSD	71.5 %	1.7 %	1.7 %	28.9 %	21.5 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	37	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1897634-1d2 A2-6020T	Rack	1		
Analysis started at:	4/1/2024 8:50:03 AM	Vial	17		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.686 %	99.337 %	0.028 ppb	28,410.097 ppb	801.205 ppb	751.954 ppb	821.459 ppb	2,082.263 ppb	93.518 %
Concentration per Run 1	95.277 %	99.404 %	0.027 ppb	28,892.829 ppb	832.597 ppb	797.118 ppb	873.425 ppb	2,142.587 ppb	94.830 %
Concentration per Run 2	94.049 %	98.907 %	0.027 ppb	27,773.717 ppb	773.548 ppb	718.952 ppb	783.527 ppb	2,025.190 ppb	94.084 %
Concentration per Run 3	91.732 %	99.702 %	0.030 ppb	28,563.743 ppb	797.470 ppb	739.793 ppb	807.424 ppb	2,079.013 ppb	91.641 %
Concentration RSD	1.9 %	0.4 %	6.0 %	2.0 %	3.7 %	5.4 %	5.7 %	2.8 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.031 ppb	1.357 ppb	0.815 ppb	36.852 ppb	0.033 ppb	0.221 ppb	2.297 ppb	5.081 ppb	98.350 %
Concentration per Run 1	0.011 ppb	1.400 ppb	0.914 ppb	34.970 ppb	0.042 ppb	0.228 ppb	2.273 ppb	5.039 ppb	101.091 %
Concentration per Run 2	0.035 ppb	1.405 ppb	0.708 ppb	38.120 ppb	0.032 ppb	0.245 ppb	2.300 ppb	5.034 ppb	94.964 %
Concentration per Run 3	0.046 ppb	1.266 ppb	0.822 ppb	37.467 ppb	0.025 ppb	0.189 ppb	2.320 ppb	5.170 ppb	98.994 %
Concentration RSD	59.0 %	5.8 %	12.6 %	4.5 %	25.6 %	12.8 %	1.0 %	1.5 %	3.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.033 ppb	0.027 ppb	4.341 ppb	0.120 ppb	90.541 %	0.347 ppb	0.002 ppb	93.858 %	0.091 ppb
Concentration per Run 1	0.023 ppb	0.011 ppb	4.509 ppb	0.121 ppb	91.102 %	0.349 ppb	0.003 ppb	98.174 %	0.082 ppb
Concentration per Run 2	0.032 ppb	0.061 ppb	4.406 ppb	0.124 ppb	90.215 %	0.353 ppb	0.001 ppb	93.977 %	0.098 ppb
Concentration per Run 3	0.045 ppb	0.010 ppb	4.109 ppb	0.116 ppb	90.306 %	0.340 ppb	0.002 ppb	89.422 %	0.092 ppb
Concentration RSD	33.9 %	108.2 %	4.8 %	3.2 %	0.5 %	1.8 %	47.9 %	4.7 %	9.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	4.071 ppb	96.852 %	95.035 %	0.065 ppb	0.566 ppb	95.646 %
Concentration per Run 1	4.104 ppb	98.285 %	97.618 %	0.035 ppb	0.567 ppb	95.860 %
Concentration per Run 2	3.958 ppb	97.000 %	94.495 %	0.077 ppb	0.552 ppb	95.975 %
Concentration per Run 3	4.150 ppb	95.271 %	92.992 %	0.084 ppb	0.578 ppb	95.101 %
Concentration RSD	2.5 %	1.6 %	2.5 %	40.5 %	2.3 %	0.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	38	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1897634-2d10 A2-6020T	Rack	1		
Analysis started at:	4/1/2024 8:54:30 AM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.747 %	95.460 %	9.903 ppb	7,504.520 ppb	2,043.260 ppb	551.595 ppb	2,030.239 ppb	2,021.891 ppb	94.915 %
Concentration per Run 1	94.264 %	95.427 %	9.909 ppb	7,856.716 ppb	2,134.708 ppb	586.191 ppb	2,192.979 ppb	2,126.346 ppb	95.611 %
Concentration per Run 2	92.528 %	97.018 %	9.959 ppb	7,328.736 ppb	2,002.184 ppb	536.660 ppb	1,960.906 ppb	2,045.364 ppb	94.415 %
Concentration per Run 3	91.448 %	93.936 %	9.841 ppb	7,328.108 ppb	1,992.888 ppb	531.935 ppb	1,936.834 ppb	1,893.965 ppb	94.720 %
Concentration RSD	1.5 %	1.6 %	0.6 %	4.1 %	3.9 %	5.4 %	7.0 %	5.8 %	0.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	91.607 ppb	37.339 ppb	94.736 ppb	202.596 ppb	93.755 ppb	95.348 ppb	48.011 ppb	95.279 ppb	99.568 %
Concentration per Run 1	94.520 ppb	37.919 ppb	99.279 ppb	204.441 ppb	93.769 ppb	96.240 ppb	49.082 ppb	96.412 ppb	100.802 %
Concentration per Run 2	89.818 ppb	37.238 ppb	92.292 ppb	196.326 ppb	94.982 ppb	94.819 ppb	47.837 ppb	94.995 ppb	98.967 %
Concentration per Run 3	90.482 ppb	36.859 ppb	92.637 ppb	207.021 ppb	92.516 ppb	94.985 ppb	47.112 ppb	94.429 ppb	98.936 %
Concentration RSD	2.8 %	1.4 %	4.2 %	2.8 %	1.3 %	0.8 %	2.1 %	1.1 %	1.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	21.222 ppb	21.652 ppb	188.619 ppb	190.044 ppb	96.740 %	9.703 ppb	10.279 ppb	97.724 %	42.989 ppb
Concentration per Run 1	21.593 ppb	22.196 ppb	196.094 ppb	194.928 ppb	94.714 %	9.838 ppb	10.480 ppb	97.608 %	43.498 ppb
Concentration per Run 2	21.100 ppb	22.448 ppb	182.537 ppb	186.789 ppb	96.792 %	9.655 ppb	10.356 ppb	96.106 %	42.881 ppb
Concentration per Run 3	20.973 ppb	20.312 ppb	187.227 ppb	188.416 ppb	98.716 %	9.617 ppb	10.000 ppb	99.460 %	42.587 ppb
Concentration RSD	1.5 %	5.4 %	3.7 %	2.3 %	2.1 %	1.2 %	2.4 %	1.7 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	394.236 ppb	99.799 %	97.406 %	23.998 ppb	103.795 ppb	96.198 %
Concentration per Run 1	411.044 ppb	98.071 %	98.531 %	24.118 ppb	108.362 ppb	96.470 %
Concentration per Run 2	389.568 ppb	98.962 %	95.992 %	24.323 ppb	106.249 ppb	96.476 %
Concentration per Run 3	382.097 ppb	102.364 %	97.694 %	23.552 ppb	96.774 ppb	95.649 %
Concentration RSD	3.8 %	2.3 %	1.3 %	1.7 %	5.9 %	0.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	39	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1897634-3d10 A2-6020T	Rack	1		
Analysis started at:	4/1/2024 8:58:57 AM	Vial	19		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.428 %	96.686 %	10.011 ppb	7,954.955 ppb	2,086.799 ppb	568.807 ppb	2,081.046 ppb	2,174.715 ppb	91.815 %
Concentration per Run 1	92.189 %	98.509 %	9.937 ppb	7,903.957 ppb	2,087.697 ppb	578.631 ppb	2,115.783 ppb	2,160.686 ppb	91.667 %
Concentration per Run 2	91.016 %	93.141 %	10.084 ppb	8,154.629 ppb	2,091.812 ppb	564.394 ppb	2,079.220 ppb	2,247.254 ppb	92.432 %
Concentration per Run 3	91.080 %	98.409 %	10.011 ppb	7,806.279 ppb	2,080.886 ppb	563.396 ppb	2,048.137 ppb	2,116.207 ppb	91.347 %
Concentration RSD	0.7 %	3.2 %	0.7 %	2.3 %	0.3 %	1.5 %	1.6 %	3.1 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	92.075 ppb	37.676 ppb	95.287 ppb	203.070 ppb	93.513 ppb	94.392 ppb	47.973 ppb	95.657 ppb	101.797 %
Concentration per Run 1	90.817 ppb	36.932 ppb	93.608 ppb	203.556 ppb	90.740 ppb	93.519 ppb	46.220 ppb	92.547 ppb	108.334 %
Concentration per Run 2	93.742 ppb	38.540 ppb	96.515 ppb	202.294 ppb	95.035 ppb	93.824 ppb	49.075 ppb	97.721 ppb	98.547 %
Concentration per Run 3	91.667 ppb	37.556 ppb	95.739 ppb	203.362 ppb	94.762 ppb	95.833 ppb	48.624 ppb	96.703 ppb	98.511 %
Concentration RSD	1.6 %	2.2 %	1.6 %	0.3 %	2.6 %	1.3 %	3.2 %	2.9 %	5.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	21.187 ppb	22.537 ppb	187.711 ppb	189.102 ppb	97.916 %	9.875 ppb	10.576 ppb	96.965 %	43.487 ppb
Concentration per Run 1	20.705 ppb	22.377 ppb	192.556 ppb	190.720 ppb	99.250 %	9.855 ppb	10.551 ppb	101.986 %	43.134 ppb
Concentration per Run 2	21.443 ppb	21.965 ppb	183.899 ppb	186.808 ppb	98.915 %	9.873 ppb	10.453 ppb	95.300 %	43.514 ppb
Concentration per Run 3	21.412 ppb	23.268 ppb	186.679 ppb	189.778 ppb	95.584 %	9.896 ppb	10.725 ppb	93.610 %	43.813 ppb
Concentration RSD	2.0 %	3.0 %	2.4 %	1.1 %	2.1 %	0.2 %	1.3 %	4.6 %	0.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	400.031 ppb	100.085 %	99.160 %	24.236 ppb	107.567 ppb	97.921 %
Concentration per Run 1	407.848 ppb	100.918 %	100.934 %	24.398 ppb	107.858 ppb	99.023 %
Concentration per Run 2	394.989 ppb	100.477 %	99.228 %	24.177 ppb	107.618 ppb	97.761 %
Concentration per Run 3	397.257 ppb	98.860 %	97.319 %	24.133 ppb	107.224 ppb	96.981 %
Concentration RSD	1.7 %	1.1 %	1.8 %	0.6 %	0.3 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	40	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1897634-4d10 A2-6020T	Rack	1		
Analysis started at:	4/1/2024 9:03:25 AM	Vial	20		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.934 %	99.867 %	9.977 ppb	8,192.195 ppb	2,054.998 ppb	560.653 ppb	2,041.318 ppb	2,100.774 ppb	91.016 %
Concentration per Run 1	91.014 %	101.789 %	10.158 ppb	8,130.664 ppb	2,070.360 ppb	570.578 ppb	2,108.617 ppb	2,079.964 ppb	91.539 %
Concentration per Run 2	89.798 %	93.936 %	9.830 ppb	8,583.575 ppb	2,142.421 ppb	587.854 ppb	2,104.368 ppb	2,245.618 ppb	91.550 %
Concentration per Run 3	88.992 %	103.877 %	9.941 ppb	7,862.346 ppb	1,952.212 ppb	523.528 ppb	1,910.969 ppb	1,976.741 ppb	89.958 %
Concentration RSD	1.1 %	5.2 %	1.7 %	4.4 %	4.7 %	5.9 %	5.5 %	6.5 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	89.295 ppb	36.540 ppb	92.857 ppb	198.935 ppb	92.197 ppb	92.826 ppb	46.741 ppb	94.470 ppb	101.004 %
Concentration per Run 1	88.597 ppb	36.762 ppb	94.284 ppb	203.309 ppb	94.716 ppb	94.844 ppb	46.488 ppb	94.456 ppb	101.747 %
Concentration per Run 2	91.959 ppb	37.379 ppb	93.329 ppb	200.420 ppb	91.848 ppb	93.870 ppb	47.398 ppb	95.163 ppb	100.772 %
Concentration per Run 3	87.329 ppb	35.479 ppb	90.957 ppb	193.074 ppb	90.028 ppb	89.764 ppb	46.336 ppb	93.791 ppb	100.493 %
Concentration RSD	2.7 %	2.7 %	1.8 %	2.7 %	2.6 %	2.9 %	1.2 %	0.7 %	0.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	21.173 ppb	21.677 ppb	185.849 ppb	188.792 ppb	96.110 %	9.702 ppb	10.451 ppb	96.741 %	42.179 ppb
Concentration per Run 1	21.212 ppb	21.880 ppb	191.502 ppb	189.602 ppb	95.237 %	9.721 ppb	10.480 ppb	98.060 %	41.972 ppb
Concentration per Run 2	21.285 ppb	22.033 ppb	183.390 ppb	190.305 ppb	97.980 %	9.720 ppb	10.467 ppb	96.547 %	42.450 ppb
Concentration per Run 3	21.023 ppb	21.117 ppb	182.654 ppb	186.468 ppb	95.112 %	9.664 ppb	10.405 ppb	95.615 %	42.115 ppb
Concentration RSD	0.6 %	2.3 %	2.6 %	1.1 %	1.7 %	0.3 %	0.4 %	1.3 %	0.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	390.968 ppb	99.281 %	97.612 %	24.271 ppb	106.609 ppb	97.320 %
Concentration per Run 1	396.172 ppb	98.474 %	97.009 %	24.041 ppb	106.518 ppb	97.254 %
Concentration per Run 2	388.468 ppb	99.948 %	98.088 %	24.679 ppb	107.357 ppb	97.436 %
Concentration per Run 3	388.265 ppb	99.422 %	97.740 %	24.092 ppb	105.951 ppb	97.270 %
Concentration RSD	1.2 %	0.8 %	0.6 %	1.5 %	0.7 %	0.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	41	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1897634-5d10 A2-6020T	Rack	1		
Analysis started at:	4/1/2024 9:07:53 AM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.616 %	95.692 %	10.134 ppb	8,776.891 ppb	2,095.114 ppb	589.226 ppb	2,075.023 ppb	2,225.777 ppb	88.332 %
Concentration per Run 1	91.583 %	89.065 %	9.965 ppb	8,902.764 ppb	2,112.212 ppb	589.572 ppb	2,054.994 ppb	2,247.013 ppb	88.658 %
Concentration per Run 2	88.058 %	100.199 %	10.274 ppb	8,805.664 ppb	2,098.236 ppb	599.782 ppb	2,125.155 ppb	2,221.527 ppb	88.103 %
Concentration per Run 3	89.208 %	97.813 %	10.163 ppb	8,622.245 ppb	2,074.893 ppb	578.324 ppb	2,044.921 ppb	2,208.790 ppb	88.234 %
Concentration RSD	2.0 %	6.1 %	1.5 %	1.6 %	0.9 %	1.8 %	2.1 %	0.9 %	0.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	94.455 ppb	38.211 ppb	97.125 ppb	204.625 ppb	95.252 ppb	96.700 ppb	49.679 ppb	98.181 ppb	97.169 %
Concentration per Run 1	94.590 ppb	38.021 ppb	97.712 ppb	209.448 ppb	95.692 ppb	98.273 ppb	49.256 ppb	96.395 ppb	98.087 %
Concentration per Run 2	92.447 ppb	37.597 ppb	96.677 ppb	204.877 ppb	92.890 ppb	94.170 ppb	48.168 ppb	97.611 ppb	101.376 %
Concentration per Run 3	96.330 ppb	39.016 ppb	96.986 ppb	199.551 ppb	97.175 ppb	97.658 ppb	51.613 ppb	100.538 ppb	92.043 %
Concentration RSD	2.1 %	1.9 %	0.5 %	2.4 %	2.3 %	2.3 %	3.5 %	2.2 %	4.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	21.682 ppb	22.301 ppb	188.747 ppb	191.939 ppb	95.797 %	9.731 ppb	10.432 ppb	96.977 %	41.333 ppb
Concentration per Run 1	21.334 ppb	21.382 ppb	185.033 ppb	190.399 ppb	93.404 %	9.898 ppb	10.559 ppb	94.907 %	41.238 ppb
Concentration per Run 2	21.670 ppb	22.478 ppb	191.707 ppb	192.493 ppb	98.587 %	9.552 ppb	10.353 ppb	102.088 %	40.937 ppb
Concentration per Run 3	22.041 ppb	23.042 ppb	189.502 ppb	192.925 ppb	95.399 %	9.741 ppb	10.382 ppb	93.935 %	41.823 ppb
Concentration RSD	1.6 %	3.8 %	1.8 %	0.7 %	2.7 %	1.8 %	1.1 %	4.6 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	393.476 ppb	97.850 %	97.240 %	24.396 ppb	100.572 ppb	95.215 %
Concentration per Run 1	395.854 ppb	95.955 %	93.990 %	24.614 ppb	101.240 ppb	94.060 %
Concentration per Run 2	391.486 ppb	99.932 %	100.946 %	24.358 ppb	101.072 ppb	96.416 %
Concentration per Run 3	393.087 ppb	97.662 %	96.784 %	24.215 ppb	99.405 ppb	95.169 %
Concentration RSD	0.6 %	2.0 %	3.6 %	0.8 %	1.0 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	42	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 9:14:06 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.986 %	95.063 %	58.604 ppb	5,407.456 ppb	5,716.577 ppb	55.195 ppb	5,499.440 ppb	5,525.164 ppb	92.233 %
Concentration per Run 1	89.382 %	87.872 %	58.576 ppb	6,020.874 ppb	6,060.474 ppb	57.700 ppb	5,827.169 ppb	5,938.104 ppb	93.290 %
Concentration per Run 2	89.388 %	100.696 %	58.253 ppb	4,973.109 ppb	5,446.548 ppb	51.517 ppb	5,197.986 ppb	5,063.569 ppb	93.615 %
Concentration per Run 3	88.188 %	96.620 %	58.983 ppb	5,228.386 ppb	5,642.708 ppb	56.367 ppb	5,473.164 ppb	5,573.819 ppb	89.792 %
Recovery Percentage 1			97.674 %	90.124 %	95.276 %	91.991 %	91.657 %	92.086 %	
Concentration RSD	0.8 %	6.9 %	0.6 %	10.1 %	5.5 %	5.9 %	5.7 %	8.0 %	2.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	57.254 ppb	57.253 ppb	57.473 ppb	5,797.792 ppb	58.707 ppb	58.838 ppb	58.610 ppb	59.224 ppb	92.329 %
Concentration per Run 1	59.397 ppb	59.495 ppb	57.501 ppb	5,852.790 ppb	59.718 ppb	60.750 ppb	59.566 ppb	60.670 ppb	90.624 %
Concentration per Run 2	54.874 ppb	55.428 ppb	56.805 ppb	5,709.181 ppb	57.218 ppb	57.786 ppb	57.397 ppb	58.130 ppb	93.312 %
Concentration per Run 3	57.492 ppb	56.835 ppb	58.112 ppb	5,831.404 ppb	59.184 ppb	57.979 ppb	58.868 ppb	58.872 ppb	93.053 %
Recovery Percentage 1	95.424 %	95.421 %	95.788 %	96.630 %	97.844 %	98.064 %	97.684 %	98.707 %	
Concentration RSD	4.0 %	3.6 %	1.1 %	1.3 %	2.2 %	2.8 %	1.9 %	2.2 %	1.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	57.944 ppb	59.415 ppb	58.061 ppb	58.904 ppb	93.662 %	59.494 ppb	60.184 ppb	91.956 %	60.790 ppb
Concentration per Run 1	58.218 ppb	57.881 ppb	58.147 ppb	59.497 ppb	94.144 %	59.940 ppb	60.484 ppb	92.686 %	61.063 ppb
Concentration per Run 2	57.277 ppb	59.414 ppb	57.861 ppb	58.654 ppb	94.514 %	58.729 ppb	59.657 ppb	91.258 %	59.890 ppb
Concentration per Run 3	58.336 ppb	60.949 ppb	58.176 ppb	58.561 ppb	92.328 %	59.815 ppb	60.410 ppb	91.925 %	61.416 ppb
Recovery Percentage 1	96.573 %	99.025 %	96.769 %	98.174 %		99.157 %	100.306 %		101.316 %
Concentration RSD	1.0 %	2.6 %	0.3 %	0.9 %	1.2 %	1.1 %	0.8 %	0.8 %	1.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.056 ppb	95.193 %	92.372 %	60.125 ppb	56.464 ppb	91.889 %
Concentration per Run 1	59.219 ppb	94.379 %	92.922 %	60.698 ppb	57.042 ppb	92.913 %
Concentration per Run 2	59.020 ppb	93.724 %	89.084 %	59.758 ppb	56.322 ppb	89.101 %
Concentration per Run 3	58.927 ppb	97.475 %	95.112 %	59.921 ppb	56.028 ppb	93.653 %
Recovery Percentage 1	98.426 %			100.209 %	94.107 %	
Concentration RSD	0.3 %	2.1 %	3.3 %	0.8 %	0.9 %	2.7 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	43	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 9:18:37 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.620 %	95.063 %	0.007 ppb	-3.251 ppb	-1.075 ppb	-0.613 ppb	-5.504 ppb	2.239 ppb	86.716 %
Concentration per Run 1	89.649 %	96.620 %	0.009 ppb	-5.088 ppb	-0.996 ppb	-0.795 ppb	-2.912 ppb	2.445 ppb	87.839 %
Concentration per Run 2	89.145 %	93.539 %	0.005 ppb	-4.200 ppb	-1.234 ppb	-0.482 ppb	-8.062 ppb	0.456 ppb	86.162 %
Concentration per Run 3	87.065 %	95.030 %	0.007 ppb	-0.465 ppb	-0.994 ppb	-0.561 ppb	-5.537 ppb	3.814 ppb	86.148 %
Recovery Percentage 1			1.395 %	-3.251 %	-1.535 %	-6.127 %	-5.504 %	2.239 %	
Concentration RSD	1.5 %	1.6 %	29.7 %	75.5 %	12.9 %	26.6 %	46.8 %	75.4 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.042 ppb	0.000 ppb	0.040 ppb	5.573 ppb	0.003 ppb	-0.013 ppb	0.000 ppb	-0.086 ppb	88.635 %
Concentration per Run 1	-0.054 ppb	0.003 ppb	0.015 ppb	6.213 ppb	0.001 ppb	-0.016 ppb	-0.004 ppb	-0.100 ppb	88.661 %
Concentration per Run 2	-0.049 ppb	0.000 ppb	0.046 ppb	5.559 ppb	0.002 ppb	0.009 ppb	0.001 ppb	-0.087 ppb	85.160 %
Concentration per Run 3	-0.022 ppb	-0.002 ppb	0.059 ppb	4.947 ppb	0.007 ppb	-0.031 ppb	0.004 ppb	-0.071 ppb	92.085 %
Recovery Percentage 1	-0.841 %	0.018 %	3.993 %	11.146 %	0.641 %	-0.640 %	0.038 %	-1.721 %	
Concentration RSD	40.8 %	1,311.5 %	56.8 %	11.4 %	95.3 %	161.7 %	957.3 %	16.9 %	3.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.047 ppb	0.085 ppb	0.005 ppb	0.295 ppb	91.379 %	0.001 ppb	0.004 ppb	90.611 %	0.286 ppb
Concentration per Run 1	0.032 ppb	0.081 ppb	0.002 ppb	0.201 ppb	90.200 %	0.002 ppb	0.003 ppb	89.420 %	0.227 ppb
Concentration per Run 2	0.049 ppb	0.118 ppb	0.003 ppb	0.332 ppb	92.237 %	0.001 ppb	0.006 ppb	90.325 %	0.294 ppb
Concentration per Run 3	0.059 ppb	0.055 ppb	0.011 ppb	0.354 ppb	91.700 %	0.002 ppb	0.002 ppb	92.089 %	0.339 ppb
Recovery Percentage 1	9.336 %	1.691 %	0.054 %	14.767 %		0.360 %	1.898 %		7.162 %
Concentration RSD	29.7 %	37.1 %	98.0 %	28.0 %	1.2 %	27.7 %	45.9 %	1.5 %	19.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.018 ppb	93.182 %	90.412 %	0.422 ppb	0.011 ppb	92.019 %
Concentration per Run 1	0.005 ppb	91.062 %	87.529 %	0.303 ppb	0.014 ppb	91.007 %
Concentration per Run 2	0.035 ppb	93.500 %	91.077 %	0.515 ppb	0.010 ppb	92.283 %
Concentration per Run 3	0.013 ppb	94.982 %	92.629 %	0.449 ppb	0.009 ppb	92.766 %
Recovery Percentage 1	3.522 %			42.247 %	1.122 %	
Concentration RSD	88.7 %	2.1 %	2.9 %	25.6 %	25.9 %	1.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	44	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902448-1 6020SL	Rack	1		
Analysis started at:	4/1/2024 9:29:11 AM	Vial	22		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.861 %	94.897 %	0.006 ppb	9.338 ppb	0.542 ppb	0.772 ppb	-1.896 ppb	12.896 ppb	92.380 %
Concentration per Run 1	93.635 %	94.135 %	0.003 ppb	7.854 ppb	1.626 ppb	0.859 ppb	-1.646 ppb	11.826 ppb	91.481 %
Concentration per Run 2	92.558 %	91.948 %	0.009 ppb	14.063 ppb	0.212 ppb	0.548 ppb	0.974 ppb	8.817 ppb	92.541 %
Concentration per Run 3	92.389 %	98.608 %	0.007 ppb	6.096 ppb	-0.212 ppb	0.908 ppb	-5.016 ppb	18.045 ppb	93.119 %
Concentration RSD	0.7 %	3.6 %	42.7 %	44.8 %	177.5 %	25.3 %	158.4 %	36.5 %	0.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.046 ppb	0.764 ppb	0.058 ppb	2.154 ppb	0.016 ppb	0.001 ppb	0.054 ppb	-0.012 ppb	93.810 %
Concentration per Run 1	-0.051 ppb	0.705 ppb	0.071 ppb	1.781 ppb	0.016 ppb	0.029 ppb	0.038 ppb	-0.017 ppb	91.511 %
Concentration per Run 2	-0.039 ppb	0.852 ppb	0.070 ppb	2.298 ppb	0.011 ppb	-0.007 ppb	0.070 ppb	0.026 ppb	93.608 %
Concentration per Run 3	-0.048 ppb	0.736 ppb	0.033 ppb	2.383 ppb	0.020 ppb	-0.018 ppb	0.053 ppb	-0.045 ppb	96.311 %
Concentration RSD	13.8 %	10.2 %	36.7 %	15.1 %	27.2 %	1,912.2 %	30.0 %	298.9 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.001 ppb	-0.001 ppb	0.021 ppb	0.092 ppb	94.283 %	0.003 ppb	0.002 ppb	93.525 %	0.425 ppb
Concentration per Run 1	0.019 ppb	0.014 ppb	0.035 ppb	0.071 ppb	93.126 %	0.005 ppb	0.001 ppb	91.384 %	0.412 ppb
Concentration per Run 2	-0.003 ppb	-0.012 ppb	0.011 ppb	0.090 ppb	94.808 %	0.002 ppb	0.002 ppb	95.162 %	0.422 ppb
Concentration per Run 3	-0.012 ppb	-0.004 ppb	0.015 ppb	0.116 ppb	94.914 %	0.002 ppb	0.002 ppb	94.028 %	0.441 ppb
Concentration RSD	1,047.1 %	2,160.0 %	61.4 %	24.2 %	1.1 %	55.6 %	33.4 %	2.1 %	3.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.048 ppb	95.697 %	94.644 %	0.074 ppb	0.019 ppb	96.802 %
Concentration per Run 1	0.052 ppb	93.367 %	91.889 %	0.042 ppb	0.025 ppb	96.321 %
Concentration per Run 2	0.050 ppb	95.977 %	95.640 %	0.087 ppb	0.017 ppb	97.160 %
Concentration per Run 3	0.041 ppb	97.747 %	96.404 %	0.091 ppb	0.016 ppb	96.926 %
Concentration RSD	12.0 %	2.3 %	2.6 %	37.1 %	25.9 %	0.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	45	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902448-2d10 6020SL	Rack	1		
Analysis started at:	4/1/2024 9:33:40 AM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.280 %	94.466 %	4.971 ppb	874.535 ppb	927.448 ppb	181.107 ppb	905.566 ppb	875.152 ppb	85.955 %
Concentration per Run 1	90.036 %	91.352 %	4.867 ppb	880.934 ppb	944.995 ppb	182.357 ppb	929.309 ppb	808.538 ppb	87.281 %
Concentration per Run 2	88.796 %	96.024 %	4.957 ppb	870.367 ppb	904.579 ppb	178.655 ppb	887.724 ppb	851.806 ppb	86.643 %
Concentration per Run 3	86.007 %	96.024 %	5.088 ppb	872.304 ppb	932.771 ppb	182.310 ppb	899.665 ppb	965.112 ppb	83.941 %
Concentration RSD	2.3 %	2.9 %	2.2 %	0.6 %	2.2 %	1.2 %	2.4 %	9.2 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	46.103 ppb	18.776 ppb	46.750 ppb	96.233 ppb	46.474 ppb	46.516 ppb	23.810 ppb	48.303 ppb	93.640 %
Concentration per Run 1	45.527 ppb	18.618 ppb	47.072 ppb	93.728 ppb	46.983 ppb	46.578 ppb	23.900 ppb	47.828 ppb	93.148 %
Concentration per Run 2	46.047 ppb	19.138 ppb	46.174 ppb	101.583 ppb	46.305 ppb	47.060 ppb	24.002 ppb	48.844 ppb	92.997 %
Concentration per Run 3	46.735 ppb	18.572 ppb	47.003 ppb	93.388 ppb	46.135 ppb	45.911 ppb	23.528 ppb	48.238 ppb	94.775 %
Concentration RSD	1.3 %	1.7 %	1.1 %	4.8 %	1.0 %	1.2 %	1.0 %	1.1 %	1.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.336 ppb	11.061 ppb	90.718 ppb	93.738 ppb	91.467 %	4.839 ppb	5.282 ppb	92.505 %	42.564 ppb
Concentration per Run 1	11.419 ppb	10.399 ppb	90.652 ppb	92.991 ppb	90.841 %	4.783 ppb	5.301 ppb	89.575 %	43.090 ppb
Concentration per Run 2	11.359 ppb	11.414 ppb	90.407 ppb	94.016 ppb	91.123 %	4.809 ppb	5.244 ppb	94.160 %	41.681 ppb
Concentration per Run 3	11.229 ppb	11.369 ppb	91.096 ppb	94.208 ppb	92.438 %	4.926 ppb	5.300 ppb	93.778 %	42.921 ppb
Concentration RSD	0.9 %	5.2 %	0.4 %	0.7 %	0.9 %	1.6 %	0.6 %	2.8 %	1.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	193.211 ppb	92.554 %	91.545 %	11.898 ppb	48.313 ppb	93.488 %
Concentration per Run 1	195.323 ppb	90.537 %	91.269 %	12.099 ppb	49.188 ppb	91.314 %
Concentration per Run 2	191.715 ppb	93.690 %	90.968 %	11.827 ppb	48.205 ppb	92.470 %
Concentration per Run 3	192.596 ppb	93.436 %	92.397 %	11.768 ppb	47.548 ppb	96.680 %
Concentration RSD	1.0 %	1.9 %	0.8 %	1.5 %	1.7 %	3.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	46	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902448-3d10 6020SL	Rack	1		
Analysis started at:	4/1/2024 9:38:09 AM	Vial	25		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.628 %	92.876 %	5.010 ppb	1,724.511 ppb	1,030.564 ppb	191.140 ppb	2,568.453 ppb	2,483.580 ppb	86.414 %
Concentration per Run 1	89.481 %	84.990 %	5.012 ppb	1,842.386 ppb	1,088.322 ppb	202.987 ppb	2,726.085 ppb	2,607.200 ppb	86.430 %
Concentration per Run 2	89.434 %	99.901 %	4.989 ppb	1,625.969 ppb	984.321 ppb	185.164 ppb	2,509.978 ppb	2,435.737 ppb	87.055 %
Concentration per Run 3	86.968 %	93.737 %	5.030 ppb	1,705.178 ppb	1,019.049 ppb	185.269 ppb	2,469.296 ppb	2,407.804 ppb	85.756 %
Concentration RSD	1.6 %	8.1 %	0.4 %	6.3 %	5.1 %	5.4 %	5.4 %	4.3 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	46.179 ppb	20.635 ppb	46.792 ppb	96.481 ppb	46.988 ppb	47.151 ppb	24.253 ppb	48.275 ppb	93.353 %
Concentration per Run 1	48.506 ppb	21.869 ppb	48.214 ppb	98.902 ppb	48.135 ppb	48.918 ppb	25.147 ppb	49.146 ppb	91.318 %
Concentration per Run 2	45.277 ppb	20.055 ppb	46.338 ppb	101.887 ppb	46.680 ppb	47.446 ppb	24.326 ppb	48.523 ppb	93.186 %
Concentration per Run 3	44.755 ppb	19.982 ppb	45.826 ppb	88.655 ppb	46.148 ppb	45.089 ppb	23.288 ppb	47.155 ppb	95.556 %
Concentration RSD	4.4 %	5.2 %	2.7 %	7.2 %	2.2 %	4.1 %	3.8 %	2.1 %	2.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.408 ppb	11.721 ppb	108.485 ppb	94.160 ppb	91.899 %	4.821 ppb	5.272 ppb	90.820 %	46.526 ppb
Concentration per Run 1	11.564 ppb	11.543 ppb	110.517 ppb	95.201 ppb	90.203 %	4.934 ppb	5.341 ppb	88.782 %	47.112 ppb
Concentration per Run 2	11.834 ppb	12.468 ppb	108.036 ppb	95.822 ppb	94.529 %	4.800 ppb	5.269 ppb	92.552 %	46.193 ppb
Concentration per Run 3	10.826 ppb	11.152 ppb	106.904 ppb	91.457 ppb	90.965 %	4.729 ppb	5.206 ppb	91.127 %	46.271 ppb
Concentration RSD	4.6 %	5.8 %	1.7 %	2.5 %	2.5 %	2.2 %	1.3 %	2.1 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	197.538 ppb	92.978 %	91.272 %	12.090 ppb	49.254 ppb	92.102 %
Concentration per Run 1	205.031 ppb	90.017 %	88.729 %	12.147 ppb	49.729 ppb	91.828 %
Concentration per Run 2	194.085 ppb	95.312 %	93.814 %	11.988 ppb	49.071 ppb	92.815 %
Concentration per Run 3	193.498 ppb	93.605 %	91.272 %	12.134 ppb	48.962 ppb	91.665 %
Concentration RSD	3.3 %	2.9 %	2.8 %	0.7 %	0.8 %	0.7 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	47	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902448-4d10 6020SL	Rack	1		
Analysis started at:	4/1/2024 9:42:35 AM	Vial	26		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.634 %	90.954 %	4.939 ppb	1,719.336 ppb	1,017.735 ppb	194.215 ppb	2,565.659 ppb	2,440.479 ppb	83.120 %
Concentration per Run 1	86.160 %	91.252 %	5.057 ppb	1,658.455 ppb	998.505 ppb	186.404 ppb	2,471.469 ppb	2,344.425 ppb	83.237 %
Concentration per Run 2	86.497 %	92.545 %	4.866 ppb	1,722.584 ppb	1,018.236 ppb	199.113 ppb	2,578.898 ppb	2,464.660 ppb	82.912 %
Concentration per Run 3	84.244 %	89.065 %	4.895 ppb	1,776.969 ppb	1,036.464 ppb	197.128 ppb	2,646.612 ppb	2,512.353 ppb	83.211 %
Concentration RSD	1.4 %	1.9 %	2.1 %	3.5 %	1.9 %	3.5 %	3.4 %	3.5 %	0.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	45.828 ppb	20.620 ppb	47.311 ppb	100.960 ppb	46.607 ppb	47.431 ppb	23.958 ppb	48.344 ppb	92.949 %
Concentration per Run 1	43.947 ppb	19.975 ppb	44.999 ppb	98.479 ppb	45.053 ppb	45.982 ppb	23.416 ppb	46.499 ppb	93.704 %
Concentration per Run 2	46.051 ppb	20.480 ppb	47.641 ppb	99.541 ppb	46.022 ppb	46.613 ppb	23.049 ppb	48.049 ppb	95.750 %
Concentration per Run 3	47.486 ppb	21.405 ppb	49.295 ppb	104.860 ppb	48.746 ppb	49.699 ppb	25.410 ppb	50.484 ppb	89.392 %
Concentration RSD	3.9 %	3.5 %	4.6 %	3.4 %	4.1 %	4.2 %	5.3 %	4.2 %	3.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.251 ppb	11.345 ppb	108.635 ppb	92.639 ppb	90.762 %	4.819 ppb	5.208 ppb	91.067 %	45.518 ppb
Concentration per Run 1	11.103 ppb	11.685 ppb	105.795 ppb	91.391 ppb	89.335 %	4.898 ppb	5.260 ppb	88.322 %	45.210 ppb
Concentration per Run 2	11.177 ppb	11.309 ppb	111.094 ppb	92.174 ppb	92.192 %	4.722 ppb	5.279 ppb	93.521 %	45.652 ppb
Concentration per Run 3	11.475 ppb	11.041 ppb	109.016 ppb	94.353 ppb	90.759 %	4.835 ppb	5.085 ppb	91.358 %	45.694 ppb
Concentration RSD	1.8 %	2.9 %	2.5 %	1.7 %	1.6 %	1.9 %	2.1 %	2.9 %	0.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	192.883 ppb	93.457 %	91.526 %	11.775 ppb	48.342 ppb	91.625 %
Concentration per Run 1	191.783 ppb	90.420 %	87.959 %	11.969 ppb	48.864 ppb	89.868 %
Concentration per Run 2	195.229 ppb	96.345 %	95.800 %	11.630 ppb	47.923 ppb	93.117 %
Concentration per Run 3	191.639 ppb	93.605 %	90.819 %	11.726 ppb	48.239 ppb	91.889 %
Concentration RSD	1.1 %	3.2 %	4.3 %	1.5 %	1.0 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	48	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902448-5d10 6020SL	Rack	1		
Analysis started at:	4/1/2024 9:47:01 AM	Vial	27		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.372 %	92.843 %	46.730 ppb	5,003.938 ppb	4,587.786 ppb	53.733 ppb	6,057.489 ppb	6,004.008 ppb	86.682 %
Concentration per Run 1	86.411 %	88.668 %	46.828 ppb	4,969.802 ppb	4,558.339 ppb	53.726 ppb	6,051.317 ppb	5,982.581 ppb	86.693 %
Concentration per Run 2	85.336 %	94.632 %	46.791 ppb	5,185.976 ppb	4,811.834 ppb	57.232 ppb	6,344.051 ppb	6,188.884 ppb	86.174 %
Concentration per Run 3	84.367 %	95.228 %	46.573 ppb	4,856.036 ppb	4,393.184 ppb	50.241 ppb	5,777.099 ppb	5,840.559 ppb	87.180 %
Concentration RSD	1.2 %	3.9 %	0.3 %	3.3 %	4.6 %	6.5 %	4.7 %	2.9 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	45.205 ppb	46.770 ppb	45.785 ppb	4,576.330 ppb	45.532 ppb	45.390 ppb	45.685 ppb	46.798 ppb	92.665 %
Concentration per Run 1	44.575 ppb	46.679 ppb	45.700 ppb	4,558.537 ppb	45.857 ppb	45.607 ppb	46.179 ppb	46.853 ppb	91.739 %
Concentration per Run 2	45.614 ppb	46.662 ppb	46.312 ppb	4,560.003 ppb	45.192 ppb	45.142 ppb	45.377 ppb	47.021 ppb	95.007 %
Concentration per Run 3	45.426 ppb	46.970 ppb	45.342 ppb	4,610.450 ppb	45.548 ppb	45.420 ppb	45.500 ppb	46.521 ppb	91.250 %
Concentration RSD	1.2 %	0.4 %	1.1 %	0.6 %	0.7 %	0.5 %	0.9 %	0.5 %	2.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	44.849 ppb	45.895 ppb	65.747 ppb	47.305 ppb	90.258 %	1.232 ppb	47.421 ppb	92.062 %	48.239 ppb
Concentration per Run 1	44.888 ppb	44.956 ppb	64.477 ppb	47.260 ppb	89.932 %	1.210 ppb	47.995 ppb	90.625 %	49.025 ppb
Concentration per Run 2	45.441 ppb	46.037 ppb	67.853 ppb	47.292 ppb	90.412 %	1.227 ppb	46.759 ppb	95.090 %	48.240 ppb
Concentration per Run 3	44.220 ppb	46.692 ppb	64.913 ppb	47.362 ppb	90.431 %	1.260 ppb	47.509 ppb	90.471 %	47.453 ppb
Concentration RSD	1.4 %	1.9 %	2.8 %	0.1 %	0.3 %	2.1 %	1.3 %	2.8 %	1.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	48.075 ppb	94.390 %	92.331 %	46.198 ppb	44.418 ppb	91.358 %
Concentration per Run 1	48.551 ppb	93.032 %	89.851 %	46.883 ppb	44.710 ppb	90.380 %
Concentration per Run 2	47.917 ppb	96.245 %	94.664 %	45.615 ppb	44.298 ppb	92.372 %
Concentration per Run 3	47.756 ppb	93.892 %	92.478 %	46.097 ppb	44.246 ppb	91.323 %
Concentration RSD	0.9 %	1.8 %	2.6 %	1.4 %	0.6 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	49	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902448-6d5 6020SL	Rack	1		
Analysis started at:	4/1/2024 9:51:28 AM	Vial	28		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.383 %	90.590 %	0.005 ppb	1,646.278 ppb	190.494 ppb	20.730 ppb	3,265.547 ppb	3,190.513 ppb	82.689 %
Concentration per Run 1	86.171 %	89.562 %	0.006 ppb	1,626.732 ppb	190.263 ppb	20.390 ppb	3,232.539 ppb	3,162.220 ppb	83.978 %
Concentration per Run 2	84.732 %	92.047 %	0.004 ppb	1,651.407 ppb	193.625 ppb	20.890 ppb	3,333.440 ppb	3,279.526 ppb	83.128 %
Concentration per Run 3	82.246 %	90.159 %	0.006 ppb	1,660.697 ppb	187.593 ppb	20.911 ppb	3,230.661 ppb	3,129.791 ppb	80.962 %
Concentration RSD	2.4 %	1.4 %	15.3 %	1.1 %	1.6 %	1.4 %	1.8 %	2.5 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.136 ppb	4.196 ppb	0.087 ppb	5.284 ppb	0.019 ppb	0.009 ppb	0.381 ppb	-0.009 ppb	92.585 %
Concentration per Run 1	0.181 ppb	4.173 ppb	0.063 ppb	5.232 ppb	0.028 ppb	0.007 ppb	0.368 ppb	0.061 ppb	88.235 %
Concentration per Run 2	0.084 ppb	4.220 ppb	0.144 ppb	5.637 ppb	0.016 ppb	0.020 ppb	0.370 ppb	-0.038 ppb	96.607 %
Concentration per Run 3	0.143 ppb	4.193 ppb	0.054 ppb	4.985 ppb	0.015 ppb	-0.001 ppb	0.406 ppb	-0.051 ppb	92.912 %
Concentration RSD	36.0 %	0.6 %	57.1 %	6.2 %	37.5 %	123.7 %	5.5 %	648.8 %	4.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.078 ppb	0.109 ppb	35.185 ppb	0.731 ppb	90.497 %	0.001 ppb	0.005 ppb	91.595 %	0.649 ppb
Concentration per Run 1	0.085 ppb	0.147 ppb	35.361 ppb	0.781 ppb	88.675 %	0.001 ppb	0.011 ppb	88.021 %	0.588 ppb
Concentration per Run 2	0.046 ppb	0.055 ppb	35.236 ppb	0.637 ppb	92.594 %	0.002 ppb	0.001 ppb	94.320 %	0.673 ppb
Concentration per Run 3	0.104 ppb	0.125 ppb	34.958 ppb	0.776 ppb	90.222 %	0.000 ppb	0.002 ppb	92.443 %	0.685 ppb
Concentration RSD	37.6 %	44.2 %	0.6 %	11.2 %	2.2 %	90.9 %	111.2 %	3.5 %	8.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	2.060 ppb	92.542 %	90.552 %	0.394 ppb	0.015 ppb	91.960 %
Concentration per Run 1	2.136 ppb	89.749 %	87.627 %	0.274 ppb	0.024 ppb	89.175 %
Concentration per Run 2	2.099 ppb	94.543 %	92.820 %	0.466 ppb	0.011 ppb	94.438 %
Concentration per Run 3	1.944 ppb	93.335 %	91.210 %	0.440 ppb	0.011 ppb	92.268 %
Concentration RSD	4.9 %	2.7 %	2.9 %	26.5 %	48.1 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 50
Analysis label: I2416561-01 6020SL
Analysis started at: 4/1/2024 9:55:54 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 24
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.110 %	88.867 %	0.006 ppb	9,148.097 ppb	915.697 ppb	98.325 ppb	16,277.390 ppb	15,643.196 ppb	86.760 %
Concentration per Run 1	86.095 %	81.013 %	0.006 ppb	9,398.250 ppb	938.966 ppb	101.267 ppb	16,788.094 ppb	15,885.087 ppb	86.343 %
Concentration per Run 2	86.632 %	86.183 %	0.007 ppb	9,287.381 ppb	930.462 ppb	96.616 ppb	16,005.091 ppb	15,504.222 ppb	87.852 %
Concentration per Run 3	85.603 %	99.404 %	0.005 ppb	8,758.660 ppb	877.662 ppb	97.092 ppb	16,038.983 ppb	15,540.279 ppb	86.086 %
Concentration RSD	0.6 %	10.7 %	16.1 %	3.7 %	3.6 %	2.6 %	2.7 %	1.3 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.941 ppb	20.489 ppb	0.144 ppb	8.306 ppb	0.061 ppb	0.111 ppb	1.991 ppb	0.245 ppb	91.381 %
Concentration per Run 1	1.017 ppb	21.141 ppb	0.097 ppb	7.103 ppb	0.060 ppb	0.084 ppb	2.126 ppb	0.255 ppb	87.285 %
Concentration per Run 2	0.863 ppb	20.363 ppb	0.167 ppb	8.888 ppb	0.062 ppb	0.114 ppb	1.933 ppb	0.257 ppb	91.069 %
Concentration per Run 3	0.941 ppb	19.962 ppb	0.168 ppb	8.927 ppb	0.059 ppb	0.136 ppb	1.913 ppb	0.222 ppb	95.787 %
Concentration RSD	8.2 %	2.9 %	28.3 %	12.5 %	2.6 %	23.8 %	5.9 %	7.9 %	4.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.283 ppb	0.221 ppb	175.255 ppb	2.390 ppb	88.668 %	0.000 ppb	0.003 ppb	91.191 %	1.940 ppb
Concentration per Run 1	0.274 ppb	0.209 ppb	175.673 ppb	2.470 ppb	85.796 %	0.000 ppb	0.004 ppb	85.752 %	1.926 ppb
Concentration per Run 2	0.276 ppb	0.174 ppb	170.059 ppb	2.254 ppb	88.743 %	0.000 ppb	0.005 ppb	88.724 %	1.907 ppb
Concentration per Run 3	0.299 ppb	0.281 ppb	180.035 ppb	2.445 ppb	91.466 %	0.000 ppb	0.000 ppb	99.097 %	1.986 ppb
Concentration RSD	4.8 %	24.8 %	2.9 %	4.9 %	3.2 %	9.3 %	88.6 %	7.7 %	2.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10.149 ppb	91.427 %	89.730 %	0.134 ppb	0.018 ppb	87.142 %
Concentration per Run 1	10.136 ppb	86.623 %	84.512 %	0.068 ppb	0.022 ppb	82.969 %
Concentration per Run 2	9.771 ppb	91.150 %	89.762 %	0.164 ppb	0.014 ppb	88.020 %
Concentration per Run 3	10.540 ppb	96.509 %	94.917 %	0.171 ppb	0.019 ppb	90.436 %
Concentration RSD	3.8 %	5.4 %	5.8 %	43.0 %	19.7 %	4.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	51	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416395-01 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:00:24 AM	Vial	29		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.002 %	95.858 %	0.009 ppb	15,378.026 ppb	30,795.134 ppb	21.839 ppb	1,091.866 ppb	68,818.299 ppb	85.837 %
Concentration per Run 1	92.163 %	92.942 %	0.009 ppb	15,446.158 ppb	31,127.817 ppb	21.215 ppb	1,069.975 ppb	67,407.092 ppb	86.974 %
Concentration per Run 2	91.356 %	91.451 %	0.010 ppb	15,683.725 ppb	31,233.517 ppb	22.744 ppb	1,114.133 ppb	71,280.032 ppb	86.318 %
Concentration per Run 3	89.487 %	103.181 %	0.008 ppb	15,004.196 ppb	30,024.068 ppb	21.557 ppb	1,091.489 ppb	67,767.774 ppb	84.218 %
Concentration RSD	1.5 %	6.7 %	9.9 %	2.2 %	2.2 %	3.7 %	2.0 %	3.1 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.247 ppb	0.822 ppb	4.083 ppb	29.814 ppb	0.111 ppb	5.411 ppb	17.643 ppb	2.225 ppb	93.140 %
Concentration per Run 1	2.207 ppb	0.792 ppb	3.900 ppb	35.233 ppb	0.122 ppb	5.541 ppb	17.775 ppb	2.168 ppb	92.138 %
Concentration per Run 2	2.268 ppb	0.904 ppb	4.371 ppb	28.342 ppb	0.114 ppb	5.447 ppb	18.280 ppb	2.252 ppb	90.041 %
Concentration per Run 3	2.267 ppb	0.769 ppb	3.978 ppb	25.866 ppb	0.098 ppb	5.244 ppb	16.873 ppb	2.256 ppb	97.241 %
Concentration RSD	1.5 %	8.8 %	6.2 %	16.3 %	11.1 %	2.8 %	4.0 %	2.2 %	4.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	2.727 ppb	0.142 ppb	218.097 ppb	0.310 ppb	87.232 %	0.000 ppb	0.005 ppb	90.854 %	0.162 ppb
Concentration per Run 1	2.719 ppb	0.187 ppb	213.807 ppb	0.282 ppb	85.759 %	0.000 ppb	0.008 ppb	88.432 %	0.136 ppb
Concentration per Run 2	2.751 ppb	0.110 ppb	218.515 ppb	0.319 ppb	86.996 %	0.001 ppb	0.000 ppb	92.278 %	0.161 ppb
Concentration per Run 3	2.710 ppb	0.129 ppb	221.970 ppb	0.328 ppb	88.941 %	0.000 ppb	0.007 ppb	91.852 %	0.189 ppb
Concentration RSD	0.8 %	28.4 %	1.9 %	7.9 %	1.8 %	213.4 %	87.8 %	2.3 %	16.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	169.205 ppb	91.197 %	89.359 %	0.074 ppb	0.063 ppb	85.819 %
Concentration per Run 1	170.928 ppb	88.899 %	86.097 %	0.041 ppb	0.069 ppb	84.137 %
Concentration per Run 2	166.809 ppb	90.016 %	88.715 %	0.086 ppb	0.058 ppb	86.182 %
Concentration per Run 3	169.879 ppb	94.676 %	93.264 %	0.096 ppb	0.061 ppb	87.138 %
Concentration RSD	1.3 %	3.4 %	4.1 %	39.3 %	8.8 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	52	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416395-02 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:04:51 AM	Vial	30		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.129 %	85.818 %	0.018 ppb	60,101.646 ppb	12,773.897 ppb	6.877 ppb	2,436.430 ppb	32,343.952 ppb	84.023 %
Concentration per Run 1	82.795 %	82.505 %	0.017 ppb	62,087.277 ppb	13,162.797 ppb	6.728 ppb	2,435.381 ppb	32,161.049 ppb	84.844 %
Concentration per Run 2	81.106 %	86.580 %	0.016 ppb	57,986.570 ppb	12,434.372 ppb	7.650 ppb	2,441.830 ppb	32,495.404 ppb	84.764 %
Concentration per Run 3	79.485 %	88.370 %	0.023 ppb	60,231.092 ppb	12,724.524 ppb	6.252 ppb	2,432.080 ppb	32,375.402 ppb	82.460 %
Concentration RSD	2.0 %	3.5 %	20.6 %	3.4 %	2.9 %	10.3 %	0.2 %	0.5 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.024 ppb	0.843 ppb	1,074.654 ppb	11,760.575 ppb	0.277 ppb	4.651 ppb	4.699 ppb	56.288 ppb	88.786 %
Concentration per Run 1	0.045 ppb	0.884 ppb	1,059.818 ppb	11,601.009 ppb	0.294 ppb	4.793 ppb	4.656 ppb	56.301 ppb	86.856 %
Concentration per Run 2	0.021 ppb	0.839 ppb	1,099.406 ppb	12,248.877 ppb	0.279 ppb	4.762 ppb	4.914 ppb	57.733 ppb	86.200 %
Concentration per Run 3	0.007 ppb	0.806 ppb	1,064.739 ppb	11,431.841 ppb	0.258 ppb	4.398 ppb	4.527 ppb	54.828 ppb	93.302 %
Concentration RSD	77.1 %	4.7 %	2.0 %	3.7 %	6.4 %	4.7 %	4.2 %	2.6 %	4.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.138 ppb	0.124 ppb	131.897 ppb	0.307 ppb	84.369 %	0.000 ppb	0.007 ppb	88.151 %	0.104 ppb
Concentration per Run 1	0.155 ppb	0.097 ppb	130.296 ppb	0.322 ppb	82.261 %	0.000 ppb	0.006 ppb	83.932 %	0.106 ppb
Concentration per Run 2	0.144 ppb	0.215 ppb	130.190 ppb	0.335 ppb	85.185 %	0.000 ppb	0.010 ppb	87.269 %	0.102 ppb
Concentration per Run 3	0.115 ppb	0.060 ppb	135.204 ppb	0.265 ppb	85.661 %	0.000 ppb	0.005 ppb	93.252 %	0.105 ppb
Concentration RSD	14.9 %	65.0 %	2.2 %	12.0 %	2.2 %	7.4 %	37.6 %	5.4 %	1.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	168.910 ppb	89.913 %	87.954 %	0.052 ppb	0.019 ppb	83.798 %
Concentration per Run 1	170.548 ppb	87.362 %	84.696 %	0.023 ppb	0.018 ppb	82.347 %
Concentration per Run 2	168.215 ppb	90.031 %	87.044 %	0.058 ppb	0.020 ppb	83.029 %
Concentration per Run 3	167.966 ppb	92.345 %	92.122 %	0.074 ppb	0.018 ppb	86.018 %
Concentration RSD	0.8 %	2.8 %	4.3 %	50.1 %	8.5 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	53	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416395-03 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:09:18 AM	Vial	31		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.894 %	94.599 %	0.015 ppb	21,401.116 ppb	24,917.825 ppb	22.097 ppb	1,677.575 ppb	74,853.389 ppb	87.042 %
Concentration per Run 1	92.395 %	88.171 %	0.014 ppb	22,250.803 ppb	26,337.751 ppb	22.814 ppb	1,727.497 ppb	76,430.349 ppb	88.891 %
Concentration per Run 2	91.001 %	97.415 %	0.015 ppb	20,881.374 ppb	24,346.863 ppb	22.095 ppb	1,627.156 ppb	72,993.785 ppb	86.528 %
Concentration per Run 3	89.286 %	98.211 %	0.016 ppb	21,071.171 ppb	24,068.860 ppb	21.382 ppb	1,678.074 ppb	75,136.034 ppb	85.707 %
Concentration RSD	1.7 %	5.9 %	7.9 %	3.5 %	5.0 %	3.2 %	3.0 %	2.3 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.573 ppb	0.887 ppb	125.829 ppb	595.123 ppb	0.098 ppb	6.977 ppb	40.225 ppb	4.629 ppb	87.757 %
Concentration per Run 1	1.738 ppb	0.907 ppb	127.949 ppb	613.036 ppb	0.096 ppb	7.238 ppb	41.154 ppb	4.623 ppb	85.087 %
Concentration per Run 2	1.473 ppb	0.918 ppb	122.572 ppb	590.044 ppb	0.088 ppb	7.012 ppb	40.519 ppb	4.736 ppb	86.319 %
Concentration per Run 3	1.509 ppb	0.837 ppb	126.964 ppb	582.289 ppb	0.111 ppb	6.681 ppb	39.001 ppb	4.528 ppb	91.864 %
Concentration RSD	9.1 %	4.9 %	2.3 %	2.7 %	12.2 %	4.0 %	2.7 %	2.2 %	4.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.416 ppb	0.177 ppb	136.443 ppb	2.193 ppb	86.756 %	0.000 ppb	0.035 ppb	87.375 %	0.090 ppb
Concentration per Run 1	1.471 ppb	0.090 ppb	136.574 ppb	2.244 ppb	83.749 %	-0.001 ppb	0.032 ppb	82.317 %	0.075 ppb
Concentration per Run 2	1.435 ppb	0.228 ppb	134.645 ppb	2.192 ppb	87.602 %	-0.001 ppb	0.036 ppb	86.451 %	0.098 ppb
Concentration per Run 3	1.341 ppb	0.213 ppb	138.110 ppb	2.144 ppb	88.915 %	0.002 ppb	0.037 ppb	93.357 %	0.096 ppb
Concentration RSD	4.8 %	42.8 %	1.3 %	2.3 %	3.1 %	58,296.8 %	6.8 %	6.4 %	14.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	140.067 ppb	89.974 %	88.009 %	0.045 ppb	0.171 ppb	83.670 %
Concentration per Run 1	146.920 ppb	86.284 %	83.561 %	0.019 ppb	0.173 ppb	80.936 %
Concentration per Run 2	137.232 ppb	90.253 %	88.756 %	0.053 ppb	0.172 ppb	82.967 %
Concentration per Run 3	136.049 ppb	93.385 %	91.709 %	0.064 ppb	0.168 ppb	87.107 %
Concentration RSD	4.3 %	4.0 %	4.7 %	52.1 %	1.7 %	3.8 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	54	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 10:13:46 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.350 %	87.740 %	58.492 ppb	5,228.062 ppb	5,520.751 ppb	53.971 ppb	5,417.544 ppb	5,481.609 ppb	83.380 %
Concentration per Run 1	83.539 %	81.610 %	58.185 ppb	5,405.031 ppb	5,933.596 ppb	55.739 ppb	5,761.238 ppb	5,854.785 ppb	83.224 %
Concentration per Run 2	81.732 %	91.948 %	58.694 ppb	5,259.549 ppb	5,159.912 ppb	52.247 ppb	5,268.294 ppb	5,400.333 ppb	84.119 %
Concentration per Run 3	81.778 %	89.662 %	58.597 ppb	5,019.608 ppb	5,468.745 ppb	53.928 ppb	5,223.100 ppb	5,189.709 ppb	82.796 %
Recovery Percentage 1			97.487 %	87.134 %	92.013 %	89.952 %	90.292 %	91.360 %	
Concentration RSD	1.3 %	6.2 %	0.5 %	3.7 %	7.1 %	3.2 %	5.5 %	6.2 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.276 ppb	55.146 ppb	55.422 ppb	5,567.919 ppb	55.553 ppb	56.310 ppb	56.844 ppb	57.020 ppb	87.884 %
Concentration per Run 1	57.708 ppb	57.429 ppb	57.976 ppb	5,700.748 ppb	57.555 ppb	58.799 ppb	58.416 ppb	58.570 ppb	86.369 %
Concentration per Run 2	53.341 ppb	52.863 ppb	53.087 ppb	5,373.586 ppb	53.593 ppb	53.847 ppb	54.886 ppb	54.874 ppb	89.474 %
Concentration per Run 3	54.779 ppb	55.144 ppb	55.203 ppb	5,629.423 ppb	55.512 ppb	56.283 ppb	57.230 ppb	57.617 ppb	87.809 %
Recovery Percentage 1	92.127 %	91.909 %	92.370 %	92.799 %	92.589 %	93.849 %	94.740 %	95.034 %	
Concentration RSD	4.0 %	4.1 %	4.4 %	3.1 %	3.6 %	4.4 %	3.2 %	3.4 %	1.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	56.307 ppb	56.371 ppb	55.237 ppb	57.505 ppb	87.597 %	57.016 ppb	57.813 ppb	88.476 %	57.838 ppb
Concentration per Run 1	57.476 ppb	56.369 ppb	55.925 ppb	58.474 ppb	86.835 %	58.086 ppb	58.846 ppb	86.767 %	58.743 ppb
Concentration per Run 2	55.057 ppb	55.036 ppb	54.268 ppb	55.936 ppb	87.536 %	56.412 ppb	57.399 ppb	88.190 %	57.801 ppb
Concentration per Run 3	56.389 ppb	57.709 ppb	55.519 ppb	58.104 ppb	88.419 %	56.550 ppb	57.195 ppb	90.473 %	56.971 ppb
Recovery Percentage 1	93.846 %	93.952 %	92.062 %	95.841 %		95.027 %	96.355 %		96.397 %
Concentration RSD	2.2 %	2.4 %	1.6 %	2.4 %	0.9 %	1.6 %	1.6 %	2.1 %	1.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	57.451 ppb	89.813 %	87.892 %	56.911 ppb	54.796 ppb	89.505 %
Concentration per Run 1	58.551 ppb	88.550 %	86.208 %	57.550 ppb	56.224 ppb	88.784 %
Concentration per Run 2	56.986 ppb	89.204 %	87.269 %	55.321 ppb	54.713 ppb	90.307 %
Concentration per Run 3	56.815 ppb	91.685 %	90.198 %	57.863 ppb	53.451 ppb	89.422 %
Recovery Percentage 1	95.751 %			94.852 %	91.326 %	
Concentration RSD	1.7 %	1.8 %	2.4 %	2.4 %	2.5 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	55	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 10:18:56 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.808 %	91.550 %	0.012 ppb	-4.878 ppb	-0.655 ppb	-0.627 ppb	-4.196 ppb	2.644 ppb	82.181 %
Concentration per Run 1	81.703 %	90.755 %	0.011 ppb	-4.880 ppb	-0.524 ppb	-0.638 ppb	-7.568 ppb	6.320 ppb	80.947 %
Concentration per Run 2	83.422 %	92.048 %	0.012 ppb	-5.433 ppb	-0.977 ppb	-0.680 ppb	-4.825 ppb	-1.988 ppb	82.131 %
Concentration per Run 3	83.299 %	91.849 %	0.013 ppb	-4.320 ppb	-0.463 ppb	-0.563 ppb	-0.193 ppb	3.600 ppb	83.464 %
Recovery Percentage 1			2.412 %	-4.878 %	-0.936 %	-6.270 %	-4.196 %	2.644 %	
Concentration RSD	1.2 %	0.8 %	10.0 %	11.4 %	42.9 %	9.5 %	88.9 %	160.2 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.024 ppb	-0.004 ppb	0.042 ppb	4.832 ppb	0.002 ppb	-0.026 ppb	-0.006 ppb	-0.097 ppb	89.595 %
Concentration per Run 1	-0.036 ppb	0.010 ppb	0.046 ppb	5.296 ppb	0.001 ppb	0.009 ppb	-0.017 ppb	-0.109 ppb	86.626 %
Concentration per Run 2	-0.017 ppb	-0.011 ppb	0.026 ppb	4.961 ppb	0.002 ppb	-0.056 ppb	-0.004 ppb	-0.093 ppb	90.496 %
Concentration per Run 3	-0.018 ppb	-0.010 ppb	0.054 ppb	4.240 ppb	0.002 ppb	-0.031 ppb	0.004 ppb	-0.089 ppb	91.663 %
Recovery Percentage 1	-0.473 %	-0.357 %	4.216 %	9.665 %	0.326 %	-1.296 %	-0.575 %	-1.931 %	
Concentration RSD	46.7 %	323.5 %	34.2 %	11.2 %	40.3 %	125.6 %	187.6 %	10.9 %	2.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.030 ppb	0.089 ppb	0.002 ppb	0.133 ppb	89.181 %	0.004 ppb	0.005 ppb	90.126 %	0.069 ppb
Concentration per Run 1	0.009 ppb	0.047 ppb	0.001 ppb	0.104 ppb	87.805 %	0.005 ppb	0.005 ppb	85.673 %	0.047 ppb
Concentration per Run 2	0.044 ppb	0.110 ppb	0.004 ppb	0.148 ppb	89.487 %	0.003 ppb	0.006 ppb	90.721 %	0.074 ppb
Concentration per Run 3	0.036 ppb	0.108 ppb	0.001 ppb	0.147 ppb	90.251 %	0.004 ppb	0.003 ppb	93.985 %	0.086 ppb
Recovery Percentage 1	5.911 %	1.774 %	0.020 %	6.647 %		0.971 %	2.309 %		1.720 %
Concentration RSD	62.9 %	40.3 %	83.2 %	18.7 %	1.4 %	16.2 %	26.0 %	4.6 %	28.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.046 ppb	89.795 %	87.934 %	0.323 ppb	0.005 ppb	90.554 %
Concentration per Run 1	0.015 ppb	87.536 %	84.428 %	0.213 ppb	0.007 ppb	88.851 %
Concentration per Run 2	0.054 ppb	89.781 %	88.267 %	0.393 ppb	0.005 ppb	90.120 %
Concentration per Run 3	0.069 ppb	92.068 %	91.106 %	0.363 ppb	0.004 ppb	92.691 %
Recovery Percentage 1	9.189 %			32.287 %	0.539 %	
Concentration RSD	60.3 %	2.5 %	3.8 %	29.9 %	30.9 %	2.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	56	User name	ALPHALAB\a2-icpmsq2	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 10:29:56 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.724 %	84.393 %	59.649 ppb	5,302.894 ppb	5,563.256 ppb	54.291 ppb	5,403.065 ppb	5,400.165 ppb	80.595 %
Concentration per Run 1	79.508 %	84.393 %	59.254 ppb	5,235.684 ppb	5,629.816 ppb	56.240 ppb	5,470.215 ppb	5,378.077 ppb	81.907 %
Concentration per Run 2	78.717 %	81.013 %	60.021 ppb	5,241.239 ppb	5,622.750 ppb	55.378 ppb	5,442.600 ppb	5,409.748 ppb	81.439 %
Concentration per Run 3	77.947 %	87.773 %	59.673 ppb	5,431.761 ppb	5,437.203 ppb	51.255 ppb	5,296.380 ppb	5,412.669 ppb	78.439 %
Recovery Percentage 1			99.416 %	88.382 %	92.721 %	90.484 %	90.051 %	90.003 %	
Concentration RSD	1.0 %	4.0 %	0.6 %	2.1 %	2.0 %	4.9 %	1.7 %	0.4 %	2.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.226 ppb	55.109 ppb	54.854 ppb	5,513.365 ppb	55.589 ppb	55.558 ppb	56.665 ppb	56.991 ppb	83.211 %
Concentration per Run 1	55.636 ppb	55.750 ppb	56.539 ppb	5,579.291 ppb	56.897 ppb	56.662 ppb	58.321 ppb	58.740 ppb	84.588 %
Concentration per Run 2	55.263 ppb	56.065 ppb	56.112 ppb	5,537.277 ppb	55.079 ppb	55.663 ppb	56.496 ppb	56.992 ppb	84.030 %
Concentration per Run 3	54.780 ppb	53.512 ppb	51.910 ppb	5,423.527 ppb	54.791 ppb	54.349 ppb	55.177 ppb	55.240 ppb	81.016 %
Recovery Percentage 1	92.044 %	91.848 %	91.423 %	91.889 %	92.648 %	92.597 %	94.441 %	94.984 %	
Concentration RSD	0.8 %	2.5 %	4.7 %	1.5 %	2.1 %	2.1 %	2.8 %	3.1 %	2.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	55.419 ppb	57.363 ppb	57.267 ppb	58.376 ppb	80.801 %	59.477 ppb	60.367 ppb	82.131 %	60.289 ppb
Concentration per Run 1	55.966 ppb	56.985 ppb	58.258 ppb	59.355 ppb	81.317 %	59.984 ppb	60.354 ppb	81.922 %	60.902 ppb
Concentration per Run 2	55.687 ppb	58.597 ppb	57.083 ppb	57.277 ppb	80.453 %	58.691 ppb	60.550 ppb	81.801 %	60.795 ppb
Concentration per Run 3	54.605 ppb	56.507 ppb	56.458 ppb	58.498 ppb	80.633 %	59.756 ppb	60.197 ppb	82.671 %	59.169 ppb
Recovery Percentage 1	92.366 %	95.605 %	95.444 %	97.294 %		99.128 %	100.612 %		100.481 %
Concentration RSD	1.3 %	1.9 %	1.6 %	1.8 %	0.6 %	1.2 %	0.3 %	0.6 %	1.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.087 ppb	84.593 %	83.234 %	58.731 ppb	55.455 ppb	84.846 %
Concentration per Run 1	59.025 ppb	84.531 %	82.626 %	58.628 ppb	55.488 ppb	85.831 %
Concentration per Run 2	59.970 ppb	83.930 %	83.124 %	58.719 ppb	55.292 ppb	83.897 %
Concentration per Run 3	58.266 ppb	85.317 %	83.954 %	58.846 ppb	55.584 ppb	84.811 %
Recovery Percentage 1	98.478 %			97.885 %	92.425 %	
Concentration RSD	1.4 %	0.8 %	0.8 %	0.2 %	0.3 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	57	User name	ALPHALAB\a2-icpmsq2	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 10:35:11 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.832 %	82.505 %	0.009 ppb	-4.289 ppb	-1.134 ppb	-0.789 ppb	-2.660 ppb	1.645 ppb	76.839 %
Concentration per Run 1	79.466 %	77.137 %	0.011 ppb	-3.289 ppb	-1.171 ppb	-0.965 ppb	1.166 ppb	1.010 ppb	77.657 %
Concentration per Run 2	78.976 %	81.113 %	0.008 ppb	-4.120 ppb	-1.096 ppb	-0.453 ppb	-2.456 ppb	0.484 ppb	76.887 %
Concentration per Run 3	78.056 %	89.264 %	0.009 ppb	-5.459 ppb	-1.134 ppb	-0.951 ppb	-6.690 ppb	3.442 ppb	75.972 %
Recovery Percentage 1			1.855 %	-4.289 %	-1.620 %	-7.895 %	-2.660 %	1.645 %	
Concentration RSD	0.9 %	7.5 %	14.6 %	25.5 %	3.3 %	37.0 %	147.8 %	95.9 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.048 ppb	-0.001 ppb	0.032 ppb	4.521 ppb	0.001 ppb	-0.033 ppb	0.004 ppb	-0.087 ppb	82.237 %
Concentration per Run 1	-0.035 ppb	0.007 ppb	0.030 ppb	4.285 ppb	0.001 ppb	-0.022 ppb	0.013 ppb	-0.072 ppb	77.475 %
Concentration per Run 2	-0.047 ppb	0.001 ppb	0.032 ppb	3.594 ppb	0.000 ppb	-0.032 ppb	0.006 ppb	-0.071 ppb	82.822 %
Concentration per Run 3	-0.062 ppb	-0.013 ppb	0.035 ppb	5.685 ppb	0.002 ppb	-0.045 ppb	-0.008 ppb	-0.119 ppb	86.413 %
Recovery Percentage 1	-0.963 %	-0.149 %	3.210 %	9.043 %	0.186 %	-1.651 %	0.366 %	-1.744 %	
Concentration RSD	27.7 %	702.9 %	8.0 %	23.6 %	134.1 %	34.1 %	295.4 %	31.6 %	5.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.026 ppb	0.055 ppb	0.001 ppb	0.121 ppb	82.042 %	0.002 ppb	0.003 ppb	81.835 %	0.049 ppb
Concentration per Run 1	0.013 ppb	0.026 ppb	-0.004 ppb	0.071 ppb	77.683 %	0.003 ppb	0.003 ppb	78.583 %	0.034 ppb
Concentration per Run 2	0.024 ppb	0.120 ppb	0.000 ppb	0.131 ppb	82.736 %	0.001 ppb	0.004 ppb	83.578 %	0.054 ppb
Concentration per Run 3	0.040 ppb	0.020 ppb	0.006 ppb	0.161 ppb	85.706 %	0.002 ppb	0.004 ppb	83.346 %	0.060 ppb
Recovery Percentage 1	5.113 %	1.106 %	0.009 %	6.056 %		0.528 %	1.675 %		1.224 %
Concentration RSD	52.5 %	101.0 %	555.5 %	37.7 %	4.9 %	50.8 %	18.3 %	3.4 %	27.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.013 ppb	84.096 %	82.139 %	0.380 ppb	0.007 ppb	84.744 %
Concentration per Run 1	0.018 ppb	79.803 %	76.933 %	0.236 ppb	0.007 ppb	81.589 %
Concentration per Run 2	0.007 ppb	84.208 %	82.904 %	0.451 ppb	0.005 ppb	85.464 %
Concentration per Run 3	0.015 ppb	88.278 %	86.579 %	0.454 ppb	0.008 ppb	87.181 %
Recovery Percentage 1	2.688 %			38.012 %	0.663 %	
Concentration RSD	44.8 %	5.0 %	5.9 %	32.9 %	21.3 %	3.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	58	User name	ALPHALAB\a2-icpmsq2	Comment	FB
Analysis label:	I2416395-07 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:39:46 AM	Vial	35		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.695 %	80.914 %	0.007 ppb	179.108 ppb	1.178 ppb	0.973 ppb	-0.197 ppb	13.073 ppb	78.347 %
Concentration per Run 1	79.762 %	79.423 %	0.007 ppb	186.160 ppb	0.797 ppb	1.394 ppb	2.932 ppb	18.500 ppb	79.025 %
Concentration per Run 2	80.827 %	85.686 %	0.010 ppb	164.147 ppb	0.979 ppb	0.307 ppb	-4.344 ppb	9.440 ppb	79.509 %
Concentration per Run 3	78.497 %	77.634 %	0.005 ppb	187.017 ppb	1.758 ppb	1.218 ppb	0.822 ppb	11.279 ppb	76.506 %
Concentration RSD	1.5 %	5.2 %	38.4 %	7.2 %	43.3 %	59.9 %	1,903.3 %	36.6 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.046 ppb	0.786 ppb	0.036 ppb	1.970 ppb	0.000 ppb	-0.016 ppb	0.107 ppb	4.168 ppb	85.233 %
Concentration per Run 1	-0.041 ppb	0.866 ppb	0.073 ppb	2.077 ppb	0.000 ppb	-0.005 ppb	0.118 ppb	4.378 ppb	80.095 %
Concentration per Run 2	-0.040 ppb	0.721 ppb	0.029 ppb	1.468 ppb	0.000 ppb	-0.018 ppb	0.095 ppb	3.929 ppb	87.863 %
Concentration per Run 3	-0.057 ppb	0.772 ppb	0.006 ppb	2.366 ppb	0.001 ppb	-0.026 ppb	0.106 ppb	4.196 ppb	87.740 %
Concentration RSD	20.1 %	9.3 %	96.0 %	23.3 %	1,293.7 %	62.9 %	10.8 %	5.4 %	5.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.018 ppb	0.006 ppb	0.009 ppb	0.057 ppb	82.413 %	0.001 ppb	0.000 ppb	83.490 %	0.051 ppb
Concentration per Run 1	0.035 ppb	-0.018 ppb	0.011 ppb	0.041 ppb	80.932 %	0.000 ppb	0.001 ppb	81.308 %	0.033 ppb
Concentration per Run 2	0.003 ppb	0.055 ppb	0.006 ppb	0.047 ppb	80.748 %	0.001 ppb	0.000 ppb	82.346 %	0.050 ppb
Concentration per Run 3	0.015 ppb	-0.021 ppb	0.010 ppb	0.083 ppb	85.558 %	0.001 ppb	0.000 ppb	86.816 %	0.069 ppb
Concentration RSD	92.6 %	765.8 %	31.6 %	40.3 %	3.3 %	115.9 %	173.2 %	3.5 %	35.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.031 ppb	83.103 %	81.865 %	0.170 ppb	0.002 ppb	82.822 %
Concentration per Run 1	0.012 ppb	81.100 %	80.783 %	0.081 ppb	0.002 ppb	82.293 %
Concentration per Run 2	0.046 ppb	82.448 %	80.122 %	0.198 ppb	0.000 ppb	81.498 %
Concentration per Run 3	0.034 ppb	85.762 %	84.690 %	0.231 ppb	0.002 ppb	84.677 %
Concentration RSD	55.3 %	2.9 %	3.0 %	46.2 %	86.5 %	2.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	59	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416395-04 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:44:15 AM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	77.024 %	79.257 %	0.085 ppb	55,894.347 ppb	13,181.016 ppb	252.569 ppb	1,980.547 ppb	33,855.927 ppb	76.421 %
Concentration per Run 1	78.235 %	78.628 %	0.092 ppb	56,376.436 ppb	13,448.923 ppb	256.556 ppb	2,024.657 ppb	34,929.275 ppb	77.297 %
Concentration per Run 2	76.825 %	80.417 %	0.082 ppb	55,413.364 ppb	13,073.418 ppb	256.738 ppb	1,960.684 ppb	33,044.771 ppb	76.404 %
Concentration per Run 3	76.013 %	78.727 %	0.080 ppb	55,893.242 ppb	13,020.708 ppb	244.412 ppb	1,956.301 ppb	33,593.734 ppb	75.561 %
Concentration RSD	1.5 %	1.3 %	7.4 %	0.9 %	1.8 %	2.8 %	1.9 %	2.9 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.031 ppb	1.262 ppb	76.622 ppb	1,410.934 ppb	0.966 ppb	17.791 ppb	182.380 ppb	11.912 ppb	84.324 %
Concentration per Run 1	1.029 ppb	1.247 ppb	76.810 ppb	1,395.854 ppb	0.976 ppb	18.187 ppb	184.927 ppb	12.100 ppb	82.944 %
Concentration per Run 2	0.990 ppb	1.268 ppb	75.645 ppb	1,418.627 ppb	0.933 ppb	17.377 ppb	176.606 ppb	11.787 ppb	86.561 %
Concentration per Run 3	1.075 ppb	1.272 ppb	77.412 ppb	1,418.321 ppb	0.988 ppb	17.810 ppb	185.606 ppb	11.849 ppb	83.466 %
Concentration RSD	4.1 %	1.0 %	1.2 %	0.9 %	3.0 %	2.3 %	2.7 %	1.4 %	2.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.902 ppb	0.941 ppb	129.235 ppb	0.458 ppb	77.465 %	0.005 ppb	0.128 ppb	78.919 %	0.063 ppb
Concentration per Run 1	0.848 ppb	1.015 ppb	128.870 ppb	0.417 ppb	75.254 %	0.003 ppb	0.114 ppb	77.600 %	0.058 ppb
Concentration per Run 2	0.873 ppb	0.887 ppb	127.319 ppb	0.457 ppb	79.438 %	0.004 ppb	0.147 ppb	81.676 %	0.065 ppb
Concentration per Run 3	0.986 ppb	0.921 ppb	131.516 ppb	0.501 ppb	77.702 %	0.008 ppb	0.121 ppb	77.481 %	0.067 ppb
Concentration RSD	8.1 %	7.1 %	1.6 %	9.2 %	2.7 %	50.5 %	13.4 %	3.0 %	7.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	66.585 ppb	81.388 %	80.292 %	0.129 ppb	1.118 ppb	75.810 %
Concentration per Run 1	67.101 ppb	80.207 %	80.778 %	0.069 ppb	1.140 ppb	75.118 %
Concentration per Run 2	66.679 ppb	83.323 %	82.084 %	0.144 ppb	1.120 ppb	77.247 %
Concentration per Run 3	65.973 ppb	80.633 %	78.014 %	0.174 ppb	1.094 ppb	75.064 %
Concentration RSD	0.9 %	2.1 %	2.6 %	41.8 %	2.1 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	60	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416395-05 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:48:43 AM	Vial	33		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.106 %	85.321 %	0.011 ppb	45,933.422 ppb	21,494.919 ppb	22.112 ppb	6,287.220 ppb	68,395.953 ppb	79.103 %
Concentration per Run 1	83.694 %	82.306 %	0.008 ppb	47,300.494 ppb	22,494.299 ppb	23.626 ppb	6,592.755 ppb	72,215.154 ppb	80.282 %
Concentration per Run 2	83.801 %	85.586 %	0.012 ppb	45,258.853 ppb	21,187.280 ppb	23.164 ppb	6,183.844 ppb	65,515.020 ppb	79.842 %
Concentration per Run 3	81.822 %	88.071 %	0.012 ppb	45,240.918 ppb	20,803.179 ppb	19.545 ppb	6,085.062 ppb	67,457.686 ppb	77.186 %
Concentration RSD	1.3 %	3.4 %	24.1 %	2.6 %	4.1 %	10.1 %	4.3 %	5.0 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.527 ppb	0.786 ppb	29.181 ppb	158.054 ppb	1.191 ppb	4.783 ppb	243.359 ppb	2.788 ppb	86.943 %
Concentration per Run 1	0.578 ppb	0.802 ppb	30.729 ppb	156.115 ppb	1.190 ppb	4.693 ppb	241.928 ppb	2.882 ppb	89.071 %
Concentration per Run 2	0.524 ppb	0.786 ppb	28.789 ppb	156.452 ppb	1.228 ppb	4.748 ppb	241.563 ppb	2.713 ppb	86.863 %
Concentration per Run 3	0.479 ppb	0.770 ppb	28.025 ppb	161.595 ppb	1.156 ppb	4.909 ppb	246.586 ppb	2.770 ppb	84.894 %
Concentration RSD	9.4 %	2.1 %	4.8 %	1.9 %	3.0 %	2.3 %	1.2 %	3.1 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.560 ppb	0.264 ppb	109.607 ppb	0.316 ppb	80.046 %	0.000 ppb	0.018 ppb	81.909 %	0.045 ppb
Concentration per Run 1	0.541 ppb	0.293 ppb	113.590 ppb	0.332 ppb	80.447 %	0.000 ppb	0.019 ppb	81.649 %	0.033 ppb
Concentration per Run 2	0.543 ppb	0.260 ppb	109.443 ppb	0.312 ppb	81.211 %	-0.001 ppb	0.021 ppb	84.432 %	0.041 ppb
Concentration per Run 3	0.597 ppb	0.238 ppb	105.789 ppb	0.305 ppb	78.481 %	0.000 ppb	0.014 ppb	79.648 %	0.062 ppb
Concentration RSD	5.7 %	10.5 %	3.6 %	4.5 %	1.8 %	58.9 %	19.0 %	2.9 %	33.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	114.484 ppb	85.052 %	83.799 %	0.088 ppb	0.077 ppb	79.533 %
Concentration per Run 1	117.494 ppb	84.822 %	85.180 %	0.044 ppb	0.083 ppb	78.489 %
Concentration per Run 2	115.317 ppb	85.844 %	84.380 %	0.095 ppb	0.075 ppb	80.246 %
Concentration per Run 3	110.643 ppb	84.491 %	81.839 %	0.126 ppb	0.074 ppb	79.866 %
Concentration RSD	3.1 %	0.8 %	2.1 %	46.6 %	6.5 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	61	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416395-06 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:53:11 AM	Vial	34		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.526 %	92.246 %	0.007 ppb	19,643.685 ppb	24,660.075 ppb	6.493 ppb	1,017.827 ppb	69,321.240 ppb	79.694 %
Concentration per Run 1	87.985 %	87.475 %	0.011 ppb	21,410.379 ppb	26,871.865 ppb	7.868 ppb	1,145.030 ppb	78,849.608 ppb	80.392 %
Concentration per Run 2	85.789 %	98.211 %	0.002 ppb	18,041.687 ppb	22,428.716 ppb	5.459 ppb	942.076 ppb	63,047.541 ppb	79.048 %
Concentration per Run 3	85.805 %	91.053 %	0.009 ppb	19,478.987 ppb	24,679.645 ppb	6.151 ppb	966.375 ppb	66,066.571 ppb	79.642 %
Concentration RSD	1.5 %	5.9 %	62.4 %	8.6 %	9.0 %	19.1 %	10.9 %	12.1 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.093 ppb	0.698 ppb	156.100 ppb	1,308.901 ppb	0.195 ppb	2.846 ppb	2.615 ppb	0.986 ppb	98.850 %
Concentration per Run 1	0.114 ppb	0.737 ppb	178.121 ppb	1,443.159 ppb	0.227 ppb	3.051 ppb	2.793 ppb	1.198 ppb	88.354 %
Concentration per Run 2	0.070 ppb	0.689 ppb	145.007 ppb	1,239.790 ppb	0.172 ppb	2.564 ppb	2.462 ppb	0.858 ppb	106.752 %
Concentration per Run 3	0.094 ppb	0.669 ppb	145.171 ppb	1,243.753 ppb	0.185 ppb	2.922 ppb	2.590 ppb	0.901 ppb	101.444 %
Concentration RSD	23.8 %	5.0 %	12.2 %	8.9 %	14.8 %	8.9 %	6.4 %	18.8 %	9.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.861 ppb	0.004 ppb	123.525 ppb	0.305 ppb	84.006 %	0.000 ppb	0.002 ppb	85.318 %	0.036 ppb
Concentration per Run 1	0.912 ppb	0.048 ppb	138.644 ppb	0.302 ppb	80.588 %	0.000 ppb	0.001 ppb	82.901 %	0.035 ppb
Concentration per Run 2	0.799 ppb	-0.009 ppb	116.386 ppb	0.277 ppb	86.378 %	-0.001 ppb	0.002 ppb	86.446 %	0.034 ppb
Concentration per Run 3	0.870 ppb	-0.028 ppb	115.544 ppb	0.335 ppb	85.053 %	0.000 ppb	0.002 ppb	86.606 %	0.038 ppb
Concentration RSD	6.7 %	1,133.7 %	10.6 %	9.4 %	3.6 %	308.2 %	32.6 %	2.5 %	6.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	206.948 ppb	87.586 %	85.936 %	0.070 ppb	0.034 ppb	81.218 %
Concentration per Run 1	213.218 ppb	82.943 %	83.574 %	0.032 ppb	0.035 ppb	77.839 %
Concentration per Run 2	205.199 ppb	90.292 %	87.645 %	0.082 ppb	0.034 ppb	82.365 %
Concentration per Run 3	202.427 ppb	89.523 %	86.588 %	0.096 ppb	0.032 ppb	83.450 %
Concentration RSD	2.7 %	4.6 %	2.5 %	47.8 %	5.2 %	3.7 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	62	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416395-08 6020SL	Rack	1		
Analysis started at:	4/1/2024 10:57:40 AM	Vial	36		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.992 %	88.370 %	0.013 ppb	43,425.036 ppb	20,402.884 ppb	20.481 ppb	6,020.942 ppb	67,013.297 ppb	78.618 %
Concentration per Run 1	83.903 %	90.855 %	0.012 ppb	43,647.931 ppb	20,767.495 ppb	20.464 ppb	6,358.543 ppb	69,965.378 ppb	79.395 %
Concentration per Run 2	83.181 %	90.358 %	0.012 ppb	42,356.072 ppb	20,103.237 ppb	19.269 ppb	5,779.564 ppb	64,765.733 ppb	78.744 %
Concentration per Run 3	81.893 %	83.896 %	0.015 ppb	44,271.103 ppb	20,337.919 ppb	21.710 ppb	5,924.719 ppb	66,308.779 ppb	77.714 %
Concentration RSD	1.2 %	4.4 %	15.9 %	2.2 %	1.7 %	6.0 %	5.0 %	4.0 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.542 ppb	0.852 ppb	28.428 ppb	174.456 ppb	1.168 ppb	5.096 ppb	219.917 ppb	3.557 ppb	83.069 %
Concentration per Run 1	0.507 ppb	0.849 ppb	28.719 ppb	173.043 ppb	1.168 ppb	4.930 ppb	212.059 ppb	3.381 ppb	87.941 %
Concentration per Run 2	0.544 ppb	0.821 ppb	28.227 ppb	171.388 ppb	1.132 ppb	5.150 ppb	219.250 ppb	3.627 ppb	83.875 %
Concentration per Run 3	0.576 ppb	0.887 ppb	28.339 ppb	178.937 ppb	1.204 ppb	5.208 ppb	228.440 ppb	3.661 ppb	77.391 %
Concentration RSD	6.3 %	3.9 %	0.9 %	2.3 %	3.1 %	2.9 %	3.7 %	4.3 %	6.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.580 ppb	0.165 ppb	112.115 ppb	0.313 ppb	80.714 %	0.000 ppb	0.022 ppb	83.724 %	0.040 ppb
Concentration per Run 1	0.518 ppb	0.118 ppb	112.459 ppb	0.328 ppb	80.967 %	-0.001 ppb	0.024 ppb	84.060 %	0.029 ppb
Concentration per Run 2	0.655 ppb	0.196 ppb	110.946 ppb	0.328 ppb	80.166 %	0.001 ppb	0.020 ppb	82.781 %	0.050 ppb
Concentration per Run 3	0.568 ppb	0.183 ppb	112.939 ppb	0.281 ppb	81.010 %	0.000 ppb	0.021 ppb	84.332 %	0.040 ppb
Concentration RSD	12.0 %	25.1 %	0.9 %	8.7 %	0.6 %	4,700.8 %	8.3 %	1.0 %	26.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	111.897 ppb	85.559 %	84.509 %	0.058 ppb	0.097 ppb	79.542 %
Concentration per Run 1	112.012 ppb	85.176 %	84.600 %	0.027 ppb	0.099 ppb	79.820 %
Concentration per Run 2	112.118 ppb	85.363 %	85.011 %	0.067 ppb	0.097 ppb	78.959 %
Concentration per Run 3	111.562 ppb	86.139 %	83.915 %	0.080 ppb	0.093 ppb	79.847 %
Concentration RSD	0.3 %	0.6 %	0.7 %	48.1 %	3.3 %	0.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	63	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416561-02 6020SL	Rack	1		
Analysis started at:	4/1/2024 11:02:09 AM	Vial	37		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	76.152 %	88.071 %	0.009 ppb	43,498.713 ppb	53,118.803 ppb	3.280 ppb	4,063.580 ppb	124,141.997 ppb	77.928 %
Concentration per Run 1	77.049 %	89.960 %	0.014 ppb	43,735.847 ppb	53,959.044 ppb	3.488 ppb	4,084.252 ppb	124,297.884 ppb	78.449 %
Concentration per Run 2	76.123 %	88.071 %	0.009 ppb	43,078.626 ppb	51,389.702 ppb	3.363 ppb	4,072.123 ppb	125,012.199 ppb	77.767 %
Concentration per Run 3	75.285 %	86.183 %	0.005 ppb	43,681.666 ppb	54,007.662 ppb	2.988 ppb	4,034.365 ppb	123,115.909 ppb	77.568 %
Concentration RSD	1.2 %	2.1 %	47.0 %	0.8 %	2.8 %	7.9 %	0.6 %	0.8 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.763 ppb	0.726 ppb	69.102 ppb	17.689 ppb	0.255 ppb	0.957 ppb	0.264 ppb	0.174 ppb	82.157 %
Concentration per Run 1	1.862 ppb	0.714 ppb	70.587 ppb	17.963 ppb	0.226 ppb	0.950 ppb	0.299 ppb	0.152 ppb	84.088 %
Concentration per Run 2	1.747 ppb	0.734 ppb	70.733 ppb	15.885 ppb	0.273 ppb	1.036 ppb	0.250 ppb	0.223 ppb	79.424 %
Concentration per Run 3	1.679 ppb	0.730 ppb	65.986 ppb	19.220 ppb	0.267 ppb	0.886 ppb	0.243 ppb	0.145 ppb	82.957 %
Concentration RSD	5.2 %	1.4 %	3.9 %	9.5 %	10.1 %	7.9 %	11.6 %	24.8 %	3.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.438 ppb	0.211 ppb	136.023 ppb	0.357 ppb	77.677 %	0.000 ppb	0.008 ppb	80.547 %	0.130 ppb
Concentration per Run 1	0.431 ppb	0.210 ppb	139.102 ppb	0.374 ppb	78.773 %	-0.001 ppb	0.006 ppb	80.431 %	0.123 ppb
Concentration per Run 2	0.474 ppb	0.129 ppb	136.145 ppb	0.358 ppb	76.830 %	0.000 ppb	0.014 ppb	80.790 %	0.133 ppb
Concentration per Run 3	0.408 ppb	0.294 ppb	132.822 ppb	0.338 ppb	77.429 %	-0.001 ppb	0.004 ppb	80.419 %	0.135 ppb
Concentration RSD	7.7 %	39.0 %	2.3 %	5.1 %	1.3 %	122.1 %	65.9 %	0.3 %	4.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	37.353 ppb	86.386 %	84.760 %	0.070 ppb	0.006 ppb	76.782 %
Concentration per Run 1	39.570 ppb	86.165 %	86.208 %	0.037 ppb	0.007 ppb	77.441 %
Concentration per Run 2	36.027 ppb	86.285 %	84.421 %	0.082 ppb	0.007 ppb	75.896 %
Concentration per Run 3	36.462 ppb	86.708 %	83.651 %	0.090 ppb	0.004 ppb	77.011 %
Concentration RSD	5.2 %	0.3 %	1.5 %	41.5 %	26.4 %	1.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	64	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416561-03 6020SL	Rack	1		
Analysis started at:	4/1/2024 11:06:36 AM	Vial	38		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	80.685 %	82.372 %	0.008 ppb	24,979.036 ppb	19,968.143 ppb	3.693 ppb	2,689.255 ppb	50,074.147 ppb	78.367 %
Concentration per Run 1	82.124 %	81.411 %	0.007 ppb	24,087.591 ppb	19,223.414 ppb	4.165 ppb	2,656.938 ppb	48,370.747 ppb	79.107 %
Concentration per Run 2	80.826 %	83.996 %	0.009 ppb	25,617.519 ppb	20,842.985 ppb	3.905 ppb	2,799.875 ppb	52,183.571 ppb	78.709 %
Concentration per Run 3	79.104 %	81.709 %	0.008 ppb	25,231.998 ppb	19,838.031 ppb	3.008 ppb	2,610.951 ppb	49,668.124 ppb	77.284 %
Concentration RSD	1.9 %	1.7 %	11.3 %	3.2 %	4.1 %	16.4 %	3.7 %	3.9 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.818 ppb	1.672 ppb	38.338 ppb	4.255 ppb	0.213 ppb	0.386 ppb	0.311 ppb	21.411 ppb	85.890 %
Concentration per Run 1	1.775 ppb	1.628 ppb	36.496 ppb	3.082 ppb	0.202 ppb	0.415 ppb	0.286 ppb	20.613 ppb	86.517 %
Concentration per Run 2	1.917 ppb	1.699 ppb	40.413 ppb	4.630 ppb	0.217 ppb	0.443 ppb	0.336 ppb	22.356 ppb	85.804 %
Concentration per Run 3	1.763 ppb	1.689 ppb	38.105 ppb	5.053 ppb	0.222 ppb	0.300 ppb	0.311 ppb	21.265 ppb	85.349 %
Concentration RSD	4.7 %	2.3 %	5.1 %	24.4 %	4.9 %	19.6 %	8.0 %	4.1 %	0.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.454 ppb	1.482 ppb	82.587 ppb	0.554 ppb	81.721 %	-0.001 ppb	0.013 ppb	83.525 %	0.589 ppb
Concentration per Run 1	0.422 ppb	1.316 ppb	79.441 ppb	0.555 ppb	81.138 %	-0.001 ppb	0.014 ppb	80.364 %	0.563 ppb
Concentration per Run 2	0.485 ppb	1.795 ppb	86.082 ppb	0.525 ppb	83.383 %	-0.001 ppb	0.012 ppb	85.953 %	0.587 ppb
Concentration per Run 3	0.455 ppb	1.337 ppb	82.237 ppb	0.583 ppb	80.642 %	-0.001 ppb	0.014 ppb	84.259 %	0.616 ppb
Concentration RSD	7.0 %	18.3 %	4.0 %	5.2 %	1.8 %	24.0 %	7.7 %	3.4 %	4.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.179 ppb	86.603 %	84.033 %	0.048 ppb	0.142 ppb	81.006 %
Concentration per Run 1	61.302 ppb	86.460 %	81.993 %	0.023 ppb	0.140 ppb	80.433 %
Concentration per Run 2	60.595 ppb	86.778 %	86.580 %	0.056 ppb	0.149 ppb	81.921 %
Concentration per Run 3	58.640 ppb	86.571 %	83.525 %	0.065 ppb	0.138 ppb	80.663 %
Concentration RSD	2.3 %	0.2 %	2.8 %	46.4 %	4.0 %	1.0 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	65	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416561-04 6020SL	Rack	1		
Analysis started at:	4/1/2024 11:11:03 AM	Vial	39		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.401 %	86.381 %	0.008 ppb	8,992.232 ppb	934.419 ppb	100.949 ppb	16,045.045 ppb	15,564.476 ppb	78.702 %
Concentration per Run 1	83.030 %	82.803 %	0.007 ppb	8,986.940 ppb	940.408 ppb	100.668 ppb	16,251.136 ppb	15,774.156 ppb	80.313 %
Concentration per Run 2	81.079 %	92.047 %	0.012 ppb	8,888.952 ppb	926.718 ppb	102.210 ppb	16,190.399 ppb	15,882.844 ppb	77.659 %
Concentration per Run 3	80.096 %	84.294 %	0.005 ppb	9,100.803 ppb	936.130 ppb	99.969 ppb	15,693.600 ppb	15,036.428 ppb	78.133 %
Concentration RSD	1.8 %	5.7 %	49.8 %	1.2 %	0.7 %	1.1 %	1.9 %	3.0 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.054 ppb	20.149 ppb	0.236 ppb	15.480 ppb	0.062 ppb	0.144 ppb	1.887 ppb	0.385 ppb	87.840 %
Concentration per Run 1	0.964 ppb	20.142 ppb	0.266 ppb	13.677 ppb	0.054 ppb	0.155 ppb	2.010 ppb	0.388 ppb	87.367 %
Concentration per Run 2	1.092 ppb	20.296 ppb	0.219 ppb	16.045 ppb	0.073 ppb	0.107 ppb	1.792 ppb	0.384 ppb	89.051 %
Concentration per Run 3	1.105 ppb	20.008 ppb	0.223 ppb	16.716 ppb	0.060 ppb	0.169 ppb	1.858 ppb	0.381 ppb	87.101 %
Concentration RSD	7.4 %	0.7 %	11.1 %	10.3 %	16.2 %	22.8 %	5.9 %	1.0 %	1.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.314 ppb	0.240 ppb	171.769 ppb	2.296 ppb	84.744 %	0.000 ppb	0.003 ppb	86.963 %	1.783 ppb
Concentration per Run 1	0.269 ppb	0.362 ppb	170.366 ppb	2.250 ppb	82.580 %	0.000 ppb	0.004 ppb	85.386 %	1.822 ppb
Concentration per Run 2	0.387 ppb	0.142 ppb	176.216 ppb	2.338 ppb	87.891 %	0.000 ppb	0.005 ppb	90.570 %	1.783 ppb
Concentration per Run 3	0.287 ppb	0.216 ppb	168.725 ppb	2.301 ppb	83.762 %	-0.001 ppb	0.001 ppb	84.932 %	1.745 ppb
Concentration RSD	20.2 %	46.6 %	2.3 %	1.9 %	3.3 %	47.3 %	55.2 %	3.6 %	2.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10.647 ppb	88.344 %	87.042 %	0.042 ppb	0.457 ppb	85.528 %
Concentration per Run 1	10.598 ppb	85.897 %	83.646 %	0.018 ppb	0.467 ppb	83.869 %
Concentration per Run 2	10.629 ppb	90.687 %	89.479 %	0.049 ppb	0.451 ppb	87.040 %
Concentration per Run 3	10.715 ppb	88.448 %	88.001 %	0.058 ppb	0.451 ppb	85.677 %
Concentration RSD	0.6 %	2.7 %	3.5 %	51.2 %	1.9 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	66	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 11:16:40 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.418 %	87.740 %	55.605 ppb	4,951.008 ppb	5,369.984 ppb	54.672 ppb	5,271.732 ppb	5,325.052 ppb	83.965 %
Concentration per Run 1	82.646 %	86.878 %	55.544 ppb	5,198.331 ppb	5,656.624 ppb	57.554 ppb	5,748.152 ppb	5,593.173 ppb	83.461 %
Concentration per Run 2	82.549 %	88.171 %	55.984 ppb	4,853.688 ppb	5,226.246 ppb	54.174 ppb	5,024.100 ppb	5,131.459 ppb	84.525 %
Concentration per Run 3	82.059 %	88.171 %	55.288 ppb	4,801.004 ppb	5,227.082 ppb	52.287 ppb	5,042.945 ppb	5,250.524 ppb	83.910 %
Recovery Percentage 1			92.676 %	82.517 %	89.500 %	91.120 %	87.862 %	88.751 %	
Concentration RSD	0.4 %	0.9 %	0.6 %	4.4 %	4.6 %	4.9 %	7.8 %	4.5 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	53.975 ppb	54.086 ppb	53.939 ppb	5,591.784 ppb	54.462 ppb	54.924 ppb	54.625 ppb	54.065 ppb	90.767 %
Concentration per Run 1	56.024 ppb	55.339 ppb	56.204 ppb	5,756.530 ppb	55.451 ppb	55.442 ppb	55.387 ppb	53.960 ppb	93.490 %
Concentration per Run 2	52.670 ppb	53.737 ppb	52.214 ppb	5,535.067 ppb	54.264 ppb	54.567 ppb	54.847 ppb	54.815 ppb	89.974 %
Concentration per Run 3	53.231 ppb	53.181 ppb	53.400 ppb	5,483.754 ppb	53.671 ppb	54.763 ppb	53.640 ppb	53.420 ppb	88.836 %
Recovery Percentage 1	89.958 %	90.143 %	89.899 %	93.196 %	90.770 %	91.540 %	91.041 %	90.108 %	
Concentration RSD	3.3 %	2.1 %	3.8 %	2.6 %	1.7 %	0.8 %	1.6 %	1.3 %	2.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	54.943 ppb	57.272 ppb	54.949 ppb	55.088 ppb	86.259 %	56.077 ppb	57.196 ppb	88.422 %	56.133 ppb
Concentration per Run 1	55.780 ppb	59.367 ppb	56.778 ppb	55.595 ppb	87.466 %	56.354 ppb	57.721 ppb	90.350 %	57.016 ppb
Concentration per Run 2	54.431 ppb	56.245 ppb	54.165 ppb	55.043 ppb	85.624 %	55.716 ppb	56.875 ppb	86.827 %	56.011 ppb
Concentration per Run 3	54.617 ppb	56.205 ppb	53.903 ppb	54.628 ppb	85.686 %	56.161 ppb	56.990 ppb	88.088 %	55.373 ppb
Recovery Percentage 1	91.571 %	95.454 %	91.581 %	91.814 %		93.461 %	95.326 %		93.556 %
Concentration RSD	1.3 %	3.2 %	2.9 %	0.9 %	1.2 %	0.6 %	0.8 %	2.0 %	1.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	54.492 ppb	90.997 %	88.983 %	55.932 ppb	53.867 ppb	89.393 %
Concentration per Run 1	56.659 ppb	91.201 %	89.869 %	56.003 ppb	53.509 ppb	88.940 %
Concentration per Run 2	53.260 ppb	92.449 %	89.940 %	55.365 ppb	53.411 ppb	90.535 %
Concentration per Run 3	53.557 ppb	89.340 %	87.141 %	56.429 ppb	54.681 ppb	88.705 %
Recovery Percentage 1	90.820 %			93.220 %	89.778 %	
Concentration RSD	3.5 %	1.7 %	1.8 %	1.0 %	1.3 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	67	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 11:21:11 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.355 %	87.011 %	0.014 ppb	-6.701 ppb	0.367 ppb	-0.675 ppb	-2.681 ppb	1.963 ppb	79.746 %
Concentration per Run 1	83.110 %	89.960 %	0.018 ppb	-6.742 ppb	-0.091 ppb	-0.749 ppb	-2.679 ppb	4.212 ppb	80.176 %
Concentration per Run 2	83.187 %	86.978 %	0.009 ppb	-6.875 ppb	-0.040 ppb	-0.444 ppb	-0.110 ppb	0.930 ppb	79.223 %
Concentration per Run 3	80.768 %	84.095 %	0.014 ppb	-6.486 ppb	1.232 ppb	-0.831 ppb	-5.255 ppb	0.746 ppb	79.840 %
Recovery Percentage 1			2.711 %	-6.701 %	0.524 %	-6.746 %	-2.681 %	1.963 %	
Concentration RSD	1.7 %	3.4 %	34.6 %	3.0 %	204.3 %	30.2 %	95.9 %	99.4 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.000 ppb	0.004 ppb	0.067 ppb	7.342 ppb	0.013 ppb	-0.009 ppb	0.009 ppb	-0.101 ppb	90.769 %
Concentration per Run 1	0.022 ppb	0.012 ppb	0.068 ppb	6.707 ppb	0.007 ppb	-0.008 ppb	0.022 ppb	-0.108 ppb	91.499 %
Concentration per Run 2	-0.027 ppb	0.004 ppb	0.023 ppb	7.648 ppb	0.016 ppb	0.000 ppb	-0.003 ppb	-0.085 ppb	89.948 %
Concentration per Run 3	0.006 ppb	-0.005 ppb	0.112 ppb	7.672 ppb	0.016 ppb	-0.018 ppb	0.006 ppb	-0.109 ppb	90.860 %
Recovery Percentage 1	0.006 %	0.364 %	6.746 %	14.685 %	2.588 %	-0.447 %	0.867 %	-2.013 %	
Concentration RSD	8,460.4 %	238.3 %	65.9 %	7.5 %	38.4 %	99.5 %	144.8 %	13.7 %	0.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.040 ppb	0.079 ppb	0.015 ppb	0.163 ppb	87.174 %	0.012 ppb	0.012 ppb	87.825 %	0.042 ppb
Concentration per Run 1	0.063 ppb	0.022 ppb	0.014 ppb	0.113 ppb	86.417 %	0.018 ppb	0.019 ppb	88.022 %	0.029 ppb
Concentration per Run 2	0.010 ppb	0.063 ppb	0.021 ppb	0.157 ppb	87.672 %	0.009 ppb	0.007 ppb	88.612 %	0.040 ppb
Concentration per Run 3	0.046 ppb	0.153 ppb	0.010 ppb	0.220 ppb	87.433 %	0.010 ppb	0.011 ppb	86.841 %	0.059 ppb
Recovery Percentage 1	7.999 %	1.585 %	0.148 %	8.162 %		3.101 %	6.102 %		1.062 %
Concentration RSD	67.7 %	84.7 %	37.2 %	32.7 %	0.8 %	38.9 %	49.8 %	1.0 %	35.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.025 ppb	90.479 %	88.176 %	0.447 ppb	0.014 ppb	90.697 %
Concentration per Run 1	0.033 ppb	88.485 %	86.912 %	0.303 ppb	0.016 ppb	89.124 %
Concentration per Run 2	0.036 ppb	91.330 %	88.248 %	0.531 ppb	0.013 ppb	90.978 %
Concentration per Run 3	0.005 ppb	91.623 %	89.368 %	0.508 ppb	0.012 ppb	91.989 %
Recovery Percentage 1	4.943 %			44.742 %	1.363 %	
Concentration RSD	68.6 %	1.9 %	1.4 %	28.0 %	14.9 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	68	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901969-1 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:06:19 PM	Vial	40		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.912 %	88.668 %	0.001 ppb	-6.953 ppb	0.618 ppb	0.612 ppb	-9.192 ppb	4.199 ppb	83.552 %
Concentration per Run 1	87.045 %	85.487 %	0.001 ppb	-7.029 ppb	0.648 ppb	0.676 ppb	-6.927 ppb	6.999 ppb	82.988 %
Concentration per Run 2	87.208 %	89.364 %	0.001 ppb	-6.362 ppb	1.023 ppb	0.785 ppb	-9.843 ppb	5.539 ppb	85.057 %
Concentration per Run 3	86.482 %	91.153 %	0.002 ppb	-7.469 ppb	0.184 ppb	0.376 ppb	-10.805 ppb	0.058 ppb	82.611 %
Concentration RSD	0.4 %	3.3 %	40.1 %	8.0 %	68.0 %	34.6 %	22.0 %	87.2 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.011 ppb	0.019 ppb	0.038 ppb	0.135 ppb	0.004 ppb	0.028 ppb	0.008 ppb	-0.057 ppb	83.829 %
Concentration per Run 1	-0.003 ppb	0.011 ppb	0.050 ppb	0.109 ppb	0.005 ppb	0.042 ppb	-0.010 ppb	-0.067 ppb	83.375 %
Concentration per Run 2	-0.017 ppb	0.019 ppb	0.048 ppb	0.335 ppb	0.006 ppb	0.040 ppb	0.011 ppb	-0.069 ppb	83.547 %
Concentration per Run 3	-0.014 ppb	0.026 ppb	0.017 ppb	-0.038 ppb	0.002 ppb	0.002 ppb	0.023 ppb	-0.036 ppb	84.566 %
Concentration RSD	66.4 %	40.2 %	48.0 %	139.0 %	45.7 %	81.6 %	206.0 %	32.4 %	0.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.006 ppb	0.043 ppb	-0.001 ppb	0.009 ppb	85.034 %	0.001 ppb	0.000 ppb	86.733 %	0.011 ppb
Concentration per Run 1	-0.009 ppb	0.000 ppb	-0.001 ppb	0.010 ppb	83.193 %	0.000 ppb	0.000 ppb	82.246 %	0.010 ppb
Concentration per Run 2	0.001 ppb	0.040 ppb	-0.002 ppb	0.016 ppb	86.195 %	0.001 ppb	0.000 ppb	89.482 %	0.009 ppb
Concentration per Run 3	0.027 ppb	0.089 ppb	-0.001 ppb	0.003 ppb	85.714 %	0.000 ppb	0.000 ppb	88.471 %	0.015 ppb
Concentration RSD	297.4 %	103.2 %	72.1 %	69.4 %	1.9 %	111.6 %	N/A	4.5 %	29.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.009 ppb	87.788 %	87.401 %	0.022 ppb	0.011 ppb	94.940 %
Concentration per Run 1	0.016 ppb	84.493 %	83.106 %	0.014 ppb	0.019 ppb	92.253 %
Concentration per Run 2	0.010 ppb	89.553 %	88.149 %	0.028 ppb	0.008 ppb	96.534 %
Concentration per Run 3	0.001 ppb	89.317 %	90.948 %	0.025 ppb	0.007 ppb	96.033 %
Concentration RSD	87.3 %	3.3 %	4.5 %	33.3 %	59.3 %	2.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	69	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901969-2d10 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:10:46 PM	Vial	41		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	87.176 %	85.288 %	4.904 ppb	880.189 ppb	945.265 ppb	182.623 ppb	922.386 ppb	818.932 ppb	83.448 %
Concentration per Run 1	88.196 %	80.914 %	4.904 ppb	910.194 ppb	989.543 ppb	191.194 ppb	970.541 ppb	911.034 ppb	84.147 %
Concentration per Run 2	87.964 %	84.493 %	4.887 ppb	882.551 ppb	945.839 ppb	182.856 ppb	899.770 ppb	792.937 ppb	83.840 %
Concentration per Run 3	85.366 %	90.457 %	4.919 ppb	847.824 ppb	900.412 ppb	173.820 ppb	896.846 ppb	752.824 ppb	82.357 %
Concentration RSD	1.8 %	5.7 %	0.3 %	3.6 %	4.7 %	4.8 %	4.5 %	10.0 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	47.511 ppb	18.523 ppb	46.876 ppb	99.557 ppb	46.130 ppb	47.271 ppb	23.653 ppb	48.813 ppb	86.140 %
Concentration per Run 1	48.302 ppb	18.828 ppb	46.363 ppb	103.646 ppb	46.675 ppb	47.090 ppb	23.351 ppb	48.476 ppb	85.822 %
Concentration per Run 2	47.041 ppb	18.741 ppb	47.701 ppb	94.697 ppb	45.950 ppb	47.348 ppb	24.383 ppb	49.765 ppb	84.519 %
Concentration per Run 3	47.190 ppb	17.999 ppb	46.565 ppb	100.328 ppb	45.765 ppb	47.376 ppb	23.226 ppb	48.199 ppb	88.078 %
Concentration RSD	1.5 %	2.5 %	1.5 %	4.5 %	1.0 %	0.3 %	2.7 %	1.7 %	2.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.314 ppb	11.585 ppb	92.426 ppb	93.150 ppb	86.625 %	4.755 ppb	5.286 ppb	86.376 %	44.921 ppb
Concentration per Run 1	11.537 ppb	11.695 ppb	92.550 ppb	95.024 ppb	84.630 %	4.876 ppb	5.405 ppb	83.041 %	45.422 ppb
Concentration per Run 2	11.332 ppb	11.793 ppb	92.545 ppb	92.039 ppb	87.065 %	4.649 ppb	5.176 ppb	86.997 %	44.465 ppb
Concentration per Run 3	11.074 ppb	11.267 ppb	92.184 ppb	92.387 ppb	88.182 %	4.739 ppb	5.277 ppb	89.090 %	44.874 ppb
Concentration RSD	2.0 %	2.4 %	0.2 %	1.8 %	2.1 %	2.4 %	2.2 %	3.6 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	193.797 ppb	89.269 %	88.143 %	11.377 ppb	47.635 ppb	91.937 %
Concentration per Run 1	199.079 ppb	85.282 %	84.184 %	11.480 ppb	48.200 ppb	89.098 %
Concentration per Run 2	191.949 ppb	90.604 %	88.427 %	11.319 ppb	47.962 ppb	91.318 %
Concentration per Run 3	190.364 ppb	91.921 %	91.818 %	11.331 ppb	46.742 ppb	95.395 %
Concentration RSD	2.4 %	3.9 %	4.3 %	0.8 %	1.6 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	70	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901969-3d10 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:15:13 PM	Vial	43		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.044 %	90.987 %	4.700 ppb	3,837.991 ppb	906.321 ppb	199.536 ppb	2,193.057 ppb	50,588.383 ppb	86.704 %
Concentration per Run 1	89.271 %	90.457 %	4.700 ppb	3,796.793 ppb	905.082 ppb	195.900 ppb	2,244.215 ppb	50,985.541 ppb	87.283 %
Concentration per Run 2	90.147 %	93.638 %	4.656 ppb	3,745.955 ppb	891.450 ppb	194.971 ppb	2,132.730 ppb	49,687.899 ppb	86.744 %
Concentration per Run 3	87.715 %	88.867 %	4.745 ppb	3,971.225 ppb	922.430 ppb	207.736 ppb	2,202.225 ppb	51,091.708 ppb	86.083 %
Concentration RSD	1.4 %	2.7 %	1.0 %	3.1 %	1.7 %	3.6 %	2.6 %	1.5 %	0.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	47.002 ppb	35.799 ppb	47.215 ppb	102.500 ppb	46.759 ppb	47.514 ppb	23.809 ppb	46.969 ppb	86.094 %
Concentration per Run 1	46.240 ppb	35.675 ppb	46.472 ppb	95.383 ppb	46.369 ppb	47.583 ppb	23.376 ppb	46.657 ppb	86.666 %
Concentration per Run 2	46.522 ppb	35.245 ppb	46.691 ppb	104.276 ppb	47.447 ppb	46.619 ppb	23.956 ppb	46.963 ppb	85.296 %
Concentration per Run 3	48.243 ppb	36.477 ppb	48.482 ppb	107.841 ppb	46.462 ppb	48.341 ppb	24.096 ppb	47.288 ppb	86.321 %
Concentration RSD	2.3 %	1.7 %	2.3 %	6.3 %	1.3 %	1.8 %	1.6 %	0.7 %	0.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.414 ppb	11.396 ppb	828.932 ppb	97.914 ppb	86.206 %	4.768 ppb	5.196 ppb	87.926 %	49.540 ppb
Concentration per Run 1	11.530 ppb	10.684 ppb	831.254 ppb	99.378 ppb	83.516 %	4.818 ppb	5.043 ppb	87.084 %	49.684 ppb
Concentration per Run 2	11.327 ppb	11.587 ppb	830.311 ppb	98.107 ppb	86.097 %	4.833 ppb	5.374 ppb	86.867 %	49.463 ppb
Concentration per Run 3	11.385 ppb	11.918 ppb	825.232 ppb	96.258 ppb	89.006 %	4.652 ppb	5.171 ppb	89.828 %	49.473 ppb
Concentration RSD	0.9 %	5.6 %	0.4 %	1.6 %	3.2 %	2.1 %	3.2 %	1.9 %	0.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	233.991 ppb	89.079 %	88.656 %	11.437 ppb	48.566 ppb	88.436 %
Concentration per Run 1	236.085 ppb	88.335 %	86.063 %	11.526 ppb	49.068 ppb	87.823 %
Concentration per Run 2	234.285 ppb	88.057 %	87.712 %	11.479 ppb	48.842 ppb	87.857 %
Concentration per Run 3	231.602 ppb	90.847 %	92.193 %	11.305 ppb	47.789 ppb	89.628 %
Concentration RSD	1.0 %	1.7 %	3.6 %	1.0 %	1.4 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	71	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1901969-5d10 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:19:41 PM	Vial	45		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.147 %	87.939 %	44.487 ppb	7,821.502 ppb	4,508.960 ppb	63.764 ppb	5,700.728 ppb	52,492.237 ppb	85.002 %
Concentration per Run 1	86.641 %	87.077 %	44.478 ppb	7,608.693 ppb	4,372.177 ppb	62.653 ppb	5,537.076 ppb	51,463.772 ppb	84.374 %
Concentration per Run 2	86.512 %	82.703 %	44.160 ppb	8,336.976 ppb	4,851.424 ppb	68.308 ppb	6,107.143 ppb	55,388.229 ppb	85.888 %
Concentration per Run 3	85.290 %	94.036 %	44.823 ppb	7,518.837 ppb	4,303.279 ppb	60.332 ppb	5,457.966 ppb	50,624.709 ppb	84.744 %
Concentration RSD	0.9 %	6.5 %	0.7 %	5.7 %	6.6 %	6.4 %	6.2 %	4.8 %	0.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	46.250 ppb	62.381 ppb	45.491 ppb	4,546.930 ppb	45.574 ppb	45.609 ppb	45.638 ppb	45.785 ppb	87.177 %
Concentration per Run 1	46.081 ppb	62.164 ppb	46.201 ppb	4,620.435 ppb	45.951 ppb	45.620 ppb	46.186 ppb	45.767 ppb	86.190 %
Concentration per Run 2	47.940 ppb	64.567 ppb	46.205 ppb	4,598.167 ppb	46.022 ppb	46.475 ppb	45.666 ppb	46.703 ppb	87.480 %
Concentration per Run 3	44.728 ppb	60.413 ppb	44.066 ppb	4,422.186 ppb	44.750 ppb	44.730 ppb	45.063 ppb	44.885 ppb	87.860 %
Concentration RSD	3.5 %	3.3 %	2.7 %	2.4 %	1.6 %	1.9 %	1.2 %	2.0 %	1.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	45.595 ppb	46.728 ppb	770.241 ppb	50.667 ppb	86.234 %	0.663 ppb	47.510 ppb	86.840 %	47.762 ppb
Concentration per Run 1	46.383 ppb	46.325 ppb	779.296 ppb	51.141 ppb	85.727 %	0.663 ppb	47.485 ppb	85.061 %	47.257 ppb
Concentration per Run 2	45.077 ppb	47.802 ppb	764.743 ppb	50.591 ppb	86.356 %	0.667 ppb	47.879 ppb	86.583 %	48.358 ppb
Concentration per Run 3	45.325 ppb	46.058 ppb	766.684 ppb	50.270 ppb	86.620 %	0.659 ppb	47.165 ppb	88.876 %	47.670 ppb
Concentration RSD	1.5 %	2.0 %	1.0 %	0.9 %	0.5 %	0.6 %	0.8 %	2.2 %	1.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	85.361 ppb	88.318 %	86.131 %	46.345 ppb	44.966 ppb	86.996 %
Concentration per Run 1	84.479 ppb	84.524 %	81.780 %	46.291 ppb	44.732 ppb	84.751 %
Concentration per Run 2	86.582 ppb	90.898 %	88.413 %	46.214 ppb	45.264 ppb	88.435 %
Concentration per Run 3	85.023 ppb	89.531 %	88.201 %	46.531 ppb	44.903 ppb	87.801 %
Concentration RSD	1.3 %	3.8 %	4.4 %	0.4 %	0.6 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 72
Analysis label: wg1901969-4 6020SL
Analysis started at: 4/1/2024 12:24:10 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 44
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.509 %	106.594 %	0.005 ppb	30,889.634 ppb	35.558 ppb	164.527 ppb	12,758.645 ppb	536,764.083 ppb	71.193 %
Concentration per Run 1	93.192 %	105.169 %	0.004 ppb	31,270.296 ppb	33.090 ppb	168.295 ppb	13,068.888 ppb	558,850.041 ppb	73.564 %
Concentration per Run 2	88.963 %	106.760 %	0.007 ppb	30,925.011 ppb	37.353 ppb	163.688 ppb	12,536.499 ppb	522,621.141 ppb	70.988 %
Concentration per Run 3	86.372 %	107.853 %	0.005 ppb	30,473.595 ppb	36.232 ppb	161.598 ppb	12,670.547 ppb	528,821.066 ppb	69.026 %
Concentration RSD	3.8 %	1.3 %	33.4 %	1.3 %	6.2 %	2.1 %	2.2 %	3.6 %	3.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.290 ppb	173.451 ppb	0.106 ppb	18.565 ppb	0.362 ppb	0.348 ppb	2.139 ppb	0.426 ppb	81.766 %
Concentration per Run 1	0.286 ppb	172.212 ppb	0.086 ppb	15.567 ppb	0.368 ppb	0.352 ppb	2.171 ppb	0.393 ppb	82.384 %
Concentration per Run 2	0.293 ppb	171.885 ppb	0.115 ppb	19.578 ppb	0.336 ppb	0.383 ppb	2.096 ppb	0.412 ppb	82.086 %
Concentration per Run 3	0.290 ppb	176.255 ppb	0.116 ppb	20.550 ppb	0.381 ppb	0.310 ppb	2.151 ppb	0.474 ppb	80.828 %
Concentration RSD	1.2 %	1.4 %	16.1 %	14.2 %	6.5 %	10.5 %	1.8 %	10.0 %	1.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.377 ppb	0.531 ppb	9,008.275 ppb	30.286 ppb	81.000 %	0.001 ppb	0.008 ppb	88.225 %	0.291 ppb
Concentration per Run 1	0.406 ppb	0.520 ppb	8,606.884 ppb	30.630 ppb	79.011 %	-0.001 ppb	0.009 ppb	85.341 %	0.285 ppb
Concentration per Run 2	0.385 ppb	0.548 ppb	9,109.447 ppb	29.708 ppb	82.352 %	0.001 ppb	0.009 ppb	90.633 %	0.286 ppb
Concentration per Run 3	0.340 ppb	0.525 ppb	9,308.495 ppb	30.518 ppb	81.638 %	0.001 ppb	0.007 ppb	88.701 %	0.301 ppb
Concentration RSD	8.9 %	2.8 %	4.0 %	1.7 %	2.2 %	187.9 %	13.5 %	3.0 %	3.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	422.332 ppb	84.446 %	82.550 %	0.495 ppb	3.270 ppb	78.446 %
Concentration per Run 1	419.620 ppb	82.106 %	80.934 %	0.314 ppb	3.349 ppb	77.986 %
Concentration per Run 2	424.484 ppb	85.237 %	83.490 %	0.624 ppb	3.227 ppb	78.732 %
Concentration per Run 3	422.890 ppb	85.995 %	83.226 %	0.548 ppb	3.233 ppb	78.620 %
Concentration RSD	0.6 %	2.4 %	1.7 %	32.6 %	2.1 %	0.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	73	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416408-06 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:28:38 PM	Vial	42		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.905 %	101.789 %	0.005 ppb	29,602.603 ppb	33.737 ppb	158.028 ppb	12,453.061 ppb	525,608.954 ppb	69.238 %
Concentration per Run 1	89.059 %	99.702 %	0.005 ppb	29,882.411 ppb	35.893 ppb	158.534 ppb	12,497.074 ppb	533,895.851 ppb	70.148 %
Concentration per Run 2	86.658 %	102.684 %	0.003 ppb	29,108.860 ppb	35.253 ppb	158.066 ppb	12,593.296 ppb	523,101.962 ppb	69.755 %
Concentration per Run 3	84.999 %	102.982 %	0.005 ppb	29,816.538 ppb	30.066 ppb	157.485 ppb	12,268.814 ppb	519,829.049 ppb	67.810 %
Concentration RSD	2.3 %	1.8 %	23.4 %	1.4 %	9.5 %	0.3 %	1.3 %	1.4 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.253 ppb	167.091 ppb	0.092 ppb	16.069 ppb	0.363 ppb	0.386 ppb	2.043 ppb	0.098 ppb	80.805 %
Concentration per Run 1	0.226 ppb	169.192 ppb	0.128 ppb	17.522 ppb	0.388 ppb	0.350 ppb	2.091 ppb	0.126 ppb	79.883 %
Concentration per Run 2	0.227 ppb	160.980 ppb	0.057 ppb	13.568 ppb	0.347 ppb	0.453 ppb	1.919 ppb	0.078 ppb	83.469 %
Concentration per Run 3	0.307 ppb	171.100 ppb	0.091 ppb	17.117 ppb	0.353 ppb	0.354 ppb	2.117 ppb	0.091 ppb	79.063 %
Concentration RSD	18.2 %	3.2 %	38.6 %	13.5 %	6.1 %	15.1 %	5.3 %	25.4 %	2.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.337 ppb	0.653 ppb	8,626.390 ppb	29.258 ppb	79.386 %	0.000 ppb	0.009 ppb	86.616 %	0.229 ppb
Concentration per Run 1	0.304 ppb	0.532 ppb	8,389.624 ppb	28.926 ppb	76.829 %	0.000 ppb	0.008 ppb	83.247 %	0.208 ppb
Concentration per Run 2	0.330 ppb	0.614 ppb	8,651.897 ppb	28.814 ppb	79.677 %	0.000 ppb	0.006 ppb	88.362 %	0.233 ppb
Concentration per Run 3	0.377 ppb	0.812 ppb	8,837.650 ppb	30.035 ppb	81.653 %	0.000 ppb	0.012 ppb	88.239 %	0.246 ppb
Concentration RSD	11.0 %	22.0 %	2.6 %	2.3 %	3.1 %	1,137.5 %	36.0 %	3.4 %	8.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	402.225 ppb	81.417 %	79.415 %	0.155 ppb	3.143 ppb	75.882 %
Concentration per Run 1	403.507 ppb	79.191 %	76.834 %	0.072 ppb	3.125 ppb	75.235 %
Concentration per Run 2	400.449 ppb	81.432 %	80.435 %	0.186 ppb	3.184 ppb	75.770 %
Concentration per Run 3	402.718 ppb	83.627 %	80.977 %	0.207 ppb	3.121 ppb	76.641 %
Concentration RSD	0.4 %	2.7 %	2.8 %	47.0 %	1.1 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	74	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416277-01 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:33:05 PM	Vial	47		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.292 %	80.914 %	0.009 ppb	26,155.888 ppb	1,641.819 ppb	2.114 ppb	3,797.247 ppb	17,441.215 ppb	84.060 %
Concentration per Run 1	82.662 %	78.031 %	0.006 ppb	26,256.107 ppb	1,637.441 ppb	1.936 ppb	3,903.119 ppb	17,854.361 ppb	85.290 %
Concentration per Run 2	81.535 %	83.996 %	0.013 ppb	25,617.833 ppb	1,614.626 ppb	2.067 ppb	3,690.287 ppb	17,070.385 ppb	83.704 %
Concentration per Run 3	79.679 %	80.715 %	0.007 ppb	26,593.724 ppb	1,673.391 ppb	2.339 ppb	3,798.337 ppb	17,398.899 ppb	83.187 %
Concentration RSD	1.9 %	3.7 %	44.3 %	1.9 %	1.8 %	9.7 %	2.8 %	2.3 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.016 ppb	0.227 ppb	144.589 ppb	2,287.876 ppb	0.053 ppb	0.487 ppb	1.210 ppb	6.079 ppb	81.732 %
Concentration per Run 1	-0.008 ppb	0.269 ppb	142.806 ppb	2,284.888 ppb	0.058 ppb	0.489 ppb	1.212 ppb	6.202 ppb	79.780 %
Concentration per Run 2	0.031 ppb	0.222 ppb	145.432 ppb	2,312.362 ppb	0.058 ppb	0.520 ppb	1.200 ppb	6.155 ppb	81.192 %
Concentration per Run 3	0.025 ppb	0.189 ppb	145.531 ppb	2,266.377 ppb	0.044 ppb	0.451 ppb	1.217 ppb	5.878 ppb	84.222 %
Concentration RSD	128.9 %	17.7 %	1.1 %	1.0 %	15.5 %	7.1 %	0.7 %	2.9 %	2.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.198 ppb	0.004 ppb	69.236 ppb	0.299 ppb	81.085 %	0.001 ppb	0.013 ppb	82.282 %	0.137 ppb
Concentration per Run 1	0.187 ppb	0.025 ppb	71.318 ppb	0.268 ppb	78.374 %	0.000 ppb	0.011 ppb	77.170 %	0.140 ppb
Concentration per Run 2	0.226 ppb	0.001 ppb	68.491 ppb	0.290 ppb	81.641 %	0.000 ppb	0.016 ppb	84.734 %	0.116 ppb
Concentration per Run 3	0.181 ppb	-0.014 ppb	67.900 ppb	0.339 ppb	83.240 %	0.002 ppb	0.012 ppb	84.943 %	0.155 ppb
Concentration RSD	12.4 %	457.5 %	2.6 %	12.2 %	3.1 %	152.5 %	21.3 %	5.4 %	14.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	34.537 ppb	83.452 %	81.505 %	0.082 ppb	0.019 ppb	79.125 %
Concentration per Run 1	36.322 ppb	78.766 %	77.579 %	0.040 ppb	0.024 ppb	75.963 %
Concentration per Run 2	32.927 ppb	85.517 %	82.704 %	0.096 ppb	0.020 ppb	79.464 %
Concentration per Run 3	34.361 ppb	86.075 %	84.233 %	0.110 ppb	0.014 ppb	81.948 %
Concentration RSD	4.9 %	4.9 %	4.3 %	45.0 %	26.8 %	3.8 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	75	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416277-02 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:37:34 PM	Vial	48		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.757 %	82.273 %	0.066 ppb	233,262.479 ppb	4,432.916 ppb	705.301 ppb	13,177.302 ppb	70,348.152 ppb	78.345 %
Concentration per Run 1	79.936 %	73.956 %	0.065 ppb	245,483.707 ppb	4,712.678 ppb	748.007 ppb	13,549.407 ppb	71,594.022 ppb	78.668 %
Concentration per Run 2	79.535 %	83.598 %	0.065 ppb	231,520.390 ppb	4,324.924 ppb	689.188 ppb	12,949.228 ppb	69,665.115 ppb	78.535 %
Concentration per Run 3	76.800 %	89.264 %	0.068 ppb	222,783.339 ppb	4,261.146 ppb	678.708 ppb	13,033.272 ppb	69,785.318 ppb	77.831 %
Concentration RSD	2.2 %	9.4 %	3.3 %	4.9 %	5.5 %	5.3 %	2.5 %	1.5 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.017 ppb	0.877 ppb	41.377 ppb	19.193 ppb	0.191 ppb	0.480 ppb	1.705 ppb	1.439 ppb	80.251 %
Concentration per Run 1	0.008 ppb	0.896 ppb	41.981 ppb	20.063 ppb	0.189 ppb	0.514 ppb	1.809 ppb	1.397 ppb	79.980 %
Concentration per Run 2	-0.024 ppb	0.841 ppb	40.681 ppb	20.449 ppb	0.192 ppb	0.467 ppb	1.659 ppb	1.435 ppb	80.585 %
Concentration per Run 3	-0.034 ppb	0.895 ppb	41.468 ppb	17.067 ppb	0.191 ppb	0.461 ppb	1.647 ppb	1.485 ppb	80.188 %
Concentration RSD	132.0 %	3.6 %	1.6 %	9.6 %	0.9 %	6.1 %	5.3 %	3.1 %	0.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.613 ppb	6.044 ppb	653.149 ppb	0.123 ppb	78.886 %	0.006 ppb	0.088 ppb	82.557 %	0.086 ppb
Concentration per Run 1	0.590 ppb	5.199 ppb	649.851 ppb	0.099 ppb	77.497 %	0.006 ppb	0.091 ppb	82.020 %	0.079 ppb
Concentration per Run 2	0.577 ppb	5.982 ppb	651.939 ppb	0.133 ppb	78.864 %	0.005 ppb	0.101 ppb	82.360 %	0.079 ppb
Concentration per Run 3	0.671 ppb	6.951 ppb	657.656 ppb	0.138 ppb	80.295 %	0.007 ppb	0.072 ppb	83.291 %	0.099 ppb
Concentration RSD	8.3 %	14.5 %	0.6 %	17.1 %	1.8 %	12.9 %	16.8 %	0.8 %	13.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	22.073 ppb	85.936 %	84.273 %	0.177 ppb	0.069 ppb	76.460 %
Concentration per Run 1	22.664 ppb	83.839 %	82.373 %	0.147 ppb	0.075 ppb	74.670 %
Concentration per Run 2	22.138 ppb	86.316 %	85.183 %	0.187 ppb	0.065 ppb	76.693 %
Concentration per Run 3	21.417 ppb	87.652 %	85.261 %	0.197 ppb	0.066 ppb	78.018 %
Concentration RSD	2.8 %	2.3 %	2.0 %	14.9 %	7.5 %	2.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	76	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416277-03 6020SL	Rack	1		
Analysis started at:	4/1/2024 12:42:04 PM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.555 %	82.571 %	0.034 ppb	294,908.254 ppb	2,482.497 ppb	69.521 ppb	5,684.177 ppb	13,320.714 ppb	77.745 %
Concentration per Run 1	80.041 %	80.914 %	0.035 ppb	296,327.116 ppb	2,486.280 ppb	67.986 ppb	5,734.113 ppb	13,549.651 ppb	78.542 %
Concentration per Run 2	77.407 %	85.785 %	0.040 ppb	288,712.830 ppb	2,409.860 ppb	68.996 ppb	5,602.119 ppb	13,088.379 ppb	76.639 %
Concentration per Run 3	78.219 %	81.013 %	0.028 ppb	299,684.815 ppb	2,551.351 ppb	71.581 ppb	5,716.298 ppb	13,324.111 ppb	78.054 %
Concentration RSD	1.7 %	3.4 %	17.4 %	1.9 %	2.9 %	2.7 %	1.3 %	1.7 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.015 ppb	343.139 ppb	780.488 ppb	8.576 ppb	0.399 ppb	1.432 ppb	1.226 ppb	4.516 ppb	78.477 %
Concentration per Run 1	-0.017 ppb	351.174 ppb	795.691 ppb	7.362 ppb	0.398 ppb	1.520 ppb	1.248 ppb	4.471 ppb	77.267 %
Concentration per Run 2	-0.005 ppb	335.920 ppb	763.483 ppb	10.267 ppb	0.400 ppb	1.351 ppb	1.240 ppb	4.547 ppb	78.928 %
Concentration per Run 3	-0.023 ppb	342.324 ppb	782.291 ppb	8.100 ppb	0.397 ppb	1.424 ppb	1.190 ppb	4.531 ppb	79.236 %
Concentration RSD	61.1 %	2.2 %	2.1 %	17.6 %	0.3 %	5.9 %	2.5 %	0.9 %	1.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.202 ppb	2.805 ppb	70.824 ppb	0.121 ppb	77.651 %	0.002 ppb	1.103 ppb	80.700 %	0.149 ppb
Concentration per Run 1	0.201 ppb	2.670 ppb	71.611 ppb	0.123 ppb	76.926 %	0.001 ppb	1.102 ppb	80.123 %	0.132 ppb
Concentration per Run 2	0.192 ppb	3.087 ppb	70.732 ppb	0.096 ppb	77.288 %	0.002 ppb	1.111 ppb	79.814 %	0.149 ppb
Concentration per Run 3	0.214 ppb	2.657 ppb	70.129 ppb	0.144 ppb	78.740 %	0.002 ppb	1.097 ppb	82.164 %	0.165 ppb
Concentration RSD	5.3 %	8.7 %	1.1 %	19.8 %	1.2 %	13.3 %	0.6 %	1.6 %	11.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	36.471 ppb	84.332 %	83.436 %	0.267 ppb	0.044 ppb	74.685 %
Concentration per Run 1	36.271 ppb	83.463 %	81.488 %	0.234 ppb	0.045 ppb	73.553 %
Concentration per Run 2	36.905 ppb	84.438 %	84.852 %	0.275 ppb	0.039 ppb	75.043 %
Concentration per Run 3	36.237 ppb	85.094 %	83.968 %	0.292 ppb	0.047 ppb	75.458 %
Concentration RSD	1.0 %	1.0 %	2.1 %	11.3 %	9.2 %	1.3 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 77 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: wg1901969-6d5 6020SL Rack 1
Analysis started at: 4/1/2024 12:46:31 PM Vial 46

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.181 %	100.729 %	0.008 ppb	6,165.600 ppb	9.537 ppb	38.061 ppb	2,523.071 ppb	98,514.944 ppb	86.152 %
Concentration per Run 1	91.340 %	97.217 %	0.008 ppb	5,851.069 ppb	8.653 ppb	37.100 ppb	2,550.897 ppb	99,630.882 ppb	87.336 %
Concentration per Run 2	89.879 %	101.491 %	0.006 ppb	6,387.374 ppb	10.896 ppb	39.079 ppb	2,585.232 ppb	98,450.075 ppb	84.953 %
Concentration per Run 3	89.325 %	103.479 %	0.010 ppb	6,258.359 ppb	9.062 ppb	38.004 ppb	2,433.084 ppb	97,463.876 ppb	86.167 %
Concentration RSD	1.2 %	3.2 %	21.5 %	4.5 %	12.5 %	2.6 %	3.2 %	1.1 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.006 ppb	33.643 ppb	0.158 ppb	5.885 ppb	0.070 ppb	0.035 ppb	0.489 ppb	0.051 ppb	91.162 %
Concentration per Run 1	0.024 ppb	34.111 ppb	0.159 ppb	6.585 ppb	0.070 ppb	0.032 ppb	0.493 ppb	0.050 ppb	87.920 %
Concentration per Run 2	0.018 ppb	32.784 ppb	0.157 ppb	6.284 ppb	0.067 ppb	0.055 ppb	0.476 ppb	0.044 ppb	95.218 %
Concentration per Run 3	-0.023 ppb	34.034 ppb	0.158 ppb	4.786 ppb	0.074 ppb	0.019 ppb	0.498 ppb	0.057 ppb	90.348 %
Concentration RSD	416.1 %	2.2 %	0.6 %	16.4 %	5.1 %	52.0 %	2.4 %	13.0 %	4.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.058 ppb	0.135 ppb	1,522.022 ppb	5.691 ppb	90.286 %	0.000 ppb	0.002 ppb	93.630 %	0.061 ppb
Concentration per Run 1	0.053 ppb	0.096 ppb	1,461.499 ppb	5.809 ppb	88.408 %	0.001 ppb	0.002 ppb	91.081 %	0.048 ppb
Concentration per Run 2	0.071 ppb	0.134 ppb	1,631.628 ppb	5.620 ppb	91.423 %	0.000 ppb	0.000 ppb	96.720 %	0.066 ppb
Concentration per Run 3	0.049 ppb	0.174 ppb	1,472.940 ppb	5.645 ppb	91.026 %	-0.001 ppb	0.002 ppb	93.088 %	0.069 ppb
Concentration RSD	20.2 %	28.9 %	6.2 %	1.8 %	1.8 %	6,016.7 %	86.6 %	3.1 %	19.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	78.689 ppb	92.539 %	91.359 %	0.034 ppb	0.608 ppb	88.249 %
Concentration per Run 1	78.555 ppb	88.860 %	88.018 %	0.015 ppb	0.607 ppb	86.040 %
Concentration per Run 2	79.041 ppb	94.036 %	93.043 %	0.039 ppb	0.600 ppb	89.421 %
Concentration per Run 3	78.472 ppb	94.721 %	93.016 %	0.049 ppb	0.616 ppb	89.287 %
Concentration RSD	0.4 %	3.5 %	3.2 %	50.9 %	1.3 %	2.2 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	78	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 12:51:00 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.078 %	86.779 %	57.261 ppb	5,188.389 ppb	5,442.040 ppb	53.810 ppb	5,405.770 ppb	5,419.075 ppb	83.233 %
Concentration per Run 1	81.971 %	83.697 %	57.658 ppb	5,196.593 ppb	5,593.098 ppb	53.650 ppb	5,474.863 ppb	5,586.001 ppb	83.279 %
Concentration per Run 2	80.818 %	94.135 %	56.964 ppb	5,221.671 ppb	5,254.031 ppb	51.803 ppb	5,339.460 ppb	5,362.462 ppb	83.446 %
Concentration per Run 3	80.444 %	82.505 %	57.160 ppb	5,146.902 ppb	5,478.990 ppb	55.979 ppb	5,402.987 ppb	5,308.762 ppb	82.973 %
Recovery Percentage 1			95.434 %	86.473 %	90.701 %	89.684 %	90.096 %	90.318 %	
Concentration RSD	1.0 %	7.4 %	0.6 %	0.7 %	3.2 %	3.9 %	1.3 %	2.7 %	0.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.651 ppb	54.710 ppb	54.839 ppb	5,541.560 ppb	54.895 ppb	55.287 ppb	55.349 ppb	57.088 ppb	85.782 %
Concentration per Run 1	57.186 ppb	57.058 ppb	55.396 ppb	5,681.392 ppb	58.204 ppb	57.392 ppb	58.449 ppb	58.241 ppb	83.755 %
Concentration per Run 2	54.482 ppb	52.988 ppb	54.590 ppb	5,439.163 ppb	52.744 ppb	54.104 ppb	52.405 ppb	56.153 ppb	88.160 %
Concentration per Run 3	55.284 ppb	54.083 ppb	54.532 ppb	5,504.124 ppb	53.738 ppb	54.367 ppb	55.194 ppb	56.870 ppb	85.432 %
Recovery Percentage 1	92.751 %	91.183 %	91.399 %	92.359 %	91.492 %	92.145 %	92.249 %	95.147 %	
Concentration RSD	2.5 %	3.8 %	0.9 %	2.3 %	5.3 %	3.3 %	5.5 %	1.9 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	54.955 ppb	58.150 ppb	56.289 ppb	56.104 ppb	85.324 %	57.232 ppb	58.378 ppb	86.803 %	57.858 ppb
Concentration per Run 1	56.178 ppb	58.571 ppb	57.029 ppb	56.154 ppb	84.137 %	57.900 ppb	58.859 ppb	85.490 %	57.964 ppb
Concentration per Run 2	54.438 ppb	60.625 ppb	57.275 ppb	56.553 ppb	86.897 %	56.782 ppb	58.199 ppb	89.348 %	58.172 ppb
Concentration per Run 3	54.250 ppb	55.255 ppb	54.565 ppb	55.605 ppb	84.938 %	57.013 ppb	58.077 ppb	85.572 %	57.438 ppb
Recovery Percentage 1	91.592 %	96.917 %	93.816 %	93.507 %		95.386 %	97.297 %		96.430 %
Concentration RSD	1.9 %	4.7 %	2.7 %	0.8 %	1.7 %	1.0 %	0.7 %	2.5 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	56.708 ppb	88.041 %	86.178 %	55.650 ppb	54.194 ppb	86.755 %
Concentration per Run 1	57.156 ppb	86.881 %	83.997 %	55.887 ppb	55.588 ppb	85.980 %
Concentration per Run 2	56.526 ppb	89.732 %	89.142 %	54.855 ppb	52.989 ppb	88.048 %
Concentration per Run 3	56.443 ppb	87.509 %	85.395 %	56.206 ppb	54.004 ppb	86.237 %
Recovery Percentage 1	94.514 %			92.749 %	90.323 %	
Concentration RSD	0.7 %	1.7 %	3.1 %	1.3 %	2.4 %	1.3 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	79	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 12:55:31 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.201 %	85.984 %	0.022 ppb	10.123 ppb	1.695 ppb	-0.698 ppb	-4.363 ppb	25.542 ppb	79.889 %
Concentration per Run 1	84.741 %	87.276 %	0.025 ppb	14.037 ppb	2.080 ppb	-0.707 ppb	-4.814 ppb	27.354 ppb	80.548 %
Concentration per Run 2	82.796 %	86.978 %	0.026 ppb	8.979 ppb	1.965 ppb	-0.536 ppb	-5.156 ppb	29.551 ppb	81.025 %
Concentration per Run 3	82.065 %	83.697 %	0.014 ppb	7.352 ppb	1.038 ppb	-0.850 ppb	-3.120 ppb	19.722 ppb	78.093 %
Recovery Percentage 1			4.322 %	10.123 %	2.421 %	-6.975 %	-4.363 %	25.542 %	
Concentration RSD	1.7 %	2.3 %	31.4 %	34.4 %	33.7 %	22.5 %	25.0 %	20.2 %	2.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.009 ppb	0.050 ppb	0.106 ppb	7.653 ppb	0.021 ppb	-0.017 ppb	0.019 ppb	-0.062 ppb	85.033 %
Concentration per Run 1	-0.021 ppb	0.066 ppb	0.136 ppb	6.776 ppb	0.018 ppb	0.009 ppb	0.018 ppb	-0.042 ppb	83.014 %
Concentration per Run 2	-0.005 ppb	0.047 ppb	0.114 ppb	9.413 ppb	0.026 ppb	-0.040 ppb	0.013 ppb	-0.101 ppb	86.057 %
Concentration per Run 3	0.001 ppb	0.037 ppb	0.067 ppb	6.771 ppb	0.020 ppb	-0.021 ppb	0.026 ppb	-0.044 ppb	86.028 %
Recovery Percentage 1	-0.170 %	4.981 %	10.562 %	15.307 %	4.247 %	-0.861 %	1.897 %	-1.245 %	
Concentration RSD	132.2 %	29.3 %	33.7 %	19.9 %	20.3 %	142.1 %	33.1 %	54.0 %	2.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.072 ppb	0.143 ppb	0.464 ppb	0.196 ppb	85.844 %	0.027 ppb	0.025 ppb	86.903 %	0.061 ppb
Concentration per Run 1	0.080 ppb	0.224 ppb	0.573 ppb	0.150 ppb	83.518 %	0.033 ppb	0.028 ppb	83.679 %	0.064 ppb
Concentration per Run 2	0.071 ppb	0.133 ppb	0.441 ppb	0.194 ppb	87.562 %	0.025 ppb	0.023 ppb	90.600 %	0.070 ppb
Concentration per Run 3	0.064 ppb	0.072 ppb	0.379 ppb	0.244 ppb	86.451 %	0.024 ppb	0.024 ppb	86.429 %	0.050 ppb
Recovery Percentage 1	14.303 %	2.855 %	4.641 %	9.797 %		6.860 %	12.569 %		1.534 %
Concentration RSD	11.1 %	53.8 %	21.4 %	24.1 %	2.4 %	17.6 %	11.5 %	4.0 %	17.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.058 ppb	87.015 %	84.991 %	0.521 ppb	0.026 ppb	87.611 %
Concentration per Run 1	0.078 ppb	83.868 %	81.549 %	0.367 ppb	0.035 ppb	85.705 %
Concentration per Run 2	0.045 ppb	89.397 %	87.778 %	0.609 ppb	0.023 ppb	88.380 %
Concentration per Run 3	0.052 ppb	87.781 %	85.646 %	0.588 ppb	0.021 ppb	88.749 %
Recovery Percentage 1	11.681 %			52.139 %	2.617 %	
Concentration RSD	30.2 %	3.3 %	3.7 %	25.7 %	29.0 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index: 80
Analysis label: L2416277-05 6020SL
Analysis started at: 4/1/2024 1:00:39 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 51
Comment FB

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.697 %	87.409 %	0.005 ppb	7.747 ppb	3.039 ppb	1.287 ppb	-5.026 ppb	45.665 ppb	80.206 %
Concentration per Run 1	84.591 %	83.101 %	0.006 ppb	12.206 ppb	3.206 ppb	1.277 ppb	-4.419 ppb	47.877 ppb	80.958 %
Concentration per Run 2	83.978 %	90.258 %	0.003 ppb	6.878 ppb	2.365 ppb	1.168 ppb	-3.747 ppb	48.025 ppb	80.440 %
Concentration per Run 3	82.520 %	88.867 %	0.006 ppb	4.157 ppb	3.547 ppb	1.417 ppb	-6.912 ppb	41.092 ppb	79.221 %
Concentration RSD	1.3 %	4.3 %	34.5 %	52.9 %	20.0 %	9.7 %	33.2 %	8.7 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.044 ppb	0.058 ppb	0.234 ppb	2.396 ppb	0.006 ppb	-0.006 ppb	0.034 ppb	0.209 ppb	84.528 %
Concentration per Run 1	-0.042 ppb	0.060 ppb	0.226 ppb	2.287 ppb	0.014 ppb	0.008 ppb	0.046 ppb	0.281 ppb	80.324 %
Concentration per Run 2	-0.041 ppb	0.055 ppb	0.232 ppb	2.782 ppb	0.003 ppb	-0.015 ppb	0.017 ppb	0.147 ppb	89.022 %
Concentration per Run 3	-0.048 ppb	0.058 ppb	0.244 ppb	2.120 ppb	0.001 ppb	-0.011 ppb	0.039 ppb	0.200 ppb	84.239 %
Concentration RSD	9.0 %	4.2 %	3.8 %	14.4 %	116.2 %	203.3 %	44.4 %	32.2 %	5.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.010 ppb	0.002 ppb	0.441 ppb	0.069 ppb	86.582 %	0.004 ppb	0.005 ppb	89.022 %	0.027 ppb
Concentration per Run 1	-0.001 ppb	0.002 ppb	0.483 ppb	0.050 ppb	82.734 %	0.006 ppb	0.005 ppb	85.790 %	0.025 ppb
Concentration per Run 2	0.016 ppb	-0.026 ppb	0.447 ppb	0.068 ppb	89.418 %	0.003 ppb	0.006 ppb	92.614 %	0.028 ppb
Concentration per Run 3	0.014 ppb	0.030 ppb	0.394 ppb	0.089 ppb	87.593 %	0.003 ppb	0.005 ppb	88.662 %	0.027 ppb
Concentration RSD	97.7 %	1,551.5 %	10.1 %	28.1 %	4.0 %	40.9 %	10.0 %	3.8 %	5.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.248 ppb	87.214 %	87.080 %	0.151 ppb	0.006 ppb	86.475 %
Concentration per Run 1	0.210 ppb	83.286 %	82.225 %	0.076 ppb	0.010 ppb	85.137 %
Concentration per Run 2	0.281 ppb	89.688 %	91.514 %	0.170 ppb	0.007 ppb	86.938 %
Concentration per Run 3	0.254 ppb	88.669 %	87.501 %	0.206 ppb	0.003 ppb	87.350 %
Concentration RSD	14.5 %	3.9 %	5.4 %	44.7 %	53.0 %	1.4 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	81	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416277-04 6020SL	Rack	1		
Analysis started at:	4/1/2024 1:05:07 PM	Vial	50		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.820 %	81.875 %	0.069 ppb	241,503.030 ppb	4,594.271 ppb	805.238 ppb	13,699.097 ppb	72,969.089 ppb	78.050 %
Concentration per Run 1	81.287 %	78.429 %	0.066 ppb	241,329.581 ppb	4,571.399 ppb	801.157 ppb	13,716.306 ppb	72,198.347 ppb	79.450 %
Concentration per Run 2	79.851 %	83.101 %	0.071 ppb	244,343.395 ppb	4,684.420 ppb	834.850 ppb	14,006.539 ppb	74,748.295 ppb	78.767 %
Concentration per Run 3	78.323 %	84.095 %	0.069 ppb	238,836.113 ppb	4,526.993 ppb	779.708 ppb	13,374.448 ppb	71,960.624 ppb	75.933 %
Concentration RSD	1.9 %	3.7 %	3.6 %	1.1 %	1.8 %	3.5 %	2.3 %	2.1 %	2.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.042 ppb	0.881 ppb	42.075 ppb	9.302 ppb	0.188 ppb	0.431 ppb	10.571 ppb	7.437 ppb	80.237 %
Concentration per Run 1	-0.040 ppb	0.942 ppb	41.607 ppb	9.443 ppb	0.191 ppb	0.471 ppb	10.597 ppb	7.410 ppb	76.846 %
Concentration per Run 2	-0.024 ppb	0.847 ppb	43.079 ppb	10.069 ppb	0.186 ppb	0.413 ppb	10.524 ppb	7.472 ppb	81.749 %
Concentration per Run 3	-0.061 ppb	0.853 ppb	41.541 ppb	8.395 ppb	0.186 ppb	0.410 ppb	10.590 ppb	7.428 ppb	82.115 %
Concentration RSD	44.3 %	6.0 %	2.1 %	9.1 %	1.4 %	8.0 %	0.4 %	0.4 %	3.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.609 ppb	6.295 ppb	683.963 ppb	0.068 ppb	78.315 %	0.013 ppb	0.094 ppb	82.746 %	0.072 ppb
Concentration per Run 1	0.617 ppb	6.391 ppb	672.431 ppb	0.040 ppb	76.442 %	0.014 ppb	0.101 ppb	78.558 %	0.071 ppb
Concentration per Run 2	0.603 ppb	6.629 ppb	709.503 ppb	0.090 ppb	79.562 %	0.011 ppb	0.090 ppb	86.358 %	0.076 ppb
Concentration per Run 3	0.608 ppb	5.864 ppb	669.956 ppb	0.073 ppb	78.942 %	0.013 ppb	0.092 ppb	83.323 %	0.071 ppb
Concentration RSD	1.2 %	6.2 %	3.2 %	37.7 %	2.1 %	12.5 %	6.2 %	4.8 %	3.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	23.250 ppb	87.245 %	84.855 %	0.210 ppb	0.608 ppb	77.149 %
Concentration per Run 1	23.283 ppb	84.822 %	82.454 %	0.164 ppb	0.614 ppb	75.680 %
Concentration per Run 2	23.636 ppb	89.774 %	88.085 %	0.219 ppb	0.608 ppb	78.282 %
Concentration per Run 3	22.832 ppb	87.140 %	84.027 %	0.246 ppb	0.602 ppb	77.485 %
Concentration RSD	1.7 %	2.8 %	3.4 %	19.7 %	1.0 %	1.7 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	82	User name	ALPHALAB\a2-icpmsq2	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/1/2024 1:09:34 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.250 %	87.243 %	56.801 ppb	5,223.677 ppb	5,409.775 ppb	54.573 ppb	5,495.625 ppb	5,650.904 ppb	84.506 %
Concentration per Run 1	82.838 %	87.773 %	56.876 ppb	5,005.398 ppb	5,284.838 ppb	52.724 ppb	5,302.547 ppb	5,452.564 ppb	84.498 %
Concentration per Run 2	82.416 %	88.966 %	56.801 ppb	5,518.845 ppb	5,471.179 ppb	56.812 ppb	5,663.444 ppb	5,851.070 ppb	86.113 %
Concentration per Run 3	81.496 %	84.990 %	56.725 ppb	5,146.789 ppb	5,473.307 ppb	54.182 ppb	5,520.884 ppb	5,649.077 ppb	82.909 %
Recovery Percentage 1			94.668 %	87.061 %	90.163 %	90.955 %	91.594 %	94.182 %	
Concentration RSD	0.8 %	2.3 %	0.1 %	5.1 %	2.0 %	3.8 %	3.3 %	3.5 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.891 ppb	54.865 ppb	56.111 ppb	5,585.270 ppb	55.471 ppb	55.856 ppb	55.490 ppb	57.887 ppb	84.169 %
Concentration per Run 1	53.867 ppb	54.020 ppb	55.348 ppb	5,460.867 ppb	54.965 ppb	56.347 ppb	56.153 ppb	56.864 ppb	84.129 %
Concentration per Run 2	57.253 ppb	55.065 ppb	56.934 ppb	5,692.818 ppb	55.705 ppb	56.555 ppb	54.862 ppb	59.221 ppb	84.858 %
Concentration per Run 3	56.554 ppb	55.509 ppb	56.051 ppb	5,602.126 ppb	55.742 ppb	54.667 ppb	55.456 ppb	57.577 ppb	83.521 %
Recovery Percentage 1	93.152 %	91.441 %	93.518 %	93.088 %	92.451 %	93.094 %	92.484 %	96.479 %	
Concentration RSD	3.2 %	1.4 %	1.4 %	2.1 %	0.8 %	1.9 %	1.2 %	2.1 %	0.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	55.750 ppb	59.274 ppb	56.002 ppb	55.873 ppb	85.135 %	56.586 ppb	57.781 ppb	86.854 %	57.396 ppb
Concentration per Run 1	55.455 ppb	55.722 ppb	54.699 ppb	55.535 ppb	84.237 %	57.270 ppb	58.080 ppb	84.190 %	57.673 ppb
Concentration per Run 2	56.268 ppb	62.024 ppb	57.695 ppb	55.846 ppb	86.580 %	56.280 ppb	57.463 ppb	89.845 %	57.570 ppb
Concentration per Run 3	55.527 ppb	60.076 ppb	55.612 ppb	56.240 ppb	84.589 %	56.206 ppb	57.798 ppb	86.527 %	56.946 ppb
Recovery Percentage 1	92.917 %	98.790 %	93.337 %	93.122 %		94.309 %	96.301 %		95.660 %
Concentration RSD	0.8 %	5.4 %	2.7 %	0.6 %	1.5 %	1.1 %	0.5 %	3.3 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	55.942 ppb	88.716 %	86.363 %	55.748 ppb	54.027 ppb	87.240 %
Concentration per Run 1	56.098 ppb	85.446 %	82.531 %	56.065 ppb	55.890 ppb	85.936 %
Concentration per Run 2	56.810 ppb	91.679 %	90.023 %	55.313 ppb	52.569 ppb	88.604 %
Concentration per Run 3	54.917 ppb	89.023 %	86.535 %	55.866 ppb	53.620 ppb	87.179 %
Recovery Percentage 1	93.236 %			92.913 %	90.044 %	
Concentration RSD	1.7 %	3.5 %	4.3 %	0.7 %	3.1 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/1/2024 1:19:17 PM

Analysis index:	83	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/1/2024 1:14:05 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.926 %	85.619 %	0.009 ppb	-7.962 ppb	-0.940 ppb	-0.545 ppb	-5.784 ppb	2.483 ppb	80.571 %
Concentration per Run 1	85.159 %	81.709 %	0.006 ppb	-7.386 ppb	-1.388 ppb	-0.676 ppb	-1.312 ppb	5.109 ppb	81.673 %
Concentration per Run 2	84.176 %	89.761 %	0.010 ppb	-8.060 ppb	-0.961 ppb	-0.437 ppb	-8.574 ppb	3.734 ppb	80.695 %
Concentration per Run 3	82.442 %	85.387 %	0.011 ppb	-8.441 ppb	-0.471 ppb	-0.521 ppb	-7.465 ppb	-1.392 ppb	79.345 %
Recovery Percentage 1			1.819 %	-7.962 %	-1.343 %	-5.447 %	-5.784 %	2.483 %	
Concentration RSD	1.6 %	4.7 %	28.9 %	6.7 %	48.8 %	22.3 %	67.6 %	138.0 %	1.5 %

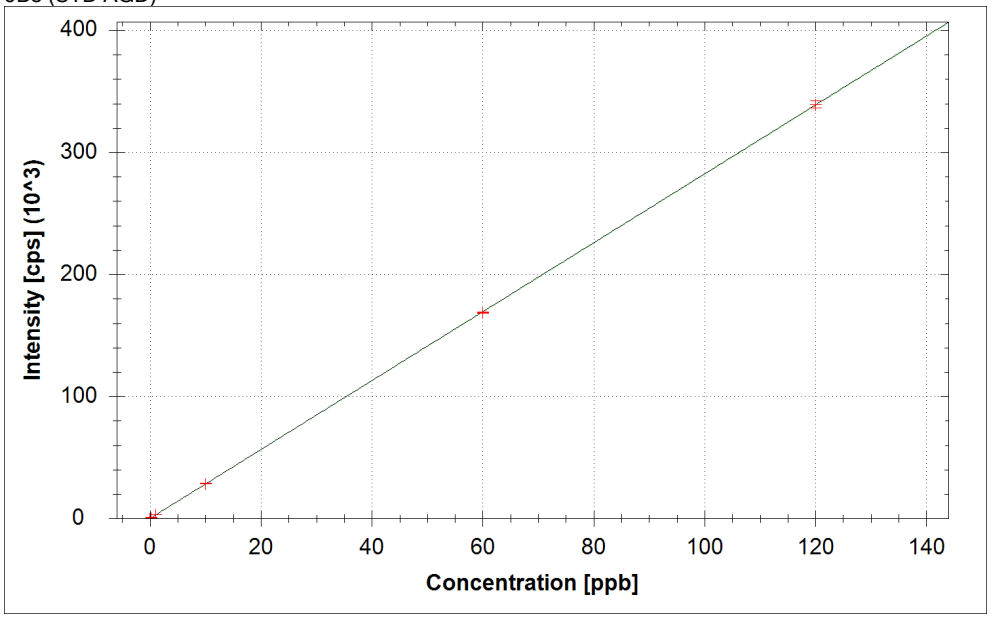
Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.041 ppb	0.004 ppb	0.039 ppb	5.971 ppb	0.003 ppb	-0.032 ppb	0.010 ppb	-0.080 ppb	85.656 %
Concentration per Run 1	-0.048 ppb	0.001 ppb	0.025 ppb	6.085 ppb	0.001 ppb	-0.033 ppb	0.018 ppb	-0.099 ppb	84.292 %
Concentration per Run 2	-0.037 ppb	0.015 ppb	0.069 ppb	5.031 ppb	0.005 ppb	-0.037 ppb	0.018 ppb	-0.053 ppb	87.584 %
Concentration per Run 3	-0.039 ppb	-0.003 ppb	0.024 ppb	6.797 ppb	0.005 ppb	-0.025 ppb	-0.004 ppb	-0.087 ppb	85.090 %
Recovery Percentage 1	-0.823 %	0.411 %	3.946 %	11.942 %	0.681 %	-1.578 %	1.046 %	-1.593 %	
Concentration RSD	14.0 %	226.3 %	65.8 %	14.9 %	63.0 %	18.7 %	123.4 %	30.2 %	2.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.042 ppb	0.092 ppb	0.019 ppb	0.163 ppb	86.283 %	0.003 ppb	0.005 ppb	87.593 %	0.028 ppb
Concentration per Run 1	0.043 ppb	0.072 ppb	0.013 ppb	0.124 ppb	85.408 %	0.005 ppb	0.005 ppb	83.567 %	0.018 ppb
Concentration per Run 2	0.021 ppb	0.053 ppb	0.018 ppb	0.191 ppb	87.101 %	0.002 ppb	0.005 ppb	91.569 %	0.030 ppb
Concentration per Run 3	0.063 ppb	0.152 ppb	0.027 ppb	0.174 ppb	86.339 %	0.002 ppb	0.005 ppb	87.643 %	0.037 ppb
Recovery Percentage 1	8.391 %	1.843 %	0.193 %	8.138 %		0.719 %	2.374 %		0.712 %
Concentration RSD	50.2 %	57.4 %	35.2 %	21.4 %	1.0 %	56.6 %	3.4 %	4.6 %	33.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.007 ppb	87.374 %	85.804 %	0.518 ppb	0.005 ppb	88.530 %
Concentration per Run 1	0.007 ppb	85.121 %	83.189 %	0.335 ppb	0.005 ppb	85.979 %
Concentration per Run 2	0.005 ppb	90.749 %	87.905 %	0.623 ppb	0.006 ppb	89.946 %
Concentration per Run 3	0.010 ppb	86.251 %	86.319 %	0.595 ppb	0.004 ppb	89.666 %
Recovery Percentage 1	1.449 %			51.754 %	0.530 %	
Concentration RSD	40.0 %	3.4 %	2.8 %	30.7 %	19.1 %	2.5 %

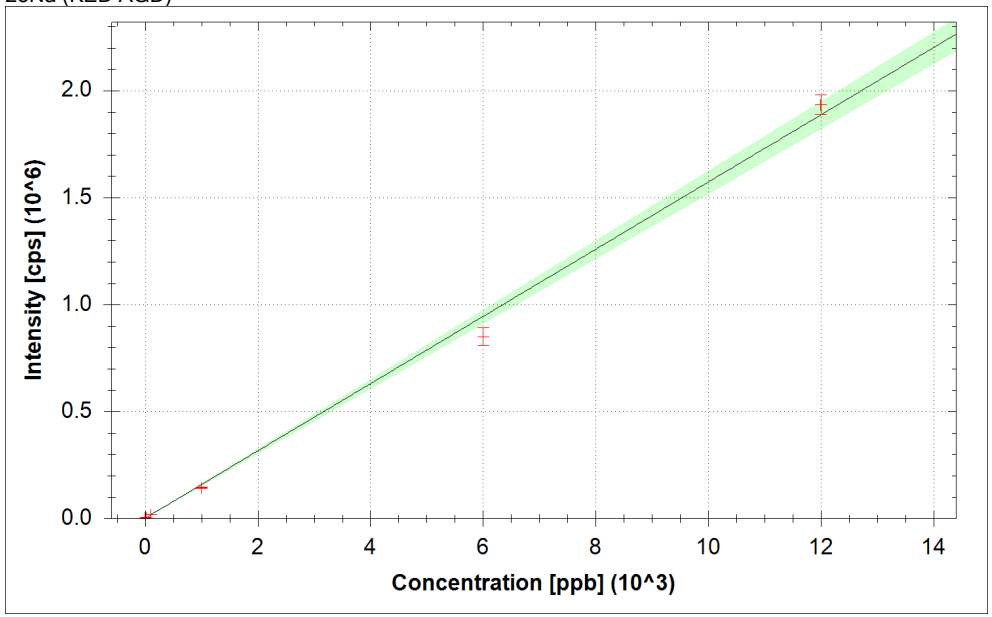
Calibration Curves:

9Be (STD AGD)



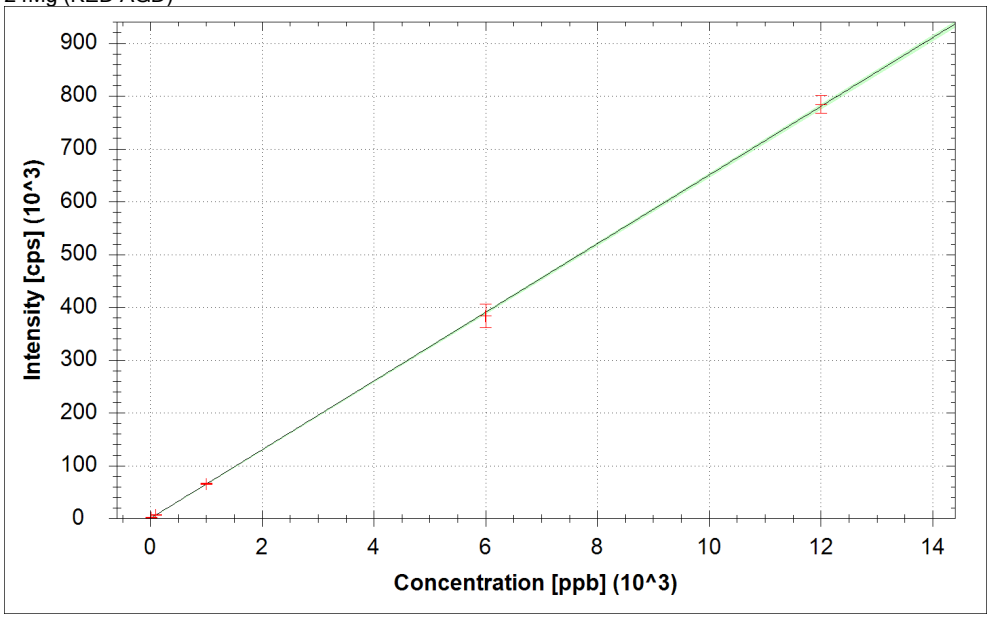
f(x) = 2823.3699*x + 16.0080
R² = 1.0000
BEC = 0.006 ppb
LoD = 0.0057 ppb

23Na (KED AGD)



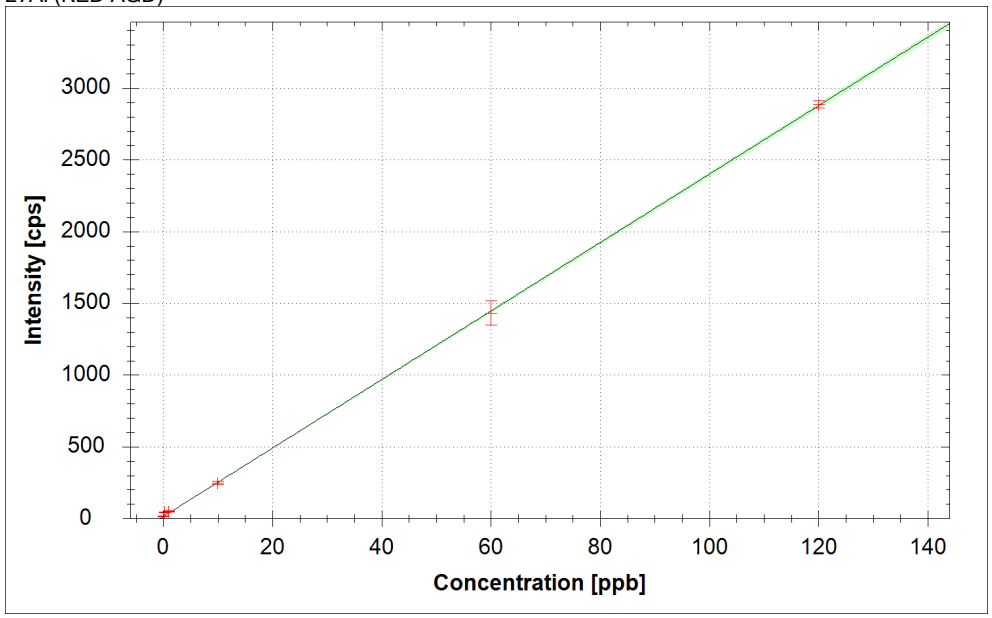
f(x) = 157.0774*x + 1574.4377
R² = 0.9963
BEC = 10.023 ppb
LoD = 11.4264 ppb

24Mg (KED AGD)



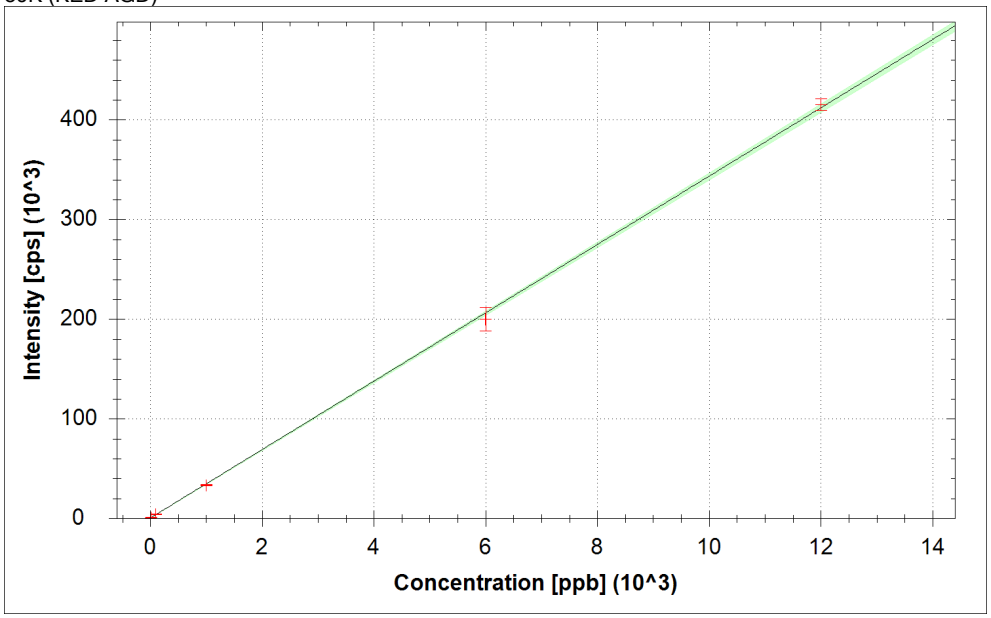
f(x) = 64.9989*x + 98.0735
R² = 0.9999
BEC = 1.509 ppb
LoD = 0.5214 ppb

27Al (KED AGD)



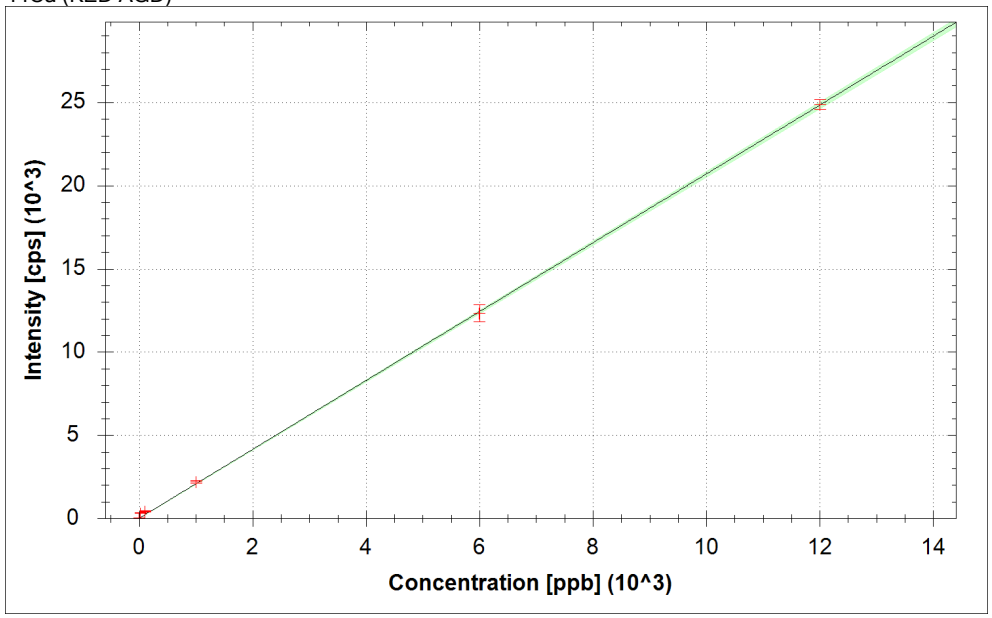
f(x) = 23.8538*x + 13.3837
R² = 0.9998
BEC = 0.561 ppb
LoD = 0.3994 ppb

39K (KED AGD)



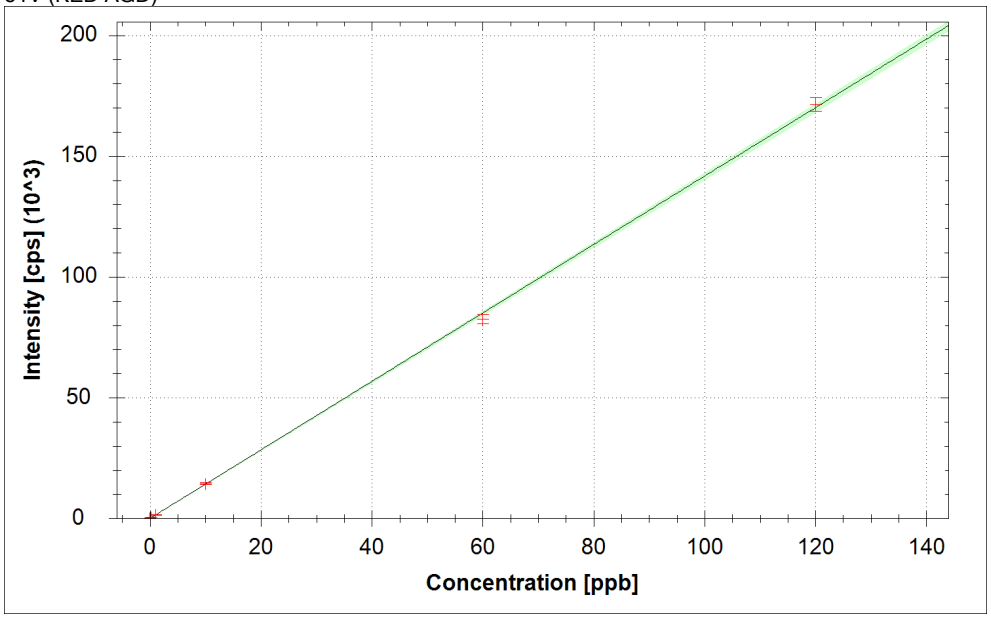
f(x) = 34.2877*x + 497.7546
R² = 0.9996
BEC = 14.517 ppb
LoD = 0.1659 ppb

44Ca (KED AGD)



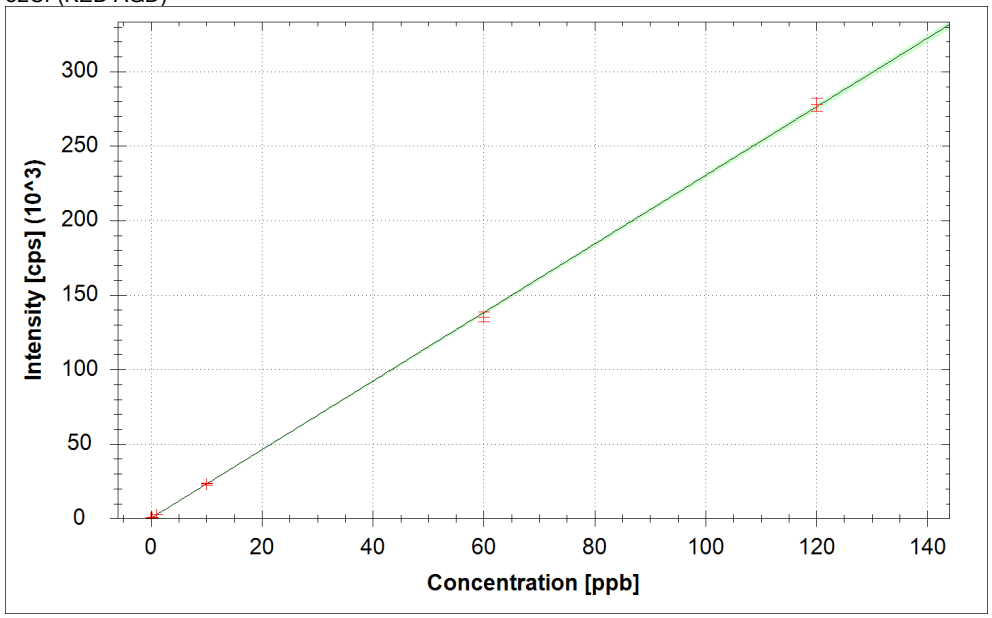
f(x) = 2.0686*x + 10.3681
R² = 0.9998
BEC = 5.012 ppb
LoD = 3.5954 ppb

51V (KED AGD)



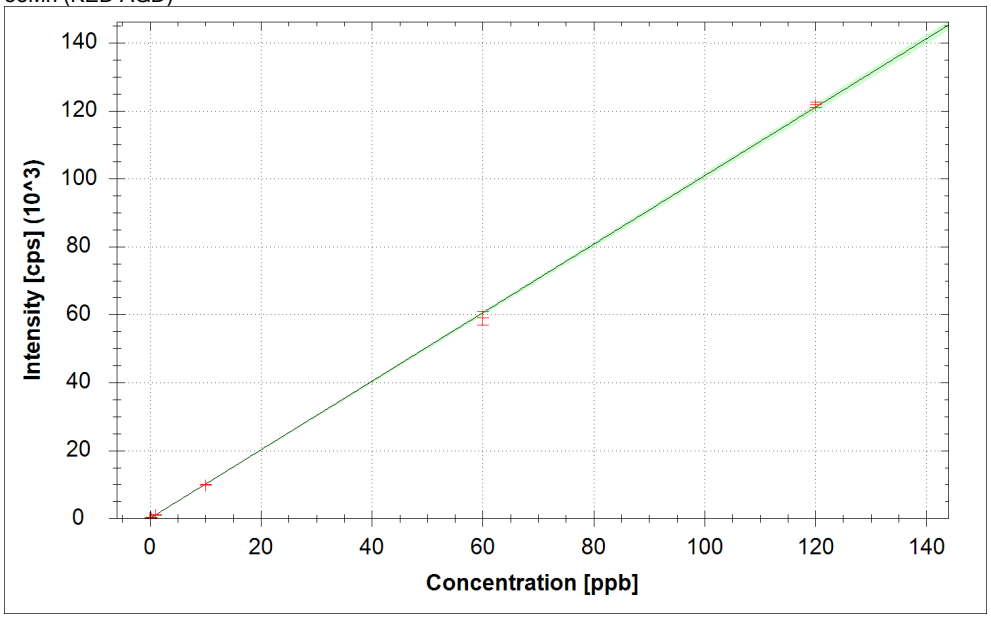
f(x) = 1416.4563*x + 61.6378
R² = 0.9997
BEC = 0.044 ppb
LoD = 0.0593 ppb

52Cr (KED AGD)



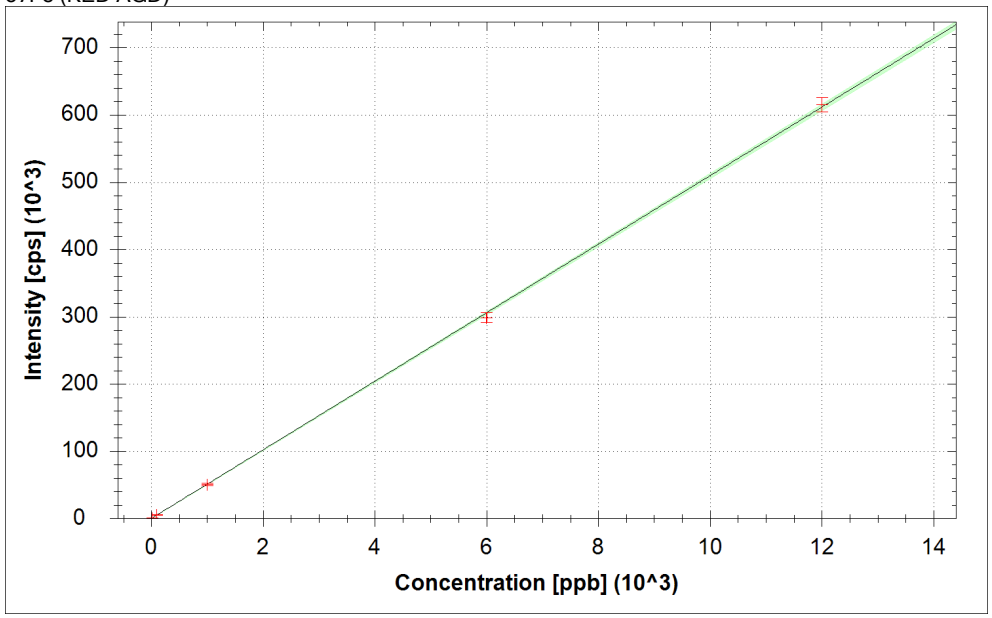
f(x) = 2301.0541*x + 141.2628
R² = 0.9998
BEC = 0.061 ppb
LoD = 0.0677 ppb

55Mn (KED AGD)



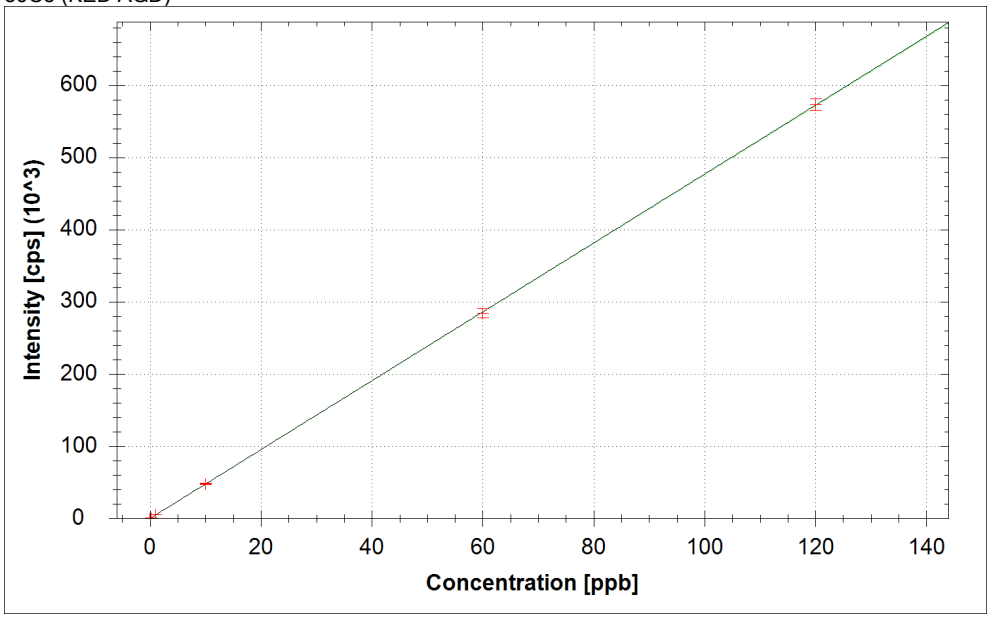
f(x) = 1007.9421*x + 42.1273
R² = 0.9997
BEC = 0.042 ppb
LoD = 0.0205 ppb

57Fe (KED AGD)



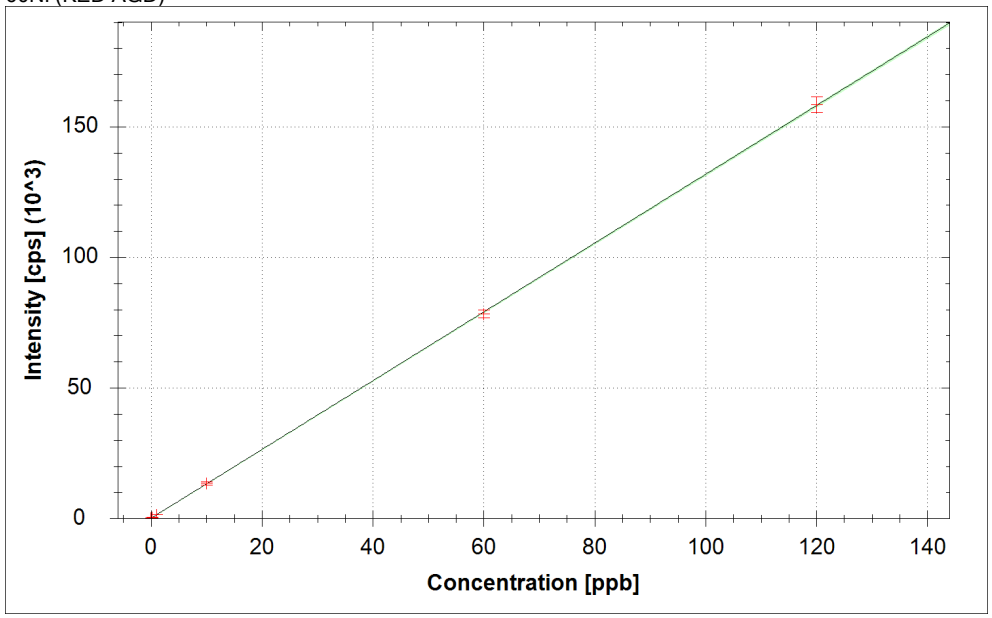
f(x) = 50.9564*x + 31.2451
R² = 0.9998
BEC = 0.613 ppb
LoD = 0.5019 ppb

59Co (KED AGD)



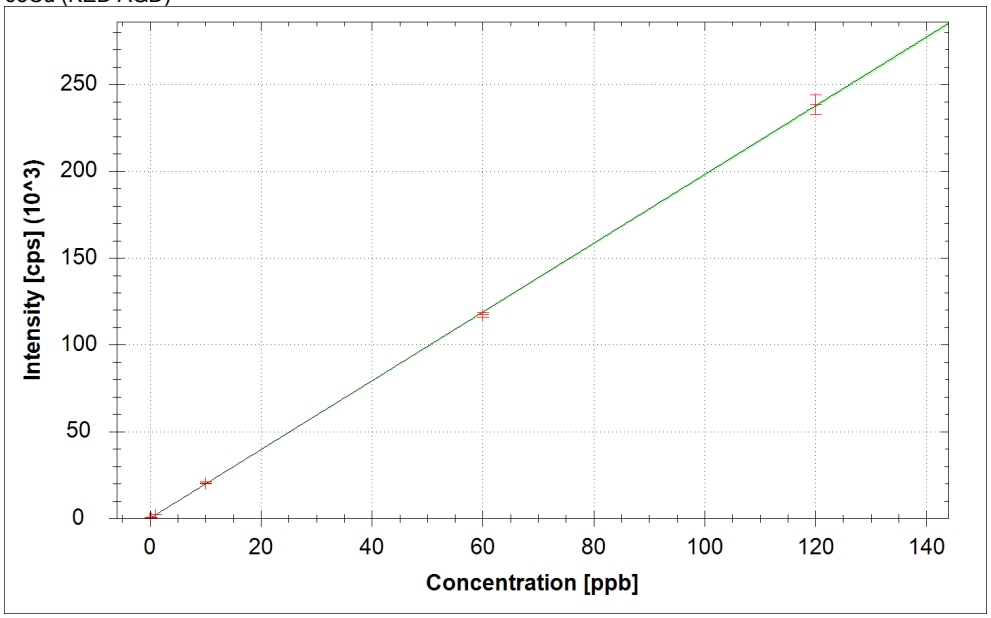
f(x) = 4768.7503*x + 4.4601
R² = 1.0000
BEC = 0.001 ppb
LoD = 0.0049 ppb

60Ni (KED AGD)



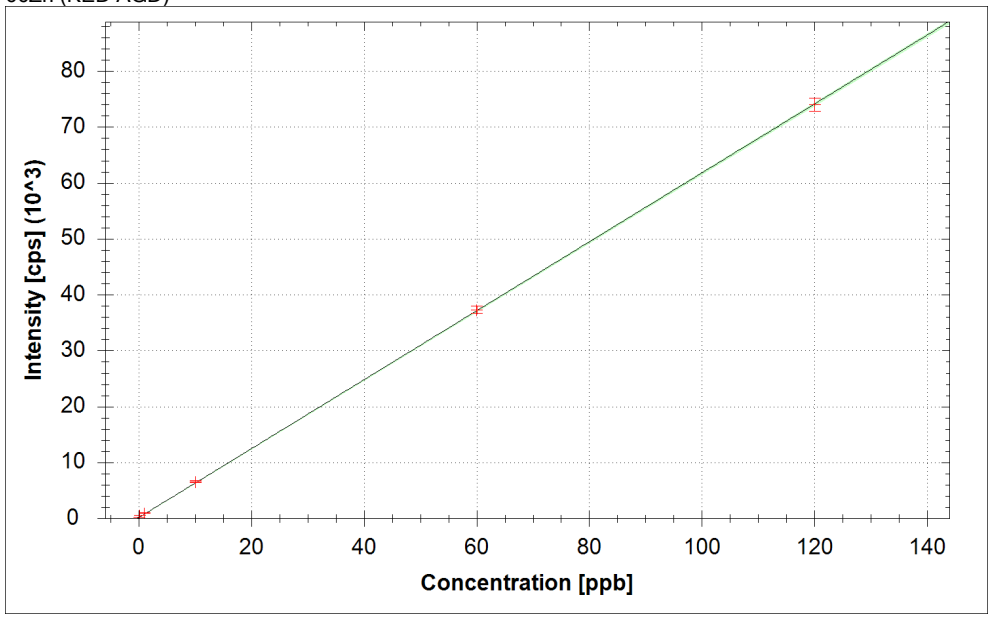
f(x) = 1316.3945*x + 84.8046
R² = 1.0000
BEC = 0.064 ppb
LoD = 0.0525 ppb

65Cu (KED AGD)



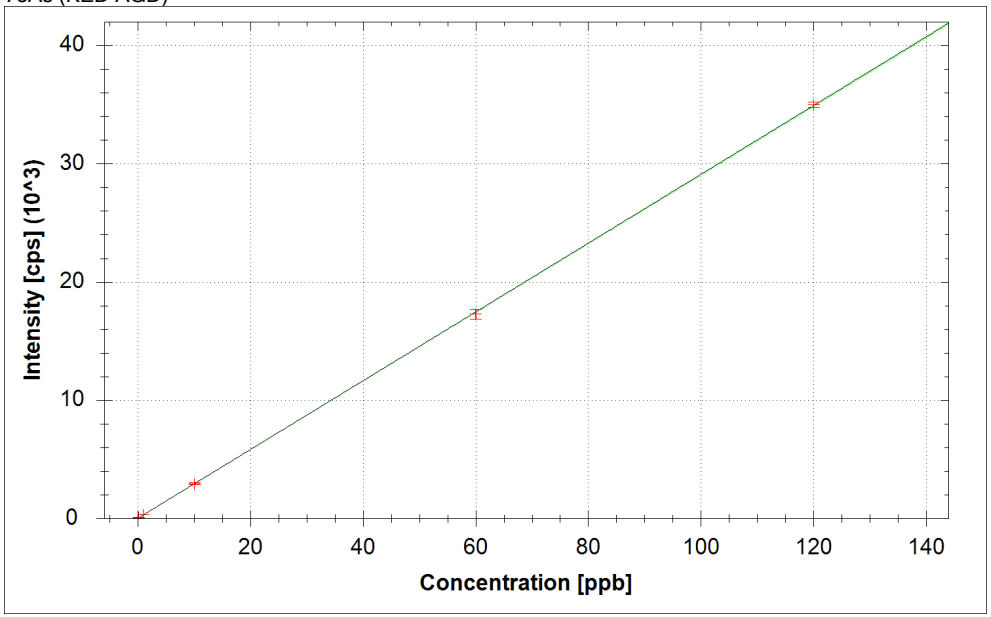
f(x) = 1978.7832*x + 71.2529
R² = 0.9999
BEC = 0.036 ppb
LoD = 0.0171 ppb

66Zn (KED AGD)



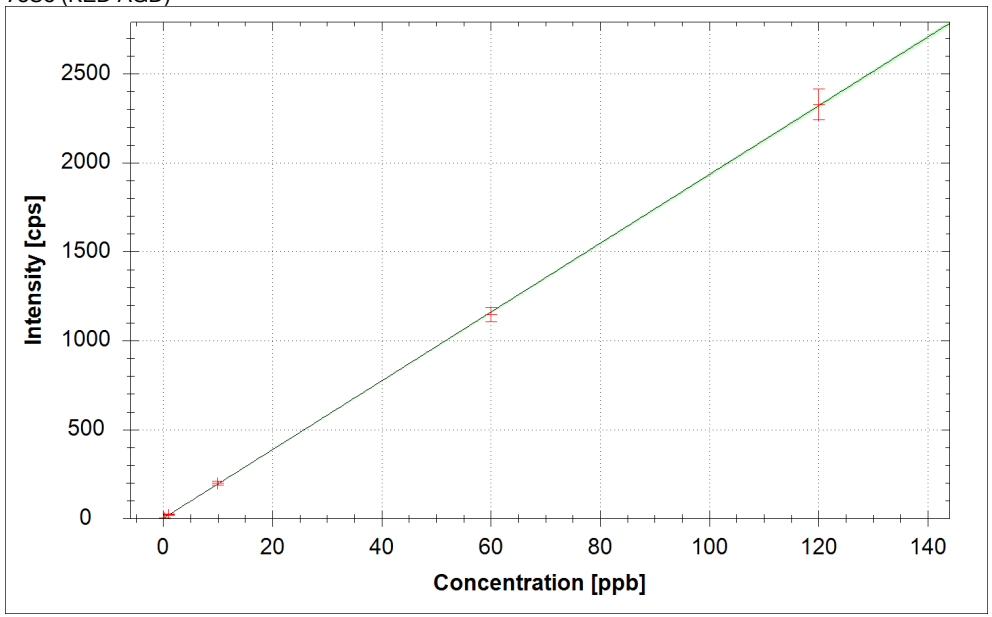
f(x) = 616.1084*x + 163.5952
R² = 1.0000
BEC = 0.266 ppb
LoD = 0.0501 ppb

75As (KED AGD)



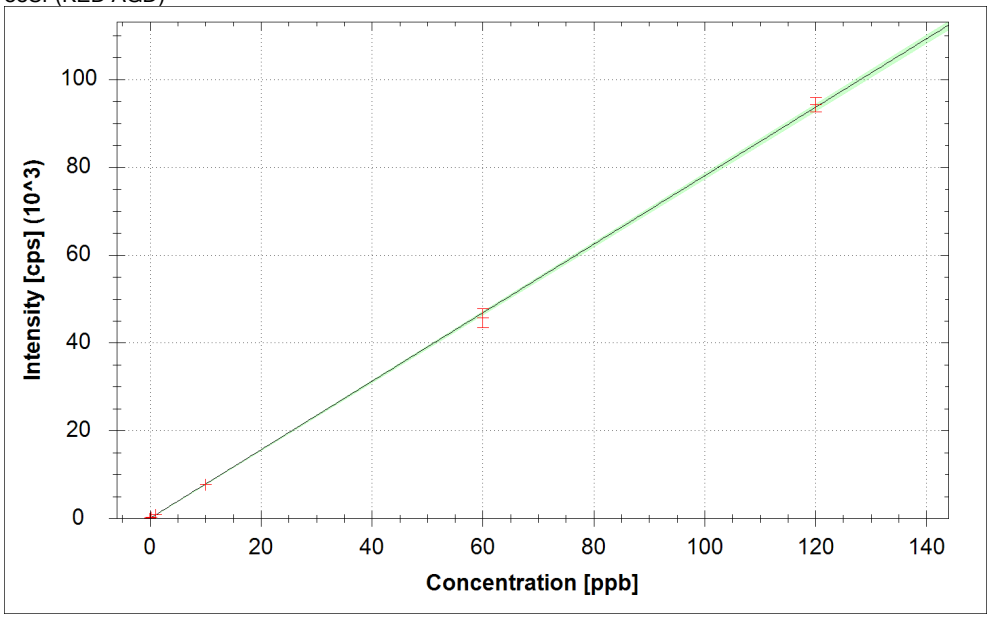
f(x) = 290.6562*x + 18.3646
R² = 1.0000
BEC = 0.063 ppb
LoD = 0.0261 ppb

78Se (KED AGD)



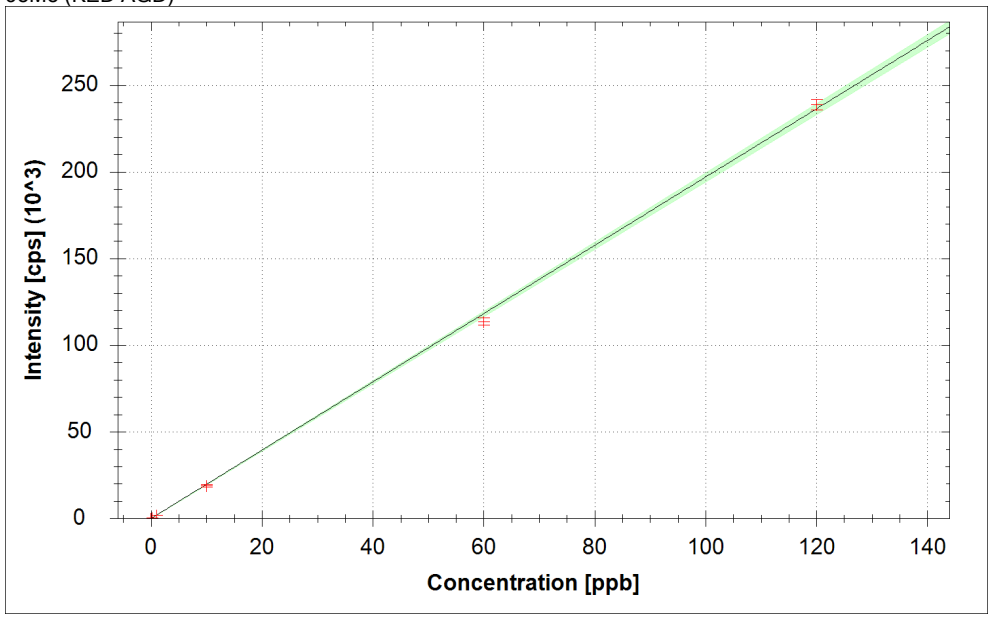
f(x) = 19.3264*x + 0.4116
R² = 0.9999
BEC = 0.021 ppb
LoD = 0.0242 ppb

88Sr (KED AGD)



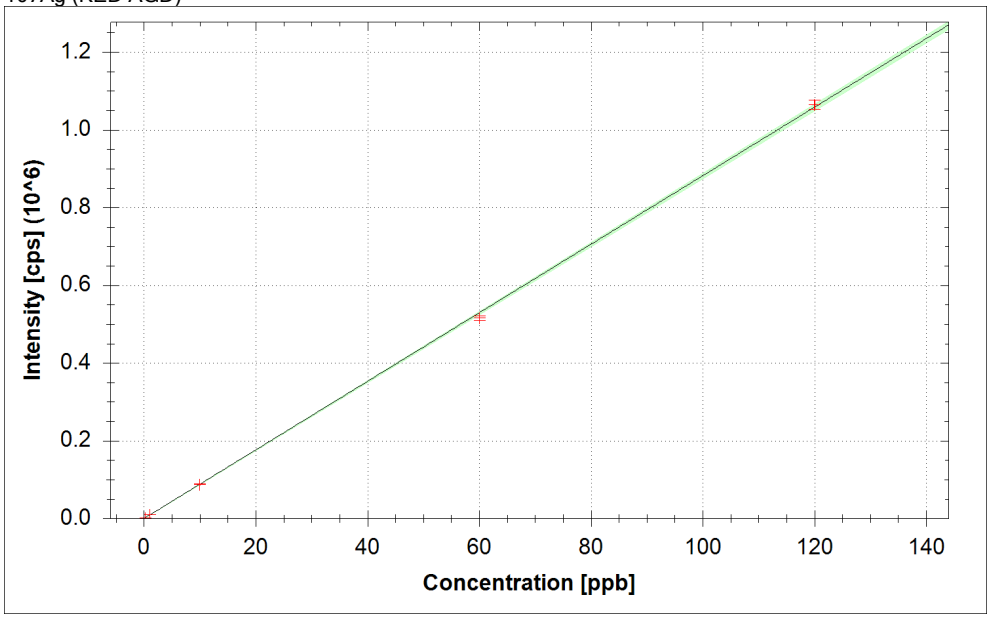
f(x) = 780.0984*x + 31.0451
R² = 0.9997
BEC = 0.040 ppb
LoD = 0.0125 ppb

95Mo (KED AGD)



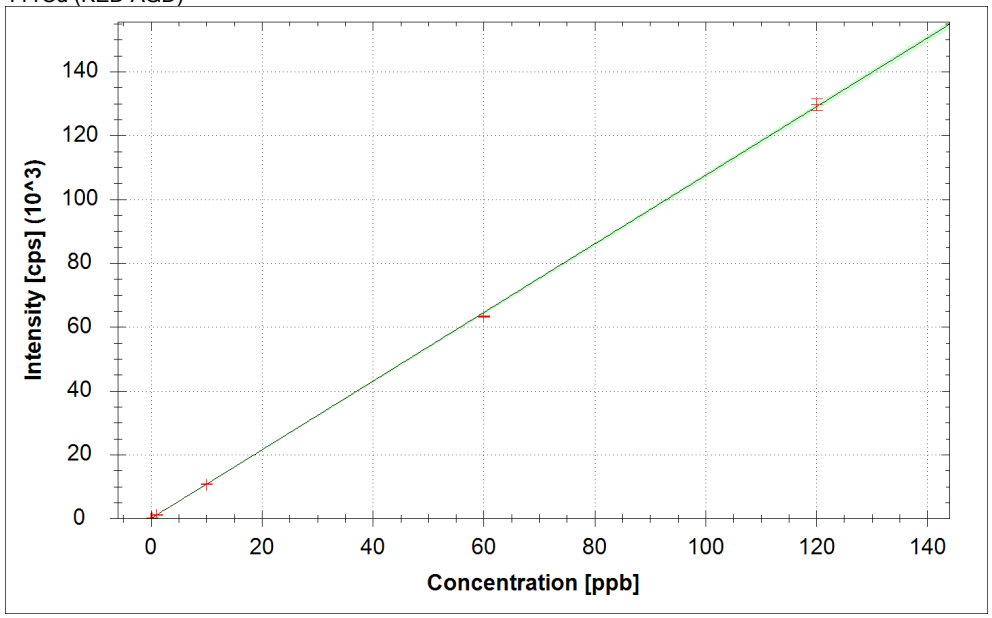
f(x) = 1969.1376*x + 15.6441
R² = 0.9994
BEC = 0.008 ppb
LoD = 0.0159 ppb

107Ag (KED AGD)



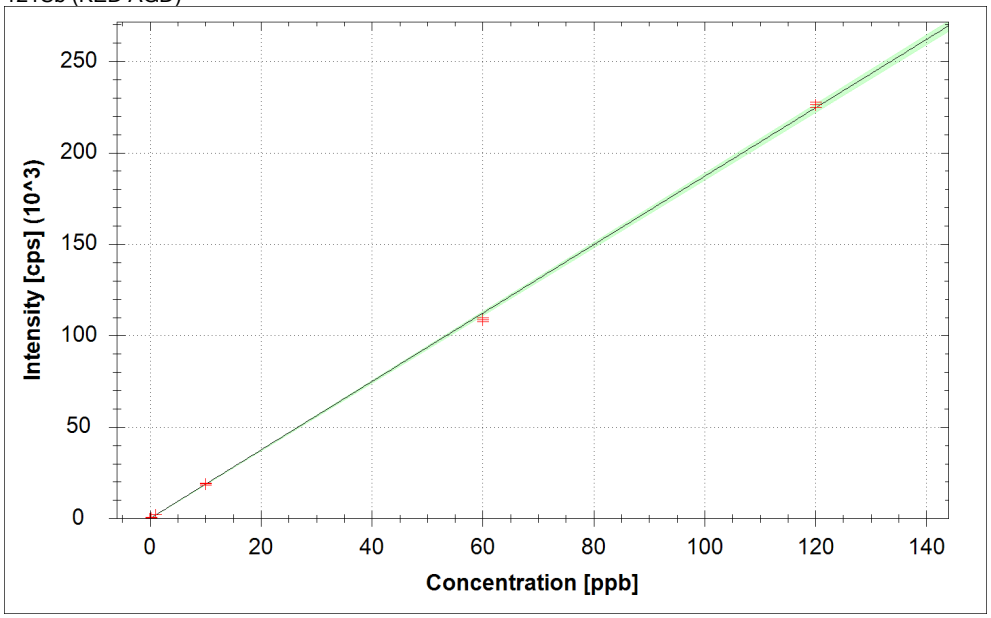
f(x) = 8816.1974*x + 5.5835
R² = 0.9998
BEC = 0.001 ppb
LoD = 0.0017 ppb

111Cd (KED AGD)



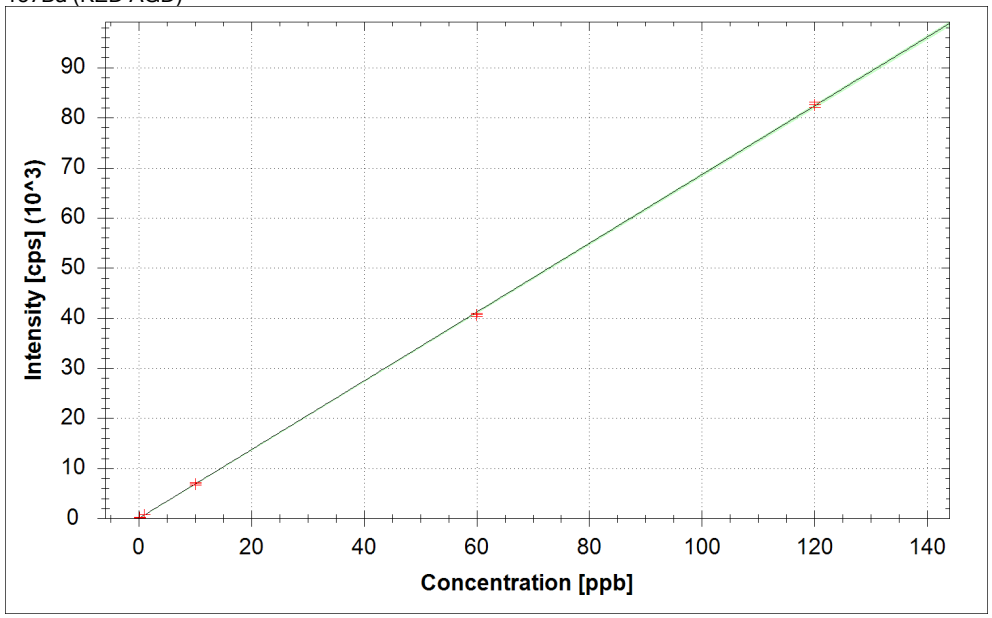
f(x) = 1074.8188*x + 0.4454
R² = 0.9998
BEC = 0.000 ppb
LoD = 0.0022 ppb

121Sb (KED AGD)



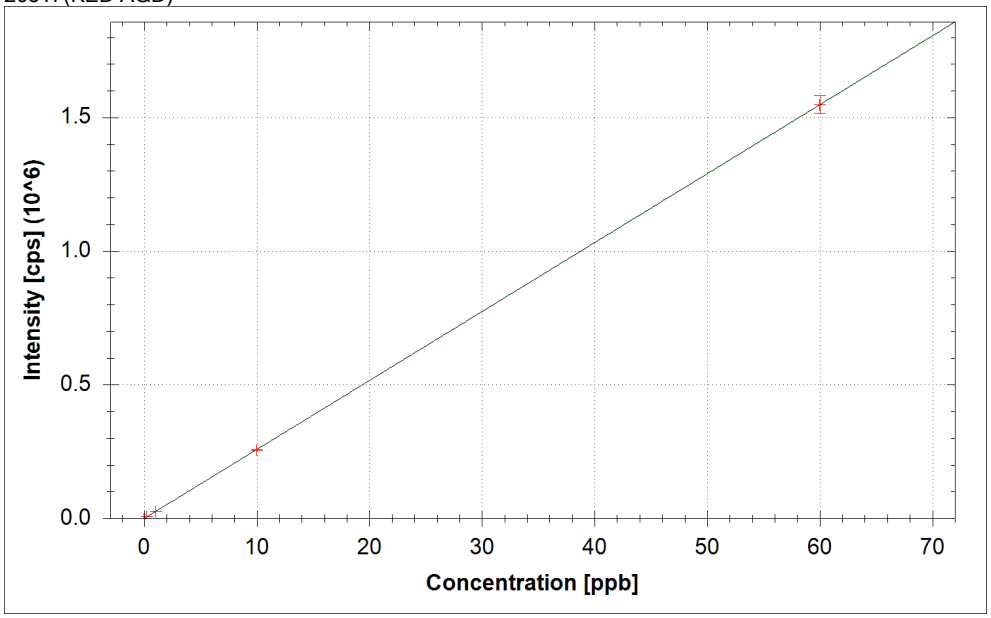
f(x) = 1870.5508*x + 9.3106
R² = 0.9996
BEC = 0.005 ppb
LoD = 0.0106 ppb

137Ba (KED AGD)



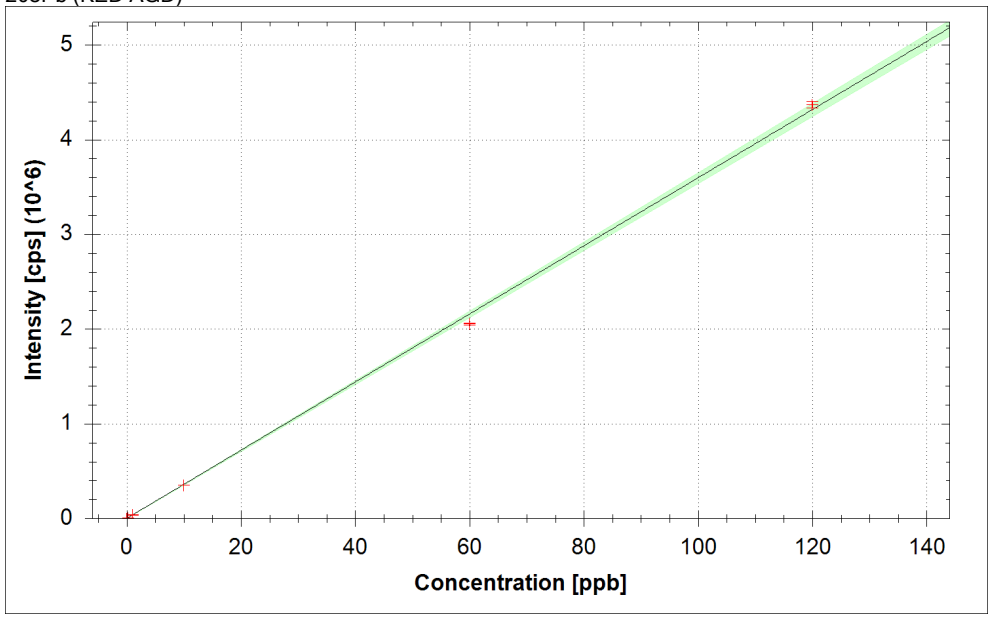
f(x) = 685.9694*x + 11.1002
R² = 0.9999
BEC = 0.016 ppb
LoD = 0.0302 ppb

205Tl (KED AGD)



f(x) = 25795.5854*x + 141.2155
R² = 1.0000
BEC = 0.005 ppb
LoD = 0.0030 ppb

208Pb (KED AGD)



f(x) = 35959.6244*x + 752.2142
R² = 0.9991
BEC = 0.021 ppb
LoD = 0.0030 ppb

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 4:25:31 AM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	99.095 %	0.9 %		0.000 %
6Li (KED AGD)	96.342 %	4.7 %		0.000 %
9Be (STD AGD)	0.221 ppb	4.7 %	0.200 ppb	10.694 %
23Na (KED AGD)	18.233 ppb	10.1 %	20.000 ppb	8.837 %
24Mg (KED AGD)	21.916 ppb	4.3 %	20.000 ppb	9.582 %
27Al (KED AGD)	1.229 ppb	6.8 %	0.200 ppb	514.367 %
39K (KED AGD)	20.587 ppb	6.0 %	20.000 ppb	2.934 %
44Ca (KED AGD)	145.817 ppb	7.7 %	20.000 ppb	629.087 %
45Sc (STD AGD)	99.867 %	0.4 %		0.000 %
51V (KED AGD)	0.255 ppb	21.5 %	0.200 ppb	27.261 %
52Cr (KED AGD)	0.218 ppb	24.3 %	0.200 ppb	9.057 %
55Mn (KED AGD)	0.195 ppb	7.0 %	0.200 ppb	2.381 %
57Fe (KED AGD)	20.820 ppb	3.4 %	20.000 ppb	4.099 %
59Co (KED AGD)	0.186 ppb	13.7 %	0.200 ppb	7.247 %
60Ni (KED AGD)	0.199 ppb	23.6 %	0.200 ppb	0.632 %
65Cu (KED AGD)	0.242 ppb	23.3 %	0.200 ppb	20.848 %
66Zn (KED AGD)	0.683 ppb	5.2 %	0.200 ppb	241.355 %
74Ge (KED AGD)	99.464 %	2.1 %		0.000 %
75As (KED AGD)	0.234 ppb	8.0 %	0.200 ppb	17.240 %
78Se (KED AGD)	0.127 ppb	11.6 %	0.200 ppb	36.347 %
88Sr (KED AGD)	0.264 ppb	3.5 %	0.200 ppb	32.167 %
95Mo (KED AGD)	0.183 ppb	10.3 %	0.200 ppb	8.327 %
103Rh (KED AGD)	99.073 %	1.4 %		0.000 %
107Ag (KED AGD)	0.196 ppb	5.1 %	0.200 ppb	2.122 %
111Cd (KED AGD)	0.205 ppb	10.9 %	0.200 ppb	2.657 %
115In (KED AGD)	99.757 %	1.6 %		0.000 %
121Sb (KED AGD)	0.215 ppb	5.9 %	0.200 ppb	7.613 %
137Ba (KED AGD)	0.230 ppb	13.9 %	0.200 ppb	15.126 %
159Tb (KED AGD)	98.664 %	2.0 %		0.000 %
175Lu (KED AGD)	99.690 %	2.3 %		0.000 %
205Tl (KED AGD)	0.210 ppb	2.4 %	0.200 ppb	5.173 %
208Pb (KED AGD)	0.206 ppb	2.7 %	0.200 ppb	3.178 %
209Bi (KED AGD)	98.738 %	1.6 %		0.000 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 4:29:58 AM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	96.582 %	1.2 %		0.000 %
6Li (KED AGD)	94.950 %	3.9 %		0.000 %
9Be (STD AGD)	1.022 ppb	1.3 %	1.000 ppb	2.170 %
23Na (KED AGD)	94.868 ppb	1.2 %	100.000 ppb	5.132 %
24Mg (KED AGD)	101.930 ppb	3.8 %	100.000 ppb	1.930 %
27Al (KED AGD)	1.474 ppb	15.5 %	1.000 ppb	47.356 %
39K (KED AGD)	108.102 ppb	5.4 %	100.000 ppb	8.102 %
44Ca (KED AGD)	191.931 ppb	9.4 %	100.000 ppb	91.931 %
45Sc (STD AGD)	98.531 %	0.5 %		0.000 %
51V (KED AGD)	0.982 ppb	8.3 %	1.000 ppb	1.785 %
52Cr (KED AGD)	1.076 ppb	2.3 %	1.000 ppb	7.551 %
55Mn (KED AGD)	1.033 ppb	7.9 %	1.000 ppb	3.329 %
57Fe (KED AGD)	99.393 ppb	3.5 %	100.000 ppb	0.607 %
59Co (KED AGD)	1.029 ppb	1.5 %	1.000 ppb	2.944 %
60Ni (KED AGD)	1.057 ppb	4.9 %	1.000 ppb	5.684 %
65Cu (KED AGD)	1.112 ppb	3.4 %	1.000 ppb	11.187 %
66Zn (KED AGD)	1.268 ppb	4.0 %	1.000 ppb	26.831 %
74Ge (KED AGD)	100.861 %	0.4 %		0.000 %
75As (KED AGD)	1.010 ppb	4.4 %	1.000 ppb	1.041 %
78Se (KED AGD)	1.093 ppb	16.8 %	1.000 ppb	9.278 %
88Sr (KED AGD)	1.049 ppb	3.7 %	1.000 ppb	4.927 %
95Mo (KED AGD)	0.911 ppb	7.6 %	1.000 ppb	8.878 %
103Rh (KED AGD)	98.544 %	0.7 %		0.000 %
107Ag (KED AGD)	1.027 ppb	2.9 %	1.000 ppb	2.722 %
111Cd (KED AGD)	1.020 ppb	6.3 %	1.000 ppb	2.028 %
115In (KED AGD)	99.392 %	2.1 %		0.000 %
121Sb (KED AGD)	1.015 ppb	1.6 %	1.000 ppb	1.460 %
137Ba (KED AGD)	1.071 ppb	1.9 %	1.000 ppb	7.109 %
159Tb (KED AGD)	98.723 %	0.7 %		0.000 %
175Lu (KED AGD)	99.528 %	1.5 %		0.000 %
205Tl (KED AGD)	0.993 ppb	1.4 %	1.000 ppb	0.745 %
208Pb (KED AGD)	1.005 ppb	3.1 %	1.000 ppb	0.528 %
209Bi (KED AGD)	99.930 %	2.9 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 10/1000 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 4:34:25 AM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	96.336 %	1.2 %		0.000 %
6Li (KED AGD)	96.103 %	3.1 %		0.000 %
9Be (STD AGD)	10.077 ppb	1.4 %	10.000 ppb	0.773 %
23Na (KED AGD)	905.012 ppb	2.6 %	1,000.000 ppb	9.499 %
24Mg (KED AGD)	1,005.115 ppb	2.1 %	1,000.000 ppb	0.512 %
27Al (KED AGD)	9.785 ppb	4.9 %	10.000 ppb	2.148 %
39K (KED AGD)	957.780 ppb	1.3 %	1,000.000 ppb	4.222 %
44Ca (KED AGD)	1,057.316 ppb	4.1 %	1,000.000 ppb	5.732 %
45Sc (STD AGD)	96.984 %	0.8 %		0.000 %
51V (KED AGD)	10.122 ppb	2.7 %	10.000 ppb	1.221 %
52Cr (KED AGD)	9.948 ppb	3.0 %	10.000 ppb	0.519 %
55Mn (KED AGD)	9.716 ppb	0.8 %	10.000 ppb	2.841 %
57Fe (KED AGD)	988.616 ppb	4.1 %	1,000.000 ppb	1.138 %
59Co (KED AGD)	10.036 ppb	2.7 %	10.000 ppb	0.355 %
60Ni (KED AGD)	10.121 ppb	5.2 %	10.000 ppb	1.209 %
65Cu (KED AGD)	10.288 ppb	3.3 %	10.000 ppb	2.879 %
66Zn (KED AGD)	10.403 ppb	2.3 %	10.000 ppb	4.028 %
74Ge (KED AGD)	99.552 %	1.8 %		0.000 %
75As (KED AGD)	10.050 ppb	2.5 %	10.000 ppb	0.498 %
78Se (KED AGD)	10.279 ppb	5.4 %	10.000 ppb	2.787 %
88Sr (KED AGD)	9.874 ppb	0.8 %	10.000 ppb	1.260 %
95Mo (KED AGD)	9.485 ppb	3.9 %	10.000 ppb	5.152 %
103Rh (KED AGD)	96.549 %	0.3 %		0.000 %
107Ag (KED AGD)	9.946 ppb	1.3 %	10.000 ppb	0.538 %
111Cd (KED AGD)	9.893 ppb	0.9 %	10.000 ppb	1.069 %
115In (KED AGD)	96.923 %	2.0 %		0.000 %
121Sb (KED AGD)	10.010 ppb	2.6 %	10.000 ppb	0.104 %
137Ba (KED AGD)	10.047 ppb	4.2 %	10.000 ppb	0.467 %
159Tb (KED AGD)	98.456 %	0.2 %		0.000 %
175Lu (KED AGD)	99.757 %	0.2 %		0.000 %
205Tl (KED AGD)	9.910 ppb	0.6 %	10.000 ppb	0.895 %
208Pb (KED AGD)	9.757 ppb	0.2 %	10.000 ppb	2.431 %
209Bi (KED AGD)	99.136 %	1.1 %		0.000 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 4:38:53 AM
Total Dilution Factor 166.6666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	92.074 %	1.8 %		0.000 %
6Li (KED AGD)	93.081 %	4.6 %		0.000 %
9Be (STD AGD)	59.793 ppb	0.3 %	60.000 ppb	0.345 %
23Na (KED AGD)	5,401.873 ppb	4.9 %	6,000.000 ppb	9.969 %
24Mg (KED AGD)	5,893.675 ppb	5.8 %	6,000.000 ppb	1.772 %
27Al (KED AGD)	59.368 ppb	6.0 %	60.000 ppb	1.053 %
39K (KED AGD)	5,814.614 ppb	5.9 %	6,000.000 ppb	3.090 %
44Ca (KED AGD)	5,960.595 ppb	4.2 %	6,000.000 ppb	0.657 %
45Sc (STD AGD)	105.758 %	2.4 %		0.000 %
51V (KED AGD)	58.193 ppb	2.3 %	60.000 ppb	3.011 %
52Cr (KED AGD)	58.681 ppb	2.4 %	60.000 ppb	2.198 %
55Mn (KED AGD)	58.475 ppb	3.4 %	60.000 ppb	2.541 %
57Fe (KED AGD)	5,854.900 ppb	2.4 %	6,000.000 ppb	2.418 %
59Co (KED AGD)	59.621 ppb	2.3 %	60.000 ppb	0.632 %
60Ni (KED AGD)	59.411 ppb	2.0 %	60.000 ppb	0.982 %
65Cu (KED AGD)	59.190 ppb	1.2 %	60.000 ppb	1.350 %
66Zn (KED AGD)	60.271 ppb	1.7 %	60.000 ppb	0.452 %
74Ge (KED AGD)	97.525 %	0.8 %		0.000 %
75As (KED AGD)	59.348 ppb	2.4 %	60.000 ppb	1.086 %
78Se (KED AGD)	59.244 ppb	3.5 %	60.000 ppb	1.260 %
88Sr (KED AGD)	58.427 ppb	4.9 %	60.000 ppb	2.622 %
95Mo (KED AGD)	57.613 ppb	1.9 %	60.000 ppb	3.978 %
103Rh (KED AGD)	95.077 %	0.8 %		0.000 %
107Ag (KED AGD)	58.495 ppb	1.1 %	60.000 ppb	2.508 %
111Cd (KED AGD)	58.789 ppb	0.3 %	60.000 ppb	2.018 %
115In (KED AGD)	97.642 %	4.7 %		0.000 %
121Sb (KED AGD)	58.076 ppb	0.9 %	60.000 ppb	3.206 %
137Ba (KED AGD)	59.215 ppb	0.9 %	60.000 ppb	1.308 %
159Tb (KED AGD)	97.036 %	2.3 %		0.000 %
175Lu (KED AGD)	97.991 %	2.4 %		0.000 %
205Tl (KED AGD)	60.015 ppb	2.1 %	60.000 ppb	0.025 %
208Pb (KED AGD)	57.091 ppb	0.5 %	60.000 ppb	4.849 %
209Bi (KED AGD)	98.714 %	0.8 %		0.000 %

Standards:

Analysis Index: 8
Analysis Name: 120/12000 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 4:43:22 AM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	88.826 %	1.8 %		0.000 %
6Li (KED AGD)	87.554 %	4.5 %		0.000 %
9Be (STD AGD)	120.097 ppb	0.9 %	120.000 ppb	0.081 %
23Na (KED AGD)	12,307.025 ppb	2.4 %	12,000.000 ppb	2.559 %
24Mg (KED AGD)	12,052.717 ppb	2.1 %	12,000.000 ppb	0.439 %
27Al (KED AGD)	120.328 ppb	0.9 %	120.000 ppb	0.274 %
39K (KED AGD)	12,096.143 ppb	1.4 %	12,000.000 ppb	0.801 %
44Ca (KED AGD)	12,013.950 ppb	1.2 %	12,000.000 ppb	0.116 %
45Sc (STD AGD)	96.296 %	1.8 %		0.000 %
51V (KED AGD)	120.893 ppb	1.6 %	120.000 ppb	0.744 %
52Cr (KED AGD)	120.663 ppb	1.5 %	120.000 ppb	0.552 %
55Mn (KED AGD)	120.786 ppb	0.7 %	120.000 ppb	0.655 %
57Fe (KED AGD)	12,073.503 ppb	1.7 %	12,000.000 ppb	0.613 %
59Co (KED AGD)	120.186 ppb	1.4 %	120.000 ppb	0.155 %
60Ni (KED AGD)	120.284 ppb	1.9 %	120.000 ppb	0.237 %
65Cu (KED AGD)	120.380 ppb	2.3 %	120.000 ppb	0.317 %
66Zn (KED AGD)	119.828 ppb	1.6 %	120.000 ppb	0.143 %
74Ge (KED AGD)	94.434 %	3.4 %		0.000 %
75As (KED AGD)	120.322 ppb	0.7 %	120.000 ppb	0.268 %
78Se (KED AGD)	120.354 ppb	3.7 %	120.000 ppb	0.295 %
88Sr (KED AGD)	120.797 ppb	1.8 %	120.000 ppb	0.664 %
95Mo (KED AGD)	121.237 ppb	1.3 %	120.000 ppb	1.031 %
103Rh (KED AGD)	90.133 %	1.8 %		0.000 %
107Ag (KED AGD)	120.757 ppb	1.1 %	120.000 ppb	0.631 %
111Cd (KED AGD)	120.614 ppb	1.4 %	120.000 ppb	0.512 %
115In (KED AGD)	92.451 %	3.8 %		0.000 %
121Sb (KED AGD)	120.961 ppb	0.7 %	120.000 ppb	0.801 %
137Ba (KED AGD)	120.388 ppb	0.6 %	120.000 ppb	0.323 %
159Tb (KED AGD)	94.142 %	2.0 %		0.000 %
175Lu (KED AGD)	94.848 %	2.9 %		0.000 %
205Tl (KED AGD)	148.394 ppb	2.0 %	120.000 ppb	23.662 %
208Pb (KED AGD)	121.475 ppb	0.8 %	120.000 ppb	1.229 %
209Bi (KED AGD)	93.329 %	1.2 %		0.000 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	1	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/3/2024 4:12:07 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.374 %	102.505 %	0.001 ppb	3.483 ppb	-0.339 ppb	0.580 ppb	5.812 ppb	3.198 ppb	103.793 %
Concentration per Run 1	108.057 %	101.630 %	0.000 ppb	5.937 ppb	-0.193 ppb	1.066 ppb	11.049 ppb	1.410 ppb	104.606 %
Concentration per Run 2	108.027 %	101.750 %	-0.002 ppb	2.277 ppb	-0.508 ppb	0.447 ppb	2.087 ppb	2.492 ppb	103.616 %
Concentration per Run 3	106.038 %	104.135 %	0.005 ppb	2.234 ppb	-0.315 ppb	0.226 ppb	4.298 ppb	5.692 ppb	103.157 %
Concentration RSD	1.1 %	1.4 %	456.8 %	61.0 %	46.8 %	75.1 %	80.3 %	69.6 %	0.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.010 ppb	0.038 ppb	0.021 ppb	1.739 ppb	0.004 ppb	0.028 ppb	0.055 ppb	0.299 ppb	101.814 %
Concentration per Run 1	0.017 ppb	0.036 ppb	0.030 ppb	1.332 ppb	0.005 ppb	0.011 ppb	0.048 ppb	0.310 ppb	100.646 %
Concentration per Run 2	0.002 ppb	0.034 ppb	0.067 ppb	1.656 ppb	0.004 ppb	0.053 ppb	0.068 ppb	0.302 ppb	104.429 %
Concentration per Run 3	0.012 ppb	0.046 ppb	-0.035 ppb	2.228 ppb	0.002 ppb	0.021 ppb	0.051 ppb	0.284 ppb	100.367 %
Concentration RSD	74.4 %	16.2 %	251.3 %	26.1 %	43.0 %	77.7 %	19.4 %	4.5 %	2.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.011 ppb	-0.014 ppb	0.006 ppb	0.000 ppb	102.875 %	0.004 ppb	0.000 ppb	107.479 %	0.000 ppb
Concentration per Run 1	0.014 ppb	0.004 ppb	0.003 ppb	0.002 ppb	102.015 %	0.005 ppb	0.000 ppb	104.808 %	-0.002 ppb
Concentration per Run 2	0.022 ppb	-0.016 ppb	0.004 ppb	0.005 ppb	104.170 %	0.003 ppb	0.000 ppb	112.031 %	0.001 ppb
Concentration per Run 3	-0.003 ppb	-0.029 ppb	0.009 ppb	-0.008 ppb	102.439 %	0.003 ppb	0.000 ppb	105.599 %	0.000 ppb
Concentration RSD	118.9 %	118.7 %	56.6 %	2,402.6 %	1.1 %	39.6 %	0.0 %	3.7 %	339.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.002 ppb	104.917 %	107.099 %	0.003 ppb	0.027 ppb	105.213 %
Concentration per Run 1	-0.011 ppb	102.023 %	104.748 %	0.001 ppb	0.035 ppb	103.998 %
Concentration per Run 2	0.006 ppb	108.725 %	111.405 %	0.004 ppb	0.025 ppb	106.621 %
Concentration per Run 3	0.012 ppb	104.003 %	105.144 %	0.004 ppb	0.022 ppb	105.019 %
Concentration RSD	602.9 %	3.3 %	3.5 %	46.4 %	24.3 %	1.3 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	2	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CAL LOT #M24-1045	Rack	0		
Analysis started at:	4/3/2024 4:16:33 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.856 %	96.501 %	0.001 ppb	1.464 ppb	0.545 ppb	0.528 ppb	5.669 ppb	0.644 ppb	98.899 %
Concentration per Run 1	102.534 %	94.354 %	-0.001 ppb	1.171 ppb	0.921 ppb	0.643 ppb	8.582 ppb	0.189 ppb	100.953 %
Concentration per Run 2	101.411 %	94.831 %	0.001 ppb	2.199 ppb	0.081 ppb	0.446 ppb	2.473 ppb	1.522 ppb	98.247 %
Concentration per Run 3	98.622 %	100.318 %	0.004 ppb	1.023 ppb	0.634 ppb	0.495 ppb	5.950 ppb	0.221 ppb	97.498 %
Concentration RSD	2.0 %	3.4 %	178.1 %	43.7 %	78.4 %	19.4 %	54.1 %	118.1 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.013 ppb	0.016 ppb	0.032 ppb	1.456 ppb	0.003 ppb	0.052 ppb	0.046 ppb	0.338 ppb	102.646 %
Concentration per Run 1	-0.002 ppb	0.006 ppb	0.030 ppb	1.438 ppb	0.002 ppb	0.049 ppb	0.042 ppb	0.335 ppb	104.603 %
Concentration per Run 2	0.013 ppb	0.008 ppb	0.037 ppb	0.951 ppb	0.006 ppb	0.071 ppb	0.067 ppb	0.285 ppb	102.231 %
Concentration per Run 3	0.026 ppb	0.035 ppb	0.030 ppb	1.980 ppb	0.002 ppb	0.036 ppb	0.027 ppb	0.392 ppb	101.105 %
Concentration RSD	111.1 %	98.7 %	13.2 %	35.3 %	75.4 %	34.3 %	44.1 %	15.8 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.007 ppb	0.005 ppb	0.002 ppb	-0.004 ppb	100.574 %	0.003 ppb	0.000 ppb	102.803 %	0.001 ppb
Concentration per Run 1	-0.006 ppb	0.003 ppb	0.002 ppb	0.002 ppb	101.296 %	0.003 ppb	0.000 ppb	103.218 %	0.002 ppb
Concentration per Run 2	0.013 ppb	0.009 ppb	0.005 ppb	-0.005 ppb	100.909 %	0.003 ppb	0.001 ppb	103.292 %	-0.001 ppb
Concentration per Run 3	0.013 ppb	0.004 ppb	-0.001 ppb	-0.008 ppb	99.517 %	0.002 ppb	0.000 ppb	101.898 %	0.002 ppb
Concentration RSD	157.4 %	69.7 %	166.1 %	143.7 %	0.9 %	21.1 %	6,383.2 %	0.8 %	155.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.017 ppb	101.475 %	101.906 %	0.002 ppb	0.019 ppb	103.893 %
Concentration per Run 1	0.012 ppb	100.775 %	102.586 %	0.001 ppb	0.016 ppb	104.064 %
Concentration per Run 2	0.003 ppb	103.308 %	102.543 %	0.003 ppb	0.018 ppb	104.606 %
Concentration per Run 3	0.037 ppb	100.342 %	100.587 %	0.002 ppb	0.023 ppb	103.008 %
Concentration RSD	101.7 %	1.6 %	1.1 %	29.8 %	17.9 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	3	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Blank EJF ICPMSQ2	Rack	4		
Analysis started at:	4/3/2024 4:20:59 AM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.1 %	0.3 %	0.4 %	0.1 %	0.2 %	0.0 %	0.2 %	0.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.5 %	0.4 %	0.2 %	0.3 %	1.7 %	0.3 %	0.2 %	0.1 %	0.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb
Concentration per Run	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb
Concentration RSD	0.1 %	0.4 %	0.1 %	0.7 %	0.0 %	0.9 %	1.7 %	0.0 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.6 %	0.0 %	0.0 %	0.2 %	0.0 %	0.0 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	4	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	0.2/20 Cal	Rack	0		
Analysis started at:	4/3/2024 4:25:31 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.095 %	96.342 %	0.221 ppb	18.233 ppb	21.916 ppb	1.229 ppb	20.587 ppb	145.817 ppb	99.867 %
Concentration per Run 1	99.880 %	94.473 %	0.223 ppb	17.060 ppb	20.836 ppb	1.299 ppb	19.303 ppb	132.780 ppb	100.290 %
Concentration per Run 2	99.246 %	101.511 %	0.210 ppb	17.282 ppb	22.610 ppb	1.252 ppb	20.689 ppb	152.043 ppb	99.674 %
Concentration per Run 3	98.160 %	93.042 %	0.231 ppb	20.356 ppb	22.303 ppb	1.135 ppb	21.769 ppb	152.630 ppb	99.638 %
Concentration RSD	0.9 %	4.7 %	4.7 %	10.1 %	4.3 %	6.8 %	6.0 %	7.7 %	0.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.255 ppb	0.218 ppb	0.195 ppb	20.820 ppb	0.186 ppb	0.199 ppb	0.242 ppb	0.683 ppb	99.464 %
Concentration per Run 1	0.196 ppb	0.161 ppb	0.207 ppb	21.407 ppb	0.166 ppb	0.248 ppb	0.307 ppb	0.688 ppb	100.019 %
Concentration per Run 2	0.305 ppb	0.227 ppb	0.180 ppb	20.024 ppb	0.214 ppb	0.194 ppb	0.209 ppb	0.645 ppb	97.189 %
Concentration per Run 3	0.263 ppb	0.266 ppb	0.199 ppb	21.029 ppb	0.176 ppb	0.154 ppb	0.210 ppb	0.715 ppb	101.184 %
Concentration RSD	21.5 %	24.3 %	7.0 %	3.4 %	13.7 %	23.6 %	23.3 %	5.2 %	2.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.234 ppb	0.127 ppb	0.264 ppb	0.183 ppb	99.073 %	0.196 ppb	0.205 ppb	99.757 %	0.215 ppb
Concentration per Run 1	0.232 ppb	0.121 ppb	0.265 ppb	0.185 ppb	97.624 %	0.184 ppb	0.223 ppb	98.043 %	0.224 ppb
Concentration per Run 2	0.217 ppb	0.117 ppb	0.273 ppb	0.201 ppb	99.236 %	0.200 ppb	0.180 ppb	99.968 %	0.201 ppb
Concentration per Run 3	0.254 ppb	0.144 ppb	0.255 ppb	0.164 ppb	100.358 %	0.203 ppb	0.213 ppb	101.261 %	0.221 ppb
Concentration RSD	8.0 %	11.6 %	3.5 %	10.3 %	1.4 %	5.1 %	10.9 %	1.6 %	5.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.230 ppb	98.664 %	99.690 %	0.210 ppb	0.206 ppb	98.738 %
Concentration per Run 1	0.209 ppb	96.545 %	97.031 %	0.205 ppb	0.213 ppb	97.134 %
Concentration per Run 2	0.267 ppb	99.094 %	101.029 %	0.212 ppb	0.203 ppb	98.862 %
Concentration per Run 3	0.215 ppb	100.353 %	101.011 %	0.214 ppb	0.203 ppb	100.218 %
Concentration RSD	13.9 %	2.0 %	2.3 %	2.4 %	2.7 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	5	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	1/100 Cal	Rack	0		
Analysis started at:	4/3/2024 4:29:58 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.582 %	94.950 %	1.022 ppb	94.868 ppb	101.930 ppb	1.474 ppb	108.102 ppb	191.931 ppb	98.531 %
Concentration per Run 1	96.250 %	99.125 %	1.012 ppb	95.761 ppb	102.138 ppb	1.232 ppb	112.489 ppb	212.073 ppb	99.118 %
Concentration per Run 2	97.843 %	92.087 %	1.037 ppb	95.295 ppb	105.731 ppb	1.502 ppb	110.391 ppb	177.264 ppb	98.347 %
Concentration per Run 3	95.653 %	93.638 %	1.016 ppb	93.549 ppb	97.921 ppb	1.687 ppb	101.426 ppb	186.455 ppb	98.130 %
Concentration RSD	1.2 %	3.9 %	1.3 %	1.2 %	3.8 %	15.5 %	5.4 %	9.4 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.982 ppb	1.076 ppb	1.033 ppb	99.393 ppb	1.029 ppb	1.057 ppb	1.112 ppb	1.268 ppb	100.861 %
Concentration per Run 1	0.935 ppb	1.048 ppb	1.108 ppb	95.816 ppb	1.040 ppb	1.117 ppb	1.156 ppb	1.325 ppb	101.215 %
Concentration per Run 2	1.076 ppb	1.082 ppb	0.946 ppb	102.793 ppb	1.012 ppb	1.029 ppb	1.089 ppb	1.227 ppb	100.916 %
Concentration per Run 3	0.935 ppb	1.096 ppb	1.046 ppb	99.570 ppb	1.036 ppb	1.025 ppb	1.091 ppb	1.253 ppb	100.452 %
Concentration RSD	8.3 %	2.3 %	7.9 %	3.5 %	1.5 %	4.9 %	3.4 %	4.0 %	0.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.010 ppb	1.093 ppb	1.049 ppb	0.911 ppb	98.544 %	1.027 ppb	1.020 ppb	99.392 %	1.015 ppb
Concentration per Run 1	0.971 ppb	1.231 ppb	1.094 ppb	0.986 ppb	99.284 %	1.007 ppb	1.018 ppb	100.419 %	1.014 ppb
Concentration per Run 2	1.000 ppb	0.885 ppb	1.027 ppb	0.898 ppb	98.276 %	1.014 ppb	1.086 ppb	97.003 %	1.032 ppb
Concentration per Run 3	1.059 ppb	1.163 ppb	1.026 ppb	0.849 ppb	98.072 %	1.061 ppb	0.957 ppb	100.754 %	0.999 ppb
Concentration RSD	4.4 %	16.8 %	3.7 %	7.6 %	0.7 %	2.9 %	6.3 %	2.1 %	1.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.071 ppb	98.723 %	99.528 %	0.993 ppb	1.005 ppb	99.930 %
Concentration per Run 1	1.073 ppb	99.473 %	101.208 %	1.005 ppb	1.024 ppb	98.122 %
Concentration per Run 2	1.049 ppb	98.188 %	98.310 %	0.996 ppb	1.023 ppb	98.435 %
Concentration per Run 3	1.091 ppb	98.508 %	99.067 %	0.977 ppb	0.969 ppb	103.232 %
Concentration RSD	1.9 %	0.7 %	1.5 %	1.4 %	3.1 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	6	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	10/1000 Cal	Rack	0		
Analysis started at:	4/3/2024 4:34:25 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.336 %	96.103 %	10.077 ppb	905.012 ppb	1,005.115 ppb	9.785 ppb	957.780 ppb	1,057.316 ppb	96.984 %
Concentration per Run 1	96.250 %	96.262 %	10.174 ppb	901.993 ppb	999.946 ppb	9.890 ppb	958.248 ppb	1,053.190 ppb	96.240 %
Concentration per Run 2	97.498 %	99.006 %	9.915 ppb	883.513 ppb	986.926 ppb	10.200 ppb	969.746 ppb	1,016.674 ppb	97.759 %
Concentration per Run 3	95.261 %	93.042 %	10.143 ppb	929.531 ppb	1,028.474 ppb	9.265 ppb	945.344 ppb	1,102.086 ppb	96.953 %
Concentration RSD	1.2 %	3.1 %	1.4 %	2.6 %	2.1 %	4.9 %	1.3 %	4.1 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	10.122 ppb	9.948 ppb	9.716 ppb	988.616 ppb	10.036 ppb	10.121 ppb	10.288 ppb	10.403 ppb	99.552 %
Concentration per Run 1	10.122 ppb	9.804 ppb	9.691 ppb	969.905 ppb	10.221 ppb	9.540 ppb	10.289 ppb	10.359 ppb	100.609 %
Concentration per Run 2	9.846 ppb	9.752 ppb	9.802 ppb	960.295 ppb	9.727 ppb	10.555 ppb	9.950 ppb	10.192 ppb	100.510 %
Concentration per Run 3	10.398 ppb	10.288 ppb	9.655 ppb	1,035.647 ppb	10.158 ppb	10.268 ppb	10.625 ppb	10.657 ppb	97.539 %
Concentration RSD	2.7 %	3.0 %	0.8 %	4.1 %	2.7 %	5.2 %	3.3 %	2.3 %	1.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	10.050 ppb	10.279 ppb	9.874 ppb	9.485 ppb	96.549 %	9.946 ppb	9.893 ppb	96.923 %	10.010 ppb
Concentration per Run 1	9.770 ppb	9.779 ppb	9.963 ppb	9.821 ppb	96.336 %	10.092 ppb	9.798 ppb	97.753 %	10.034 ppb
Concentration per Run 2	10.113 ppb	10.186 ppb	9.850 ppb	9.086 ppb	96.396 %	9.853 ppb	9.976 ppb	94.680 %	10.257 ppb
Concentration per Run 3	10.266 ppb	10.871 ppb	9.808 ppb	9.547 ppb	96.915 %	9.894 ppb	9.905 ppb	98.336 %	9.741 ppb
Concentration RSD	2.5 %	5.4 %	0.8 %	3.9 %	0.3 %	1.3 %	0.9 %	2.0 %	2.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10.047 ppb	98.456 %	99.757 %	9.910 ppb	9.757 ppb	99.136 %
Concentration per Run 1	10.260 ppb	98.264 %	99.948 %	9.845 ppb	9.770 ppb	98.610 %
Concentration per Run 2	10.321 ppb	98.396 %	99.616 %	9.929 ppb	9.767 ppb	98.380 %
Concentration per Run 3	9.560 ppb	98.709 %	99.706 %	9.957 ppb	9.734 ppb	100.419 %
Concentration RSD	4.2 %	0.2 %	0.2 %	0.6 %	0.2 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	7	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/3/2024 4:38:53 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.074 %	93.081 %	59.793 ppb	5,401.873 ppb	5,893.675 ppb	59.368 ppb	5,814.614 ppb	5,960.595 ppb	105.758 %
Concentration per Run 1	93.811 %	97.932 %	59.757 ppb	5,112.676 ppb	5,518.063 ppb	55.871 ppb	5,481.686 ppb	5,822.638 ppb	108.727 %
Concentration per Run 2	91.965 %	91.610 %	59.617 ppb	5,635.905 ppb	6,185.840 ppb	62.957 ppb	6,171.421 ppb	6,246.636 ppb	104.090 %
Concentration per Run 3	90.447 %	89.702 %	60.005 ppb	5,457.039 ppb	5,977.123 ppb	59.276 ppb	5,790.735 ppb	5,812.512 ppb	104.457 %
Concentration RSD	1.8 %	4.6 %	0.3 %	4.9 %	5.8 %	6.0 %	5.9 %	4.2 %	2.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	58.193 ppb	58.681 ppb	58.475 ppb	5,854.900 ppb	59.621 ppb	59.411 ppb	59.190 ppb	60.271 ppb	97.525 %
Concentration per Run 1	57.559 ppb	57.660 ppb	57.396 ppb	5,722.814 ppb	58.090 ppb	58.620 ppb	58.516 ppb	59.136 ppb	98.362 %
Concentration per Run 2	59.739 ppb	60.278 ppb	60.792 ppb	6,004.366 ppb	60.661 ppb	60.758 ppb	59.881 ppb	61.133 ppb	97.466 %
Concentration per Run 3	57.282 ppb	58.107 ppb	57.239 ppb	5,837.519 ppb	60.112 ppb	58.855 ppb	59.172 ppb	60.544 ppb	96.747 %
Concentration RSD	2.3 %	2.4 %	3.4 %	2.4 %	2.3 %	2.0 %	1.2 %	1.7 %	0.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	59.348 ppb	59.244 ppb	58.427 ppb	57.613 ppb	95.077 %	58.495 ppb	58.789 ppb	97.642 %	58.076 ppb
Concentration per Run 1	58.083 ppb	58.294 ppb	56.703 ppb	56.472 ppb	94.884 %	58.653 ppb	58.579 ppb	96.569 %	57.470 ppb
Concentration per Run 2	60.877 ppb	61.617 ppb	61.726 ppb	58.585 ppb	95.927 %	57.779 ppb	58.956 ppb	102.653 %	58.278 ppb
Concentration per Run 3	59.084 ppb	57.822 ppb	56.851 ppb	57.784 ppb	94.421 %	59.053 ppb	58.831 ppb	93.705 %	58.480 ppb
Concentration RSD	2.4 %	3.5 %	4.9 %	1.9 %	0.8 %	1.1 %	0.3 %	4.7 %	0.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.215 ppb	97.036 %	97.991 %	60.015 ppb	57.091 ppb	98.714 %
Concentration per Run 1	58.996 ppb	94.948 %	95.480 %	59.853 ppb	56.819 ppb	98.342 %
Concentration per Run 2	59.824 ppb	99.368 %	100.202 %	58.819 ppb	57.349 ppb	99.567 %
Concentration per Run 3	58.826 ppb	96.792 %	98.292 %	61.373 ppb	57.104 ppb	98.234 %
Concentration RSD	0.9 %	2.3 %	2.4 %	2.1 %	0.5 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	8	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	120/12000 Cal	Rack	0		
Analysis started at:	4/3/2024 4:43:22 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.826 %	87.554 %	120.097 ppb	12,307.025 ppb	12,052.717 ppb	120.328 ppb	12,096.143 ppb	12,013.950 ppb	96.296 %
Concentration per Run 1	90.667 %	83.737 %	118.949 ppb	12,582.709 ppb	12,261.756 ppb	119.793 ppb	12,160.066 ppb	12,000.472 ppb	97.114 %
Concentration per Run 2	87.807 %	91.610 %	120.914 ppb	12,003.339 ppb	11,768.874 ppb	119.633 ppb	12,222.048 ppb	12,165.006 ppb	97.444 %
Concentration per Run 3	88.003 %	87.316 %	120.428 ppb	12,335.026 ppb	12,127.521 ppb	121.558 ppb	11,906.314 ppb	11,876.372 ppb	94.330 %
Concentration RSD	1.8 %	4.5 %	0.9 %	2.4 %	2.1 %	0.9 %	1.4 %	1.2 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	120.893 ppb	120.663 ppb	120.786 ppb	12,073.503 ppb	120.186 ppb	120.284 ppb	120.380 ppb	119.828 ppb	94.434 %
Concentration per Run 1	119.745 ppb	122.035 ppb	121.699 ppb	12,078.708 ppb	120.498 ppb	121.554 ppb	121.343 ppb	119.279 ppb	94.443 %
Concentration per Run 2	119.755 ppb	118.548 ppb	120.221 ppb	11,863.654 ppb	118.335 ppb	117.581 ppb	117.213 ppb	118.276 ppb	97.606 %
Concentration per Run 3	123.180 ppb	121.406 ppb	120.438 ppb	12,278.145 ppb	121.726 ppb	121.718 ppb	122.585 ppb	121.929 ppb	91.254 %
Concentration RSD	1.6 %	1.5 %	0.7 %	1.7 %	1.4 %	1.9 %	2.3 %	1.6 %	3.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	120.322 ppb	120.354 ppb	120.797 ppb	121.237 ppb	90.133 %	120.757 ppb	120.614 ppb	92.451 %	120.961 ppb
Concentration per Run 1	119.894 ppb	115.181 ppb	118.833 ppb	119.847 ppb	89.907 %	120.312 ppb	120.855 ppb	92.003 %	121.369 ppb
Concentration per Run 2	119.845 ppb	122.418 ppb	123.086 ppb	120.940 ppb	91.815 %	119.754 ppb	118.791 ppb	96.182 %	120.023 ppb
Concentration per Run 3	121.226 ppb	123.463 ppb	120.471 ppb	122.924 ppb	88.677 %	122.204 ppb	122.197 ppb	89.167 %	121.491 ppb
Concentration RSD	0.7 %	3.7 %	1.8 %	1.3 %	1.8 %	1.1 %	1.4 %	3.8 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	120.388 ppb	94.142 %	94.848 %	148.394 ppb	121.475 ppb	93.329 %
Concentration per Run 1	119.611 ppb	93.067 %	93.378 %	148.689 ppb	122.436 ppb	92.088 %
Concentration per Run 2	120.563 ppb	96.327 %	98.008 %	145.249 ppb	121.546 ppb	93.913 %
Concentration per Run 3	120.990 ppb	93.033 %	93.159 %	151.245 ppb	120.443 ppb	93.986 %
Concentration RSD	0.6 %	2.0 %	2.9 %	2.0 %	0.8 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	9	User name	ALPHALAB\a2-icpmsq2	Comment	Sr Inteference Check
Analysis label:	Sr 200ppb	Rack	4		
Analysis started at:	4/3/2024 4:48:21 AM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.508 %	90.099 %	0.010 ppb	0.875 ppb	2.172 ppb	0.683 ppb	8.482 ppb	-0.900 ppb	91.965 %
Concentration per Run 1	91.744 %	89.105 %	0.009 ppb	0.680 ppb	3.054 ppb	0.404 ppb	9.501 ppb	-69.858 ppb	92.116 %
Concentration per Run 2	92.131 %	92.564 %	0.012 ppb	0.971 ppb	1.580 ppb	0.610 ppb	8.816 ppb	25.887 ppb	93.361 %
Concentration per Run 3	90.650 %	88.628 %	0.009 ppb	0.973 ppb	1.882 ppb	1.034 ppb	7.129 ppb	41.272 ppb	90.418 %
Concentration RSD	0.8 %	2.4 %	15.5 %	19.2 %	35.9 %	47.1 %	14.4 %	6,691.9 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.012 ppb	0.035 ppb	0.055 ppb	7.173 ppb	0.010 ppb	0.068 ppb	0.019 ppb	0.479 ppb	97.160 %
Concentration per Run 1	-0.014 ppb	0.028 ppb	0.067 ppb	6.077 ppb	0.012 ppb	0.090 ppb	0.022 ppb	0.497 ppb	100.677 %
Concentration per Run 2	0.002 ppb	0.044 ppb	0.064 ppb	7.900 ppb	0.012 ppb	0.044 ppb	0.011 ppb	0.469 ppb	94.149 %
Concentration per Run 3	-0.023 ppb	0.033 ppb	0.035 ppb	7.543 ppb	0.006 ppb	0.069 ppb	0.024 ppb	0.472 ppb	96.655 %
Concentration RSD	106.1 %	23.0 %	31.6 %	13.5 %	32.5 %	34.6 %	38.0 %	3.2 %	3.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.040 ppb	0.194 ppb	180.851 ppb	0.204 ppb	93.809 %	0.012 ppb	0.015 ppb	94.407 %	0.027 ppb
Concentration per Run 1	0.020 ppb	0.113 ppb	180.559 ppb	0.172 ppb	93.816 %	0.020 ppb	0.015 ppb	93.545 %	0.034 ppb
Concentration per Run 2	0.059 ppb	0.155 ppb	182.330 ppb	0.204 ppb	94.433 %	0.011 ppb	0.023 ppb	95.989 %	0.021 ppb
Concentration per Run 3	0.041 ppb	0.315 ppb	179.665 ppb	0.237 ppb	93.177 %	0.006 ppb	0.006 ppb	93.686 %	0.025 ppb
Concentration RSD	49.2 %	54.9 %	0.8 %	15.7 %	0.7 %	58.4 %	56.4 %	1.5 %	24.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.056 ppb	94.724 %	96.045 %	0.476 ppb	0.019 ppb	97.297 %
Concentration per Run 1	0.031 ppb	92.305 %	94.081 %	0.352 ppb	0.022 ppb	97.691 %
Concentration per Run 2	0.035 ppb	95.531 %	96.740 %	0.573 ppb	0.021 ppb	96.320 %
Concentration per Run 3	0.101 ppb	96.335 %	97.315 %	0.502 ppb	0.015 ppb	97.882 %
Concentration RSD	71.4 %	2.3 %	1.8 %	23.7 %	18.5 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	10	User name	ALPHALAB\a2-icpmsq2	Comment	ICV
Analysis label:	ICV	Rack	0		
Analysis started at:	4/3/2024 4:52:53 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.549 %	84.532 %	50.264 ppb	4,758.360 ppb	5,187.119 ppb	52.241 ppb	4,994.854 ppb	5,157.843 ppb	81.823 %
Concentration per Run 1	80.088 %	81.590 %	50.261 ppb	4,880.566 ppb	5,292.676 ppb	54.795 ppb	5,093.643 ppb	5,327.268 ppb	82.931 %
Concentration per Run 2	80.081 %	90.059 %	50.017 ppb	4,717.909 ppb	5,134.024 ppb	51.654 ppb	4,992.004 ppb	5,083.038 ppb	83.091 %
Concentration per Run 3	78.478 %	81.948 %	50.514 ppb	4,676.603 ppb	5,134.658 ppb	50.273 ppb	4,898.914 ppb	5,063.224 ppb	79.446 %
Recovery Percentage 1			100.528 %	95.167 %	103.742 %	104.481 %	99.897 %	103.157 %	
Concentration RSD	1.2 %	5.7 %	0.5 %	2.3 %	1.8 %	4.4 %	1.9 %	2.9 %	2.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	50.429 ppb	49.859 ppb	49.572 ppb	5,042.647 ppb	50.305 ppb	50.184 ppb	50.197 ppb	51.440 ppb	93.020 %
Concentration per Run 1	52.932 ppb	51.669 ppb	50.437 ppb	5,244.483 ppb	51.994 ppb	53.064 ppb	51.595 ppb	52.542 ppb	89.444 %
Concentration per Run 2	48.924 ppb	48.486 ppb	48.624 ppb	4,912.944 ppb	49.038 ppb	48.002 ppb	48.305 ppb	50.283 ppb	97.603 %
Concentration per Run 3	49.431 ppb	49.422 ppb	49.654 ppb	4,970.513 ppb	49.881 ppb	49.486 ppb	50.690 ppb	51.496 ppb	92.013 %
Recovery Percentage 1	100.859 %	99.718 %	99.144 %	100.853 %	100.609 %	100.368 %	100.393 %	102.881 %	
Concentration RSD	4.3 %	3.3 %	1.8 %	3.5 %	3.0 %	5.2 %	3.4 %	2.2 %	4.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	50.657 ppb	50.270 ppb	51.219 ppb	50.181 ppb	92.012 %	48.923 ppb	49.680 ppb	93.290 %	49.334 ppb
Concentration per Run 1	52.197 ppb	50.792 ppb	52.028 ppb	51.417 ppb	91.863 %	50.651 ppb	50.565 ppb	93.235 %	50.291 ppb
Concentration per Run 2	49.632 ppb	50.011 ppb	51.263 ppb	50.148 ppb	93.943 %	48.057 ppb	49.781 ppb	96.675 %	48.382 ppb
Concentration per Run 3	50.142 ppb	50.007 ppb	50.367 ppb	48.978 ppb	90.228 %	48.062 ppb	48.694 ppb	89.961 %	49.328 ppb
Recovery Percentage 1	101.314 %	100.540 %	102.439 %	100.362 %		97.847 %	99.360 %		98.667 %
Concentration RSD	2.7 %	0.9 %	1.6 %	2.4 %	2.0 %	3.1 %	1.9 %	3.6 %	1.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	50.263 ppb	93.701 %	94.153 %	51.104 ppb	49.648 ppb	95.005 %
Concentration per Run 1	51.971 ppb	92.084 %	93.548 %	51.032 ppb	50.522 ppb	94.449 %
Concentration per Run 2	49.312 ppb	96.262 %	97.010 %	51.009 ppb	49.326 ppb	97.058 %
Concentration per Run 3	49.507 ppb	92.757 %	91.902 %	51.270 ppb	49.097 ppb	93.509 %
Recovery Percentage 1	100.527 %			102.207 %	99.297 %	
Concentration RSD	2.9 %	2.4 %	2.8 %	0.3 %	1.5 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	11	User name	ALPHALAB\a2-icpmsq2	Comment	ICB
Analysis label:	ICB	Rack	0		
Analysis started at:	4/3/2024 4:57:23 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.514 %	85.646 %	0.008 ppb	-0.768 ppb	-0.543 ppb	-0.090 ppb	5.633 ppb	-0.109 ppb	92.516 %
Concentration per Run 1	91.994 %	80.636 %	0.010 ppb	-0.284 ppb	0.132 ppb	-0.080 ppb	2.360 ppb	-0.996 ppb	92.827 %
Concentration per Run 2	91.552 %	86.839 %	0.006 ppb	-1.425 ppb	-0.819 ppb	0.094 ppb	5.326 ppb	-0.046 ppb	92.619 %
Concentration per Run 3	90.996 %	89.463 %	0.007 ppb	-0.597 ppb	-0.941 ppb	-0.283 ppb	9.213 ppb	0.715 ppb	92.101 %
Recovery Percentage 1			1.512 %	-0.768 %	-0.775 %	-0.896 %	5.633 %	-0.109 %	
Concentration RSD	0.5 %	5.3 %	25.1 %	76.7 %	108.2 %	210.5 %	61.0 %	787.2 %	0.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.008 ppb	-0.014 ppb	0.029 ppb	5.018 ppb	0.004 ppb	0.002 ppb	0.011 ppb	0.089 ppb	90.414 %
Concentration per Run 1	0.002 ppb	0.000 ppb	-0.002 ppb	3.831 ppb	0.001 ppb	0.052 ppb	0.021 ppb	0.116 ppb	83.029 %
Concentration per Run 2	-0.013 ppb	-0.025 ppb	0.050 ppb	4.566 ppb	0.008 ppb	-0.016 ppb	-0.011 ppb	0.043 ppb	95.679 %
Concentration per Run 3	-0.013 ppb	-0.015 ppb	0.038 ppb	6.658 ppb	0.004 ppb	-0.031 ppb	0.023 ppb	0.108 ppb	92.534 %
Recovery Percentage 1	-0.156 %	-1.358 %	2.879 %	10.037 %	0.827 %	0.082 %	1.082 %	1.782 %	
Concentration RSD	111.9 %	95.6 %	94.2 %	29.2 %	88.4 %	2,695.8 %	175.2 %	44.9 %	7.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.059 ppb	0.108 ppb	0.008 ppb	0.161 ppb	89.614 %	0.007 ppb	0.009 ppb	91.542 %	0.040 ppb
Concentration per Run 1	0.047 ppb	0.110 ppb	0.011 ppb	0.155 ppb	80.335 %	0.008 ppb	0.016 ppb	81.542 %	0.033 ppb
Concentration per Run 2	0.054 ppb	0.133 ppb	0.006 ppb	0.162 ppb	95.737 %	0.008 ppb	0.007 ppb	98.313 %	0.037 ppb
Concentration per Run 3	0.076 ppb	0.083 ppb	0.006 ppb	0.167 ppb	92.769 %	0.005 ppb	0.005 ppb	94.772 %	0.049 ppb
Recovery Percentage 1	11.823 %	2.169 %	0.077 %	8.068 %		1.739 %	4.747 %		0.990 %
Concentration RSD	25.6 %	23.4 %	42.9 %	3.9 %	9.1 %	29.1 %	64.2 %	9.7 %	21.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.013 ppb	91.929 %	92.331 %	0.401 ppb	0.018 ppb	93.902 %
Concentration per Run 1	0.002 ppb	82.787 %	81.612 %	0.288 ppb	0.025 ppb	84.817 %
Concentration per Run 2	0.029 ppb	96.130 %	98.360 %	0.491 ppb	0.016 ppb	97.833 %
Concentration per Run 3	0.009 ppb	96.872 %	97.021 %	0.424 ppb	0.014 ppb	99.055 %
Recovery Percentage 1	2.636 %			40.080 %	1.824 %	
Concentration RSD	106.6 %	8.6 %	10.1 %	25.9 %	30.7 %	8.4 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	12	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/3/2024 5:09:46 AM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	69.189 %	75.029 %	0.028 ppb	262,232.159 ppb	103,382.669 ppb	92,418.059 ppb	103,741.120 ppb	290,586.187 ppb	74.459 %
Concentration per Run 1	72.223 %	72.047 %	0.020 ppb	264,905.345 ppb	104,688.408 ppb	97,241.669 ppb	107,934.299 ppb	305,877.079 ppb	79.773 %
Concentration per Run 2	68.900 %	79.920 %	0.036 ppb	247,634.132 ppb	98,530.028 ppb	86,445.882 ppb	99,164.277 ppb	275,219.680 ppb	71.851 %
Concentration per Run 3	66.445 %	73.121 %	0.029 ppb	274,157.000 ppb	106,929.571 ppb	93,566.625 ppb	104,124.784 ppb	290,661.801 ppb	71.752 %
Recovery Percentage 1			2.841 %	104.893 %	103.383 %	92.418 %	103.741 %	96.862 %	
Concentration RSD	4.2 %	5.7 %	27.7 %	5.1 %	4.2 %	5.9 %	4.2 %	5.3 %	6.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.105 ppb	1.582 ppb	4.524 ppb	260,509.763 ppb	2.009 ppb	2.629 ppb	1.104 ppb	1.948 ppb	87.476 %
Concentration per Run 1	0.080 ppb	1.616 ppb	4.397 ppb	263,090.096 ppb	2.065 ppb	2.771 ppb	1.070 ppb	1.954 ppb	89.750 %
Concentration per Run 2	0.125 ppb	1.548 ppb	4.440 ppb	258,256.906 ppb	1.903 ppb	2.528 ppb	1.069 ppb	1.914 ppb	85.550 %
Concentration per Run 3	0.111 ppb	1.582 ppb	4.736 ppb	260,182.288 ppb	2.059 ppb	2.587 ppb	1.173 ppb	1.975 ppb	87.129 %
Recovery Percentage 1	2.108 %	47.944 %	79.376 %	104.204 %	70.003 %	43.095 %	134.630 %	17.086 %	
Concentration RSD	21.9 %	2.2 %	4.1 %	0.9 %	4.6 %	4.8 %	5.4 %	1.6 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.393 ppb	2.807 ppb	2.612 ppb	2,128.013 ppb	80.653 %	0.022 ppb	0.529 ppb	91.767 %	0.155 ppb
Concentration per Run 1	0.376 ppb	2.319 ppb	2.665 ppb	2,096.815 ppb	80.627 %	0.022 ppb	0.541 ppb	94.014 %	0.156 ppb
Concentration per Run 2	0.424 ppb	2.961 ppb	2.579 ppb	2,148.689 ppb	79.669 %	0.020 ppb	0.536 ppb	89.600 %	0.170 ppb
Concentration per Run 3	0.379 ppb	3.140 ppb	2.592 ppb	2,138.533 ppb	81.664 %	0.023 ppb	0.511 ppb	91.688 %	0.138 ppb
Recovery Percentage 1	24.103 %	21.758 %	522.443 %	106.401 %		2.702 %	132.314 %		1.935 %
Concentration RSD	6.9 %	15.4 %	1.8 %	1.3 %	1.2 %	8.1 %	3.1 %	2.4 %	10.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.278 ppb	81.353 %	76.955 %	0.091 ppb	1.551 ppb	83.744 %
Concentration per Run 1	1.300 ppb	81.710 %	78.257 %	0.075 ppb	1.532 ppb	85.287 %
Concentration per Run 2	1.192 ppb	80.159 %	74.624 %	0.101 ppb	1.572 ppb	81.946 %
Concentration per Run 3	1.342 ppb	82.191 %	77.984 %	0.099 ppb	1.550 ppb	83.999 %
Recovery Percentage 1	67.978 %			4.575 %	50.037 %	
Concentration RSD	6.1 %	1.3 %	2.6 %	16.0 %	1.3 %	2.0 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	13	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	LDR Check - 10/1ppm	Rack	4		
Analysis started at:	4/3/2024 5:14:17 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	87.854 %	94.473 %	0.007 ppb	61.693 ppb	17.694 ppb	17.917 ppb	37.894 ppb	59.574 ppb	98.776 %
Concentration per Run 1	90.310 %	91.610 %	0.007 ppb	61.343 ppb	17.661 ppb	16.545 ppb	41.614 ppb	45.657 ppb	101.436 %
Concentration per Run 2	87.413 %	95.308 %	0.011 ppb	79.968 ppb	26.022 ppb	25.273 ppb	44.630 ppb	87.753 ppb	98.389 %
Concentration per Run 3	85.839 %	96.501 %	0.004 ppb	43.767 ppb	9.400 ppb	11.934 ppb	27.438 ppb	45.313 ppb	96.503 %
Concentration RSD	2.6 %	2.7 %	47.0 %	29.3 %	47.0 %	37.8 %	24.2 %	41.0 %	2.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.014 ppb	0.423 ppb	10,993.385 ppb	68.248 ppb	0.050 ppb	0.157 ppb	11,470.239 ppb	10,868.307 ppb	104.359 %
Concentration per Run 1	-0.015 ppb	0.442 ppb	10,970.097 ppb	65.298 ppb	0.048 ppb	0.180 ppb	11,768.267 ppb	10,955.439 ppb	101.284 %
Concentration per Run 2	-0.012 ppb	0.422 ppb	10,793.109 ppb	87.361 ppb	0.047 ppb	0.154 ppb	11,473.569 ppb	10,922.893 ppb	106.901 %
Concentration per Run 3	-0.016 ppb	0.406 ppb	11,216.949 ppb	52.085 ppb	0.053 ppb	0.137 ppb	11,168.880 ppb	10,726.589 ppb	104.892 %
Concentration RSD	16.0 %	4.2 %	1.9 %	26.1 %	6.5 %	14.0 %	2.6 %	1.1 %	2.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	951.955 ppb	0.064 ppb	0.219 ppb	2.281 ppb	104.562 %	0.041 ppb	0.013 ppb	102.466 %	0.008 ppb
Concentration per Run 1	956.631 ppb	0.065 ppb	0.227 ppb	2.066 ppb	100.542 %	0.039 ppb	0.018 ppb	98.982 %	0.007 ppb
Concentration per Run 2	924.108 ppb	0.067 ppb	0.205 ppb	2.470 ppb	104.976 %	0.046 ppb	0.012 ppb	102.617 %	0.007 ppb
Concentration per Run 3	975.125 ppb	0.060 ppb	0.225 ppb	2.306 ppb	108.169 %	0.039 ppb	0.010 ppb	105.798 %	0.009 ppb
Concentration RSD	2.7 %	5.7 %	5.6 %	8.9 %	3.7 %	10.1 %	32.9 %	3.3 %	11.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10,902.607 ppb	101.758 %	100.919 %	0.050 ppb	11,413.012 ppb	102.310 %
Concentration per Run 1	11,005.444 ppb	97.683 %	97.152 %	0.029 ppb	11,530.800 ppb	98.471 %
Concentration per Run 2	10,809.903 ppb	102.309 %	100.391 %	0.059 ppb	11,385.768 ppb	102.222 %
Concentration per Run 3	10,892.474 ppb	105.282 %	105.216 %	0.063 ppb	11,322.468 ppb	106.236 %
Concentration RSD	0.9 %	3.8 %	4.0 %	36.5 %	0.9 %	3.8 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	14	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/3/2024 5:18:47 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.795 %	93.002 %	0.009 ppb	11.114 ppb	1.515 ppb	1.657 ppb	11.337 ppb	4.682 ppb	91.730 %
Concentration per Run 1	87.427 %	95.904 %	0.010 ppb	10.108 ppb	1.092 ppb	1.641 ppb	8.246 ppb	7.783 ppb	92.755 %
Concentration per Run 2	87.130 %	89.105 %	0.008 ppb	8.722 ppb	2.341 ppb	1.224 ppb	11.018 ppb	2.362 ppb	92.136 %
Concentration per Run 3	85.828 %	93.996 %	0.008 ppb	14.510 ppb	1.113 ppb	2.107 ppb	14.747 ppb	3.901 ppb	90.298 %
Concentration RSD	1.0 %	3.8 %	11.5 %	27.2 %	47.2 %	26.7 %	28.8 %	59.7 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.010 ppb	-0.004 ppb	1.297 ppb	8.614 ppb	0.005 ppb	0.067 ppb	1.516 ppb	1.853 ppb	106.392 %
Concentration per Run 1	-0.011 ppb	-0.002 ppb	2.125 ppb	7.354 ppb	0.006 ppb	0.067 ppb	2.340 ppb	2.659 ppb	105.983 %
Concentration per Run 2	-0.015 ppb	-0.011 ppb	0.953 ppb	9.116 ppb	0.003 ppb	0.060 ppb	1.204 ppb	1.583 ppb	104.772 %
Concentration per Run 3	-0.003 ppb	0.000 ppb	0.814 ppb	9.373 ppb	0.006 ppb	0.075 ppb	1.005 ppb	1.318 ppb	108.420 %
Concentration RSD	66.2 %	132.4 %	55.5 %	12.8 %	30.0 %	10.8 %	47.5 %	38.3 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.479 ppb	0.040 ppb	-0.001 ppb	0.392 ppb	97.792 %	0.005 ppb	0.002 ppb	96.959 %	0.006 ppb
Concentration per Run 1	0.528 ppb	0.039 ppb	-0.001 ppb	0.310 ppb	98.002 %	0.006 ppb	0.000 ppb	96.957 %	0.004 ppb
Concentration per Run 2	0.480 ppb	0.058 ppb	-0.002 ppb	0.364 ppb	95.876 %	0.005 ppb	0.004 ppb	92.857 %	0.005 ppb
Concentration per Run 3	0.430 ppb	0.023 ppb	0.000 ppb	0.503 ppb	99.496 %	0.004 ppb	0.002 ppb	101.064 %	0.008 ppb
Concentration RSD	10.2 %	43.4 %	126.8 %	25.5 %	1.9 %	14.1 %	115.7 %	4.2 %	41.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.201 ppb	97.303 %	97.223 %	0.038 ppb	1.798 ppb	98.408 %
Concentration per Run 1	1.894 ppb	95.902 %	94.076 %	0.025 ppb	2.647 ppb	98.227 %
Concentration per Run 2	0.964 ppb	96.568 %	96.144 %	0.043 ppb	1.564 ppb	98.386 %
Concentration per Run 3	0.745 ppb	99.441 %	101.450 %	0.047 ppb	1.184 ppb	98.611 %
Concentration RSD	50.8 %	1.9 %	3.9 %	30.4 %	42.2 %	0.2 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	15	User name	ALPHALAB\a2-icpmsq2	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 5:23:13 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.779 %	89.344 %	59.336 ppb	5,585.458 ppb	6,011.332 ppb	64.116 ppb	5,878.037 ppb	5,998.725 ppb	92.533 %
Concentration per Run 1	86.131 %	87.077 %	59.362 ppb	5,602.500 ppb	6,029.330 ppb	67.793 ppb	5,686.718 ppb	5,847.723 ppb	90.410 %
Concentration per Run 2	87.711 %	87.793 %	59.115 ppb	5,619.138 ppb	6,122.292 ppb	61.789 ppb	6,108.491 ppb	6,191.960 ppb	93.704 %
Concentration per Run 3	86.493 %	93.161 %	59.531 ppb	5,534.736 ppb	5,882.373 ppb	62.767 ppb	5,838.903 ppb	5,956.492 ppb	93.486 %
Recovery Percentage 1			98.893 %	93.091 %	100.189 %	106.860 %	97.967 %	99.979 %	
Concentration RSD	1.0 %	3.7 %	0.4 %	0.8 %	2.0 %	5.0 %	3.6 %	2.9 %	2.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	58.439 ppb	59.528 ppb	59.644 ppb	5,953.447 ppb	59.334 ppb	60.095 ppb	62.282 ppb	62.765 ppb	96.844 %
Concentration per Run 1	57.330 ppb	60.039 ppb	60.132 ppb	5,981.762 ppb	60.336 ppb	60.130 ppb	63.583 ppb	62.199 ppb	94.949 %
Concentration per Run 2	60.220 ppb	60.156 ppb	59.838 ppb	5,996.988 ppb	60.069 ppb	62.104 ppb	63.344 ppb	64.581 ppb	93.963 %
Concentration per Run 3	57.768 ppb	58.388 ppb	58.960 ppb	5,881.591 ppb	57.598 ppb	58.050 ppb	59.919 ppb	61.517 ppb	101.619 %
Recovery Percentage 1	97.399 %	99.213 %	99.406 %	99.224 %	98.891 %	100.158 %	103.803 %	104.609 %	
Concentration RSD	2.7 %	1.7 %	1.0 %	1.1 %	2.5 %	3.4 %	3.3 %	2.6 %	4.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	60.255 ppb	59.153 ppb	55.961 ppb	58.286 ppb	96.197 %	58.642 ppb	58.787 ppb	96.151 %	58.197 ppb
Concentration per Run 1	60.619 ppb	57.773 ppb	55.342 ppb	59.087 ppb	94.022 %	58.998 ppb	58.658 ppb	91.812 %	58.728 ppb
Concentration per Run 2	61.462 ppb	59.336 ppb	56.454 ppb	58.727 ppb	97.702 %	59.218 ppb	59.031 ppb	97.882 %	58.343 ppb
Concentration per Run 3	58.684 ppb	60.349 ppb	56.088 ppb	57.043 ppb	96.867 %	57.709 ppb	58.671 ppb	98.760 %	57.520 ppb
Recovery Percentage 1	100.426 %	98.588 %	93.269 %	97.143 %		97.736 %	97.978 %		96.995 %
Concentration RSD	2.4 %	2.2 %	1.0 %	1.9 %	2.0 %	1.4 %	0.4 %	3.9 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.845 ppb	97.922 %	97.135 %	59.923 ppb	58.984 ppb	98.623 %
Concentration per Run 1	61.668 ppb	93.606 %	93.543 %	59.293 ppb	58.917 ppb	97.058 %
Concentration per Run 2	59.665 ppb	99.232 %	98.164 %	60.351 ppb	59.401 ppb	98.641 %
Concentration per Run 3	58.203 ppb	100.927 %	99.699 %	60.125 ppb	58.634 ppb	100.170 %
Recovery Percentage 1	99.742 %			99.872 %	98.307 %	
Concentration RSD	2.9 %	3.9 %	3.3 %	0.9 %	0.7 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	16	User name	ALPHALAB\a2-icpmsq2	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 5:27:44 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.990 %	92.763 %	0.015 ppb	6.443 ppb	3.521 ppb	0.639 ppb	7.258 ppb	5.128 ppb	97.905 %
Concentration per Run 1	94.083 %	90.775 %	0.022 ppb	6.428 ppb	3.178 ppb	0.592 ppb	9.562 ppb	6.570 ppb	96.665 %
Concentration per Run 2	95.375 %	93.042 %	0.007 ppb	6.441 ppb	3.221 ppb	0.518 ppb	3.450 ppb	7.225 ppb	98.673 %
Concentration per Run 3	95.512 %	94.473 %	0.015 ppb	6.460 ppb	4.165 ppb	0.806 ppb	8.761 ppb	1.589 ppb	98.376 %
Recovery Percentage 1			2.940 %	6.443 %	5.030 %	6.387 %	7.258 %	5.128 %	
Concentration RSD	0.8 %	2.0 %	50.1 %	0.2 %	15.8 %	23.4 %	45.8 %	60.1 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.006 ppb	0.010 ppb	0.365 ppb	11.723 ppb	0.029 ppb	0.033 ppb	0.424 ppb	0.507 ppb	101.148 %
Concentration per Run 1	0.017 ppb	0.008 ppb	0.318 ppb	10.939 ppb	0.018 ppb	0.043 ppb	0.410 ppb	0.538 ppb	95.081 %
Concentration per Run 2	0.009 ppb	0.003 ppb	0.377 ppb	10.795 ppb	0.030 ppb	0.047 ppb	0.378 ppb	0.416 ppb	102.017 %
Concentration per Run 3	-0.007 ppb	0.019 ppb	0.401 ppb	13.435 ppb	0.038 ppb	0.009 ppb	0.485 ppb	0.568 ppb	106.347 %
Recovery Percentage 1	0.126 %	1.009 %	36.523 %	23.446 %	5.755 %	1.643 %	42.430 %	10.142 %	
Concentration RSD	190.1 %	82.1 %	11.8 %	12.7 %	34.5 %	63.9 %	12.9 %	15.8 %	5.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.144 ppb	0.144 ppb	0.028 ppb	0.291 ppb	96.397 %	0.032 ppb	0.025 ppb	95.704 %	0.050 ppb
Concentration per Run 1	0.148 ppb	0.155 ppb	0.023 ppb	0.236 ppb	92.320 %	0.026 ppb	0.022 ppb	93.686 %	0.039 ppb
Concentration per Run 2	0.148 ppb	0.193 ppb	0.025 ppb	0.298 ppb	98.736 %	0.031 ppb	0.019 ppb	96.521 %	0.042 ppb
Concentration per Run 3	0.137 ppb	0.083 ppb	0.036 ppb	0.339 ppb	98.136 %	0.040 ppb	0.035 ppb	96.906 %	0.069 ppb
Recovery Percentage 1	28.853 %	2.880 %	0.279 %	14.550 %		8.073 %	12.700 %		1.247 %
Concentration RSD	4.5 %	38.7 %	24.4 %	17.9 %	3.7 %	20.9 %	34.4 %	1.8 %	33.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.361 ppb	97.127 %	96.571 %	0.427 ppb	0.441 ppb	99.513 %
Concentration per Run 1	0.362 ppb	93.948 %	91.607 %	0.320 ppb	0.410 ppb	95.428 %
Concentration per Run 2	0.295 ppb	97.191 %	98.891 %	0.520 ppb	0.417 ppb	101.226 %
Concentration per Run 3	0.427 ppb	100.241 %	99.215 %	0.440 ppb	0.495 ppb	101.886 %
Recovery Percentage 1	72.287 %			42.671 %	44.069 %	
Concentration RSD	18.3 %	3.2 %	4.5 %	23.5 %	10.7 %	3.6 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	17	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416561-02 6020SL	Rack	1		
Analysis started at:	4/3/2024 5:36:57 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.323 %	82.266 %	0.005 ppb	46,686.230 ppb	56,933.414 ppb	4.203 ppb	4,196.641 ppb	128,850.355 ppb	87.228 %
Concentration per Run 1	83.406 %	80.039 %	0.005 ppb	45,048.450 ppb	55,420.937 ppb	4.155 ppb	4,079.835 ppb	125,520.381 ppb	88.192 %
Concentration per Run 2	83.026 %	82.783 %	0.007 ppb	47,562.404 ppb	58,424.321 ppb	4.464 ppb	4,266.495 ppb	131,380.352 ppb	87.866 %
Concentration per Run 3	80.535 %	83.976 %	0.004 ppb	47,447.835 ppb	56,954.984 ppb	3.990 ppb	4,243.592 ppb	129,650.332 ppb	85.627 %
Concentration RSD	1.9 %	2.5 %	30.3 %	3.0 %	2.6 %	5.7 %	2.4 %	2.3 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.011 ppb	0.751 ppb	71.458 ppb	22.240 ppb	0.270 ppb	1.025 ppb	0.405 ppb	0.377 ppb	84.391 %
Concentration per Run 1	1.915 ppb	0.641 ppb	68.442 ppb	19.961 ppb	0.284 ppb	1.023 ppb	0.331 ppb	0.344 ppb	81.849 %
Concentration per Run 2	2.093 ppb	0.832 ppb	73.474 ppb	24.053 ppb	0.274 ppb	1.009 ppb	0.442 ppb	0.389 ppb	84.857 %
Concentration per Run 3	2.023 ppb	0.781 ppb	72.458 ppb	22.706 ppb	0.253 ppb	1.043 ppb	0.441 ppb	0.397 ppb	86.467 %
Concentration RSD	4.5 %	13.1 %	3.7 %	9.4 %	5.9 %	1.7 %	15.7 %	7.6 %	2.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.427 ppb	0.252 ppb	135.370 ppb	0.399 ppb	81.301 %	0.000 ppb	0.004 ppb	85.016 %	0.123 ppb
Concentration per Run 1	0.448 ppb	0.206 ppb	133.637 ppb	0.362 ppb	81.352 %	0.000 ppb	0.004 ppb	84.601 %	0.125 ppb
Concentration per Run 2	0.394 ppb	0.316 ppb	137.358 ppb	0.417 ppb	81.127 %	0.000 ppb	0.007 ppb	86.309 %	0.124 ppb
Concentration per Run 3	0.439 ppb	0.233 ppb	135.114 ppb	0.417 ppb	81.424 %	0.001 ppb	0.001 ppb	84.139 %	0.118 ppb
Concentration RSD	6.8 %	23.0 %	1.4 %	8.0 %	0.2 %	405.8 %	72.8 %	1.3 %	3.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	38.065 ppb	89.796 %	91.125 %	0.085 ppb	0.053 ppb	84.091 %
Concentration per Run 1	37.944 ppb	87.886 %	90.218 %	0.055 ppb	0.052 ppb	81.643 %
Concentration per Run 2	38.245 ppb	91.282 %	91.619 %	0.096 ppb	0.053 ppb	85.968 %
Concentration per Run 3	38.005 ppb	90.221 %	91.538 %	0.105 ppb	0.055 ppb	84.663 %
Concentration RSD	0.4 %	1.9 %	0.9 %	31.1 %	2.9 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	18	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416561-03 6020SL	Rack	1		
Analysis started at:	4/3/2024 5:41:24 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.337 %	75.069 %	0.005 ppb	26,703.984 ppb	20,541.159 ppb	4.430 ppb	2,797.801 ppb	53,012.976 ppb	79.680 %
Concentration per Run 1	80.193 %	73.359 %	0.006 ppb	26,886.551 ppb	20,697.496 ppb	4.588 ppb	2,775.882 ppb	53,087.453 ppb	79.688 %
Concentration per Run 2	78.858 %	77.177 %	0.009 ppb	26,336.873 ppb	20,347.594 ppb	4.508 ppb	2,834.312 ppb	53,766.671 ppb	79.403 %
Concentration per Run 3	78.960 %	74.672 %	0.001 ppb	26,888.530 ppb	20,578.386 ppb	4.193 ppb	2,783.209 ppb	52,184.803 ppb	79.951 %
Concentration RSD	0.9 %	2.6 %	77.9 %	1.2 %	0.9 %	4.7 %	1.1 %	1.5 %	0.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.899 ppb	1.662 ppb	39.664 ppb	4.812 ppb	0.224 ppb	0.448 ppb	0.408 ppb	22.314 ppb	82.231 %
Concentration per Run 1	1.865 ppb	1.644 ppb	38.453 ppb	3.422 ppb	0.197 ppb	0.389 ppb	0.378 ppb	22.131 ppb	83.622 %
Concentration per Run 2	1.962 ppb	1.587 ppb	39.973 ppb	4.627 ppb	0.212 ppb	0.486 ppb	0.509 ppb	22.326 ppb	80.805 %
Concentration per Run 3	1.870 ppb	1.754 ppb	40.566 ppb	6.387 ppb	0.264 ppb	0.469 ppb	0.337 ppb	22.484 ppb	82.267 %
Concentration RSD	2.9 %	5.1 %	2.7 %	31.0 %	15.8 %	11.5 %	22.1 %	0.8 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.509 ppb	1.541 ppb	81.582 ppb	0.637 ppb	78.541 %	0.000 ppb	0.014 ppb	79.381 %	0.537 ppb
Concentration per Run 1	0.497 ppb	1.261 ppb	82.090 ppb	0.490 ppb	77.930 %	-0.001 ppb	0.017 ppb	77.934 %	0.515 ppb
Concentration per Run 2	0.463 ppb	1.772 ppb	79.747 ppb	0.713 ppb	77.580 %	0.000 ppb	0.014 ppb	79.263 %	0.550 ppb
Concentration per Run 3	0.568 ppb	1.589 ppb	82.909 ppb	0.709 ppb	80.112 %	-0.001 ppb	0.012 ppb	80.948 %	0.545 ppb
Concentration RSD	10.6 %	16.8 %	2.0 %	20.0 %	1.7 %	59.2 %	18.5 %	1.9 %	3.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.467 ppb	83.461 %	83.777 %	0.053 ppb	0.191 ppb	81.063 %
Concentration per Run 1	60.910 ppb	81.043 %	82.360 %	0.030 ppb	0.196 ppb	78.768 %
Concentration per Run 2	58.667 ppb	83.750 %	83.520 %	0.065 ppb	0.189 ppb	81.060 %
Concentration per Run 3	58.823 ppb	85.590 %	85.450 %	0.065 ppb	0.189 ppb	83.362 %
Concentration RSD	2.1 %	2.7 %	1.9 %	38.1 %	2.0 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	19	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2416561-04 6020SL	Rack	1		
Analysis started at:	4/3/2024 5:45:51 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	80.073 %	78.449 %	0.010 ppb	8,642.350 ppb	952.757 ppb	101.622 ppb	16,166.273 ppb	15,836.773 ppb	79.280 %
Concentration per Run 1	81.283 %	78.489 %	0.007 ppb	8,566.881 ppb	952.235 ppb	101.073 ppb	16,229.132 ppb	15,803.215 ppb	79.870 %
Concentration per Run 2	79.770 %	75.984 %	0.010 ppb	8,359.140 ppb	955.874 ppb	102.753 ppb	16,094.330 ppb	16,063.769 ppb	78.365 %
Concentration per Run 3	79.167 %	80.874 %	0.013 ppb	9,001.028 ppb	950.161 ppb	101.039 ppb	16,175.357 ppb	15,643.335 ppb	79.606 %
Concentration RSD	1.4 %	3.1 %	30.5 %	3.8 %	0.3 %	1.0 %	0.4 %	1.3 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.135 ppb	21.217 ppb	0.290 ppb	16.344 ppb	0.073 ppb	0.157 ppb	2.155 ppb	0.668 ppb	79.275 %
Concentration per Run 1	1.061 ppb	20.900 ppb	0.248 ppb	13.963 ppb	0.076 ppb	0.157 ppb	2.139 ppb	0.655 ppb	80.354 %
Concentration per Run 2	1.252 ppb	22.042 ppb	0.294 ppb	19.531 ppb	0.083 ppb	0.132 ppb	2.325 ppb	0.694 ppb	74.263 %
Concentration per Run 3	1.093 ppb	20.708 ppb	0.327 ppb	15.538 ppb	0.060 ppb	0.180 ppb	2.000 ppb	0.656 ppb	83.208 %
Concentration RSD	9.0 %	3.4 %	13.6 %	17.6 %	16.4 %	15.3 %	7.6 %	3.3 %	5.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.376 ppb	0.151 ppb	171.891 ppb	2.407 ppb	81.067 %	0.000 ppb	0.002 ppb	80.627 %	1.796 ppb
Concentration per Run 1	0.383 ppb	0.094 ppb	170.990 ppb	2.304 ppb	80.624 %	0.000 ppb	0.006 ppb	81.009 %	1.756 ppb
Concentration per Run 2	0.399 ppb	0.222 ppb	175.092 ppb	2.436 ppb	79.807 %	0.000 ppb	0.000 ppb	79.216 %	1.820 ppb
Concentration per Run 3	0.347 ppb	0.137 ppb	169.591 ppb	2.480 ppb	82.768 %	0.000 ppb	0.001 ppb	81.656 %	1.811 ppb
Concentration RSD	7.1 %	42.9 %	1.7 %	3.8 %	1.9 %	185.4 %	149.7 %	1.6 %	1.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10.453 ppb	83.525 %	83.414 %	0.047 ppb	0.508 ppb	83.729 %
Concentration per Run 1	10.655 ppb	83.241 %	82.841 %	0.026 ppb	0.511 ppb	83.990 %
Concentration per Run 2	10.471 ppb	82.531 %	82.349 %	0.056 ppb	0.512 ppb	82.011 %
Concentration per Run 3	10.233 ppb	84.804 %	85.051 %	0.058 ppb	0.501 ppb	85.186 %
Concentration RSD	2.0 %	1.4 %	1.7 %	38.3 %	1.2 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	20	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417074-02 6020TL	Rack	1		
Analysis started at:	4/3/2024 5:50:19 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	74.453 %	75.904 %	0.010 ppb	11,594.773 ppb	5,928.661 ppb	100.478 ppb	2,681.107 ppb	25,894.161 ppb	74.883 %
Concentration per Run 1	75.632 %	72.882 %	0.010 ppb	11,934.152 ppb	6,131.327 ppb	104.482 ppb	2,745.733 ppb	26,626.590 ppb	75.900 %
Concentration per Run 2	74.663 %	73.717 %	0.007 ppb	11,816.400 ppb	6,020.982 ppb	103.784 ppb	2,693.684 ppb	25,635.560 ppb	74.606 %
Concentration per Run 3	73.065 %	81.113 %	0.012 ppb	11,033.766 ppb	5,633.674 ppb	93.167 ppb	2,603.906 ppb	25,420.334 ppb	74.145 %
Concentration RSD	1.7 %	6.0 %	27.8 %	4.2 %	4.4 %	6.3 %	2.7 %	2.5 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.590 ppb	1.214 ppb	5,802.337 ppb	229.139 ppb	0.805 ppb	0.991 ppb	1.073 ppb	1.025 ppb	81.569 %
Concentration per Run 1	0.663 ppb	1.205 ppb	5,945.657 ppb	226.284 ppb	0.807 ppb	1.078 ppb	1.067 ppb	0.994 ppb	80.458 %
Concentration per Run 2	0.548 ppb	1.215 ppb	5,767.958 ppb	236.885 ppb	0.741 ppb	0.971 ppb	1.152 ppb	1.136 ppb	82.561 %
Concentration per Run 3	0.557 ppb	1.222 ppb	5,693.396 ppb	224.249 ppb	0.868 ppb	0.923 ppb	1.000 ppb	0.944 ppb	81.689 %
Concentration RSD	10.9 %	0.7 %	2.2 %	3.0 %	7.9 %	8.0 %	7.1 %	9.8 %	1.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.190 ppb	0.122 ppb	76.798 ppb	1.326 ppb	79.088 %	0.000 ppb	0.018 ppb	79.713 %	0.061 ppb
Concentration per Run 1	0.183 ppb	0.093 ppb	77.544 ppb	1.254 ppb	78.638 %	-0.001 ppb	0.012 ppb	76.638 %	0.055 ppb
Concentration per Run 2	0.177 ppb	0.161 ppb	75.613 ppb	1.348 ppb	78.884 %	0.000 ppb	0.015 ppb	80.528 %	0.061 ppb
Concentration per Run 3	0.211 ppb	0.112 ppb	77.238 ppb	1.375 ppb	79.743 %	0.000 ppb	0.027 ppb	81.975 %	0.065 ppb
Concentration RSD	9.5 %	28.9 %	1.4 %	4.8 %	0.7 %	19,333.4 %	42.9 %	3.5 %	8.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	17.631 ppb	81.794 %	82.217 %	0.118 ppb	0.240 ppb	81.318 %
Concentration per Run 1	17.965 ppb	79.574 %	79.675 %	0.103 ppb	0.233 ppb	80.436 %
Concentration per Run 2	17.353 ppb	82.194 %	81.549 %	0.126 ppb	0.240 ppb	80.700 %
Concentration per Run 3	17.575 ppb	83.614 %	85.427 %	0.124 ppb	0.248 ppb	82.817 %
Concentration RSD	1.8 %	2.5 %	3.6 %	10.9 %	3.1 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	21	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417074-03 6020TL	Rack	1		
Analysis started at:	4/3/2024 5:54:47 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.574 %	75.944 %	0.007 ppb	9,701.239 ppb	5,623.281 ppb	2.314 ppb	1,643.090 ppb	16,694.941 ppb	80.164 %
Concentration per Run 1	78.694 %	69.781 %	0.009 ppb	10,321.290 ppb	5,760.025 ppb	2.459 ppb	1,673.165 ppb	16,908.010 ppb	79.907 %
Concentration per Run 2	79.818 %	78.847 %	0.007 ppb	9,694.377 ppb	5,531.926 ppb	1.720 ppb	1,631.443 ppb	16,602.216 ppb	80.740 %
Concentration per Run 3	80.210 %	79.204 %	0.005 ppb	9,088.049 ppb	5,577.892 ppb	2.764 ppb	1,624.663 ppb	16,574.598 ppb	79.844 %
Concentration RSD	1.0 %	7.0 %	27.8 %	6.4 %	2.1 %	23.2 %	1.6 %	1.1 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.145 ppb	0.470 ppb	23.718 ppb	5.373 ppb	0.059 ppb	0.421 ppb	0.364 ppb	0.398 ppb	84.224 %
Concentration per Run 1	0.134 ppb	0.427 ppb	22.714 ppb	5.102 ppb	0.047 ppb	0.498 ppb	0.352 ppb	0.412 ppb	80.521 %
Concentration per Run 2	0.149 ppb	0.459 ppb	21.340 ppb	4.386 ppb	0.074 ppb	0.430 ppb	0.367 ppb	0.384 ppb	85.375 %
Concentration per Run 3	0.152 ppb	0.523 ppb	27.101 ppb	6.631 ppb	0.055 ppb	0.334 ppb	0.373 ppb	0.397 ppb	86.775 %
Concentration RSD	6.7 %	10.3 %	12.7 %	21.3 %	23.4 %	19.6 %	3.0 %	3.5 %	3.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.060 ppb	0.047 ppb	61.406 ppb	0.070 ppb	81.369 %	0.000 ppb	0.006 ppb	81.861 %	0.017 ppb
Concentration per Run 1	0.079 ppb	0.051 ppb	62.266 ppb	0.072 ppb	79.780 %	0.001 ppb	0.006 ppb	79.900 %	0.012 ppb
Concentration per Run 2	0.034 ppb	0.055 ppb	61.325 ppb	0.078 ppb	81.269 %	0.000 ppb	0.007 ppb	81.603 %	0.024 ppb
Concentration per Run 3	0.066 ppb	0.034 ppb	60.627 ppb	0.061 ppb	83.057 %	0.000 ppb	0.006 ppb	84.081 %	0.014 ppb
Concentration RSD	38.5 %	24.3 %	1.3 %	12.9 %	2.0 %	64.3 %	14.6 %	2.6 %	37.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	16.954 ppb	85.517 %	85.033 %	0.038 ppb	0.029 ppb	83.413 %
Concentration per Run 1	17.518 ppb	83.787 %	82.027 %	0.021 ppb	0.026 ppb	82.154 %
Concentration per Run 2	17.169 ppb	85.291 %	86.190 %	0.042 ppb	0.031 ppb	83.778 %
Concentration per Run 3	16.175 ppb	87.472 %	86.882 %	0.050 ppb	0.029 ppb	84.307 %
Concentration RSD	4.1 %	2.2 %	3.1 %	38.8 %	8.4 %	1.3 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	22	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417074-04 6020TL	Rack	1		
Analysis started at:	4/3/2024 5:59:15 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.650 %	78.489 %	0.023 ppb	10,348.030 ppb	5,080.222 ppb	219.915 ppb	1,757.542 ppb	16,632.324 ppb	79.807 %
Concentration per Run 1	79.954 %	73.717 %	0.024 ppb	10,776.145 ppb	5,229.640 ppb	226.013 ppb	1,816.759 ppb	16,990.504 ppb	79.768 %
Concentration per Run 2	79.642 %	79.324 %	0.026 ppb	10,293.738 ppb	5,009.706 ppb	217.601 ppb	1,727.745 ppb	16,490.381 ppb	79.941 %
Concentration per Run 3	79.355 %	82.425 %	0.020 ppb	9,974.206 ppb	5,001.320 ppb	216.131 ppb	1,728.122 ppb	16,416.085 ppb	79.712 %
Concentration RSD	0.4 %	5.6 %	13.9 %	3.9 %	2.5 %	2.4 %	2.9 %	1.9 %	0.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.580 ppb	0.376 ppb	7.594 ppb	230.025 ppb	0.111 ppb	0.294 ppb	0.648 ppb	0.888 ppb	87.587 %
Concentration per Run 1	0.489 ppb	0.415 ppb	7.927 ppb	241.178 ppb	0.138 ppb	0.388 ppb	0.665 ppb	0.868 ppb	85.136 %
Concentration per Run 2	0.620 ppb	0.372 ppb	7.810 ppb	224.994 ppb	0.096 ppb	0.288 ppb	0.654 ppb	0.861 ppb	88.041 %
Concentration per Run 3	0.631 ppb	0.342 ppb	7.044 ppb	223.903 ppb	0.099 ppb	0.206 ppb	0.625 ppb	0.934 ppb	89.585 %
Concentration RSD	13.6 %	9.8 %	6.3 %	4.2 %	20.8 %	31.1 %	3.2 %	4.5 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.313 ppb	0.107 ppb	67.245 ppb	0.095 ppb	79.650 %	0.002 ppb	0.007 ppb	80.011 %	0.021 ppb
Concentration per Run 1	0.309 ppb	0.093 ppb	67.045 ppb	0.095 ppb	76.791 %	0.002 ppb	0.009 ppb	76.412 %	0.015 ppb
Concentration per Run 2	0.263 ppb	0.053 ppb	67.860 ppb	0.086 ppb	80.568 %	0.002 ppb	0.009 ppb	81.086 %	0.026 ppb
Concentration per Run 3	0.367 ppb	0.175 ppb	66.829 ppb	0.105 ppb	81.592 %	0.001 ppb	0.003 ppb	82.535 %	0.023 ppb
Concentration RSD	16.6 %	58.1 %	0.8 %	9.9 %	3.2 %	20.7 %	54.1 %	4.0 %	24.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	17.153 ppb	83.100 %	82.372 %	0.040 ppb	0.266 ppb	83.083 %
Concentration per Run 1	16.567 ppb	78.830 %	77.715 %	0.023 ppb	0.277 ppb	80.860 %
Concentration per Run 2	17.520 ppb	85.186 %	84.379 %	0.049 ppb	0.260 ppb	82.508 %
Concentration per Run 3	17.370 ppb	85.283 %	85.022 %	0.048 ppb	0.262 ppb	85.883 %
Concentration RSD	3.0 %	4.4 %	4.9 %	36.2 %	3.4 %	3.1 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	23	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902287-3d10 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:03:43 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.622 %	82.584 %	5.009 ppb	19,713.596 ppb	2,379.234 ppb	192.799 ppb	1,519.267 ppb	1,697.170 ppb	83.037 %
Concentration per Run 1	82.513 %	77.892 %	5.052 ppb	20,832.392 ppb	2,503.880 ppb	196.616 ppb	1,569.505 ppb	1,740.127 ppb	84.043 %
Concentration per Run 2	81.467 %	84.572 %	4.975 ppb	18,731.590 ppb	2,262.920 ppb	185.751 ppb	1,492.779 ppb	1,637.370 ppb	82.868 %
Concentration per Run 3	80.885 %	85.288 %	5.001 ppb	19,576.805 ppb	2,370.902 ppb	196.029 ppb	1,495.515 ppb	1,714.014 ppb	82.201 %
Concentration RSD	1.0 %	4.9 %	0.8 %	5.4 %	5.1 %	3.2 %	2.9 %	3.1 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	43.696 ppb	17.556 ppb	46.806 ppb	137.985 ppb	43.669 ppb	44.259 ppb	22.923 ppb	52.579 ppb	91.510 %
Concentration per Run 1	45.376 ppb	18.382 ppb	49.584 ppb	139.135 ppb	45.703 ppb	46.178 ppb	23.853 ppb	53.677 ppb	88.656 %
Concentration per Run 2	42.631 ppb	17.180 ppb	45.636 ppb	139.856 ppb	43.077 ppb	43.545 ppb	22.712 ppb	52.376 ppb	88.947 %
Concentration per Run 3	43.082 ppb	17.108 ppb	45.197 ppb	134.963 ppb	42.228 ppb	43.054 ppb	22.204 ppb	51.686 ppb	96.927 %
Concentration RSD	3.4 %	4.1 %	5.2 %	1.9 %	4.1 %	3.8 %	3.7 %	1.9 %	5.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	9.924 ppb	10.791 ppb	96.681 ppb	84.807 ppb	83.591 %	4.842 ppb	5.281 ppb	83.870 %	39.093 ppb
Concentration per Run 1	10.447 ppb	10.282 ppb	97.874 ppb	86.061 ppb	80.947 %	4.895 ppb	5.354 ppb	81.774 %	39.891 ppb
Concentration per Run 2	10.063 ppb	11.129 ppb	97.913 ppb	84.723 ppb	83.999 %	4.860 ppb	5.325 ppb	85.004 %	38.481 ppb
Concentration per Run 3	9.263 ppb	10.961 ppb	94.257 ppb	83.635 ppb	85.828 %	4.770 ppb	5.164 ppb	84.831 %	38.906 ppb
Concentration RSD	6.1 %	4.2 %	2.2 %	1.4 %	2.9 %	1.3 %	1.9 %	2.2 %	1.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	194.039 ppb	86.193 %	87.038 %	12.192 ppb	51.691 ppb	87.656 %
Concentration per Run 1	199.360 ppb	83.301 %	83.340 %	12.237 ppb	51.760 ppb	85.518 %
Concentration per Run 2	190.842 ppb	87.561 %	89.313 %	12.288 ppb	52.336 ppb	87.254 %
Concentration per Run 3	191.916 ppb	87.719 %	88.460 %	12.050 ppb	50.976 ppb	90.195 %
Concentration RSD	2.4 %	2.9 %	3.7 %	1.0 %	1.3 %	2.7 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	24	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902287-4 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:08:13 AM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.271 %	79.165 %	0.025 ppb	196,292.611 ppb	14,961.158 ppb	281.316 ppb	6,534.062 ppb	8,567.681 ppb	79.761 %
Concentration per Run 1	80.551 %	76.580 %	0.025 ppb	200,292.305 ppb	15,377.484 ppb	286.476 ppb	6,643.513 ppb	8,580.136 ppb	81.090 %
Concentration per Run 2	79.421 %	80.636 %	0.028 ppb	195,689.808 ppb	14,693.297 ppb	273.085 ppb	6,405.543 ppb	8,471.156 ppb	79.429 %
Concentration per Run 3	77.840 %	80.278 %	0.023 ppb	192,895.719 ppb	14,812.693 ppb	284.385 ppb	6,553.131 ppb	8,651.752 ppb	78.764 %
Concentration RSD	1.7 %	2.8 %	9.6 %	1.9 %	2.4 %	2.6 %	1.8 %	1.1 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.399 ppb	1.268 ppb	30.378 ppb	696.226 ppb	0.316 ppb	0.889 ppb	4.753 ppb	69.509 ppb	84.814 %
Concentration per Run 1	2.302 ppb	1.356 ppb	30.908 ppb	711.988 ppb	0.327 ppb	0.974 ppb	4.816 ppb	70.258 ppb	83.980 %
Concentration per Run 2	2.404 ppb	1.228 ppb	30.211 ppb	707.589 ppb	0.291 ppb	0.853 ppb	4.886 ppb	69.229 ppb	85.481 %
Concentration per Run 3	2.491 ppb	1.221 ppb	30.013 ppb	669.100 ppb	0.332 ppb	0.840 ppb	4.558 ppb	69.041 ppb	84.982 %
Concentration RSD	3.9 %	6.0 %	1.5 %	3.4 %	7.1 %	8.3 %	3.6 %	0.9 %	0.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.853 ppb	0.154 ppb	105.546 ppb	1.211 ppb	76.788 %	0.008 ppb	0.027 ppb	78.014 %	0.555 ppb
Concentration per Run 1	0.882 ppb	0.154 ppb	106.288 ppb	1.135 ppb	75.197 %	0.007 ppb	0.027 ppb	75.880 %	0.505 ppb
Concentration per Run 2	0.828 ppb	0.146 ppb	104.894 ppb	1.250 ppb	77.841 %	0.011 ppb	0.026 ppb	79.889 %	0.548 ppb
Concentration per Run 3	0.847 ppb	0.162 ppb	105.456 ppb	1.249 ppb	77.326 %	0.007 ppb	0.027 ppb	78.273 %	0.613 ppb
Concentration RSD	3.2 %	5.2 %	0.7 %	5.5 %	1.8 %	27.3 %	2.4 %	2.6 %	9.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	16.540 ppb	84.037 %	83.691 %	0.038 ppb	2.873 ppb	74.826 %
Concentration per Run 1	16.650 ppb	82.263 %	81.650 %	0.024 ppb	2.819 ppb	75.609 %
Concentration per Run 2	16.438 ppb	84.200 %	84.011 %	0.046 ppb	2.951 ppb	74.252 %
Concentration per Run 3	16.532 ppb	85.649 %	85.414 %	0.043 ppb	2.850 ppb	74.617 %
Concentration RSD	0.6 %	2.0 %	2.3 %	32.0 %	2.4 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	25	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416912-01 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:12:42 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	77.923 %	76.302 %	0.023 ppb	201,650.786 ppb	15,591.301 ppb	289.244 ppb	6,640.936 ppb	8,828.615 ppb	78.435 %
Concentration per Run 1	79.447 %	71.212 %	0.021 ppb	214,431.436 ppb	16,680.085 ppb	309.717 ppb	6,964.197 ppb	9,176.683 ppb	79.331 %
Concentration per Run 2	77.809 %	81.829 %	0.027 ppb	189,772.364 ppb	14,549.699 ppb	268.188 ppb	6,321.656 ppb	8,402.811 ppb	78.906 %
Concentration per Run 3	76.512 %	75.864 %	0.022 ppb	200,748.558 ppb	15,544.119 ppb	289.826 ppb	6,636.955 ppb	8,906.349 ppb	77.067 %
Concentration RSD	1.9 %	7.0 %	13.7 %	6.1 %	6.8 %	7.2 %	4.8 %	4.4 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.424 ppb	1.256 ppb	31.255 ppb	701.652 ppb	0.311 ppb	1.064 ppb	4.806 ppb	68.801 ppb	84.021 %
Concentration per Run 1	2.329 ppb	1.182 ppb	32.259 ppb	712.089 ppb	0.298 ppb	1.069 ppb	4.991 ppb	68.072 ppb	81.711 %
Concentration per Run 2	2.400 ppb	1.233 ppb	30.498 ppb	688.830 ppb	0.317 ppb	1.045 ppb	4.625 ppb	68.086 ppb	85.096 %
Concentration per Run 3	2.543 ppb	1.354 ppb	31.008 ppb	704.038 ppb	0.317 ppb	1.078 ppb	4.802 ppb	70.244 ppb	85.256 %
Concentration RSD	4.5 %	7.0 %	2.9 %	1.7 %	3.4 %	1.6 %	3.8 %	1.8 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.819 ppb	0.134 ppb	104.134 ppb	0.978 ppb	76.672 %	0.008 ppb	0.019 ppb	77.466 %	0.321 ppb
Concentration per Run 1	0.816 ppb	0.100 ppb	103.193 ppb	0.929 ppb	75.179 %	0.009 ppb	0.018 ppb	75.592 %	0.321 ppb
Concentration per Run 2	0.809 ppb	0.233 ppb	104.867 ppb	0.915 ppb	76.967 %	0.008 ppb	0.016 ppb	78.051 %	0.282 ppb
Concentration per Run 3	0.831 ppb	0.069 ppb	104.343 ppb	1.089 ppb	77.869 %	0.006 ppb	0.023 ppb	78.757 %	0.359 ppb
Concentration RSD	1.3 %	65.2 %	0.8 %	9.9 %	1.8 %	24.7 %	21.3 %	2.1 %	12.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	16.745 ppb	82.316 %	83.069 %	0.028 ppb	2.836 ppb	74.837 %
Concentration per Run 1	17.028 ppb	80.593 %	80.735 %	0.016 ppb	2.781 ppb	75.484 %
Concentration per Run 2	16.684 ppb	82.744 %	83.677 %	0.033 ppb	2.894 ppb	74.181 %
Concentration per Run 3	16.522 ppb	83.610 %	84.794 %	0.034 ppb	2.835 ppb	74.845 %
Concentration RSD	1.5 %	1.9 %	2.5 %	35.4 %	2.0 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	26	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416272-01 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:17:11 AM	Vial	12		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	75.215 %	83.737 %	0.015 ppb	429,045.679 ppb	33,516.250 ppb	18.601 ppb	156,710.697 ppb	174,045.554 ppb	71.452 %
Concentration per Run 1	76.976 %	87.793 %	0.015 ppb	404,032.263 ppb	31,536.743 ppb	17.703 ppb	148,606.676 ppb	163,347.442 ppb	72.485 %
Concentration per Run 2	75.566 %	80.755 %	0.014 ppb	444,976.037 ppb	34,762.381 ppb	20.405 ppb	160,797.722 ppb	176,925.674 ppb	71.511 %
Concentration per Run 3	73.103 %	82.664 %	0.015 ppb	438,128.737 ppb	34,249.624 ppb	17.697 ppb	160,727.692 ppb	181,863.546 ppb	70.359 %
Concentration RSD	2.6 %	4.3 %	2.2 %	5.1 %	5.2 %	8.4 %	4.5 %	5.5 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	6.402 ppb	11.728 ppb	678.182 ppb	1,346.339 ppb	2.611 ppb	19.097 ppb	2.857 ppb	4.794 ppb	76.136 %
Concentration per Run 1	5.980 ppb	10.924 ppb	656.561 ppb	1,271.083 ppb	2.459 ppb	18.370 ppb	2.853 ppb	4.633 ppb	76.533 %
Concentration per Run 2	6.496 ppb	12.291 ppb	683.578 ppb	1,380.076 ppb	2.691 ppb	19.809 ppb	2.793 ppb	4.965 ppb	75.667 %
Concentration per Run 3	6.731 ppb	11.969 ppb	694.406 ppb	1,387.859 ppb	2.681 ppb	19.114 ppb	2.924 ppb	4.785 ppb	76.209 %
Concentration RSD	6.0 %	6.1 %	2.9 %	4.8 %	5.0 %	3.8 %	2.3 %	3.5 %	0.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	40.116 ppb	0.415 ppb	1,429.310 ppb	14.883 ppb	70.594 %	0.082 ppb	0.092 ppb	73.696 %	1.470 ppb
Concentration per Run 1	39.064 ppb	0.379 ppb	1,395.000 ppb	14.590 ppb	70.594 %	0.082 ppb	0.110 ppb	72.865 %	1.367 ppb
Concentration per Run 2	40.489 ppb	0.333 ppb	1,459.225 ppb	15.320 ppb	69.597 %	0.084 ppb	0.065 ppb	73.931 %	1.530 ppb
Concentration per Run 3	40.796 ppb	0.534 ppb	1,433.706 ppb	14.738 ppb	71.593 %	0.081 ppb	0.103 ppb	74.294 %	1.513 ppb
Concentration RSD	2.3 %	25.3 %	2.3 %	2.6 %	1.4 %	2.1 %	26.3 %	1.0 %	6.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	208.958 ppb	81.842 %	81.732 %	0.066 ppb	0.071 ppb	69.123 %
Concentration per Run 1	203.707 ppb	82.067 %	81.746 %	0.051 ppb	0.065 ppb	70.177 %
Concentration per Run 2	213.427 ppb	80.914 %	80.441 %	0.074 ppb	0.076 ppb	68.893 %
Concentration per Run 3	209.739 ppb	82.544 %	83.008 %	0.074 ppb	0.072 ppb	68.297 %
Concentration RSD	2.3 %	1.0 %	1.6 %	20.2 %	7.5 %	1.4 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	27	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 6:21:42 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.588 %	80.079 %	58.682 ppb	5,483.187 ppb	5,656.832 ppb	55.194 ppb	5,521.101 ppb	5,568.610 ppb	85.249 %
Concentration per Run 1	79.168 %	83.618 %	58.468 ppb	5,348.349 ppb	5,550.320 ppb	54.894 ppb	5,502.053 ppb	5,387.214 ppb	85.961 %
Concentration per Run 2	78.439 %	75.626 %	58.294 ppb	5,664.582 ppb	5,799.185 ppb	56.653 ppb	5,646.475 ppb	5,780.021 ppb	85.095 %
Concentration per Run 3	78.159 %	80.994 %	59.284 ppb	5,436.629 ppb	5,620.993 ppb	54.034 ppb	5,414.774 ppb	5,538.594 ppb	84.692 %
Recovery Percentage 1			97.804 %	91.386 %	94.281 %	91.990 %	92.018 %	92.810 %	
Concentration RSD	0.7 %	5.1 %	0.9 %	3.0 %	2.3 %	2.4 %	2.1 %	3.6 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	54.338 ppb	55.081 ppb	54.630 ppb	5,456.082 ppb	55.417 ppb	55.010 ppb	55.277 ppb	56.021 ppb	90.149 %
Concentration per Run 1	53.306 ppb	54.311 ppb	54.028 ppb	5,466.143 ppb	55.841 ppb	54.357 ppb	56.562 ppb	56.667 ppb	88.011 %
Concentration per Run 2	55.869 ppb	56.800 ppb	56.456 ppb	5,620.635 ppb	56.370 ppb	56.819 ppb	55.878 ppb	57.243 ppb	89.687 %
Concentration per Run 3	53.838 ppb	54.131 ppb	53.404 ppb	5,281.468 ppb	54.042 ppb	53.853 ppb	53.390 ppb	54.153 ppb	92.748 %
Recovery Percentage 1	90.563 %	91.801 %	91.049 %	90.935 %	92.362 %	91.683 %	92.128 %	93.368 %	
Concentration RSD	2.5 %	2.7 %	3.0 %	3.1 %	2.2 %	2.9 %	3.0 %	2.9 %	2.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	54.187 ppb	55.083 ppb	54.959 ppb	55.099 ppb	81.739 %	59.249 ppb	59.134 ppb	80.786 %	59.328 ppb
Concentration per Run 1	54.686 ppb	54.617 ppb	54.329 ppb	54.817 ppb	83.292 %	58.544 ppb	58.499 ppb	80.995 %	59.612 ppb
Concentration per Run 2	55.339 ppb	56.537 ppb	56.040 ppb	54.897 ppb	78.308 %	59.997 ppb	60.266 ppb	77.333 %	59.487 ppb
Concentration per Run 3	52.536 ppb	54.096 ppb	54.509 ppb	55.582 ppb	83.617 %	59.206 ppb	58.636 ppb	84.030 %	58.884 ppb
Recovery Percentage 1	90.312 %	91.805 %	91.599 %	91.831 %		98.748 %	98.556 %		98.880 %
Concentration RSD	2.7 %	2.3 %	1.7 %	0.8 %	3.6 %	1.2 %	1.7 %	4.2 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.700 ppb	83.826 %	82.410 %	59.976 ppb	57.406 ppb	85.239 %
Concentration per Run 1	58.291 ppb	84.538 %	83.364 %	59.239 ppb	56.717 ppb	85.528 %
Concentration per Run 2	59.511 ppb	80.629 %	78.547 %	60.124 ppb	57.719 ppb	83.388 %
Concentration per Run 3	58.299 ppb	86.311 %	85.319 %	60.566 ppb	57.784 ppb	86.803 %
Recovery Percentage 1	97.834 %			99.960 %	95.677 %	
Concentration RSD	1.2 %	3.5 %	4.2 %	1.1 %	1.0 %	2.0 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	28	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 6:26:13 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	80.263 %	78.131 %	0.023 ppb	65.534 ppb	3.894 ppb	-0.052 ppb	21.745 ppb	14.506 ppb	82.368 %
Concentration per Run 1	80.078 %	77.892 %	0.027 ppb	69.560 ppb	3.349 ppb	0.044 ppb	17.567 ppb	17.150 ppb	82.651 %
Concentration per Run 2	81.142 %	78.727 %	0.023 ppb	54.836 ppb	3.446 ppb	-0.251 ppb	19.934 ppb	14.936 ppb	83.256 %
Concentration per Run 3	79.568 %	77.773 %	0.019 ppb	72.207 ppb	4.887 ppb	0.049 ppb	27.734 ppb	11.431 ppb	81.197 %
Recovery Percentage 1			4.580 %	65.534 %	5.563 %	-0.525 %	21.745 %	14.506 %	
Concentration RSD	1.0 %	0.7 %	16.3 %	14.3 %	22.1 %	327.4 %	24.5 %	19.9 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.009 ppb	0.002 ppb	0.109 ppb	5.973 ppb	0.013 ppb	0.018 ppb	0.033 ppb	0.032 ppb	91.325 %
Concentration per Run 1	0.009 ppb	0.008 ppb	0.098 ppb	6.325 ppb	0.014 ppb	0.019 ppb	0.011 ppb	0.092 ppb	94.722 %
Concentration per Run 2	0.001 ppb	-0.008 ppb	0.107 ppb	5.897 ppb	0.009 ppb	0.019 ppb	0.047 ppb	0.003 ppb	86.300 %
Concentration per Run 3	0.015 ppb	0.004 ppb	0.122 ppb	5.697 ppb	0.016 ppb	0.015 ppb	0.042 ppb	0.000 ppb	92.953 %
Recovery Percentage 1	0.175 %	0.166 %	10.918 %	11.946 %	2.642 %	0.876 %	3.336 %	0.633 %	
Concentration RSD	80.2 %	509.6 %	11.3 %	5.4 %	28.6 %	15.0 %	57.7 %	163.9 %	4.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.072 ppb	0.074 ppb	0.108 ppb	0.180 ppb	83.418 %	0.020 ppb	0.016 ppb	83.832 %	0.073 ppb
Concentration per Run 1	0.064 ppb	0.047 ppb	0.117 ppb	0.125 ppb	83.532 %	0.022 ppb	0.024 ppb	82.336 %	0.068 ppb
Concentration per Run 2	0.057 ppb	0.088 ppb	0.090 ppb	0.158 ppb	82.431 %	0.015 ppb	0.010 ppb	83.972 %	0.061 ppb
Concentration per Run 3	0.095 ppb	0.087 ppb	0.119 ppb	0.258 ppb	84.292 %	0.023 ppb	0.014 ppb	85.188 %	0.089 ppb
Recovery Percentage 1	14.380 %	1.482 %	1.084 %	9.015 %		4.964 %	7.961 %		1.818 %
Concentration RSD	27.9 %	31.6 %	15.1 %	38.3 %	1.1 %	22.1 %	43.7 %	1.7 %	19.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.069 ppb	84.924 %	84.336 %	0.383 ppb	0.042 ppb	87.836 %
Concentration per Run 1	0.118 ppb	83.997 %	83.572 %	0.308 ppb	0.044 ppb	86.964 %
Concentration per Run 2	0.030 ppb	84.654 %	83.668 %	0.454 ppb	0.034 ppb	87.868 %
Concentration per Run 3	0.058 ppb	86.121 %	85.769 %	0.387 ppb	0.046 ppb	88.676 %
Recovery Percentage 1	13.713 %			38.287 %	4.166 %	
Concentration RSD	65.9 %	1.3 %	1.5 %	19.1 %	15.8 %	1.0 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	29	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	xWG1902287-1 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:37:56 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.902 %	79.721 %	0.010 ppb	43.677 ppb	2.578 ppb	1.751 ppb	17.968 ppb	20.182 ppb	84.157 %
Concentration per Run 1	84.671 %	76.103 %	0.007 ppb	43.954 ppb	2.371 ppb	1.924 ppb	13.950 ppb	16.693 ppb	84.906 %
Concentration per Run 2	83.730 %	81.948 %	0.007 ppb	27.804 ppb	2.690 ppb	1.588 ppb	9.328 ppb	21.353 ppb	83.584 %
Concentration per Run 3	83.304 %	81.113 %	0.015 ppb	59.274 ppb	2.673 ppb	1.741 ppb	30.628 ppb	22.499 ppb	83.980 %
Concentration RSD	0.8 %	4.0 %	49.6 %	36.0 %	7.0 %	9.6 %	62.4 %	15.2 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.004 ppb	0.006 ppb	0.079 ppb	1.113 ppb	0.007 ppb	0.173 ppb	0.081 ppb	2.381 ppb	88.016 %
Concentration per Run 1	-0.016 ppb	0.014 ppb	0.052 ppb	0.923 ppb	0.012 ppb	0.178 ppb	0.108 ppb	2.339 ppb	88.185 %
Concentration per Run 2	0.012 ppb	0.004 ppb	0.044 ppb	1.385 ppb	0.001 ppb	0.203 ppb	0.043 ppb	2.382 ppb	86.157 %
Concentration per Run 3	0.016 ppb	0.000 ppb	0.140 ppb	1.031 ppb	0.007 ppb	0.137 ppb	0.093 ppb	2.421 ppb	89.705 %
Concentration RSD	409.0 %	121.5 %	68.0 %	21.7 %	86.5 %	19.2 %	42.1 %	1.7 %	2.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.042 ppb	0.111 ppb	0.085 ppb	0.034 ppb	85.828 %	0.007 ppb	0.008 ppb	85.613 %	0.027 ppb
Concentration per Run 1	0.034 ppb	0.111 ppb	0.073 ppb	0.016 ppb	85.869 %	0.008 ppb	0.010 ppb	84.209 %	0.024 ppb
Concentration per Run 2	0.057 ppb	0.177 ppb	0.043 ppb	0.024 ppb	85.853 %	0.004 ppb	0.002 ppb	85.632 %	0.023 ppb
Concentration per Run 3	0.036 ppb	0.045 ppb	0.138 ppb	0.062 ppb	85.762 %	0.010 ppb	0.011 ppb	86.996 %	0.033 ppb
Concentration RSD	29.2 %	59.0 %	57.3 %	73.9 %	0.1 %	41.3 %	59.5 %	1.6 %	19.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.077 ppb	87.699 %	89.206 %	0.064 ppb	0.016 ppb	90.754 %
Concentration per Run 1	0.052 ppb	87.933 %	87.394 %	0.044 ppb	0.019 ppb	94.098 %
Concentration per Run 2	0.023 ppb	86.328 %	89.047 %	0.066 ppb	0.012 ppb	88.781 %
Concentration per Run 3	0.155 ppb	88.838 %	91.177 %	0.081 ppb	0.016 ppb	89.383 %
Concentration RSD	90.5 %	1.4 %	2.1 %	28.9 %	22.2 %	3.2 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	30	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	xWG1902287-2d10 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:42:24 AM	Vial	8		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.480 %	82.266 %	4.939 ppb	900.383 ppb	935.953 ppb	179.063 ppb	915.033 ppb	894.354 ppb	83.941 %
Concentration per Run 1	83.449 %	77.534 %	4.963 ppb	914.566 ppb	962.524 ppb	178.701 ppb	907.293 ppb	877.155 ppb	85.186 %
Concentration per Run 2	83.043 %	82.425 %	4.880 ppb	874.077 ppb	907.901 ppb	174.529 ppb	888.722 ppb	861.568 ppb	84.306 %
Concentration per Run 3	80.948 %	86.839 %	4.972 ppb	912.507 ppb	937.435 ppb	183.960 ppb	949.085 ppb	944.340 ppb	82.331 %
Concentration RSD	1.6 %	5.7 %	1.0 %	2.5 %	2.9 %	2.6 %	3.4 %	4.9 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	44.895 ppb	18.258 ppb	45.584 ppb	94.290 ppb	45.055 ppb	45.663 ppb	22.990 ppb	47.605 ppb	91.599 %
Concentration per Run 1	46.202 ppb	18.455 ppb	47.041 ppb	94.131 ppb	47.175 ppb	47.779 ppb	23.762 ppb	48.444 ppb	87.409 %
Concentration per Run 2	43.047 ppb	17.689 ppb	43.316 ppb	95.946 ppb	43.275 ppb	44.356 ppb	22.158 ppb	46.016 ppb	92.867 %
Concentration per Run 3	45.435 ppb	18.631 ppb	46.395 ppb	92.794 ppb	44.714 ppb	44.854 ppb	23.049 ppb	48.355 ppb	94.521 %
Concentration RSD	3.7 %	2.7 %	4.4 %	1.7 %	4.4 %	4.0 %	3.5 %	2.9 %	4.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.003 ppb	11.346 ppb	87.487 ppb	89.381 ppb	85.920 %	4.774 ppb	5.085 ppb	86.018 %	42.648 ppb
Concentration per Run 1	11.251 ppb	10.807 ppb	86.901 ppb	90.612 ppb	83.748 %	4.826 ppb	5.020 ppb	83.047 %	42.595 ppb
Concentration per Run 2	10.631 ppb	11.282 ppb	84.427 ppb	88.598 ppb	86.215 %	4.854 ppb	5.242 ppb	83.486 %	43.195 ppb
Concentration per Run 3	11.128 ppb	11.950 ppb	91.132 ppb	88.933 ppb	87.798 %	4.641 ppb	4.991 ppb	91.520 %	42.154 ppb
Concentration RSD	3.0 %	5.1 %	3.9 %	1.2 %	2.4 %	2.4 %	2.7 %	5.5 %	1.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	191.270 ppb	87.400 %	88.095 %	11.826 ppb	49.589 ppb	91.963 %
Concentration per Run 1	191.899 ppb	84.902 %	85.297 %	11.769 ppb	49.735 ppb	90.148 %
Concentration per Run 2	192.641 ppb	86.935 %	87.047 %	12.068 ppb	49.610 ppb	90.855 %
Concentration per Run 3	189.271 ppb	90.363 %	91.941 %	11.640 ppb	49.421 ppb	94.885 %
Concentration RSD	0.9 %	3.2 %	3.9 %	1.9 %	0.3 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	31	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	xL2416667-01 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:46:53 AM	Vial	13		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	77.841 %	74.632 %	0.008 ppb	89,156.291 ppb	3,700.405 ppb	18.907 ppb	25,100.111 ppb	45,797.870 ppb	80.526 %
Concentration per Run 1	79.092 %	71.451 %	0.010 ppb	91,380.314 ppb	3,759.178 ppb	18.344 ppb	24,971.135 ppb	45,499.880 ppb	81.556 %
Concentration per Run 2	77.823 %	71.928 %	0.009 ppb	91,391.045 ppb	3,787.235 ppb	19.941 ppb	25,537.130 ppb	47,041.304 ppb	80.687 %
Concentration per Run 3	76.609 %	80.517 %	0.003 ppb	84,697.515 ppb	3,554.803 ppb	18.436 ppb	24,792.069 ppb	44,852.424 ppb	79.334 %
Concentration RSD	1.6 %	6.8 %	53.5 %	4.3 %	3.4 %	4.7 %	1.5 %	2.5 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.371 ppb	0.129 ppb	6.617 ppb	24.387 ppb	0.116 ppb	1.179 ppb	5.621 ppb	32.242 ppb	81.975 %
Concentration per Run 1	1.471 ppb	0.133 ppb	6.777 ppb	26.258 ppb	0.146 ppb	1.219 ppb	5.636 ppb	32.314 ppb	81.355 %
Concentration per Run 2	1.444 ppb	0.132 ppb	6.947 ppb	23.960 ppb	0.103 ppb	1.282 ppb	5.759 ppb	32.392 ppb	81.804 %
Concentration per Run 3	1.196 ppb	0.122 ppb	6.128 ppb	22.943 ppb	0.101 ppb	1.037 ppb	5.469 ppb	32.021 ppb	82.765 %
Concentration RSD	11.1 %	4.7 %	6.5 %	7.0 %	21.7 %	10.8 %	2.6 %	0.6 %	0.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.657 ppb	0.351 ppb	108.606 ppb	1.136 ppb	77.014 %	0.003 ppb	0.042 ppb	78.999 %	0.810 ppb
Concentration per Run 1	0.615 ppb	0.391 ppb	108.490 ppb	1.067 ppb	77.342 %	0.003 ppb	0.049 ppb	77.306 %	0.762 ppb
Concentration per Run 2	0.633 ppb	0.310 ppb	106.324 ppb	1.133 ppb	75.752 %	0.003 ppb	0.040 ppb	77.149 %	0.834 ppb
Concentration per Run 3	0.725 ppb	0.350 ppb	111.004 ppb	1.209 ppb	77.947 %	0.002 ppb	0.036 ppb	82.543 %	0.834 ppb
Concentration RSD	9.0 %	11.5 %	2.2 %	6.3 %	1.5 %	21.3 %	16.0 %	3.9 %	5.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	9.849 ppb	83.412 %	83.385 %	0.054 ppb	0.179 ppb	81.458 %
Concentration per Run 1	10.237 ppb	82.259 %	81.250 %	0.039 ppb	0.183 ppb	80.952 %
Concentration per Run 2	9.813 ppb	83.068 %	82.832 %	0.068 ppb	0.182 ppb	80.520 %
Concentration per Run 3	9.498 ppb	84.910 %	86.074 %	0.054 ppb	0.173 ppb	82.903 %
Concentration RSD	3.8 %	1.6 %	2.9 %	27.6 %	3.0 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	32	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	xL2416691-01 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:51:19 AM	Vial	14		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.967 %	78.012 %	0.014 ppb	60,923.999 ppb	2,932.253 ppb	19.361 ppb	6,214.417 ppb	17,700.638 ppb	81.480 %
Concentration per Run 1	79.969 %	80.159 %	0.014 ppb	59,635.896 ppb	2,862.535 ppb	19.819 ppb	6,103.709 ppb	17,183.117 ppb	82.239 %
Concentration per Run 2	78.591 %	75.387 %	0.009 ppb	63,480.005 ppb	3,067.771 ppb	19.414 ppb	6,355.021 ppb	18,025.455 ppb	81.762 %
Concentration per Run 3	78.340 %	78.489 %	0.019 ppb	59,656.096 ppb	2,866.453 ppb	18.849 ppb	6,184.521 ppb	17,893.341 ppb	80.439 %
Concentration RSD	1.1 %	3.1 %	37.2 %	3.6 %	4.0 %	2.5 %	2.1 %	2.6 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.179 ppb	0.145 ppb	7.506 ppb	41.930 ppb	0.151 ppb	0.961 ppb	10.749 ppb	20.612 ppb	83.109 %
Concentration per Run 1	0.139 ppb	0.144 ppb	7.399 ppb	42.275 ppb	0.135 ppb	0.892 ppb	10.876 ppb	20.403 ppb	83.921 %
Concentration per Run 2	0.229 ppb	0.137 ppb	8.177 ppb	43.126 ppb	0.148 ppb	1.004 ppb	10.952 ppb	20.942 ppb	81.366 %
Concentration per Run 3	0.168 ppb	0.154 ppb	6.944 ppb	40.387 ppb	0.170 ppb	0.986 ppb	10.418 ppb	20.493 ppb	84.040 %
Concentration RSD	25.8 %	5.6 %	8.3 %	3.3 %	11.5 %	6.3 %	2.7 %	1.4 %	1.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.729 ppb	0.220 ppb	87.722 ppb	0.256 ppb	79.296 %	0.008 ppb	0.034 ppb	80.564 %	0.301 ppb
Concentration per Run 1	0.728 ppb	0.239 ppb	86.742 ppb	0.216 ppb	78.925 %	0.006 ppb	0.035 ppb	80.627 %	0.240 ppb
Concentration per Run 2	0.713 ppb	0.243 ppb	88.974 ppb	0.269 ppb	78.687 %	0.008 ppb	0.037 ppb	79.604 %	0.309 ppb
Concentration per Run 3	0.747 ppb	0.179 ppb	87.448 ppb	0.284 ppb	80.278 %	0.009 ppb	0.030 ppb	81.461 %	0.353 ppb
Concentration RSD	2.3 %	16.3 %	1.3 %	14.0 %	1.1 %	21.0 %	10.5 %	1.2 %	18.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	22.641 ppb	83.855 %	83.342 %	0.046 ppb	0.125 ppb	84.108 %
Concentration per Run 1	22.561 ppb	83.895 %	84.038 %	0.032 ppb	0.123 ppb	83.655 %
Concentration per Run 2	22.851 ppb	83.511 %	82.270 %	0.051 ppb	0.125 ppb	82.473 %
Concentration per Run 3	22.511 ppb	84.160 %	83.717 %	0.056 ppb	0.127 ppb	86.195 %
Concentration RSD	0.8 %	0.4 %	1.1 %	27.1 %	1.7 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	33	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	xL2416819-01 2008TL	Rack	1		
Analysis started at:	4/3/2024 6:55:45 AM	Vial	15		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	12.468 %	22.505 %	0.010 ppb	13,466,425.427 ppb	27,764.846 ppb	325.946 ppb	33,598.412 ppb	21,653.863 ppb	6.151 %
Concentration per Run 1	12.695 %	27.554 %	-0.002 ppb	14,320,897.243 ppb	28,897.122 ppb	316.870 ppb	30,642.428 ppb	18,694.740 ppb	6.270 %
Concentration per Run 2	12.469 %	22.186 %	0.014 ppb	12,360,237.798 ppb	25,758.451 ppb	311.201 ppb	32,122.533 ppb	21,341.330 ppb	6.170 %
Concentration per Run 3	12.239 %	17.773 %	0.018 ppb	13,718,141.241 ppb	28,638.964 ppb	349.768 ppb	38,030.275 ppb	24,925.519 ppb	6.013 %
Concentration RSD	1.8 %	21.8 %	104.1 %	7.5 %	6.3 %	6.4 %	11.6 %	14.4 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.982 ppb	1.460 ppb	59.410 ppb	3,138.919 ppb	0.548 ppb	1.225 ppb	7.899 ppb	18.323 ppb	12.126 %
Concentration per Run 1	0.983 ppb	1.199 ppb	59.389 ppb	3,224.610 ppb	0.526 ppb	1.115 ppb	7.174 ppb	17.691 ppb	15.025 %
Concentration per Run 2	0.943 ppb	1.433 ppb	55.921 ppb	2,950.714 ppb	0.616 ppb	0.920 ppb	7.897 ppb	17.222 ppb	11.740 %
Concentration per Run 3	1.021 ppb	1.747 ppb	62.920 ppb	3,241.433 ppb	0.501 ppb	1.639 ppb	8.627 ppb	20.057 ppb	9.615 %
Concentration RSD	4.0 %	18.8 %	5.9 %	5.2 %	11.1 %	30.4 %	9.2 %	8.3 %	22.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	5.041 ppb	0.810 ppb	781.457 ppb	7.918 ppb	7.742 %	2.891 ppb	7.647 ppb	11.341 %	0.908 ppb
Concentration per Run 1	4.991 ppb	0.459 ppb	776.878 ppb	8.349 ppb	8.654 %	3.316 ppb	8.608 ppb	12.275 %	0.953 ppb
Concentration per Run 2	4.808 ppb	1.060 ppb	751.663 ppb	6.835 ppb	7.552 %	2.691 ppb	6.957 ppb	11.282 %	0.861 ppb
Concentration per Run 3	5.325 ppb	0.910 ppb	815.831 ppb	8.570 ppb	7.020 %	2.666 ppb	7.376 ppb	10.466 %	0.910 ppb
Concentration RSD	5.2 %	38.6 %	4.1 %	11.9 %	10.8 %	12.8 %	11.2 %	8.0 %	5.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	67.454 ppb	14.162 %	16.125 %	0.345 ppb	3.885 ppb	10.073 %
Concentration per Run 1	73.556 ppb	15.038 %	16.658 %	0.390 ppb	4.194 ppb	10.744 %
Concentration per Run 2	65.388 ppb	14.283 %	16.262 %	0.325 ppb	3.819 ppb	9.975 %
Concentration per Run 3	63.417 ppb	13.165 %	15.457 %	0.319 ppb	3.642 ppb	9.500 %
Concentration RSD	8.0 %	6.7 %	3.8 %	11.4 %	7.2 %	6.2 %

Alpha ICPMSQ2 Data with SRD

4/3/2024 9:00:16 AM

Analysis index:	34	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	xL2416819-02 2008TL	Rack	1		
Analysis started at:	4/3/2024 7:00:12 AM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	11.518 %	16.381 %	0.010 ppb	16,514,550.542 ppb	30,520.984 ppb	305.038 ppb	44,917.716 ppb	40,376.959 ppb	3.712 %
Concentration per Run 1	11.553 %	16.580 %	0.007 ppb	17,156,433.940 ppb	31,781.933 ppb	315.887 ppb	46,551.519 ppb	42,234.403 ppb	3.767 %
Concentration per Run 2	11.600 %	16.461 %	0.007 ppb	16,188,246.879 ppb	29,684.602 ppb	305.766 ppb	44,596.549 ppb	39,434.571 ppb	3.788 %
Concentration per Run 3	11.401 %	16.103 %	0.016 ppb	16,198,970.808 ppb	30,096.417 ppb	293.460 ppb	43,605.078 ppb	39,461.902 ppb	3.581 %
Concentration RSD	0.9 %	1.5 %	50.6 %	3.4 %	3.6 %	3.7 %	3.3 %	4.0 %	3.1 %

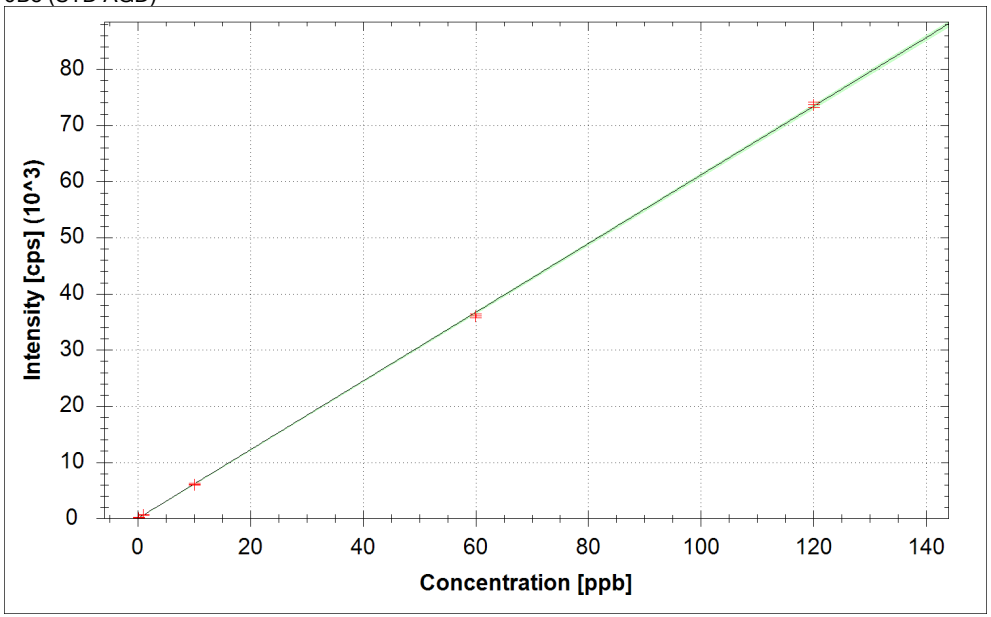
Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.929 ppb	1.283 ppb	31.653 ppb	4,570.573 ppb	0.393 ppb	1.339 ppb	9.219 ppb	15.268 ppb	5.567 %
Concentration per Run 1	1.960 ppb	1.576 ppb	31.393 ppb	4,991.026 ppb	0.424 ppb	1.989 ppb	10.667 ppb	18.161 ppb	5.016 %
Concentration per Run 2	1.857 ppb	1.322 ppb	30.405 ppb	4,520.695 ppb	0.426 ppb	1.053 ppb	8.418 ppb	14.329 ppb	5.434 %
Concentration per Run 3	1.970 ppb	0.951 ppb	33.163 ppb	4,199.999 ppb	0.331 ppb	0.975 ppb	8.571 ppb	13.315 ppb	6.250 %
Concentration RSD	3.2 %	24.5 %	4.4 %	8.7 %	13.8 %	42.1 %	13.6 %	16.7 %	11.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	51.175 ppb	1.347 ppb	3,847.075 ppb	17.017 ppb	3.763 %	1.951 ppb	2.757 ppb	5.710 %	0.857 ppb
Concentration per Run 1	57.442 ppb	1.062 ppb	4,269.437 ppb	18.298 ppb	3.274 %	2.425 ppb	3.241 ppb	4.909 %	0.843 ppb
Concentration per Run 2	48.827 ppb	1.277 ppb	3,807.573 ppb	16.245 ppb	3.971 %	1.750 ppb	2.705 ppb	5.925 %	0.965 ppb
Concentration per Run 3	47.257 ppb	1.701 ppb	3,464.214 ppb	16.507 ppb	4.045 %	1.679 ppb	2.326 ppb	6.297 %	0.764 ppb
Concentration RSD	10.7 %	24.2 %	10.5 %	6.6 %	11.3 %	21.1 %	16.7 %	12.6 %	11.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	124.932 ppb	7.319 %	8.485 %	0.424 ppb	7.226 ppb	5.113 %
Concentration per Run 1	140.135 ppb	6.522 %	7.381 %	0.492 ppb	8.236 ppb	4.613 %
Concentration per Run 2	112.994 ppb	7.726 %	9.197 %	0.367 ppb	6.855 ppb	5.381 %
Concentration per Run 3	121.668 ppb	7.707 %	8.878 %	0.414 ppb	6.587 ppb	5.344 %
Concentration RSD	11.1 %	9.4 %	11.4 %	14.8 %	12.2 %	8.5 %

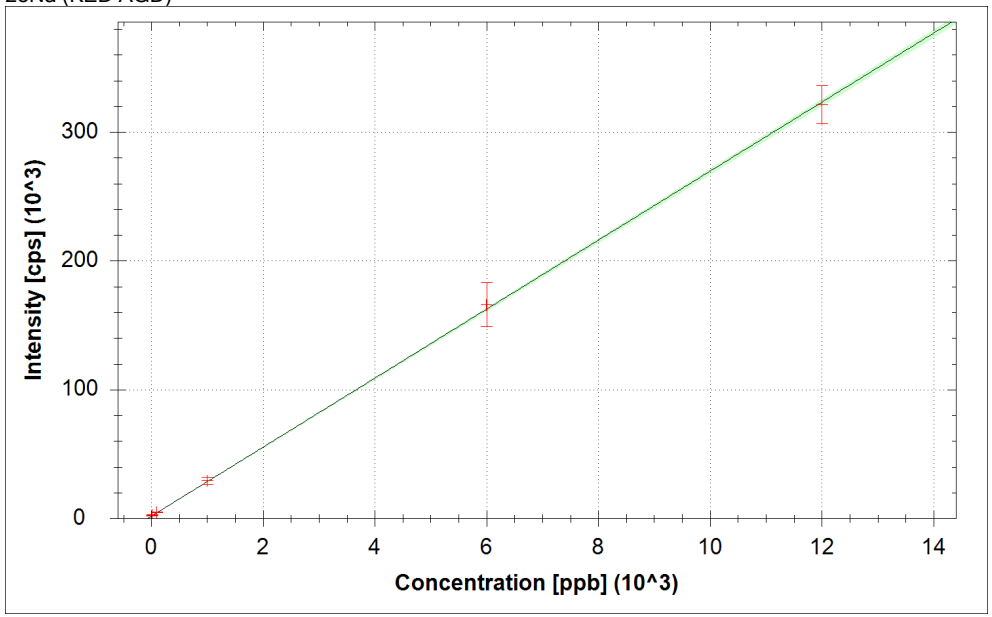
Calibration Curves:

9Be (STD AGD)



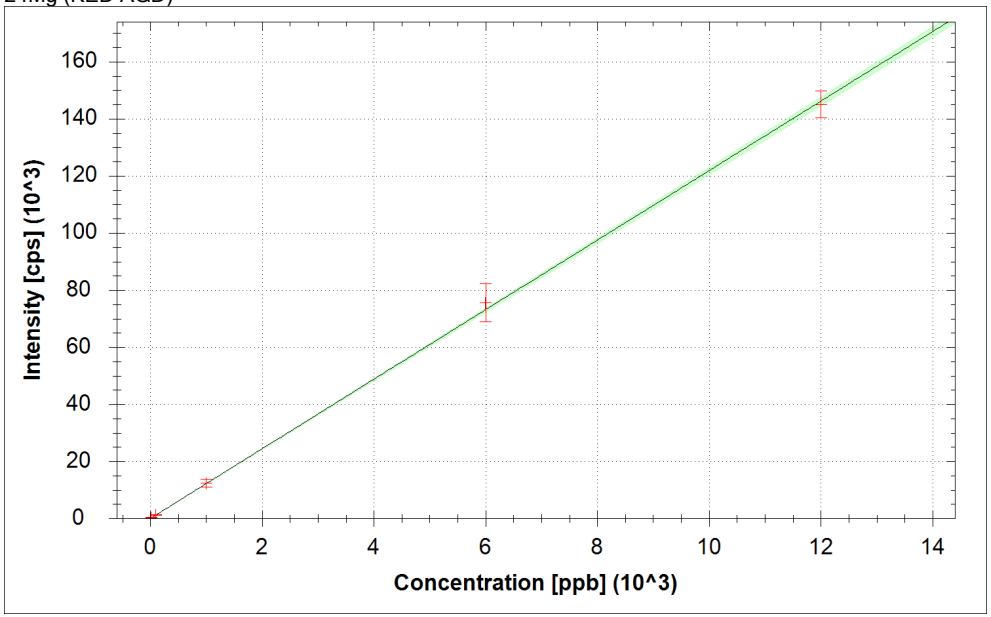
f(x) = 611.2136*x + 11.0948
R² = 0.9999
BEC = 0.018 ppb
LoD = 0.0132 ppb

23Na (KED AGD)



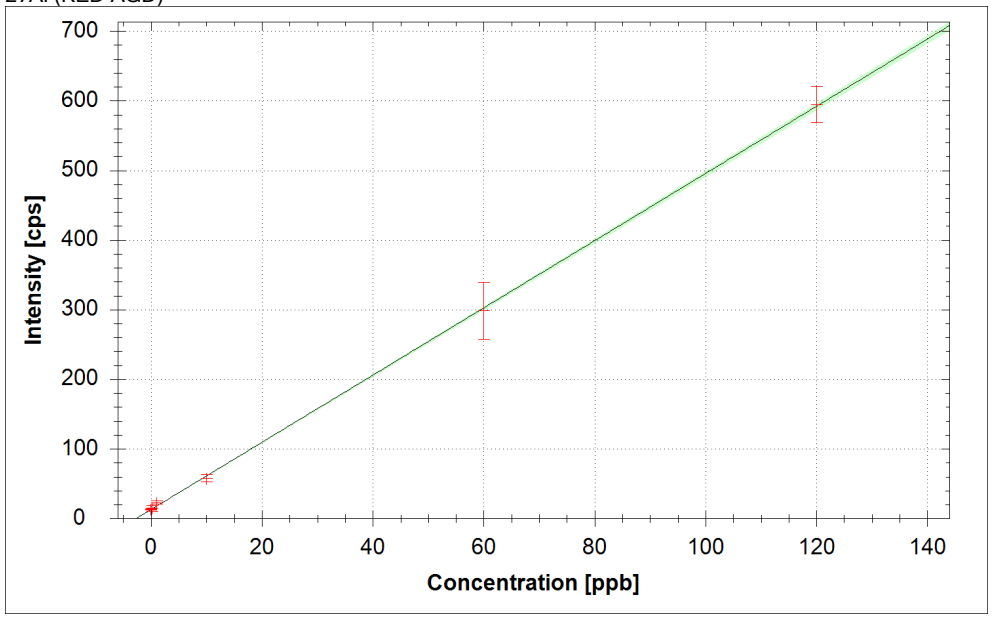
f(x) = 26.7820*x + 1767.4372
R² = 0.9998
BEC = 65.993 ppb
LoD = 7.9507 ppb

24Mg (KED AGD)



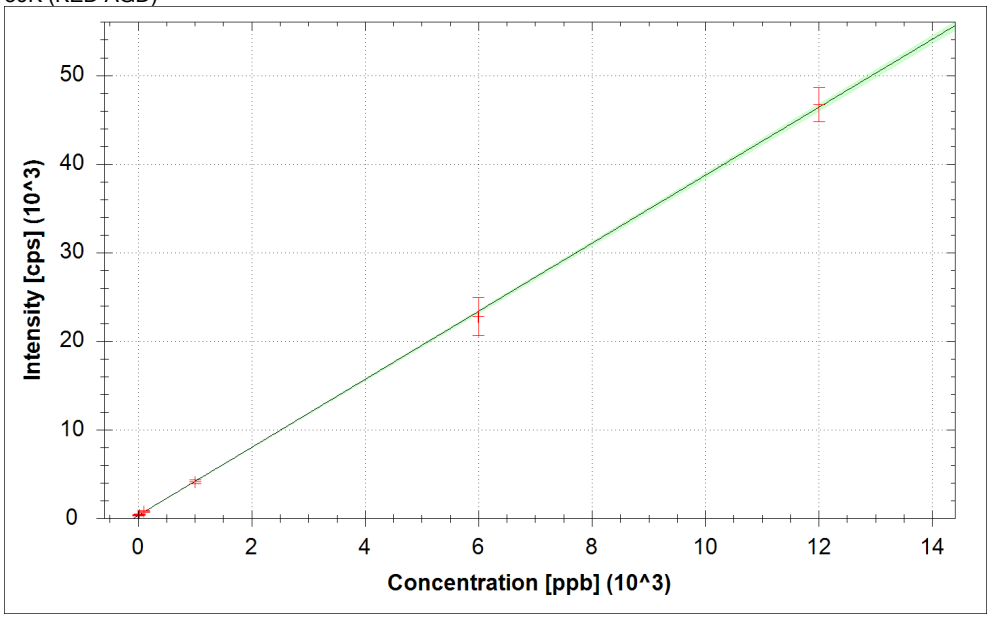
f(x) = 12.1785*x + 29.0379
R² = 0.9996
BEC = 2.384 ppb
LoD = 2.0542 ppb

27Al (KED AGD)



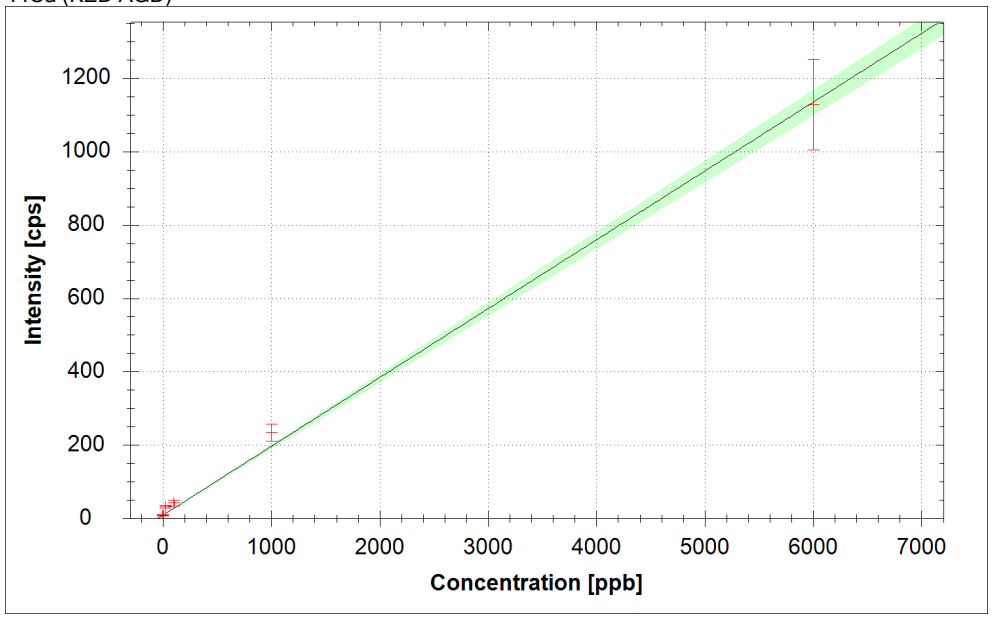
f(x) = 4.8258*x + 12.8646
R² = 0.9998
BEC = 2.666 ppb
LoD = 0.5215 ppb

39K (KED AGD)



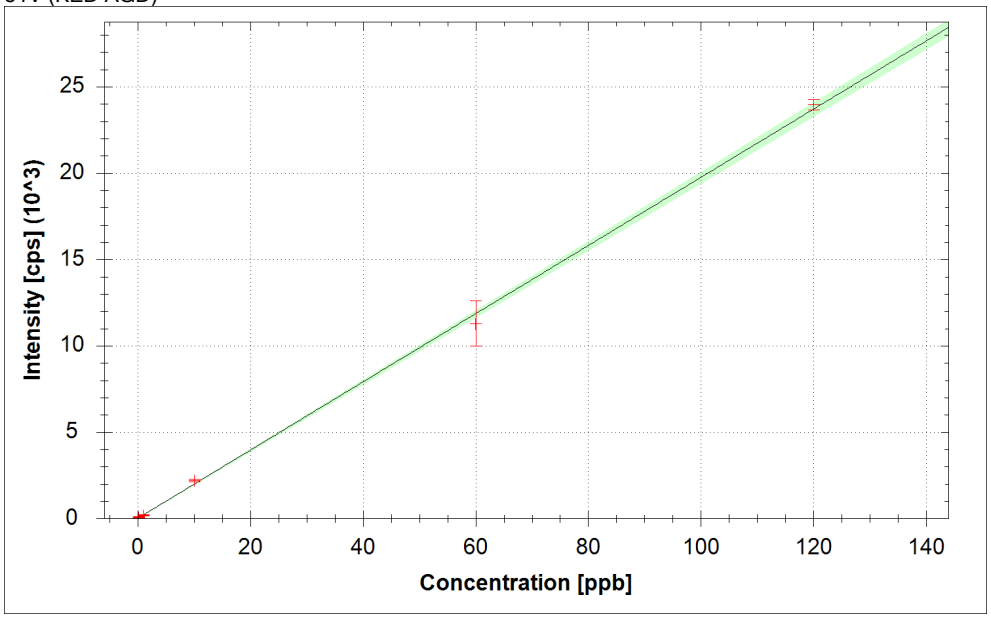
f(x) = 3.8365*x + 340.6542
R² = 0.9997
BEC = 88.792 ppb
LoD = 63.7744 ppb

44Ca (KED AGD)



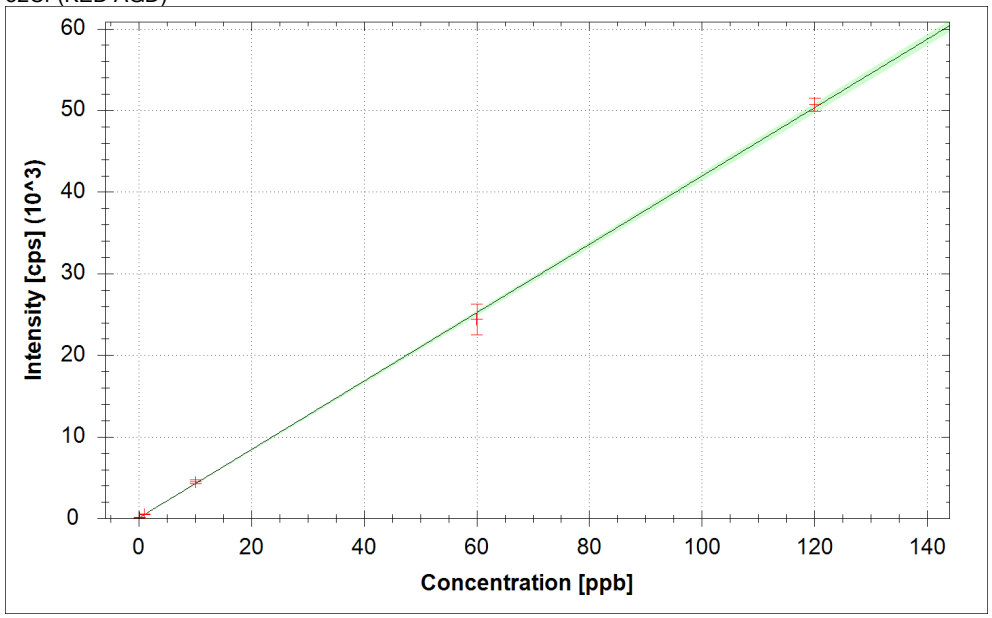
f(x) = 0.1875*x + 8.8252
R² = 0.9978
BEC = 47.056 ppb
LoD = 32.9951 ppb

51V (KED AGD)



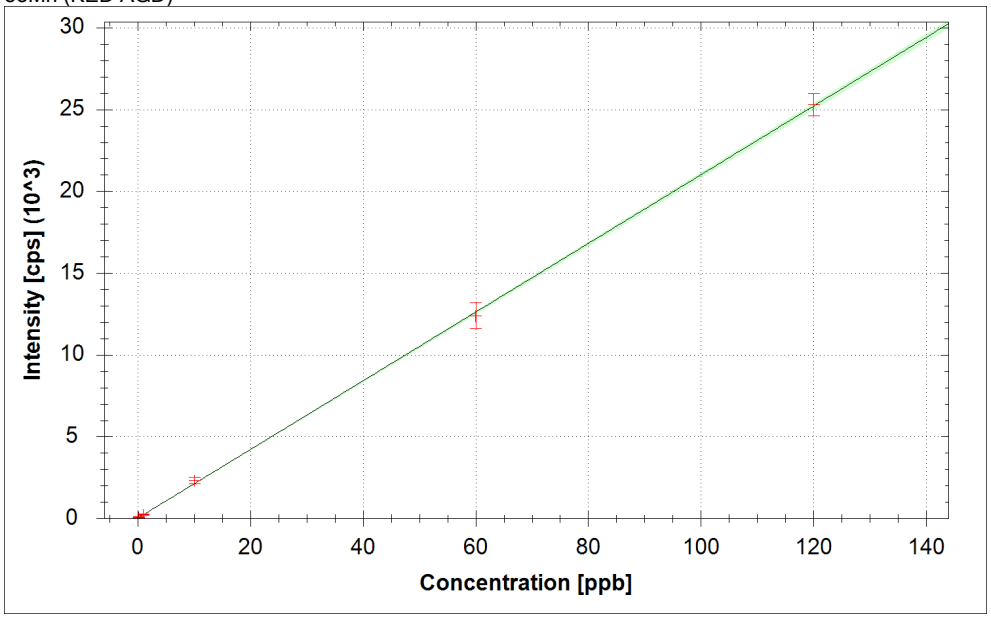
f(x) = 197.3360*x + 13.3381
R² = 0.9991
BEC = 0.068 ppb
LoD = 0.0047 ppb

52Cr (KED AGD)



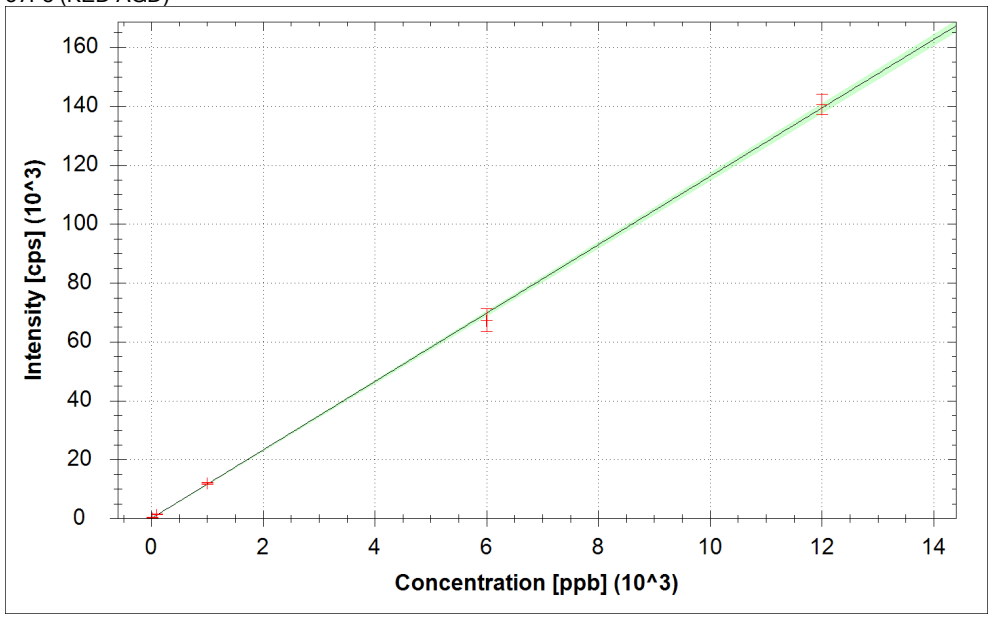
f(x) = 418.7053*x + 67.8297
R² = 0.9996
BEC = 0.162 ppb
LoD = 0.0976 ppb

55Mn (KED AGD)



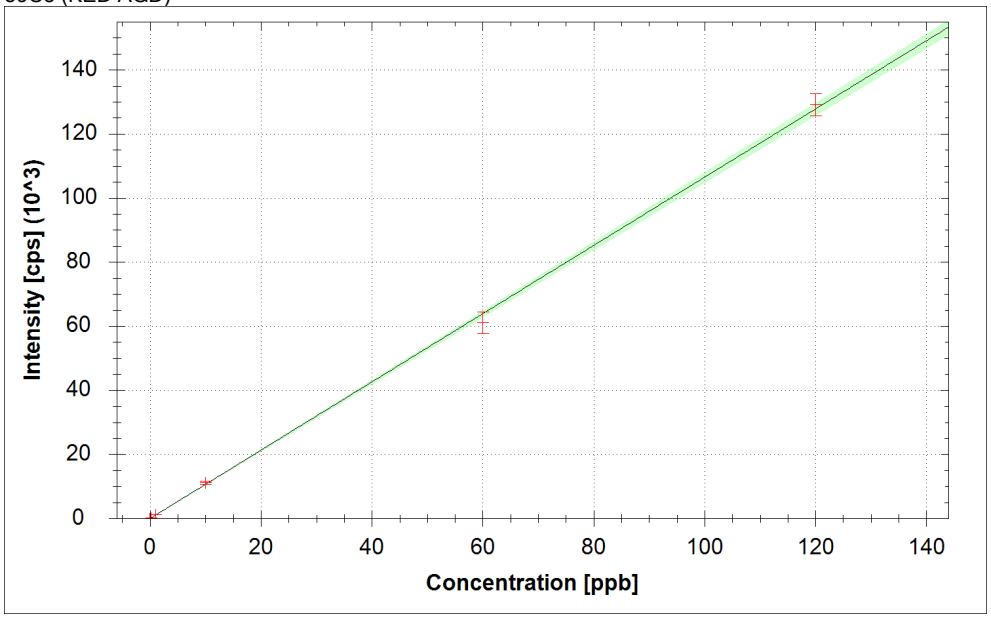
f(x) = 209.8208*x + 19.7821
R² = 0.9998
BEC = 0.094 ppb
LoD = 0.2495 ppb

57Fe (KED AGD)



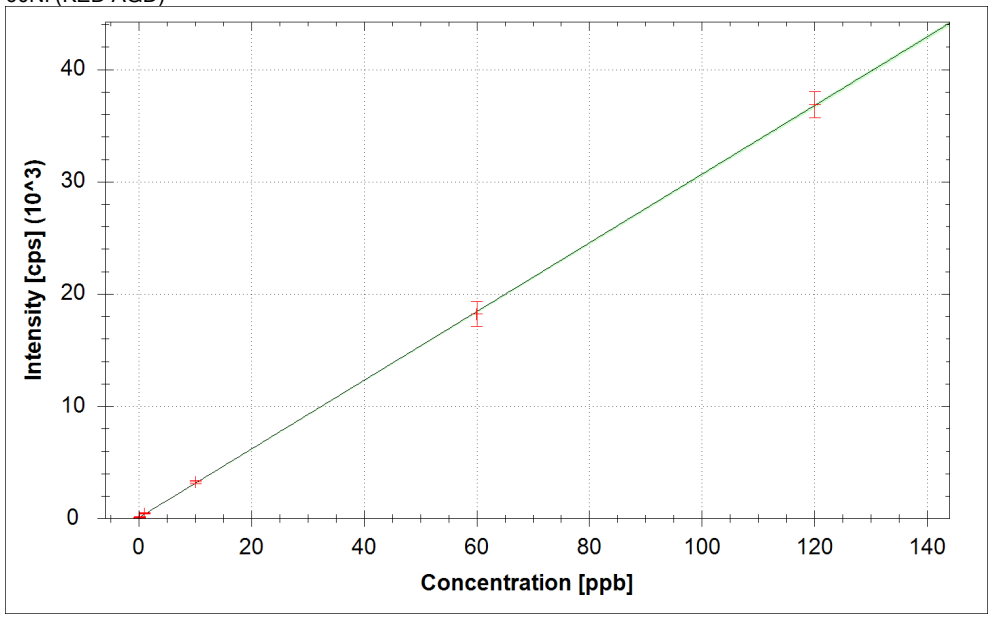
f(x) = 11.6127*x + 13.4710
R² = 0.9996
BEC = 1.160 ppb
LoD = 3.0742 ppb

59Co (KED AGD)



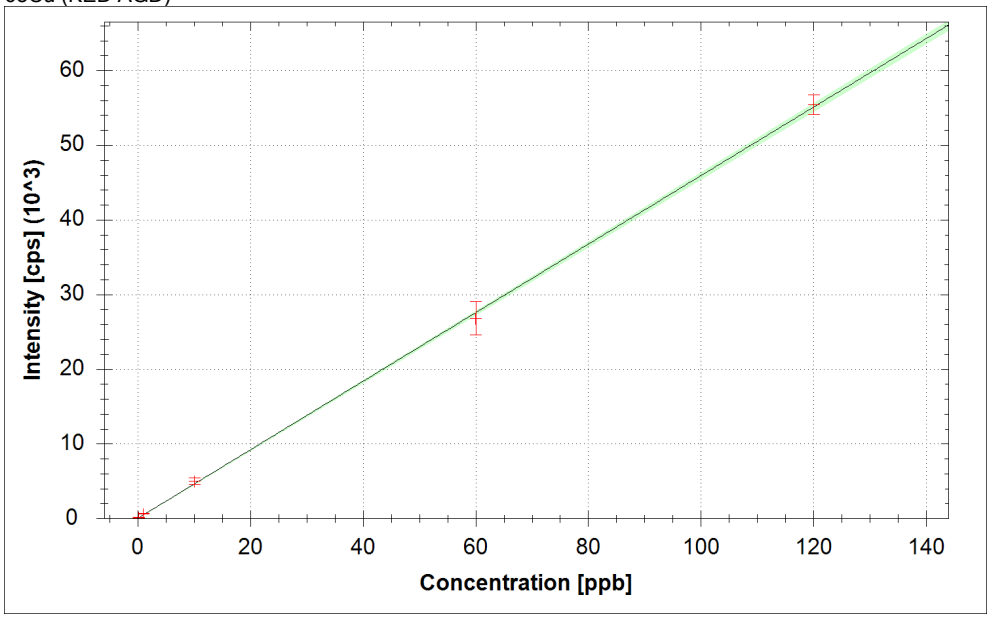
f(x) = 1064.4324*x + 6.6678
R² = 0.9993
BEC = 0.006 ppb
LoD = 0.0003 ppb

60Ni (KED AGD)



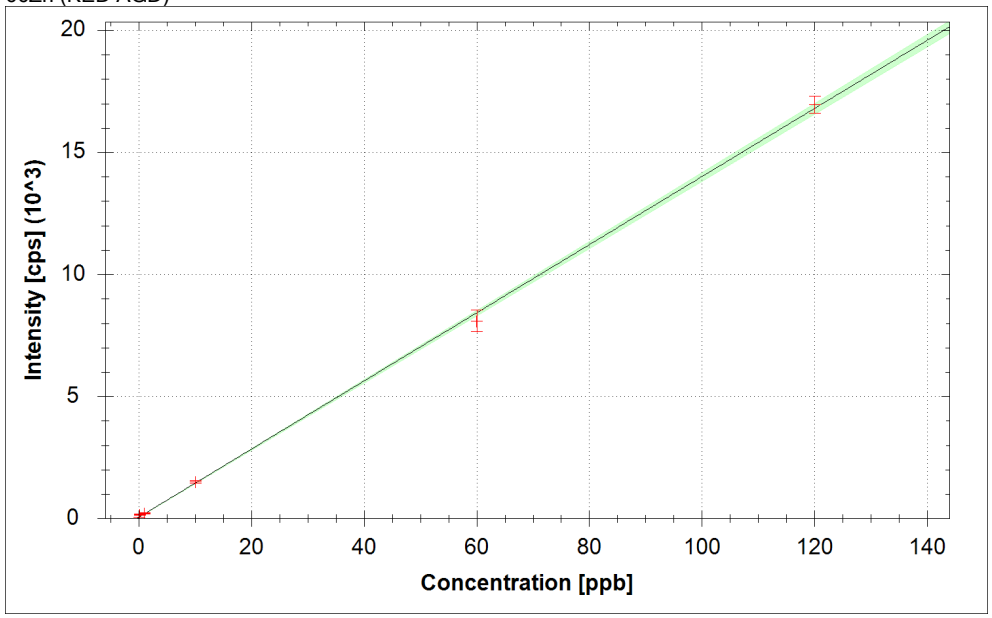
f(x) = 305.8719*x + 69.2832
R² = 0.9999
BEC = 0.227 ppb
LoD = 0.3961 ppb

65Cu (KED AGD)



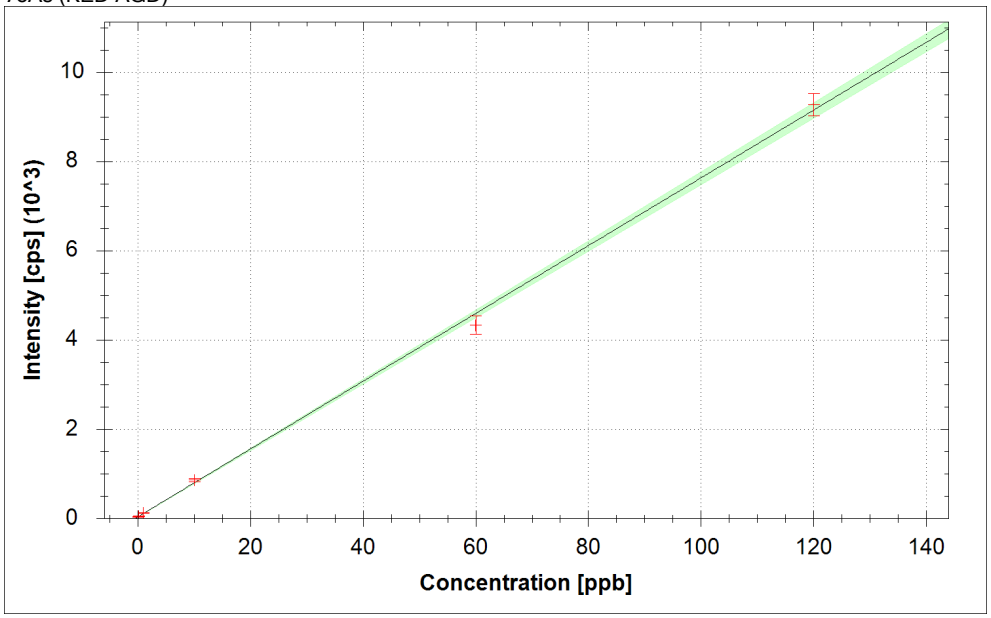
f(x) = 458.7125*x + 24.3767
R² = 0.9997
BEC = 0.053 ppb
LoD = 0.0652 ppb

66Zn (KED AGD)



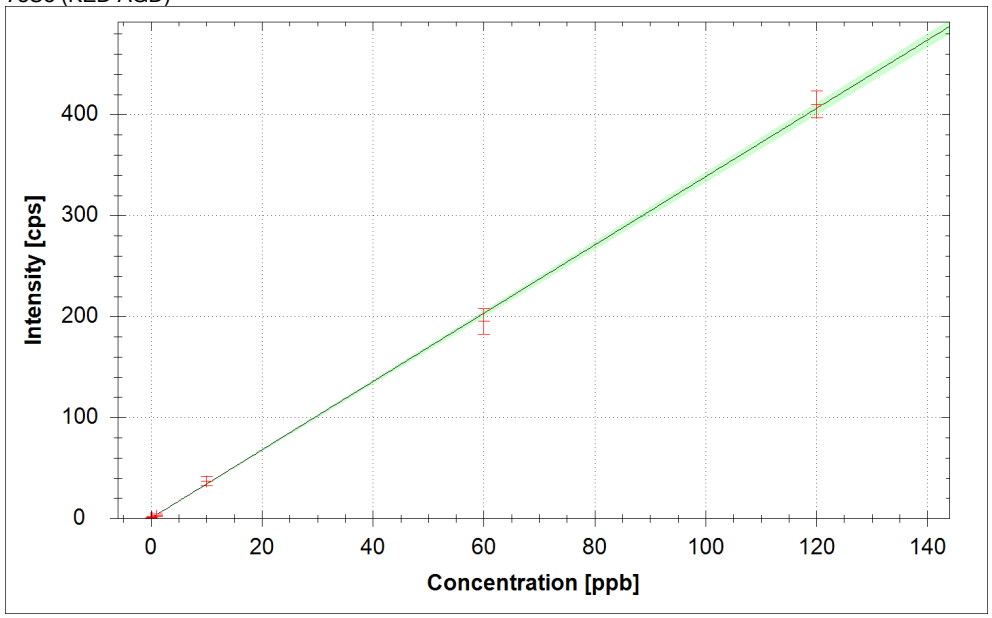
f(x) = 139.5155*x + 51.5680
R² = 0.9994
BEC = 0.370 ppb
LoD = 0.1039 ppb

75As (KED AGD)



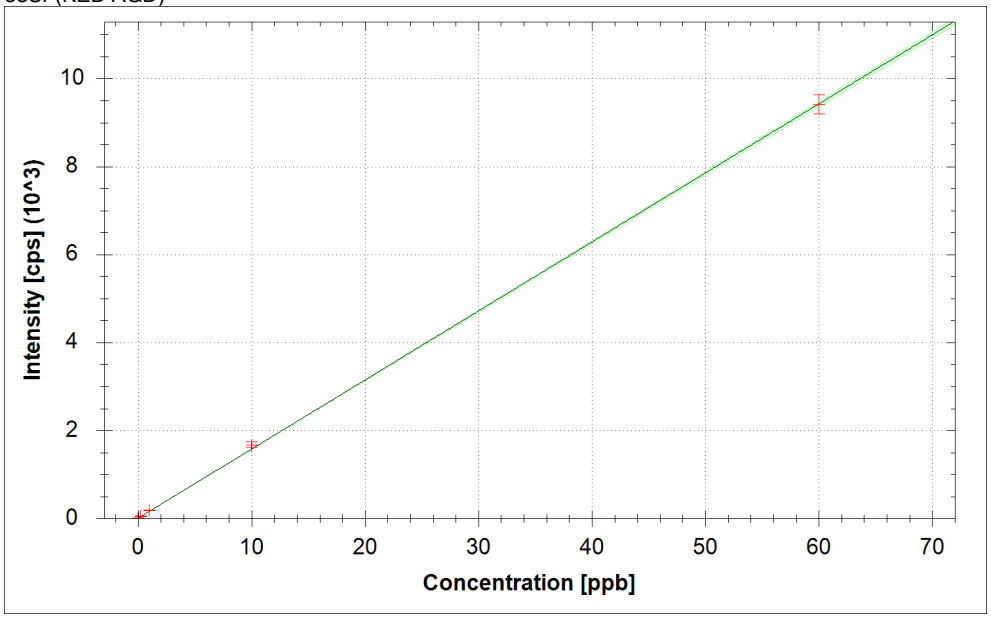
f(x) = 75.9117*x + 36.9567
R² = 0.9987
BEC = 0.487 ppb
LoD = 0.2597 ppb

78Se (KED AGD)



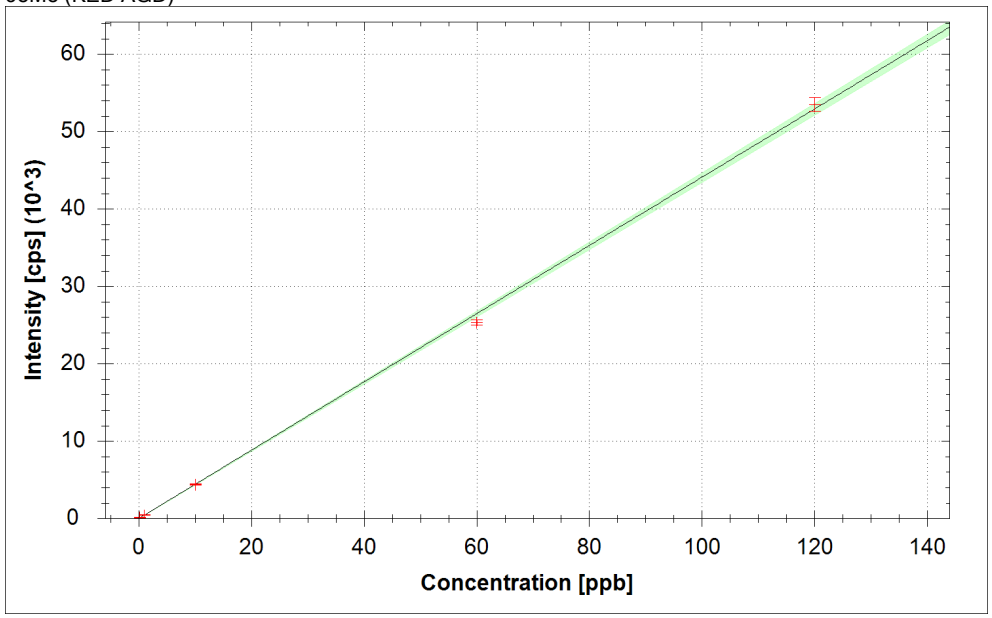
f(x) = 3.3810*x + 0.2669
R² = 0.9994
BEC = 0.079 ppb
LoD = 0.2723 ppb

88Sr (KED AGD)



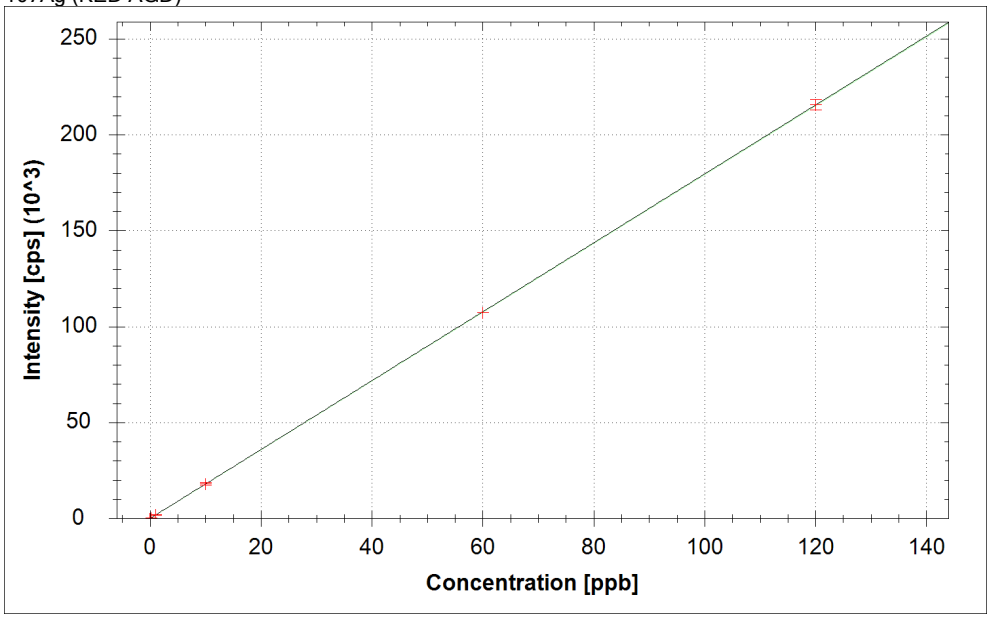
f(x) = 156.8985*x + 7.3372
R² = 0.9999
BEC = 0.047 ppb
LoD = 0.0093 ppb

95Mo (KED AGD)



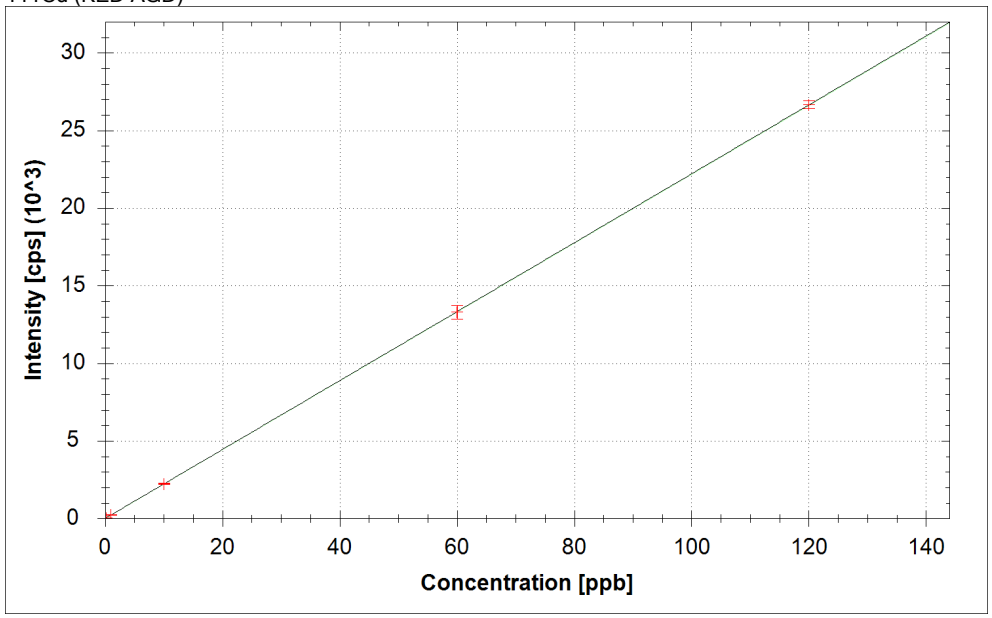
f(x) = 440.7441*x + 4.4023
R² = 0.9993
BEC = 0.010 ppb
LoD = 0.0260 ppb

107Ag (KED AGD)



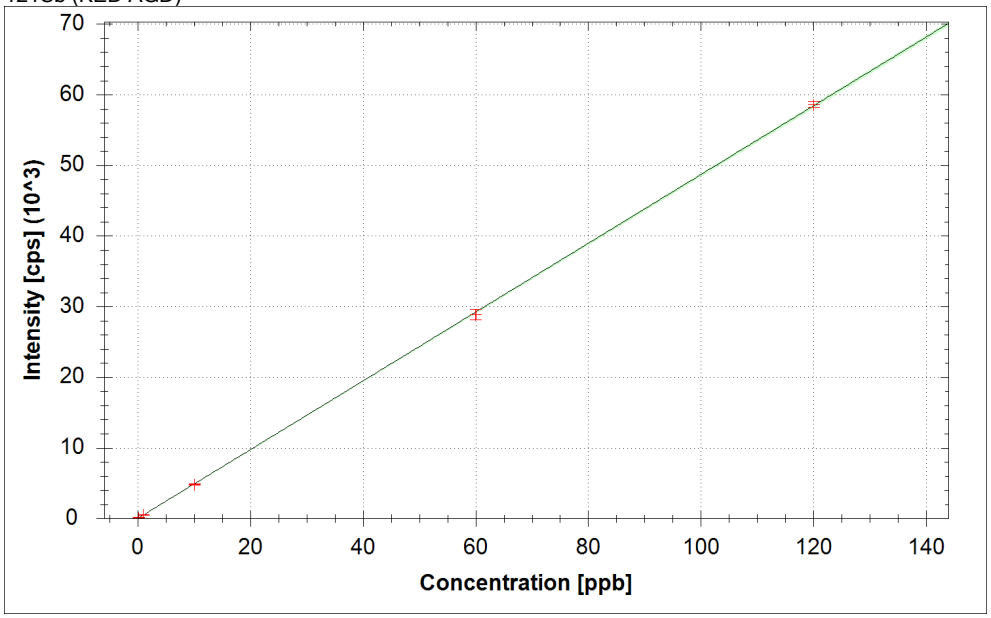
f(x) = 1795.1970*x + 2.2324
R² = 1.0000
BEC = 0.001 ppb
LoD = 0.0032 ppb

111Cd (KED AGD)



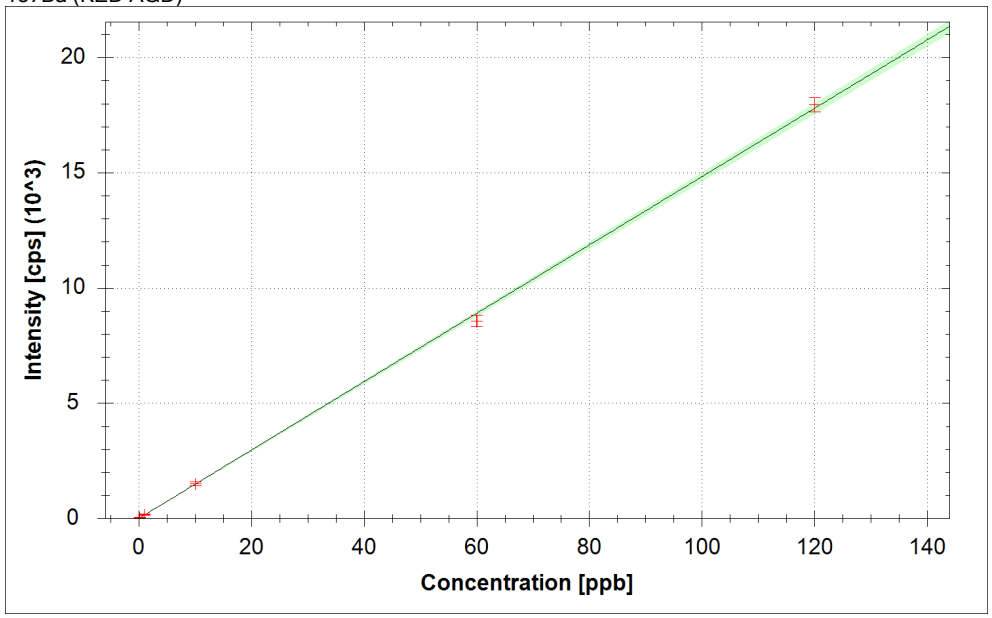
f(x) = 222.0082*x
R² = 1.0000
BEC = 0.000 ppb
LoD = 0.0000 ppb

121Sb (KED AGD)



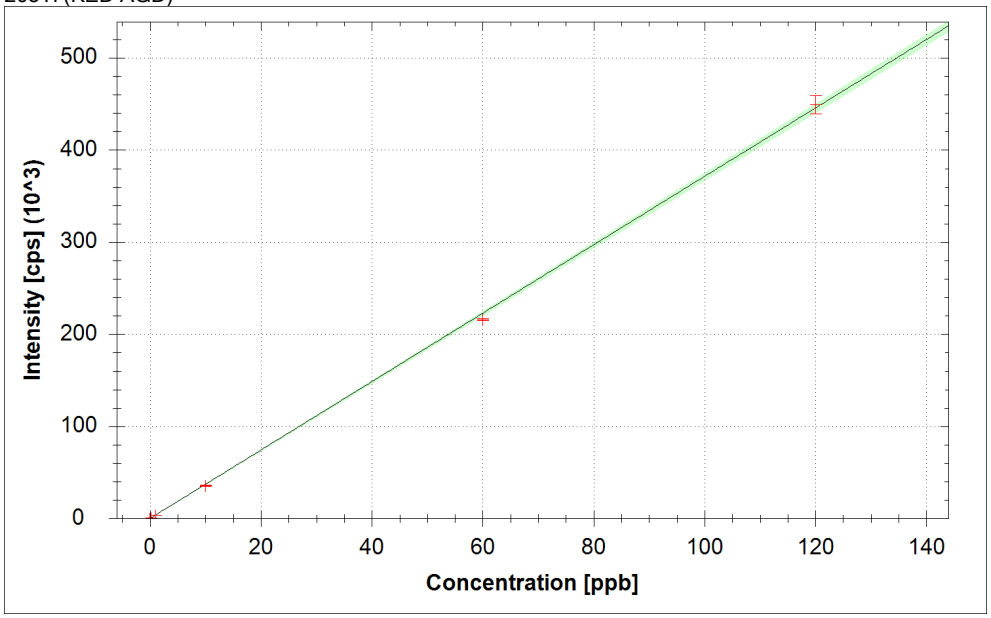
f(x) = 486.5706*x + 18.6886
R² = 0.9999
BEC = 0.038 ppb
LoD = 0.0361 ppb

137Ba (KED AGD)



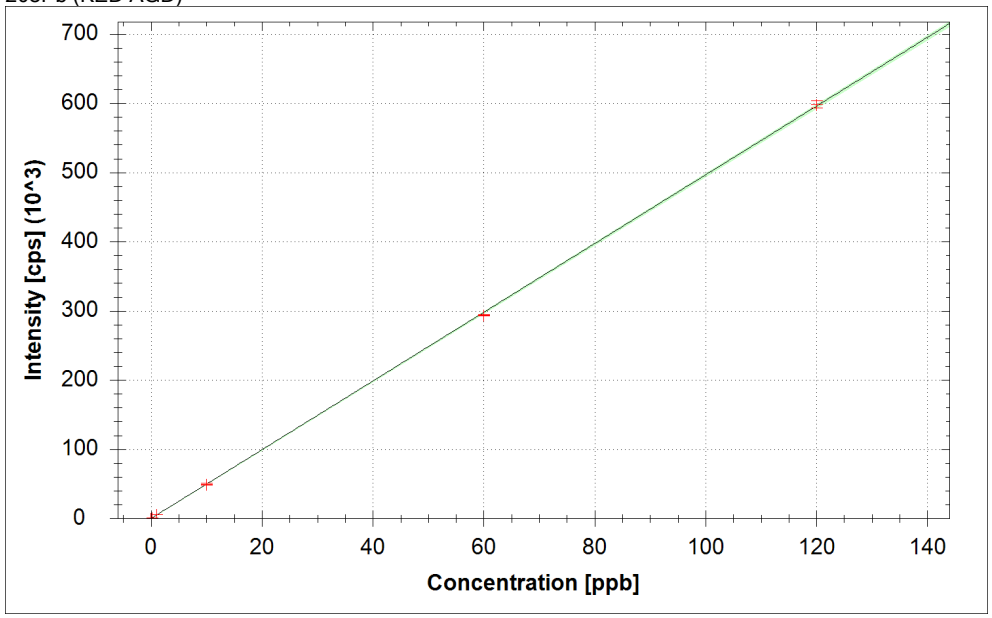
f(x) = 148.1863*x + 3.2143
R² = 0.9995
BEC = 0.022 ppb
LoD = 0.1127 ppb

205Tl (KED AGD)



f(x) = 3712.9467*x + 34.1088
R² = 0.9996
BEC = 0.009 ppb
LoD = 0.0212 ppb

208Pb (KED AGD)



f(x) = 4963.7993*x + 44.4665
R² = 0.9999
BEC = 0.009 ppb
LoD = 0.0020 ppb

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 8:55:32 AM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	97.278 %	1.6 %		0.000 %
6Li (KED AGD)	86.126 %	14.9 %		0.000 %
9Be (STD AGD)	0.194 ppb	29.9 %	0.200 ppb	2.892 %
23Na (KED AGD)	33.287 ppb	43.4 %	20.000 ppb	66.435 %
24Mg (KED AGD)	26.975 ppb	25.7 %	20.000 ppb	34.876 %
27Al (KED AGD)	0.307 ppb	271.6 %	0.200 ppb	53.432 %
39K (KED AGD)	18.327 ppb	77.5 %	20.000 ppb	8.366 %
44Ca (KED AGD)	122.157 ppb	16.8 %	20.000 ppb	510.783 %
45Sc (STD AGD)	100.253 %	0.9 %		0.000 %
51V (KED AGD)	0.201 ppb	91.2 %	0.200 ppb	0.633 %
52Cr (KED AGD)	0.254 ppb	3.2 %	0.200 ppb	26.929 %
55Mn (KED AGD)	0.199 ppb	104.8 %	0.200 ppb	0.715 %
57Fe (KED AGD)	20.856 ppb	20.3 %	20.000 ppb	4.282 %
59Co (KED AGD)	0.184 ppb	6.1 %	0.200 ppb	7.752 %
60Ni (KED AGD)	0.175 ppb	106.3 %	0.200 ppb	12.440 %
65Cu (KED AGD)	0.258 ppb	34.4 %	0.200 ppb	29.013 %
66Zn (KED AGD)	0.671 ppb	25.9 %	0.200 ppb	235.583 %
74Ge (KED AGD)	105.199 %	9.4 %		0.000 %
75As (KED AGD)	0.149 ppb	58.0 %	0.200 ppb	25.323 %
78Se (KED AGD)	0.321 ppb	24.4 %	0.200 ppb	60.467 %
88Sr (KED AGD)	0.268 ppb	4.7 %	0.200 ppb	33.853 %
95Mo (KED AGD)	0.266 ppb	31.1 %	0.200 ppb	32.967 %
103Rh (KED AGD)	98.642 %	0.4 %		0.000 %
107Ag (KED AGD)	0.185 ppb	9.4 %	0.200 ppb	7.583 %
111Cd (KED AGD)	0.180 ppb	24.5 %	0.200 ppb	9.771 %
115In (KED AGD)	102.048 %	0.3 %		0.000 %
121Sb (KED AGD)	0.189 ppb	5.5 %	0.200 ppb	5.310 %
137Ba (KED AGD)	0.193 ppb	40.3 %	0.200 ppb	3.551 %
159Tb (KED AGD)	100.576 %	0.7 %		0.000 %
175Lu (KED AGD)	100.043 %	1.2 %		0.000 %
205Tl (KED AGD)	0.183 ppb	6.2 %	0.200 ppb	8.568 %
208Pb (KED AGD)	0.202 ppb	4.9 %	0.200 ppb	0.794 %
209Bi (KED AGD)	103.621 %	1.6 %		0.000 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 8:59:59 AM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	98.019 %	2.5 %		0.000 %
6Li (KED AGD)	95.288 %	12.0 %		0.000 %
9Be (STD AGD)	1.022 ppb	7.1 %	1.000 ppb	2.208 %
23Na (KED AGD)	114.249 ppb	10.5 %	100.000 ppb	14.249 %
24Mg (KED AGD)	96.175 ppb	16.4 %	100.000 ppb	3.825 %
27Al (KED AGD)	1.999 ppb	25.9 %	1.000 ppb	99.873 %
39K (KED AGD)	114.298 ppb	22.3 %	100.000 ppb	14.298 %
44Ca (KED AGD)	176.850 ppb	24.1 %	100.000 ppb	76.850 %
45Sc (STD AGD)	103.619 %	2.9 %		0.000 %
51V (KED AGD)	0.905 ppb	24.6 %	1.000 ppb	9.540 %
52Cr (KED AGD)	1.071 ppb	8.1 %	1.000 ppb	7.148 %
55Mn (KED AGD)	0.996 ppb	15.1 %	1.000 ppb	0.362 %
57Fe (KED AGD)	111.687 ppb	11.0 %	100.000 ppb	11.687 %
59Co (KED AGD)	1.053 ppb	4.1 %	1.000 ppb	5.292 %
60Ni (KED AGD)	1.192 ppb	13.2 %	1.000 ppb	19.207 %
65Cu (KED AGD)	1.262 ppb	8.1 %	1.000 ppb	26.224 %
66Zn (KED AGD)	1.144 ppb	12.3 %	1.000 ppb	14.372 %
74Ge (KED AGD)	95.500 %	1.1 %		0.000 %
75As (KED AGD)	1.190 ppb	8.4 %	1.000 ppb	19.044 %
78Se (KED AGD)	0.822 ppb	46.4 %	1.000 ppb	17.809 %
88Sr (KED AGD)	1.150 ppb	3.7 %	1.000 ppb	15.008 %
95Mo (KED AGD)	0.988 ppb	5.5 %	1.000 ppb	1.222 %
103Rh (KED AGD)	98.261 %	1.4 %		0.000 %
107Ag (KED AGD)	1.012 ppb	3.1 %	1.000 ppb	1.213 %
111Cd (KED AGD)	1.023 ppb	10.3 %	1.000 ppb	2.278 %
115In (KED AGD)	102.426 %	1.2 %		0.000 %
121Sb (KED AGD)	1.006 ppb	5.7 %	1.000 ppb	0.578 %
137Ba (KED AGD)	1.024 ppb	17.2 %	1.000 ppb	2.409 %
159Tb (KED AGD)	101.104 %	0.3 %		0.000 %
175Lu (KED AGD)	101.577 %	2.1 %		0.000 %
205Tl (KED AGD)	0.940 ppb	3.8 %	1.000 ppb	5.951 %
208Pb (KED AGD)	1.025 ppb	2.4 %	1.000 ppb	2.520 %
209Bi (KED AGD)	104.045 %	1.8 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 10/1000 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 9:04:27 AM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	100.733 %	1.4 %		0.000 %
6Li (KED AGD)	98.429 %	11.6 %		0.000 %
9Be (STD AGD)	9.875 ppb	2.9 %	10.000 ppb	1.248 %
23Na (KED AGD)	1,023.964 ppb	10.3 %	1,000.000 ppb	2.396 %
24Mg (KED AGD)	1,004.539 ppb	11.3 %	1,000.000 ppb	0.454 %
27Al (KED AGD)	9.260 ppb	11.5 %	10.000 ppb	7.403 %
39K (KED AGD)	984.086 ppb	6.4 %	1,000.000 ppb	1.591 %
44Ca (KED AGD)	1,198.686 ppb	10.5 %	1,000.000 ppb	19.869 %
45Sc (STD AGD)	101.432 %	2.1 %		0.000 %
51V (KED AGD)	11.009 ppb	3.2 %	10.000 ppb	10.085 %
52Cr (KED AGD)	10.497 ppb	5.6 %	10.000 ppb	4.970 %
55Mn (KED AGD)	10.939 ppb	9.0 %	10.000 ppb	9.392 %
57Fe (KED AGD)	1,022.620 ppb	2.3 %	1,000.000 ppb	2.262 %
59Co (KED AGD)	10.469 ppb	4.5 %	10.000 ppb	4.689 %
60Ni (KED AGD)	10.369 ppb	5.0 %	10.000 ppb	3.693 %
65Cu (KED AGD)	10.806 ppb	8.6 %	10.000 ppb	8.060 %
66Zn (KED AGD)	10.350 ppb	3.2 %	10.000 ppb	3.500 %
74Ge (KED AGD)	97.333 %	0.9 %		0.000 %
75As (KED AGD)	10.784 ppb	4.8 %	10.000 ppb	7.838 %
78Se (KED AGD)	10.871 ppb	12.7 %	10.000 ppb	8.712 %
88Sr (KED AGD)	10.580 ppb	4.1 %	10.000 ppb	5.795 %
95Mo (KED AGD)	9.940 ppb	2.5 %	10.000 ppb	0.603 %
103Rh (KED AGD)	97.237 %	0.7 %		0.000 %
107Ag (KED AGD)	10.023 ppb	3.2 %	10.000 ppb	0.234 %
111Cd (KED AGD)	10.017 ppb	1.5 %	10.000 ppb	0.166 %
115In (KED AGD)	99.516 %	1.7 %		0.000 %
121Sb (KED AGD)	9.803 ppb	1.8 %	10.000 ppb	1.974 %
137Ba (KED AGD)	10.052 ppb	5.5 %	10.000 ppb	0.521 %
159Tb (KED AGD)	102.549 %	1.5 %		0.000 %
175Lu (KED AGD)	103.104 %	1.9 %		0.000 %
205Tl (KED AGD)	9.521 ppb	2.5 %	10.000 ppb	4.787 %
208Pb (KED AGD)	9.948 ppb	2.7 %	10.000 ppb	0.524 %
209Bi (KED AGD)	104.955 %	2.8 %		0.000 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 9:08:55 AM
Total Dilution Factor 166.6666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	103.730 %	0.3 %		0.000 %
6Li (KED AGD)	93.455 %	8.8 %		0.000 %
9Be (STD AGD)	58.999 ppb	1.0 %	60.000 ppb	1.668 %
23Na (KED AGD)	6,134.168 ppb	10.5 %	6,000.000 ppb	2.236 %
24Mg (KED AGD)	6,197.648 ppb	8.8 %	6,000.000 ppb	3.294 %
27Al (KED AGD)	59.094 ppb	14.4 %	60.000 ppb	1.510 %
39K (KED AGD)	5,841.990 ppb	9.6 %	6,000.000 ppb	2.634 %
44Ca (KED AGD)	5,965.264 ppb	11.0 %	6,000.000 ppb	0.579 %
45Sc (STD AGD)	110.255 %	1.3 %		0.000 %
51V (KED AGD)	57.127 ppb	11.6 %	60.000 ppb	4.789 %
52Cr (KED AGD)	58.075 ppb	7.8 %	60.000 ppb	3.208 %
55Mn (KED AGD)	58.939 ppb	6.3 %	60.000 ppb	1.769 %
57Fe (KED AGD)	5,794.492 ppb	5.8 %	6,000.000 ppb	3.425 %
59Co (KED AGD)	57.346 ppb	5.4 %	60.000 ppb	4.423 %
60Ni (KED AGD)	59.342 ppb	6.0 %	60.000 ppb	1.096 %
65Cu (KED AGD)	58.349 ppb	8.4 %	60.000 ppb	2.751 %
66Zn (KED AGD)	57.642 ppb	5.7 %	60.000 ppb	3.931 %
74Ge (KED AGD)	111.366 %	3.9 %		0.000 %
75As (KED AGD)	56.559 ppb	4.7 %	60.000 ppb	5.734 %
78Se (KED AGD)	57.611 ppb	6.5 %	60.000 ppb	3.982 %
88Sr (KED AGD)	59.901 ppb	2.3 %	60.000 ppb	0.166 %
95Mo (KED AGD)	57.399 ppb	1.4 %	60.000 ppb	4.335 %
103Rh (KED AGD)	103.062 %	1.3 %		0.000 %
107Ag (KED AGD)	59.722 ppb	0.1 %	60.000 ppb	0.464 %
111Cd (KED AGD)	59.821 ppb	3.3 %	60.000 ppb	0.299 %
115In (KED AGD)	104.934 %	2.3 %		0.000 %
121Sb (KED AGD)	59.309 ppb	2.5 %	60.000 ppb	1.152 %
137Ba (KED AGD)	57.783 ppb	2.9 %	60.000 ppb	3.695 %
159Tb (KED AGD)	111.994 %	3.9 %		0.000 %
175Lu (KED AGD)	110.564 %	4.0 %		0.000 %
205Tl (KED AGD)	58.114 ppb	0.6 %	60.000 ppb	3.144 %
208Pb (KED AGD)	59.114 ppb	0.4 %	60.000 ppb	1.477 %
209Bi (KED AGD)	114.618 %	3.7 %		0.000 %

Standards:

Analysis Index: 8
Analysis Name: 120/12000 Cal
Analysis Type: STD
Analysis Started at: 4/3/2024 9:13:24 AM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	105.694 %	1.4 %		0.000 %
6Li (KED AGD)	103.927 %	10.3 %		0.000 %
9Be (STD AGD)	120.511 ppb	0.7 %	120.000 ppb	0.425 %
23Na (KED AGD)	11,930.778 ppb	4.6 %	12,000.000 ppb	0.577 %
24Mg (KED AGD)	11,900.818 ppb	3.2 %	12,000.000 ppb	0.827 %
27Al (KED AGD)	120.506 ppb	4.5 %	120.000 ppb	0.422 %
39K (KED AGD)	12,080.215 ppb	4.2 %	12,000.000 ppb	0.668 %
44Ca (KED AGD)	12,751.456 ppb	1.9 %	12,000.000 ppb	6.262 %
45Sc (STD AGD)	117.213 %	1.5 %		0.000 %
51V (KED AGD)	121.353 ppb	1.3 %	120.000 ppb	1.128 %
52Cr (KED AGD)	120.920 ppb	1.6 %	120.000 ppb	0.767 %
55Mn (KED AGD)	120.452 ppb	2.7 %	120.000 ppb	0.377 %
57Fe (KED AGD)	12,100.770 ppb	2.5 %	12,000.000 ppb	0.840 %
59Co (KED AGD)	121.287 ppb	2.7 %	120.000 ppb	1.073 %
60Ni (KED AGD)	120.297 ppb	3.2 %	120.000 ppb	0.247 %
65Cu (KED AGD)	120.756 ppb	2.4 %	120.000 ppb	0.630 %
66Zn (KED AGD)	121.148 ppb	2.0 %	120.000 ppb	0.957 %
74Ge (KED AGD)	107.421 %	2.9 %		0.000 %
75As (KED AGD)	121.653 ppb	2.7 %	120.000 ppb	1.378 %
78Se (KED AGD)	121.123 ppb	3.2 %	120.000 ppb	0.936 %
88Sr (KED AGD)	126.233 ppb	2.0 %	120.000 ppb	5.194 %
95Mo (KED AGD)	121.305 ppb	1.7 %	120.000 ppb	1.088 %
103Rh (KED AGD)	105.651 %	1.4 %		0.000 %
107Ag (KED AGD)	120.137 ppb	1.2 %	120.000 ppb	0.114 %
111Cd (KED AGD)	120.088 ppb	1.0 %	120.000 ppb	0.073 %
115In (KED AGD)	108.858 %	2.6 %		0.000 %
121Sb (KED AGD)	120.362 ppb	0.7 %	120.000 ppb	0.302 %
137Ba (KED AGD)	121.104 ppb	1.8 %	120.000 ppb	0.920 %
159Tb (KED AGD)	116.723 %	0.8 %		0.000 %
175Lu (KED AGD)	116.971 %	0.8 %		0.000 %
205Tl (KED AGD)	120.984 ppb	2.2 %	120.000 ppb	0.820 %
208Pb (KED AGD)	120.447 ppb	0.9 %	120.000 ppb	0.373 %
209Bi (KED AGD)	120.186 %	1.0 %		0.000 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	1	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/3/2024 8:42:10 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.979 %	103.141 %	0.003 ppb	0.194 ppb	-1.316 ppb	-0.690 ppb	4.814 ppb	-5.932 ppb	108.728 %
Concentration per Run 1	103.372 %	105.236 %	0.003 ppb	-1.310 ppb	-2.384 ppb	-0.338 ppb	-4.928 ppb	-2.347 ppb	109.482 %
Concentration per Run 2	105.519 %	106.021 %	0.000 ppb	-2.064 ppb	-1.347 ppb	-0.702 ppb	-2.910 ppb	-26.971 ppb	108.771 %
Concentration per Run 3	106.047 %	98.168 %	0.006 ppb	3.955 ppb	-0.215 ppb	-1.031 ppb	22.279 ppb	11.522 ppb	107.932 %
Concentration RSD	1.3 %	4.2 %	94.1 %	1,693.9 %	82.5 %	50.2 %	314.9 %	328.6 %	0.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.025 ppb	0.043 ppb	0.006 ppb	2.766 ppb	-0.002 ppb	0.025 ppb	0.114 ppb	0.119 ppb	107.810 %
Concentration per Run 1	-0.005 ppb	0.058 ppb	-0.036 ppb	4.101 ppb	-0.001 ppb	0.033 ppb	0.172 ppb	0.039 ppb	110.412 %
Concentration per Run 2	-0.035 ppb	0.088 ppb	0.057 ppb	0.484 ppb	-0.006 ppb	0.023 ppb	0.114 ppb	0.206 ppb	104.360 %
Concentration per Run 3	-0.035 ppb	-0.018 ppb	-0.004 ppb	3.713 ppb	0.000 ppb	0.019 ppb	0.055 ppb	0.111 ppb	108.659 %
Concentration RSD	68.2 %	129.0 %	827.2 %	71.8 %	140.4 %	27.7 %	51.4 %	70.4 %	2.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.050 ppb	0.216 ppb	-0.002 ppb	0.010 ppb	101.433 %	0.006 ppb	0.000 ppb	107.356 %	0.020 ppb
Concentration per Run 1	0.042 ppb	-0.117 ppb	0.001 ppb	0.019 ppb	100.535 %	0.013 ppb	0.000 ppb	108.690 %	0.002 ppb
Concentration per Run 2	0.019 ppb	0.295 ppb	-0.001 ppb	0.020 ppb	101.097 %	0.002 ppb	0.000 ppb	107.978 %	0.033 ppb
Concentration per Run 3	0.090 ppb	0.470 ppb	-0.007 ppb	-0.010 ppb	102.667 %	0.002 ppb	0.000 ppb	105.401 %	0.024 ppb
Concentration RSD	72.7 %	139.8 %	193.1 %	176.1 %	1.1 %	104.9 %	N/A	1.6 %	81.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.042 ppb	105.262 %	104.650 %	0.002 ppb	0.008 ppb	109.346 %
Concentration per Run 1	0.061 ppb	107.927 %	104.421 %	-0.001 ppb	0.004 ppb	115.383 %
Concentration per Run 2	0.042 ppb	103.096 %	105.750 %	0.004 ppb	0.017 ppb	105.175 %
Concentration per Run 3	0.021 ppb	104.764 %	103.779 %	0.004 ppb	0.003 ppb	107.481 %
Concentration RSD	48.4 %	2.3 %	1.0 %	106.2 %	93.6 %	4.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	2	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CAL LOT #M24-1045	Rack	0		
Analysis started at:	4/3/2024 8:46:35 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.063 %	97.120 %	-0.002 ppb	2.190 ppb	-0.496 ppb	-0.618 ppb	4.963 ppb	-26.608 ppb	104.294 %
Concentration per Run 1	99.961 %	100.524 %	0.001 ppb	7.961 ppb	-1.842 ppb	-0.339 ppb	-20.080 ppb	-19.491 ppb	103.305 %
Concentration per Run 2	102.484 %	98.953 %	-0.001 ppb	-2.831 ppb	-1.284 ppb	-0.724 ppb	3.331 ppb	-33.349 ppb	104.365 %
Concentration per Run 3	103.743 %	91.885 %	-0.006 ppb	1.441 ppb	1.637 ppb	-0.792 ppb	31.639 ppb	-26.985 ppb	105.213 %
Concentration RSD	1.9 %	4.7 %	201.6 %	248.2 %	376.6 %	39.5 %	521.8 %	26.1 %	0.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.022 ppb	0.054 ppb	-0.010 ppb	-0.023 ppb	0.004 ppb	-0.047 ppb	0.066 ppb	0.168 ppb	102.540 %
Concentration per Run 1	0.066 ppb	0.097 ppb	-0.063 ppb	-0.029 ppb	-0.006 ppb	-0.055 ppb	0.076 ppb	0.185 ppb	101.832 %
Concentration per Run 2	0.000 ppb	0.044 ppb	0.001 ppb	0.553 ppb	0.012 ppb	-0.032 ppb	0.077 ppb	0.190 ppb	101.055 %
Concentration per Run 3	0.000 ppb	0.020 ppb	0.031 ppb	-0.595 ppb	0.006 ppb	-0.056 ppb	0.046 ppb	0.130 ppb	104.732 %
Concentration RSD	175.4 %	73.2 %	465.7 %	2,451.3 %	233.8 %	28.9 %	26.7 %	19.6 %	1.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	-0.047 ppb	0.196 ppb	-0.003 ppb	0.000 ppb	101.320 %	0.005 ppb	0.000 ppb	104.724 %	0.011 ppb
Concentration per Run 1	-0.077 ppb	0.177 ppb	0.000 ppb	0.005 ppb	98.343 %	0.004 ppb	0.000 ppb	102.696 %	0.010 ppb
Concentration per Run 2	0.045 ppb	0.402 ppb	-0.001 ppb	-0.010 ppb	101.841 %	-0.001 ppb	0.000 ppb	104.455 %	0.006 ppb
Concentration per Run 3	-0.109 ppb	0.010 ppb	-0.009 ppb	0.005 ppb	103.775 %	0.011 ppb	0.000 ppb	107.020 %	0.018 ppb
Concentration RSD	173.7 %	100.3 %	153.3 %	13,251.5 %	2.7 %	130.7 %	N/A	2.1 %	54.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.022 ppb	102.772 %	103.499 %	0.000 ppb	0.005 ppb	101.728 %
Concentration per Run 1	0.068 ppb	98.706 %	100.382 %	-0.002 ppb	0.004 ppb	100.467 %
Concentration per Run 2	0.000 ppb	105.779 %	103.858 %	-0.003 ppb	0.010 ppb	101.066 %
Concentration per Run 3	0.000 ppb	103.831 %	106.256 %	0.004 ppb	0.000 ppb	103.652 %
Concentration RSD	175.7 %	3.6 %	2.9 %	871.8 %	103.6 %	1.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	3	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Blank NTB ICPMSQ2	Rack	4		
Analysis started at:	4/3/2024 8:51:01 AM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.1 %	0.2 %	0.0 %	0.3 %	0.1 %	0.2 %	0.2 %	0.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.2 %	0.9 %	0.9 %	0.0 %	0.6 %	0.4 %	0.1 %	0.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb
Concentration per Run	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb
Concentration RSD	0.2 %	1.1 %	0.1 %	0.9 %	0.0 %	0.9 %		0.0 %	0.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	1.7 %	0.0 %	0.0 %	0.8 %	0.1 %	0.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	4	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	0.2/20 Cal	Rack	0		
Analysis started at:	4/3/2024 8:55:32 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.278 %	86.126 %	0.194 ppb	33.287 ppb	26.975 ppb	0.307 ppb	18.327 ppb	122.157 ppb	100.253 %
Concentration per Run 1	95.562 %	95.026 %	0.191 ppb	25.009 ppb	21.546 ppb	-0.490 ppb	1.932 ppb	109.617 ppb	99.254 %
Concentration per Run 2	97.717 %	71.466 %	0.138 ppb	49.971 ppb	34.784 ppb	0.238 ppb	26.038 ppb	145.842 ppb	101.057 %
Concentration per Run 3	98.554 %	91.885 %	0.254 ppb	24.881 ppb	24.596 ppb	1.173 ppb	27.011 ppb	111.011 ppb	100.449 %
Concentration RSD	1.6 %	14.9 %	29.9 %	43.4 %	25.7 %	271.6 %	77.5 %	16.8 %	0.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.201 ppb	0.254 ppb	0.199 ppb	20.856 ppb	0.184 ppb	0.175 ppb	0.258 ppb	0.671 ppb	105.199 %
Concentration per Run 1	0.118 ppb	0.245 ppb	0.050 ppb	18.498 ppb	0.173 ppb	0.046 ppb	0.177 ppb	0.479 ppb	116.295 %
Concentration per Run 2	0.412 ppb	0.262 ppb	0.110 ppb	18.316 ppb	0.184 ppb	0.389 ppb	0.244 ppb	0.719 ppb	101.951 %
Concentration per Run 3	0.074 ppb	0.254 ppb	0.436 ppb	25.755 ppb	0.196 ppb	0.091 ppb	0.353 ppb	0.816 ppb	97.350 %
Concentration RSD	91.2 %	3.2 %	104.8 %	20.3 %	6.1 %	106.3 %	34.4 %	25.9 %	9.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.149 ppb	0.321 ppb	0.268 ppb	0.266 ppb	98.642 %	0.185 ppb	0.180 ppb	102.048 %	0.189 ppb
Concentration per Run 1	0.054 ppb	0.257 ppb	0.264 ppb	0.296 ppb	99.125 %	0.201 ppb	0.231 ppb	102.226 %	0.195 ppb
Concentration per Run 2	0.171 ppb	0.298 ppb	0.257 ppb	0.173 ppb	98.498 %	0.166 ppb	0.155 ppb	102.226 %	0.196 ppb
Concentration per Run 3	0.223 ppb	0.408 ppb	0.282 ppb	0.329 ppb	98.304 %	0.187 ppb	0.155 ppb	101.692 %	0.177 ppb
Concentration RSD	58.0 %	24.4 %	4.7 %	31.1 %	0.4 %	9.4 %	24.5 %	0.3 %	5.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.193 ppb	100.576 %	100.043 %	0.183 ppb	0.202 ppb	103.621 %
Concentration per Run 1	0.266 ppb	100.951 %	101.474 %	0.179 ppb	0.205 ppb	102.821 %
Concentration per Run 2	0.201 ppb	99.711 %	99.218 %	0.174 ppb	0.209 ppb	105.546 %
Concentration per Run 3	0.111 ppb	101.066 %	99.438 %	0.196 ppb	0.190 ppb	102.497 %
Concentration RSD	40.3 %	0.7 %	1.2 %	6.2 %	4.9 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	5	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	1/100 Cal	Rack	0		
Analysis started at:	4/3/2024 8:59:59 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.019 %	95.288 %	1.022 ppb	114.249 ppb	96.175 ppb	1.999 ppb	114.298 ppb	176.850 ppb	103.619 %
Concentration per Run 1	95.184 %	106.021 %	0.940 ppb	101.870 ppb	81.916 ppb	1.635 ppb	107.453 ppb	137.214 ppb	100.457 %
Concentration per Run 2	99.672 %	96.597 %	1.077 ppb	115.087 ppb	93.416 ppb	1.769 ppb	92.985 ppb	171.431 ppb	106.404 %
Concentration per Run 3	99.200 %	83.246 %	1.049 ppb	125.791 ppb	113.193 ppb	2.592 ppb	142.454 ppb	221.904 ppb	103.996 %
Concentration RSD	2.5 %	12.0 %	7.1 %	10.5 %	16.4 %	25.9 %	22.3 %	24.1 %	2.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.905 ppb	1.071 ppb	0.996 ppb	111.687 ppb	1.053 ppb	1.192 ppb	1.262 ppb	1.144 ppb	95.500 %
Concentration per Run 1	0.648 ppb	0.972 ppb	0.970 ppb	97.665 ppb	1.062 ppb	1.023 ppb	1.281 ppb	1.121 ppb	95.563 %
Concentration per Run 2	1.052 ppb	1.133 ppb	0.860 ppb	120.767 ppb	1.006 ppb	1.219 ppb	1.152 ppb	1.294 ppb	96.506 %
Concentration per Run 3	1.013 ppb	1.109 ppb	1.159 ppb	116.629 ppb	1.090 ppb	1.335 ppb	1.354 ppb	1.016 ppb	94.431 %
Concentration RSD	24.6 %	8.1 %	15.1 %	11.0 %	4.1 %	13.2 %	8.1 %	12.3 %	1.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.190 ppb	0.822 ppb	1.150 ppb	0.988 ppb	98.261 %	1.012 ppb	1.023 ppb	102.426 %	1.006 ppb
Concentration per Run 1	1.167 ppb	0.411 ppb	1.111 ppb	0.932 ppb	96.665 %	1.045 ppb	1.067 ppb	101.059 %	0.962 ppb
Concentration per Run 2	1.104 ppb	0.890 ppb	1.196 ppb	0.992 ppb	98.754 %	1.008 ppb	0.902 ppb	103.427 %	0.985 ppb
Concentration per Run 3	1.300 ppb	1.165 ppb	1.144 ppb	1.040 ppb	99.364 %	0.984 ppb	1.099 ppb	102.793 %	1.071 ppb
Concentration RSD	8.4 %	46.4 %	3.7 %	5.5 %	1.4 %	3.1 %	10.3 %	1.2 %	5.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.024 ppb	101.104 %	101.577 %	0.940 ppb	1.025 ppb	104.045 %
Concentration per Run 1	0.823 ppb	101.439 %	99.484 %	0.916 ppb	1.053 ppb	102.477 %
Concentration per Run 2	1.101 ppb	100.971 %	101.490 %	0.981 ppb	1.015 ppb	103.510 %
Concentration per Run 3	1.149 ppb	100.902 %	103.758 %	0.925 ppb	1.008 ppb	106.147 %
Concentration RSD	17.2 %	0.3 %	2.1 %	3.8 %	2.4 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	6	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	10/1000 Cal	Rack	0		
Analysis started at:	4/3/2024 9:04:27 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.733 %	98.429 %	9.875 ppb	1,023.964 ppb	1,004.539 ppb	9.260 ppb	984.086 ppb	1,198.686 ppb	101.432 %
Concentration per Run 1	99.188 %	87.173 %	9.878 ppb	1,141.712 ppb	1,135.233 ppb	9.835 ppb	1,046.874 ppb	1,197.005 ppb	98.978 %
Concentration per Run 2	100.948 %	98.168 %	10.157 ppb	991.179 ppb	946.934 ppb	9.916 ppb	984.656 ppb	1,073.485 ppb	102.816 %
Concentration per Run 3	102.063 %	109.948 %	9.591 ppb	939.000 ppb	931.451 ppb	8.028 ppb	920.728 ppb	1,325.569 ppb	102.502 %
Concentration RSD	1.4 %	11.6 %	2.9 %	10.3 %	11.3 %	11.5 %	6.4 %	10.5 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	11.009 ppb	10.497 ppb	10.939 ppb	1,022.620 ppb	10.469 ppb	10.369 ppb	10.806 ppb	10.350 ppb	97.333 %
Concentration per Run 1	10.723 ppb	11.162 ppb	12.054 ppb	1,000.369 ppb	11.000 ppb	10.964 ppb	11.879 ppb	10.102 ppb	98.331 %
Concentration per Run 2	11.402 ppb	10.046 ppb	10.211 ppb	1,047.162 ppb	10.105 ppb	10.086 ppb	10.191 ppb	10.224 ppb	96.724 %
Concentration per Run 3	10.901 ppb	10.284 ppb	10.552 ppb	1,020.328 ppb	10.301 ppb	10.057 ppb	10.348 ppb	10.724 ppb	96.946 %
Concentration RSD	3.2 %	5.6 %	9.0 %	2.3 %	4.5 %	5.0 %	8.6 %	3.2 %	0.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	10.784 ppb	10.871 ppb	10.580 ppb	9.940 ppb	97.237 %	10.023 ppb	10.017 ppb	99.516 %	9.803 ppb
Concentration per Run 1	10.238 ppb	12.469 ppb	10.099 ppb	10.039 ppb	96.427 %	10.368 ppb	9.847 ppb	98.729 %	9.893 ppb
Concentration per Run 2	11.256 ppb	10.075 ppb	10.694 ppb	9.662 ppb	97.725 %	9.971 ppb	10.135 ppb	98.342 %	9.913 ppb
Concentration per Run 3	10.857 ppb	10.069 ppb	10.946 ppb	10.118 ppb	97.560 %	9.730 ppb	10.068 ppb	101.475 %	9.602 ppb
Concentration RSD	4.8 %	12.7 %	4.1 %	2.5 %	0.7 %	3.2 %	1.5 %	1.7 %	1.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10.052 ppb	102.549 %	103.104 %	9.521 ppb	9.948 ppb	104.955 %
Concentration per Run 1	9.865 ppb	101.043 %	101.142 %	9.390 ppb	9.749 ppb	105.298 %
Concentration per Run 2	9.612 ppb	102.471 %	103.014 %	9.792 ppb	10.249 ppb	101.842 %
Concentration per Run 3	10.679 ppb	104.134 %	105.155 %	9.382 ppb	9.845 ppb	107.723 %
Concentration RSD	5.5 %	1.5 %	1.9 %	2.5 %	2.7 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	7	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/3/2024 9:08:55 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.730 %	93.455 %	58.999 ppb	6,134.168 ppb	6,197.648 ppb	59.094 ppb	5,841.990 ppb	5,965.264 ppb	110.255 %
Concentration per Run 1	103.371 %	102.880 %	58.317 ppb	5,405.438 ppb	5,574.604 ppb	49.613 ppb	5,293.722 ppb	5,371.490 ppb	108.734 %
Concentration per Run 2	103.777 %	89.529 %	59.482 ppb	6,377.832 ppb	6,415.150 ppb	61.517 ppb	5,821.246 ppb	5,854.736 ppb	110.395 %
Concentration per Run 3	104.043 %	87.958 %	59.200 ppb	6,619.233 ppb	6,603.189 ppb	66.151 ppb	6,411.002 ppb	6,669.566 ppb	111.636 %
Concentration RSD	0.3 %	8.8 %	1.0 %	10.5 %	8.8 %	14.4 %	9.6 %	11.0 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	57.127 ppb	58.075 ppb	58.939 ppb	5,794.492 ppb	57.346 ppb	59.342 ppb	58.349 ppb	57.642 ppb	111.366 %
Concentration per Run 1	49.981 ppb	53.164 ppb	54.822 ppb	5,535.058 ppb	55.355 ppb	56.773 ppb	55.043 ppb	54.979 ppb	112.018 %
Concentration per Run 2	58.358 ppb	58.962 ppb	59.995 ppb	5,671.120 ppb	55.769 ppb	57.835 ppb	56.022 ppb	56.659 ppb	115.361 %
Concentration per Run 3	63.041 ppb	62.100 ppb	61.999 ppb	6,177.298 ppb	60.915 ppb	63.419 ppb	63.983 ppb	61.287 ppb	106.718 %
Concentration RSD	11.6 %	7.8 %	6.3 %	5.8 %	5.4 %	6.0 %	8.4 %	5.7 %	3.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	56.559 ppb	57.611 ppb	59.901 ppb	57.399 ppb	103.062 %	59.722 ppb	59.821 ppb	104.934 %	59.309 ppb
Concentration per Run 1	55.852 ppb	54.556 ppb	59.770 ppb	56.466 ppb	103.093 %	59.756 ppb	57.755 ppb	107.095 %	57.630 ppb
Concentration per Run 2	54.316 ppb	56.466 ppb	58.589 ppb	57.948 ppb	104.377 %	59.662 ppb	61.659 ppb	102.317 %	60.458 ppb
Concentration per Run 3	59.511 ppb	61.810 ppb	61.343 ppb	57.784 ppb	101.716 %	59.747 ppb	60.048 ppb	105.390 %	59.838 ppb
Concentration RSD	4.7 %	6.5 %	2.3 %	1.4 %	1.3 %	0.1 %	3.3 %	2.3 %	2.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	57.783 ppb	111.994 %	110.564 %	58.114 ppb	59.114 ppb	114.618 %
Concentration per Run 1	55.911 ppb	106.933 %	105.473 %	57.956 ppb	59.115 ppb	109.804 %
Concentration per Run 2	59.214 ppb	114.604 %	112.659 %	57.889 ppb	58.875 ppb	116.214 %
Concentration per Run 3	58.223 ppb	114.445 %	113.559 %	58.496 ppb	59.351 ppb	117.838 %
Concentration RSD	2.9 %	3.9 %	4.0 %	0.6 %	0.4 %	3.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	8	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	120/12000 Cal	Rack	0		
Analysis started at:	4/3/2024 9:13:24 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.694 %	103.927 %	120.511 ppb	11,930.778 ppb	11,900.818 ppb	120.506 ppb	12,080.215 ppb	12,751.456 ppb	117.213 %
Concentration per Run 1	104.640 %	91.885 %	121.260 ppb	12,564.221 ppb	12,347.244 ppb	118.270 ppb	12,232.641 ppb	12,660.304 ppb	116.022 %
Concentration per Run 2	105.094 %	107.592 %	120.641 ppb	11,585.366 ppb	11,682.324 ppb	126.666 ppb	12,492.015 ppb	13,022.558 ppb	116.360 %
Concentration per Run 3	107.347 %	112.304 %	119.630 ppb	11,642.748 ppb	11,672.888 ppb	116.583 ppb	11,515.989 ppb	12,571.507 ppb	119.259 %
Concentration RSD	1.4 %	10.3 %	0.7 %	4.6 %	3.2 %	4.5 %	4.2 %	1.9 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	121.353 ppb	120.920 ppb	120.452 ppb	12,100.770 ppb	121.287 ppb	120.297 ppb	120.756 ppb	121.148 ppb	107.421 %
Concentration per Run 1	121.244 ppb	122.300 ppb	118.492 ppb	12,289.745 ppb	124.199 ppb	122.863 ppb	122.167 ppb	118.669 ppb	105.444 %
Concentration per Run 2	122.978 ppb	121.750 ppb	124.224 ppb	12,256.156 ppb	121.989 ppb	122.116 ppb	122.654 ppb	123.617 ppb	105.781 %
Concentration per Run 3	119.838 ppb	118.710 ppb	118.641 ppb	11,756.410 ppb	117.673 ppb	115.911 ppb	117.447 ppb	121.158 ppb	111.037 %
Concentration RSD	1.3 %	1.6 %	2.7 %	2.5 %	2.7 %	3.2 %	2.4 %	2.0 %	2.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	121.653 ppb	121.123 ppb	126.233 ppb	121.305 ppb	105.651 %	120.137 ppb	120.088 ppb	108.858 %	120.362 ppb
Concentration per Run 1	121.536 ppb	120.725 ppb	126.314 ppb	121.112 ppb	104.119 %	118.420 ppb	119.051 ppb	109.568 %	120.130 ppb
Concentration per Run 2	124.972 ppb	125.244 ppb	128.695 ppb	123.439 ppb	105.693 %	120.889 ppb	119.833 ppb	111.230 %	119.669 ppb
Concentration per Run 3	118.452 ppb	117.402 ppb	123.690 ppb	119.365 ppb	107.140 %	121.103 ppb	121.380 ppb	105.775 %	121.287 ppb
Concentration RSD	2.7 %	3.2 %	2.0 %	1.7 %	1.4 %	1.2 %	1.0 %	2.6 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	121.104 ppb	116.723 %	116.971 %	120.984 ppb	120.447 ppb	120.186 %
Concentration per Run 1	121.901 ppb	115.666 %	115.951 %	118.343 ppb	119.420 ppb	121.094 %
Concentration per Run 2	122.722 ppb	117.564 %	117.929 %	123.616 ppb	121.545 ppb	118.748 %
Concentration per Run 3	118.689 ppb	116.940 %	117.033 %	120.991 ppb	120.377 ppb	120.715 %
Concentration RSD	1.8 %	0.8 %	0.8 %	2.2 %	0.9 %	1.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	9	User name	ALPHALAB\a2-icpmsq2	Comment	Sr Inteference Check
Analysis label:	Sr 200ppb	Rack	4		
Analysis started at:	4/3/2024 9:18:30 AM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.341 %	118.063 %	0.043 ppb	-9.084 ppb	3.008 ppb	0.324 ppb	-4.476 ppb	0.313 ppb	105.820 %
Concentration per Run 1	105.431 %	121.728 %	0.046 ppb	-9.903 ppb	0.705 ppb	0.665 ppb	-22.579 ppb	-75.007 ppb	105.698 %
Concentration per Run 2	104.315 %	123.299 %	0.047 ppb	-11.961 ppb	3.307 ppb	-0.131 ppb	-0.878 ppb	4.262 ppb	104.799 %
Concentration per Run 3	106.276 %	109.162 %	0.035 ppb	-5.387 ppb	5.013 ppb	0.437 ppb	10.028 ppb	71.684 ppb	106.963 %
Concentration RSD	0.9 %	6.6 %	15.1 %	37.0 %	72.1 %	126.6 %	370.8 %	23,461.8 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.088 ppb	0.061 ppb	0.113 ppb	10.392 ppb	0.025 ppb	-0.080 ppb	0.051 ppb	0.343 ppb	125.502 %
Concentration per Run 1	0.144 ppb	0.006 ppb	0.030 ppb	9.580 ppb	0.042 ppb	-0.057 ppb	0.070 ppb	0.310 ppb	130.476 %
Concentration per Run 2	0.038 ppb	0.087 ppb	0.154 ppb	12.717 ppb	0.023 ppb	-0.108 ppb	0.048 ppb	0.193 ppb	129.901 %
Concentration per Run 3	0.081 ppb	0.090 ppb	0.156 ppb	8.878 ppb	0.010 ppb	-0.074 ppb	0.035 ppb	0.526 ppb	116.128 %
Concentration RSD	60.8 %	77.6 %	63.8 %	19.7 %	64.6 %	32.3 %	34.8 %	49.2 %	6.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	-0.018 ppb	0.131 ppb	184.103 ppb	0.289 ppb	108.224 %	0.054 ppb	0.027 ppb	111.818 %	0.057 ppb
Concentration per Run 1	-0.013 ppb	0.284 ppb	179.069 ppb	0.334 ppb	108.117 %	0.071 ppb	0.028 ppb	108.214 %	0.080 ppb
Concentration per Run 2	0.057 ppb	0.145 ppb	181.049 ppb	0.216 ppb	107.566 %	0.060 ppb	0.021 ppb	114.204 %	0.036 ppb
Concentration per Run 3	-0.098 ppb	-0.035 ppb	192.190 ppb	0.317 ppb	108.987 %	0.031 ppb	0.032 ppb	113.038 %	0.056 ppb
Concentration RSD	432.6 %	121.9 %	3.8 %	22.1 %	0.7 %	38.5 %	20.0 %	2.8 %	38.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.051 ppb	114.959 %	116.763 %	0.506 ppb	0.047 ppb	120.629 %
Concentration per Run 1	0.039 ppb	115.019 %	117.393 %	0.410 ppb	0.053 ppb	121.897 %
Concentration per Run 2	0.057 ppb	114.525 %	116.366 %	0.604 ppb	0.055 ppb	120.622 %
Concentration per Run 3	0.057 ppb	115.332 %	116.528 %	0.504 ppb	0.033 ppb	119.369 %
Concentration RSD	20.7 %	0.4 %	0.5 %	19.3 %	26.2 %	1.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 10 User name ALPHALAB\a2-icpmsq2 Comment ICV
Analysis label: ICV Rack 0
Analysis started at: 4/3/2024 9:23:02 AM Vial 7

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.621 %	97.644 %	50.484 ppb	5,572.474 ppb	5,676.325 ppb	51.642 ppb	5,571.076 ppb	5,289.137 ppb	105.578 %
Concentration per Run 1	104.011 %	95.812 %	50.829 ppb	5,586.297 ppb	5,705.013 ppb	50.889 ppb	5,549.208 ppb	5,383.552 ppb	104.614 %
Concentration per Run 2	105.936 %	100.524 %	50.500 ppb	5,530.004 ppb	5,580.533 ppb	51.311 ppb	5,518.713 ppb	5,217.388 ppb	106.815 %
Concentration per Run 3	106.916 %	96.597 %	50.123 ppb	5,601.121 ppb	5,743.428 ppb	52.727 ppb	5,645.306 ppb	5,266.472 ppb	105.306 %
Recovery Percentage 1			100.968 %	111.449 %	113.526 %	103.285 %	111.422 %	105.783 %	
Concentration RSD	1.4 %	2.6 %	0.7 %	0.7 %	1.5 %	1.9 %	1.2 %	1.6 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	54.051 ppb	55.213 ppb	53.869 ppb	5,191.954 ppb	54.751 ppb	55.033 ppb	51.992 ppb	52.536 ppb	103.831 %
Concentration per Run 1	50.955 ppb	55.468 ppb	54.032 ppb	5,257.665 ppb	53.786 ppb	53.579 ppb	53.045 ppb	54.538 ppb	105.481 %
Concentration per Run 2	56.760 ppb	54.367 ppb	54.102 ppb	5,118.317 ppb	55.954 ppb	55.696 ppb	52.053 ppb	51.270 ppb	103.208 %
Concentration per Run 3	54.437 ppb	55.804 ppb	53.474 ppb	5,199.879 ppb	54.515 ppb	55.824 ppb	50.877 ppb	51.801 ppb	102.803 %
Recovery Percentage 1	108.101 %	110.426 %	107.739 %	103.839 %	109.503 %	110.066 %	103.983 %	105.072 %	
Concentration RSD	5.4 %	1.4 %	0.6 %	1.3 %	2.0 %	2.3 %	2.1 %	3.3 %	1.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	51.838 ppb	52.914 ppb	52.148 ppb	51.891 ppb	107.888 %	50.250 ppb	51.353 ppb	109.320 %	51.111 ppb
Concentration per Run 1	53.649 ppb	52.061 ppb	51.342 ppb	52.522 ppb	105.652 %	51.016 ppb	51.511 ppb	105.613 %	52.263 ppb
Concentration per Run 2	50.023 ppb	55.519 ppb	52.026 ppb	50.643 ppb	111.142 %	49.598 ppb	50.982 ppb	112.914 %	50.987 ppb
Concentration per Run 3	51.842 ppb	51.162 ppb	53.077 ppb	52.509 ppb	106.869 %	50.135 ppb	51.567 ppb	109.432 %	50.083 ppb
Recovery Percentage 1	103.676 %	105.828 %	104.297 %	103.783 %		100.499 %	102.706 %		102.222 %
Concentration RSD	3.5 %	4.3 %	1.7 %	2.1 %	2.7 %	1.4 %	0.6 %	3.3 %	2.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	50.781 ppb	117.314 %	115.063 %	50.279 ppb	51.055 ppb	122.288 %
Concentration per Run 1	49.432 ppb	115.889 %	112.128 %	49.131 ppb	50.952 ppb	120.800 %
Concentration per Run 2	52.128 ppb	118.885 %	117.312 %	50.535 ppb	51.145 ppb	124.869 %
Concentration per Run 3	50.782 ppb	117.168 %	115.750 %	51.170 ppb	51.069 ppb	121.196 %
Recovery Percentage 1	101.562 %			100.557 %	102.111 %	
Concentration RSD	2.7 %	1.3 %	2.3 %	2.1 %	0.2 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	11	User name	ALPHALAB\a2-icpmsq2	Comment	ICB
Analysis label:	ICB	Rack	0		
Analysis started at:	4/3/2024 9:30:09 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.941 %	105.497 %	0.029 ppb	-9.384 ppb	-0.085 ppb	-0.990 ppb	19.061 ppb	-13.494 ppb	105.400 %
Concentration per Run 1	107.212 %	116.230 %	0.027 ppb	-13.975 ppb	0.026 ppb	-1.689 ppb	29.834 ppb	6.142 ppb	103.479 %
Concentration per Run 2	107.351 %	93.455 %	0.037 ppb	-7.733 ppb	1.584 ppb	0.465 ppb	5.836 ppb	-27.288 ppb	105.362 %
Concentration per Run 3	109.260 %	106.806 %	0.024 ppb	-6.445 ppb	-1.864 ppb	-1.745 ppb	21.512 ppb	-19.336 ppb	107.360 %
Recovery Percentage 1			5.824 %	-9.384 %	-0.121 %	-9.897 %	19.061 %	-13.494 %	
Concentration RSD	1.1 %	10.8 %	23.4 %	42.9 %	2,033.9 %	127.3 %	63.9 %	129.4 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.030 ppb	0.016 ppb	0.006 ppb	6.728 ppb	0.002 ppb	-0.060 ppb	0.044 ppb	0.010 ppb	104.108 %
Concentration per Run 1	0.025 ppb	0.005 ppb	0.052 ppb	6.237 ppb	0.005 ppb	-0.045 ppb	0.069 ppb	-0.049 ppb	106.132 %
Concentration per Run 2	0.066 ppb	0.003 ppb	-0.001 ppb	8.382 ppb	0.006 ppb	-0.057 ppb	0.017 ppb	0.035 ppb	105.220 %
Concentration per Run 3	-0.002 ppb	0.039 ppb	-0.032 ppb	5.566 ppb	-0.006 ppb	-0.077 ppb	0.047 ppb	0.044 ppb	100.972 %
Recovery Percentage 1	0.592 %	1.582 %	0.614 %	13.456 %	0.332 %	-2.988 %	4.413 %	0.202 %	
Concentration RSD	115.4 %	128.4 %	690.1 %	21.9 %	414.3 %	27.1 %	58.7 %	508.5 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	-0.030 ppb	0.060 ppb	0.007 ppb	0.112 ppb	108.429 %	0.028 ppb	0.013 ppb	112.875 %	0.023 ppb
Concentration per Run 1	-0.011 ppb	0.286 ppb	0.002 ppb	0.046 ppb	108.632 %	0.035 ppb	0.016 ppb	118.028 %	0.001 ppb
Concentration per Run 2	-0.080 ppb	0.003 ppb	0.016 ppb	0.104 ppb	106.645 %	0.031 ppb	0.011 ppb	110.526 %	0.038 ppb
Concentration per Run 3	0.001 ppb	-0.108 ppb	0.005 ppb	0.187 ppb	110.011 %	0.017 ppb	0.011 ppb	110.073 %	0.028 ppb
Recovery Percentage 1	-6.045 %	1.205 %	0.073 %	5.616 %		7.006 %	6.265 %		0.564 %
Concentration RSD	144.5 %	337.3 %	99.6 %	63.1 %	1.6 %	33.8 %	21.8 %	4.0 %	84.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.011 ppb	114.789 %	116.591 %	0.208 ppb	0.018 ppb	121.235 %
Concentration per Run 1	0.017 ppb	114.626 %	117.960 %	0.145 ppb	0.021 ppb	121.754 %
Concentration per Run 2	-0.002 ppb	115.206 %	117.000 %	0.253 ppb	0.017 ppb	120.810 %
Concentration per Run 3	0.018 ppb	114.537 %	114.813 %	0.228 ppb	0.017 ppb	121.141 %
Recovery Percentage 1	2.239 %			20.844 %	1.839 %	
Concentration RSD	100.4 %	0.3 %	1.4 %	27.1 %	11.6 %	0.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 12
Analysis label: ICV
Analysis started at: 4/3/2024 9:35:31 AM
User name ALPHALAB\a2-icpmsq2
Rack 0
Vial 7
Comment ICV

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	109.612 %	113.874 %	48.268 ppb	4,932.348 ppb	5,076.006 ppb	51.883 ppb	5,302.807 ppb	6,350.253 ppb	110.825 %
Concentration per Run 1	107.730 %	117.016 %	48.206 ppb	4,864.008 ppb	5,154.802 ppb	47.814 ppb	5,261.092 ppb	6,148.717 ppb	109.385 %
Concentration per Run 2	109.873 %	107.592 %	48.369 ppb	5,116.415 ppb	5,241.765 ppb	57.153 ppb	5,390.565 ppb	6,599.813 ppb	110.557 %
Concentration per Run 3	111.234 %	117.016 %	48.231 ppb	4,816.622 ppb	4,831.451 ppb	50.681 ppb	5,256.764 ppb	6,302.228 ppb	112.534 %
Recovery Percentage 1			96.537 %	98.647 %	101.520 %	103.765 %	106.056 %	127.005 %	
Concentration RSD	1.6 %	4.8 %	0.2 %	3.3 %	4.3 %	9.2 %	1.4 %	3.6 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	53.209 ppb	52.357 ppb	55.372 ppb	5,294.579 ppb	52.514 ppb	53.261 ppb	54.328 ppb	54.225 ppb	105.487 %
Concentration per Run 1	51.123 ppb	49.807 ppb	53.522 ppb	5,180.036 ppb	53.448 ppb	50.999 ppb	52.588 ppb	54.087 ppb	110.300 %
Concentration per Run 2	55.599 ppb	54.088 ppb	56.852 ppb	5,472.165 ppb	53.571 ppb	55.023 ppb	56.433 ppb	54.965 ppb	102.450 %
Concentration per Run 3	52.904 ppb	53.176 ppb	55.743 ppb	5,231.535 ppb	50.521 ppb	53.762 ppb	53.963 ppb	53.624 ppb	103.712 %
Recovery Percentage 1	106.418 %	104.714 %	110.745 %	105.892 %	105.027 %	106.523 %	108.656 %	108.451 %	
Concentration RSD	4.2 %	4.3 %	3.1 %	2.9 %	3.3 %	3.9 %	3.6 %	1.3 %	4.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	54.983 ppb	57.610 ppb	52.159 ppb	49.911 ppb	112.000 %	48.220 ppb	48.525 ppb	116.043 %	49.251 ppb
Concentration per Run 1	53.575 ppb	57.416 ppb	51.659 ppb	49.876 ppb	115.623 %	46.858 ppb	47.360 ppb	120.170 %	48.886 ppb
Concentration per Run 2	56.293 ppb	58.570 ppb	52.397 ppb	49.582 ppb	111.361 %	48.106 ppb	48.276 ppb	115.431 %	48.993 ppb
Concentration per Run 3	55.080 ppb	56.843 ppb	52.420 ppb	50.275 ppb	109.015 %	49.696 ppb	49.940 ppb	112.528 %	49.874 ppb
Recovery Percentage 1	109.965 %	115.219 %	104.317 %	99.821 %		96.440 %	97.050 %		98.502 %
Concentration RSD	2.5 %	1.5 %	0.8 %	0.7 %	3.0 %	2.9 %	2.7 %	3.3 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	49.044 ppb	121.599 %	123.012 %	47.609 ppb	49.363 ppb	126.948 %
Concentration per Run 1	49.416 ppb	123.619 %	124.933 %	47.204 ppb	49.570 ppb	130.515 %
Concentration per Run 2	48.468 ppb	121.334 %	123.894 %	47.165 ppb	49.192 ppb	128.439 %
Concentration per Run 3	49.249 ppb	119.843 %	120.209 %	48.458 ppb	49.326 ppb	121.890 %
Recovery Percentage 1	98.089 %			95.218 %	98.726 %	
Concentration RSD	1.0 %	1.6 %	2.0 %	1.5 %	0.4 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	13	User name	ALPHALAB\a2-icpmsq2	Comment	ICB
Analysis label:	ICB	Rack	0		
Analysis started at:	4/3/2024 9:40:34 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.358 %	96.859 %	0.029 ppb	-5.158 ppb	-1.457 ppb	-0.262 ppb	16.085 ppb	-4.300 ppb	104.130 %
Concentration per Run 1	103.360 %	99.738 %	0.024 ppb	-5.314 ppb	-1.841 ppb	0.617 ppb	23.959 ppb	-6.336 ppb	102.197 %
Concentration per Run 2	107.326 %	93.455 %	0.035 ppb	0.569 ppb	-1.250 ppb	-0.957 ppb	16.463 ppb	-0.043 ppb	105.943 %
Concentration per Run 3	105.387 %	97.382 %	0.029 ppb	-10.728 ppb	-1.281 ppb	-0.444 ppb	7.832 ppb	-6.521 ppb	104.250 %
Recovery Percentage 1			5.889 %	-5.158 %	-2.082 %	-2.615 %	16.085 %	-4.300 %	
Concentration RSD	1.9 %	3.3 %	18.1 %	109.5 %	22.8 %	307.0 %	50.2 %	85.8 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.021 ppb	-0.003 ppb	0.061 ppb	4.817 ppb	0.000 ppb	-0.050 ppb	0.017 ppb	0.028 ppb	104.355 %
Concentration per Run 1	-0.002 ppb	0.048 ppb	0.060 ppb	3.866 ppb	0.000 ppb	-0.100 ppb	0.017 ppb	-0.018 ppb	103.820 %
Concentration per Run 2	0.066 ppb	0.019 ppb	0.093 ppb	5.024 ppb	0.000 ppb	0.028 ppb	0.017 ppb	0.018 ppb	105.002 %
Concentration per Run 3	-0.001 ppb	-0.076 ppb	0.030 ppb	5.559 ppb	0.000 ppb	-0.078 ppb	0.017 ppb	0.083 ppb	104.244 %
Recovery Percentage 1	0.421 %	-0.321 %	6.113 %	9.633 %	-0.033 %	-2.488 %	1.716 %	0.551 %	
Concentration RSD	185.3 %	2,018.8 %	51.6 %	18.0 %	8.4 %	137.6 %	0.4 %	186.6 %	0.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	-0.007 ppb	0.206 ppb	0.000 ppb	0.144 ppb	109.632 %	0.022 ppb	0.004 ppb	113.977 %	0.033 ppb
Concentration per Run 1	-0.002 ppb	0.540 ppb	-0.002 ppb	0.115 ppb	110.710 %	0.019 ppb	0.005 ppb	113.433 %	0.017 ppb
Concentration per Run 2	0.046 ppb	0.015 ppb	0.001 ppb	0.145 ppb	108.240 %	0.034 ppb	0.005 ppb	113.980 %	0.050 ppb
Concentration per Run 3	-0.066 ppb	0.063 ppb	0.001 ppb	0.171 ppb	109.945 %	0.012 ppb	0.000 ppb	114.518 %	0.031 ppb
Recovery Percentage 1	-1.478 %	4.115 %	0.001 %	7.193 %		5.413 %	1.783 %		0.816 %
Concentration RSD	762.2 %	141.0 %	1,052.9 %	19.6 %	1.2 %	52.3 %	86.6 %	0.5 %	51.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.009 ppb	117.042 %	118.115 %	0.324 ppb	0.019 ppb	123.973 %
Concentration per Run 1	-0.002 ppb	116.150 %	117.758 %	0.231 ppb	0.022 ppb	126.498 %
Concentration per Run 2	-0.022 ppb	117.464 %	118.231 %	0.395 ppb	0.016 ppb	123.245 %
Concentration per Run 3	-0.002 ppb	117.514 %	118.355 %	0.345 ppb	0.019 ppb	122.178 %
Recovery Percentage 1	-1.739 %			32.383 %	1.913 %	
Concentration RSD	129.4 %	0.7 %	0.3 %	25.9 %	16.2 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	14	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/3/2024 9:45:05 AM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.811 %	87.435 %	0.054 ppb	275,583.693 ppb	103,889.693 ppb	101,033.026 ppb	107,036.563 ppb	325,827.093 ppb	109.787 %
Concentration per Run 1	89.628 %	95.811 %	0.039 ppb	247,741.653 ppb	94,548.768 ppb	91,560.307 ppb	96,528.528 ppb	305,360.350 ppb	107.534 %
Concentration per Run 2	91.848 %	86.387 %	0.071 ppb	272,639.536 ppb	102,627.071 ppb	97,538.477 ppb	104,778.171 ppb	327,902.977 ppb	110.673 %
Concentration per Run 3	93.955 %	80.105 %	0.051 ppb	306,369.889 ppb	114,493.240 ppb	114,000.294 ppb	119,802.990 ppb	344,217.950 ppb	111.153 %
Recovery Percentage 1			5.354 %	110.233 %	103.890 %	101.033 %	107.037 %	108.609 %	
Concentration RSD	2.4 %	9.0 %	29.7 %	10.7 %	9.7 %	11.5 %	11.0 %	6.0 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.167 ppb	1.780 ppb	5.216 ppb	268,337.517 ppb	2.230 ppb	2.815 ppb	1.216 ppb	2.623 ppb	101.406 %
Concentration per Run 1	0.100 ppb	1.734 ppb	5.350 ppb	254,873.712 ppb	2.192 ppb	2.783 ppb	1.220 ppb	2.456 ppb	103.772 %
Concentration per Run 2	0.258 ppb	1.634 ppb	5.214 ppb	268,986.976 ppb	2.411 ppb	3.040 ppb	1.134 ppb	2.797 ppb	96.926 %
Concentration per Run 3	0.144 ppb	1.971 ppb	5.083 ppb	281,151.862 ppb	2.089 ppb	2.622 ppb	1.293 ppb	2.618 ppb	103.518 %
Recovery Percentage 1	3.347 %	53.929 %	91.503 %	107.335 %	77.717 %	46.147 %	148.240 %	23.013 %	
Concentration RSD	48.8 %	9.7 %	2.6 %	4.9 %	7.4 %	7.5 %	6.6 %	6.5 %	3.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.408 ppb	3.665 ppb	2.726 ppb	2,036.441 ppb	93.116 %	0.030 ppb	0.574 ppb	101.394 %	0.196 ppb
Concentration per Run 1	0.352 ppb	4.321 ppb	2.627 ppb	1,999.642 ppb	92.722 %	0.030 ppb	0.570 ppb	103.670 %	0.166 ppb
Concentration per Run 2	0.444 ppb	3.304 ppb	2.624 ppb	2,032.757 ppb	91.543 %	0.029 ppb	0.569 ppb	95.093 %	0.214 ppb
Concentration per Run 3	0.428 ppb	3.371 ppb	2.928 ppb	2,076.925 ppb	95.083 %	0.033 ppb	0.583 ppb	105.419 %	0.209 ppb
Recovery Percentage 1	25.017 %	28.413 %	545.216 %	101.822 %		3.794 %	143.558 %		2.452 %
Concentration RSD	12.0 %	15.5 %	6.4 %	1.9 %	1.9 %	6.8 %	1.3 %	5.5 %	13.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.315 ppb	109.976 %	111.275 %	0.150 ppb	1.533 ppb	105.652 %
Concentration per Run 1	1.262 ppb	110.075 %	111.226 %	0.087 ppb	1.530 ppb	108.465 %
Concentration per Run 2	1.183 ppb	106.617 %	108.691 %	0.192 ppb	1.539 ppb	101.733 %
Concentration per Run 3	1.501 ppb	113.236 %	113.907 %	0.171 ppb	1.530 ppb	106.758 %
Recovery Percentage 1	69.963 %			7.510 %	49.445 %	
Concentration RSD	12.6 %	3.0 %	2.3 %	36.9 %	0.3 %	3.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	15	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	LDR Check - 10/1 ppm	Rack	4		
Analysis started at:	4/3/2024 9:49:37 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.890 %	101.571 %	0.014 ppb	80.483 ppb	15.483 ppb	14.111 ppb	105.324 ppb	33.343 ppb	105.673 %
Concentration per Run 1	106.467 %	93.455 %	0.019 ppb	92.388 ppb	16.746 ppb	16.173 ppb	95.477 ppb	31.097 ppb	103.650 %
Concentration per Run 2	108.312 %	96.597 %	-0.004 ppb	89.627 ppb	18.272 ppb	17.432 ppb	135.280 ppb	55.097 ppb	107.009 %
Concentration per Run 3	108.891 %	114.660 %	0.028 ppb	59.435 ppb	11.431 ppb	8.729 ppb	85.216 ppb	13.835 ppb	106.359 %
Concentration RSD	1.2 %	11.3 %	115.7 %	22.7 %	23.2 %	33.3 %	25.1 %	62.2 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.021 ppb	0.204 ppb	10,891.826 ppb	64.214 ppb	0.161 ppb	0.093 ppb	12,332.703 ppb	9,935.819 ppb	99.962 %
Concentration per Run 1	0.038 ppb	0.294 ppb	10,805.060 ppb	60.890 ppb	0.176 ppb	0.113 ppb	12,371.929 ppb	9,719.241 ppb	97.148 %
Concentration per Run 2	-0.034 ppb	0.155 ppb	10,692.353 ppb	69.517 ppb	0.161 ppb	0.140 ppb	12,176.928 ppb	9,766.178 ppb	102.102 %
Concentration per Run 3	-0.068 ppb	0.163 ppb	11,178.066 ppb	62.235 ppb	0.145 ppb	0.026 ppb	12,449.253 ppb	10,322.038 ppb	100.635 %
Concentration RSD	255.5 %	38.1 %	2.3 %	7.2 %	9.7 %	64.1 %	1.1 %	3.4 %	2.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1,049.797 ppb	0.118 ppb	0.251 ppb	2.142 ppb	108.702 %	0.036 ppb	0.018 ppb	110.738 %	0.013 ppb
Concentration per Run 1	1,054.439 ppb	0.379 ppb	0.238 ppb	1.896 ppb	106.542 %	0.054 ppb	0.017 ppb	107.924 %	0.015 ppb
Concentration per Run 2	1,013.259 ppb	0.089 ppb	0.237 ppb	2.359 ppb	107.467 %	0.023 ppb	0.017 ppb	108.682 %	0.007 ppb
Concentration per Run 3	1,081.694 ppb	-0.114 ppb	0.277 ppb	2.170 ppb	112.096 %	0.032 ppb	0.021 ppb	115.607 %	0.019 ppb
Concentration RSD	3.3 %	209.8 %	9.1 %	10.9 %	2.7 %	44.8 %	13.7 %	3.8 %	44.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	9,898.916 ppb	111.752 %	112.010 %	0.088 ppb	10,998.537 ppb	117.546 %
Concentration per Run 1	9,722.821 ppb	109.805 %	110.181 %	0.050 ppb	10,856.934 ppb	116.680 %
Concentration per Run 2	9,928.375 ppb	110.346 %	109.362 %	0.114 ppb	11,048.880 ppb	116.678 %
Concentration per Run 3	10,045.552 ppb	115.105 %	116.486 %	0.099 ppb	11,089.796 ppb	119.279 %
Concentration RSD	1.7 %	2.6 %	3.5 %	38.5 %	1.1 %	1.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	16	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/3/2024 9:55:41 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	109.179 %	112.304 %	0.017 ppb	20.185 ppb	-0.690 ppb	0.156 ppb	25.984 ppb	2.972 ppb	101.853 %
Concentration per Run 1	107.245 %	106.021 %	0.023 ppb	24.572 ppb	0.212 ppb	-0.567 ppb	48.696 ppb	-19.999 ppb	100.786 %
Concentration per Run 2	109.761 %	111.518 %	0.016 ppb	19.165 ppb	-0.853 ppb	0.058 ppb	26.894 ppb	27.164 ppb	103.027 %
Concentration per Run 3	110.531 %	119.372 %	0.012 ppb	16.819 ppb	-1.429 ppb	0.977 ppb	2.363 ppb	1.750 ppb	101.745 %
Concentration RSD	1.6 %	6.0 %	33.5 %	19.7 %	120.7 %	497.7 %	89.2 %	794.3 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.004 ppb	0.048 ppb	1.390 ppb	10.349 ppb	0.010 ppb	-0.008 ppb	2.067 ppb	1.779 ppb	100.079 %
Concentration per Run 1	-0.035 ppb	0.021 ppb	2.006 ppb	8.748 ppb	0.018 ppb	-0.059 ppb	2.657 ppb	2.268 ppb	103.720 %
Concentration per Run 2	-0.034 ppb	0.115 ppb	1.243 ppb	10.975 ppb	-0.006 ppb	-0.028 ppb	2.095 ppb	1.784 ppb	95.292 %
Concentration per Run 3	0.058 ppb	0.009 ppb	0.922 ppb	11.324 ppb	0.018 ppb	0.064 ppb	1.448 ppb	1.285 ppb	101.226 %
Concentration RSD	1,455.8 %	120.3 %	40.1 %	13.5 %	142.6 %	850.8 %	29.3 %	27.6 %	4.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.653 ppb	0.023 ppb	-0.002 ppb	0.360 ppb	110.376 %	0.005 ppb	0.002 ppb	110.786 %	-0.009 ppb
Concentration per Run 1	1.954 ppb	0.276 ppb	-0.002 ppb	0.329 ppb	108.300 %	0.005 ppb	0.000 ppb	115.321 %	-0.007 ppb
Concentration per Run 2	1.827 ppb	-0.116 ppb	-0.001 ppb	0.388 ppb	110.838 %	0.006 ppb	0.006 ppb	106.927 %	0.000 ppb
Concentration per Run 3	1.177 ppb	-0.091 ppb	-0.004 ppb	0.365 ppb	111.990 %	0.004 ppb	0.000 ppb	110.110 %	-0.019 ppb
Concentration RSD	25.2 %	947.5 %	54.4 %	8.2 %	1.7 %	20.5 %	173.2 %	3.8 %	105.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.122 ppb	113.666 %	113.945 %	0.053 ppb	1.698 ppb	115.422 %
Concentration per Run 1	1.682 ppb	114.449 %	112.441 %	0.023 ppb	2.322 ppb	116.880 %
Concentration per Run 2	1.004 ppb	112.421 %	113.252 %	0.067 ppb	1.681 ppb	112.928 %
Concentration per Run 3	0.681 ppb	114.128 %	116.143 %	0.069 ppb	1.091 ppb	116.457 %
Concentration RSD	45.5 %	1.0 %	1.7 %	48.9 %	36.3 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	17	User name	ALPHALAB\a2-icpmsq2	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 10:00:07 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	112.871 %	110.995 %	59.190 ppb	6,218.735 ppb	6,316.260 ppb	63.369 ppb	6,176.067 ppb	6,529.420 ppb	110.782 %
Concentration per Run 1	111.239 %	124.869 %	59.443 ppb	5,594.349 ppb	5,789.329 ppb	55.020 ppb	5,563.310 ppb	5,840.307 ppb	109.334 %
Concentration per Run 2	113.443 %	98.953 %	59.324 ppb	6,691.948 ppb	6,730.296 ppb	65.589 ppb	6,658.418 ppb	6,694.940 ppb	111.388 %
Concentration per Run 3	113.931 %	109.162 %	58.804 ppb	6,369.907 ppb	6,429.154 ppb	69.498 ppb	6,306.474 ppb	7,053.012 ppb	111.623 %
Recovery Percentage 1			98.651 %	103.646 %	105.271 %	105.615 %	102.934 %	108.824 %	
Concentration RSD	1.3 %	11.8 %	0.6 %	9.1 %	7.6 %	11.8 %	9.1 %	9.5 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	58.972 ppb	60.638 ppb	63.179 ppb	6,058.949 ppb	59.589 ppb	59.339 ppb	61.163 ppb	59.154 ppb	118.617 %
Concentration per Run 1	53.177 ppb	56.949 ppb	58.115 ppb	5,648.854 ppb	54.439 ppb	54.222 ppb	57.181 ppb	54.879 ppb	127.657 %
Concentration per Run 2	61.144 ppb	63.001 ppb	65.558 ppb	6,262.532 ppb	61.131 ppb	60.230 ppb	63.324 ppb	60.564 ppb	116.068 %
Concentration per Run 3	62.595 ppb	61.964 ppb	65.865 ppb	6,265.462 ppb	63.197 ppb	63.566 ppb	62.984 ppb	62.019 ppb	112.125 %
Recovery Percentage 1	98.287 %	101.064 %	105.299 %	100.982 %	99.315 %	98.899 %	101.938 %	98.590 %	
Concentration RSD	8.6 %	5.3 %	6.9 %	5.9 %	7.7 %	8.0 %	5.6 %	6.4 %	6.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	60.498 ppb	61.558 ppb	60.659 ppb	59.569 ppb	109.070 %	60.354 ppb	60.690 ppb	110.929 %	60.211 ppb
Concentration per Run 1	56.408 ppb	60.911 ppb	59.360 ppb	56.254 ppb	108.809 %	59.309 ppb	58.494 ppb	115.615 %	59.917 ppb
Concentration per Run 2	61.784 ppb	59.799 ppb	60.922 ppb	60.342 ppb	110.192 %	60.328 ppb	61.136 ppb	109.200 %	60.472 ppb
Concentration per Run 3	63.301 ppb	63.962 ppb	61.694 ppb	62.110 ppb	108.211 %	61.426 ppb	62.440 ppb	107.971 %	60.243 ppb
Recovery Percentage 1	100.830 %	102.596 %	101.098 %	99.281 %		100.590 %	101.150 %		100.352 %
Concentration RSD	6.0 %	3.5 %	2.0 %	5.0 %	0.9 %	1.8 %	3.3 %	3.7 %	0.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.733 ppb	116.368 %	115.370 %	58.202 ppb	59.274 ppb	120.790 %
Concentration per Run 1	62.227 ppb	116.191 %	114.889 %	58.296 ppb	59.443 ppb	120.088 %
Concentration per Run 2	61.919 ppb	116.710 %	116.151 %	57.147 ppb	59.304 ppb	121.148 %
Concentration per Run 3	61.053 ppb	116.204 %	115.070 %	59.163 ppb	59.073 ppb	121.135 %
Recovery Percentage 1	102.888 %			97.003 %	98.789 %	
Concentration RSD	1.0 %	0.3 %	0.6 %	1.7 %	0.3 %	0.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	18	User name	ALPHALAB\a2-icpmsq2	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 10:05:15 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.213 %	120.157 %	0.032 ppb	6.492 ppb	2.273 ppb	-0.320 ppb	29.753 ppb	2.875 ppb	102.688 %
Concentration per Run 1	113.669 %	129.581 %	0.032 ppb	6.306 ppb	2.012 ppb	-1.325 ppb	21.014 ppb	36.184 ppb	101.117 %
Concentration per Run 2	114.708 %	121.728 %	0.034 ppb	4.186 ppb	3.601 ppb	-0.216 ppb	26.038 ppb	-15.496 ppb	101.492 %
Concentration per Run 3	114.261 %	109.162 %	0.030 ppb	8.984 ppb	1.204 ppb	0.581 ppb	42.205 ppb	-12.061 ppb	105.454 %
Recovery Percentage 1			6.379 %	6.492 %	3.247 %	-3.202 %	29.753 %	2.875 %	
Concentration RSD	0.5 %	8.6 %	6.0 %	37.0 %	53.7 %	299.0 %	37.2 %	1,004.9 %	2.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.062 ppb	0.066 ppb	0.070 ppb	8.334 ppb	0.025 ppb	-0.060 ppb	0.522 ppb	0.103 ppb	107.188 %
Concentration per Run 1	0.106 ppb	0.063 ppb	-0.012 ppb	8.309 ppb	0.021 ppb	-0.017 ppb	0.603 ppb	0.105 ppb	110.396 %
Concentration per Run 2	0.050 ppb	0.026 ppb	0.101 ppb	9.445 ppb	0.016 ppb	-0.130 ppb	0.542 ppb	0.158 ppb	111.003 %
Concentration per Run 3	0.031 ppb	0.108 ppb	0.122 ppb	7.248 ppb	0.037 ppb	-0.034 ppb	0.420 ppb	0.046 ppb	100.164 %
Recovery Percentage 1	1.245 %	6.580 %	7.040 %	16.668 %	4.903 %	-3.022 %	52.158 %	2.063 %	
Concentration RSD	62.7 %	62.8 %	102.4 %	13.2 %	44.2 %	101.1 %	17.9 %	54.5 %	5.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.471 ppb	0.103 ppb	0.013 ppb	0.246 ppb	111.585 %	0.074 ppb	0.020 ppb	111.927 %	0.030 ppb
Concentration per Run 1	0.345 ppb	0.078 ppb	0.014 ppb	0.222 ppb	110.914 %	0.084 ppb	0.022 ppb	111.880 %	0.054 ppb
Concentration per Run 2	0.490 ppb	0.060 ppb	0.012 ppb	0.272 ppb	113.057 %	0.084 ppb	0.021 ppb	111.999 %	0.018 ppb
Concentration per Run 3	0.578 ppb	0.171 ppb	0.013 ppb	0.242 ppb	110.785 %	0.052 ppb	0.016 ppb	111.903 %	0.017 ppb
Recovery Percentage 1	94.212 %	2.060 %	0.128 %	12.283 %		18.377 %	9.845 %		0.744 %
Concentration RSD	24.9 %	57.6 %	8.8 %	10.3 %	1.1 %	25.1 %	15.6 %	0.1 %	71.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.044 ppb	116.936 %	115.906 %	0.373 ppb	0.133 ppb	116.937 %
Concentration per Run 1	0.078 ppb	114.477 %	114.205 %	0.275 ppb	0.159 ppb	115.953 %
Concentration per Run 2	0.037 ppb	117.124 %	118.074 %	0.472 ppb	0.141 ppb	115.256 %
Concentration per Run 3	0.017 ppb	119.207 %	115.440 %	0.371 ppb	0.100 ppb	119.602 %
Recovery Percentage 1	8.809 %			37.261 %	13.328 %	
Concentration RSD	69.9 %	2.0 %	1.7 %	26.5 %	22.9 %	2.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	19	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-1 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:10:42 AM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	119.721 %	106.545 %	0.010 ppb	54.458 ppb	3.478 ppb	3.234 ppb	27.827 ppb	2.582 ppb	109.881 %
Concentration per Run 1	120.011 %	113.089 %	0.013 ppb	46.795 ppb	3.433 ppb	2.474 ppb	25.236 ppb	15.640 ppb	111.819 %
Concentration per Run 2	120.174 %	95.026 %	0.015 ppb	64.975 ppb	4.924 ppb	3.127 ppb	24.907 ppb	-6.524 ppb	109.699 %
Concentration per Run 3	118.978 %	111.518 %	0.002 ppb	51.605 ppb	2.076 ppb	4.099 ppb	33.338 ppb	-1.370 ppb	108.125 %
Concentration RSD	0.5 %	9.4 %	68.4 %	17.3 %	41.0 %	25.3 %	17.2 %	449.2 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.046 ppb	0.122 ppb	0.151 ppb	5.820 ppb	0.000 ppb	0.011 ppb	0.662 ppb	1.200 ppb	107.946 %
Concentration per Run 1	-0.038 ppb	0.043 ppb	0.216 ppb	3.939 ppb	-0.001 ppb	0.006 ppb	0.644 ppb	1.236 ppb	112.435 %
Concentration per Run 2	-0.034 ppb	0.177 ppb	0.125 ppb	6.743 ppb	0.000 ppb	0.051 ppb	0.654 ppb	1.219 ppb	103.923 %
Concentration per Run 3	-0.068 ppb	0.145 ppb	0.111 ppb	6.777 ppb	0.000 ppb	-0.025 ppb	0.687 ppb	1.144 ppb	107.481 %
Concentration RSD	39.6 %	57.5 %	38.0 %	28.0 %	67.2 %	364.4 %	3.4 %	4.1 %	4.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.209 ppb	0.043 ppb	0.022 ppb	0.239 ppb	112.530 %	0.016 ppb	0.003 ppb	115.245 %	0.379 ppb
Concentration per Run 1	0.118 ppb	0.075 ppb	0.021 ppb	0.285 ppb	113.183 %	0.021 ppb	0.010 ppb	118.633 %	0.420 ppb
Concentration per Run 2	0.261 ppb	0.080 ppb	0.017 ppb	0.267 ppb	111.254 %	0.014 ppb	0.000 ppb	111.358 %	0.346 ppb
Concentration per Run 3	0.247 ppb	-0.027 ppb	0.030 ppb	0.166 ppb	113.152 %	0.013 ppb	0.000 ppb	115.743 %	0.370 ppb
Concentration RSD	37.7 %	140.6 %	29.7 %	26.7 %	1.0 %	27.7 %	173.2 %	3.2 %	9.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.121 ppb	116.488 %	114.674 %	0.123 ppb	0.065 ppb	124.613 %
Concentration per Run 1	0.131 ppb	117.152 %	116.670 %	0.071 ppb	0.059 ppb	128.147 %
Concentration per Run 2	0.177 ppb	115.151 %	113.274 %	0.137 ppb	0.067 ppb	121.748 %
Concentration per Run 3	0.056 ppb	117.161 %	114.079 %	0.163 ppb	0.068 ppb	123.945 %
Concentration RSD	50.6 %	1.0 %	1.5 %	38.4 %	7.5 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	20	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-2d10 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:15:09 AM	Vial	19		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.575 %	111.518 %	4.840 ppb	1,066.971 ppb	1,028.341 ppb	202.821 ppb	1,077.750 ppb	998.577 ppb	106.692 %
Concentration per Run 1	112.675 %	106.806 %	4.876 ppb	1,098.579 ppb	1,057.572 ppb	205.274 ppb	1,162.089 ppb	1,046.477 ppb	106.534 %
Concentration per Run 2	115.279 %	121.728 %	4.815 ppb	1,004.240 ppb	977.275 ppb	182.710 ppb	996.627 ppb	755.393 ppb	105.980 %
Concentration per Run 3	115.771 %	106.021 %	4.829 ppb	1,098.096 ppb	1,050.175 ppb	220.480 ppb	1,074.534 ppb	1,193.861 ppb	107.563 %
Concentration RSD	1.5 %	7.9 %	0.7 %	5.1 %	4.3 %	9.4 %	7.7 %	22.3 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	50.041 ppb	21.522 ppb	55.566 ppb	115.919 ppb	53.449 ppb	54.508 ppb	27.971 ppb	55.506 ppb	103.465 %
Concentration per Run 1	48.007 ppb	21.366 ppb	55.824 ppb	113.417 ppb	53.309 ppb	55.907 ppb	27.855 ppb	56.220 ppb	106.036 %
Concentration per Run 2	50.416 ppb	22.037 ppb	55.659 ppb	124.578 ppb	54.919 ppb	53.989 ppb	29.047 ppb	56.615 ppb	98.227 %
Concentration per Run 3	51.700 ppb	21.164 ppb	55.214 ppb	109.763 ppb	52.119 ppb	53.629 ppb	27.010 ppb	53.683 ppb	106.132 %
Concentration RSD	3.7 %	2.1 %	0.6 %	6.7 %	2.6 %	2.2 %	3.7 %	2.9 %	4.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.116 ppb	12.287 ppb	101.862 ppb	96.336 ppb	109.257 %	4.777 ppb	5.167 ppb	111.753 %	44.972 ppb
Concentration per Run 1	12.662 ppb	12.014 ppb	103.363 ppb	95.098 ppb	110.878 %	4.622 ppb	4.828 ppb	116.797 %	44.062 ppb
Concentration per Run 2	14.038 ppb	13.601 ppb	101.471 ppb	95.478 ppb	105.574 %	4.764 ppb	5.378 ppb	105.847 %	45.553 ppb
Concentration per Run 3	12.648 ppb	11.248 ppb	100.753 ppb	98.433 ppb	111.319 %	4.946 ppb	5.295 ppb	112.616 %	45.299 ppb
Concentration RSD	6.1 %	9.8 %	1.3 %	1.9 %	2.9 %	3.4 %	5.7 %	4.9 %	1.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	194.729 ppb	116.819 %	114.903 %	11.683 ppb	51.019 ppb	122.249 %
Concentration per Run 1	193.346 ppb	119.814 %	118.170 %	11.701 ppb	50.359 ppb	125.677 %
Concentration per Run 2	194.217 ppb	113.828 %	111.892 %	11.556 ppb	51.374 ppb	120.427 %
Concentration per Run 3	196.625 ppb	116.815 %	114.647 %	11.791 ppb	51.324 ppb	120.643 %
Concentration RSD	0.9 %	2.6 %	2.7 %	1.0 %	1.1 %	2.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	21	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-3d10 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:20:40 AM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	113.832 %	106.806 %	10.206 ppb	36,198.782 ppb	6,049.126 ppb	424.199 ppb	5,212.202 ppb	16,635.221 ppb	102.229 %
Concentration per Run 1	113.176 %	96.597 %	10.406 ppb	36,114.977 ppb	6,101.669 ppb	417.734 ppb	5,181.581 ppb	17,294.207 ppb	101.002 %
Concentration per Run 2	113.232 %	103.665 %	10.021 ppb	36,951.615 ppb	6,240.399 ppb	449.176 ppb	5,315.465 ppb	17,739.397 ppb	102.027 %
Concentration per Run 3	115.087 %	120.157 %	10.190 ppb	35,529.754 ppb	5,805.310 ppb	405.686 ppb	5,139.561 ppb	14,872.059 ppb	103.659 %
Concentration RSD	1.0 %	11.3 %	1.9 %	2.0 %	3.7 %	5.3 %	1.8 %	9.3 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	102.040 ppb	41.110 ppb	210.732 ppb	267.000 ppb	99.312 ppb	102.171 ppb	50.587 ppb	98.784 ppb	119.093 %
Concentration per Run 1	100.915 ppb	40.631 ppb	202.504 ppb	251.029 ppb	98.255 ppb	98.333 ppb	48.190 ppb	95.989 ppb	120.194 %
Concentration per Run 2	101.141 ppb	41.650 ppb	217.963 ppb	280.824 ppb	100.910 ppb	104.719 ppb	52.614 ppb	99.734 ppb	119.384 %
Concentration per Run 3	104.064 ppb	41.049 ppb	211.730 ppb	269.145 ppb	98.772 ppb	103.461 ppb	50.957 ppb	100.628 ppb	117.702 %
Concentration RSD	1.7 %	1.2 %	3.7 %	5.6 %	1.4 %	3.3 %	4.4 %	2.5 %	1.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	23.782 ppb	25.639 ppb	322.451 ppb	204.999 ppb	103.869 %	10.248 ppb	11.323 ppb	106.278 %	107.786 ppb
Concentration per Run 1	22.978 ppb	24.605 ppb	324.026 ppb	202.108 ppb	102.668 %	10.693 ppb	11.759 ppb	105.506 %	108.527 ppb
Concentration per Run 2	24.312 ppb	26.718 ppb	320.786 ppb	205.721 ppb	104.420 %	10.149 ppb	11.168 ppb	106.313 %	107.554 ppb
Concentration per Run 3	24.055 ppb	25.593 ppb	322.540 ppb	207.170 ppb	104.520 %	9.901 ppb	11.042 ppb	107.016 %	107.275 ppb
Concentration RSD	3.0 %	4.1 %	0.5 %	1.3 %	1.0 %	4.0 %	3.4 %	0.7 %	0.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	438.058 ppb	111.242 %	110.633 %	26.763 ppb	118.541 ppb	108.411 %
Concentration per Run 1	437.134 ppb	110.371 %	108.499 %	26.244 ppb	114.931 ppb	109.348 %
Concentration per Run 2	441.549 ppb	111.248 %	109.357 %	27.183 ppb	121.513 ppb	107.539 %
Concentration per Run 3	435.491 ppb	112.106 %	114.043 %	26.862 ppb	119.179 ppb	108.344 %
Concentration RSD	0.7 %	0.8 %	2.7 %	1.8 %	2.8 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	22	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-5d10 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:25:08 AM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	113.118 %	122.251 %	47.503 ppb	37,113.101 ppb	8,252.634 ppb	66.263 ppb	7,708.608 ppb	17,186.105 ppb	101.743 %
Concentration per Run 1	112.058 %	117.016 %	46.866 ppb	38,096.709 ppb	8,609.422 ppb	63.354 ppb	8,029.413 ppb	17,765.005 ppb	100.297 %
Concentration per Run 2	113.436 %	116.230 %	47.232 ppb	38,317.440 ppb	8,620.704 ppb	78.644 ppb	8,040.534 ppb	18,176.960 ppb	102.252 %
Concentration per Run 3	113.861 %	133.508 %	48.409 ppb	34,925.154 ppb	7,527.775 ppb	56.791 ppb	7,055.878 ppb	15,616.351 ppb	102.681 %
Concentration RSD	0.8 %	8.0 %	1.7 %	5.1 %	7.6 %	16.9 %	7.3 %	8.0 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	47.994 ppb	47.891 ppb	160.272 ppb	4,947.539 ppb	48.736 ppb	50.887 ppb	48.937 ppb	50.985 ppb	108.899 %
Concentration per Run 1	49.309 ppb	51.588 ppb	173.115 ppb	5,250.151 ppb	52.422 ppb	55.228 ppb	52.060 ppb	54.718 ppb	100.614 %
Concentration per Run 2	47.745 ppb	47.420 ppb	157.525 ppb	5,019.880 ppb	48.112 ppb	51.496 ppb	50.483 ppb	51.198 ppb	109.578 %
Concentration per Run 3	46.930 ppb	44.667 ppb	150.176 ppb	4,572.585 ppb	45.672 ppb	45.936 ppb	44.267 ppb	47.040 ppb	116.504 %
Concentration RSD	2.5 %	7.3 %	7.3 %	7.0 %	7.0 %	9.2 %	8.4 %	7.5 %	7.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	50.875 ppb	48.045 ppb	174.899 ppb	49.920 ppb	102.811 %	5.655 ppb	49.087 ppb	105.556 %	49.971 ppb
Concentration per Run 1	54.566 ppb	52.772 ppb	187.103 ppb	52.773 ppb	98.367 %	5.739 ppb	51.757 ppb	101.865 %	51.244 ppb
Concentration per Run 2	51.031 ppb	46.157 ppb	170.995 ppb	48.199 ppb	104.924 %	5.748 ppb	47.944 ppb	106.027 %	50.179 ppb
Concentration per Run 3	47.029 ppb	45.206 ppb	166.600 ppb	48.789 ppb	105.143 %	5.476 ppb	47.559 ppb	108.777 %	48.490 ppb
Concentration RSD	7.4 %	8.6 %	6.2 %	5.0 %	3.7 %	2.7 %	4.7 %	3.3 %	2.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.261 ppb	111.379 %	109.804 %	50.555 ppb	52.764 ppb	108.771 %
Concentration per Run 1	64.168 ppb	104.693 %	105.765 %	52.937 ppb	55.332 ppb	104.251 %
Concentration per Run 2	59.361 ppb	113.692 %	111.896 %	48.900 ppb	51.531 ppb	109.983 %
Concentration per Run 3	60.254 ppb	115.754 %	111.751 %	49.828 ppb	51.429 ppb	112.080 %
Concentration RSD	4.2 %	5.3 %	3.2 %	4.2 %	4.2 %	3.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	23	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-4 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:29:37 AM	Vial	22		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	115.499 %	111.780 %	0.057 ppb	337,077.358 ppb	35,962.861 ppb	182.872 ppb	28,965.196 ppb	130,225.996 ppb	106.232 %
Concentration per Run 1	115.712 %	106.021 %	0.048 ppb	348,183.766 ppb	37,074.723 ppb	182.754 ppb	28,474.380 ppb	131,529.864 ppb	104.706 %
Concentration per Run 2	115.202 %	113.874 %	0.035 ppb	325,955.664 ppb	35,092.898 ppb	184.145 ppb	28,957.815 ppb	130,927.565 ppb	106.244 %
Concentration per Run 3	115.582 %	115.445 %	0.086 ppb	337,092.645 ppb	35,720.962 ppb	181.717 ppb	29,463.394 ppb	128,220.560 ppb	107.747 %
Concentration RSD	0.2 %	4.5 %	46.8 %	3.3 %	2.8 %	0.7 %	1.7 %	1.4 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.620 ppb	0.853 ppb	1,097.059 ppb	643.718 ppb	0.717 ppb	15.593 ppb	4.162 ppb	12.462 ppb	100.618 %
Concentration per Run 1	3.006 ppb	0.925 ppb	1,112.052 ppb	639.732 ppb	0.743 ppb	15.809 ppb	4.528 ppb	12.602 ppb	101.932 %
Concentration per Run 2	1.956 ppb	0.763 ppb	1,075.335 ppb	661.013 ppb	0.692 ppb	15.113 ppb	4.069 ppb	12.042 ppb	105.775 %
Concentration per Run 3	2.899 ppb	0.870 ppb	1,103.788 ppb	630.409 ppb	0.716 ppb	15.858 ppb	3.889 ppb	12.742 ppb	94.147 %
Concentration RSD	22.1 %	9.6 %	1.8 %	2.4 %	3.5 %	2.7 %	7.9 %	3.0 %	5.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.820 ppb	0.322 ppb	1,223.863 ppb	1.160 ppb	96.312 %	0.024 ppb	0.040 ppb	100.669 %	0.595 ppb
Concentration per Run 1	1.565 ppb	0.380 ppb	1,209.861 ppb	1.169 ppb	94.054 %	0.026 ppb	0.037 ppb	99.907 %	0.490 ppb
Concentration per Run 2	1.646 ppb	0.363 ppb	1,198.042 ppb	1.095 ppb	97.673 %	0.027 ppb	0.054 ppb	100.426 %	0.654 ppb
Concentration per Run 3	2.250 ppb	0.221 ppb	1,263.687 ppb	1.214 ppb	97.209 %	0.019 ppb	0.030 ppb	101.675 %	0.642 ppb
Concentration RSD	20.6 %	27.2 %	2.9 %	5.2 %	2.0 %	16.9 %	31.1 %	0.9 %	15.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	113.456 ppb	106.876 %	107.645 %	0.446 ppb	6.229 ppb	102.231 %
Concentration per Run 1	114.970 ppb	104.853 %	105.626 %	0.337 ppb	6.205 ppb	102.448 %
Concentration per Run 2	114.585 ppb	106.595 %	107.946 %	0.561 ppb	6.304 ppb	100.336 %
Concentration per Run 3	110.814 ppb	109.179 %	109.362 %	0.440 ppb	6.179 ppb	103.908 %
Concentration RSD	2.0 %	2.0 %	1.8 %	25.1 %	1.1 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	24	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417598-01 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:35:31 AM	Vial	20		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	111.400 %	108.377 %	0.017 ppb	349,472.337 ppb	37,302.105 ppb	187.165 ppb	31,088.590 ppb	140,146.007 ppb	100.787 %
Concentration per Run 1	109.613 %	98.168 %	0.014 ppb	368,202.993 ppb	39,643.788 ppb	194.075 ppb	32,536.336 ppb	151,127.130 ppb	99.499 %
Concentration per Run 2	112.233 %	102.094 %	0.019 ppb	360,416.676 ppb	38,507.778 ppb	195.670 ppb	31,477.980 ppb	148,072.157 ppb	101.459 %
Concentration per Run 3	112.353 %	124.869 %	0.019 ppb	319,797.342 ppb	33,754.749 ppb	171.750 ppb	29,251.456 ppb	121,238.734 ppb	101.404 %
Concentration RSD	1.4 %	13.3 %	17.0 %	7.4 %	8.4 %	7.1 %	5.4 %	11.7 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.556 ppb	0.801 ppb	1,150.049 ppb	671.008 ppb	0.774 ppb	16.243 ppb	4.039 ppb	13.660 ppb	95.994 %
Concentration per Run 1	2.692 ppb	0.785 ppb	1,213.685 ppb	688.055 ppb	0.777 ppb	17.568 ppb	4.305 ppb	14.138 ppb	92.258 %
Concentration per Run 2	2.488 ppb	0.818 ppb	1,141.074 ppb	664.026 ppb	0.857 ppb	15.543 ppb	4.060 ppb	13.435 ppb	97.652 %
Concentration per Run 3	2.487 ppb	0.800 ppb	1,095.387 ppb	660.943 ppb	0.686 ppb	15.620 ppb	3.751 ppb	13.406 ppb	98.072 %
Concentration RSD	4.6 %	2.1 %	5.2 %	2.2 %	11.1 %	7.1 %	6.9 %	3.0 %	3.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.887 ppb	-0.032 ppb	1,274.495 ppb	0.867 ppb	88.900 %	0.027 ppb	0.027 ppb	91.409 %	0.525 ppb
Concentration per Run 1	1.877 ppb	0.016 ppb	1,274.358 ppb	1.068 ppb	83.072 %	0.034 ppb	0.035 ppb	85.912 %	0.504 ppb
Concentration per Run 2	2.116 ppb	-0.014 ppb	1,273.630 ppb	0.787 ppb	91.209 %	0.023 ppb	0.026 ppb	94.118 %	0.532 ppb
Concentration per Run 3	1.667 ppb	-0.097 ppb	1,275.496 ppb	0.746 ppb	92.420 %	0.025 ppb	0.019 ppb	94.197 %	0.538 ppb
Concentration RSD	11.9 %	184.8 %	0.1 %	20.2 %	5.7 %	22.1 %	30.2 %	5.2 %	3.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	118.668 ppb	98.337 %	97.757 %	0.134 ppb	6.650 ppb	90.787 %
Concentration per Run 1	121.450 ppb	92.614 %	93.266 %	0.071 ppb	6.705 ppb	90.412 %
Concentration per Run 2	119.766 ppb	101.279 %	99.234 %	0.144 ppb	6.720 ppb	89.481 %
Concentration per Run 3	114.788 ppb	101.118 %	100.770 %	0.187 ppb	6.527 ppb	92.467 %
Concentration RSD	2.9 %	5.0 %	4.1 %	43.7 %	1.6 %	1.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	25	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-6d5 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:39:59 AM	Vial	24		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.716 %	102.356 %	0.007 ppb	69,637.565 ppb	7,589.910 ppb	51.205 ppb	6,144.778 ppb	27,231.531 ppb	101.320 %
Concentration per Run 1	102.749 %	97.382 %	0.012 ppb	72,222.303 ppb	7,935.750 ppb	49.140 ppb	6,206.231 ppb	27,043.774 ppb	100.445 %
Concentration per Run 2	103.519 %	99.738 %	0.001 ppb	70,313.926 ppb	7,674.650 ppb	60.478 ppb	6,090.625 ppb	27,968.432 ppb	101.417 %
Concentration per Run 3	104.879 %	109.948 %	0.009 ppb	66,376.465 ppb	7,159.330 ppb	43.999 ppb	6,137.478 ppb	26,682.387 ppb	102.096 %
Concentration RSD	1.0 %	6.5 %	78.6 %	4.3 %	5.2 %	16.5 %	0.9 %	2.4 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.524 ppb	0.221 ppb	233.450 ppb	141.118 ppb	0.131 ppb	3.230 ppb	1.288 ppb	3.389 ppb	93.388 %
Concentration per Run 1	0.452 ppb	0.189 ppb	235.457 ppb	142.147 ppb	0.119 ppb	3.272 ppb	1.237 ppb	3.642 ppb	87.725 %
Concentration per Run 2	0.418 ppb	0.312 ppb	233.755 ppb	136.534 ppb	0.136 ppb	3.122 ppb	1.494 ppb	3.436 ppb	96.288 %
Concentration per Run 3	0.703 ppb	0.162 ppb	231.137 ppb	144.673 ppb	0.139 ppb	3.296 ppb	1.134 ppb	3.091 ppb	96.152 %
Concentration RSD	29.7 %	36.2 %	0.9 %	3.0 %	8.1 %	2.9 %	14.4 %	8.2 %	5.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.605 ppb	0.239 ppb	246.412 ppb	0.235 ppb	95.176 %	0.007 ppb	0.004 ppb	98.398 %	0.125 ppb
Concentration per Run 1	0.437 ppb	0.124 ppb	245.428 ppb	0.238 ppb	92.969 %	0.013 ppb	0.006 ppb	95.162 %	0.117 ppb
Concentration per Run 2	0.631 ppb	0.409 ppb	244.462 ppb	0.196 ppb	95.101 %	0.008 ppb	0.006 ppb	97.925 %	0.140 ppb
Concentration per Run 3	0.746 ppb	0.184 ppb	249.347 ppb	0.270 ppb	97.458 %	0.001 ppb	0.000 ppb	102.109 %	0.118 ppb
Concentration RSD	25.8 %	62.9 %	1.0 %	15.9 %	2.4 %	84.2 %	86.6 %	3.6 %	10.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	22.563 ppb	98.805 %	98.625 %	0.065 ppb	1.220 ppb	100.362 %
Concentration per Run 1	22.198 ppb	96.607 %	96.945 %	0.032 ppb	1.216 ppb	99.741 %
Concentration per Run 2	22.890 ppb	99.050 %	98.113 %	0.085 ppb	1.233 ppb	98.604 %
Concentration per Run 3	22.601 ppb	100.758 %	100.815 %	0.077 ppb	1.211 ppb	102.741 %
Concentration RSD	1.5 %	2.1 %	2.0 %	43.6 %	0.9 %	2.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	26	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417598-01d10 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:44:28 AM	Vial	25		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.046 %	95.550 %	0.009 ppb	35,005.388 ppb	3,994.267 ppb	21.857 ppb	3,110.824 ppb	14,729.014 ppb	95.577 %
Concentration per Run 1	98.718 %	104.450 %	0.013 ppb	32,842.639 ppb	3,719.436 ppb	15.732 ppb	2,970.863 ppb	13,358.053 ppb	92.306 %
Concentration per Run 2	100.773 %	86.387 %	0.014 ppb	37,804.361 ppb	4,249.244 ppb	22.745 ppb	3,252.538 ppb	16,673.517 ppb	96.243 %
Concentration per Run 3	103.647 %	95.811 %	-0.001 ppb	34,369.165 ppb	4,014.121 ppb	27.095 ppb	3,109.071 ppb	14,155.473 ppb	98.181 %
Concentration RSD	2.5 %	9.5 %	99.4 %	7.3 %	6.6 %	26.2 %	4.5 %	11.7 %	3.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.394 ppb	0.150 ppb	117.728 ppb	68.825 ppb	0.091 ppb	1.730 ppb	0.594 ppb	1.565 ppb	92.079 %
Concentration per Run 1	0.347 ppb	0.066 ppb	115.435 ppb	65.153 ppb	0.084 ppb	1.693 ppb	0.705 ppb	1.509 ppb	94.467 %
Concentration per Run 2	0.479 ppb	0.188 ppb	124.375 ppb	87.094 ppb	0.102 ppb	1.940 ppb	0.535 ppb	1.740 ppb	86.562 %
Concentration per Run 3	0.357 ppb	0.197 ppb	113.374 ppb	54.228 ppb	0.086 ppb	1.557 ppb	0.542 ppb	1.446 ppb	95.209 %
Concentration RSD	18.7 %	48.6 %	5.0 %	24.3 %	11.0 %	11.2 %	16.3 %	9.9 %	5.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.478 ppb	0.049 ppb	124.057 ppb	0.124 ppb	94.251 %	0.016 ppb	0.004 ppb	95.432 %	0.070 ppb
Concentration per Run 1	0.489 ppb	0.287 ppb	122.538 ppb	0.149 ppb	95.296 %	0.010 ppb	0.000 ppb	97.521 %	0.051 ppb
Concentration per Run 2	0.474 ppb	-0.134 ppb	126.730 ppb	0.073 ppb	93.363 %	0.019 ppb	0.006 ppb	93.682 %	0.087 ppb
Concentration per Run 3	0.471 ppb	-0.007 ppb	122.904 ppb	0.150 ppb	94.094 %	0.018 ppb	0.006 ppb	95.093 %	0.073 ppb
Concentration RSD	2.0 %	441.8 %	1.9 %	35.9 %	1.0 %	29.8 %	86.6 %	2.0 %	25.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	11.320 ppb	98.576 %	97.194 %	0.043 ppb	0.609 ppb	98.966 %
Concentration per Run 1	11.098 ppb	99.526 %	97.698 %	0.016 ppb	0.621 ppb	102.074 %
Concentration per Run 2	11.381 ppb	97.693 %	95.592 %	0.047 ppb	0.584 ppb	96.108 %
Concentration per Run 3	11.482 ppb	98.509 %	98.290 %	0.066 ppb	0.622 ppb	98.716 %
Concentration RSD	1.8 %	0.9 %	1.5 %	58.2 %	3.6 %	3.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	27	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-4d10 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:48:54 AM	Vial	26		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.042 %	101.309 %	0.007 ppb	33,511.728 ppb	3,818.463 ppb	19.910 ppb	3,092.220 ppb	14,043.401 ppb	96.630 %
Concentration per Run 1	99.102 %	105.236 %	0.008 ppb	32,532.128 ppb	3,805.210 ppb	19.959 ppb	3,126.727 ppb	13,700.118 ppb	93.892 %
Concentration per Run 2	101.108 %	96.597 %	0.006 ppb	35,632.204 ppb	4,015.195 ppb	23.809 ppb	3,168.574 ppb	14,416.145 ppb	95.425 %
Concentration per Run 3	102.914 %	102.094 %	0.007 ppb	32,370.851 ppb	3,634.984 ppb	15.963 ppb	2,981.359 ppb	14,013.942 ppb	100.574 %
Concentration RSD	1.9 %	4.3 %	19.0 %	5.5 %	5.0 %	19.7 %	3.2 %	2.6 %	3.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.498 ppb	0.181 ppb	115.880 ppb	64.547 ppb	0.057 ppb	1.775 ppb	0.544 ppb	1.457 ppb	92.572 %
Concentration per Run 1	0.498 ppb	0.155 ppb	117.932 ppb	57.868 ppb	0.060 ppb	1.425 ppb	0.669 ppb	1.492 ppb	90.707 %
Concentration per Run 2	0.477 ppb	0.223 ppb	116.454 ppb	73.200 ppb	0.028 ppb	2.014 ppb	0.594 ppb	1.574 ppb	91.330 %
Concentration per Run 3	0.519 ppb	0.164 ppb	113.252 ppb	62.574 ppb	0.084 ppb	1.886 ppb	0.368 ppb	1.305 ppb	95.681 %
Concentration RSD	4.3 %	20.5 %	2.1 %	12.2 %	49.4 %	17.5 %	28.8 %	9.5 %	2.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.547 ppb	-0.037 ppb	123.739 ppb	0.135 ppb	94.136 %	0.005 ppb	0.002 ppb	96.877 %	0.073 ppb
Concentration per Run 1	0.516 ppb	0.003 ppb	126.939 ppb	0.199 ppb	95.190 %	0.006 ppb	0.006 ppb	98.648 %	0.059 ppb
Concentration per Run 2	0.474 ppb	-0.118 ppb	123.989 ppb	0.055 ppb	93.429 %	0.005 ppb	0.000 ppb	96.819 %	0.063 ppb
Concentration per Run 3	0.650 ppb	0.006 ppb	120.289 ppb	0.150 ppb	93.788 %	0.005 ppb	0.000 ppb	95.164 %	0.097 ppb
Concentration RSD	16.8 %	192.7 %	2.7 %	54.3 %	1.0 %	19.9 %	173.2 %	1.8 %	28.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	11.169 ppb	97.977 %	95.682 %	0.038 ppb	0.634 ppb	97.870 %
Concentration per Run 1	11.726 ppb	100.880 %	98.061 %	0.017 ppb	0.658 ppb	100.821 %
Concentration per Run 2	11.346 ppb	96.715 %	95.435 %	0.051 ppb	0.646 ppb	95.346 %
Concentration per Run 3	10.433 ppb	96.337 %	93.549 %	0.047 ppb	0.599 ppb	97.441 %
Concentration RSD	6.0 %	2.6 %	2.4 %	49.1 %	4.9 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	28	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903688-6d50 6020SL	Rack	1		
Analysis started at:	4/3/2024 10:53:20 AM	Vial	27		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.511 %	94.503 %	0.006 ppb	7,217.493 ppb	828.443 ppb	5.094 ppb	688.165 ppb	2,901.599 ppb	94.559 %
Concentration per Run 1	98.937 %	87.173 %	0.015 ppb	7,378.420 ppb	856.456 ppb	4.390 ppb	729.784 ppb	3,215.619 ppb	92.588 %
Concentration per Run 2	102.430 %	108.377 %	0.001 ppb	6,789.286 ppb	765.318 ppb	4.650 ppb	647.372 ppb	2,406.939 ppb	95.713 %
Concentration per Run 3	103.165 %	87.958 %	0.001 ppb	7,484.775 ppb	863.554 ppb	6.241 ppb	687.338 ppb	3,082.239 ppb	95.377 %
Concentration RSD	2.2 %	12.7 %	141.4 %	5.2 %	6.6 %	19.7 %	6.0 %	14.9 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.328 ppb	0.122 ppb	23.836 ppb	13.919 ppb	0.016 ppb	0.351 ppb	0.221 ppb	0.385 ppb	93.235 %
Concentration per Run 1	0.294 ppb	0.127 ppb	24.539 ppb	12.858 ppb	-0.006 ppb	0.257 ppb	0.298 ppb	0.442 ppb	96.538 %
Concentration per Run 2	0.377 ppb	0.097 ppb	23.001 ppb	16.522 ppb	0.032 ppb	0.337 ppb	0.175 ppb	0.291 ppb	93.741 %
Concentration per Run 3	0.312 ppb	0.142 ppb	23.968 ppb	12.377 ppb	0.022 ppb	0.458 ppb	0.191 ppb	0.423 ppb	89.426 %
Concentration RSD	13.3 %	19.0 %	3.3 %	16.3 %	124.9 %	28.9 %	30.2 %	21.3 %	3.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.327 ppb	-0.029 ppb	24.464 ppb	0.033 ppb	94.869 %	0.003 ppb	0.000 ppb	97.014 %	0.026 ppb
Concentration per Run 1	0.173 ppb	-0.091 ppb	24.335 ppb	0.053 ppb	95.667 %	0.001 ppb	0.000 ppb	98.883 %	0.012 ppb
Concentration per Run 2	0.426 ppb	-0.006 ppb	24.994 ppb	0.022 ppb	95.624 %	0.008 ppb	0.000 ppb	99.023 %	0.045 ppb
Concentration per Run 3	0.383 ppb	0.011 ppb	24.061 ppb	0.023 ppb	93.316 %	0.001 ppb	0.000 ppb	93.137 %	0.023 ppb
Concentration RSD	41.4 %	189.3 %	2.0 %	54.6 %	1.4 %	135.4 %	N/A	3.5 %	63.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	2.301 ppb	97.320 %	95.348 %	0.029 ppb	0.126 ppb	101.013 %
Concentration per Run 1	2.315 ppb	97.503 %	95.769 %	0.026 ppb	0.140 ppb	101.590 %
Concentration per Run 2	2.270 ppb	99.251 %	96.371 %	0.029 ppb	0.115 ppb	102.571 %
Concentration per Run 3	2.319 ppb	95.207 %	93.905 %	0.033 ppb	0.123 ppb	98.879 %
Concentration RSD	1.2 %	2.1 %	1.3 %	12.6 %	10.1 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	29	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 10:57:46 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.807 %	101.309 %	59.187 ppb	6,291.034 ppb	6,345.303 ppb	61.289 ppb	6,362.051 ppb	5,614.419 ppb	96.039 %
Concentration per Run 1	102.352 %	114.660 %	58.995 ppb	5,614.970 ppb	5,677.953 ppb	55.660 ppb	5,842.804 ppb	4,957.452 ppb	95.261 %
Concentration per Run 2	102.595 %	102.880 %	58.461 ppb	6,002.592 ppb	6,153.767 ppb	61.534 ppb	6,023.891 ppb	5,200.390 ppb	95.759 %
Concentration per Run 3	103.474 %	86.387 %	60.105 ppb	7,255.541 ppb	7,204.190 ppb	66.672 ppb	7,219.457 ppb	6,685.416 ppb	97.097 %
Recovery Percentage 1			98.645 %	104.851 %	105.755 %	102.148 %	106.034 %	93.574 %	
Concentration RSD	0.6 %	14.0 %	1.4 %	13.6 %	12.3 %	9.0 %	11.8 %	16.7 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	62.491 ppb	64.572 ppb	59.064 ppb	6,418.937 ppb	65.389 ppb	65.118 ppb	65.355 ppb	65.917 ppb	90.704 %
Concentration per Run 1	59.852 ppb	61.506 ppb	52.294 ppb	6,279.411 ppb	62.696 ppb	61.578 ppb	65.010 ppb	64.405 ppb	92.348 %
Concentration per Run 2	59.021 ppb	61.287 ppb	57.703 ppb	6,025.195 ppb	62.092 ppb	63.363 ppb	65.226 ppb	63.326 ppb	93.752 %
Concentration per Run 3	68.600 ppb	70.924 ppb	67.194 ppb	6,952.204 ppb	71.379 ppb	70.413 ppb	65.830 ppb	70.019 ppb	86.010 %
Recovery Percentage 1	104.152 %	107.620 %	98.440 %	106.982 %	108.982 %	108.530 %	108.925 %	109.861 %	
Concentration RSD	8.5 %	8.5 %	12.8 %	7.5 %	7.9 %	7.2 %	0.7 %	5.5 %	4.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	64.220 ppb	65.373 ppb	64.035 ppb	62.990 ppb	91.701 %	61.550 ppb	62.159 ppb	90.772 %	62.107 ppb
Concentration per Run 1	66.424 ppb	64.616 ppb	64.347 ppb	63.731 ppb	92.300 %	62.225 ppb	61.846 ppb	93.642 %	61.161 ppb
Concentration per Run 2	62.535 ppb	63.438 ppb	61.804 ppb	60.687 ppb	92.432 %	60.132 ppb	61.392 ppb	89.205 %	61.742 ppb
Concentration per Run 3	63.700 ppb	68.065 ppb	65.953 ppb	64.552 ppb	90.371 %	62.295 ppb	63.241 ppb	89.470 %	63.418 ppb
Recovery Percentage 1	107.033 %	108.954 %	106.725 %	104.983 %		102.584 %	103.599 %		103.511 %
Concentration RSD	3.1 %	3.7 %	3.3 %	3.2 %	1.3 %	2.0 %	1.6 %	2.7 %	1.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.290 ppb	95.428 %	92.384 %	61.636 ppb	62.807 ppb	94.965 %
Concentration per Run 1	60.956 ppb	96.110 %	92.700 %	63.558 ppb	63.438 ppb	94.474 %
Concentration per Run 2	59.837 ppb	94.843 %	93.474 %	59.819 ppb	62.083 ppb	94.992 %
Concentration per Run 3	63.077 ppb	95.332 %	90.979 %	61.530 ppb	62.900 ppb	95.428 %
Recovery Percentage 1	102.150 %			102.726 %	104.678 %	
Concentration RSD	2.7 %	0.7 %	1.4 %	3.0 %	1.1 %	0.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	30	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 11:02:18 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.305 %	98.691 %	0.032 ppb	34.588 ppb	0.447 ppb	-0.228 ppb	29.472 ppb	13.931 ppb	93.045 %
Concentration per Run 1	98.932 %	102.094 %	0.035 ppb	30.913 ppb	-0.347 ppb	-0.881 ppb	27.612 ppb	23.956 ppb	91.421 %
Concentration per Run 2	103.663 %	97.382 %	0.014 ppb	38.479 ppb	0.815 ppb	-0.131 ppb	28.065 ppb	2.612 ppb	93.928 %
Concentration per Run 3	104.321 %	96.597 %	0.047 ppb	34.372 ppb	0.873 ppb	0.327 ppb	32.739 ppb	15.225 ppb	93.786 %
Recovery Percentage 1			6.394 %	34.588 %	0.638 %	-2.283 %	29.472 %	13.931 %	
Concentration RSD	2.9 %	3.0 %	53.1 %	11.0 %	154.0 %	267.2 %	9.6 %	77.0 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.074 ppb	0.035 ppb	0.137 ppb	6.309 ppb	0.011 ppb	-0.060 ppb	0.108 ppb	-0.084 ppb	117.470 %
Concentration per Run 1	0.020 ppb	-0.018 ppb	0.120 ppb	5.689 ppb	-0.001 ppb	-0.042 ppb	0.142 ppb	-0.115 ppb	122.432 %
Concentration per Run 2	0.207 ppb	0.039 ppb	0.254 ppb	7.527 ppb	0.016 ppb	-0.150 ppb	0.101 ppb	-0.095 ppb	117.342 %
Concentration per Run 3	-0.005 ppb	0.083 ppb	0.038 ppb	5.711 ppb	0.017 ppb	0.013 ppb	0.081 ppb	-0.042 ppb	112.638 %
Recovery Percentage 1	1.486 %	3.462 %	13.727 %	12.618 %	2.111 %	-2.983 %	10.799 %	-1.679 %	
Concentration RSD	156.0 %	145.1 %	79.6 %	16.7 %	94.5 %	138.3 %	28.9 %	45.1 %	4.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.362 ppb	0.143 ppb	0.013 ppb	0.175 ppb	95.056 %	0.074 ppb	0.006 ppb	94.050 %	0.033 ppb
Concentration per Run 1	0.444 ppb	0.072 ppb	0.010 ppb	0.181 ppb	95.485 %	0.093 ppb	0.013 ppb	93.299 %	0.055 ppb
Concentration per Run 2	0.308 ppb	0.257 ppb	0.011 ppb	0.233 ppb	92.897 %	0.096 ppb	0.006 ppb	93.853 %	0.020 ppb
Concentration per Run 3	0.332 ppb	0.100 ppb	0.018 ppb	0.110 ppb	96.785 %	0.032 ppb	0.000 ppb	94.999 %	0.025 ppb
Recovery Percentage 1	72.310 %	2.854 %	0.130 %	8.727 %		18.396 %	3.199 %		0.833 %
Concentration RSD	20.0 %	69.8 %	33.2 %	35.5 %	2.1 %	49.5 %	99.8 %	0.9 %	57.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.034 ppb	96.266 %	94.683 %	0.448 ppb	0.041 ppb	100.583 %
Concentration per Run 1	0.098 ppb	94.704 %	94.214 %	0.326 ppb	0.050 ppb	100.519 %
Concentration per Run 2	0.002 ppb	94.802 %	92.481 %	0.560 ppb	0.050 ppb	99.540 %
Concentration per Run 3	0.001 ppb	99.291 %	97.355 %	0.458 ppb	0.023 ppb	101.689 %
Recovery Percentage 1	6.772 %			44.807 %	4.108 %	
Concentration RSD	163.9 %	2.7 %	2.6 %	26.1 %	37.2 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 31
Analysis label: WG1902287-1 2008TL
Analysis started at: 4/3/2024 11:12:14 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 7
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.941 %	84.817 %	0.015 ppb	51.555 ppb	1.605 ppb	2.102 ppb	39.232 ppb	39.415 ppb	88.227 %
Concentration per Run 1	94.210 %	88.743 %	0.014 ppb	50.721 ppb	1.952 ppb	1.089 ppb	25.660 ppb	41.966 ppb	86.171 %
Concentration per Run 2	98.382 %	72.251 %	0.006 ppb	66.096 ppb	0.501 ppb	2.932 ppb	60.925 ppb	59.874 ppb	91.195 %
Concentration per Run 3	98.230 %	93.455 %	0.024 ppb	37.849 ppb	2.361 ppb	2.285 ppb	31.111 ppb	16.405 ppb	87.314 %
Concentration RSD	2.4 %	13.1 %	59.9 %	27.4 %	60.9 %	44.5 %	48.4 %	55.4 %	3.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.075 ppb	0.112 ppb	0.124 ppb	2.364 ppb	0.001 ppb	10.058 ppb	0.308 ppb	2.832 ppb	87.455 %
Concentration per Run 1	0.125 ppb	0.092 ppb	0.159 ppb	2.113 ppb	0.008 ppb	10.396 ppb	0.279 ppb	2.547 ppb	87.336 %
Concentration per Run 2	0.057 ppb	0.141 ppb	0.060 ppb	2.317 ppb	0.001 ppb	9.995 ppb	0.292 ppb	3.300 ppb	86.007 %
Concentration per Run 3	0.044 ppb	0.102 ppb	0.152 ppb	2.662 ppb	-0.006 ppb	9.784 ppb	0.352 ppb	2.651 ppb	89.021 %
Concentration RSD	57.4 %	23.0 %	44.5 %	11.7 %	703.7 %	3.1 %	12.7 %	14.4 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.395 ppb	0.167 ppb	0.014 ppb	0.029 ppb	93.542 %	0.011 ppb	0.000 ppb	93.843 %	-0.017 ppb
Concentration per Run 1	0.502 ppb	0.005 ppb	0.016 ppb	0.022 ppb	97.597 %	0.006 ppb	0.000 ppb	96.996 %	-0.019 ppb
Concentration per Run 2	0.467 ppb	0.367 ppb	0.018 ppb	0.006 ppb	93.934 %	0.018 ppb	0.000 ppb	94.395 %	-0.012 ppb
Concentration per Run 3	0.216 ppb	0.129 ppb	0.008 ppb	0.058 ppb	89.094 %	0.009 ppb	0.000 ppb	90.139 %	-0.020 ppb
Concentration RSD	39.5 %	110.1 %	38.8 %	91.7 %	4.6 %	56.0 %	N/A	3.7 %	24.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.018 ppb	94.810 %	92.994 %	0.065 ppb	0.006 ppb	98.975 %
Concentration per Run 1	0.024 ppb	98.665 %	96.146 %	0.046 ppb	0.005 ppb	103.175 %
Concentration per Run 2	0.002 ppb	95.670 %	94.906 %	0.065 ppb	0.005 ppb	99.998 %
Concentration per Run 3	0.028 ppb	90.095 %	87.931 %	0.085 ppb	0.008 ppb	93.750 %
Concentration RSD	77.9 %	4.6 %	4.8 %	30.0 %	27.5 %	4.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	32	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	xWG1902287-2d10 2008TL	Rack	1		
Analysis started at:	4/3/2024 11:16:43 AM	Vial	8		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	247.646 %	99.738 %	0.081 ppb	1,118.979 ppb	1,047.046 ppb	197.853 ppb	1,101.434 ppb	1,422.711 ppb	99.784 %
Concentration per Run 1	253.893 %	108.377 %	0.162 ppb	1,003.018 ppb	896.849 ppb	177.742 ppb	943.373 ppb	1,343.515 ppb	82.474 %
Concentration per Run 2	206.141 %	106.806 %	0.061 ppb	1,053.558 ppb	976.655 ppb	187.791 ppb	1,100.743 ppb	1,587.818 ppb	82.771 %
Concentration per Run 3	282.904 %	84.031 %	0.019 ppb	1,300.359 ppb	1,267.634 ppb	228.026 ppb	1,260.185 ppb	1,336.801 ppb	134.107 %
Concentration RSD	15.7 %	13.7 %	91.1 %	14.2 %	18.6 %	13.4 %	14.4 %	10.1 %	29.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	50.445 ppb	21.295 ppb	54.765 ppb	109.401 ppb	54.087 ppb	54.473 ppb	27.532 ppb	54.412 ppb	86.327 %
Concentration per Run 1	46.881 ppb	20.250 ppb	53.071 ppb	108.574 ppb	51.148 ppb	52.154 ppb	26.981 ppb	52.137 ppb	85.249 %
Concentration per Run 2	51.514 ppb	21.446 ppb	54.951 ppb	105.795 ppb	55.556 ppb	54.497 ppb	28.024 ppb	56.086 ppb	83.917 %
Concentration per Run 3	52.939 ppb	22.187 ppb	56.272 ppb	113.835 ppb	55.556 ppb	56.768 ppb	27.591 ppb	55.014 ppb	89.814 %
Concentration RSD	6.3 %	4.6 %	2.9 %	3.7 %	4.7 %	4.2 %	1.9 %	3.8 %	3.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.615 ppb	13.671 ppb	105.057 ppb	95.702 ppb	90.787 %	4.988 ppb	5.333 ppb	92.027 %	45.415 ppb
Concentration per Run 1	12.875 ppb	14.218 ppb	105.683 ppb	94.774 ppb	86.237 %	4.931 ppb	5.221 ppb	90.081 %	44.800 ppb
Concentration per Run 2	14.547 ppb	15.553 ppb	107.058 ppb	99.932 ppb	91.981 %	4.888 ppb	5.420 ppb	93.305 %	45.857 ppb
Concentration per Run 3	13.424 ppb	11.242 ppb	102.431 ppb	92.401 ppb	94.144 %	5.145 ppb	5.356 ppb	92.696 %	45.586 ppb
Concentration RSD	6.3 %	16.1 %	2.3 %	4.0 %	4.5 %	2.8 %	1.9 %	1.9 %	1.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	200.200 ppb	94.818 %	93.153 %	12.013 ppb	53.127 ppb	98.524 %
Concentration per Run 1	196.608 ppb	92.903 %	90.355 %	11.874 ppb	52.733 ppb	96.048 %
Concentration per Run 2	205.931 ppb	95.319 %	93.205 %	12.369 ppb	54.363 ppb	98.403 %
Concentration per Run 3	198.060 ppb	96.231 %	95.898 %	11.795 ppb	52.286 ppb	101.121 %
Concentration RSD	2.5 %	1.8 %	3.0 %	2.6 %	2.1 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	33	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 11:21:12 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.078 %	85.602 %	58.326 ppb	6,556.565 ppb	6,488.836 ppb	64.679 ppb	6,516.724 ppb	6,163.503 ppb	94.487 %
Concentration per Run 1	99.410 %	91.099 %	53.857 ppb	6,559.762 ppb	6,372.643 ppb	58.485 ppb	6,149.360 ppb	5,574.872 ppb	100.421 %
Concentration per Run 2	97.956 %	80.105 %	57.061 ppb	6,367.727 ppb	6,747.685 ppb	73.616 ppb	6,748.930 ppb	6,322.166 ppb	96.637 %
Concentration per Run 3	90.868 %	85.602 %	64.059 ppb	6,742.207 ppb	6,346.181 ppb	61.935 ppb	6,651.883 ppb	6,593.472 ppb	86.403 %
Recovery Percentage 1			97.210 %	109.276 %	108.147 %	107.798 %	108.612 %	102.725 %	
Concentration RSD	4.8 %	6.4 %	8.9 %	2.9 %	3.5 %	12.3 %	4.9 %	8.6 %	7.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	61.217 ppb	62.180 ppb	63.466 ppb	6,262.670 ppb	65.169 ppb	63.959 ppb	63.029 ppb	63.347 ppb	80.817 %
Concentration per Run 1	58.853 ppb	60.091 ppb	61.255 ppb	6,189.951 ppb	65.699 ppb	63.467 ppb	63.996 ppb	61.726 ppb	84.074 %
Concentration per Run 2	61.293 ppb	63.316 ppb	66.388 ppb	6,221.491 ppb	63.772 ppb	62.034 ppb	63.659 ppb	65.301 ppb	80.861 %
Concentration per Run 3	63.505 ppb	63.133 ppb	62.755 ppb	6,376.569 ppb	66.036 ppb	66.374 ppb	61.432 ppb	63.013 ppb	77.515 %
Recovery Percentage 1	102.028 %	103.634 %	105.777 %	104.378 %	108.614 %	106.598 %	105.049 %	105.578 %	
Concentration RSD	3.8 %	2.9 %	4.2 %	1.6 %	1.9 %	3.5 %	2.2 %	2.9 %	4.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	61.724 ppb	61.659 ppb	64.363 ppb	60.429 ppb	85.844 %	59.690 ppb	59.751 ppb	85.884 %	60.235 ppb
Concentration per Run 1	60.390 ppb	61.343 ppb	62.560 ppb	60.569 ppb	89.771 %	60.060 ppb	58.958 ppb	88.095 %	60.494 ppb
Concentration per Run 2	62.058 ppb	61.731 ppb	65.882 ppb	58.527 ppb	84.555 %	59.341 ppb	60.029 ppb	85.628 %	59.131 ppb
Concentration per Run 3	62.724 ppb	61.902 ppb	64.648 ppb	62.191 ppb	83.207 %	59.668 ppb	60.266 ppb	83.929 %	61.082 ppb
Recovery Percentage 1	102.873 %	102.765 %	107.272 %	100.715 %		99.483 %	99.585 %		100.392 %
Concentration RSD	1.9 %	0.5 %	2.6 %	3.0 %	4.0 %	0.6 %	1.2 %	2.4 %	1.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.847 ppb	87.940 %	86.818 %	59.210 ppb	60.441 ppb	92.312 %
Concentration per Run 1	60.123 ppb	92.158 %	89.896 %	58.138 ppb	59.306 ppb	96.235 %
Concentration per Run 2	60.020 ppb	85.562 %	86.112 %	58.295 ppb	61.271 ppb	91.807 %
Concentration per Run 3	59.397 ppb	86.100 %	84.445 %	61.195 ppb	60.746 ppb	88.894 %
Recovery Percentage 1	99.745 %			98.683 %	100.735 %	
Concentration RSD	0.7 %	4.2 %	3.2 %	2.9 %	1.7 %	4.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	34	User name	ALPHALAB\a2-icpmsq2	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 11:29:04 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	110.407 %	102.356 %	0.043 ppb	18.110 ppb	0.956 ppb	-0.393 ppb	67.323 ppb	-3.048 ppb	103.072 %
Concentration per Run 1	110.225 %	95.026 %	0.060 ppb	15.553 ppb	0.590 ppb	-0.855 ppb	68.428 ppb	-21.940 ppb	101.353 %
Concentration per Run 2	109.914 %	109.162 %	0.044 ppb	9.342 ppb	-1.337 ppb	0.129 ppb	57.843 ppb	30.014 ppb	104.721 %
Concentration per Run 3	111.082 %	102.880 %	0.027 ppb	29.433 ppb	3.616 ppb	-0.454 ppb	75.697 ppb	-17.218 ppb	103.143 %
Recovery Percentage 1			8.692 %	18.110 %	1.366 %	-3.931 %	67.323 %	-3.048 %	
Concentration RSD	0.5 %	6.9 %	37.1 %	56.8 %	261.1 %	125.8 %	13.3 %	942.5 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.088 ppb	0.099 ppb	0.213 ppb	6.067 ppb	0.005 ppb	-0.051 ppb	0.125 ppb	-0.002 ppb	89.606 %
Concentration per Run 1	0.087 ppb	0.120 ppb	0.235 ppb	6.138 ppb	0.001 ppb	0.027 ppb	0.066 ppb	0.024 ppb	83.695 %
Concentration per Run 2	0.036 ppb	0.059 ppb	0.267 ppb	1.229 ppb	-0.006 ppb	-0.135 ppb	0.163 ppb	-0.044 ppb	91.786 %
Concentration per Run 3	0.142 ppb	0.119 ppb	0.137 ppb	10.835 ppb	0.020 ppb	-0.044 ppb	0.147 ppb	0.015 ppb	93.337 %
Recovery Percentage 1	1.769 %	9.929 %	21.323 %	12.134 %	0.981 %	-2.530 %	12.532 %	-0.034 %	
Concentration RSD	60.0 %	35.4 %	31.7 %	79.2 %	276.2 %	160.5 %	41.3 %	2,158.4 %	5.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.408 ppb	-0.075 ppb	0.009 ppb	0.148 ppb	98.110 %	0.047 ppb	0.008 ppb	99.393 %	0.129 ppb
Concentration per Run 1	0.349 ppb	-0.114 ppb	-0.003 ppb	0.119 ppb	97.415 %	0.046 ppb	0.000 ppb	99.451 %	0.102 ppb
Concentration per Run 2	0.362 ppb	-0.111 ppb	0.001 ppb	0.164 ppb	97.194 %	0.050 ppb	0.006 ppb	96.433 %	0.140 ppb
Concentration per Run 3	0.512 ppb	0.000 ppb	0.031 ppb	0.160 ppb	99.720 %	0.043 ppb	0.018 ppb	102.295 %	0.146 ppb
Recovery Percentage 1	81.529 %	-1.501 %	0.094 %	7.383 %		11.635 %	3.996 %		3.231 %
Concentration RSD	22.3 %	86.9 %	197.9 %	16.7 %	1.4 %	8.0 %	112.8 %	2.9 %	18.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.015 ppb	101.569 %	100.290 %	0.212 ppb	0.022 ppb	110.795 %
Concentration per Run 1	0.023 ppb	102.139 %	98.448 %	0.150 ppb	0.014 ppb	112.808 %
Concentration per Run 2	-0.022 ppb	99.415 %	99.446 %	0.245 ppb	0.017 ppb	109.759 %
Concentration per Run 3	0.044 ppb	103.153 %	102.976 %	0.241 ppb	0.036 ppb	109.817 %
Recovery Percentage 1	3.017 %			21.197 %	2.231 %	
Concentration RSD	222.4 %	1.9 %	2.4 %	25.3 %	52.5 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	35	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903663-1 6020TL	Rack	1		
Analysis started at:	4/3/2024 11:37:10 AM	Vial	28		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.881 %	107.592 %	0.002 ppb	14.355 ppb	3.774 ppb	2.047 ppb	21.140 ppb	2.298 ppb	98.036 %
Concentration per Run 1	105.276 %	114.660 %	0.009 ppb	8.756 ppb	2.622 ppb	2.047 ppb	15.560 ppb	42.670 ppb	97.355 %
Concentration per Run 2	107.871 %	102.094 %	-0.004 ppb	16.899 ppb	3.679 ppb	1.667 ppb	11.535 ppb	-39.869 ppb	99.351 %
Concentration per Run 3	110.497 %	106.021 %	0.002 ppb	17.410 ppb	5.021 ppb	2.427 ppb	36.324 ppb	4.092 ppb	97.401 %
Concentration RSD	2.4 %	6.0 %	283.9 %	33.8 %	31.9 %	18.6 %	62.9 %	1,797.5 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.013 ppb	0.161 ppb	0.155 ppb	2.362 ppb	-0.002 ppb	-0.093 ppb	0.093 ppb	0.317 ppb	94.208 %
Concentration per Run 1	-0.034 ppb	0.169 ppb	0.064 ppb	2.875 ppb	0.000 ppb	-0.006 ppb	0.081 ppb	0.311 ppb	94.566 %
Concentration per Run 2	0.074 ppb	0.131 ppb	0.141 ppb	1.887 ppb	0.000 ppb	-0.157 ppb	0.103 ppb	0.382 ppb	91.584 %
Concentration per Run 3	0.000 ppb	0.182 ppb	0.258 ppb	2.324 ppb	-0.006 ppb	-0.116 ppb	0.096 ppb	0.257 ppb	96.474 %
Concentration RSD	413.0 %	16.3 %	63.2 %	21.0 %	194.4 %	84.2 %	11.8 %	19.8 %	2.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.308 ppb	0.067 ppb	0.014 ppb	0.020 ppb	102.325 %	0.010 ppb	0.000 ppb	102.579 %	0.044 ppb
Concentration per Run 1	0.219 ppb	0.095 ppb	0.012 ppb	0.020 ppb	104.063 %	0.008 ppb	0.000 ppb	104.900 %	0.035 ppb
Concentration per Run 2	0.410 ppb	0.108 ppb	0.024 ppb	0.006 ppb	98.891 %	0.014 ppb	0.000 ppb	99.700 %	0.063 ppb
Concentration per Run 3	0.296 ppb	-0.002 ppb	0.007 ppb	0.035 ppb	104.020 %	0.008 ppb	0.000 ppb	103.137 %	0.033 ppb
Concentration RSD	31.1 %	90.3 %	60.9 %	72.3 %	2.9 %	36.0 %	N/A	2.6 %	38.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.029 ppb	103.796 %	101.223 %	0.067 ppb	0.009 ppb	110.450 %
Concentration per Run 1	0.000 ppb	105.319 %	100.837 %	0.040 ppb	0.005 ppb	113.992 %
Concentration per Run 2	0.023 ppb	103.008 %	100.489 %	0.086 ppb	0.010 ppb	109.138 %
Concentration per Run 3	0.066 ppb	103.062 %	102.344 %	0.074 ppb	0.011 ppb	108.221 %
Concentration RSD	114.0 %	1.3 %	1.0 %	35.6 %	34.7 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	36	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903663-2d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 11:41:36 AM	Vial	29		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.634 %	99.738 %	4.829 ppb	1,151.730 ppb	1,118.206 ppb	214.430 ppb	1,141.729 ppb	1,004.573 ppb	93.540 %
Concentration per Run 1	105.314 %	92.670 %	4.965 ppb	1,204.459 ppb	1,175.849 ppb	233.099 ppb	1,251.764 ppb	1,120.138 ppb	92.614 %
Concentration per Run 2	108.324 %	100.524 %	4.761 ppb	1,148.623 ppb	1,069.106 ppb	208.371 ppb	1,082.130 ppb	1,022.972 ppb	93.481 %
Concentration per Run 3	109.263 %	106.021 %	4.762 ppb	1,102.107 ppb	1,109.664 ppb	201.820 ppb	1,091.292 ppb	870.609 ppb	94.524 %
Concentration RSD	1.9 %	6.7 %	2.4 %	4.4 %	4.8 %	7.7 %	8.4 %	12.5 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.985 ppb	22.117 ppb	58.251 ppb	113.943 ppb	56.672 ppb	56.738 ppb	27.648 ppb	56.348 ppb	90.556 %
Concentration per Run 1	53.164 ppb	22.387 ppb	57.860 ppb	113.973 ppb	56.741 ppb	56.678 ppb	26.727 ppb	55.434 ppb	90.116 %
Concentration per Run 2	55.904 ppb	22.011 ppb	58.576 ppb	122.584 ppb	56.218 ppb	58.167 ppb	27.785 ppb	57.306 ppb	89.593 %
Concentration per Run 3	58.886 ppb	21.953 ppb	58.317 ppb	105.272 ppb	57.056 ppb	55.369 ppb	28.432 ppb	56.305 ppb	91.960 %
Concentration RSD	5.1 %	1.1 %	0.6 %	7.6 %	0.7 %	2.5 %	3.1 %	1.7 %	1.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.993 ppb	13.160 ppb	105.398 ppb	100.791 ppb	94.440 %	5.085 ppb	5.571 ppb	93.003 %	48.664 ppb
Concentration per Run 1	13.885 ppb	12.123 ppb	108.260 ppb	101.160 ppb	90.702 %	5.274 ppb	5.947 ppb	92.198 %	49.465 ppb
Concentration per Run 2	14.323 ppb	15.579 ppb	101.661 ppb	100.649 ppb	92.563 %	5.125 ppb	5.449 ppb	89.801 %	48.186 ppb
Concentration per Run 3	13.771 ppb	11.778 ppb	106.273 ppb	100.566 ppb	100.055 %	4.856 ppb	5.318 ppb	97.011 %	48.342 ppb
Concentration RSD	2.1 %	16.0 %	3.2 %	0.3 %	5.2 %	4.2 %	6.0 %	3.9 %	1.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	201.075 ppb	98.257 %	98.055 %	12.884 ppb	56.403 ppb	98.269 %
Concentration per Run 1	206.726 ppb	94.851 %	93.065 %	12.563 ppb	56.723 ppb	96.931 %
Concentration per Run 2	197.474 ppb	97.364 %	95.854 %	12.811 ppb	57.004 ppb	96.234 %
Concentration per Run 3	199.024 ppb	102.555 %	105.245 %	13.276 ppb	55.481 ppb	101.643 %
Concentration RSD	2.5 %	4.0 %	6.5 %	2.8 %	1.4 %	3.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	37	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903663-3d5 6020TL	Rack	1		
Analysis started at:	4/3/2024 11:46:03 AM	Vial	31		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.163 %	96.597 %	11.816 ppb	32,685.564 ppb	3,689.719 ppb	542.109 ppb	3,407.925 ppb	13,184.119 ppb	87.993 %
Concentration per Run 1	94.464 %	111.518 %	11.627 ppb	28,678.939 ppb	3,325.848 ppb	487.173 ppb	2,993.426 ppb	11,458.305 ppb	86.379 %
Concentration per Run 2	93.798 %	87.958 %	11.776 ppb	35,145.842 ppb	3,868.752 ppb	572.744 ppb	3,716.872 ppb	13,928.037 ppb	87.083 %
Concentration per Run 3	94.228 %	90.314 %	12.044 ppb	34,231.910 ppb	3,874.557 ppb	566.411 ppb	3,513.477 ppb	14,166.014 ppb	90.518 %
Concentration RSD	0.4 %	13.4 %	1.8 %	10.7 %	8.5 %	8.8 %	10.9 %	11.4 %	2.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	113.254 ppb	46.943 ppb	555.890 ppb	3,049.814 ppb	112.410 ppb	111.022 ppb	62.860 ppb	124.851 ppb	85.568 %
Concentration per Run 1	97.978 ppb	41.016 ppb	492.558 ppb	2,951.178 ppb	102.290 ppb	98.981 ppb	60.514 ppb	119.368 ppb	91.651 %
Concentration per Run 2	119.569 ppb	51.118 ppb	598.526 ppb	3,007.376 ppb	118.664 ppb	117.676 ppb	63.426 ppb	124.810 ppb	82.742 %
Concentration per Run 3	122.214 ppb	48.694 ppb	576.587 ppb	3,190.887 ppb	116.276 ppb	116.409 ppb	64.640 ppb	130.375 ppb	82.311 %
Concentration RSD	11.7 %	11.2 %	10.1 %	4.1 %	7.9 %	9.4 %	3.4 %	4.4 %	6.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	28.964 ppb	28.975 ppb	309.415 ppb	224.187 ppb	89.885 %	11.473 ppb	12.327 ppb	90.825 %	112.590 ppb
Concentration per Run 1	27.413 ppb	27.170 ppb	305.084 ppb	220.683 ppb	95.309 %	11.450 ppb	12.319 ppb	93.641 %	112.775 ppb
Concentration per Run 2	28.492 ppb	29.024 ppb	312.798 ppb	228.029 ppb	88.846 %	11.309 ppb	12.129 ppb	92.253 %	111.760 ppb
Concentration per Run 3	30.987 ppb	30.732 ppb	310.363 ppb	223.847 ppb	85.501 %	11.659 ppb	12.532 ppb	86.582 %	113.235 ppb
Concentration RSD	6.3 %	6.1 %	1.3 %	1.6 %	5.5 %	1.5 %	1.6 %	4.1 %	0.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	485.770 ppb	97.032 %	95.437 %	27.924 ppb	124.353 ppb	100.002 %
Concentration per Run 1	488.653 ppb	100.117 %	99.963 %	27.772 ppb	125.008 ppb	104.786 %
Concentration per Run 2	488.598 ppb	96.184 %	93.639 %	28.005 ppb	124.806 ppb	98.372 %
Concentration per Run 3	480.061 ppb	94.794 %	92.709 %	27.995 ppb	123.245 ppb	96.848 %
Concentration RSD	1.0 %	2.8 %	4.1 %	0.5 %	0.8 %	4.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	38	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903663-5d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 11:50:30 AM	Vial	33		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.307 %	91.623 %	46.180 ppb	18,930.641 ppb	6,006.477 ppb	93.106 ppb	6,146.663 ppb	12,509.908 ppb	87.786 %
Concentration per Run 1	97.585 %	90.314 %	46.261 ppb	19,530.348 ppb	6,311.989 ppb	95.543 ppb	6,114.089 ppb	13,226.090 ppb	87.794 %
Concentration per Run 2	100.878 %	91.099 %	46.125 ppb	18,279.320 ppb	5,899.226 ppb	90.667 ppb	5,986.196 ppb	12,040.572 ppb	88.264 %
Concentration per Run 3	102.458 %	93.455 %	46.153 ppb	18,982.254 ppb	5,808.216 ppb	93.108 ppb	6,339.704 ppb	12,263.062 ppb	87.300 %
Concentration RSD	2.5 %	1.8 %	0.2 %	3.3 %	4.5 %	2.6 %	2.9 %	5.0 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.537 ppb	54.729 ppb	269.964 ppb	6,617.710 ppb	53.110 ppb	53.618 ppb	54.928 ppb	55.188 ppb	82.673 %
Concentration per Run 1	55.357 ppb	55.976 ppb	280.155 ppb	6,739.055 ppb	54.745 ppb	55.861 ppb	55.394 ppb	58.921 ppb	82.100 %
Concentration per Run 2	55.813 ppb	52.300 ppb	262.119 ppb	6,438.480 ppb	51.083 ppb	51.890 ppb	54.596 ppb	52.212 ppb	81.290 %
Concentration per Run 3	55.440 ppb	55.912 ppb	267.618 ppb	6,675.596 ppb	53.502 ppb	53.103 ppb	54.792 ppb	54.430 ppb	84.630 %
Concentration RSD	0.4 %	3.8 %	3.4 %	2.4 %	3.5 %	3.8 %	0.8 %	6.2 %	2.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	55.941 ppb	55.368 ppb	90.794 ppb	49.922 ppb	86.034 %	1.212 ppb	49.017 ppb	85.648 %	50.744 ppb
Concentration per Run 1	57.569 ppb	56.567 ppb	97.302 ppb	51.060 ppb	85.794 %	1.233 ppb	49.535 ppb	87.568 %	51.363 ppb
Concentration per Run 2	55.370 ppb	52.463 ppb	89.192 ppb	49.076 ppb	84.909 %	1.169 ppb	49.188 ppb	83.452 %	50.754 ppb
Concentration per Run 3	54.885 ppb	57.075 ppb	85.889 ppb	49.631 ppb	87.399 %	1.234 ppb	48.327 ppb	85.925 %	50.114 ppb
Concentration RSD	2.6 %	4.6 %	6.5 %	2.1 %	1.5 %	3.1 %	1.3 %	2.4 %	1.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.790 ppb	89.812 %	89.875 %	50.600 ppb	51.871 ppb	90.867 %
Concentration per Run 1	59.668 ppb	91.043 %	90.733 %	50.410 ppb	52.240 ppb	90.911 %
Concentration per Run 2	59.170 ppb	87.993 %	88.552 %	51.716 ppb	53.431 ppb	85.322 %
Concentration per Run 3	57.532 ppb	90.400 %	90.339 %	49.675 ppb	49.941 ppb	96.367 %
Concentration RSD	1.9 %	1.8 %	1.3 %	2.0 %	3.4 %	6.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 39
Analysis label: WG1903663-4 6020TL
Analysis started at: 4/3/2024 11:54:59 AM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 32
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.748 %	107.068 %	0.088 ppb	130,081.229 ppb	5,380.039 ppb	349.776 ppb	3,988.714 ppb	54,732.115 ppb	102.433 %
Concentration per Run 1	101.512 %	110.733 %	0.083 ppb	127,464.310 ppb	5,260.760 ppb	340.276 ppb	4,078.204 ppb	54,906.811 ppb	100.717 %
Concentration per Run 2	100.986 %	101.309 %	0.092 ppb	134,356.099 ppb	5,602.964 ppb	356.370 ppb	4,095.583 ppb	54,477.736 ppb	103.069 %
Concentration per Run 3	102.748 %	109.162 %	0.090 ppb	128,423.277 ppb	5,276.394 ppb	352.682 ppb	3,792.355 ppb	54,811.798 ppb	103.512 %
Concentration RSD	0.9 %	4.7 %	5.4 %	2.9 %	3.6 %	2.4 %	4.3 %	0.4 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.446 ppb	1.839 ppb	1,878.668 ppb	10,766.200 ppb	1.448 ppb	1.576 ppb	3.947 ppb	9.660 ppb	100.603 %
Concentration per Run 1	2.492 ppb	2.065 ppb	1,783.806 ppb	10,426.037 ppb	1.316 ppb	1.775 ppb	3.679 ppb	9.734 ppb	102.947 %
Concentration per Run 2	2.080 ppb	1.799 ppb	1,928.235 ppb	10,877.669 ppb	1.517 ppb	1.585 ppb	4.038 ppb	9.726 ppb	97.973 %
Concentration per Run 3	2.767 ppb	1.652 ppb	1,923.964 ppb	10,994.896 ppb	1.512 ppb	1.367 ppb	4.123 ppb	9.520 ppb	100.888 %
Concentration RSD	14.1 %	11.4 %	4.4 %	2.8 %	7.9 %	13.0 %	6.0 %	1.3 %	2.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.972 ppb	3.672 ppb	349.326 ppb	0.590 ppb	92.829 %	0.012 ppb	0.056 ppb	96.715 %	0.411 ppb
Concentration per Run 1	1.117 ppb	4.723 ppb	349.278 ppb	0.552 ppb	94.526 %	0.008 ppb	0.080 ppb	99.032 %	0.358 ppb
Concentration per Run 2	1.051 ppb	2.641 ppb	347.370 ppb	0.569 ppb	92.463 %	0.015 ppb	0.045 ppb	95.149 %	0.432 ppb
Concentration per Run 3	0.747 ppb	3.653 ppb	351.330 ppb	0.649 ppb	91.497 %	0.013 ppb	0.044 ppb	95.963 %	0.444 ppb
Concentration RSD	20.3 %	28.4 %	0.6 %	8.8 %	1.7 %	26.8 %	36.4 %	2.1 %	11.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	92.322 ppb	103.093 %	102.805 %	0.441 ppb	1.231 ppb	102.900 %
Concentration per Run 1	90.582 ppb	102.577 %	101.873 %	0.325 ppb	1.207 ppb	104.097 %
Concentration per Run 2	93.035 ppb	102.016 %	103.143 %	0.548 ppb	1.265 ppb	100.769 %
Concentration per Run 3	93.350 ppb	104.686 %	103.400 %	0.449 ppb	1.221 ppb	103.833 %
Concentration RSD	1.6 %	1.4 %	0.8 %	25.4 %	2.5 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 40 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: I2417353-01 6020TL Rack 1
Analysis started at: 4/3/2024 11:59:27 AM Vial 30

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.442 %	95.550 %	0.072 ppb	144,693.132 ppb	5,914.414 ppb	393.106 ppb	4,544.977 ppb	60,523.262 ppb	94.060 %
Concentration per Run 1	97.554 %	87.173 %	0.078 ppb	153,873.804 ppb	6,362.078 ppb	415.401 ppb	4,636.768 ppb	59,950.466 ppb	92.358 %
Concentration per Run 2	99.131 %	101.309 %	0.061 ppb	137,109.934 ppb	5,563.740 ppb	369.522 ppb	4,501.299 ppb	61,451.890 ppb	94.888 %
Concentration per Run 3	101.639 %	98.168 %	0.077 ppb	143,095.658 ppb	5,817.425 ppb	394.394 ppb	4,496.864 ppb	60,167.430 ppb	94.935 %
Concentration RSD	2.1 %	7.8 %	13.1 %	5.9 %	6.9 %	5.8 %	1.7 %	1.3 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.509 ppb	2.027 ppb	2,075.338 ppb	12,241.851 ppb	1.531 ppb	1.767 ppb	4.507 ppb	9.872 ppb	89.949 %
Concentration per Run 1	2.245 ppb	2.051 ppb	2,049.393 ppb	12,136.805 ppb	1.367 ppb	1.827 ppb	4.435 ppb	9.551 ppb	92.325 %
Concentration per Run 2	3.073 ppb	1.933 ppb	2,075.942 ppb	12,480.362 ppb	1.516 ppb	1.723 ppb	4.718 ppb	10.366 ppb	86.376 %
Concentration per Run 3	2.208 ppb	2.096 ppb	2,100.678 ppb	12,108.386 ppb	1.710 ppb	1.751 ppb	4.367 ppb	9.700 ppb	91.147 %
Concentration RSD	19.5 %	4.2 %	1.2 %	1.7 %	11.2 %	3.1 %	4.1 %	4.4 %	3.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.112 ppb	4.056 ppb	368.216 ppb	0.370 ppb	90.226 %	0.010 ppb	0.031 ppb	92.705 %	0.251 ppb
Concentration per Run 1	1.132 ppb	3.985 ppb	367.428 ppb	0.360 ppb	89.102 %	0.005 ppb	0.047 ppb	89.774 %	0.231 ppb
Concentration per Run 2	1.366 ppb	3.646 ppb	369.677 ppb	0.347 ppb	89.969 %	0.009 ppb	0.033 ppb	91.217 %	0.268 ppb
Concentration per Run 3	0.838 ppb	4.536 ppb	367.544 ppb	0.403 ppb	91.606 %	0.015 ppb	0.013 ppb	97.125 %	0.253 ppb
Concentration RSD	23.8 %	11.1 %	0.3 %	8.0 %	1.4 %	50.8 %	56.0 %	4.2 %	7.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	94.830 ppb	98.234 %	98.085 %	0.153 ppb	1.306 ppb	95.814 %
Concentration per Run 1	95.239 ppb	94.840 %	96.497 %	0.097 ppb	1.238 ppb	98.755 %
Concentration per Run 2	93.786 ppb	98.849 %	97.152 %	0.178 ppb	1.310 ppb	93.345 %
Concentration per Run 3	95.465 ppb	101.014 %	100.606 %	0.185 ppb	1.370 ppb	95.341 %
Concentration RSD	1.0 %	3.2 %	2.3 %	32.2 %	5.0 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	41	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417598-01 6020TL	Rack	1		
Analysis started at:	4/3/2024 12:03:54 PM	Vial	35		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	112.312 %	111.518 %	0.436 ppb	336,494.075 ppb	42,810.513 ppb	5,753.549 ppb	31,814.319 ppb	275,972.668 ppb	108.734 %
Concentration per Run 1	110.245 %	121.728 %	0.438 ppb	310,857.413 ppb	38,460.697 ppb	5,150.367 ppb	28,376.698 ppb	264,110.287 ppb	106.460 %
Concentration per Run 2	112.867 %	98.953 %	0.445 ppb	360,766.857 ppb	46,508.634 ppb	6,281.185 ppb	34,586.648 ppb	274,316.535 ppb	107.799 %
Concentration per Run 3	113.826 %	113.874 %	0.425 ppb	337,857.956 ppb	43,462.207 ppb	5,829.095 ppb	32,479.612 ppb	289,491.182 ppb	111.942 %
Concentration RSD	1.7 %	10.4 %	2.4 %	7.4 %	9.5 %	9.9 %	9.9 %	4.6 %	2.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	19.511 ppb	18.435 ppb	1,483.076 ppb	22,362.305 ppb	4.977 ppb	30.102 ppb	107.086 ppb	319.462 ppb	103.075 %
Concentration per Run 1	18.628 ppb	17.354 ppb	1,412.246 ppb	21,525.234 ppb	4.697 ppb	28.606 ppb	103.016 ppb	308.025 ppb	107.381 %
Concentration per Run 2	19.774 ppb	18.929 ppb	1,511.181 ppb	22,484.576 ppb	4.838 ppb	30.604 ppb	107.772 ppb	316.117 ppb	103.570 %
Concentration per Run 3	20.130 ppb	19.022 ppb	1,525.803 ppb	23,077.107 ppb	5.395 ppb	31.098 ppb	110.470 ppb	334.243 ppb	98.275 %
Concentration RSD	4.0 %	5.1 %	4.2 %	3.5 %	7.4 %	4.4 %	3.5 %	4.2 %	4.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.535 ppb	2.125 ppb	1,490.267 ppb	0.973 ppb	89.782 %	0.332 ppb	0.850 ppb	93.709 %	1.652 ppb
Concentration per Run 1	10.971 ppb	1.523 ppb	1,445.966 ppb	0.937 ppb	91.428 %	0.308 ppb	0.791 ppb	96.560 %	1.532 ppb
Concentration per Run 2	11.387 ppb	2.469 ppb	1,475.926 ppb	0.928 ppb	89.708 %	0.326 ppb	0.874 ppb	93.338 %	1.740 ppb
Concentration per Run 3	12.248 ppb	2.384 ppb	1,548.909 ppb	1.054 ppb	88.209 %	0.363 ppb	0.885 ppb	91.230 %	1.683 ppb
Concentration RSD	5.6 %	24.6 %	3.6 %	7.2 %	1.8 %	8.5 %	6.0 %	2.9 %	6.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	335.734 ppb	103.115 %	100.459 %	0.195 ppb	261.949 ppb	97.768 %
Concentration per Run 1	322.771 ppb	103.954 %	103.411 %	0.159 ppb	258.923 ppb	100.293 %
Concentration per Run 2	336.986 ppb	102.740 %	99.860 %	0.197 ppb	264.003 ppb	96.221 %
Concentration per Run 3	347.444 ppb	102.652 %	98.105 %	0.230 ppb	262.922 ppb	96.789 %
Concentration RSD	3.7 %	0.7 %	2.7 %	18.0 %	1.0 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	42	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903663-6d5 6020TL	Rack	1		
Analysis started at:	4/3/2024 12:08:23 PM	Vial	34		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	106.063 %	94.241 %	0.021 ppb	28,833.168 ppb	1,250.063 ppb	81.230 ppb	922.358 ppb	11,923.250 ppb	100.474 %
Concentration per Run 1	105.811 %	98.953 %	0.023 ppb	27,891.723 ppb	1,225.402 ppb	79.799 ppb	933.248 ppb	12,834.856 ppb	98.175 %
Concentration per Run 2	104.788 %	90.314 %	0.017 ppb	29,268.512 ppb	1,250.795 ppb	79.870 ppb	935.125 ppb	11,639.444 ppb	100.716 %
Concentration per Run 3	107.590 %	93.455 %	0.023 ppb	29,339.269 ppb	1,273.992 ppb	84.020 ppb	898.700 ppb	11,295.450 ppb	102.529 %
Concentration RSD	1.3 %	4.6 %	15.4 %	2.8 %	1.9 %	3.0 %	2.2 %	6.8 %	2.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.599 ppb	0.477 ppb	422.798 ppb	2,500.842 ppb	0.314 ppb	0.408 ppb	0.960 ppb	2.441 ppb	97.882 %
Concentration per Run 1	0.665 ppb	0.547 ppb	426.198 ppb	2,588.297 ppb	0.331 ppb	0.565 ppb	1.011 ppb	2.667 ppb	88.819 %
Concentration per Run 2	0.602 ppb	0.460 ppb	419.056 ppb	2,416.413 ppb	0.356 ppb	0.380 ppb	1.019 ppb	2.340 ppb	98.679 %
Concentration per Run 3	0.529 ppb	0.423 ppb	423.140 ppb	2,497.818 ppb	0.254 ppb	0.279 ppb	0.851 ppb	2.315 ppb	106.148 %
Concentration RSD	11.3 %	13.3 %	0.8 %	3.4 %	16.9 %	35.5 %	9.9 %	8.0 %	8.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.431 ppb	0.637 ppb	71.963 ppb	0.088 ppb	96.815 %	0.003 ppb	0.013 ppb	96.551 %	0.096 ppb
Concentration per Run 1	0.499 ppb	0.677 ppb	74.470 ppb	0.055 ppb	95.243 %	0.003 ppb	0.026 ppb	91.690 %	0.056 ppb
Concentration per Run 2	0.470 ppb	0.491 ppb	71.099 ppb	0.145 ppb	97.022 %	0.003 ppb	0.006 ppb	98.457 %	0.114 ppb
Concentration per Run 3	0.322 ppb	0.743 ppb	70.319 ppb	0.065 ppb	98.181 %	0.003 ppb	0.006 ppb	99.504 %	0.117 ppb
Concentration RSD	22.1 %	20.5 %	3.1 %	55.9 %	1.5 %	3.7 %	90.0 %	4.4 %	36.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	19.206 ppb	103.116 %	101.369 %	0.052 ppb	0.352 ppb	105.516 %
Concentration per Run 1	19.772 ppb	101.528 %	98.105 %	0.029 ppb	0.405 ppb	103.003 %
Concentration per Run 2	18.323 ppb	102.414 %	101.937 %	0.068 ppb	0.328 ppb	105.650 %
Concentration per Run 3	19.521 ppb	105.405 %	104.064 %	0.059 ppb	0.323 ppb	107.896 %
Concentration RSD	4.0 %	2.0 %	3.0 %	39.8 %	13.1 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	43	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417598-01d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 12:17:35 PM	Vial	36		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	106.431 %	107.330 %	0.062 ppb	33,317.023 ppb	4,614.793 ppb	615.147 ppb	3,402.305 ppb	29,574.851 ppb	99.923 %
Concentration per Run 1	104.613 %	95.812 %	0.072 ppb	35,325.530 ppb	4,900.801 ppb	651.969 ppb	3,494.292 ppb	28,461.519 ppb	97.489 %
Concentration per Run 2	107.609 %	116.230 %	0.063 ppb	31,942.690 ppb	4,521.163 ppb	591.024 ppb	3,181.470 ppb	29,805.154 ppb	100.532 %
Concentration per Run 3	107.070 %	109.948 %	0.049 ppb	32,682.848 ppb	4,422.415 ppb	602.448 ppb	3,531.152 ppb	30,457.881 ppb	101.750 %
Concentration RSD	1.5 %	9.7 %	18.6 %	5.3 %	5.5 %	5.3 %	5.6 %	3.4 %	2.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	2.258 ppb	2.074 ppb	162.761 ppb	2,492.917 ppb	0.571 ppb	3.273 ppb	12.278 ppb	37.008 ppb	97.287 %
Concentration per Run 1	1.685 ppb	2.192 ppb	167.965 ppb	2,587.016 ppb	0.565 ppb	3.524 ppb	11.962 ppb	36.734 ppb	96.656 %
Concentration per Run 2	2.558 ppb	2.010 ppb	160.265 ppb	2,418.817 ppb	0.585 ppb	3.207 ppb	12.643 ppb	36.705 ppb	96.152 %
Concentration per Run 3	2.530 ppb	2.019 ppb	160.054 ppb	2,472.917 ppb	0.562 ppb	3.087 ppb	12.228 ppb	37.586 ppb	99.052 %
Concentration RSD	22.0 %	5.0 %	2.8 %	3.4 %	2.2 %	6.9 %	2.8 %	1.4 %	1.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.385 ppb	0.165 ppb	150.842 ppb	0.164 ppb	95.266 %	0.035 ppb	0.108 ppb	97.092 %	0.204 ppb
Concentration per Run 1	1.470 ppb	0.204 ppb	150.592 ppb	0.202 ppb	91.490 %	0.027 ppb	0.141 ppb	95.044 %	0.199 ppb
Concentration per Run 2	1.386 ppb	0.300 ppb	151.954 ppb	0.085 ppb	95.900 %	0.041 ppb	0.099 ppb	97.983 %	0.202 ppb
Concentration per Run 3	1.298 ppb	-0.010 ppb	149.980 ppb	0.205 ppb	98.407 %	0.038 ppb	0.086 ppb	98.249 %	0.211 ppb
Concentration RSD	6.2 %	96.2 %	0.7 %	41.9 %	3.7 %	21.4 %	26.6 %	1.8 %	3.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	34.747 ppb	100.285 %	97.996 %	0.033 ppb	25.912 ppb	102.994 %
Concentration per Run 1	34.402 ppb	99.330 %	97.844 %	0.019 ppb	25.675 ppb	102.220 %
Concentration per Run 2	34.380 ppb	99.262 %	99.019 %	0.034 ppb	26.524 ppb	101.409 %
Concentration per Run 3	35.459 ppb	102.263 %	97.124 %	0.045 ppb	25.537 ppb	105.352 %
Concentration RSD	1.8 %	1.7 %	1.0 %	39.8 %	2.1 %	2.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	44	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 12:22:36 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	106.458 %	103.665 %	57.909 ppb	6,614.040 ppb	6,554.147 ppb	63.128 ppb	6,623.314 ppb	6,210.332 ppb	99.458 %
Concentration per Run 1	104.872 %	107.592 %	57.333 ppb	6,152.939 ppb	6,265.832 ppb	59.546 ppb	6,080.120 ppb	5,753.837 ppb	99.296 %
Concentration per Run 2	106.102 %	98.953 %	58.369 ppb	6,960.631 ppb	6,828.174 ppb	69.890 ppb	7,388.871 ppb	6,618.160 ppb	99.015 %
Concentration per Run 3	108.400 %	104.450 %	58.025 ppb	6,728.549 ppb	6,568.435 ppb	59.947 ppb	6,400.951 ppb	6,259.000 ppb	100.062 %
Recovery Percentage 1			96.515 %	110.234 %	109.236 %	105.213 %	110.389 %	103.506 %	
Concentration RSD	1.7 %	4.2 %	0.9 %	6.3 %	4.3 %	9.3 %	10.3 %	7.0 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	63.498 ppb	66.187 ppb	64.934 ppb	6,495.231 ppb	64.670 ppb	65.022 ppb	64.542 ppb	63.133 ppb	97.155 %
Concentration per Run 1	59.252 ppb	65.005 ppb	63.017 ppb	6,374.120 ppb	63.602 ppb	65.726 ppb	66.564 ppb	63.009 ppb	92.840 %
Concentration per Run 2	64.239 ppb	65.918 ppb	66.821 ppb	6,479.411 ppb	64.591 ppb	64.095 ppb	61.939 ppb	62.772 ppb	101.606 %
Concentration per Run 3	67.002 ppb	67.639 ppb	64.965 ppb	6,632.162 ppb	65.817 ppb	65.245 ppb	65.125 ppb	63.616 ppb	97.020 %
Recovery Percentage 1	105.830 %	110.312 %	108.223 %	108.254 %	107.783 %	108.370 %	107.571 %	105.221 %	
Concentration RSD	6.2 %	2.0 %	2.9 %	2.0 %	1.7 %	1.3 %	3.7 %	0.7 %	4.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	65.253 ppb	64.778 ppb	63.957 ppb	60.972 ppb	98.287 %	60.192 ppb	60.194 ppb	98.755 %	61.154 ppb
Concentration per Run 1	67.034 ppb	67.055 ppb	63.018 ppb	60.160 ppb	99.782 %	60.121 ppb	60.537 ppb	96.514 %	60.893 ppb
Concentration per Run 2	64.615 ppb	66.792 ppb	65.863 ppb	60.579 ppb	97.028 %	59.684 ppb	59.253 ppb	100.957 %	62.037 ppb
Concentration per Run 3	64.109 ppb	60.487 ppb	62.990 ppb	62.176 ppb	98.050 %	60.772 ppb	60.793 ppb	98.795 %	60.532 ppb
Recovery Percentage 1	108.755 %	107.963 %	106.595 %	101.619 %		100.321 %	100.324 %		101.923 %
Concentration RSD	2.4 %	5.7 %	2.6 %	1.7 %	1.4 %	0.9 %	1.4 %	2.2 %	1.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.274 ppb	102.312 %	100.594 %	60.017 ppb	61.130 ppb	105.100 %
Concentration per Run 1	62.064 ppb	101.019 %	99.706 %	59.388 ppb	60.837 ppb	103.454 %
Concentration per Run 2	61.777 ppb	104.124 %	103.661 %	59.534 ppb	61.972 ppb	105.196 %
Concentration per Run 3	62.981 ppb	101.793 %	98.416 %	61.128 ppb	60.582 ppb	106.649 %
Recovery Percentage 1	103.790 %			100.028 %	101.884 %	
Concentration RSD	1.0 %	1.6 %	2.7 %	1.6 %	1.2 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	45	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 12:27:07 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	108.349 %	106.545 %	0.020 ppb	50.423 ppb	1.901 ppb	-0.135 ppb	24.219 ppb	-0.363 ppb	94.440 %
Concentration per Run 1	106.533 %	86.387 %	0.025 ppb	72.785 ppb	3.229 ppb	0.160 ppb	25.223 ppb	-12.791 ppb	93.196 %
Concentration per Run 2	109.405 %	118.586 %	0.014 ppb	41.702 ppb	3.845 ppb	-0.353 ppb	31.955 ppb	-0.066 ppb	96.217 %
Concentration per Run 3	109.108 %	114.660 %	0.020 ppb	36.780 ppb	-1.371 ppb	-0.212 ppb	15.479 ppb	11.770 ppb	93.906 %
Recovery Percentage 1			3.971 %	50.423 %	2.716 %	-1.350 %	24.219 %	-0.363 %	
Concentration RSD	1.5 %	16.5 %	28.3 %	38.7 %	149.9 %	196.5 %	34.2 %	3,388.4 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.141 ppb	0.076 ppb	0.170 ppb	7.731 ppb	0.015 ppb	-0.076 ppb	0.104 ppb	-0.021 ppb	94.478 %
Concentration per Run 1	0.120 ppb	0.077 ppb	0.152 ppb	10.286 ppb	0.021 ppb	-0.082 ppb	0.075 ppb	-0.044 ppb	91.583 %
Concentration per Run 2	0.027 ppb	0.068 ppb	0.025 ppb	7.485 ppb	0.023 ppb	-0.103 ppb	0.072 ppb	0.053 ppb	102.134 %
Concentration per Run 3	0.277 ppb	0.082 ppb	0.333 ppb	5.421 ppb	0.000 ppb	-0.043 ppb	0.166 ppb	-0.070 ppb	89.715 %
Recovery Percentage 1	2.824 %	7.566 %	17.007 %	15.461 %	3.006 %	-3.788 %	10.421 %	-0.411 %	
Concentration RSD	89.5 %	9.8 %	91.0 %	31.6 %	85.0 %	40.2 %	51.0 %	315.8 %	7.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.410 ppb	0.203 ppb	0.031 ppb	0.164 ppb	100.026 %	0.055 ppb	0.010 ppb	99.106 %	0.047 ppb
Concentration per Run 1	0.528 ppb	0.207 ppb	0.035 ppb	0.204 ppb	101.655 %	0.062 ppb	0.012 ppb	95.698 %	0.044 ppb
Concentration per Run 2	0.288 ppb	0.171 ppb	0.036 ppb	0.127 ppb	98.500 %	0.059 ppb	0.012 ppb	101.166 %	0.048 ppb
Concentration per Run 3	0.415 ppb	0.232 ppb	0.022 ppb	0.161 ppb	99.921 %	0.045 ppb	0.006 ppb	100.454 %	0.049 ppb
Recovery Percentage 1	82.084 %	4.067 %	0.313 %	8.206 %		13.814 %	5.044 %		1.169 %
Concentration RSD	29.3 %	15.3 %	24.6 %	23.6 %	1.6 %	16.2 %	35.2 %	3.0 %	5.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	103.395 %	101.590 %	0.443 ppb	0.040 ppb	108.898 %
Concentration per Run 1	0.001 ppb	104.578 %	101.796 %	0.339 ppb	0.054 ppb	109.962 %
Concentration per Run 2	0.022 ppb	102.853 %	102.950 %	0.530 ppb	0.036 ppb	109.143 %
Concentration per Run 3	-0.022 ppb	102.753 %	100.025 %	0.460 ppb	0.029 ppb	107.589 %
Recovery Percentage 1	0.099 %			44.317 %	3.977 %	
Concentration RSD	4,432.7 %	1.0 %	1.5 %	21.8 %	32.3 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	46	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904115-1 6020TL	Rack	1		
Analysis started at:	4/3/2024 12:38:34 PM	Vial	37		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.664 %	112.565 %	0.025 ppb	43.079 ppb	2.123 ppb	3.558 ppb	26.505 ppb	21.000 ppb	94.721 %
Concentration per Run 1	104.589 %	113.089 %	0.030 ppb	39.944 ppb	1.762 ppb	4.217 ppb	37.091 ppb	36.141 ppb	93.445 %
Concentration per Run 2	103.373 %	110.733 %	0.029 ppb	49.061 ppb	2.954 ppb	3.342 ppb	29.214 ppb	5.830 ppb	94.805 %
Concentration per Run 3	106.030 %	113.874 %	0.015 ppb	40.232 ppb	1.654 ppb	3.115 ppb	13.211 ppb	21.031 ppb	95.911 %
Concentration RSD	1.3 %	1.5 %	33.9 %	12.0 %	34.0 %	16.4 %	45.9 %	72.2 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.027 ppb	0.197 ppb	0.234 ppb	4.184 ppb	0.005 ppb	-0.113 ppb	0.084 ppb	1.008 ppb	85.999 %
Concentration per Run 1	0.004 ppb	0.228 ppb	0.180 ppb	3.212 ppb	0.001 ppb	-0.106 ppb	0.160 ppb	1.007 ppb	84.857 %
Concentration per Run 2	0.045 ppb	0.264 ppb	0.265 ppb	4.087 ppb	0.015 ppb	-0.049 ppb	0.068 ppb	1.120 ppb	79.785 %
Concentration per Run 3	0.033 ppb	0.101 ppb	0.258 ppb	5.252 ppb	0.000 ppb	-0.182 ppb	0.022 ppb	0.898 ppb	93.356 %
Concentration RSD	76.8 %	43.4 %	20.2 %	24.5 %	161.3 %	59.0 %	83.9 %	11.0 %	8.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.207 ppb	0.018 ppb	0.018 ppb	0.023 ppb	95.555 %	0.007 ppb	0.000 ppb	97.908 %	0.007 ppb
Concentration per Run 1	0.312 ppb	-0.086 ppb	0.023 ppb	-0.010 ppb	95.312 %	0.006 ppb	0.000 ppb	97.777 %	-0.010 ppb
Concentration per Run 2	0.115 ppb	0.133 ppb	0.021 ppb	0.057 ppb	94.804 %	0.005 ppb	0.000 ppb	97.846 %	0.004 ppb
Concentration per Run 3	0.194 ppb	0.007 ppb	0.010 ppb	0.022 ppb	96.549 %	0.010 ppb	0.000 ppb	98.100 %	0.029 ppb
Concentration RSD	47.9 %	612.7 %	40.3 %	146.4 %	0.9 %	40.6 %	N/A	0.2 %	271.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.063 ppb	98.184 %	95.869 %	0.069 ppb	0.009 ppb	105.407 %
Concentration per Run 1	0.117 ppb	96.171 %	94.295 %	0.039 ppb	0.011 ppb	105.887 %
Concentration per Run 2	0.001 ppb	99.457 %	98.055 %	0.096 ppb	0.005 ppb	105.700 %
Concentration per Run 3	0.070 ppb	98.922 %	95.258 %	0.072 ppb	0.012 ppb	104.634 %
Concentration RSD	93.2 %	1.8 %	2.0 %	41.6 %	39.9 %	0.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	47	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904115-2d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 12:43:01 PM	Vial	38		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.833 %	119.634 %	4.568 ppb	1,034.148 ppb	858.528 ppb	227.553 ppb	899.069 ppb	1,043.788 ppb	94.510 %
Concentration per Run 1	105.654 %	113.874 %	4.686 ppb	1,059.737 ppb	882.955 ppb	217.496 ppb	861.153 ppb	1,101.709 ppb	94.039 %
Concentration per Run 2	108.238 %	120.942 %	4.464 ppb	1,035.923 ppb	872.986 ppb	233.923 ppb	883.599 ppb	1,007.202 ppb	94.510 %
Concentration per Run 3	109.606 %	124.084 %	4.553 ppb	1,006.783 ppb	819.642 ppb	231.239 ppb	952.455 ppb	1,022.452 ppb	94.980 %
Concentration RSD	1.9 %	4.4 %	2.4 %	2.6 %	4.0 %	3.9 %	5.3 %	4.9 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	57.099 ppb	21.093 ppb	55.104 ppb	114.512 ppb	52.512 ppb	52.651 ppb	27.270 ppb	53.712 ppb	86.051 %
Concentration per Run 1	56.378 ppb	20.612 ppb	54.659 ppb	102.327 ppb	53.444 ppb	52.776 ppb	27.298 ppb	53.242 ppb	84.825 %
Concentration per Run 2	57.800 ppb	20.779 ppb	56.821 ppb	128.215 ppb	51.612 ppb	52.678 ppb	28.018 ppb	53.377 ppb	83.933 %
Concentration per Run 3	57.120 ppb	21.888 ppb	53.831 ppb	112.995 ppb	52.478 ppb	52.500 ppb	26.494 ppb	54.517 ppb	89.394 %
Concentration RSD	1.2 %	3.3 %	2.8 %	11.4 %	1.7 %	0.3 %	2.8 %	1.3 %	3.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.473 ppb	13.396 ppb	103.703 ppb	97.113 ppb	95.614 %	4.807 ppb	5.441 ppb	94.561 %	45.761 ppb
Concentration per Run 1	13.600 ppb	14.213 ppb	104.591 ppb	96.796 ppb	92.859 %	4.702 ppb	5.454 ppb	92.810 %	46.025 ppb
Concentration per Run 2	13.033 ppb	12.954 ppb	103.169 ppb	96.084 ppb	94.169 %	4.742 ppb	5.170 ppb	92.668 %	47.056 ppb
Concentration per Run 3	13.787 ppb	13.022 ppb	103.348 ppb	98.460 ppb	99.814 %	4.976 ppb	5.699 ppb	98.204 %	44.202 ppb
Concentration RSD	2.9 %	5.3 %	0.7 %	1.3 %	3.9 %	3.1 %	4.9 %	3.3 %	3.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	196.005 ppb	98.272 %	96.790 %	12.279 ppb	54.169 ppb	99.905 %
Concentration per Run 1	200.810 ppb	95.910 %	93.545 %	11.597 ppb	51.966 ppb	102.041 %
Concentration per Run 2	201.780 ppb	96.285 %	94.905 %	12.846 ppb	56.697 ppb	95.085 %
Concentration per Run 3	185.425 ppb	102.622 %	101.921 %	12.394 ppb	53.844 ppb	102.590 %
Concentration RSD	4.7 %	3.8 %	4.6 %	5.1 %	4.4 %	4.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	48	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904115-3d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 12:51:45 PM	Vial	40		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.755 %	104.189 %	4.695 ppb	63,350.618 ppb	5,832.311 ppb	197.671 ppb	5,868.447 ppb	36,490.770 ppb	98.496 %
Concentration per Run 1	103.220 %	87.173 %	4.780 ppb	70,953.609 ppb	6,564.023 ppb	225.078 ppb	6,435.610 ppb	36,993.389 ppb	97.193 %
Concentration per Run 2	104.382 %	109.948 %	4.624 ppb	62,406.383 ppb	5,647.828 ppb	198.522 ppb	5,854.369 ppb	36,739.631 ppb	99.476 %
Concentration per Run 3	106.663 %	115.445 %	4.680 ppb	56,691.863 ppb	5,285.081 ppb	169.413 ppb	5,315.361 ppb	35,739.291 ppb	98.818 %
Concentration RSD	1.7 %	14.4 %	1.7 %	11.3 %	11.3 %	14.1 %	9.5 %	1.8 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	50.222 ppb	21.137 ppb	1,211.612 ppb	3,999.441 ppb	51.822 ppb	51.714 ppb	27.116 ppb	51.881 ppb	86.118 %
Concentration per Run 1	51.381 ppb	21.527 ppb	1,265.541 ppb	4,167.604 ppb	54.280 ppb	54.090 ppb	28.188 ppb	53.620 ppb	87.165 %
Concentration per Run 2	51.161 ppb	21.518 ppb	1,207.279 ppb	3,997.463 ppb	52.168 ppb	51.921 ppb	26.459 ppb	52.370 ppb	87.455 %
Concentration per Run 3	48.124 ppb	20.366 ppb	1,162.018 ppb	3,833.257 ppb	49.017 ppb	49.131 ppb	26.700 ppb	49.652 ppb	83.735 %
Concentration RSD	3.6 %	3.2 %	4.3 %	4.2 %	5.1 %	4.8 %	3.5 %	3.9 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	14.092 ppb	12.092 ppb	252.486 ppb	98.340 ppb	93.863 %	4.629 ppb	4.761 ppb	94.583 %	46.963 ppb
Concentration per Run 1	13.815 ppb	11.087 ppb	248.395 ppb	96.667 ppb	92.631 %	4.562 ppb	4.472 ppb	94.486 %	46.743 ppb
Concentration per Run 2	14.465 ppb	13.812 ppb	251.057 ppb	98.345 ppb	95.680 %	4.612 ppb	4.919 ppb	94.640 %	47.816 ppb
Concentration per Run 3	13.996 ppb	11.376 ppb	258.004 ppb	100.008 ppb	93.276 %	4.713 ppb	4.892 ppb	94.622 %	46.328 ppb
Concentration RSD	2.4 %	12.4 %	2.0 %	1.7 %	1.7 %	1.7 %	5.3 %	0.1 %	1.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	200.875 ppb	100.388 %	98.727 %	11.074 ppb	50.186 ppb	104.208 %
Concentration per Run 1	202.402 ppb	100.146 %	98.365 %	10.768 ppb	49.353 ppb	103.998 %
Concentration per Run 2	203.611 ppb	98.392 %	97.675 %	11.206 ppb	50.659 ppb	104.537 %
Concentration per Run 3	196.611 ppb	102.626 %	100.142 %	11.249 ppb	50.546 ppb	104.090 %
Concentration RSD	1.9 %	2.1 %	1.3 %	2.4 %	1.4 %	0.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 49
Analysis label: WG1904115-5d10 6020TL
Analysis started at: 4/3/2024 12:56:12 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 42
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.089 %	100.000 %	46.457 ppb	69,388.954 ppb	10,361.823 ppb	63.527 ppb	10,522.661 ppb	41,792.521 ppb	98.246 %
Concentration per Run 1	103.764 %	100.524 %	45.916 ppb	67,751.400 ppb	10,092.750 ppb	57.223 ppb	10,183.000 ppb	41,369.801 ppb	97.479 %
Concentration per Run 2	105.078 %	103.665 %	46.582 ppb	68,418.139 ppb	10,193.152 ppb	58.508 ppb	10,318.834 ppb	42,309.243 ppb	97.525 %
Concentration per Run 3	103.425 %	95.811 %	46.872 ppb	71,997.325 ppb	10,799.569 ppb	74.851 ppb	11,066.149 ppb	41,698.519 ppb	99.734 %
Concentration RSD	0.8 %	4.0 %	1.1 %	3.3 %	3.7 %	15.5 %	4.5 %	1.1 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.210 ppb	54.576 ppb	1,227.660 ppb	9,365.371 ppb	54.822 ppb	53.420 ppb	54.761 ppb	54.420 ppb	88.752 %
Concentration per Run 1	54.315 ppb	51.774 ppb	1,216.123 ppb	9,164.732 ppb	54.777 ppb	52.157 ppb	51.336 ppb	54.734 ppb	89.485 %
Concentration per Run 2	56.379 ppb	56.683 ppb	1,241.174 ppb	9,606.566 ppb	55.271 ppb	56.055 ppb	58.167 ppb	55.180 ppb	85.352 %
Concentration per Run 3	54.936 ppb	55.271 ppb	1,225.684 ppb	9,324.817 ppb	54.418 ppb	52.048 ppb	54.781 ppb	53.346 ppb	91.420 %
Concentration RSD	1.9 %	4.6 %	1.0 %	2.4 %	0.8 %	4.3 %	6.2 %	1.8 %	3.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	55.142 ppb	55.104 ppb	203.753 ppb	50.966 ppb	94.655 %	5.543 ppb	46.687 ppb	96.664 %	47.625 ppb
Concentration per Run 1	55.306 ppb	54.173 ppb	205.905 ppb	51.417 ppb	92.744 %	5.510 ppb	46.126 ppb	97.703 %	47.244 ppb
Concentration per Run 2	57.153 ppb	54.934 ppb	206.593 ppb	50.697 ppb	93.725 %	5.679 ppb	48.678 ppb	91.828 %	50.266 ppb
Concentration per Run 3	52.966 ppb	56.206 ppb	198.762 ppb	50.785 ppb	97.496 %	5.440 ppb	45.258 ppb	100.460 %	45.365 ppb
Concentration RSD	3.8 %	1.9 %	2.1 %	0.8 %	2.7 %	2.2 %	3.8 %	4.6 %	5.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.545 ppb	102.462 %	101.030 %	47.309 ppb	48.726 ppb	103.159 %
Concentration per Run 1	62.232 ppb	101.105 %	99.474 %	46.445 ppb	48.596 ppb	102.341 %
Concentration per Run 2	65.160 ppb	98.602 %	98.751 %	50.212 ppb	51.130 ppb	97.242 %
Concentration per Run 3	60.242 ppb	107.678 %	104.864 %	45.269 ppb	46.453 ppb	109.895 %
Concentration RSD	4.0 %	4.6 %	3.3 %	5.5 %	4.8 %	6.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 50
Analysis label: WG1904115-4 6020TL
Analysis started at: 4/3/2024 1:00:40 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 41
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.365 %	82.984 %	0.032 ppb	722,376.304 ppb	53,769.009 ppb	144.182 ppb	52,211.456 ppb	366,383.963 ppb	89.244 %
Concentration per Run 1	87.461 %	80.105 %	0.019 ppb	750,104.909 ppb	55,185.412 ppb	133.816 ppb	53,961.916 ppb	399,313.917 ppb	89.776 %
Concentration per Run 2	89.239 %	78.534 %	0.041 ppb	748,226.175 ppb	56,305.755 ppb	162.464 ppb	54,479.178 ppb	355,233.770 ppb	88.595 %
Concentration per Run 3	88.397 %	90.314 %	0.036 ppb	668,797.827 ppb	49,815.859 ppb	136.267 ppb	48,193.274 ppb	344,604.200 ppb	89.360 %
Concentration RSD	1.0 %	7.7 %	35.3 %	6.4 %	6.5 %	11.0 %	6.7 %	7.9 %	0.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.255 ppb	0.834 ppb	13,273.510 ppb	41,857.481 ppb	0.587 ppb	1.017 ppb	0.654 ppb	2.615 ppb	78.937 %
Concentration per Run 1	1.068 ppb	0.771 ppb	13,961.778 ppb	44,576.004 ppb	0.574 ppb	1.142 ppb	0.948 ppb	2.703 ppb	71.459 %
Concentration per Run 2	1.130 ppb	0.849 ppb	13,538.240 ppb	41,224.091 ppb	0.571 ppb	0.831 ppb	0.491 ppb	2.478 ppb	83.492 %
Concentration per Run 3	1.567 ppb	0.883 ppb	12,320.513 ppb	39,772.348 ppb	0.615 ppb	1.077 ppb	0.525 ppb	2.664 ppb	81.858 %
Concentration RSD	21.7 %	6.9 %	6.4 %	5.9 %	4.1 %	16.2 %	38.9 %	4.6 %	8.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.945 ppb	0.413 ppb	1,627.326 ppb	0.518 ppb	82.366 %	0.005 ppb	0.019 ppb	86.091 %	0.157 ppb
Concentration per Run 1	2.237 ppb	0.831 ppb	1,709.037 ppb	0.598 ppb	79.280 %	0.008 ppb	0.022 ppb	81.315 %	0.135 ppb
Concentration per Run 2	1.523 ppb	0.253 ppb	1,623.374 ppb	0.507 ppb	85.372 %	0.001 ppb	0.000 ppb	90.039 %	0.185 ppb
Concentration per Run 3	2.074 ppb	0.154 ppb	1,549.568 ppb	0.450 ppb	82.447 %	0.005 ppb	0.035 ppb	86.918 %	0.152 ppb
Concentration RSD	19.2 %	88.6 %	4.9 %	14.4 %	3.7 %	75.7 %	92.8 %	5.1 %	16.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	158.188 ppb	93.025 %	91.321 %	0.484 ppb	0.856 ppb	82.541 %
Concentration per Run 1	167.469 ppb	89.234 %	87.766 %	0.382 ppb	0.899 ppb	82.743 %
Concentration per Run 2	152.727 ppb	96.144 %	94.241 %	0.574 ppb	0.856 ppb	83.651 %
Concentration per Run 3	154.367 ppb	93.697 %	91.955 %	0.496 ppb	0.813 ppb	81.230 %
Concentration RSD	5.1 %	3.8 %	3.6 %	19.9 %	5.0 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	51	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417832-01 6020TL	Rack	1		
Analysis started at:	4/3/2024 1:05:07 PM	Vial	39		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.006 %	87.173 %	0.009 ppb	668,514.465 ppb	50,080.354 ppb	125.487 ppb	48,903.776 ppb	350,245.697 ppb	91.902 %
Concentration per Run 1	84.824 %	95.812 %	0.007 ppb	610,847.936 ppb	45,786.010 ppb	111.693 ppb	43,085.324 ppb	327,865.842 ppb	91.698 %
Concentration per Run 2	87.344 %	76.178 %	0.007 ppb	720,687.609 ppb	53,831.001 ppb	128.565 ppb	52,950.868 ppb	357,405.742 ppb	92.938 %
Concentration per Run 3	85.849 %	89.529 %	0.012 ppb	674,007.848 ppb	50,624.050 ppb	136.203 ppb	50,675.135 ppb	365,465.507 ppb	91.070 %
Concentration RSD	1.5 %	11.5 %	34.1 %	8.2 %	8.1 %	10.0 %	10.6 %	5.7 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.344 ppb	0.771 ppb	12,597.451 ppb	39,591.900 ppb	0.497 ppb	1.056 ppb	0.620 ppb	4.967 ppb	79.926 %
Concentration per Run 1	1.151 ppb	0.581 ppb	11,630.722 ppb	37,368.470 ppb	0.433 ppb	1.045 ppb	0.631 ppb	4.660 ppb	80.899 %
Concentration per Run 2	1.412 ppb	1.007 ppb	13,148.381 ppb	41,681.611 ppb	0.525 ppb	0.921 ppb	0.747 ppb	5.186 ppb	78.352 %
Concentration per Run 3	1.469 ppb	0.725 ppb	13,013.249 ppb	39,725.619 ppb	0.533 ppb	1.202 ppb	0.480 ppb	5.054 ppb	80.526 %
Concentration RSD	12.6 %	28.1 %	6.7 %	5.5 %	11.2 %	13.4 %	21.6 %	5.5 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	2.176 ppb	0.955 ppb	1,587.853 ppb	0.277 ppb	81.257 %	0.002 ppb	0.009 ppb	86.014 %	0.096 ppb
Concentration per Run 1	2.238 ppb	0.977 ppb	1,513.384 ppb	0.265 ppb	83.128 %	0.005 ppb	0.007 ppb	83.194 %	0.073 ppb
Concentration per Run 2	2.216 ppb	0.644 ppb	1,586.729 ppb	0.315 ppb	79.259 %	-0.001 ppb	0.000 ppb	84.846 %	0.092 ppb
Concentration per Run 3	2.075 ppb	1.244 ppb	1,663.447 ppb	0.251 ppb	81.385 %	0.003 ppb	0.021 ppb	90.001 %	0.123 ppb
Concentration RSD	4.1 %	31.4 %	4.7 %	12.2 %	2.4 %	138.5 %	112.9 %	4.1 %	26.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	154.350 ppb	90.818 %	90.416 %	0.139 ppb	0.733 ppb	84.470 %
Concentration per Run 1	156.987 ppb	88.695 %	89.475 %	0.084 ppb	0.708 ppb	85.216 %
Concentration per Run 2	150.884 ppb	93.219 %	88.461 %	0.161 ppb	0.767 ppb	84.335 %
Concentration per Run 3	155.179 ppb	90.540 %	93.313 %	0.171 ppb	0.725 ppb	83.858 %
Concentration RSD	2.0 %	2.5 %	2.8 %	34.4 %	4.2 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	52	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417832-02 6020TL	Rack	1		
Analysis started at:	4/3/2024 1:09:34 PM	Vial	44		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.958 %	95.812 %	0.006 ppb	103,204.921 ppb	36,457.164 ppb	34.123 ppb	21,618.011 ppb	89,630.809 ppb	90.850 %
Concentration per Run 1	92.957 %	96.597 %	0.001 ppb	102,570.049 ppb	36,230.555 ppb	38.201 ppb	21,029.657 ppb	90,424.783 ppb	87.434 %
Concentration per Run 2	95.651 %	93.455 %	0.018 ppb	103,495.769 ppb	36,289.868 ppb	34.326 ppb	21,689.389 ppb	87,341.648 ppb	92.412 %
Concentration per Run 3	96.267 %	97.382 %	0.000 ppb	103,548.944 ppb	36,851.069 ppb	29.843 ppb	22,134.988 ppb	91,125.998 ppb	92.703 %
Concentration RSD	1.9 %	2.2 %	163.3 %	0.5 %	0.9 %	12.3 %	2.6 %	2.2 %	3.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.694 ppb	0.436 ppb	8,413.675 ppb	98.254 ppb	0.396 ppb	3.140 ppb	2.399 ppb	2.194 ppb	82.752 %
Concentration per Run 1	0.556 ppb	0.464 ppb	8,177.370 ppb	95.751 ppb	0.407 ppb	2.992 ppb	2.348 ppb	2.246 ppb	81.541 %
Concentration per Run 2	0.742 ppb	0.493 ppb	8,463.071 ppb	105.227 ppb	0.435 ppb	3.201 ppb	2.639 ppb	2.105 ppb	84.690 %
Concentration per Run 3	0.785 ppb	0.350 ppb	8,600.584 ppb	93.782 ppb	0.346 ppb	3.228 ppb	2.212 ppb	2.230 ppb	82.025 %
Concentration RSD	17.5 %	17.3 %	2.6 %	6.2 %	11.5 %	4.1 %	9.1 %	3.5 %	2.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.759 ppb	1.857 ppb	297.540 ppb	1.612 ppb	86.960 %	0.010 ppb	0.112 ppb	90.305 %	0.172 ppb
Concentration per Run 1	0.842 ppb	1.873 ppb	296.506 ppb	1.441 ppb	88.408 %	0.011 ppb	0.133 ppb	90.877 %	0.169 ppb
Concentration per Run 2	0.653 ppb	1.886 ppb	292.930 ppb	1.744 ppb	86.852 %	0.009 ppb	0.135 ppb	90.014 %	0.161 ppb
Concentration per Run 3	0.783 ppb	1.811 ppb	303.183 ppb	1.652 ppb	85.621 %	0.009 ppb	0.068 ppb	90.025 %	0.186 ppb
Concentration RSD	12.8 %	2.2 %	1.7 %	9.6 %	1.6 %	10.8 %	34.2 %	0.5 %	7.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	140.965 ppb	92.841 %	91.034 %	0.138 ppb	0.183 ppb	90.384 %
Concentration per Run 1	140.761 ppb	92.981 %	90.332 %	0.090 ppb	0.174 ppb	89.695 %
Concentration per Run 2	140.724 ppb	93.413 %	90.110 %	0.147 ppb	0.192 ppb	90.231 %
Concentration per Run 3	141.410 ppb	92.128 %	92.659 %	0.176 ppb	0.184 ppb	91.226 %
Concentration RSD	0.3 %	0.7 %	1.6 %	32.0 %	5.0 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	53	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417832-03 6020TL	Rack	1		
Analysis started at:	4/3/2024 1:14:02 PM	Vial	45		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.051 %	101.832 %	0.225 ppb	444,650.748 ppb	57,407.407 ppb	2,499.279 ppb	48,727.159 ppb	299,797.972 ppb	92.766 %
Concentration per Run 1	99.182 %	107.592 %	0.196 ppb	435,958.926 ppb	56,157.400 ppb	2,403.972 ppb	48,071.732 ppb	306,888.057 ppb	91.951 %
Concentration per Run 2	99.031 %	104.450 %	0.272 ppb	428,371.765 ppb	55,226.914 ppb	2,386.265 ppb	46,572.550 ppb	294,059.111 ppb	92.297 %
Concentration per Run 3	101.941 %	93.455 %	0.208 ppb	469,621.552 ppb	60,837.905 ppb	2,707.600 ppb	51,537.197 ppb	298,446.748 ppb	94.049 %
Concentration RSD	1.6 %	7.3 %	18.1 %	4.9 %	5.2 %	7.2 %	5.2 %	2.2 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	10.810 ppb	6.881 ppb	1,049.702 ppb	10,101.132 ppb	2.253 ppb	29.950 ppb	30.573 ppb	102.534 ppb	78.920 %
Concentration per Run 1	9.199 ppb	6.469 ppb	1,054.718 ppb	10,349.050 ppb	2.146 ppb	29.569 ppb	31.088 ppb	104.872 ppb	76.683 %
Concentration per Run 2	10.533 ppb	7.090 ppb	1,031.300 ppb	9,852.336 ppb	2.354 ppb	29.882 ppb	30.519 ppb	102.017 ppb	79.058 %
Concentration per Run 3	12.698 ppb	7.084 ppb	1,063.090 ppb	10,102.010 ppb	2.260 ppb	30.398 ppb	30.113 ppb	100.713 ppb	81.017 %
Concentration RSD	16.3 %	5.2 %	1.6 %	2.5 %	4.6 %	1.4 %	1.6 %	2.1 %	2.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	4.963 ppb	0.797 ppb	1,685.232 ppb	1.514 ppb	78.186 %	0.082 ppb	0.315 ppb	80.259 %	0.927 ppb
Concentration per Run 1	5.303 ppb	0.626 ppb	1,726.843 ppb	1.466 ppb	79.751 %	0.092 ppb	0.269 ppb	80.634 %	1.017 ppb
Concentration per Run 2	4.835 ppb	0.838 ppb	1,653.196 ppb	1.409 ppb	77.316 %	0.072 ppb	0.295 ppb	80.617 %	0.825 ppb
Concentration per Run 3	4.751 ppb	0.926 ppb	1,675.657 ppb	1.667 ppb	77.491 %	0.082 ppb	0.381 ppb	79.527 %	0.937 ppb
Concentration RSD	6.0 %	19.4 %	2.2 %	8.9 %	1.7 %	11.8 %	18.6 %	0.8 %	10.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	252.869 ppb	85.828 %	84.311 %	0.105 ppb	66.734 ppb	75.315 %
Concentration per Run 1	254.770 ppb	86.988 %	85.276 %	0.077 ppb	65.973 ppb	78.715 %
Concentration per Run 2	251.609 ppb	85.130 %	82.811 %	0.119 ppb	65.124 ppb	74.938 %
Concentration per Run 3	252.229 ppb	85.365 %	84.845 %	0.120 ppb	69.103 ppb	72.291 %
Concentration RSD	0.7 %	1.2 %	1.6 %	23.4 %	3.1 %	4.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	54	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417832-04 6020TL	Rack	1		
Analysis started at:	4/3/2024 1:18:30 PM	Vial	46		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.145 %	94.503 %	0.014 ppb	175,959.764 ppb	35,928.654 ppb	130.423 ppb	15,291.870 ppb	145,554.805 ppb	92.286 %
Concentration per Run 1	98.028 %	84.817 %	0.018 ppb	190,749.600 ppb	38,926.306 ppb	129.854 ppb	16,405.236 ppb	156,339.983 ppb	93.458 %
Concentration per Run 2	99.849 %	102.094 %	0.021 ppb	163,784.935 ppb	33,049.465 ppb	121.761 ppb	14,167.428 ppb	138,467.501 ppb	91.827 %
Concentration per Run 3	99.557 %	96.597 %	0.002 ppb	173,344.756 ppb	35,810.189 ppb	139.653 ppb	15,302.946 ppb	141,856.931 ppb	91.573 %
Concentration RSD	1.0 %	9.3 %	77.1 %	7.8 %	8.2 %	6.9 %	7.3 %	6.5 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.778 ppb	0.671 ppb	60.763 ppb	272.949 ppb	0.762 ppb	7.887 ppb	1.813 ppb	2.612 ppb	81.857 %
Concentration per Run 1	0.697 ppb	0.890 ppb	66.112 ppb	296.684 ppb	0.791 ppb	7.799 ppb	1.980 ppb	2.837 ppb	76.850 %
Concentration per Run 2	0.935 ppb	0.540 ppb	57.414 ppb	263.639 ppb	0.718 ppb	7.554 ppb	1.805 ppb	2.465 ppb	85.364 %
Concentration per Run 3	0.702 ppb	0.583 ppb	58.763 ppb	258.523 ppb	0.778 ppb	8.307 ppb	1.654 ppb	2.534 ppb	83.358 %
Concentration RSD	17.5 %	28.5 %	7.7 %	7.6 %	5.1 %	4.9 %	9.0 %	7.6 %	5.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.952 ppb	0.331 ppb	444.643 ppb	0.658 ppb	84.490 %	0.004 ppb	0.019 ppb	84.953 %	0.098 ppb
Concentration per Run 1	0.825 ppb	0.543 ppb	469.202 ppb	0.865 ppb	80.501 %	0.001 ppb	0.022 ppb	82.589 %	0.067 ppb
Concentration per Run 2	0.939 ppb	0.447 ppb	420.841 ppb	0.529 ppb	87.601 %	0.001 ppb	0.021 ppb	87.145 %	0.099 ppb
Concentration per Run 3	1.092 ppb	0.003 ppb	443.887 ppb	0.579 ppb	85.367 %	0.010 ppb	0.014 ppb	85.124 %	0.128 ppb
Concentration RSD	14.1 %	87.0 %	5.4 %	27.6 %	4.3 %	130.0 %	22.3 %	2.7 %	31.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	46.106 ppb	88.888 %	86.537 %	0.072 ppb	0.571 ppb	80.544 %
Concentration per Run 1	48.811 ppb	86.509 %	83.101 %	0.046 ppb	0.583 ppb	82.463 %
Concentration per Run 2	45.250 ppb	90.682 %	89.134 %	0.094 ppb	0.577 ppb	78.488 %
Concentration per Run 3	44.257 ppb	89.473 %	87.377 %	0.077 ppb	0.552 ppb	80.682 %
Concentration RSD	5.2 %	2.4 %	3.6 %	33.6 %	2.9 %	2.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	55	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904115-6d5 6020TL	Rack	1		
Analysis started at:	4/3/2024 1:22:59 PM	Vial	43		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.430 %	98.168 %	0.010 ppb	124,400.486 ppb	9,445.349 ppb	26.767 ppb	9,179.176 ppb	67,896.100 ppb	100.930 %
Concentration per Run 1	98.946 %	103.665 %	0.017 ppb	118,260.513 ppb	9,019.546 ppb	29.220 ppb	9,134.343 ppb	69,931.300 ppb	94.962 %
Concentration per Run 2	106.541 %	89.529 %	0.013 ppb	132,027.207 ppb	10,054.333 ppb	25.538 ppb	9,398.442 ppb	64,400.714 ppb	104.278 %
Concentration per Run 3	107.802 %	101.309 %	0.000 ppb	122,913.739 ppb	9,262.168 ppb	25.543 ppb	9,004.742 ppb	69,356.286 ppb	103.549 %
Concentration RSD	4.6 %	7.7 %	88.7 %	5.6 %	5.7 %	7.9 %	2.2 %	4.5 %	5.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.195 ppb	0.260 ppb	2,305.040 ppb	7,769.811 ppb	0.133 ppb	0.160 ppb	0.240 ppb	1.219 ppb	85.869 %
Concentration per Run 1	0.231 ppb	0.262 ppb	2,319.601 ppb	7,885.269 ppb	0.136 ppb	0.220 ppb	0.216 ppb	1.375 ppb	83.647 %
Concentration per Run 2	0.161 ppb	0.197 ppb	2,272.826 ppb	7,739.637 ppb	0.128 ppb	0.290 ppb	0.292 ppb	0.992 ppb	88.295 %
Concentration per Run 3	0.192 ppb	0.321 ppb	2,322.695 ppb	7,684.526 ppb	0.134 ppb	-0.030 ppb	0.212 ppb	1.290 ppb	85.666 %
Concentration RSD	18.1 %	23.8 %	1.2 %	1.3 %	3.1 %	105.3 %	18.7 %	16.5 %	2.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.607 ppb	0.045 ppb	302.869 ppb	0.025 ppb	88.329 %	0.006 ppb	0.002 ppb	88.670 %	0.024 ppb
Concentration per Run 1	0.653 ppb	0.273 ppb	311.489 ppb	0.060 ppb	86.727 %	0.009 ppb	0.000 ppb	86.572 %	0.012 ppb
Concentration per Run 2	0.669 ppb	0.019 ppb	295.159 ppb	0.007 ppb	88.368 %	0.003 ppb	0.007 ppb	89.345 %	0.038 ppb
Concentration per Run 3	0.498 ppb	-0.155 ppb	301.957 ppb	0.007 ppb	89.893 %	0.005 ppb	0.000 ppb	90.093 %	0.022 ppb
Concentration RSD	15.6 %	473.4 %	2.7 %	123.8 %	1.8 %	57.8 %	173.2 %	2.1 %	54.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	31.779 ppb	91.992 %	89.337 %	0.035 ppb	0.160 ppb	89.727 %
Concentration per Run 1	32.683 ppb	89.950 %	87.091 %	0.014 ppb	0.150 ppb	87.495 %
Concentration per Run 2	31.729 ppb	92.198 %	89.506 %	0.052 ppb	0.166 ppb	90.702 %
Concentration per Run 3	30.927 ppb	93.826 %	91.413 %	0.039 ppb	0.163 ppb	90.983 %
Concentration RSD	2.8 %	2.1 %	2.4 %	54.5 %	5.3 %	2.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	56	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 1:27:26 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.460 %	104.450 %	58.202 ppb	6,207.111 ppb	6,437.557 ppb	59.773 ppb	6,236.354 ppb	5,826.444 ppb	97.543 %
Concentration per Run 1	98.984 %	96.597 %	58.137 ppb	6,535.830 ppb	6,490.031 ppb	60.784 ppb	6,555.506 ppb	6,409.279 ppb	94.405 %
Concentration per Run 2	102.045 %	110.733 %	57.558 ppb	5,704.868 ppb	6,042.439 ppb	56.738 ppb	5,715.355 ppb	5,274.038 ppb	99.652 %
Concentration per Run 3	100.352 %	106.021 %	58.912 ppb	6,380.634 ppb	6,780.202 ppb	61.796 ppb	6,438.200 ppb	5,796.017 ppb	98.572 %
Recovery Percentage 1			97.004 %	103.452 %	107.293 %	99.621 %	103.939 %	97.107 %	
Concentration RSD	1.5 %	6.9 %	1.2 %	7.1 %	5.8 %	4.5 %	7.3 %	9.8 %	2.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	57.338 ppb	58.379 ppb	58.579 ppb	6,458.132 ppb	64.290 ppb	65.871 ppb	64.722 ppb	61.602 ppb	86.232 %
Concentration per Run 1	59.982 ppb	61.728 ppb	61.776 ppb	6,503.067 ppb	66.098 ppb	64.750 ppb	66.082 ppb	61.710 ppb	86.260 %
Concentration per Run 2	52.725 ppb	53.485 ppb	52.429 ppb	6,143.477 ppb	61.629 ppb	62.663 ppb	64.199 ppb	60.030 ppb	84.257 %
Concentration per Run 3	59.307 ppb	59.925 ppb	61.531 ppb	6,727.852 ppb	65.142 ppb	70.202 ppb	63.885 ppb	63.065 ppb	88.179 %
Recovery Percentage 1	95.563 %	97.299 %	97.631 %	107.636 %	107.149 %	109.786 %	107.870 %	102.670 %	
Concentration RSD	7.0 %	7.4 %	9.1 %	4.6 %	3.7 %	5.9 %	1.8 %	2.5 %	2.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	63.827 ppb	61.021 ppb	62.111 ppb	62.915 ppb	93.907 %	61.275 ppb	61.807 ppb	92.437 %	61.497 ppb
Concentration per Run 1	62.091 ppb	59.499 ppb	61.295 ppb	62.411 ppb	93.157 %	62.074 ppb	63.311 ppb	90.263 %	62.419 ppb
Concentration per Run 2	63.845 ppb	59.976 ppb	60.156 ppb	62.119 ppb	95.020 %	60.711 ppb	61.583 ppb	90.901 %	60.634 ppb
Concentration per Run 3	65.546 ppb	63.587 ppb	64.883 ppb	64.217 ppb	93.544 %	61.039 ppb	60.525 ppb	96.146 %	61.436 ppb
Recovery Percentage 1	106.379 %	101.701 %	103.519 %	104.859 %		102.125 %	103.011 %		102.494 %
Concentration RSD	2.7 %	3.7 %	4.0 %	1.8 %	1.0 %	1.2 %	2.3 %	3.5 %	1.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.518 ppb	95.631 %	93.766 %	61.468 ppb	62.087 ppb	96.724 %
Concentration per Run 1	61.138 ppb	95.761 %	93.015 %	62.748 ppb	62.485 ppb	94.848 %
Concentration per Run 2	64.344 ppb	95.716 %	90.516 %	60.479 ppb	62.453 ppb	95.600 %
Concentration per Run 3	62.071 ppb	95.417 %	97.765 %	61.177 ppb	61.323 ppb	99.724 %
Recovery Percentage 1	104.196 %			102.447 %	103.478 %	
Concentration RSD	2.6 %	0.2 %	3.9 %	1.9 %	1.1 %	2.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	57	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 1:31:57 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.432 %	96.597 %	0.019 ppb	155.708 ppb	1.298 ppb	0.889 ppb	56.606 ppb	-0.685 ppb	91.904 %
Concentration per Run 1	102.766 %	89.529 %	0.012 ppb	169.766 ppb	0.637 ppb	0.835 ppb	51.796 ppb	-17.242 ppb	91.634 %
Concentration per Run 2	103.932 %	93.455 %	0.020 ppb	171.608 ppb	1.829 ppb	1.302 ppb	75.494 ppb	2.935 ppb	92.408 %
Concentration per Run 3	103.599 %	106.806 %	0.024 ppb	125.751 ppb	1.428 ppb	0.529 ppb	42.529 ppb	12.254 ppb	91.670 %
Recovery Percentage 1			3.741 %	155.708 %	1.854 %	8.885 %	56.606 %	-0.685 %	
Concentration RSD	0.6 %	9.4 %	34.0 %	16.7 %	46.7 %	43.8 %	30.0 %	2,202.2 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.096 ppb	0.166 ppb	0.490 ppb	11.527 ppb	0.005 ppb	-0.047 ppb	0.028 ppb	0.058 ppb	86.843 %
Concentration per Run 1	0.006 ppb	0.175 ppb	0.387 ppb	9.388 ppb	0.007 ppb	-0.038 ppb	0.072 ppb	0.154 ppb	93.523 %
Concentration per Run 2	0.165 ppb	0.195 ppb	0.786 ppb	12.803 ppb	-0.006 ppb	-0.024 ppb	-0.002 ppb	0.012 ppb	83.965 %
Concentration per Run 3	0.118 ppb	0.128 ppb	0.295 ppb	12.388 ppb	0.015 ppb	-0.078 ppb	0.014 ppb	0.009 ppb	83.040 %
Recovery Percentage 1	1.923 %	16.564 %	48.954 %	23.053 %	1.067 %	-2.330 %	2.807 %	1.169 %	
Concentration RSD	85.1 %	20.8 %	53.3 %	16.2 %	201.8 %	60.1 %	138.2 %	141.8 %	6.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.310 ppb	0.198 ppb	0.035 ppb	0.137 ppb	94.541 %	0.051 ppb	0.009 ppb	91.001 %	0.018 ppb
Concentration per Run 1	0.348 ppb	0.001 ppb	0.030 ppb	0.090 ppb	90.165 %	0.063 ppb	0.013 ppb	89.093 %	0.026 ppb
Concentration per Run 2	0.333 ppb	0.367 ppb	0.050 ppb	0.153 ppb	96.228 %	0.058 ppb	0.013 ppb	91.373 %	0.009 ppb
Concentration per Run 3	0.249 ppb	0.227 ppb	0.026 ppb	0.168 ppb	97.231 %	0.034 ppb	0.000 ppb	92.537 %	0.018 ppb
Recovery Percentage 1	61.961 %	3.969 %	0.352 %	6.848 %		12.848 %	4.391 %		0.441 %
Concentration RSD	17.1 %	93.1 %	35.9 %	30.4 %	4.0 %	30.3 %	86.7 %	1.9 %	47.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.011 ppb	93.580 %	90.240 %	0.458 ppb	0.026 ppb	97.754 %
Concentration per Run 1	0.003 ppb	91.269 %	87.414 %	0.344 ppb	0.029 ppb	96.702 %
Concentration per Run 2	0.027 ppb	94.687 %	91.123 %	0.554 ppb	0.030 ppb	97.085 %
Concentration per Run 3	0.002 ppb	94.783 %	92.184 %	0.475 ppb	0.019 ppb	99.474 %
Recovery Percentage 1	2.150 %			45.781 %	2.622 %	
Concentration RSD	128.3 %	2.1 %	2.8 %	23.2 %	22.3 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	58	User name	ALPHALAB\a2-icpmsq2	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 1:38:14 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.871 %	98.429 %	0.012 ppb	127.091 ppb	1.838 ppb	-0.515 ppb	50.110 ppb	-2.977 ppb	88.583 %
Concentration per Run 1	99.597 %	100.524 %	0.004 ppb	125.151 ppb	5.017 ppb	-0.784 ppb	42.716 ppb	36.731 ppb	87.080 %
Concentration per Run 2	103.367 %	95.812 %	0.012 ppb	129.425 ppb	1.741 ppb	0.025 ppb	55.276 ppb	-14.163 ppb	90.075 %
Concentration per Run 3	99.650 %	98.953 %	0.019 ppb	126.696 ppb	-1.244 ppb	-0.786 ppb	52.339 ppb	-31.499 ppb	88.595 %
Recovery Percentage 1			2.336 %	127.091 %	2.626 %	-5.148 %	50.110 %	-2.977 %	
Concentration RSD	2.1 %	2.4 %	66.0 %	1.7 %	170.4 %	90.8 %	13.1 %	1,191.2 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.118 ppb	0.152 ppb	0.430 ppb	5.332 ppb	0.010 ppb	-0.037 ppb	0.025 ppb	0.040 ppb	85.548 %
Concentration per Run 1	0.046 ppb	0.168 ppb	0.444 ppb	4.703 ppb	0.001 ppb	0.023 ppb	0.065 ppb	0.009 ppb	83.980 %
Concentration per Run 2	0.009 ppb	0.162 ppb	0.593 ppb	8.021 ppb	0.030 ppb	-0.076 ppb	0.014 ppb	0.030 ppb	84.790 %
Concentration per Run 3	0.301 ppb	0.125 ppb	0.255 ppb	3.273 ppb	0.001 ppb	-0.057 ppb	-0.004 ppb	0.080 ppb	87.875 %
Recovery Percentage 1	2.369 %	15.178 %	43.045 %	10.665 %	2.079 %	-1.845 %	2.495 %	0.794 %	
Concentration RSD	134.4 %	15.2 %	39.3 %	45.7 %	160.3 %	142.7 %	143.7 %	93.1 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.324 ppb	0.055 ppb	0.041 ppb	0.029 ppb	91.979 %	0.016 ppb	0.002 ppb	90.555 %	0.013 ppb
Concentration per Run 1	0.165 ppb	0.132 ppb	0.059 ppb	0.007 ppb	90.979 %	0.028 ppb	0.007 ppb	84.287 %	0.026 ppb
Concentration per Run 2	0.533 ppb	0.015 ppb	0.032 ppb	0.041 ppb	91.425 %	0.017 ppb	0.000 ppb	90.130 %	0.013 ppb
Concentration per Run 3	0.274 ppb	0.019 ppb	0.030 ppb	0.039 ppb	93.532 %	0.003 ppb	0.000 ppb	97.249 %	-0.002 ppb
Recovery Percentage 1	64.773 %	1.105 %	0.406 %	1.450 %		3.987 %	1.157 %		0.313 %
Concentration RSD	58.4 %	120.3 %	39.9 %	65.7 %	1.5 %	79.8 %	173.2 %	7.2 %	111.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.045 ppb	92.285 %	91.081 %	0.114 ppb	0.010 ppb	92.760 %
Concentration per Run 1	0.082 ppb	88.630 %	88.246 %	0.085 ppb	0.024 ppb	90.295 %
Concentration per Run 2	0.027 ppb	93.352 %	89.722 %	0.133 ppb	0.006 ppb	91.622 %
Concentration per Run 3	0.025 ppb	94.871 %	95.275 %	0.125 ppb	0.001 ppb	96.363 %
Recovery Percentage 1	8.991 %			11.431 %	1.034 %	
Concentration RSD	72.1 %	3.5 %	4.1 %	22.8 %	115.8 %	3.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 59
Analysis label: L2417832-05 6020TL
Analysis started at: 4/3/2024 1:43:45 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 47
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.999 %	100.524 %	0.014 ppb	135,647.563 ppb	25,476.164 ppb	19.850 ppb	22,311.835 ppb	205,240.439 ppb	85.271 %
Concentration per Run 1	90.897 %	97.382 %	0.011 ppb	136,928.978 ppb	25,649.447 ppb	18.685 ppb	21,895.951 ppb	202,085.070 ppb	85.209 %
Concentration per Run 2	86.561 %	108.377 %	0.022 ppb	128,873.402 ppb	23,963.680 ppb	19.553 ppb	22,196.357 ppb	209,041.119 ppb	83.646 %
Concentration per Run 3	89.538 %	95.812 %	0.009 ppb	141,140.308 ppb	26,815.365 ppb	21.313 ppb	22,843.197 ppb	204,595.129 ppb	86.959 %
Concentration RSD	2.5 %	6.8 %	52.5 %	4.6 %	5.6 %	6.7 %	2.2 %	1.7 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	10.661 ppb	0.482 ppb	101.268 ppb	92.838 ppb	2.132 ppb	2.811 ppb	3.557 ppb	2.927 ppb	89.074 %
Concentration per Run 1	10.757 ppb	0.617 ppb	101.111 ppb	88.481 ppb	1.956 ppb	2.611 ppb	3.695 ppb	2.786 ppb	87.943 %
Concentration per Run 2	11.092 ppb	0.445 ppb	101.030 ppb	99.273 ppb	2.225 ppb	2.501 ppb	3.655 ppb	2.992 ppb	89.632 %
Concentration per Run 3	10.134 ppb	0.385 ppb	101.665 ppb	90.759 ppb	2.217 ppb	3.322 ppb	3.321 ppb	3.004 ppb	89.648 %
Concentration RSD	4.6 %	24.9 %	0.3 %	6.1 %	7.2 %	15.8 %	5.8 %	4.2 %	1.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.586 ppb	2.035 ppb	1,112.644 ppb	10.815 ppb	86.623 %	0.009 ppb	0.012 ppb	88.965 %	1.035 ppb
Concentration per Run 1	1.587 ppb	1.665 ppb	1,097.206 ppb	10.491 ppb	86.263 %	0.009 ppb	0.014 ppb	89.791 %	0.983 ppb
Concentration per Run 2	1.462 ppb	2.323 ppb	1,109.046 ppb	10.685 ppb	87.362 %	0.009 ppb	0.000 ppb	91.702 %	0.980 ppb
Concentration per Run 3	1.708 ppb	2.119 ppb	1,131.681 ppb	11.269 ppb	86.245 %	0.010 ppb	0.021 ppb	85.402 %	1.142 ppb
Concentration RSD	7.7 %	16.5 %	1.6 %	3.7 %	0.7 %	1.8 %	92.5 %	3.6 %	9.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	51.454 ppb	92.372 %	90.116 %	0.070 ppb	0.159 ppb	90.455 %
Concentration per Run 1	51.646 ppb	92.504 %	89.499 %	0.035 ppb	0.146 ppb	91.763 %
Concentration per Run 2	51.432 ppb	94.152 %	92.349 %	0.089 ppb	0.177 ppb	91.149 %
Concentration per Run 3	51.285 ppb	90.460 %	88.499 %	0.087 ppb	0.154 ppb	88.454 %
Concentration RSD	0.4 %	2.0 %	2.2 %	43.6 %	10.3 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 60 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: L2417832-06 6020TL Rack 1
Analysis started at: 4/3/2024 1:48:14 PM Vial 48

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.664 %	95.812 %	0.014 ppb	178,780.610 ppb	13,032.173 ppb	428.393 ppb	21,408.176 ppb	94,274.442 ppb	90.865 %
Concentration per Run 1	94.385 %	109.948 %	0.010 ppb	163,247.679 ppb	11,828.808 ppb	404.629 ppb	19,695.116 ppb	90,462.834 ppb	87.955 %
Concentration per Run 2	96.355 %	87.173 %	0.014 ppb	190,112.904 ppb	13,919.079 ppb	442.315 ppb	22,536.889 ppb	95,978.149 ppb	91.490 %
Concentration per Run 3	96.254 %	90.314 %	0.018 ppb	182,981.247 ppb	13,348.632 ppb	438.234 ppb	21,992.524 ppb	96,382.343 ppb	93.150 %
Concentration RSD	1.2 %	12.9 %	30.6 %	7.8 %	8.3 %	4.8 %	7.0 %	3.5 %	2.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	17.014 ppb	3.444 ppb	247.181 ppb	2,755.496 ppb	1.411 ppb	7.434 ppb	14.257 ppb	4.320 ppb	82.993 %
Concentration per Run 1	15.376 ppb	3.132 ppb	229.991 ppb	2,579.255 ppb	1.405 ppb	6.746 ppb	13.178 ppb	3.890 ppb	89.593 %
Concentration per Run 2	18.119 ppb	3.298 ppb	261.450 ppb	2,928.352 ppb	1.549 ppb	7.768 ppb	14.045 ppb	4.547 ppb	81.775 %
Concentration per Run 3	17.546 ppb	3.900 ppb	250.102 ppb	2,758.883 ppb	1.279 ppb	7.788 ppb	15.548 ppb	4.523 ppb	77.611 %
Concentration RSD	8.5 %	11.7 %	6.4 %	6.3 %	9.6 %	8.0 %	8.4 %	8.6 %	7.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	8.365 ppb	2.315 ppb	946.569 ppb	22.118 ppb	86.744 %	0.011 ppb	0.020 ppb	89.065 %	0.532 ppb
Concentration per Run 1	7.469 ppb	2.292 ppb	939.457 ppb	22.349 ppb	88.574 %	0.009 ppb	0.033 ppb	93.764 %	0.484 ppb
Concentration per Run 2	8.294 ppb	2.268 ppb	940.404 ppb	22.301 ppb	85.072 %	0.014 ppb	0.007 ppb	88.358 %	0.508 ppb
Concentration per Run 3	9.333 ppb	2.384 ppb	959.846 ppb	21.703 ppb	86.587 %	0.010 ppb	0.021 ppb	85.072 %	0.604 ppb
Concentration RSD	11.2 %	2.6 %	1.2 %	1.6 %	2.0 %	24.4 %	63.9 %	4.9 %	11.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	35.191 ppb	91.905 %	88.807 %	0.062 ppb	1.928 ppb	88.438 %
Concentration per Run 1	36.231 ppb	94.531 %	93.334 %	0.025 ppb	1.922 ppb	92.641 %
Concentration per Run 2	35.700 ppb	91.016 %	88.974 %	0.079 ppb	1.931 ppb	88.540 %
Concentration per Run 3	33.641 ppb	90.169 %	84.112 %	0.083 ppb	1.932 ppb	84.133 %
Concentration RSD	3.9 %	2.5 %	5.2 %	52.2 %	0.3 %	4.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	61	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417832-01d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 1:54:35 PM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.117 %	96.597 %	0.010 ppb	63,946.650 ppb	5,026.860 ppb	13.644 ppb	4,699.902 ppb	35,650.717 ppb	87.851 %
Concentration per Run 1	95.944 %	87.173 %	0.016 ppb	68,876.384 ppb	5,448.171 ppb	15.768 ppb	4,900.374 ppb	35,720.032 ppb	85.665 %
Concentration per Run 2	98.748 %	109.162 %	0.013 ppb	57,200.604 ppb	4,510.193 ppb	12.608 ppb	4,279.628 ppb	35,401.095 ppb	88.009 %
Concentration per Run 3	99.659 %	93.455 %	0.002 ppb	65,762.962 ppb	5,122.216 ppb	12.554 ppb	4,919.704 ppb	35,831.023 ppb	89.878 %
Concentration RSD	2.0 %	11.7 %	74.0 %	9.5 %	9.5 %	13.5 %	7.7 %	0.6 %	2.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.269 ppb	0.199 ppb	1,183.460 ppb	4,073.820 ppb	0.048 ppb	-0.010 ppb	0.074 ppb	0.793 ppb	81.537 %
Concentration per Run 1	0.345 ppb	0.208 ppb	1,231.434 ppb	4,242.305 ppb	0.048 ppb	0.070 ppb	0.056 ppb	0.872 ppb	79.110 %
Concentration per Run 2	0.372 ppb	0.141 ppb	1,119.339 ppb	3,899.843 ppb	0.043 ppb	-0.030 ppb	0.080 ppb	0.600 ppb	83.695 %
Concentration per Run 3	0.090 ppb	0.247 ppb	1,199.608 ppb	4,079.311 ppb	0.053 ppb	-0.071 ppb	0.086 ppb	0.906 ppb	81.807 %
Concentration RSD	57.8 %	27.0 %	4.9 %	4.2 %	10.7 %	697.1 %	22.0 %	21.1 %	2.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.629 ppb	0.016 ppb	153.167 ppb	0.050 ppb	83.938 %	0.001 ppb	0.000 ppb	82.807 %	0.004 ppb
Concentration per Run 1	0.609 ppb	-0.087 ppb	161.461 ppb	0.028 ppb	80.867 %	0.001 ppb	0.000 ppb	81.038 %	0.015 ppb
Concentration per Run 2	0.694 ppb	-0.100 ppb	145.134 ppb	0.081 ppb	82.935 %	0.001 ppb	0.000 ppb	80.124 %	0.016 ppb
Concentration per Run 3	0.584 ppb	0.235 ppb	152.906 ppb	0.043 ppb	88.012 %	0.001 ppb	0.000 ppb	87.260 %	-0.020 ppb
Concentration RSD	9.2 %	1,179.5 %	5.3 %	54.6 %	4.4 %	9.8 %	N/A	4.7 %	535.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	15.513 ppb	87.588 %	84.770 %	0.041 ppb	0.083 ppb	84.684 %
Concentration per Run 1	15.492 ppb	84.851 %	82.887 %	0.025 ppb	0.080 ppb	84.053 %
Concentration per Run 2	15.159 ppb	86.146 %	83.024 %	0.040 ppb	0.075 ppb	85.041 %
Concentration per Run 3	15.887 ppb	91.766 %	88.398 %	0.057 ppb	0.094 ppb	84.959 %
Concentration RSD	2.3 %	4.2 %	3.7 %	39.6 %	12.3 %	0.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 62
Analysis label: L2417832-03d10 6020TL
Analysis started at: 4/3/2024 1:59:02 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 52
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.007 %	100.524 %	0.028 ppb	47,587.024 ppb	6,280.783 ppb	270.082 ppb	5,278.963 ppb	30,819.721 ppb	88.082 %
Concentration per Run 1	99.395 %	106.806 %	0.037 ppb	44,296.800 ppb	5,963.201 ppb	266.237 ppb	5,095.686 ppb	31,714.180 ppb	88.356 %
Concentration per Run 2	100.660 %	97.382 %	0.015 ppb	49,220.582 ppb	6,438.567 ppb	271.466 ppb	5,363.925 ppb	30,408.730 ppb	87.693 %
Concentration per Run 3	102.967 %	97.382 %	0.031 ppb	49,243.690 ppb	6,440.581 ppb	272.543 ppb	5,377.278 ppb	30,336.253 ppb	88.199 %
Concentration RSD	1.8 %	5.4 %	42.1 %	6.0 %	4.4 %	1.2 %	3.0 %	2.5 %	0.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.464 ppb	0.802 ppb	115.171 ppb	1,106.873 ppb	0.278 ppb	3.296 ppb	3.360 ppb	11.988 ppb	80.891 %
Concentration per Run 1	1.525 ppb	0.879 ppb	113.777 ppb	1,121.929 ppb	0.314 ppb	2.805 ppb	3.407 ppb	11.923 ppb	80.038 %
Concentration per Run 2	1.586 ppb	0.815 ppb	117.669 ppb	1,080.034 ppb	0.248 ppb	3.116 ppb	3.431 ppb	11.809 ppb	79.868 %
Concentration per Run 3	1.280 ppb	0.711 ppb	114.067 ppb	1,118.656 ppb	0.271 ppb	3.966 ppb	3.241 ppb	12.232 ppb	82.767 %
Concentration RSD	11.1 %	10.6 %	1.9 %	2.1 %	12.2 %	18.2 %	3.1 %	1.8 %	2.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.902 ppb	0.129 ppb	166.465 ppb	0.165 ppb	84.952 %	0.010 ppb	0.031 ppb	84.050 %	0.084 ppb
Concentration per Run 1	0.868 ppb	-0.124 ppb	172.739 ppb	0.226 ppb	84.400 %	0.016 ppb	0.036 ppb	84.075 %	0.078 ppb
Concentration per Run 2	0.747 ppb	0.128 ppb	168.213 ppb	0.098 ppb	86.055 %	0.007 ppb	0.021 ppb	86.803 %	0.081 ppb
Concentration per Run 3	1.090 ppb	0.382 ppb	158.443 ppb	0.170 ppb	84.401 %	0.008 ppb	0.036 ppb	81.271 %	0.092 ppb
Concentration RSD	19.3 %	196.2 %	4.4 %	39.2 %	1.1 %	48.9 %	28.5 %	3.3 %	8.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	25.978 ppb	88.627 %	86.613 %	0.030 ppb	6.655 ppb	86.216 %
Concentration per Run 1	27.091 ppb	87.357 %	87.365 %	0.006 ppb	6.773 ppb	86.096 %
Concentration per Run 2	25.996 ppb	90.977 %	87.501 %	0.035 ppb	6.571 ppb	86.375 %
Concentration per Run 3	24.845 ppb	87.547 %	84.974 %	0.047 ppb	6.620 ppb	86.177 %
Concentration RSD	4.3 %	2.3 %	1.6 %	70.7 %	1.6 %	0.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 63
Analysis label: WG1904115-4d10 6020TL
Analysis started at: 4/3/2024 2:03:30 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 50
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.938 %	102.618 %	0.011 ppb	62,567.687 ppb	4,826.795 ppb	15.885 ppb	4,718.905 ppb	34,640.928 ppb	88.176 %
Concentration per Run 1	98.302 %	119.372 %	0.004 ppb	53,711.113 ppb	4,254.437 ppb	11.850 ppb	4,302.034 ppb	32,021.575 ppb	87.053 %
Concentration per Run 2	98.424 %	87.958 %	0.013 ppb	69,692.214 ppb	5,375.728 ppb	20.115 ppb	4,911.239 ppb	36,411.225 ppb	88.236 %
Concentration per Run 3	100.089 %	100.524 %	0.015 ppb	64,299.735 ppb	4,850.219 ppb	15.690 ppb	4,943.442 ppb	35,489.985 ppb	89.240 %
Concentration RSD	1.0 %	15.4 %	53.0 %	13.0 %	11.6 %	26.0 %	7.7 %	6.7 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.253 ppb	0.217 ppb	1,173.705 ppb	3,972.734 ppb	0.113 ppb	0.010 ppb	0.130 ppb	0.467 ppb	83.476 %
Concentration per Run 1	0.371 ppb	0.125 ppb	1,079.460 ppb	3,514.037 ppb	0.110 ppb	0.090 ppb	0.070 ppb	0.252 ppb	90.303 %
Concentration per Run 2	0.264 ppb	0.308 ppb	1,247.854 ppb	4,238.209 ppb	0.119 ppb	-0.036 ppb	0.167 ppb	0.668 ppb	78.047 %
Concentration per Run 3	0.124 ppb	0.218 ppb	1,193.800 ppb	4,165.957 ppb	0.110 ppb	-0.023 ppb	0.153 ppb	0.481 ppb	82.077 %
Concentration RSD	49.0 %	42.1 %	7.3 %	10.0 %	4.3 %	676.0 %	40.1 %	44.6 %	7.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.501 ppb	0.058 ppb	153.506 ppb	0.036 ppb	88.772 %	0.000 ppb	0.002 ppb	91.701 %	-0.004 ppb
Concentration per Run 1	0.450 ppb	0.113 ppb	151.627 ppb	0.024 ppb	89.162 %	0.001 ppb	0.000 ppb	95.150 %	-0.007 ppb
Concentration per Run 2	0.605 ppb	0.154 ppb	155.100 ppb	0.061 ppb	88.330 %	-0.001 ppb	0.007 ppb	88.262 %	0.005 ppb
Concentration per Run 3	0.447 ppb	-0.093 ppb	153.791 ppb	0.025 ppb	88.824 %	0.001 ppb	0.000 ppb	91.691 %	-0.009 ppb
Concentration RSD	18.1 %	228.9 %	1.1 %	57.8 %	0.5 %	949.3 %	173.2 %	3.8 %	198.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	15.372 ppb	94.776 %	91.809 %	0.022 ppb	0.082 ppb	96.727 %
Concentration per Run 1	15.100 ppb	94.679 %	92.421 %	0.008 ppb	0.080 ppb	97.062 %
Concentration per Run 2	14.540 ppb	95.885 %	93.906 %	0.023 ppb	0.079 ppb	97.224 %
Concentration per Run 3	16.476 ppb	93.764 %	89.101 %	0.035 ppb	0.088 ppb	95.894 %
Concentration RSD	6.5 %	1.1 %	2.7 %	59.9 %	5.9 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	64	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904115-6d50 6020TL	Rack	1		
Analysis started at:	4/3/2024 2:07:57 PM	Vial	51		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.259 %	101.309 %	0.006 ppb	11,531.559 ppb	903.347 ppb	3.290 ppb	825.229 ppb	5,348.327 ppb	89.459 %
Concentration per Run 1	101.632 %	113.089 %	0.010 ppb	10,380.962 ppb	824.507 ppb	3.499 ppb	738.880 ppb	5,439.792 ppb	87.969 %
Concentration per Run 2	101.789 %	92.670 %	-0.001 ppb	12,234.063 ppb	950.517 ppb	3.484 ppb	832.537 ppb	5,255.507 ppb	89.619 %
Concentration per Run 3	103.355 %	98.168 %	0.007 ppb	11,979.654 ppb	935.018 ppb	2.887 ppb	904.270 ppb	5,349.681 ppb	90.790 %
Concentration RSD	0.9 %	10.4 %	102.6 %	8.7 %	7.6 %	10.6 %	10.1 %	1.7 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.140 ppb	0.112 ppb	199.875 ppb	701.923 ppb	0.010 ppb	-0.072 ppb	0.032 ppb	0.310 ppb	103.457 %
Concentration per Run 1	0.155 ppb	0.101 ppb	187.705 ppb	650.609 ppb	0.018 ppb	-0.039 ppb	0.045 ppb	0.294 ppb	102.455 %
Concentration per Run 2	0.133 ppb	0.074 ppb	207.383 ppb	716.336 ppb	0.000 ppb	-0.057 ppb	-0.011 ppb	0.293 ppb	105.394 %
Concentration per Run 3	0.133 ppb	0.161 ppb	204.537 ppb	738.826 ppb	0.012 ppb	-0.119 ppb	0.061 ppb	0.342 ppb	102.523 %
Concentration RSD	9.2 %	39.7 %	5.3 %	6.5 %	92.1 %	58.7 %	119.8 %	9.2 %	1.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.170 ppb	0.097 ppb	26.752 ppb	0.017 ppb	91.853 %	-0.001 ppb	0.002 ppb	89.672 %	-0.007 ppb
Concentration per Run 1	0.158 ppb	0.105 ppb	27.245 ppb	0.006 ppb	91.266 %	-0.001 ppb	0.000 ppb	89.568 %	-0.008 ppb
Concentration per Run 2	0.172 ppb	-0.102 ppb	26.323 ppb	0.006 ppb	92.592 %	-0.001 ppb	0.007 ppb	90.056 %	-0.014 ppb
Concentration per Run 3	0.179 ppb	0.288 ppb	26.687 ppb	0.038 ppb	91.700 %	-0.001 ppb	0.000 ppb	89.392 %	0.001 ppb
Concentration RSD	6.3 %	201.7 %	1.7 %	111.6 %	0.7 %	0.0 %	173.2 %	0.4 %	110.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	3.007 ppb	93.627 %	90.737 %	0.020 ppb	0.017 ppb	98.691 %
Concentration per Run 1	2.500 ppb	94.209 %	91.827 %	0.007 ppb	0.016 ppb	98.913 %
Concentration per Run 2	2.870 ppb	93.529 %	88.829 %	0.022 ppb	0.015 ppb	100.176 %
Concentration per Run 3	3.651 ppb	93.143 %	91.554 %	0.030 ppb	0.018 ppb	96.983 %
Concentration RSD	19.5 %	0.6 %	1.8 %	58.4 %	8.7 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	65	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 2:12:24 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.008 %	90.576 %	57.255 ppb	6,869.287 ppb	7,067.041 ppb	64.073 ppb	7,198.631 ppb	6,246.433 ppb	91.813 %
Concentration per Run 1	98.110 %	97.382 %	58.450 ppb	6,088.674 ppb	6,381.108 ppb	60.041 ppb	6,920.798 ppb	5,790.095 ppb	89.563 %
Concentration per Run 2	99.986 %	96.597 %	57.217 ppb	6,329.389 ppb	6,586.248 ppb	59.669 ppb	6,753.614 ppb	5,530.959 ppb	94.478 %
Concentration per Run 3	101.927 %	77.749 %	56.098 ppb	8,189.800 ppb	8,233.767 ppb	72.507 ppb	7,921.480 ppb	7,418.246 ppb	91.399 %
Recovery Percentage 1			95.425 %	114.488 %	117.784 %	106.788 %	119.977 %	104.107 %	
Concentration RSD	1.9 %	12.3 %	2.1 %	16.7 %	14.4 %	11.4 %	8.8 %	16.4 %	2.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	61.084 ppb	65.301 ppb	65.579 ppb	6,355.361 ppb	64.421 ppb	64.565 ppb	65.066 ppb	62.593 ppb	83.353 %
Concentration per Run 1	55.350 ppb	58.744 ppb	63.995 ppb	6,324.597 ppb	63.606 ppb	66.008 ppb	64.011 ppb	62.471 ppb	83.092 %
Concentration per Run 2	54.195 ppb	59.585 ppb	66.959 ppb	6,431.722 ppb	65.088 ppb	64.963 ppb	66.564 ppb	63.396 ppb	84.495 %
Concentration per Run 3	73.707 ppb	77.572 ppb	65.784 ppb	6,309.763 ppb	64.569 ppb	62.724 ppb	64.622 ppb	61.912 ppb	82.472 %
Recovery Percentage 1	101.807 %	108.834 %	109.299 %	105.923 %	107.368 %	107.609 %	108.443 %	104.322 %	
Concentration RSD	17.9 %	16.3 %	2.3 %	1.0 %	1.2 %	2.6 %	2.0 %	1.2 %	1.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	61.936 ppb	65.075 ppb	64.871 ppb	62.125 ppb	90.674 %	62.048 ppb	62.134 ppb	88.661 %	61.155 ppb
Concentration per Run 1	62.172 ppb	60.570 ppb	64.540 ppb	60.235 ppb	89.571 %	60.953 ppb	60.326 ppb	90.517 %	59.115 ppb
Concentration per Run 2	62.491 ppb	61.638 ppb	64.646 ppb	62.046 ppb	90.018 %	63.229 ppb	62.787 ppb	87.402 %	63.269 ppb
Concentration per Run 3	61.145 ppb	73.017 ppb	65.428 ppb	64.094 ppb	92.434 %	61.963 ppb	63.290 ppb	88.063 %	61.081 ppb
Recovery Percentage 1	103.227 %	108.458 %	108.119 %	103.542 %		103.413 %	103.557 %		101.925 %
Concentration RSD	1.1 %	10.6 %	0.7 %	3.1 %	1.7 %	1.8 %	2.6 %	1.9 %	3.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.727 ppb	94.200 %	90.702 %	62.663 ppb	63.141 ppb	95.428 %
Concentration per Run 1	58.861 ppb	96.507 %	91.406 %	60.423 ppb	61.865 ppb	96.266 %
Concentration per Run 2	61.749 ppb	91.969 %	90.504 %	64.308 ppb	64.694 ppb	92.597 %
Concentration per Run 3	58.571 ppb	94.123 %	90.198 %	63.257 ppb	62.865 ppb	97.419 %
Recovery Percentage 1	99.545 %			104.438 %	105.235 %	
Concentration RSD	2.9 %	2.4 %	0.7 %	3.2 %	2.3 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	66	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 2:16:55 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.979 %	96.859 %	0.029 ppb	72.971 ppb	0.605 ppb	-0.328 ppb	78.569 ppb	17.368 ppb	77.941 %
Concentration per Run 1	89.836 %	91.099 %	0.031 ppb	82.260 ppb	0.753 ppb	-0.113 ppb	91.153 ppb	25.083 ppb	77.417 %
Concentration per Run 2	90.877 %	100.524 %	0.030 ppb	70.415 ppb	2.864 ppb	0.015 ppb	78.451 ppb	24.985 ppb	76.703 %
Concentration per Run 3	92.226 %	98.953 %	0.025 ppb	66.239 ppb	-1.802 ppb	-0.885 ppb	66.102 ppb	2.036 ppb	79.702 %
Recovery Percentage 1			5.750 %	72.971 %	0.865 %	-3.278 %	78.569 %	17.368 %	
Concentration RSD	1.3 %	5.2 %	11.7 %	11.4 %	386.0 %	148.6 %	15.9 %	76.5 %	2.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.112 ppb	0.102 ppb	0.230 ppb	7.342 ppb	0.017 ppb	-0.150 ppb	0.084 ppb	-0.025 ppb	77.285 %
Concentration per Run 1	0.077 ppb	0.153 ppb	0.254 ppb	8.258 ppb	0.021 ppb	-0.129 ppb	0.106 ppb	-0.082 ppb	76.500 %
Concentration per Run 2	0.128 ppb	0.102 ppb	0.094 ppb	10.994 ppb	0.016 ppb	-0.173 ppb	0.084 ppb	-0.117 ppb	75.370 %
Concentration per Run 3	0.131 ppb	0.052 ppb	0.342 ppb	2.776 ppb	0.015 ppb	-0.149 ppb	0.063 ppb	0.124 ppb	79.986 %
Recovery Percentage 1	2.239 %	10.233 %	23.007 %	14.685 %	3.481 %	-7.512 %	8.420 %	-0.503 %	
Concentration RSD	27.1 %	49.5 %	54.7 %	57.0 %	18.7 %	14.6 %	25.3 %	517.5 %	3.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.242 ppb	0.182 ppb	0.022 ppb	0.187 ppb	87.005 %	0.050 ppb	0.019 ppb	85.725 %	0.015 ppb
Concentration per Run 1	0.295 ppb	0.393 ppb	0.033 ppb	0.165 ppb	90.365 %	0.048 ppb	0.014 ppb	88.088 %	0.008 ppb
Concentration per Run 2	0.200 ppb	0.018 ppb	0.025 ppb	0.120 ppb	84.006 %	0.065 ppb	0.036 ppb	83.622 %	0.033 ppb
Concentration per Run 3	0.229 ppb	0.135 ppb	0.009 ppb	0.275 ppb	86.645 %	0.038 ppb	0.007 ppb	85.464 %	0.003 ppb
Recovery Percentage 1	48.305 %	3.646 %	0.224 %	9.332 %		12.597 %	9.395 %		0.370 %
Concentration RSD	20.0 %	105.2 %	53.3 %	42.9 %	3.7 %	27.6 %	80.5 %	2.6 %	109.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.005 ppb	88.788 %	86.590 %	0.461 ppb	0.023 ppb	91.573 %
Concentration per Run 1	-0.022 ppb	91.976 %	90.168 %	0.339 ppb	0.034 ppb	95.081 %
Concentration per Run 2	0.031 ppb	86.873 %	84.784 %	0.585 ppb	0.016 ppb	88.625 %
Concentration per Run 3	0.004 ppb	87.517 %	84.817 %	0.459 ppb	0.018 ppb	91.013 %
Recovery Percentage 1	0.914 %			46.107 %	2.264 %	
Concentration RSD	577.5 %	3.1 %	3.6 %	26.8 %	44.3 %	3.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	67	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 2:57:36 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	110.307 %	112.042 %	54.726 ppb	6,242.705 ppb	6,116.807 ppb	61.011 ppb	6,038.187 ppb	5,535.949 ppb	99.275 %
Concentration per Run 1	108.143 %	113.089 %	54.658 ppb	6,189.911 ppb	6,206.601 ppb	59.013 ppb	5,897.932 ppb	5,369.391 ppb	97.396 %
Concentration per Run 2	111.171 %	112.304 %	54.208 ppb	6,111.098 ppb	5,894.350 ppb	58.158 ppb	5,930.017 ppb	5,336.029 ppb	100.413 %
Concentration per Run 3	111.607 %	110.733 %	55.311 ppb	6,427.107 ppb	6,249.471 ppb	65.863 ppb	6,286.613 ppb	5,902.428 ppb	100.015 %
Recovery Percentage 1			91.210 %	104.045 %	101.947 %	101.685 %	100.636 %	92.266 %	
Concentration RSD	1.7 %	1.1 %	1.0 %	2.6 %	3.2 %	6.9 %	3.6 %	5.7 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	63.618 ppb	65.959 ppb	64.370 ppb	6,385.154 ppb	65.001 ppb	64.881 ppb	62.918 ppb	63.699 ppb	89.251 %
Concentration per Run 1	67.563 ppb	70.207 ppb	69.408 ppb	6,748.675 ppb	70.246 ppb	68.266 ppb	65.436 ppb	68.094 ppb	79.791 %
Concentration per Run 2	59.623 ppb	63.517 ppb	61.633 ppb	6,281.383 ppb	62.559 ppb	63.978 ppb	58.963 ppb	62.394 ppb	89.171 %
Concentration per Run 3	63.668 ppb	64.153 ppb	62.068 ppb	6,125.404 ppb	62.197 ppb	62.400 ppb	64.355 ppb	60.610 ppb	98.789 %
Recovery Percentage 1	106.030 %	109.932 %	107.283 %	106.419 %	108.334 %	108.135 %	104.863 %	106.165 %	
Concentration RSD	6.2 %	5.6 %	6.8 %	5.1 %	7.0 %	4.7 %	5.5 %	6.1 %	10.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	66.025 ppb	62.816 ppb	**63.380 ppb**	59.578 ppb	95.417 %	59.285 ppb	59.764 ppb	93.321 %	59.282 ppb
Concentration per Run 1	71.988 ppb	64.258 ppb	66.829 ppb	63.814 ppb	89.933 %	63.347 ppb	63.331 ppb	86.579 %	61.821 ppb
Concentration per Run 2	63.442 ppb	63.042 ppb	63.214 ppb	58.966 ppb	97.139 %	58.288 ppb	58.474 ppb	96.461 %	57.845 ppb
Concentration per Run 3	62.645 ppb	61.146 ppb	60.097 ppb	55.955 ppb	99.180 %	56.220 ppb	57.489 ppb	96.923 %	58.178 ppb
Recovery Percentage 1	110.041 %	104.693 %	105.634 %	99.297 %		98.808 %	99.607 %		98.803 %
Concentration RSD	7.8 %	2.5 %	5.3 %	6.7 %	5.1 %	6.2 %	5.2 %	6.3 %	3.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.121 ppb	97.680 %	96.156 %	60.435 ppb	60.597 ppb	99.994 %
Concentration per Run 1	62.009 ppb	92.403 %	89.854 %	60.687 ppb	61.019 ppb	97.468 %
Concentration per Run 2	59.646 ppb	100.551 %	99.393 %	60.593 ppb	60.823 ppb	100.211 %
Concentration per Run 3	58.709 ppb	100.086 %	99.221 %	60.024 ppb	59.950 ppb	102.302 %
Recovery Percentage 1	100.202 %			100.725 %	100.996 %	
Concentration RSD	2.8 %	4.7 %	5.7 %	0.6 %	0.9 %	2.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	68	User name	ALPHALAB\a2-icpmsq2	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 3:02:07 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	118.286 %	107.330 %	0.018 ppb	53.370 ppb	0.881 ppb	0.135 ppb	26.745 ppb	-13.000 ppb	98.086 %
Concentration per Run 1	115.749 %	98.168 %	0.018 ppb	63.860 ppb	-0.143 ppb	0.165 ppb	30.743 ppb	-22.026 ppb	98.311 %
Concentration per Run 2	119.492 %	99.738 %	0.019 ppb	55.353 ppb	1.959 ppb	0.343 ppb	45.746 ppb	-10.439 ppb	97.544 %
Concentration per Run 3	119.619 %	124.084 %	0.017 ppb	40.898 ppb	0.826 ppb	-0.103 ppb	3.746 ppb	-6.536 ppb	98.403 %
Recovery Percentage 1			3.596 %	53.370 %	1.258 %	1.352 %	26.745 %	-13.000 %	
Concentration RSD	1.9 %	13.5 %	5.3 %	21.8 %	119.4 %	165.9 %	79.6 %	62.0 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.042 ppb	0.134 ppb	0.069 ppb	6.979 ppb	0.019 ppb	-0.170 ppb	0.072 ppb	0.016 ppb	102.141 %
Concentration per Run 1	0.072 ppb	0.093 ppb	0.037 ppb	7.146 ppb	0.033 ppb	-0.181 ppb	0.091 ppb	0.056 ppb	96.303 %
Concentration per Run 2	0.031 ppb	0.172 ppb	0.122 ppb	6.655 ppb	0.024 ppb	-0.163 ppb	0.072 ppb	0.009 ppb	103.887 %
Concentration per Run 3	0.023 ppb	0.137 ppb	0.049 ppb	7.138 ppb	-0.001 ppb	-0.167 ppb	0.054 ppb	-0.017 ppb	106.231 %
Recovery Percentage 1	0.839 %	13.367 %	6.925 %	13.959 %	3.744 %	-8.525 %	7.213 %	0.325 %	
Concentration RSD	62.6 %	29.7 %	66.8 %	4.0 %	92.1 %	5.7 %	25.1 %	227.4 %	5.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.248 ppb	0.209 ppb	0.024 ppb	0.121 ppb	103.696 %	0.051 ppb	0.024 ppb	99.089 %	0.044 ppb
Concentration per Run 1	0.299 ppb	0.304 ppb	0.025 ppb	0.097 ppb	99.998 %	0.072 ppb	0.031 ppb	95.858 %	0.058 ppb
Concentration per Run 2	0.189 ppb	0.082 ppb	0.030 ppb	0.121 ppb	103.777 %	0.042 ppb	0.030 ppb	98.798 %	0.047 ppb
Concentration per Run 3	0.257 ppb	0.241 ppb	0.017 ppb	0.145 ppb	107.312 %	0.039 ppb	0.012 ppb	102.610 %	0.028 ppb
Recovery Percentage 1	49.671 %	4.177 %	0.241 %	6.061 %		12.811 %	12.051 %		1.107 %
Concentration RSD	22.2 %	54.7 %	27.8 %	20.0 %	3.5 %	35.5 %	45.2 %	3.4 %	34.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.007 ppb	104.642 %	100.343 %	0.480 ppb	0.024 ppb	104.706 %
Concentration per Run 1	0.024 ppb	102.117 %	98.122 %	0.378 ppb	0.024 ppb	104.636 %
Concentration per Run 2	-0.022 ppb	101.934 %	95.016 %	0.585 ppb	0.031 ppb	100.005 %
Concentration per Run 3	-0.022 ppb	109.874 %	107.892 %	0.478 ppb	0.017 ppb	109.477 %
Recovery Percentage 1	-1.308 %			48.036 %	2.379 %	
Concentration RSD	401.1 %	4.3 %	6.7 %	21.6 %	29.2 %	4.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	69	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1902287-2d10 2008TL	Rack	1		
Analysis started at:	4/3/2024 3:15:22 PM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	119.369 %	113.874 %	4.681 ppb	1,268.818 ppb	1,102.220 ppb	197.071 ppb	1,278.287 ppb	1,489.278 ppb	102.799 %
Concentration per Run 1	119.357 %	103.665 %	4.575 ppb	1,322.505 ppb	1,134.256 ppb	218.319 ppb	1,452.954 ppb	1,628.714 ppb	101.073 %
Concentration per Run 2	118.864 %	108.377 %	4.680 ppb	1,317.499 ppb	1,186.818 ppb	195.505 ppb	1,280.006 ppb	1,411.377 ppb	102.696 %
Concentration per Run 3	119.886 %	129.581 %	4.788 ppb	1,166.450 ppb	985.585 ppb	177.389 ppb	1,101.902 ppb	1,427.743 ppb	104.629 %
Concentration RSD	0.4 %	12.1 %	2.3 %	7.0 %	9.5 %	10.4 %	13.7 %	8.1 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	53.934 ppb	22.514 ppb	57.589 ppb	118.122 ppb	53.385 ppb	53.541 ppb	27.374 ppb	53.445 ppb	98.452 %
Concentration per Run 1	55.238 ppb	22.905 ppb	59.130 ppb	107.030 ppb	53.695 ppb	53.892 ppb	27.157 ppb	53.693 ppb	96.339 %
Concentration per Run 2	54.657 ppb	23.010 ppb	59.361 ppb	129.058 ppb	55.598 ppb	55.417 ppb	28.668 ppb	55.235 ppb	96.728 %
Concentration per Run 3	51.908 ppb	21.626 ppb	54.277 ppb	118.278 ppb	50.861 ppb	51.313 ppb	26.296 ppb	51.407 ppb	102.289 %
Concentration RSD	3.3 %	3.4 %	5.0 %	9.3 %	4.5 %	3.9 %	4.4 %	3.6 %	3.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.657 ppb	12.761 ppb	103.393 ppb	96.389 ppb	102.619 %	5.021 ppb	5.442 ppb	100.566 %	45.219 ppb
Concentration per Run 1	14.138 ppb	13.011 ppb	107.579 ppb	98.366 ppb	101.961 %	4.883 ppb	5.347 ppb	102.168 %	44.150 ppb
Concentration per Run 2	13.721 ppb	13.785 ppb	107.531 ppb	100.127 ppb	99.290 %	5.382 ppb	5.972 ppb	95.185 %	48.765 ppb
Concentration per Run 3	13.113 ppb	11.487 ppb	95.070 ppb	90.674 ppb	106.607 %	4.796 ppb	5.006 ppb	104.347 %	42.742 ppb
Concentration RSD	3.8 %	9.2 %	7.0 %	5.2 %	3.6 %	6.3 %	9.0 %	4.8 %	7.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	195.011 ppb	106.930 %	102.910 %	12.336 ppb	53.822 ppb	112.491 %
Concentration per Run 1	193.552 ppb	105.463 %	103.336 %	12.259 ppb	53.329 ppb	109.472 %
Concentration per Run 2	207.420 ppb	102.872 %	98.146 %	13.512 ppb	59.325 ppb	102.327 %
Concentration per Run 3	184.061 ppb	112.455 %	107.246 %	11.235 ppb	48.813 ppb	125.673 %
Concentration RSD	6.0 %	4.6 %	4.4 %	9.2 %	9.8 %	10.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 70
Analysis label: L2416667-01 2008TL
Analysis started at: 4/3/2024 3:19:50 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 13
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	110.491 %	104.712 %	0.006 ppb	107,580.078 ppb	4,360.280 ppb	22.692 ppb	33,333.744 ppb	67,839.509 ppb	98.954 %
Concentration per Run 1	107.685 %	113.089 %	0.002 ppb	103,234.913 ppb	4,228.474 ppb	20.149 ppb	32,657.766 ppb	68,313.323 ppb	97.249 %
Concentration per Run 2	111.427 %	93.455 %	0.011 ppb	115,553.740 ppb	4,535.205 ppb	25.224 ppb	34,389.105 ppb	66,746.884 ppb	98.305 %
Concentration per Run 3	112.362 %	107.592 %	0.003 ppb	103,951.581 ppb	4,317.162 ppb	22.703 ppb	32,954.361 ppb	68,458.321 ppb	101.307 %
Concentration RSD	2.2 %	9.7 %	88.3 %	6.4 %	3.6 %	11.2 %	2.8 %	1.4 %	2.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.916 ppb	0.251 ppb	8.512 ppb	25.871 ppb	0.103 ppb	1.338 ppb	6.846 ppb	39.729 ppb	94.236 %
Concentration per Run 1	2.097 ppb	0.225 ppb	8.960 ppb	20.296 ppb	0.074 ppb	1.111 ppb	6.553 ppb	39.483 ppb	97.870 %
Concentration per Run 2	1.572 ppb	0.207 ppb	8.717 ppb	30.443 ppb	0.149 ppb	1.327 ppb	7.221 ppb	40.345 ppb	92.377 %
Concentration per Run 3	2.079 ppb	0.320 ppb	7.859 ppb	26.875 ppb	0.085 ppb	1.575 ppb	6.763 ppb	39.360 ppb	92.460 %
Concentration RSD	15.6 %	24.3 %	6.8 %	19.9 %	39.4 %	17.3 %	5.0 %	1.4 %	3.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.983 ppb	0.395 ppb	131.069 ppb	1.008 ppb	98.374 %	0.001 ppb	0.039 ppb	98.657 %	1.022 ppb
Concentration per Run 1	0.981 ppb	0.222 ppb	136.085 ppb	0.953 ppb	101.571 %	0.001 ppb	0.040 ppb	105.368 %	0.958 ppb
Concentration per Run 2	0.960 ppb	0.523 ppb	131.802 ppb	0.958 ppb	98.579 %	0.001 ppb	0.031 ppb	96.879 %	1.111 ppb
Concentration per Run 3	1.008 ppb	0.439 ppb	125.320 ppb	1.113 ppb	94.971 %	0.003 ppb	0.045 ppb	93.725 %	0.996 ppb
Concentration RSD	2.5 %	39.4 %	4.1 %	9.0 %	3.4 %	92.4 %	18.4 %	6.1 %	7.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	10.610 ppb	106.590 %	105.480 %	0.059 ppb	0.180 ppb	108.030 %
Concentration per Run 1	10.915 ppb	108.970 %	109.907 %	0.038 ppb	0.181 ppb	111.635 %
Concentration per Run 2	10.062 ppb	108.805 %	104.508 %	0.062 ppb	0.171 ppb	105.671 %
Concentration per Run 3	10.852 ppb	101.996 %	102.025 %	0.077 ppb	0.189 ppb	106.785 %
Concentration RSD	4.5 %	3.7 %	3.8 %	33.0 %	5.1 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 71
Analysis label: L2416691-01 2008TL
Analysis started at: 4/3/2024 3:24:16 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 14
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	113.285 %	117.016 %	0.014 ppb	69,732.424 ppb	3,220.616 ppb	21.420 ppb	7,911.489 ppb	26,307.252 ppb	97.867 %
Concentration per Run 1	114.115 %	129.581 %	0.017 ppb	65,538.251 ppb	2,960.431 ppb	19.427 ppb	7,591.610 ppb	26,343.702 ppb	98.075 %
Concentration per Run 2	113.456 %	110.733 %	0.021 ppb	70,477.626 ppb	3,341.121 ppb	21.665 ppb	7,982.515 ppb	26,406.935 ppb	97.710 %
Concentration per Run 3	112.284 %	110.733 %	0.005 ppb	73,181.395 ppb	3,360.296 ppb	23.169 ppb	8,160.342 ppb	26,171.119 ppb	97.816 %
Concentration RSD	0.8 %	9.3 %	55.7 %	5.6 %	7.0 %	8.8 %	3.7 %	0.5 %	0.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.457 ppb	0.340 ppb	8.718 ppb	57.822 ppb	0.136 ppb	0.992 ppb	13.040 ppb	24.269 ppb	97.191 %
Concentration per Run 1	0.304 ppb	0.233 ppb	8.370 ppb	51.688 ppb	0.124 ppb	1.101 ppb	12.967 ppb	22.803 ppb	98.747 %
Concentration per Run 2	0.428 ppb	0.400 ppb	8.928 ppb	56.790 ppb	0.137 ppb	0.793 ppb	12.610 ppb	24.974 ppb	97.819 %
Concentration per Run 3	0.640 ppb	0.387 ppb	8.856 ppb	64.989 ppb	0.146 ppb	1.082 ppb	13.542 ppb	25.031 ppb	95.006 %
Concentration RSD	37.1 %	27.2 %	3.5 %	11.6 %	8.2 %	17.4 %	3.6 %	5.2 %	2.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.166 ppb	0.136 ppb	105.172 ppb	0.276 ppb	99.349 %	0.009 ppb	0.032 ppb	101.464 %	0.350 ppb
Concentration per Run 1	1.080 ppb	0.302 ppb	107.011 ppb	0.280 ppb	99.104 %	0.017 ppb	0.029 ppb	103.485 %	0.299 ppb
Concentration per Run 2	1.128 ppb	0.003 ppb	103.391 ppb	0.295 ppb	99.530 %	0.006 ppb	0.030 ppb	101.164 %	0.358 ppb
Concentration per Run 3	1.290 ppb	0.102 ppb	105.115 ppb	0.252 ppb	99.412 %	0.004 ppb	0.036 ppb	99.743 %	0.392 ppb
Concentration RSD	9.4 %	112.1 %	1.7 %	8.0 %	0.2 %	75.3 %	11.9 %	1.9 %	13.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	23.887 ppb	106.944 %	103.056 %	0.049 ppb	0.122 ppb	111.639 %
Concentration per Run 1	24.480 ppb	106.605 %	102.955 %	0.034 ppb	0.119 ppb	111.081 %
Concentration per Run 2	24.039 ppb	108.849 %	105.764 %	0.058 ppb	0.116 ppb	113.164 %
Concentration per Run 3	23.143 ppb	105.377 %	100.450 %	0.055 ppb	0.131 ppb	110.673 %
Concentration RSD	2.9 %	1.6 %	2.6 %	26.6 %	6.6 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	72	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416819-01d20 2008TL	Rack	1		
Analysis started at:	4/3/2024 3:28:42 PM	Vial	15		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.839 %	96.073 %	0.010 ppb	1,801,621.483 ppb	3,658.334 ppb	34.454 ppb	5,670.293 ppb	5,170.821 ppb	86.137 %
Concentration per Run 1	92.958 %	110.733 %	0.015 ppb	1,575,614.150 ppb	3,193.275 ppb	27.965 ppb	4,952.545 ppb	5,300.193 ppb	84.830 %
Concentration per Run 2	95.701 %	83.246 %	0.014 ppb	2,041,691.926 ppb	4,121.360 ppb	38.921 ppb	6,129.009 ppb	5,098.798 ppb	86.895 %
Concentration per Run 3	95.858 %	94.241 %	0.002 ppb	1,787,558.374 ppb	3,660.367 ppb	36.477 ppb	5,929.324 ppb	5,113.473 ppb	86.687 %
Concentration RSD	1.7 %	14.4 %	66.2 %	13.0 %	12.7 %	16.7 %	11.1 %	2.2 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.486 ppb	0.346 ppb	6.400 ppb	328.404 ppb	0.043 ppb	0.060 ppb	0.880 ppb	2.001 ppb	86.145 %
Concentration per Run 1	0.447 ppb	0.326 ppb	5.684 ppb	313.076 ppb	0.036 ppb	-0.029 ppb	1.012 ppb	1.853 ppb	82.215 %
Concentration per Run 2	0.576 ppb	0.364 ppb	7.021 ppb	354.718 ppb	0.049 ppb	0.183 ppb	0.761 ppb	2.061 ppb	92.290 %
Concentration per Run 3	0.435 ppb	0.349 ppb	6.494 ppb	317.418 ppb	0.045 ppb	0.027 ppb	0.867 ppb	2.089 ppb	83.929 %
Concentration RSD	16.1 %	5.6 %	10.5 %	7.0 %	15.2 %	181.6 %	14.3 %	6.4 %	6.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.049 ppb	0.372 ppb	39.702 ppb	0.404 ppb	81.093 %	0.186 ppb	0.533 ppb	85.286 %	0.158 ppb
Concentration per Run 1	1.050 ppb	0.274 ppb	39.471 ppb	0.381 ppb	80.816 %	0.177 ppb	0.590 ppb	84.696 %	0.141 ppb
Concentration per Run 2	1.077 ppb	0.240 ppb	40.315 ppb	0.507 ppb	82.117 %	0.202 ppb	0.475 ppb	87.923 %	0.182 ppb
Concentration per Run 3	1.020 ppb	0.601 ppb	39.319 ppb	0.325 ppb	80.345 %	0.179 ppb	0.533 ppb	83.240 %	0.151 ppb
Concentration RSD	2.8 %	53.6 %	1.4 %	23.0 %	1.1 %	7.4 %	10.8 %	2.8 %	13.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	3.103 ppb	90.140 %	90.295 %	0.044 ppb	0.187 ppb	84.716 %
Concentration per Run 1	3.078 ppb	90.913 %	90.863 %	0.030 ppb	0.209 ppb	87.243 %
Concentration per Run 2	2.792 ppb	91.181 %	92.918 %	0.041 ppb	0.167 ppb	85.047 %
Concentration per Run 3	3.440 ppb	88.325 %	87.103 %	0.062 ppb	0.184 ppb	81.858 %
Concentration RSD	10.5 %	1.8 %	3.3 %	36.6 %	11.5 %	3.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	73	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2416819-02d20 2008TL	Rack	1		
Analysis started at:	4/3/2024 3:33:09 PM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.050 %	76.178 %	-0.004 ppb	3,435,225.231 ppb	6,204.765 ppb	50.880 ppb	10,009.967 ppb	15,518.936 ppb	73.675 %
Concentration per Run 1	77.429 %	84.817 %	-0.010 ppb	3,171,065.729 ppb	5,824.622 ppb	41.993 ppb	8,998.311 ppb	15,990.076 ppb	72.522 %
Concentration per Run 2	77.257 %	71.466 %	0.002 ppb	3,697,999.297 ppb	6,543.643 ppb	58.772 ppb	10,995.764 ppb	16,351.782 ppb	74.884 %
Concentration per Run 3	79.463 %	72.251 %	-0.004 ppb	3,436,610.669 ppb	6,246.030 ppb	51.876 ppb	10,035.825 ppb	14,214.950 ppb	73.618 %
Concentration RSD	1.6 %	9.8 %	137.6 %	7.7 %	5.8 %	16.6 %	10.0 %	7.4 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.416 ppb	0.450 ppb	4.739 ppb	561.095 ppb	0.040 ppb	0.067 ppb	1.071 ppb	2.145 ppb	70.808 %
Concentration per Run 1	0.204 ppb	0.361 ppb	4.767 ppb	575.317 ppb	0.028 ppb	0.013 ppb	0.840 ppb	1.893 ppb	69.604 %
Concentration per Run 2	0.641 ppb	0.506 ppb	4.923 ppb	565.317 ppb	0.046 ppb	0.048 ppb	1.267 ppb	2.301 ppb	71.594 %
Concentration per Run 3	0.404 ppb	0.483 ppb	4.527 ppb	542.652 ppb	0.046 ppb	0.140 ppb	1.108 ppb	2.242 ppb	71.225 %
Concentration RSD	52.6 %	17.2 %	4.2 %	3.0 %	26.1 %	97.8 %	20.1 %	10.3 %	1.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	6.357 ppb	0.072 ppb	197.839 ppb	1.060 ppb	67.353 %	0.139 ppb	0.162 ppb	73.603 %	0.144 ppb
Concentration per Run 1	6.401 ppb	-0.140 ppb	199.259 ppb	0.979 ppb	66.400 %	0.133 ppb	0.182 ppb	70.901 %	0.161 ppb
Concentration per Run 2	6.286 ppb	0.034 ppb	203.580 ppb	1.060 ppb	68.350 %	0.124 ppb	0.180 ppb	76.142 %	0.130 ppb
Concentration per Run 3	6.385 ppb	0.323 ppb	190.679 ppb	1.140 ppb	67.308 %	0.159 ppb	0.126 ppb	73.766 %	0.139 ppb
Concentration RSD	1.0 %	322.5 %	3.3 %	7.6 %	1.4 %	13.1 %	19.5 %	3.6 %	11.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	6.165 ppb	75.993 %	76.493 %	0.041 ppb	0.377 ppb	67.312 %
Concentration per Run 1	6.390 ppb	74.341 %	74.618 %	0.026 ppb	0.378 ppb	67.816 %
Concentration per Run 2	6.268 ppb	77.648 %	77.511 %	0.034 ppb	0.372 ppb	68.053 %
Concentration per Run 3	5.837 ppb	75.989 %	77.350 %	0.063 ppb	0.381 ppb	66.068 %
Concentration RSD	4.7 %	2.2 %	2.1 %	47.3 %	1.2 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 74
Analysis label: L2416819-03d20 2008TL
Analysis started at: 4/3/2024 3:37:36 PM
User name ALPHALAB\a2-icpmsq2
Rack 1
Vial 17
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.936 %	90.314 %	0.000 ppb	860,426.432 ppb	17,799.827 ppb	9.857 ppb	11,182.338 ppb	9,437.849 ppb	88.987 %
Concentration per Run 1	93.537 %	98.953 %	0.001 ppb	797,993.417 ppb	16,369.609 ppb	10.576 ppb	10,649.481 ppb	10,296.670 ppb	88.434 %
Concentration per Run 2	94.822 %	82.461 %	-0.002 ppb	920,206.266 ppb	18,903.302 ppb	10.246 ppb	11,846.349 ppb	8,552.285 ppb	88.978 %
Concentration per Run 3	96.449 %	89.529 %	0.000 ppb	863,079.613 ppb	18,126.569 ppb	8.749 ppb	11,051.183 ppb	9,464.591 ppb	89.550 %
Concentration RSD	1.5 %	9.2 %	300.3 %	7.1 %	7.3 %	9.9 %	5.4 %	9.2 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.181 ppb	0.229 ppb	2.732 ppb	347.791 ppb	0.028 ppb	-0.122 ppb	0.265 ppb	1.713 ppb	83.549 %
Concentration per Run 1	0.134 ppb	0.316 ppb	2.725 ppb	348.562 ppb	0.032 ppb	-0.037 ppb	0.315 ppb	1.663 ppb	75.806 %
Concentration per Run 2	0.127 ppb	0.177 ppb	2.709 ppb	340.836 ppb	0.037 ppb	-0.152 ppb	0.112 ppb	1.805 ppb	89.140 %
Concentration per Run 3	0.282 ppb	0.195 ppb	2.762 ppb	353.974 ppb	0.015 ppb	-0.176 ppb	0.368 ppb	1.672 ppb	85.702 %
Concentration RSD	48.3 %	33.0 %	1.0 %	1.9 %	39.8 %	61.0 %	51.1 %	4.6 %	8.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.728 ppb	0.143 ppb	123.324 ppb	0.643 ppb	79.359 %	0.062 ppb	0.130 ppb	83.350 %	0.116 ppb
Concentration per Run 1	0.714 ppb	0.416 ppb	127.443 ppb	0.716 ppb	77.608 %	0.055 ppb	0.136 ppb	80.596 %	0.106 ppb
Concentration per Run 2	0.724 ppb	0.020 ppb	121.212 ppb	0.630 ppb	80.298 %	0.059 ppb	0.106 ppb	87.739 %	0.086 ppb
Concentration per Run 3	0.746 ppb	-0.005 ppb	121.318 ppb	0.582 ppb	80.170 %	0.070 ppb	0.148 ppb	81.713 %	0.155 ppb
Concentration RSD	2.2 %	164.8 %	2.9 %	10.5 %	1.9 %	12.3 %	16.8 %	4.6 %	30.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.694 ppb	88.100 %	88.698 %	0.026 ppb	0.112 ppb	82.757 %
Concentration per Run 1	1.637 ppb	87.556 %	86.960 %	0.013 ppb	0.117 ppb	82.718 %
Concentration per Run 2	1.621 ppb	90.283 %	91.674 %	0.028 ppb	0.114 ppb	85.362 %
Concentration per Run 3	1.824 ppb	86.460 %	87.459 %	0.037 ppb	0.103 ppb	80.190 %
Concentration RSD	6.7 %	2.2 %	2.9 %	45.7 %	6.8 %	3.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	75	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 3:56:54 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.863 %	106.806 %	55.851 ppb	6,575.856 ppb	6,178.763 ppb	59.150 ppb	6,503.791 ppb	5,882.024 ppb	108.107 %
Concentration per Run 1	103.233 %	117.016 %	56.028 ppb	5,864.285 ppb	5,599.729 ppb	52.429 ppb	5,415.353 ppb	5,440.134 ppb	108.918 %
Concentration per Run 2	105.293 %	99.738 %	55.524 ppb	6,956.559 ppb	6,427.183 ppb	59.114 ppb	6,887.855 ppb	6,014.689 ppb	108.610 %
Concentration per Run 3	106.061 %	103.665 %	56.003 ppb	6,906.724 ppb	6,509.377 ppb	65.906 ppb	7,208.165 ppb	6,191.250 ppb	106.792 %
Recovery Percentage 1			93.086 %	109.598 %	102.979 %	98.583 %	108.397 %	98.034 %	
Concentration RSD	1.4 %	8.5 %	0.5 %	9.4 %	8.1 %	11.4 %	14.7 %	6.7 %	1.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	64.033 ppb	65.353 ppb	64.792 ppb	6,222.319 ppb	61.481 ppb	63.336 ppb	62.970 ppb	61.497 ppb	86.174 %
Concentration per Run 1	59.581 ppb	61.697 ppb	60.299 ppb	6,054.682 ppb	59.219 ppb	63.840 ppb	61.750 ppb	60.227 ppb	83.178 %
Concentration per Run 2	65.800 ppb	68.467 ppb	66.333 ppb	6,440.380 ppb	63.899 ppb	63.849 ppb	66.341 ppb	64.212 ppb	83.785 %
Concentration per Run 3	66.717 ppb	65.896 ppb	67.744 ppb	6,171.894 ppb	61.327 ppb	62.318 ppb	60.820 ppb	60.053 ppb	91.559 %
Recovery Percentage 1	106.721 %	108.922 %	107.987 %	103.705 %	102.469 %	105.560 %	104.951 %	102.496 %	
Concentration RSD	6.1 %	5.2 %	6.1 %	3.2 %	3.8 %	1.4 %	4.7 %	3.8 %	5.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	62.390 ppb	62.981 ppb	65.099 ppb	58.872 ppb	87.839 %	57.511 ppb	56.064 ppb	91.606 %	56.651 ppb
Concentration per Run 1	61.404 ppb	62.713 ppb	64.586 ppb	56.696 ppb	87.693 %	57.311 ppb	54.829 ppb	90.169 %	56.379 ppb
Concentration per Run 2	61.312 ppb	61.055 ppb	66.879 ppb	62.295 ppb	88.893 %	58.054 ppb	57.475 ppb	92.844 %	57.248 ppb
Concentration per Run 3	64.452 ppb	65.174 ppb	63.833 ppb	57.626 ppb	86.931 %	57.167 ppb	55.888 ppb	91.806 %	56.325 ppb
Recovery Percentage 1	103.983 %	104.968 %	108.498 %	98.121 %		95.851 %	93.440 %		94.418 %
Concentration RSD	2.9 %	3.3 %	2.4 %	5.1 %	1.1 %	0.8 %	2.4 %	1.5 %	0.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.534 ppb	92.668 %	90.280 %	57.156 ppb	57.659 ppb	95.056 %
Concentration per Run 1	58.138 ppb	90.354 %	88.622 %	55.091 ppb	56.243 ppb	94.799 %
Concentration per Run 2	60.833 ppb	93.885 %	93.007 %	57.860 ppb	58.085 ppb	95.513 %
Concentration per Run 3	56.630 ppb	93.764 %	89.212 %	58.518 ppb	58.650 ppb	94.857 %
Recovery Percentage 1	97.556 %			95.261 %	96.099 %	
Concentration RSD	3.6 %	2.2 %	2.6 %	3.2 %	2.2 %	0.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	76	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 4:01:25 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.145 %	89.529 %	0.006 ppb	525.657 ppb	0.448 ppb	-0.234 ppb	66.981 ppb	24.053 ppb	91.214 %
Concentration per Run 1	98.437 %	87.958 %	0.013 ppb	554.197 ppb	-1.759 ppb	0.336 ppb	112.962 ppb	7.263 ppb	89.808 %
Concentration per Run 2	100.229 %	88.743 %	0.006 ppb	544.306 ppb	0.674 ppb	-0.045 ppb	63.905 ppb	40.190 ppb	91.490 %
Concentration per Run 3	101.770 %	91.885 %	-0.001 ppb	478.468 ppb	2.427 ppb	-0.994 ppb	24.077 ppb	24.705 ppb	92.343 %
Recovery Percentage 1			1.210 %	525.657 %	0.639 %	-2.341 %	66.981 %	24.053 %	
Concentration RSD	1.7 %	2.3 %	115.4 %	7.8 %	469.7 %	292.6 %	66.5 %	68.5 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.047 ppb	0.127 ppb	0.109 ppb	8.963 ppb	0.029 ppb	-0.055 ppb	0.073 ppb	0.023 ppb	88.803 %
Concentration per Run 1	0.127 ppb	0.122 ppb	0.199 ppb	11.423 ppb	0.066 ppb	-0.025 ppb	0.132 ppb	-0.016 ppb	86.257 %
Concentration per Run 2	0.044 ppb	0.119 ppb	0.046 ppb	10.848 ppb	0.001 ppb	-0.083 ppb	0.090 ppb	0.133 ppb	91.536 %
Concentration per Run 3	-0.030 ppb	0.140 ppb	0.083 ppb	4.617 ppb	0.022 ppb	-0.056 ppb	-0.004 ppb	-0.047 ppb	88.617 %
Recovery Percentage 1	0.942 %	12.708 %	10.924 %	17.926 %	5.896 %	-2.726 %	7.262 %	0.466 %	
Concentration RSD	166.6 %	8.8 %	73.0 %	42.1 %	113.2 %	52.8 %	95.9 %	414.2 %	3.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.268 ppb	0.122 ppb	0.011 ppb	0.186 ppb	90.671 %	0.054 ppb	0.013 ppb	94.813 %	0.019 ppb
Concentration per Run 1	0.288 ppb	0.286 ppb	0.005 ppb	0.212 ppb	89.703 %	0.047 ppb	0.038 ppb	96.302 %	0.016 ppb
Concentration per Run 2	0.128 ppb	-0.020 ppb	0.029 ppb	0.123 ppb	90.388 %	0.070 ppb	0.000 ppb	92.735 %	0.003 ppb
Concentration per Run 3	0.387 ppb	0.101 ppb	-0.001 ppb	0.223 ppb	91.922 %	0.045 ppb	0.000 ppb	95.402 %	0.039 ppb
Recovery Percentage 1	53.538 %	2.445 %	0.112 %	9.295 %		13.494 %	6.382 %		0.485 %
Concentration RSD	48.8 %	126.0 %	138.7 %	29.3 %	1.3 %	25.9 %	173.2 %	2.0 %	95.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.002 ppb	93.455 %	91.616 %	0.445 ppb	0.018 ppb	93.444 %
Concentration per Run 1	0.002 ppb	93.686 %	92.887 %	0.324 ppb	0.020 ppb	93.656 %
Concentration per Run 2	0.002 ppb	94.034 %	94.619 %	0.507 ppb	0.022 ppb	96.931 %
Concentration per Run 3	0.002 ppb	92.644 %	87.340 %	0.505 ppb	0.011 ppb	89.744 %
Recovery Percentage 1	0.441 %			44.523 %	1.751 %	
Concentration RSD	9.3 %	0.8 %	4.2 %	23.6 %	31.3 %	3.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	77	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903680-1 6020TL	Rack	1		
Analysis started at:	4/3/2024 4:27:24 PM	Vial	54		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.173 %	88.482 %	0.019 ppb	343.459 ppb	1.471 ppb	1.874 ppb	80.148 ppb	31.950 ppb	77.051 %
Concentration per Run 1	87.451 %	82.461 %	0.022 ppb	359.743 ppb	1.068 ppb	2.246 ppb	81.300 ppb	53.290 ppb	75.396 %
Concentration per Run 2	87.865 %	91.099 %	0.024 ppb	333.082 ppb	0.715 ppb	2.053 ppb	60.786 ppb	14.122 ppb	78.302 %
Concentration per Run 3	89.204 %	91.885 %	0.009 ppb	337.552 ppb	2.629 ppb	1.323 ppb	98.356 ppb	28.438 ppb	77.454 %
Concentration RSD	1.0 %	5.9 %	44.9 %	4.2 %	69.2 %	26.0 %	23.5 %	62.0 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.062 ppb	2.139 ppb	0.212 ppb	2.789 ppb	0.005 ppb	0.012 ppb	0.081 ppb	0.428 ppb	75.233 %
Concentration per Run 1	0.114 ppb	2.441 ppb	0.121 ppb	3.530 ppb	0.011 ppb	-0.077 ppb	0.128 ppb	0.535 ppb	70.429 %
Concentration per Run 2	0.013 ppb	2.105 ppb	0.248 ppb	0.911 ppb	0.001 ppb	0.090 ppb	0.053 ppb	0.308 ppb	80.526 %
Concentration per Run 3	0.058 ppb	1.871 ppb	0.265 ppb	3.925 ppb	0.002 ppb	0.024 ppb	0.060 ppb	0.440 ppb	74.744 %
Concentration RSD	82.2 %	13.4 %	37.3 %	58.7 %	117.0 %	685.0 %	51.6 %	26.6 %	6.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.565 ppb	0.033 ppb	0.030 ppb	-0.010 ppb	76.594 %	0.012 ppb	0.000 ppb	76.552 %	0.001 ppb
Concentration per Run 1	0.602 ppb	0.148 ppb	0.027 ppb	-0.010 ppb	74.111 %	0.009 ppb	0.000 ppb	73.977 %	0.010 ppb
Concentration per Run 2	0.523 ppb	-0.094 ppb	0.033 ppb	-0.010 ppb	78.419 %	0.008 ppb	0.000 ppb	77.787 %	-0.007 ppb
Concentration per Run 3	0.569 ppb	0.044 ppb	0.028 ppb	-0.010 ppb	77.253 %	0.018 ppb	0.000 ppb	77.893 %	0.000 ppb
Concentration RSD	7.1 %	369.2 %	11.0 %	0.0 %	2.9 %	46.7 %	N/A	2.9 %	832.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.027 ppb	78.311 %	76.345 %	0.042 ppb	0.007 ppb	77.131 %
Concentration per Run 1	0.038 ppb	75.608 %	74.020 %	0.029 ppb	0.011 ppb	75.963 %
Concentration per Run 2	0.064 ppb	80.374 %	77.912 %	0.049 ppb	0.001 ppb	77.070 %
Concentration per Run 3	-0.022 ppb	78.952 %	77.102 %	0.047 ppb	0.009 ppb	78.360 %
Concentration RSD	163.6 %	3.1 %	2.7 %	26.9 %	80.7 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	78	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	zWG1903680-2D10 6020TL	Rack	1		
Analysis started at:	4/3/2024 4:31:51 PM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.101 %	109.948 %	4.909 ppb	1,611.593 ppb	-75.729 ppb	202.610 ppb	1,292.181 ppb	1,393.836 ppb	103.956 %
Concentration per Run 1	110.614 %	124.084 %	4.917 ppb	1,812.130 ppb	-2,512.472 ppb	209.919 ppb	1,349.079 ppb	1,831.552 ppb	101.833 %
Concentration per Run 2	116.081 %	95.026 %	4.859 ppb	1,567.839 ppb	1,180.685 ppb	206.133 ppb	1,354.277 ppb	1,200.363 ppb	104.531 %
Concentration per Run 3	115.609 %	110.733 %	4.950 ppb	1,454.811 ppb	1,104.600 ppb	191.777 ppb	1,173.186 ppb	1,149.593 ppb	105.506 %
Concentration RSD	2.7 %	13.2 %	0.9 %	11.3 %	2,787.1 %	4.7 %	8.0 %	27.3 %	1.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	48.949 ppb	20.997 ppb	51.443 ppb	147.890 ppb	47.598 ppb	49.303 ppb	23.887 ppb	49.351 ppb	114.541 %
Concentration per Run 1	51.253 ppb	23.442 ppb	58.567 ppb	210.239 ppb	54.156 ppb	57.800 ppb	28.315 ppb	61.128 ppb	86.340 %
Concentration per Run 2	51.075 ppb	21.176 ppb	52.069 ppb	120.811 ppb	47.698 ppb	49.816 ppb	23.929 ppb	47.991 ppb	111.916 %
Concentration per Run 3	44.519 ppb	18.372 ppb	43.694 ppb	112.619 ppb	40.939 ppb	40.292 ppb	19.417 ppb	38.935 ppb	145.367 %
Concentration RSD	7.8 %	12.1 %	14.5 %	36.6 %	13.9 %	17.8 %	18.6 %	22.6 %	25.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.927 ppb	11.564 ppb	105.010 ppb	95.533 ppb	100.847 %	4.788 ppb	5.215 ppb	103.996 %	44.616 ppb
Concentration per Run 1	14.985 ppb	13.899 ppb	116.204 ppb	100.379 ppb	98.961 %	4.781 ppb	5.196 ppb	98.413 %	44.558 ppb
Concentration per Run 2	11.706 ppb	11.358 ppb	106.581 ppb	96.672 ppb	98.974 %	4.806 ppb	5.089 ppb	107.367 %	43.782 ppb
Concentration per Run 3	9.091 ppb	9.437 ppb	92.244 ppb	89.548 ppb	104.605 %	4.778 ppb	5.360 ppb	106.208 %	45.510 ppb
Concentration RSD	24.8 %	19.4 %	11.5 %	5.8 %	3.2 %	0.3 %	2.6 %	4.7 %	1.9 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	201.786 ppb	105.621 %	103.648 %	12.198 ppb	53.851 ppb	105.620 %
Concentration per Run 1	202.348 ppb	103.092 %	102.330 %	11.854 ppb	52.936 ppb	105.389 %
Concentration per Run 2	197.895 ppb	104.683 %	103.558 %	12.306 ppb	54.421 ppb	101.182 %
Concentration per Run 3	205.115 ppb	109.087 %	105.055 %	12.433 ppb	54.195 ppb	110.291 %
Concentration RSD	1.8 %	2.9 %	1.3 %	2.5 %	1.5 %	4.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	79	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903680-3d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 4:36:20 PM	Vial	57		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	110.927 %	111.257 %	4.923 ppb	2,150.624 ppb	1,274.945 ppb	199.855 ppb	1,558.874 ppb	1,929.328 ppb	101.454 %
Concentration per Run 1	109.749 %	109.162 %	4.980 ppb	2,139.515 ppb	1,254.778 ppb	197.762 ppb	1,548.232 ppb	1,823.055 ppb	100.602 %
Concentration per Run 2	111.643 %	118.586 %	4.756 ppb	2,055.337 ppb	1,237.501 ppb	193.030 ppb	1,514.554 ppb	2,043.779 ppb	103.318 %
Concentration per Run 3	111.390 %	106.021 %	5.034 ppb	2,257.019 ppb	1,332.555 ppb	208.774 ppb	1,613.835 ppb	1,921.151 ppb	100.444 %
Concentration RSD	0.9 %	5.9 %	3.0 %	4.7 %	4.0 %	4.0 %	3.2 %	5.7 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	48.950 ppb	20.955 ppb	65.136 ppb	206.002 ppb	49.077 ppb	49.892 ppb	25.723 ppb	57.884 ppb	111.028 %
Concentration per Run 1	47.521 ppb	20.185 ppb	61.800 ppb	198.662 ppb	46.989 ppb	47.167 ppb	24.701 ppb	56.475 ppb	115.707 %
Concentration per Run 2	49.034 ppb	21.388 ppb	64.707 ppb	184.224 ppb	49.642 ppb	49.638 ppb	26.687 ppb	57.580 ppb	107.889 %
Concentration per Run 3	50.295 ppb	21.291 ppb	68.902 ppb	235.119 ppb	50.599 ppb	52.871 ppb	25.781 ppb	59.598 ppb	109.487 %
Concentration RSD	2.8 %	3.2 %	5.5 %	12.7 %	3.8 %	5.7 %	3.9 %	2.7 %	3.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.773 ppb	12.522 ppb	110.268 ppb	94.207 ppb	101.268 %	4.968 ppb	5.328 ppb	100.660 %	47.660 ppb
Concentration per Run 1	11.607 ppb	12.390 ppb	109.567 ppb	95.743 ppb	100.918 %	5.125 ppb	5.517 ppb	102.548 %	46.681 ppb
Concentration per Run 2	12.182 ppb	13.821 ppb	107.259 ppb	91.383 ppb	100.295 %	4.859 ppb	5.187 ppb	97.491 %	47.615 ppb
Concentration per Run 3	11.531 ppb	11.355 ppb	113.977 ppb	95.494 ppb	102.590 %	4.919 ppb	5.280 ppb	101.940 %	48.684 ppb
Concentration RSD	3.0 %	9.9 %	3.1 %	2.6 %	1.2 %	2.8 %	3.2 %	2.7 %	2.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	207.318 ppb	104.534 %	103.450 %	12.301 ppb	54.411 ppb	107.171 %
Concentration per Run 1	203.826 ppb	105.724 %	105.887 %	12.026 ppb	53.605 ppb	109.020 %
Concentration per Run 2	206.036 ppb	102.452 %	100.601 %	12.632 ppb	55.391 ppb	104.637 %
Concentration per Run 3	212.091 ppb	105.426 %	103.862 %	12.245 ppb	54.238 ppb	107.856 %
Concentration RSD	2.1 %	1.7 %	2.6 %	2.5 %	1.7 %	2.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	80	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903680-5d10 6020TL	Rack	1		
Analysis started at:	4/3/2024 4:40:48 PM	Vial	59		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	110.226 %	110.471 %	46.982 ppb	6,059.730 ppb	5,257.770 ppb	50.019 ppb	6,027.195 ppb	6,469.129 ppb	104.950 %
Concentration per Run 1	108.958 %	118.586 %	47.062 ppb	5,700.109 ppb	5,062.606 ppb	47.520 ppb	5,575.388 ppb	6,236.524 ppb	100.998 %
Concentration per Run 2	110.856 %	108.377 %	46.381 ppb	6,105.113 ppb	5,259.301 ppb	47.146 ppb	5,988.918 ppb	6,406.327 ppb	107.461 %
Concentration per Run 3	110.864 %	104.450 %	47.503 ppb	6,373.968 ppb	5,451.404 ppb	55.389 ppb	6,517.279 ppb	6,764.536 ppb	106.391 %
Concentration RSD	1.0 %	6.6 %	1.2 %	5.6 %	3.7 %	9.3 %	7.8 %	4.2 %	3.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	47.996 ppb	48.831 ppb	61.688 ppb	4,718.958 ppb	46.760 ppb	46.447 ppb	47.419 ppb	53.095 ppb	111.099 %
Concentration per Run 1	45.771 ppb	46.134 ppb	59.025 ppb	4,615.101 ppb	45.415 ppb	44.038 ppb	47.132 ppb	51.445 ppb	114.314 %
Concentration per Run 2	47.754 ppb	49.375 ppb	59.704 ppb	4,713.102 ppb	46.332 ppb	46.647 ppb	47.041 ppb	52.186 ppb	112.173 %
Concentration per Run 3	50.464 ppb	50.986 ppb	66.335 ppb	4,828.672 ppb	48.531 ppb	48.655 ppb	48.084 ppb	55.654 ppb	106.810 %
Concentration RSD	4.9 %	5.1 %	6.5 %	2.3 %	3.4 %	5.0 %	1.2 %	4.2 %	3.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	45.549 ppb	49.004 ppb	61.182 ppb	46.812 ppb	98.342 %	3.989 ppb	48.809 ppb	100.332 %	49.720 ppb
Concentration per Run 1	44.490 ppb	48.180 ppb	60.336 ppb	44.363 ppb	96.747 %	3.857 ppb	48.974 ppb	101.519 %	49.025 ppb
Concentration per Run 2	45.821 ppb	52.655 ppb	61.491 ppb	48.032 ppb	98.389 %	4.101 ppb	48.404 ppb	101.122 %	49.555 ppb
Concentration per Run 3	46.337 ppb	46.176 ppb	61.718 ppb	48.040 ppb	99.889 %	4.008 ppb	49.050 ppb	98.354 %	50.581 ppb
Concentration RSD	2.1 %	6.8 %	1.2 %	4.5 %	1.6 %	3.1 %	0.7 %	1.7 %	1.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	54.957 ppb	104.940 %	103.304 %	48.014 ppb	50.176 ppb	105.496 %
Concentration per Run 1	56.749 ppb	105.148 %	104.060 %	46.759 ppb	49.462 ppb	108.475 %
Concentration per Run 2	55.354 ppb	105.307 %	102.206 %	49.172 ppb	51.726 ppb	101.867 %
Concentration per Run 3	52.769 ppb	104.366 %	103.647 %	48.110 ppb	49.340 ppb	106.145 %
Concentration RSD	3.7 %	0.5 %	0.9 %	2.5 %	2.7 %	3.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	81	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903680-4 6020TL	Rack	1		
Analysis started at:	4/3/2024 4:45:17 PM	Vial	58		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	111.051 %	116.492 %	0.021 ppb	7,073.013 ppb	2,086.055 ppb	26.178 ppb	2,730.268 ppb	8,064.563 ppb	99.712 %
Concentration per Run 1	108.099 %	117.016 %	0.027 ppb	7,211.441 ppb	2,124.847 ppb	26.833 ppb	2,523.277 ppb	7,843.163 ppb	97.000 %
Concentration per Run 2	111.874 %	106.806 %	0.023 ppb	7,442.973 ppb	2,220.560 ppb	27.128 ppb	3,058.794 ppb	8,563.641 ppb	102.202 %
Concentration per Run 3	113.180 %	125.655 %	0.013 ppb	6,564.624 ppb	1,912.757 ppb	24.572 ppb	2,608.731 ppb	7,786.885 ppb	99.933 %
Concentration RSD	2.4 %	8.1 %	33.9 %	6.4 %	7.6 %	5.3 %	10.5 %	5.4 %	2.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.498 ppb	4.064 ppb	137.305 ppb	1,169.895 ppb	0.619 ppb	7.464 ppb	11.591 ppb	89.851 ppb	98.698 %
Concentration per Run 1	0.640 ppb	4.007 ppb	139.597 ppb	1,204.042 ppb	0.693 ppb	7.540 ppb	11.759 ppb	89.756 ppb	99.020 %
Concentration per Run 2	0.269 ppb	4.217 ppb	142.790 ppb	1,170.550 ppb	0.624 ppb	7.593 ppb	11.645 ppb	92.089 ppb	97.279 %
Concentration per Run 3	0.586 ppb	3.967 ppb	129.527 ppb	1,135.094 ppb	0.540 ppb	7.259 ppb	11.368 ppb	87.709 ppb	99.794 %
Concentration RSD	40.3 %	3.3 %	5.0 %	2.9 %	12.4 %	2.4 %	1.7 %	2.4 %	1.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.811 ppb	0.229 ppb	91.367 ppb	1.205 ppb	98.690 %	0.014 ppb	0.250 ppb	99.195 %	0.757 ppb
Concentration per Run 1	0.911 ppb	0.208 ppb	92.887 ppb	1.055 ppb	97.641 %	0.008 ppb	0.215 ppb	98.016 %	0.727 ppb
Concentration per Run 2	0.753 ppb	0.080 ppb	90.541 ppb	1.269 ppb	100.126 %	0.019 ppb	0.277 ppb	99.552 %	0.792 ppb
Concentration per Run 3	0.768 ppb	0.398 ppb	90.672 ppb	1.292 ppb	98.304 %	0.016 ppb	0.260 ppb	100.016 %	0.752 ppb
Concentration RSD	10.7 %	70.0 %	1.4 %	10.9 %	1.3 %	38.9 %	12.8 %	1.1 %	4.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.840 ppb	104.196 %	102.942 %	0.446 ppb	2.895 ppb	101.599 %
Concentration per Run 1	61.408 ppb	101.331 %	102.840 %	0.363 ppb	2.820 ppb	105.076 %
Concentration per Run 2	63.434 ppb	104.856 %	101.763 %	0.555 ppb	2.910 ppb	101.768 %
Concentration per Run 3	60.678 ppb	106.403 %	104.222 %	0.421 ppb	2.955 ppb	97.954 %
Concentration RSD	2.3 %	2.5 %	1.2 %	22.0 %	2.4 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	82	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417531-01 6020TL	Rack	1		
Analysis started at:	4/3/2024 4:49:46 PM	Vial	56		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.868 %	112.042 %	0.011 ppb	7,171.129 ppb	2,097.831 ppb	28.480 ppb	2,589.839 ppb	7,408.807 ppb	103.348 %
Concentration per Run 1	113.658 %	113.874 %	0.011 ppb	6,750.336 ppb	1,970.676 ppb	24.865 ppb	2,399.870 ppb	6,104.799 ppb	100.635 %
Concentration per Run 2	116.878 %	111.518 %	0.008 ppb	7,070.980 ppb	2,122.317 ppb	27.894 ppb	2,601.236 ppb	7,618.162 ppb	105.689 %
Concentration per Run 3	114.068 %	110.733 %	0.013 ppb	7,692.070 ppb	2,200.499 ppb	32.679 ppb	2,768.412 ppb	8,503.460 ppb	103.719 %
Concentration RSD	1.5 %	1.5 %	21.4 %	6.7 %	5.6 %	13.8 %	7.1 %	16.4 %	2.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.647 ppb	3.870 ppb	131.718 ppb	1,073.830 ppb	0.505 ppb	6.831 ppb	10.277 ppb	79.467 ppb	113.217 %
Concentration per Run 1	0.550 ppb	3.255 ppb	117.651 ppb	974.412 ppb	0.459 ppb	6.849 ppb	9.378 ppb	68.959 ppb	131.857 %
Concentration per Run 2	0.646 ppb	4.153 ppb	136.723 ppb	1,108.878 ppb	0.514 ppb	6.651 ppb	10.906 ppb	80.473 ppb	107.580 %
Concentration per Run 3	0.746 ppb	4.202 ppb	140.780 ppb	1,138.201 ppb	0.543 ppb	6.991 ppb	10.548 ppb	88.968 ppb	100.214 %
Concentration RSD	15.1 %	13.8 %	9.4 %	8.1 %	8.5 %	2.5 %	7.8 %	12.6 %	14.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.539 ppb	0.078 ppb	83.191 ppb	0.929 ppb	102.822 %	0.008 ppb	0.284 ppb	100.676 %	0.611 ppb
Concentration per Run 1	0.538 ppb	0.052 ppb	77.771 ppb	0.757 ppb	99.562 %	0.006 ppb	0.274 ppb	98.205 %	0.546 ppb
Concentration per Run 2	0.637 ppb	0.191 ppb	83.486 ppb	0.850 ppb	104.796 %	0.011 ppb	0.294 ppb	100.803 %	0.669 ppb
Concentration per Run 3	0.443 ppb	-0.011 ppb	88.318 ppb	1.179 ppb	104.110 %	0.008 ppb	0.285 ppb	103.020 %	0.618 ppb
Concentration RSD	18.0 %	133.4 %	6.3 %	23.9 %	2.8 %	31.0 %	3.5 %	2.4 %	10.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.926 ppb	106.508 %	106.999 %	0.143 ppb	2.852 ppb	102.850 %
Concentration per Run 1	63.766 ppb	104.079 %	107.605 %	0.103 ppb	2.820 ppb	103.070 %
Concentration per Run 2	63.181 ppb	105.988 %	105.775 %	0.163 ppb	2.880 ppb	100.036 %
Concentration per Run 3	61.830 ppb	109.455 %	107.618 %	0.164 ppb	2.858 ppb	105.444 %
Concentration RSD	1.6 %	2.6 %	1.0 %	24.2 %	1.1 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	83	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417531-02 6020TL	Rack	2		
Analysis started at:	4/3/2024 4:54:14 PM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	116.660 %	102.356 %	0.009 ppb	7,284.915 ppb	2,354.273 ppb	15.816 ppb	2,599.110 ppb	8,427.658 ppb	104.435 %
Concentration per Run 1	117.360 %	113.089 %	0.021 ppb	6,509.310 ppb	2,083.489 ppb	13.801 ppb	2,406.159 ppb	7,654.561 ppb	103.633 %
Concentration per Run 2	117.411 %	96.597 %	0.001 ppb	7,530.008 ppb	2,465.733 ppb	18.678 ppb	2,635.836 ppb	8,950.215 ppb	104.569 %
Concentration per Run 3	115.209 %	97.382 %	0.005 ppb	7,815.428 ppb	2,513.598 ppb	14.970 ppb	2,755.334 ppb	8,678.197 ppb	105.103 %
Concentration RSD	1.1 %	9.1 %	123.5 %	9.4 %	10.0 %	16.1 %	6.8 %	8.1 %	0.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.352 ppb	2.352 ppb	6.811 ppb	576.955 ppb	0.075 ppb	2.449 ppb	4.948 ppb	5.170 ppb	103.378 %
Concentration per Run 1	0.240 ppb	2.195 ppb	6.373 ppb	562.464 ppb	0.080 ppb	2.268 ppb	4.861 ppb	4.709 ppb	108.203 %
Concentration per Run 2	0.512 ppb	2.562 ppb	6.437 ppb	588.918 ppb	0.076 ppb	2.752 ppb	5.248 ppb	5.852 ppb	100.282 %
Concentration per Run 3	0.303 ppb	2.299 ppb	7.624 ppb	579.482 ppb	0.068 ppb	2.326 ppb	4.735 ppb	4.950 ppb	101.648 %
Concentration RSD	40.5 %	8.0 %	10.3 %	2.3 %	7.7 %	10.8 %	5.4 %	11.7 %	4.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.374 ppb	0.036 ppb	99.802 ppb	0.147 ppb	102.763 %	0.005 ppb	0.014 ppb	104.633 %	0.435 ppb
Concentration per Run 1	0.225 ppb	-0.004 ppb	97.536 ppb	0.135 ppb	102.658 %	0.004 ppb	0.012 ppb	104.641 %	0.404 ppb
Concentration per Run 2	0.683 ppb	0.105 ppb	101.234 ppb	0.211 ppb	103.284 %	0.001 ppb	0.023 ppb	102.786 %	0.462 ppb
Concentration per Run 3	0.215 ppb	0.006 ppb	100.634 ppb	0.094 ppb	102.346 %	0.009 ppb	0.006 ppb	106.471 %	0.441 ppb
Concentration RSD	71.5 %	168.4 %	2.0 %	40.7 %	0.5 %	95.0 %	66.3 %	1.8 %	6.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.741 ppb	109.691 %	107.805 %	0.073 ppb	1.027 ppb	109.847 %
Concentration per Run 1	1.570 ppb	110.159 %	108.898 %	0.045 ppb	1.017 ppb	111.639 %
Concentration per Run 2	1.701 ppb	108.701 %	106.414 %	0.092 ppb	1.010 ppb	108.835 %
Concentration per Run 3	1.951 ppb	110.214 %	108.103 %	0.082 ppb	1.053 ppb	109.068 %
Concentration RSD	11.1 %	0.8 %	1.2 %	34.0 %	2.2 %	1.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	84	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417531-03 6020TL	Rack	2		
Analysis started at:	4/3/2024 4:58:42 PM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	113.258 %	114.922 %	0.012 ppb	6,544.577 ppb	2,371.051 ppb	8.051 ppb	2,637.880 ppb	7,392.505 ppb	103.515 %
Concentration per Run 1	111.034 %	114.660 %	0.008 ppb	6,803.824 ppb	2,453.585 ppb	8.904 ppb	2,723.317 ppb	6,994.830 ppb	102.949 %
Concentration per Run 2	113.307 %	113.089 %	0.019 ppb	6,766.179 ppb	2,471.746 ppb	8.918 ppb	2,565.882 ppb	7,743.344 ppb	105.256 %
Concentration per Run 3	115.431 %	117.016 %	0.009 ppb	6,063.728 ppb	2,187.823 ppb	6.329 ppb	2,624.441 ppb	7,439.341 ppb	102.341 %
Concentration RSD	1.9 %	1.7 %	53.1 %	6.4 %	6.7 %	18.5 %	3.0 %	5.1 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.343 ppb	1.948 ppb	1.641 ppb	424.884 ppb	0.067 ppb	0.991 ppb	3.002 ppb	1.743 ppb	103.373 %
Concentration per Run 1	0.241 ppb	1.811 ppb	1.975 ppb	421.694 ppb	0.040 ppb	0.899 ppb	2.817 ppb	1.848 ppb	106.807 %
Concentration per Run 2	0.507 ppb	1.902 ppb	1.416 ppb	444.959 ppb	0.102 ppb	1.068 ppb	2.977 ppb	1.690 ppb	102.170 %
Concentration per Run 3	0.281 ppb	2.130 ppb	1.531 ppb	407.998 ppb	0.060 ppb	1.005 ppb	3.213 ppb	1.690 ppb	101.143 %
Concentration RSD	41.8 %	8.4 %	18.0 %	4.4 %	47.0 %	8.6 %	6.6 %	5.2 %	2.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.361 ppb	-0.006 ppb	18.085 ppb	0.069 ppb	101.283 %	0.002 ppb	0.016 ppb	103.535 %	0.245 ppb
Concentration per Run 1	0.316 ppb	0.079 ppb	18.222 ppb	0.063 ppb	102.086 %	0.002 ppb	0.023 ppb	106.183 %	0.211 ppb
Concentration per Run 2	0.266 ppb	0.012 ppb	18.253 ppb	0.050 ppb	100.159 %	-0.001 ppb	0.018 ppb	102.625 %	0.275 ppb
Concentration per Run 3	0.501 ppb	-0.109 ppb	17.780 ppb	0.094 ppb	101.605 %	0.006 ppb	0.006 ppb	101.796 %	0.249 ppb
Concentration RSD	34.3 %	1,569.5 %	1.5 %	32.9 %	1.0 %	153.0 %	56.2 %	2.3 %	13.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.578 ppb	106.414 %	107.140 %	0.041 ppb	0.685 ppb	107.669 %
Concentration per Run 1	0.629 ppb	108.163 %	112.208 %	0.011 ppb	0.654 ppb	113.368 %
Concentration per Run 2	0.581 ppb	106.420 %	105.870 %	0.054 ppb	0.719 ppb	104.220 %
Concentration per Run 3	0.523 ppb	104.658 %	103.341 %	0.060 ppb	0.681 ppb	105.417 %
Concentration RSD	9.2 %	1.6 %	4.3 %	64.8 %	4.8 %	4.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	85	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903680-6d5 6020TL	Rack	1		
Analysis started at:	4/3/2024 5:03:10 PM	Vial	60		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	115.783 %	103.403 %	0.003 ppb	1,744.108 ppb	426.255 ppb	6.260 ppb	549.154 ppb	1,479.174 ppb	101.832 %
Concentration per Run 1	114.970 %	95.026 %	0.001 ppb	1,896.849 ppb	468.738 ppb	5.752 ppb	606.832 ppb	1,584.159 ppb	99.605 %
Concentration per Run 2	115.173 %	110.733 %	-0.001 ppb	1,623.766 ppb	413.211 ppb	5.608 ppb	523.234 ppb	1,474.644 ppb	103.304 %
Concentration per Run 3	117.205 %	104.450 %	0.008 ppb	1,711.709 ppb	396.816 ppb	7.419 ppb	517.395 ppb	1,378.720 ppb	102.585 %
Concentration RSD	1.1 %	7.6 %	175.4 %	8.0 %	8.8 %	16.1 %	9.1 %	6.9 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.344 ppb	0.866 ppb	26.268 ppb	212.061 ppb	0.091 ppb	1.337 ppb	2.036 ppb	16.549 ppb	107.654 %
Concentration per Run 1	0.262 ppb	0.863 ppb	27.939 ppb	232.653 ppb	0.072 ppb	1.284 ppb	1.974 ppb	17.341 ppb	106.168 %
Concentration per Run 2	0.395 ppb	0.913 ppb	24.609 ppb	182.997 ppb	0.103 ppb	1.408 ppb	2.169 ppb	16.024 ppb	108.996 %
Concentration per Run 3	0.376 ppb	0.823 ppb	26.255 ppb	220.533 ppb	0.099 ppb	1.320 ppb	1.964 ppb	16.280 ppb	107.798 %
Concentration RSD	20.8 %	5.2 %	6.3 %	12.2 %	18.2 %	4.8 %	5.7 %	4.2 %	1.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.214 ppb	-0.038 ppb	16.424 ppb	0.139 ppb	104.120 %	0.001 ppb	0.050 ppb	105.211 %	0.139 ppb
Concentration per Run 1	0.257 ppb	-0.096 ppb	17.217 ppb	0.117 ppb	107.577 %	-0.001 ppb	0.038 ppb	113.142 %	0.124 ppb
Concentration per Run 2	0.260 ppb	-0.101 ppb	15.981 ppb	0.092 ppb	101.754 %	0.001 ppb	0.042 ppb	99.776 %	0.147 ppb
Concentration per Run 3	0.125 ppb	0.083 ppb	16.074 ppb	0.207 ppb	103.027 %	0.002 ppb	0.070 ppb	102.715 %	0.145 ppb
Concentration RSD	36.0 %	274.6 %	4.2 %	43.7 %	2.9 %	315.7 %	35.3 %	6.7 %	9.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	11.558 ppb	107.821 %	107.030 %	0.035 ppb	0.513 ppb	110.822 %
Concentration per Run 1	11.992 ppb	112.689 %	112.147 %	0.009 ppb	0.506 ppb	116.503 %
Concentration per Run 2	12.130 ppb	104.970 %	101.722 %	0.051 ppb	0.524 ppb	107.579 %
Concentration per Run 3	10.551 ppb	105.805 %	107.223 %	0.044 ppb	0.510 ppb	108.385 %
Concentration RSD	7.6 %	3.9 %	4.9 %	65.9 %	1.8 %	4.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	86	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1903680-2D10 6020TL	Rack	1		
Analysis started at:	4/3/2024 5:12:38 PM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.504 %	110.733 %	4.777 ppb	1,429.858 ppb	1,131.928 ppb	204.029 ppb	1,333.174 ppb	1,707.339 ppb	106.798 %
Concentration per Run 1	111.384 %	100.524 %	4.756 ppb	1,511.808 ppb	1,196.434 ppb	210.531 ppb	1,369.364 ppb	1,739.417 ppb	106.372 %
Concentration per Run 2	116.323 %	110.733 %	4.780 ppb	1,477.892 ppb	1,155.476 ppb	210.220 ppb	1,340.304 ppb	1,578.659 ppb	108.010 %
Concentration per Run 3	115.804 %	120.942 %	4.795 ppb	1,299.876 ppb	1,043.874 ppb	191.337 ppb	1,289.854 ppb	1,803.939 ppb	106.012 %
Concentration RSD	2.4 %	9.2 %	0.4 %	8.0 %	7.0 %	5.4 %	3.0 %	6.8 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	53.043 ppb	22.384 ppb	55.403 ppb	108.453 ppb	52.031 ppb	53.829 ppb	26.996 ppb	51.621 ppb	100.391 %
Concentration per Run 1	53.121 ppb	22.194 ppb	56.308 ppb	115.488 ppb	54.021 ppb	55.524 ppb	27.870 ppb	52.046 ppb	97.739 %
Concentration per Run 2	51.838 ppb	22.085 ppb	56.033 ppb	104.360 ppb	51.571 ppb	55.536 ppb	27.043 ppb	51.632 ppb	103.098 %
Concentration per Run 3	54.170 ppb	22.874 ppb	53.867 ppb	105.510 ppb	50.501 ppb	50.429 ppb	26.075 ppb	51.186 ppb	100.337 %
Concentration RSD	2.2 %	1.9 %	2.4 %	5.6 %	3.5 %	5.5 %	3.3 %	0.8 %	2.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.414 ppb	11.834 ppb	108.221 ppb	95.456 ppb	100.817 %	4.709 ppb	4.920 ppb	108.494 %	42.219 ppb
Concentration per Run 1	13.184 ppb	11.172 ppb	105.119 ppb	96.552 ppb	104.338 %	4.619 ppb	4.470 ppb	114.927 %	38.562 ppb
Concentration per Run 2	13.133 ppb	12.817 ppb	111.393 ppb	95.847 ppb	98.327 %	4.643 ppb	5.322 ppb	107.604 %	43.329 ppb
Concentration per Run 3	13.926 ppb	11.512 ppb	108.152 ppb	93.970 ppb	99.787 %	4.863 ppb	4.969 ppb	102.951 %	44.764 ppb
Concentration RSD	3.3 %	7.3 %	2.9 %	1.4 %	3.1 %	2.9 %	8.7 %	5.6 %	7.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	193.476 ppb	106.453 %	104.707 %	10.917 ppb	47.740 ppb	122.948 %
Concentration per Run 1	177.282 ppb	110.481 %	109.246 %	9.146 ppb	39.311 ppb	147.897 %
Concentration per Run 2	198.755 ppb	105.525 %	104.231 %	11.583 ppb	51.625 ppb	112.579 %
Concentration per Run 3	204.390 ppb	103.354 %	100.643 %	12.022 ppb	52.284 ppb	108.370 %
Concentration RSD	7.4 %	3.4 %	4.1 %	14.2 %	15.3 %	17.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	87	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 5:17:05 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	110.979 %	107.592 %	55.668 ppb	6,313.514 ppb	6,299.493 ppb	62.356 ppb	8,535.821 ppb	6,442.667 ppb	100.786 %
Concentration per Run 1	109.117 %	103.665 %	55.469 ppb	6,405.558 ppb	6,359.549 ppb	62.026 ppb	8,683.182 ppb	6,534.576 ppb	100.735 %
Concentration per Run 2	111.227 %	104.450 %	55.321 ppb	6,654.794 ppb	6,619.224 ppb	65.679 ppb	8,430.315 ppb	6,554.108 ppb	100.717 %
Concentration per Run 3	112.592 %	114.660 %	56.214 ppb	5,880.189 ppb	5,919.705 ppb	59.363 ppb	8,493.967 ppb	6,239.318 ppb	100.905 %
Recovery Percentage 1			92.780 %	105.225 %	104.992 %	103.926 %	142.264 %	107.378 %	
Concentration RSD	1.6 %	5.7 %	0.9 %	6.3 %	5.6 %	5.1 %	1.5 %	2.7 %	0.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	59.280 ppb	59.343 ppb	58.091 ppb	6,583.821 ppb	64.890 ppb	64.226 ppb	63.089 ppb	62.754 ppb	92.952 %
Concentration per Run 1	57.571 ppb	59.881 ppb	57.908 ppb	6,475.450 ppb	66.896 ppb	64.508 ppb	65.203 ppb	64.599 ppb	89.353 %
Concentration per Run 2	62.335 ppb	63.234 ppb	60.429 ppb	6,768.127 ppb	63.530 ppb	64.207 ppb	60.817 ppb	62.497 ppb	97.762 %
Concentration per Run 3	57.934 ppb	54.914 ppb	55.938 ppb	6,507.885 ppb	64.246 ppb	63.965 ppb	63.246 ppb	61.166 ppb	91.741 %
Recovery Percentage 1	98.800 %	98.905 %	96.819 %	109.730 %	108.151 %	107.044 %	105.148 %	104.590 %	
Concentration RSD	4.5 %	7.1 %	3.9 %	2.4 %	2.7 %	0.4 %	3.5 %	2.8 %	4.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	62.189 ppb	63.365 ppb	62.692 ppb	62.233 ppb	98.446 %	60.790 ppb	61.274 ppb	98.529 %	61.309 ppb
Concentration per Run 1	63.983 ppb	62.546 ppb	62.894 ppb	62.814 ppb	94.302 %	63.072 ppb	63.428 ppb	91.458 %	64.179 ppb
Concentration per Run 2	62.871 ppb	66.076 ppb	65.073 ppb	62.091 ppb	100.345 %	59.007 ppb	60.096 ppb	104.419 %	60.862 ppb
Concentration per Run 3	59.713 ppb	61.475 ppb	60.109 ppb	61.795 ppb	100.691 %	60.291 ppb	60.297 ppb	99.709 %	58.885 ppb
Recovery Percentage 1	103.649 %	105.609 %	104.487 %	103.722 %		101.316 %	102.123 %		102.181 %
Concentration RSD	3.6 %	3.8 %	4.0 %	0.8 %	3.6 %	3.4 %	3.0 %	6.7 %	4.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.350 ppb	101.348 %	101.653 %	63.506 ppb	64.373 ppb	100.021 %
Concentration per Run 1	64.442 ppb	97.532 %	96.358 %	63.372 ppb	64.338 ppb	99.196 %
Concentration per Run 2	58.927 ppb	105.075 %	106.067 %	62.584 ppb	64.267 ppb	101.824 %
Concentration per Run 3	57.681 ppb	101.437 %	102.534 %	64.563 ppb	64.513 ppb	99.044 %
Recovery Percentage 1	100.583 %			105.844 %	107.288 %	
Concentration RSD	6.0 %	3.7 %	4.8 %	1.6 %	0.2 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	88	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 5:21:36 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	111.143 %	101.047 %	0.008 ppb	103.436 ppb	-0.171 ppb	-0.167 ppb	35.039 ppb	22.693 ppb	94.249 %
Concentration per Run 1	109.954 %	92.670 %	0.006 ppb	110.568 ppb	0.553 ppb	-0.566 ppb	32.842 ppb	11.262 ppb	91.970 %
Concentration per Run 2	111.448 %	98.168 %	0.023 ppb	112.697 ppb	-0.156 ppb	0.145 ppb	39.257 ppb	-3.752 ppb	94.750 %
Concentration per Run 3	112.027 %	112.304 %	-0.004 ppb	87.043 ppb	-0.910 ppb	-0.081 ppb	33.017 ppb	60.568 ppb	96.026 %
Recovery Percentage 1			1.668 %	103.436 %	-0.245 %	-1.671 %	35.039 %	22.693 %	
Concentration RSD	1.0 %	10.0 %	168.5 %	13.8 %	427.0 %	217.6 %	10.4 %	148.3 %	2.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.143 ppb	0.085 ppb	0.029 ppb	4.752 ppb	0.008 ppb	-0.107 ppb	0.000 ppb	0.019 ppb	104.934 %
Concentration per Run 1	0.144 ppb	0.099 ppb	-0.055 ppb	4.420 ppb	0.012 ppb	-0.108 ppb	-0.037 ppb	0.090 ppb	106.283 %
Concentration per Run 2	0.264 ppb	0.054 ppb	0.067 ppb	6.688 ppb	0.000 ppb	-0.118 ppb	0.046 ppb	-0.021 ppb	103.820 %
Concentration per Run 3	0.021 ppb	0.102 ppb	0.074 ppb	3.148 ppb	0.011 ppb	-0.093 ppb	-0.009 ppb	-0.011 ppb	104.700 %
Recovery Percentage 1	2.866 %	8.478 %	2.863 %	9.505 %	1.545 %	-5.326 %	0.036 %	0.389 %	
Concentration RSD	84.7 %	31.8 %	252.8 %	37.7 %	88.4 %	11.8 %	11,821.4 %	316.4 %	1.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.282 ppb	0.108 ppb	0.008 ppb	0.187 ppb	97.738 %	0.029 ppb	0.002 ppb	98.715 %	0.257 ppb
Concentration per Run 1	0.284 ppb	0.123 ppb	0.007 ppb	0.146 ppb	93.101 %	0.038 ppb	0.000 ppb	95.192 %	0.235 ppb
Concentration per Run 2	0.105 ppb	0.206 ppb	0.008 ppb	0.182 ppb	101.556 %	0.026 ppb	0.006 ppb	102.609 %	0.294 ppb
Concentration per Run 3	0.459 ppb	-0.004 ppb	0.011 ppb	0.231 ppb	98.558 %	0.021 ppb	0.000 ppb	98.343 %	0.242 ppb
Recovery Percentage 1	56.497 %	2.166 %	0.085 %	9.337 %		7.151 %	0.979 %		6.429 %
Concentration RSD	62.6 %	97.8 %	22.5 %	22.9 %	4.4 %	30.6 %	173.2 %	3.8 %	12.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.008 ppb	100.319 %	99.240 %	0.442 ppb	0.011 ppb	100.438 %
Concentration per Run 1	0.002 ppb	95.006 %	94.286 %	0.351 ppb	0.009 ppb	98.174 %
Concentration per Run 2	0.043 ppb	104.706 %	103.219 %	0.552 ppb	0.013 ppb	99.218 %
Concentration per Run 3	-0.022 ppb	101.244 %	100.216 %	0.422 ppb	0.012 ppb	103.922 %
Recovery Percentage 1	1.579 %			44.163 %	1.131 %	
Concentration RSD	417.5 %	4.9 %	4.6 %	23.1 %	20.2 %	3.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 89
Analysis label: WG1904117-1 6020TL
Analysis started at: 4/3/2024 5:30:25 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 3
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	111.880 %	117.539 %	0.010 ppb	86.701 ppb	1.904 ppb	0.847 ppb	44.720 ppb	-3.496 ppb	91.578 %
Concentration per Run 1	109.713 %	120.157 %	0.000 ppb	75.401 ppb	1.973 ppb	1.038 ppb	14.982 ppb	-24.704 ppb	91.168 %
Concentration per Run 2	111.727 %	108.377 %	0.014 ppb	97.102 ppb	3.307 ppb	0.219 ppb	53.715 ppb	17.274 ppb	92.089 %
Concentration per Run 3	114.199 %	124.084 %	0.017 ppb	87.600 ppb	0.432 ppb	1.285 ppb	65.463 ppb	-3.056 ppb	91.476 %
Concentration RSD	2.0 %	7.0 %	88.3 %	12.5 %	75.6 %	65.9 %	59.1 %	600.5 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	-0.002 ppb	1.000 ppb	0.259 ppb	4.483 ppb	0.004 ppb	1.074 ppb	1.455 ppb	0.174 ppb	95.968 %
Concentration per Run 1	-0.002 ppb	0.977 ppb	0.063 ppb	2.282 ppb	0.013 ppb	0.875 ppb	1.326 ppb	0.214 ppb	93.388 %
Concentration per Run 2	-0.001 ppb	0.925 ppb	0.470 ppb	4.520 ppb	0.000 ppb	0.986 ppb	1.663 ppb	0.157 ppb	98.632 %
Concentration per Run 3	-0.004 ppb	1.097 ppb	0.243 ppb	6.648 ppb	0.000 ppb	1.360 ppb	1.377 ppb	0.151 ppb	95.883 %
Concentration RSD	55.2 %	8.8 %	78.8 %	48.7 %	177.0 %	23.6 %	12.5 %	20.2 %	2.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.177 ppb	0.105 ppb	0.017 ppb	0.052 ppb	97.689 %	0.006 ppb	0.000 ppb	96.441 %	0.092 ppb
Concentration per Run 1	0.242 ppb	0.119 ppb	0.015 ppb	0.038 ppb	94.509 %	0.011 ppb	0.000 ppb	92.801 %	0.076 ppb
Concentration per Run 2	0.136 ppb	0.197 ppb	0.022 ppb	0.005 ppb	98.829 %	0.003 ppb	0.000 ppb	96.658 %	0.114 ppb
Concentration per Run 3	0.153 ppb	-0.002 ppb	0.014 ppb	0.113 ppb	99.731 %	0.004 ppb	0.000 ppb	99.865 %	0.085 ppb
Concentration RSD	31.9 %	95.4 %	26.1 %	105.6 %	2.9 %	72.7 %	N/A	3.7 %	21.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.022 ppb	98.527 %	97.904 %	0.072 ppb	0.005 ppb	97.732 %
Concentration per Run 1	-0.022 ppb	96.350 %	95.212 %	0.041 ppb	0.008 ppb	97.664 %
Concentration per Run 2	-0.022 ppb	100.255 %	97.247 %	0.086 ppb	0.001 ppb	97.002 %
Concentration per Run 3	-0.022 ppb	98.974 %	101.255 %	0.091 ppb	0.005 ppb	98.531 %
Concentration RSD	0.0 %	2.0 %	3.1 %	38.2 %	67.4 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	90	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904117-2d10 6020TL	Rack	2		
Analysis started at:	4/3/2024 5:34:53 PM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.942 %	99.215 %	4.883 ppb	1,398.168 ppb	1,156.211 ppb	211.056 ppb	1,371.647 ppb	1,432.407 ppb	89.795 %
Concentration per Run 1	102.179 %	104.450 %	4.936 ppb	1,313.503 ppb	1,056.359 ppb	198.228 ppb	1,324.921 ppb	1,546.231 ppb	89.522 %
Concentration per Run 2	103.860 %	90.314 %	4.787 ppb	1,479.324 ppb	1,195.682 ppb	223.125 ppb	1,398.867 ppb	1,262.054 ppb	90.623 %
Concentration per Run 3	105.787 %	102.880 %	4.927 ppb	1,401.676 ppb	1,216.593 ppb	211.816 ppb	1,391.153 ppb	1,488.937 ppb	89.240 %
Concentration RSD	1.7 %	7.8 %	1.7 %	5.9 %	7.5 %	5.9 %	3.0 %	10.5 %	0.8 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	56.489 ppb	23.870 ppb	57.870 ppb	114.894 ppb	55.206 ppb	56.306 ppb	28.147 ppb	54.799 ppb	92.625 %
Concentration per Run 1	53.347 ppb	22.971 ppb	53.772 ppb	128.301 ppb	52.831 ppb	56.749 ppb	28.187 ppb	52.144 ppb	92.900 %
Concentration per Run 2	57.797 ppb	24.862 ppb	60.602 ppb	109.372 ppb	57.785 ppb	57.164 ppb	29.033 ppb	57.985 ppb	86.935 %
Concentration per Run 3	58.322 ppb	23.777 ppb	59.235 ppb	107.010 ppb	55.001 ppb	55.006 ppb	27.221 ppb	54.269 ppb	98.041 %
Concentration RSD	4.8 %	4.0 %	6.2 %	10.2 %	4.5 %	2.0 %	3.2 %	5.4 %	6.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.365 ppb	12.929 ppb	110.030 ppb	100.113 ppb	95.160 %	4.981 ppb	5.602 ppb	95.078 %	46.827 ppb
Concentration per Run 1	13.307 ppb	12.182 ppb	106.855 ppb	97.052 ppb	94.567 %	4.944 ppb	5.410 ppb	95.265 %	44.504 ppb
Concentration per Run 2	13.547 ppb	14.616 ppb	110.553 ppb	103.100 ppb	92.978 %	5.029 ppb	5.961 ppb	92.098 %	47.568 ppb
Concentration per Run 3	13.242 ppb	11.990 ppb	112.681 ppb	100.187 ppb	97.934 %	4.971 ppb	5.436 ppb	97.871 %	48.410 ppb
Concentration RSD	1.2 %	11.3 %	2.7 %	3.0 %	2.7 %	0.9 %	5.6 %	3.0 %	4.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	203.874 ppb	98.947 %	96.586 %	12.541 ppb	54.952 ppb	101.040 %
Concentration per Run 1	196.716 ppb	98.504 %	95.700 %	11.976 ppb	52.784 ppb	104.468 %
Concentration per Run 2	203.165 ppb	97.785 %	94.124 %	12.852 ppb	56.767 ppb	97.137 %
Concentration per Run 3	211.742 ppb	100.551 %	99.935 %	12.797 ppb	55.305 ppb	101.515 %
Concentration RSD	3.7 %	1.5 %	3.1 %	3.9 %	3.7 %	3.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	91	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904117-3d10 6020TL	Rack	2		
Analysis started at:	4/3/2024 5:39:20 PM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.557 %	104.712 %	4.770 ppb	3,465.073 ppb	3,310.697 ppb	200.018 ppb	1,460.064 ppb	7,466.593 ppb	93.020 %
Concentration per Run 1	106.287 %	99.738 %	4.719 ppb	3,441.083 ppb	3,337.444 ppb	185.596 ppb	1,445.251 ppb	6,925.990 ppb	92.177 %
Concentration per Run 2	108.090 %	99.738 %	4.863 ppb	3,598.984 ppb	3,370.896 ppb	211.122 ppb	1,479.339 ppb	7,669.541 ppb	92.865 %
Concentration per Run 3	108.292 %	114.660 %	4.728 ppb	3,355.151 ppb	3,223.751 ppb	203.336 ppb	1,455.601 ppb	7,804.249 ppb	94.017 %
Concentration RSD	1.0 %	8.2 %	1.7 %	3.6 %	2.3 %	6.5 %	1.2 %	6.3 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	54.075 ppb	21.913 ppb	68.899 ppb	118.544 ppb	52.780 ppb	54.338 ppb	26.493 ppb	54.099 ppb	91.563 %
Concentration per Run 1	53.483 ppb	20.437 ppb	63.457 ppb	123.259 ppb	49.082 ppb	48.631 ppb	25.199 ppb	50.856 ppb	97.803 %
Concentration per Run 2	54.617 ppb	23.570 ppb	71.868 ppb	121.616 ppb	56.721 ppb	58.784 ppb	27.608 ppb	56.426 ppb	85.837 %
Concentration per Run 3	54.125 ppb	21.731 ppb	71.370 ppb	110.757 ppb	52.537 ppb	55.599 ppb	26.673 ppb	55.015 ppb	91.048 %
Concentration RSD	1.1 %	7.2 %	6.8 %	5.7 %	7.2 %	9.6 %	4.6 %	5.4 %	6.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.909 ppb	13.453 ppb	142.523 ppb	100.590 ppb	95.040 %	4.941 ppb	5.232 ppb	96.432 %	48.457 ppb
Concentration per Run 1	13.251 ppb	12.123 ppb	134.206 ppb	98.799 ppb	95.767 %	4.858 ppb	5.057 ppb	95.698 %	47.320 ppb
Concentration per Run 2	14.944 ppb	13.696 ppb	143.544 ppb	101.218 ppb	95.017 %	5.012 ppb	5.270 ppb	96.425 %	48.683 ppb
Concentration per Run 3	13.531 ppb	14.542 ppb	149.818 ppb	101.753 ppb	94.337 %	4.952 ppb	5.368 ppb	97.171 %	49.368 ppb
Concentration RSD	6.5 %	9.1 %	5.5 %	1.6 %	0.8 %	1.6 %	3.0 %	0.8 %	2.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	220.948 ppb	101.164 %	98.678 %	12.218 ppb	53.791 ppb	101.582 %
Concentration per Run 1	215.171 ppb	99.937 %	98.130 %	11.960 ppb	52.639 ppb	101.976 %
Concentration per Run 2	221.870 ppb	101.497 %	96.834 %	12.266 ppb	54.088 ppb	101.276 %
Concentration per Run 3	225.804 ppb	102.058 %	101.070 %	12.428 ppb	54.648 ppb	101.494 %
Concentration RSD	2.4 %	1.1 %	2.2 %	1.9 %	1.9 %	0.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	92	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904117-5d10 6020TL	Rack	2		
Analysis started at:	4/3/2024 5:43:48 PM	Vial	8		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.581 %	97.906 %	46.327 ppb	8,034.563 ppb	7,893.091 ppb	53.987 ppb	6,486.255 ppb	12,752.342 ppb	96.844 %
Concentration per Run 1	103.300 %	73.822 %	46.551 ppb	9,381.034 ppb	9,230.593 ppb	58.820 ppb	7,051.724 ppb	11,982.913 ppb	94.828 %
Concentration per Run 2	106.026 %	114.660 %	46.032 ppb	7,055.744 ppb	6,832.411 ppb	48.206 ppb	5,635.128 ppb	12,826.119 ppb	97.318 %
Concentration per Run 3	107.417 %	105.236 %	46.400 ppb	7,666.910 ppb	7,616.269 ppb	54.935 ppb	6,771.914 ppb	13,447.994 ppb	98.388 %
Concentration RSD	2.0 %	21.8 %	0.6 %	15.0 %	15.5 %	9.9 %	11.6 %	5.8 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	53.746 ppb	55.164 ppb	66.969 ppb	5,248.212 ppb	52.179 ppb	54.707 ppb	53.074 ppb	53.430 ppb	90.922 %
Concentration per Run 1	56.478 ppb	58.067 ppb	67.274 ppb	5,434.402 ppb	54.142 ppb	56.341 ppb	53.339 ppb	54.000 ppb	91.607 %
Concentration per Run 2	50.184 ppb	53.293 ppb	68.452 ppb	5,146.885 ppb	51.514 ppb	54.683 ppb	52.598 ppb	54.046 ppb	88.958 %
Concentration per Run 3	54.576 ppb	54.132 ppb	65.181 ppb	5,163.349 ppb	50.881 ppb	53.097 ppb	53.285 ppb	52.244 ppb	92.201 %
Concentration RSD	6.0 %	4.6 %	2.5 %	3.1 %	3.3 %	3.0 %	0.8 %	1.9 %	1.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	54.028 ppb	51.942 ppb	89.411 ppb	50.923 ppb	93.309 %	1.131 ppb	48.647 ppb	96.207 %	48.479 ppb
Concentration per Run 1	50.957 ppb	51.587 ppb	87.328 ppb	49.586 ppb	92.653 %	1.143 ppb	48.132 ppb	93.112 %	48.979 ppb
Concentration per Run 2	53.200 ppb	49.521 ppb	89.295 ppb	51.047 ppb	91.978 %	1.121 ppb	48.659 ppb	95.145 %	47.940 ppb
Concentration per Run 3	57.926 ppb	54.717 ppb	91.609 ppb	52.136 ppb	95.296 %	1.128 ppb	49.151 ppb	100.363 %	48.518 ppb
Concentration RSD	6.6 %	5.0 %	2.4 %	2.5 %	1.9 %	1.0 %	1.0 %	3.9 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	70.550 ppb	99.358 %	98.155 %	49.413 ppb	50.658 ppb	99.383 %
Concentration per Run 1	70.771 ppb	98.379 %	95.062 %	48.662 ppb	50.037 ppb	100.800 %
Concentration per Run 2	68.097 ppb	97.713 %	97.058 %	49.900 ppb	51.326 ppb	96.065 %
Concentration per Run 3	72.780 ppb	101.983 %	102.344 %	49.676 ppb	50.610 ppb	101.283 %
Concentration RSD	3.3 %	2.3 %	3.8 %	1.3 %	1.3 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 93
Analysis label: WG1904117-4 6020TL
Analysis started at: 4/3/2024 5:48:16 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 7
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.905 %	102.356 %	0.044 ppb	20,328.723 ppb	20,073.391 ppb	10.426 ppb	1,717.344 ppb	55,905.657 ppb	89.508 %
Concentration per Run 1	101.083 %	89.529 %	0.047 ppb	22,311.560 ppb	21,901.243 ppb	8.743 ppb	1,830.535 ppb	56,276.188 ppb	88.259 %
Concentration per Run 2	100.838 %	118.586 %	0.045 ppb	17,995.762 ppb	17,720.853 ppb	9.846 ppb	1,656.547 ppb	58,152.176 ppb	90.177 %
Concentration per Run 3	100.795 %	98.953 %	0.039 ppb	20,678.847 ppb	20,598.076 ppb	12.690 ppb	1,664.951 ppb	53,288.608 ppb	90.089 %
Concentration RSD	0.2 %	14.5 %	10.3 %	10.7 %	10.7 %	19.5 %	5.7 %	4.4 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.963 ppb	1.390 ppb	118.380 ppb	73.996 ppb	0.182 ppb	0.416 ppb	0.335 ppb	2.702 ppb	87.998 %
Concentration per Run 1	0.941 ppb	1.457 ppb	123.393 ppb	80.209 ppb	0.203 ppb	0.554 ppb	0.334 ppb	2.654 ppb	85.868 %
Concentration per Run 2	0.914 ppb	1.366 ppb	116.641 ppb	67.081 ppb	0.190 ppb	0.414 ppb	0.369 ppb	2.704 ppb	84.976 %
Concentration per Run 3	1.034 ppb	1.346 ppb	115.107 ppb	74.698 ppb	0.153 ppb	0.282 ppb	0.303 ppb	2.747 ppb	93.150 %
Concentration RSD	6.5 %	4.2 %	3.7 %	8.9 %	14.4 %	32.6 %	9.9 %	1.7 %	5.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	2.169 ppb	0.520 ppb	331.063 ppb	0.502 ppb	88.614 %	0.004 ppb	0.022 ppb	90.220 %	0.312 ppb
Concentration per Run 1	2.310 ppb	0.551 ppb	334.767 ppb	0.421 ppb	88.562 %	0.001 ppb	0.027 ppb	91.141 %	0.260 ppb
Concentration per Run 2	2.003 ppb	0.694 ppb	335.717 ppb	0.475 ppb	88.221 %	0.014 ppb	0.028 ppb	86.652 %	0.321 ppb
Concentration per Run 3	2.192 ppb	0.315 ppb	322.704 ppb	0.611 ppb	89.059 %	-0.001 ppb	0.013 ppb	92.865 %	0.355 ppb
Concentration RSD	7.1 %	36.8 %	2.2 %	19.5 %	0.5 %	182.8 %	36.0 %	3.6 %	15.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	227.765 ppb	95.045 %	91.360 %	0.440 ppb	0.059 ppb	95.113 %
Concentration per Run 1	225.541 ppb	95.220 %	91.468 %	0.328 ppb	0.070 ppb	97.238 %
Concentration per Run 2	233.868 ppb	94.214 %	90.450 %	0.586 ppb	0.049 ppb	93.454 %
Concentration per Run 3	223.887 ppb	95.701 %	92.162 %	0.407 ppb	0.058 ppb	94.648 %
Concentration RSD	2.3 %	0.8 %	0.9 %	30.0 %	17.4 %	2.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	94	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417767-01 6020TL	Rack	2		
Analysis started at:	4/3/2024 5:52:45 PM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.763 %	98.953 %	0.014 ppb	20,979.599 ppb	20,721.399 ppb	10.323 ppb	1,630.012 ppb	48,030.320 ppb	94.307 %
Concentration per Run 1	103.710 %	84.817 %	0.009 ppb	23,255.347 ppb	22,653.223 ppb	7.846 ppb	1,663.584 ppb	46,203.890 ppb	91.259 %
Concentration per Run 2	104.821 %	116.230 %	0.003 ppb	18,482.513 ppb	18,165.150 ppb	8.203 ppb	1,476.888 ppb	47,528.102 ppb	94.417 %
Concentration per Run 3	105.759 %	95.812 %	0.030 ppb	21,200.937 ppb	21,345.824 ppb	14.919 ppb	1,749.564 ppb	50,358.968 ppb	97.244 %
Concentration RSD	1.0 %	16.1 %	99.9 %	11.4 %	11.1 %	38.6 %	8.6 %	4.4 %	3.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.922 ppb	1.291 ppb	109.541 ppb	37.383 ppb	0.146 ppb	0.373 ppb	0.370 ppb	2.497 ppb	102.287 %
Concentration per Run 1	0.592 ppb	1.362 ppb	115.243 ppb	38.251 ppb	0.195 ppb	0.297 ppb	0.420 ppb	2.594 ppb	103.804 %
Concentration per Run 2	0.881 ppb	1.309 ppb	97.636 ppb	34.178 ppb	0.137 ppb	0.459 ppb	0.366 ppb	2.487 ppb	102.051 %
Concentration per Run 3	1.294 ppb	1.201 ppb	115.744 ppb	39.720 ppb	0.107 ppb	0.362 ppb	0.324 ppb	2.410 ppb	101.007 %
Concentration RSD	38.3 %	6.4 %	9.4 %	7.7 %	30.7 %	21.8 %	13.1 %	3.7 %	1.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	2.017 ppb	0.813 ppb	313.247 ppb	0.362 ppb	88.147 %	0.007 ppb	0.014 ppb	87.506 %	0.197 ppb
Concentration per Run 1	2.163 ppb	0.567 ppb	315.355 ppb	0.292 ppb	85.008 %	0.012 ppb	0.007 ppb	86.132 %	0.177 ppb
Concentration per Run 2	2.030 ppb	0.487 ppb	312.168 ppb	0.299 ppb	89.514 %	0.007 ppb	0.014 ppb	87.598 %	0.185 ppb
Concentration per Run 3	1.859 ppb	1.384 ppb	312.219 ppb	0.494 ppb	89.921 %	0.003 ppb	0.020 ppb	88.788 %	0.230 ppb
Concentration RSD	7.6 %	61.1 %	0.6 %	31.7 %	3.1 %	61.2 %	48.5 %	1.5 %	14.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	233.828 ppb	93.110 %	90.447 %	0.156 ppb	0.025 ppb	88.303 %
Concentration per Run 1	240.439 ppb	89.020 %	88.456 %	0.099 ppb	0.030 ppb	87.210 %
Concentration per Run 2	229.938 ppb	93.593 %	90.044 %	0.209 ppb	0.030 ppb	88.917 %
Concentration per Run 3	231.106 ppb	96.717 %	92.841 %	0.162 ppb	0.015 ppb	88.781 %
Concentration RSD	2.5 %	4.2 %	2.5 %	35.3 %	34.0 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	95	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417639-01 6020TL	Rack	2		
Analysis started at:	4/3/2024 5:57:12 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.527 %	94.503 %	0.014 ppb	350,456.146 ppb	16,151.836 ppb	6.221 ppb	40,902.806 ppb	347,890.764 ppb	92.781 %
Concentration per Run 1	101.456 %	94.241 %	0.006 ppb	337,871.491 ppb	15,449.315 ppb	5.344 ppb	38,993.894 ppb	329,701.351 ppb	91.532 %
Concentration per Run 2	102.295 %	90.314 %	0.012 ppb	371,617.296 ppb	17,342.756 ppb	6.484 ppb	42,168.670 ppb	355,868.762 ppb	93.472 %
Concentration per Run 3	103.829 %	98.953 %	0.024 ppb	341,879.651 ppb	15,663.436 ppb	6.836 ppb	41,545.855 ppb	358,102.178 ppb	93.339 %
Concentration RSD	1.2 %	4.6 %	67.7 %	5.3 %	6.4 %	12.5 %	4.1 %	4.5 %	1.2 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.216 ppb	1.364 ppb	1,604.381 ppb	61.270 ppb	120.639 ppb	131.151 ppb	3.760 ppb	25.564 ppb	83.683 %
Concentration per Run 1	0.162 ppb	1.421 ppb	1,578.252 ppb	66.531 ppb	117.135 ppb	130.981 ppb	4.007 ppb	25.229 ppb	85.059 %
Concentration per Run 2	0.212 ppb	1.396 ppb	1,666.749 ppb	70.898 ppb	124.011 ppb	133.693 ppb	4.117 ppb	26.168 ppb	81.434 %
Concentration per Run 3	0.272 ppb	1.275 ppb	1,568.142 ppb	46.379 ppb	120.772 ppb	128.777 ppb	3.158 ppb	25.296 ppb	84.555 %
Concentration RSD	25.5 %	5.7 %	3.4 %	21.3 %	2.9 %	1.9 %	14.0 %	2.0 %	2.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.720 ppb	0.913 ppb	2,262.943 ppb	2.999 ppb	82.720 %	0.002 ppb	0.144 ppb	85.853 %	0.420 ppb
Concentration per Run 1	0.819 ppb	0.798 ppb	2,252.866 ppb	3.099 ppb	80.472 %	-0.001 ppb	0.139 ppb	82.931 %	0.421 ppb
Concentration per Run 2	0.699 ppb	0.972 ppb	2,311.002 ppb	2.990 ppb	82.478 %	0.005 ppb	0.155 ppb	86.901 %	0.425 ppb
Concentration per Run 3	0.642 ppb	0.969 ppb	2,224.959 ppb	2.908 ppb	85.210 %	0.003 ppb	0.138 ppb	87.727 %	0.416 ppb
Concentration RSD	12.5 %	10.9 %	1.9 %	3.2 %	2.9 %	139.9 %	6.4 %	3.0 %	1.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	53.326 ppb	91.396 %	88.914 %	0.110 ppb	0.039 ppb	86.637 %
Concentration per Run 1	51.492 ppb	87.592 %	84.455 %	0.062 ppb	0.041 ppb	84.533 %
Concentration per Run 2	56.318 ppb	91.863 %	89.325 %	0.128 ppb	0.041 ppb	88.002 %
Concentration per Run 3	52.167 ppb	94.733 %	92.961 %	0.141 ppb	0.035 ppb	87.375 %
Concentration RSD	4.9 %	3.9 %	4.8 %	38.4 %	9.1 %	2.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	96	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417639-02 6020TL	Rack	2		
Analysis started at:	4/3/2024 6:01:41 PM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.282 %	95.026 %	0.003 ppb	348,594.351 ppb	16,006.218 ppb	13.050 ppb	39,682.158 ppb	354,646.060 ppb	88.611 %
Concentration per Run 1	99.182 %	96.597 %	0.004 ppb	337,482.366 ppb	15,625.462 ppb	15.992 ppb	37,951.351 ppb	353,285.594 ppb	87.315 %
Concentration per Run 2	102.158 %	101.309 %	0.001 ppb	328,705.313 ppb	15,012.487 ppb	10.578 ppb	37,701.700 ppb	338,600.480 ppb	90.241 %
Concentration per Run 3	102.506 %	87.173 %	0.003 ppb	379,595.373 ppb	17,380.706 ppb	12.580 ppb	43,393.423 ppb	372,052.107 ppb	88.277 %
Concentration RSD	1.8 %	7.6 %	50.8 %	7.8 %	7.7 %	21.0 %	8.1 %	4.7 %	1.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.318 ppb	1.173 ppb	1,554.749 ppb	68.033 ppb	118.133 ppb	129.684 ppb	3.533 ppb	21.920 ppb	80.160 %
Concentration per Run 1	0.291 ppb	1.223 ppb	1,522.377 ppb	76.141 ppb	119.198 ppb	129.622 ppb	3.712 ppb	22.031 ppb	78.705 %
Concentration per Run 2	0.271 ppb	1.197 ppb	1,490.967 ppb	56.037 ppb	114.454 ppb	122.951 ppb	3.282 ppb	21.005 ppb	83.996 %
Concentration per Run 3	0.391 ppb	1.099 ppb	1,650.904 ppb	71.921 ppb	120.747 ppb	136.479 ppb	3.607 ppb	22.724 ppb	77.778 %
Concentration RSD	20.3 %	5.6 %	5.5 %	15.6 %	2.8 %	5.2 %	6.3 %	3.9 %	4.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.821 ppb	0.882 ppb	2,278.458 ppb	3.476 ppb	79.307 %	0.004 ppb	0.125 ppb	78.475 %	0.408 ppb
Concentration per Run 1	0.910 ppb	0.749 ppb	2,343.464 ppb	3.677 ppb	75.394 %	0.001 ppb	0.138 ppb	73.058 %	0.415 ppb
Concentration per Run 2	0.913 ppb	0.849 ppb	2,183.727 ppb	3.252 ppb	81.982 %	0.001 ppb	0.104 ppb	80.292 %	0.397 ppb
Concentration per Run 3	0.641 ppb	1.049 ppb	2,308.183 ppb	3.498 ppb	80.545 %	0.010 ppb	0.133 ppb	82.076 %	0.413 ppb
Concentration RSD	19.0 %	17.3 %	3.7 %	6.1 %	4.4 %	125.8 %	14.7 %	6.1 %	2.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	56.624 ppb	86.381 %	85.083 %	0.088 ppb	0.040 ppb	79.007 %
Concentration per Run 1	57.281 ppb	82.519 %	79.040 %	0.068 ppb	0.046 ppb	76.502 %
Concentration per Run 2	56.572 ppb	86.933 %	86.636 %	0.102 ppb	0.035 ppb	79.994 %
Concentration per Run 3	56.019 ppb	89.690 %	89.573 %	0.094 ppb	0.039 ppb	80.524 %
Concentration RSD	1.1 %	4.2 %	6.4 %	20.2 %	14.7 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	97	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904117-6d5 6020TL	Rack	2		
Analysis started at:	4/3/2024 6:06:11 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.529 %	100.262 %	0.005 ppb	4,327.118 ppb	4,091.510 ppb	3.536 ppb	424.195 ppb	10,945.061 ppb	89.088 %
Concentration per Run 1	101.630 %	101.309 %	0.006 ppb	4,298.221 ppb	4,012.431 ppb	4.915 ppb	379.561 ppb	11,103.919 ppb	86.518 %
Concentration per Run 2	103.080 %	90.314 %	0.010 ppb	4,621.965 ppb	4,295.050 ppb	2.922 ppb	458.556 ppb	11,418.047 ppb	89.085 %
Concentration per Run 3	105.876 %	109.162 %	-0.001 ppb	4,061.167 ppb	3,967.050 ppb	2.772 ppb	434.469 ppb	10,313.216 ppb	91.662 %
Concentration RSD	2.1 %	9.4 %	122.2 %	6.5 %	4.3 %	33.8 %	9.5 %	5.2 %	2.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.369 ppb	0.369 ppb	24.210 ppb	12.498 ppb	0.049 ppb	0.014 ppb	0.113 ppb	0.684 ppb	88.342 %
Concentration per Run 1	0.377 ppb	0.389 ppb	24.338 ppb	8.427 ppb	0.057 ppb	-0.129 ppb	0.112 ppb	0.773 ppb	85.987 %
Concentration per Run 2	0.318 ppb	0.311 ppb	24.230 ppb	10.698 ppb	0.044 ppb	0.124 ppb	0.098 ppb	0.690 ppb	86.090 %
Concentration per Run 3	0.413 ppb	0.406 ppb	24.063 ppb	18.370 ppb	0.046 ppb	0.045 ppb	0.130 ppb	0.588 ppb	92.948 %
Concentration RSD	12.9 %	13.7 %	0.6 %	41.7 %	14.2 %	952.0 %	14.3 %	13.6 %	4.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.693 ppb	0.203 ppb	65.496 ppb	0.065 ppb	87.012 %	0.004 ppb	0.009 ppb	85.845 %	0.070 ppb
Concentration per Run 1	0.738 ppb	0.337 ppb	66.179 ppb	0.060 ppb	87.114 %	0.003 ppb	0.000 ppb	84.649 %	0.055 ppb
Concentration per Run 2	0.762 ppb	0.351 ppb	65.465 ppb	0.095 ppb	87.119 %	0.003 ppb	0.007 ppb	84.987 %	0.087 ppb
Concentration per Run 3	0.579 ppb	-0.079 ppb	64.843 ppb	0.041 ppb	86.803 %	0.007 ppb	0.021 ppb	87.900 %	0.070 ppb
Concentration RSD	14.4 %	120.3 %	1.0 %	41.5 %	0.2 %	54.6 %	113.8 %	2.1 %	22.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	44.407 ppb	90.119 %	88.772 %	0.037 ppb	0.002 ppb	92.387 %
Concentration per Run 1	44.134 ppb	88.599 %	89.292 %	0.019 ppb	0.000 ppb	93.085 %
Concentration per Run 2	42.631 ppb	89.088 %	89.098 %	0.047 ppb	0.001 ppb	90.639 %
Concentration per Run 3	46.456 ppb	92.672 %	87.927 %	0.044 ppb	0.007 ppb	93.436 %
Concentration RSD	4.3 %	2.5 %	0.8 %	42.3 %	160.6 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	98	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 6:10:39 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.847 %	93.979 %	55.076 ppb	6,566.228 ppb	6,514.851 ppb	59.358 ppb	7,410.973 ppb	6,126.523 ppb	86.147 %
Concentration per Run 1	97.332 %	90.314 %	55.533 ppb	7,072.691 ppb	6,878.876 ppb	60.644 ppb	7,374.603 ppb	6,547.244 ppb	85.932 %
Concentration per Run 2	97.304 %	98.168 %	55.617 ppb	6,161.103 ppb	6,171.141 ppb	58.826 ppb	7,395.985 ppb	5,850.252 ppb	85.997 %
Concentration per Run 3	98.905 %	93.455 %	54.077 ppb	6,464.890 ppb	6,494.536 ppb	58.605 ppb	7,462.332 ppb	5,982.073 ppb	86.512 %
Recovery Percentage 1			91.793 %	109.437 %	108.581 %	98.930 %	123.516 %	102.109 %	
Concentration RSD	0.9 %	4.2 %	1.6 %	7.1 %	5.4 %	1.9 %	0.6 %	6.0 %	0.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	65.705 ppb	58.658 ppb	65.081 ppb	6,228.102 ppb	64.190 ppb	63.283 ppb	64.773 ppb	62.786 ppb	82.562 %
Concentration per Run 1	69.176 ppb	64.028 ppb	67.665 ppb	6,515.085 ppb	67.975 ppb	66.106 ppb	67.418 ppb	64.649 ppb	82.623 %
Concentration per Run 2	61.689 ppb	54.497 ppb	62.631 ppb	5,895.401 ppb	61.110 ppb	59.863 ppb	60.852 ppb	59.712 ppb	84.376 %
Concentration per Run 3	66.251 ppb	57.448 ppb	64.948 ppb	6,273.819 ppb	63.485 ppb	63.881 ppb	66.048 ppb	63.997 ppb	80.687 %
Recovery Percentage 1	109.509 %	97.763 %	108.469 %	103.802 %	106.983 %	105.472 %	107.955 %	104.643 %	
Concentration RSD	5.7 %	8.3 %	3.9 %	5.0 %	5.4 %	5.0 %	5.3 %	4.3 %	2.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	65.619 ppb	63.459 ppb	64.415 ppb	58.988 ppb	84.704 %	61.526 ppb	61.664 ppb	81.915 %	62.065 ppb
Concentration per Run 1	66.508 ppb	65.764 ppb	65.779 ppb	60.659 ppb	84.763 %	64.138 ppb	63.505 ppb	80.396 %	64.233 ppb
Concentration per Run 2	64.791 ppb	60.368 ppb	62.873 ppb	57.545 ppb	85.112 %	61.406 ppb	61.087 ppb	81.200 %	61.983 ppb
Concentration per Run 3	65.558 ppb	64.246 ppb	64.594 ppb	58.759 ppb	84.237 %	59.033 ppb	60.401 ppb	84.148 %	59.980 ppb
Recovery Percentage 1	109.365 %	105.765 %	107.359 %	98.313 %		102.543 %	102.774 %		103.442 %
Concentration RSD	1.3 %	4.4 %	2.3 %	2.7 %	0.5 %	4.2 %	2.6 %	2.4 %	3.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.698 ppb	88.964 %	87.510 %	63.638 ppb	64.514 ppb	86.447 %
Concentration per Run 1	61.824 ppb	88.788 %	87.154 %	65.448 ppb	65.729 ppb	86.404 %
Concentration per Run 2	62.152 ppb	89.407 %	87.967 %	62.674 ppb	63.381 ppb	85.665 %
Concentration per Run 3	58.117 ppb	88.696 %	87.409 %	62.791 ppb	64.433 ppb	87.271 %
Recovery Percentage 1	101.163 %			106.063 %	107.524 %	
Concentration RSD	3.7 %	0.4 %	0.5 %	2.5 %	1.8 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	99	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 6:15:11 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.787 %	99.215 %	0.013 ppb	123.053 ppb	-0.316 ppb	0.638 ppb	57.219 ppb	-6.161 ppb	80.320 %
Concentration per Run 1	94.689 %	95.026 %	0.001 ppb	123.083 ppb	-1.168 ppb	1.053 ppb	54.992 ppb	3.685 ppb	79.380 %
Concentration per Run 2	94.549 %	111.518 %	0.024 ppb	109.724 ppb	0.756 ppb	0.406 ppb	37.849 ppb	-8.119 ppb	79.868 %
Concentration per Run 3	95.122 %	91.099 %	0.014 ppb	136.353 ppb	-0.537 ppb	0.454 ppb	78.817 ppb	-14.050 ppb	81.711 %
Recovery Percentage 1			2.580 %	123.053 %	-0.452 %	6.379 %	57.219 %	-6.161 %	
Concentration RSD	0.3 %	10.9 %	91.1 %	10.8 %	310.1 %	56.5 %	36.0 %	146.5 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.347 ppb	0.173 ppb	0.091 ppb	5.697 ppb	-0.002 ppb	-0.107 ppb	0.044 ppb	-0.069 ppb	81.386 %
Concentration per Run 1	0.588 ppb	0.117 ppb	0.101 ppb	4.525 ppb	-0.006 ppb	-0.117 ppb	0.002 ppb	-0.113 ppb	76.028 %
Concentration per Run 2	0.363 ppb	0.117 ppb	0.043 ppb	6.965 ppb	0.001 ppb	-0.106 ppb	0.045 ppb	-0.088 ppb	85.297 %
Concentration per Run 3	0.090 ppb	0.287 ppb	0.130 ppb	5.602 ppb	0.001 ppb	-0.098 ppb	0.085 ppb	-0.005 ppb	82.834 %
Recovery Percentage 1	6.941 %	17.348 %	9.119 %	11.395 %	-0.301 %	-5.357 %	4.428 %	-1.376 %	
Concentration RSD	71.8 %	56.5 %	48.4 %	21.5 %	274.2 %	9.3 %	93.8 %	82.6 %	5.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.425 ppb	0.174 ppb	0.027 ppb	0.126 ppb	86.519 %	0.036 ppb	0.000 ppb	85.873 %	0.053 ppb
Concentration per Run 1	0.694 ppb	0.154 ppb	0.026 ppb	0.140 ppb	82.388 %	0.028 ppb	0.000 ppb	81.259 %	0.019 ppb
Concentration per Run 2	0.194 ppb	0.122 ppb	0.029 ppb	0.143 ppb	90.298 %	0.038 ppb	0.000 ppb	90.373 %	0.061 ppb
Concentration per Run 3	0.386 ppb	0.247 ppb	0.024 ppb	0.096 ppb	86.871 %	0.042 ppb	0.000 ppb	85.988 %	0.079 ppb
Recovery Percentage 1	84.934 %	3.490 %	0.265 %	6.317 %		8.971 %	0.000 %		1.323 %
Concentration RSD	59.4 %	37.1 %	8.3 %	20.9 %	4.6 %	19.3 %	N/A	5.3 %	58.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.013 ppb	89.022 %	85.212 %	0.437 ppb	0.005 ppb	92.547 %
Concentration per Run 1	0.032 ppb	85.140 %	81.956 %	0.358 ppb	0.010 ppb	88.067 %
Concentration per Run 2	0.027 ppb	93.175 %	89.831 %	0.485 ppb	0.001 ppb	95.734 %
Concentration per Run 3	-0.022 ppb	88.751 %	83.849 %	0.468 ppb	0.003 ppb	93.841 %
Recovery Percentage 1	2.535 %			43.672 %	0.452 %	
Concentration RSD	235.7 %	4.5 %	4.8 %	15.8 %	109.4 %	4.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 100
Analysis label: I2417639-03 6020TL
Analysis started at: 4/3/2024 6:23:31 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 12
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.720 %	99.738 %	0.003 ppb	302,534.319 ppb	14,278.431 ppb	5.297 ppb	36,650.894 ppb	312,694.337 ppb	92.561 %
Concentration per Run 1	97.859 %	88.743 %	0.011 ppb	333,933.978 ppb	15,628.353 ppb	6.000 ppb	40,282.505 ppb	328,215.980 ppb	87.813 %
Concentration per Run 2	104.897 %	107.592 %	-0.006 ppb	285,315.482 ppb	13,462.940 ppb	5.652 ppb	34,795.865 ppb	306,785.950 ppb	94.838 %
Concentration per Run 3	105.404 %	102.880 %	0.003 ppb	288,353.496 ppb	13,744.001 ppb	4.239 ppb	34,874.311 ppb	303,081.081 ppb	95.031 %
Concentration RSD	4.1 %	9.8 %	305.2 %	9.0 %	8.2 %	17.6 %	8.6 %	4.3 %	4.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.218 ppb	0.925 ppb	1,353.433 ppb	45.273 ppb	99.617 ppb	110.381 ppb	3.257 ppb	22.959 ppb	86.589 %
Concentration per Run 1	0.284 ppb	0.814 ppb	1,410.541 ppb	45.476 ppb	102.956 ppb	113.627 ppb	3.455 ppb	23.894 ppb	85.313 %
Concentration per Run 2	0.255 ppb	0.915 ppb	1,335.049 ppb	42.355 ppb	97.733 ppb	108.629 ppb	3.178 ppb	22.614 ppb	87.268 %
Concentration per Run 3	0.115 ppb	1.046 ppb	1,314.709 ppb	47.989 ppb	98.162 ppb	108.887 ppb	3.138 ppb	22.368 ppb	87.185 %
Concentration RSD	41.5 %	12.5 %	3.7 %	6.2 %	2.9 %	2.5 %	5.3 %	3.6 %	1.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.726 ppb	0.786 ppb	2,093.295 ppb	3.333 ppb	77.483 %	0.004 ppb	0.144 ppb	81.903 %	0.356 ppb
Concentration per Run 1	0.753 ppb	0.816 ppb	2,164.731 ppb	3.478 ppb	76.505 %	0.001 ppb	0.178 ppb	83.302 %	0.316 ppb
Concentration per Run 2	0.612 ppb	1.062 ppb	2,032.324 ppb	3.453 ppb	77.135 %	0.004 ppb	0.130 ppb	79.538 %	0.409 ppb
Concentration per Run 3	0.814 ppb	0.480 ppb	2,082.829 ppb	3.067 ppb	78.809 %	0.008 ppb	0.125 ppb	82.868 %	0.344 ppb
Concentration RSD	14.3 %	37.2 %	3.2 %	6.9 %	1.5 %	83.1 %	20.2 %	2.5 %	13.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	53.600 ppb	86.299 %	85.019 %	0.131 ppb	0.015 ppb	82.638 %
Concentration per Run 1	54.020 ppb	85.655 %	85.880 %	0.089 ppb	0.018 ppb	83.265 %
Concentration per Run 2	53.273 ppb	84.017 %	82.286 %	0.145 ppb	0.014 ppb	81.840 %
Concentration per Run 3	53.506 ppb	89.224 %	86.890 %	0.158 ppb	0.015 ppb	82.811 %
Concentration RSD	0.7 %	3.1 %	2.8 %	28.3 %	12.7 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 101 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: I2417767-02 6020TL Rack 2
Analysis started at: 4/3/2024 6:28:01 PM Vial 13

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	108.322 %	105.236 %	0.010 ppb	21,033.105 ppb	19,746.059 ppb	5.288 ppb	1,660.477 ppb	48,858.514 ppb	95.887 %
Concentration per Run 1	106.459 %	122.513 %	0.015 ppb	18,744.983 ppb	17,782.159 ppb	4.423 ppb	1,508.197 ppb	48,253.324 ppb	94.205 %
Concentration per Run 2	108.803 %	99.738 %	0.006 ppb	21,487.131 ppb	20,406.100 ppb	4.290 ppb	1,666.117 ppb	50,121.030 ppb	97.806 %
Concentration per Run 3	109.704 %	93.455 %	0.008 ppb	22,867.201 ppb	21,049.918 ppb	7.149 ppb	1,807.117 ppb	48,201.187 ppb	95.648 %
Concentration RSD	1.5 %	14.5 %	48.2 %	10.0 %	8.8 %	30.5 %	9.0 %	2.2 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.981 ppb	1.254 ppb	0.506 ppb	4.296 ppb	0.013 ppb	0.038 ppb	0.162 ppb	0.566 ppb	101.166 %
Concentration per Run 1	0.849 ppb	1.188 ppb	0.225 ppb	3.582 ppb	0.000 ppb	-0.005 ppb	0.124 ppb	0.626 ppb	104.431 %
Concentration per Run 2	0.992 ppb	1.337 ppb	0.743 ppb	5.822 ppb	0.025 ppb	0.061 ppb	0.212 ppb	0.543 ppb	98.310 %
Concentration per Run 3	1.101 ppb	1.238 ppb	0.549 ppb	3.482 ppb	0.013 ppb	0.059 ppb	0.151 ppb	0.530 ppb	100.757 %
Concentration RSD	12.9 %	6.1 %	51.7 %	30.8 %	103.4 %	97.6 %	28.0 %	9.2 %	3.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.975 ppb	0.485 ppb	315.599 ppb	0.315 ppb	89.935 %	0.004 ppb	0.000 ppb	94.123 %	0.078 ppb
Concentration per Run 1	1.886 ppb	0.669 ppb	318.089 ppb	0.333 ppb	94.108 %	0.001 ppb	0.000 ppb	96.369 %	0.058 ppb
Concentration per Run 2	1.889 ppb	0.272 ppb	316.210 ppb	0.290 ppb	87.911 %	0.009 ppb	0.000 ppb	92.254 %	0.107 ppb
Concentration per Run 3	2.151 ppb	0.513 ppb	312.499 ppb	0.321 ppb	87.787 %	0.003 ppb	0.000 ppb	93.746 %	0.070 ppb
Concentration RSD	7.7 %	41.2 %	0.9 %	7.1 %	4.0 %	103.0 %	N/A	2.2 %	32.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	209.384 ppb	95.173 %	92.616 %	0.049 ppb	0.007 ppb	97.880 %
Concentration per Run 1	207.623 ppb	97.843 %	96.719 %	0.025 ppb	0.008 ppb	101.258 %
Concentration per Run 2	211.393 ppb	92.477 %	88.849 %	0.056 ppb	0.005 ppb	96.674 %
Concentration per Run 3	209.136 ppb	95.201 %	92.280 %	0.067 ppb	0.007 ppb	95.708 %
Concentration RSD	0.9 %	2.8 %	4.3 %	44.7 %	21.7 %	3.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 102
Analysis label: I2417639-01d10 6020TL
Analysis started at: 4/3/2024 6:32:34 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 14
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.224 %	101.309 %	0.006 ppb	31,889.649 ppb	1,611.680 ppb	2.382 ppb	3,976.426 ppb	33,079.085 ppb	87.617 %
Concentration per Run 1	103.821 %	98.953 %	0.003 ppb	31,622.629 ppb	1,619.576 ppb	1.963 ppb	3,768.619 ppb	32,196.928 ppb	84.590 %
Concentration per Run 2	106.745 %	94.241 %	0.005 ppb	33,978.484 ppb	1,702.570 ppb	1.928 ppb	4,272.357 ppb	33,690.262 ppb	89.167 %
Concentration per Run 3	105.107 %	110.733 %	0.011 ppb	30,067.835 ppb	1,512.895 ppb	3.254 ppb	3,888.303 ppb	33,350.065 ppb	89.093 %
Concentration RSD	1.4 %	8.4 %	68.0 %	6.2 %	5.9 %	31.7 %	6.6 %	2.4 %	3.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.306 ppb	0.290 ppb	154.417 ppb	7.662 ppb	11.395 ppb	13.464 ppb	0.375 ppb	2.681 ppb	90.314 %
Concentration per Run 1	0.191 ppb	0.291 ppb	156.135 ppb	8.348 ppb	11.388 ppb	12.987 ppb	0.354 ppb	2.634 ppb	87.776 %
Concentration per Run 2	0.556 ppb	0.262 ppb	154.342 ppb	5.720 ppb	11.460 ppb	14.283 ppb	0.424 ppb	2.842 ppb	90.977 %
Concentration per Run 3	0.173 ppb	0.316 ppb	152.776 ppb	8.919 ppb	11.337 ppb	13.124 ppb	0.346 ppb	2.567 ppb	92.191 %
Concentration RSD	70.6 %	9.4 %	1.1 %	22.3 %	0.5 %	5.3 %	11.4 %	5.3 %	2.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.369 ppb	0.055 ppb	218.820 ppb	0.376 ppb	88.335 %	0.002 ppb	0.027 ppb	87.952 %	0.061 ppb
Concentration per Run 1	0.312 ppb	0.026 ppb	217.196 ppb	0.325 ppb	91.234 %	0.003 ppb	0.032 ppb	94.347 %	0.052 ppb
Concentration per Run 2	0.552 ppb	-0.086 ppb	219.049 ppb	0.419 ppb	86.953 %	0.001 ppb	0.028 ppb	84.823 %	0.064 ppb
Concentration per Run 3	0.241 ppb	0.225 ppb	220.214 ppb	0.384 ppb	86.818 %	0.003 ppb	0.021 ppb	84.685 %	0.067 ppb
Concentration RSD	44.3 %	285.5 %	0.7 %	12.7 %	2.8 %	52.0 %	20.7 %	6.3 %	13.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	5.753 ppb	91.228 %	88.884 %	0.035 ppb	0.005 ppb	91.239 %
Concentration per Run 1	5.443 ppb	94.179 %	91.522 %	0.015 ppb	0.002 ppb	95.288 %
Concentration per Run 2	6.100 ppb	89.347 %	87.650 %	0.045 ppb	0.008 ppb	90.058 %
Concentration per Run 3	5.717 ppb	90.158 %	87.481 %	0.044 ppb	0.005 ppb	88.370 %
Concentration RSD	5.7 %	2.8 %	2.6 %	48.1 %	67.9 %	4.0 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 103
Analysis label: I2417639-02d10 6020TL
Analysis started at: 4/3/2024 6:37:03 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 15
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.893 %	101.571 %	0.003 ppb	31,442.410 ppb	1,550.429 ppb	2.467 ppb	3,794.293 ppb	32,620.067 ppb	90.856 %
Concentration per Run 1	102.607 %	109.948 %	-0.005 ppb	27,794.721 ppb	1,289.700 ppb	1.342 ppb	3,479.023 ppb	30,509.500 ppb	90.859 %
Concentration per Run 2	103.587 %	89.529 %	0.007 ppb	34,836.237 ppb	1,770.321 ppb	3.796 ppb	4,039.821 ppb	33,333.511 ppb	91.163 %
Concentration per Run 3	105.486 %	105.236 %	0.007 ppb	31,696.272 ppb	1,591.267 ppb	2.264 ppb	3,864.034 ppb	34,017.191 ppb	90.545 %
Concentration RSD	1.4 %	10.5 %	239.0 %	11.2 %	15.7 %	50.2 %	7.6 %	5.7 %	0.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.366 ppb	0.282 ppb	155.694 ppb	10.512 ppb	11.618 ppb	12.449 ppb	0.426 ppb	2.333 ppb	84.756 %
Concentration per Run 1	0.426 ppb	0.196 ppb	137.501 ppb	8.607 ppb	11.222 ppb	10.941 ppb	0.439 ppb	2.364 ppb	88.736 %
Concentration per Run 2	0.327 ppb	0.341 ppb	165.960 ppb	11.676 ppb	12.282 ppb	13.129 ppb	0.447 ppb	2.344 ppb	83.457 %
Concentration per Run 3	0.346 ppb	0.309 ppb	163.620 ppb	11.254 ppb	11.349 ppb	13.277 ppb	0.391 ppb	2.290 ppb	82.077 %
Concentration RSD	14.2 %	27.0 %	10.1 %	15.8 %	5.0 %	10.5 %	7.2 %	1.6 %	4.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.397 ppb	0.044 ppb	213.746 ppb	0.313 ppb	84.385 %	0.000 ppb	0.028 ppb	86.072 %	0.054 ppb
Concentration per Run 1	0.442 ppb	0.012 ppb	201.463 ppb	0.324 ppb	85.117 %	0.001 ppb	0.043 ppb	82.557 %	0.034 ppb
Concentration per Run 2	0.422 ppb	0.144 ppb	224.733 ppb	0.343 ppb	80.796 %	-0.001 ppb	0.022 ppb	84.019 %	0.050 ppb
Concentration per Run 3	0.327 ppb	-0.025 ppb	215.043 ppb	0.272 ppb	87.244 %	0.001 ppb	0.020 ppb	91.641 %	0.078 ppb
Concentration RSD	15.5 %	202.9 %	5.5 %	11.7 %	3.9 %	657.9 %	45.7 %	5.7 %	41.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	5.774 ppb	87.612 %	85.325 %	0.031 ppb	0.003 ppb	88.632 %
Concentration per Run 1	5.995 ppb	85.701 %	83.088 %	0.008 ppb	0.003 ppb	89.586 %
Concentration per Run 2	5.631 ppb	84.721 %	80.910 %	0.039 ppb	0.002 ppb	84.184 %
Concentration per Run 3	5.698 ppb	92.414 %	91.976 %	0.047 ppb	0.003 ppb	92.126 %
Concentration RSD	3.4 %	4.8 %	6.9 %	65.9 %	21.4 %	4.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	104	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 639-02X	Rack	2		
Analysis started at:	4/3/2024 6:46:11 PM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.128 %	101.309 %	0.003 ppb	316,410.812 ppb	14,701.095 ppb	7.879 ppb	36,602.211 ppb	295,647.832 ppb	89.575 %
Concentration per Run 1	98.850 %	91.885 %	0.017 ppb	325,625.938 ppb	15,506.269 ppb	8.175 ppb	36,278.349 ppb	292,205.094 ppb	88.074 %
Concentration per Run 2	100.039 %	108.377 %	-0.012 ppb	309,982.898 ppb	14,223.100 ppb	8.147 ppb	36,556.746 ppb	299,556.323 ppb	90.702 %
Concentration per Run 3	101.494 %	103.665 %	0.004 ppb	313,623.600 ppb	14,373.918 ppb	7.315 ppb	36,971.538 ppb	295,182.078 ppb	89.950 %
Concentration RSD	1.3 %	8.4 %	462.0 %	2.6 %	4.8 %	6.2 %	1.0 %	1.3 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.156 ppb	0.290 ppb	1,333.972 ppb	57.660 ppb	97.840 ppb	108.156 ppb	2.964 ppb	16.080 ppb	98.686 %
Concentration per Run 1	0.040 ppb	0.327 ppb	1,330.769 ppb	50.395 ppb	98.648 ppb	108.134 ppb	2.882 ppb	16.356 ppb	95.578 %
Concentration per Run 2	0.194 ppb	0.262 ppb	1,327.596 ppb	54.735 ppb	96.339 ppb	105.808 ppb	2.944 ppb	15.586 ppb	100.821 %
Concentration per Run 3	0.233 ppb	0.280 ppb	1,343.552 ppb	67.851 ppb	98.533 ppb	110.526 ppb	3.066 ppb	16.297 ppb	99.659 %
Concentration RSD	65.7 %	11.7 %	0.6 %	15.8 %	1.3 %	2.2 %	3.2 %	2.7 %	2.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.507 ppb	0.640 ppb	2,030.312 ppb	2.869 ppb	79.303 %	-0.001 ppb	0.152 ppb	83.626 %	0.347 ppb
Concentration per Run 1	0.542 ppb	0.730 ppb	1,977.938 ppb	2.952 ppb	77.120 %	-0.001 ppb	0.175 ppb	79.959 %	0.284 ppb
Concentration per Run 2	0.511 ppb	0.588 ppb	2,087.353 ppb	2.587 ppb	80.639 %	-0.001 ppb	0.120 ppb	87.022 %	0.364 ppb
Concentration per Run 3	0.467 ppb	0.602 ppb	2,025.645 ppb	3.067 ppb	80.152 %	-0.001 ppb	0.160 ppb	83.897 %	0.392 ppb
Concentration RSD	7.5 %	12.2 %	2.7 %	8.7 %	2.4 %	0.0 %	18.6 %	4.2 %	16.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	53.902 ppb	87.875 %	85.362 %	0.045 ppb	0.017 ppb	81.544 %
Concentration per Run 1	54.735 ppb	85.641 %	82.638 %	0.035 ppb	0.023 ppb	80.271 %
Concentration per Run 2	52.694 ppb	88.746 %	87.592 %	0.047 ppb	0.014 ppb	82.868 %
Concentration per Run 3	54.276 ppb	89.238 %	85.855 %	0.053 ppb	0.014 ppb	81.492 %
Concentration RSD	2.0 %	2.2 %	2.9 %	20.0 %	30.6 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	105	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 639-03X	Rack	2		
Analysis started at:	4/3/2024 6:50:39 PM	Vial	17		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.694 %	93.717 %	0.000 ppb	333,793.666 ppb	15,526.995 ppb	3.813 ppb	38,258.900 ppb	305,841.253 ppb	91.073 %
Concentration per Run 1	97.853 %	87.958 %	-0.002 ppb	345,718.846 ppb	16,198.741 ppb	3.275 ppb	39,439.594 ppb	308,113.638 ppb	88.549 %
Concentration per Run 2	100.328 %	104.450 %	-0.003 ppb	305,596.809 ppb	14,177.197 ppb	2.972 ppb	36,677.573 ppb	316,286.425 ppb	91.283 %
Concentration per Run 3	103.900 %	88.743 %	0.005 ppb	350,065.345 ppb	16,205.047 ppb	5.192 ppb	38,659.532 ppb	293,123.696 ppb	93.385 %
Concentration RSD	3.0 %	9.9 %	10,131.0 %	7.3 %	7.5 %	31.6 %	3.7 %	3.8 %	2.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.043 ppb	0.280 ppb	1,396.800 ppb	44.518 ppb	103.168 ppb	112.226 ppb	3.365 ppb	23.188 ppb	92.735 %
Concentration per Run 1	0.123 ppb	0.394 ppb	1,423.079 ppb	44.029 ppb	105.079 ppb	114.667 ppb	2.949 ppb	23.702 ppb	89.256 %
Concentration per Run 2	0.003 ppb	0.212 ppb	1,390.357 ppb	43.677 ppb	102.617 ppb	109.469 ppb	3.533 ppb	23.033 ppb	91.516 %
Concentration per Run 3	0.004 ppb	0.233 ppb	1,376.964 ppb	45.848 ppb	101.809 ppb	112.544 ppb	3.615 ppb	22.829 ppb	97.434 %
Concentration RSD	159.6 %	35.4 %	1.7 %	2.6 %	1.7 %	2.3 %	10.8 %	2.0 %	4.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.596 ppb	0.696 ppb	2,089.304 ppb	2.994 ppb	79.441 %	0.000 ppb	0.115 ppb	82.604 %	0.372 ppb
Concentration per Run 1	0.452 ppb	0.681 ppb	2,139.522 ppb	3.054 ppb	77.789 %	-0.001 ppb	0.060 ppb	81.008 %	0.331 ppb
Concentration per Run 2	0.621 ppb	0.449 ppb	2,092.952 ppb	2.910 ppb	80.302 %	-0.001 ppb	0.109 ppb	83.689 %	0.392 ppb
Concentration per Run 3	0.715 ppb	0.958 ppb	2,035.438 ppb	3.016 ppb	80.233 %	0.001 ppb	0.175 ppb	83.116 %	0.393 ppb
Concentration RSD	22.3 %	36.6 %	2.5 %	2.5 %	1.8 %	274.4 %	50.4 %	1.7 %	9.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	54.830 ppb	86.648 %	85.111 %	0.050 ppb	0.006 ppb	80.307 %
Concentration per Run 1	56.464 ppb	85.978 %	83.560 %	0.037 ppb	0.003 ppb	79.396 %
Concentration per Run 2	53.394 ppb	86.069 %	86.215 %	0.058 ppb	0.010 ppb	81.802 %
Concentration per Run 3	54.633 ppb	87.899 %	85.557 %	0.054 ppb	0.005 ppb	79.724 %
Concentration RSD	2.8 %	1.3 %	1.6 %	23.0 %	59.1 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	106	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 767-02F	Rack	2		
Analysis started at:	4/3/2024 6:55:07 PM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.479 %	104.450 %	-0.001 ppb	20,884.676 ppb	19,506.638 ppb	3.319 ppb	1,571.542 ppb	47,768.417 ppb	90.181 %
Concentration per Run 1	101.144 %	99.738 %	-0.005 ppb	20,316.725 ppb	19,436.136 ppb	2.544 ppb	1,470.211 ppb	44,681.904 ppb	88.328 %
Concentration per Run 2	101.361 %	109.948 %	0.010 ppb	20,854.024 ppb	19,291.174 ppb	3.902 ppb	1,599.124 ppb	51,093.146 ppb	90.218 %
Concentration per Run 3	101.932 %	103.665 %	-0.007 ppb	21,483.280 ppb	19,792.605 ppb	3.511 ppb	1,645.290 ppb	47,530.201 ppb	91.997 %
Concentration RSD	0.4 %	4.9 %	1,189.6 %	2.8 %	1.3 %	21.1 %	5.8 %	6.7 %	2.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.876 ppb	0.551 ppb	1.133 ppb	0.893 ppb	0.075 ppb	0.057 ppb	0.113 ppb	0.220 ppb	101.834 %
Concentration per Run 1	0.794 ppb	0.541 ppb	0.839 ppb	1.086 ppb	0.073 ppb	0.050 ppb	0.159 ppb	0.180 ppb	103.046 %
Concentration per Run 2	0.775 ppb	0.526 ppb	1.468 ppb	1.059 ppb	0.103 ppb	0.217 ppb	0.032 ppb	0.378 ppb	101.313 %
Concentration per Run 3	1.059 ppb	0.588 ppb	1.091 ppb	0.532 ppb	0.049 ppb	-0.098 ppb	0.147 ppb	0.101 ppb	101.142 %
Concentration RSD	18.1 %	5.8 %	27.9 %	35.0 %	35.9 %	278.6 %	62.3 %	64.8 %	1.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.880 ppb	0.390 ppb	315.642 ppb	0.265 ppb	85.584 %	0.002 ppb	0.002 ppb	85.923 %	0.072 ppb
Concentration per Run 1	1.817 ppb	0.283 ppb	300.438 ppb	0.173 ppb	86.016 %	0.005 ppb	0.007 ppb	84.190 %	0.101 ppb
Concentration per Run 2	1.953 ppb	0.506 ppb	331.186 ppb	0.394 ppb	85.519 %	0.003 ppb	0.000 ppb	88.887 %	0.069 ppb
Concentration per Run 3	1.870 ppb	0.383 ppb	315.303 ppb	0.226 ppb	85.218 %	-0.001 ppb	0.000 ppb	84.692 %	0.045 ppb
Concentration RSD	3.7 %	28.6 %	4.9 %	43.5 %	0.5 %	140.5 %	173.2 %	3.0 %	38.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	224.374 ppb	88.827 %	87.620 %	0.024 ppb	0.000 ppb	80.542 %
Concentration per Run 1	216.114 ppb	88.163 %	86.989 %	0.005 ppb	-0.001 ppb	81.496 %
Concentration per Run 2	228.942 ppb	89.229 %	89.632 %	0.031 ppb	0.002 ppb	79.757 %
Concentration per Run 3	228.066 ppb	89.088 %	86.240 %	0.035 ppb	-0.002 ppb	80.372 %
Concentration RSD	3.2 %	0.7 %	2.0 %	68.8 %	597.9 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	107	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 7:04:07 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.815 %	95.550 %	53.941 ppb	6,492.037 ppb	6,381.716 ppb	62.019 ppb	7,084.076 ppb	7,615.474 ppb	100.130 %
Concentration per Run 1	102.816 %	88.743 %	53.498 ppb	6,683.418 ppb	6,552.470 ppb	61.608 ppb	7,070.183 ppb	7,532.394 ppb	99.080 %
Concentration per Run 2	105.969 %	97.382 %	53.645 ppb	6,322.338 ppb	6,257.548 ppb	64.308 ppb	6,776.761 ppb	7,146.841 ppb	100.298 %
Concentration per Run 3	105.658 %	100.524 %	54.678 ppb	6,470.355 ppb	6,335.129 ppb	60.139 ppb	7,405.284 ppb	8,167.187 ppb	101.012 %
Recovery Percentage 1			89.901 %	108.201 %	106.362 %	103.364 %	118.068 %	126.925 %	
Concentration RSD	1.7 %	6.4 %	1.2 %	2.8 %	2.4 %	3.4 %	4.4 %	6.8 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	61.844 ppb	61.797 ppb	60.950 ppb	5,866.517 ppb	59.266 ppb	59.389 ppb	58.553 ppb	57.148 ppb	94.773 %
Concentration per Run 1	62.027 ppb	60.455 ppb	62.048 ppb	5,696.824 ppb	57.673 ppb	59.701 ppb	58.675 ppb	54.759 ppb	95.787 %
Concentration per Run 2	60.564 ppb	60.836 ppb	59.217 ppb	5,770.109 ppb	57.503 ppb	58.705 ppb	57.338 ppb	56.701 ppb	97.980 %
Concentration per Run 3	62.942 ppb	64.099 ppb	61.583 ppb	6,132.617 ppb	62.624 ppb	59.761 ppb	59.646 ppb	59.986 ppb	90.551 %
Recovery Percentage 1	103.074 %	102.994 %	101.583 %	97.775 %	98.777 %	98.982 %	97.588 %	95.247 %	
Concentration RSD	1.9 %	3.2 %	2.5 %	4.0 %	4.9 %	1.0 %	2.0 %	4.6 %	4.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	57.775 ppb	59.695 ppb	60.195 ppb	57.246 ppb	87.365 %	58.981 ppb	57.975 ppb	87.173 %	58.632 ppb
Concentration per Run 1	54.895 ppb	57.721 ppb	57.946 ppb	54.592 ppb	87.372 %	58.646 ppb	56.293 ppb	86.172 %	57.748 ppb
Concentration per Run 2	56.814 ppb	56.657 ppb	60.158 ppb	56.671 ppb	86.608 %	59.657 ppb	57.830 ppb	87.562 %	59.187 ppb
Concentration per Run 3	61.616 ppb	64.707 ppb	62.480 ppb	60.475 ppb	88.116 %	58.639 ppb	59.802 ppb	87.785 %	58.962 ppb
Recovery Percentage 1	96.292 %	99.491 %	100.325 %	95.410 %		98.301 %	96.625 %		97.721 %
Concentration RSD	6.0 %	7.3 %	3.8 %	5.2 %	0.9 %	1.0 %	3.0 %	1.0 %	1.3 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.258 ppb	88.720 %	85.878 %	58.731 ppb	59.276 ppb	91.740 %
Concentration per Run 1	58.683 ppb	88.534 %	84.069 %	56.731 ppb	57.408 ppb	91.987 %
Concentration per Run 2	60.797 ppb	86.993 %	85.891 %	59.245 ppb	60.054 ppb	91.337 %
Concentration per Run 3	58.294 ppb	90.632 %	87.675 %	60.216 ppb	60.366 ppb	91.894 %
Recovery Percentage 1	98.763 %			97.884 %	98.793 %	
Concentration RSD	2.3 %	2.1 %	2.1 %	3.1 %	2.7 %	0.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	108	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 7:08:38 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	106.262 %	98.168 %	0.012 ppb	122.215 ppb	0.439 ppb	0.210 ppb	62.405 ppb	4.541 ppb	87.674 %
Concentration per Run 1	104.675 %	103.665 %	0.009 ppb	113.897 ppb	0.193 ppb	0.573 ppb	47.547 ppb	-3.709 ppb	87.116 %
Concentration per Run 2	107.748 %	101.309 %	0.013 ppb	117.984 ppb	0.718 ppb	-0.334 ppb	66.504 ppb	6.366 ppb	87.964 %
Concentration per Run 3	106.363 %	89.529 %	0.013 ppb	134.765 ppb	0.407 ppb	0.390 ppb	73.164 ppb	10.965 ppb	87.941 %
Recovery Percentage 1			2.332 %	122.215 %	0.628 %	2.096 %	62.405 %	4.541 %	
Concentration RSD	1.4 %	7.7 %	17.6 %	9.0 %	60.2 %	228.6 %	21.3 %	165.3 %	0.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.226 ppb	0.124 ppb	0.066 ppb	4.433 ppb	0.010 ppb	-0.105 ppb	-0.011 ppb	-0.134 ppb	117.847 %
Concentration per Run 1	0.239 ppb	0.221 ppb	0.049 ppb	5.053 ppb	0.016 ppb	-0.109 ppb	0.012 ppb	-0.029 ppb	113.296 %
Concentration per Run 2	0.262 ppb	0.071 ppb	0.101 ppb	6.882 ppb	0.010 ppb	-0.056 ppb	-0.041 ppb	-0.181 ppb	118.520 %
Concentration per Run 3	0.176 ppb	0.081 ppb	0.047 ppb	1.365 ppb	0.005 ppb	-0.151 ppb	-0.004 ppb	-0.191 ppb	121.725 %
Recovery Percentage 1	4.519 %	12.425 %	6.578 %	8.867 %	2.070 %	-5.261 %	-1.085 %	-2.674 %	
Concentration RSD	19.7 %	67.5 %	46.8 %	63.4 %	56.1 %	45.2 %	248.0 %	68.1 %	3.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.119 ppb	0.026 ppb	0.026 ppb	0.189 ppb	89.629 %	0.048 ppb	0.013 ppb	88.962 %	0.047 ppb
Concentration per Run 1	0.236 ppb	0.180 ppb	0.036 ppb	0.281 ppb	86.103 %	0.063 ppb	0.007 ppb	86.200 %	0.050 ppb
Concentration per Run 2	0.036 ppb	-0.003 ppb	0.034 ppb	0.159 ppb	91.046 %	0.050 ppb	0.020 ppb	90.578 %	0.058 ppb
Concentration per Run 3	0.086 ppb	-0.099 ppb	0.009 ppb	0.126 ppb	91.740 %	0.029 ppb	0.013 ppb	90.107 %	0.031 ppb
Recovery Percentage 1	23.893 %	0.515 %	0.263 %	9.428 %		11.880 %	6.680 %		1.163 %
Concentration RSD	87.2 %	551.4 %	58.2 %	43.3 %	3.4 %	36.2 %	48.2 %	2.7 %	29.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.012 ppb	91.593 %	88.600 %	0.457 ppb	0.016 ppb	88.570 %
Concentration per Run 1	0.030 ppb	89.111 %	86.120 %	0.341 ppb	0.022 ppb	88.127 %
Concentration per Run 2	0.003 ppb	92.710 %	88.485 %	0.577 ppb	0.020 ppb	88.127 %
Concentration per Run 3	0.003 ppb	92.958 %	91.194 %	0.451 ppb	0.006 ppb	89.457 %
Recovery Percentage 1	2.358 %			45.666 %	1.586 %	
Concentration RSD	131.1 %	2.4 %	2.9 %	25.9 %	53.8 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	109	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903804-1 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:20:45 PM	Vial	19		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.305 %	102.618 %	0.004 ppb	126.165 ppb	0.907 ppb	1.641 ppb	82.612 ppb	57.610 ppb	89.433 %
Concentration per Run 1	104.103 %	114.660 %	0.001 ppb	111.947 ppb	-0.844 ppb	0.615 ppb	62.508 ppb	28.421 ppb	89.323 %
Concentration per Run 2	105.074 %	89.529 %	0.009 ppb	147.335 ppb	3.211 ppb	2.526 ppb	107.335 ppb	104.811 ppb	89.882 %
Concentration per Run 3	106.737 %	103.665 %	0.003 ppb	119.212 ppb	0.353 ppb	1.783 ppb	77.993 ppb	39.598 ppb	89.093 %
Concentration RSD	1.3 %	12.3 %	103.6 %	14.8 %	229.8 %	58.7 %	27.6 %	71.6 %	0.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.341 ppb	0.195 ppb	0.078 ppb	3.320 ppb	0.001 ppb	0.027 ppb	0.211 ppb	0.248 ppb	85.990 %
Concentration per Run 1	0.397 ppb	0.185 ppb	0.214 ppb	2.589 ppb	-0.006 ppb	0.014 ppb	0.177 ppb	0.163 ppb	84.286 %
Concentration per Run 2	0.444 ppb	0.191 ppb	-0.020 ppb	4.220 ppb	0.001 ppb	0.081 ppb	0.239 ppb	0.206 ppb	83.968 %
Concentration per Run 3	0.183 ppb	0.210 ppb	0.041 ppb	3.152 ppb	0.007 ppb	-0.015 ppb	0.217 ppb	0.373 ppb	89.715 %
Concentration RSD	40.8 %	6.7 %	154.5 %	25.0 %	985.2 %	182.7 %	14.7 %	44.7 %	3.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.421 ppb	0.058 ppb	0.015 ppb	0.036 ppb	88.417 %	0.007 ppb	0.000 ppb	85.558 %	0.027 ppb
Concentration per Run 1	0.515 ppb	0.016 ppb	0.008 ppb	0.043 ppb	86.602 %	0.010 ppb	0.000 ppb	84.065 %	0.033 ppb
Concentration per Run 2	0.244 ppb	0.147 ppb	0.020 ppb	0.060 ppb	87.506 %	0.009 ppb	0.000 ppb	86.945 %	0.050 ppb
Concentration per Run 3	0.504 ppb	0.011 ppb	0.018 ppb	0.007 ppb	91.143 %	0.001 ppb	0.000 ppb	85.663 %	0.000 ppb
Concentration RSD	36.4 %	133.1 %	41.7 %	74.5 %	2.7 %	75.7 %	N/A	1.7 %	92.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.031 ppb	88.892 %	85.104 %	0.065 ppb	0.004 ppb	88.517 %
Concentration per Run 1	0.110 ppb	86.781 %	81.811 %	0.040 ppb	0.004 ppb	91.736 %
Concentration per Run 2	-0.022 ppb	88.660 %	85.457 %	0.062 ppb	0.007 ppb	86.603 %
Concentration per Run 3	0.004 ppb	91.236 %	88.042 %	0.094 ppb	0.000 ppb	87.213 %
Concentration RSD	227.7 %	2.5 %	3.7 %	40.9 %	89.4 %	3.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	110	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903804-2d10 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:25:14 PM	Vial	20		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.546 %	107.592 %	5.862 ppb	1,203.664 ppb	1,037.380 ppb	189.414 ppb	1,268.573 ppb	1,463.813 ppb	76.557 %
Concentration per Run 1	89.178 %	115.445 %	5.936 ppb	1,096.959 ppb	930.841 ppb	177.626 ppb	1,181.953 ppb	1,489.226 ppb	72.634 %
Concentration per Run 2	90.072 %	96.597 %	6.128 ppb	1,307.360 ppb	1,141.447 ppb	195.374 ppb	1,336.600 ppb	1,722.364 ppb	76.879 %
Concentration per Run 3	95.388 %	110.733 %	5.521 ppb	1,206.672 ppb	1,039.852 ppb	195.242 ppb	1,287.165 ppb	1,179.849 ppb	80.159 %
Concentration RSD	3.7 %	9.1 %	5.3 %	8.7 %	10.2 %	5.4 %	6.2 %	18.6 %	4.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	47.644 ppb	19.994 ppb	50.270 ppb	107.729 ppb	49.350 ppb	49.956 ppb	24.120 ppb	48.412 ppb	98.935 %
Concentration per Run 1	44.334 ppb	17.791 ppb	43.876 ppb	99.172 ppb	45.377 ppb	48.896 ppb	22.901 ppb	45.583 ppb	101.900 %
Concentration per Run 2	52.064 ppb	21.821 ppb	54.743 ppb	116.553 ppb	54.506 ppb	53.951 ppb	26.357 ppb	51.799 ppb	88.755 %
Concentration per Run 3	46.533 ppb	20.371 ppb	52.191 ppb	107.462 ppb	48.167 ppb	47.020 ppb	23.101 ppb	47.855 ppb	106.148 %
Concentration RSD	8.4 %	10.2 %	11.3 %	8.1 %	9.5 %	7.2 %	8.0 %	6.5 %	9.2 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	11.646 ppb	11.095 ppb	104.167 ppb	96.052 ppb	89.194 %	5.016 ppb	5.443 ppb	90.063 %	46.469 ppb
Concentration per Run 1	10.300 ppb	11.217 ppb	98.860 ppb	95.619 ppb	89.249 %	5.033 ppb	5.653 ppb	88.921 %	45.303 ppb
Concentration per Run 2	13.020 ppb	11.343 ppb	107.052 ppb	97.662 ppb	88.684 %	5.008 ppb	5.515 ppb	87.152 %	46.851 ppb
Concentration per Run 3	11.616 ppb	10.724 ppb	106.589 ppb	94.875 ppb	89.650 %	5.006 ppb	5.161 ppb	94.116 %	47.253 ppb
Concentration RSD	11.7 %	3.0 %	4.4 %	1.5 %	0.5 %	0.3 %	4.7 %	4.0 %	2.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	206.731 ppb	92.417 %	91.158 %	12.767 ppb	56.117 ppb	93.278 %
Concentration per Run 1	200.495 ppb	90.942 %	89.701 %	12.761 ppb	55.188 ppb	93.604 %
Concentration per Run 2	207.378 ppb	90.636 %	88.523 %	12.812 ppb	57.015 ppb	91.022 %
Concentration per Run 3	212.319 ppb	95.674 %	95.250 %	12.728 ppb	56.146 ppb	95.209 %
Concentration RSD	2.9 %	3.1 %	3.9 %	0.3 %	1.6 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	111	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903804-3d10 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:29:42 PM	Vial	22		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.141 %	103.141 %	4.980 ppb	51,656.844 ppb	1,815.582 ppb	189.517 ppb	5,813.704 ppb	8,334.631 ppb	86.420 %
Concentration per Run 1	101.000 %	103.665 %	4.840 ppb	50,518.573 ppb	1,802.977 ppb	186.994 ppb	5,703.450 ppb	8,249.881 ppb	85.264 %
Concentration per Run 2	102.360 %	108.377 %	5.153 ppb	49,881.537 ppb	1,787.337 ppb	182.754 ppb	5,738.438 ppb	8,144.710 ppb	87.479 %
Concentration per Run 3	103.064 %	97.382 %	4.948 ppb	54,570.421 ppb	1,856.432 ppb	198.802 ppb	5,999.226 ppb	8,609.301 ppb	86.517 %
Concentration RSD	1.0 %	5.3 %	3.2 %	4.9 %	2.0 %	4.4 %	2.8 %	2.9 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.428 ppb	22.760 ppb	112.988 ppb	120.488 ppb	53.898 ppb	54.641 ppb	28.170 ppb	55.157 ppb	84.645 %
Concentration per Run 1	51.652 ppb	21.535 ppb	111.471 ppb	118.812 ppb	53.486 ppb	51.850 ppb	27.690 ppb	53.426 ppb	84.758 %
Concentration per Run 2	52.181 ppb	22.013 ppb	107.969 ppb	116.011 ppb	52.308 ppb	54.199 ppb	28.211 ppb	54.280 ppb	86.039 %
Concentration per Run 3	62.450 ppb	24.733 ppb	119.523 ppb	126.639 ppb	55.900 ppb	57.873 ppb	28.608 ppb	57.765 ppb	83.140 %
Concentration RSD	11.0 %	7.6 %	5.2 %	4.6 %	3.4 %	5.6 %	1.6 %	4.2 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	13.617 ppb	13.860 ppb	148.852 ppb	111.086 ppb	85.126 %	5.072 ppb	5.359 ppb	86.069 %	49.896 ppb
Concentration per Run 1	13.370 ppb	13.386 ppb	148.886 ppb	111.965 ppb	85.097 %	5.071 ppb	5.521 ppb	85.867 %	49.042 ppb
Concentration per Run 2	13.730 ppb	11.619 ppb	146.104 ppb	111.647 ppb	85.506 %	5.115 ppb	5.635 ppb	84.188 %	50.839 ppb
Concentration per Run 3	13.751 ppb	16.575 ppb	151.566 ppb	109.645 ppb	84.775 %	5.030 ppb	4.921 ppb	88.152 %	49.807 ppb
Concentration RSD	1.6 %	18.1 %	1.8 %	1.1 %	0.4 %	0.8 %	7.2 %	2.3 %	1.8 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	223.638 ppb	90.517 %	88.619 %	12.869 ppb	56.807 ppb	91.674 %
Concentration per Run 1	223.603 ppb	89.888 %	89.610 %	12.576 ppb	56.058 ppb	92.190 %
Concentration per Run 2	222.153 ppb	90.808 %	87.682 %	12.825 ppb	56.979 ppb	91.931 %
Concentration per Run 3	225.159 ppb	90.855 %	88.564 %	13.206 ppb	57.384 ppb	90.901 %
Concentration RSD	0.7 %	0.6 %	1.1 %	2.5 %	1.2 %	0.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	112	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903804-5d10 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:34:11 PM	Vial	24		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.261 %	92.670 %	46.519 ppb	60,603.198 ppb	6,516.010 ppb	53.896 ppb	11,246.018 ppb	14,659.939 ppb	85.199 %
Concentration per Run 1	97.997 %	89.529 %	46.239 ppb	61,162.196 ppb	6,518.172 ppb	52.023 ppb	11,415.350 ppb	15,089.324 ppb	83.693 %
Concentration per Run 2	99.988 %	106.021 %	45.853 ppb	53,714.224 ppb	5,986.578 ppb	50.237 ppb	10,234.859 ppb	13,809.106 ppb	86.370 %
Concentration per Run 3	99.798 %	82.461 %	47.465 ppb	66,933.173 ppb	7,043.281 ppb	59.429 ppb	12,087.845 ppb	15,081.387 ppb	85.535 %
Concentration RSD	1.1 %	13.0 %	1.8 %	10.9 %	8.1 %	9.0 %	8.3 %	5.0 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	55.717 ppb	56.597 ppb	117.202 ppb	5,441.720 ppb	56.387 ppb	55.916 ppb	55.456 ppb	56.050 ppb	79.166 %
Concentration per Run 1	56.835 ppb	58.555 ppb	122.152 ppb	5,599.019 ppb	57.839 ppb	56.712 ppb	55.912 ppb	56.282 ppb	77.733 %
Concentration per Run 2	52.729 ppb	53.231 ppb	108.232 ppb	5,192.113 ppb	53.670 ppb	53.687 ppb	53.795 ppb	54.756 ppb	80.648 %
Concentration per Run 3	57.587 ppb	58.004 ppb	121.221 ppb	5,534.028 ppb	57.652 ppb	57.350 ppb	56.659 ppb	57.111 ppb	79.117 %
Concentration RSD	4.7 %	5.2 %	6.6 %	4.0 %	4.2 %	3.5 %	2.7 %	2.1 %	1.8 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	57.602 ppb	56.852 ppb	96.181 ppb	54.374 ppb	83.900 %	1.780 ppb	50.469 ppb	82.957 %	52.295 ppb
Concentration per Run 1	57.798 ppb	57.580 ppb	99.293 ppb	55.516 ppb	82.885 %	1.763 ppb	51.020 ppb	84.060 %	53.571 ppb
Concentration per Run 2	57.352 ppb	53.921 ppb	93.281 ppb	53.144 ppb	84.747 %	1.724 ppb	51.009 ppb	81.371 %	51.960 ppb
Concentration per Run 3	57.658 ppb	59.055 ppb	95.970 ppb	54.464 ppb	84.069 %	1.852 ppb	49.378 ppb	83.441 %	51.354 ppb
Concentration RSD	0.4 %	4.6 %	3.1 %	2.2 %	1.1 %	3.7 %	1.9 %	1.7 %	2.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	67.193 ppb	88.500 %	85.802 %	53.419 ppb	55.772 ppb	84.660 %
Concentration per Run 1	69.878 ppb	89.524 %	84.958 %	54.344 ppb	56.821 ppb	83.526 %
Concentration per Run 2	66.088 ppb	88.611 %	85.140 %	52.324 ppb	55.081 ppb	85.120 %
Concentration per Run 3	65.612 ppb	87.365 %	87.307 %	53.590 ppb	55.414 ppb	85.335 %
Concentration RSD	3.5 %	1.2 %	1.5 %	1.9 %	1.7 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	113	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903804-4 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:38:41 PM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.182 %	81.675 %	0.028 ppb	544,831.894 ppb	7,506.380 ppb	8.532 ppb	46,678.424 ppb	66,040.998 ppb	81.495 %
Concentration per Run 1	87.478 %	80.105 %	0.027 ppb	556,135.456 ppb	7,646.942 ppb	8.974 ppb	46,065.472 ppb	64,925.583 ppb	78.233 %
Concentration per Run 2	87.747 %	86.387 %	0.042 ppb	524,772.759 ppb	7,149.374 ppb	5.294 ppb	47,374.528 ppb	68,561.689 ppb	82.187 %
Concentration per Run 3	89.320 %	78.534 %	0.016 ppb	553,587.468 ppb	7,722.825 ppb	11.328 ppb	46,595.271 ppb	64,635.721 ppb	84.065 %
Concentration RSD	1.1 %	5.1 %	45.3 %	3.2 %	4.1 %	35.6 %	1.4 %	3.3 %	3.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.500 ppb	0.405 ppb	576.616 ppb	43.190 ppb	0.977 ppb	7.900 ppb	0.750 ppb	1.238 ppb	81.352 %
Concentration per Run 1	0.513 ppb	0.346 ppb	572.839 ppb	45.291 ppb	1.152 ppb	8.449 ppb	0.711 ppb	1.359 ppb	82.061 %
Concentration per Run 2	0.418 ppb	0.420 ppb	573.320 ppb	46.499 ppb	1.005 ppb	7.791 ppb	0.774 ppb	1.205 ppb	82.025 %
Concentration per Run 3	0.570 ppb	0.449 ppb	583.689 ppb	37.781 ppb	0.772 ppb	7.461 ppb	0.767 ppb	1.151 ppb	79.971 %
Concentration RSD	15.4 %	13.0 %	1.1 %	10.9 %	19.6 %	6.4 %	4.6 %	8.7 %	1.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.492 ppb	0.993 ppb	359.864 ppb	33.778 ppb	76.786 %	0.005 ppb	0.036 ppb	78.081 %	0.979 ppb
Concentration per Run 1	1.402 ppb	1.214 ppb	368.659 ppb	32.806 ppb	78.528 %	0.001 ppb	0.054 ppb	78.537 %	1.038 ppb
Concentration per Run 2	1.579 ppb	1.361 ppb	358.488 ppb	35.506 ppb	77.023 %	0.004 ppb	0.031 ppb	79.024 %	0.843 ppb
Concentration per Run 3	1.494 ppb	0.403 ppb	352.445 ppb	33.022 ppb	74.807 %	0.011 ppb	0.024 ppb	76.683 %	1.056 ppb
Concentration RSD	5.9 %	51.9 %	2.3 %	4.4 %	2.4 %	99.0 %	43.4 %	1.6 %	12.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	166.790 ppb	83.504 %	82.005 %	0.433 ppb	1.747 ppb	79.689 %
Concentration per Run 1	166.772 ppb	83.060 %	80.151 %	0.361 ppb	1.783 ppb	79.276 %
Concentration per Run 2	166.663 ppb	85.510 %	86.657 %	0.504 ppb	1.789 ppb	80.756 %
Concentration per Run 3	166.934 ppb	81.943 %	79.207 %	0.435 ppb	1.669 ppb	79.036 %
Concentration RSD	0.1 %	2.2 %	4.9 %	16.6 %	3.9 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	114	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417070-02 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:43:10 PM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.294 %	102.618 %	0.022 ppb	478,239.096 ppb	6,501.030 ppb	6.136 ppb	40,405.245 ppb	55,536.841 ppb	91.461 %
Concentration per Run 1	94.607 %	98.168 %	0.019 ppb	471,725.523 ppb	6,385.172 ppb	6.195 ppb	38,581.288 ppb	47,519.180 ppb	89.065 %
Concentration per Run 2	97.466 %	101.309 %	0.025 ppb	487,304.170 ppb	6,701.865 ppb	5.068 ppb	40,548.364 ppb	57,919.034 ppb	92.864 %
Concentration per Run 3	99.810 %	108.377 %	0.021 ppb	475,687.594 ppb	6,416.054 ppb	7.146 ppb	42,086.084 ppb	61,172.309 ppb	92.453 %
Concentration RSD	2.7 %	5.1 %	13.0 %	1.7 %	2.7 %	17.0 %	4.3 %	12.8 %	2.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.454 ppb	0.296 ppb	486.860 ppb	29.141 ppb	0.824 ppb	7.148 ppb	0.423 ppb	0.818 ppb	108.655 %
Concentration per Run 1	0.344 ppb	0.224 ppb	444.969 ppb	30.180 ppb	0.705 ppb	6.993 ppb	0.334 ppb	0.653 ppb	123.597 %
Concentration per Run 2	0.493 ppb	0.289 ppb	498.708 ppb	32.985 ppb	0.928 ppb	7.186 ppb	0.541 ppb	0.793 ppb	102.979 %
Concentration per Run 3	0.526 ppb	0.375 ppb	516.901 ppb	24.258 ppb	0.840 ppb	7.266 ppb	0.395 ppb	1.010 ppb	99.389 %
Concentration RSD	21.4 %	25.5 %	7.7 %	15.3 %	13.6 %	2.0 %	25.2 %	22.0 %	12.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	1.072 ppb	0.421 ppb	316.102 ppb	31.321 ppb	81.585 %	0.006 ppb	0.012 ppb	83.769 %	0.853 ppb
Concentration per Run 1	0.942 ppb	0.236 ppb	275.606 ppb	29.082 ppb	81.132 %	0.012 ppb	0.015 ppb	80.953 %	0.855 ppb
Concentration per Run 2	1.070 ppb	0.407 ppb	331.537 ppb	32.649 ppb	82.606 %	0.003 ppb	0.000 ppb	83.381 %	0.825 ppb
Concentration per Run 3	1.203 ppb	0.621 ppb	341.162 ppb	32.230 ppb	81.017 %	0.001 ppb	0.021 ppb	86.972 %	0.880 ppb
Concentration RSD	12.2 %	45.9 %	11.2 %	6.2 %	1.1 %	109.4 %	90.6 %	3.6 %	3.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	167.322 ppb	88.290 %	87.779 %	0.119 ppb	1.725 ppb	85.249 %
Concentration per Run 1	166.857 ppb	87.931 %	88.046 %	0.062 ppb	1.718 ppb	86.058 %
Concentration per Run 2	173.091 ppb	88.659 %	88.241 %	0.152 ppb	1.755 ppb	85.793 %
Concentration per Run 3	162.019 ppb	88.281 %	87.050 %	0.143 ppb	1.704 ppb	83.894 %
Concentration RSD	3.3 %	0.4 %	0.7 %	42.0 %	1.5 %	1.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 115
Analysis label: L2417070-03 6020SL
Analysis started at: 4/3/2024 7:47:39 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 26
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.159 %	88.482 %	0.012 ppb	112,195.488 ppb	6,333.057 ppb	23.665 ppb	6,112.653 ppb	23,186.960 ppb	90.850 %
Concentration per Run 1	100.731 %	91.099 %	0.010 ppb	104,822.115 ppb	5,857.524 ppb	23.316 ppb	5,697.455 ppb	21,696.499 ppb	87.877 %
Concentration per Run 2	101.688 %	89.529 %	0.010 ppb	111,817.102 ppb	6,267.112 ppb	23.239 ppb	6,334.886 ppb	24,129.934 ppb	91.933 %
Concentration per Run 3	101.057 %	84.817 %	0.014 ppb	119,947.248 ppb	6,874.536 ppb	24.440 ppb	6,305.618 ppb	23,734.446 ppb	92.741 %
Concentration RSD	0.5 %	3.7 %	21.6 %	6.7 %	8.1 %	2.8 %	5.9 %	5.6 %	2.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	1.523 ppb	0.283 ppb	547.768 ppb	21.419 ppb	0.298 ppb	4.475 ppb	1.062 ppb	1.874 ppb	97.109 %
Concentration per Run 1	1.476 ppb	0.311 ppb	519.360 ppb	21.306 ppb	0.272 ppb	4.420 ppb	1.124 ppb	1.679 ppb	95.698 %
Concentration per Run 2	1.689 ppb	0.235 ppb	553.368 ppb	24.862 ppb	0.290 ppb	4.216 ppb	0.964 ppb	2.084 ppb	96.644 %
Concentration per Run 3	1.403 ppb	0.302 ppb	570.575 ppb	18.089 ppb	0.334 ppb	4.788 ppb	1.099 ppb	1.860 ppb	98.984 %
Concentration RSD	9.8 %	14.8 %	4.8 %	15.8 %	10.6 %	6.5 %	8.1 %	10.8 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.936 ppb	0.146 ppb	103.313 ppb	30.213 ppb	85.619 %	0.003 ppb	0.052 ppb	83.745 %	1.095 ppb
Concentration per Run 1	0.952 ppb	0.215 ppb	100.981 ppb	28.660 ppb	85.850 %	0.003 ppb	0.057 ppb	84.180 %	1.086 ppb
Concentration per Run 2	0.916 ppb	0.213 ppb	104.591 ppb	29.992 ppb	86.124 %	0.001 ppb	0.043 ppb	82.837 %	1.117 ppb
Concentration per Run 3	0.940 ppb	0.010 ppb	104.367 ppb	31.987 ppb	84.884 %	0.005 ppb	0.057 ppb	84.219 %	1.083 ppb
Concentration RSD	2.0 %	80.5 %	2.0 %	5.5 %	0.8 %	70.2 %	15.3 %	0.9 %	1.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.571 ppb	91.159 %	88.315 %	0.070 ppb	0.877 ppb	88.131 %
Concentration per Run 1	58.084 ppb	90.392 %	88.857 %	0.047 ppb	0.851 ppb	88.547 %
Concentration per Run 2	64.650 ppb	92.738 %	88.384 %	0.079 ppb	0.861 ppb	88.124 %
Concentration per Run 3	61.980 ppb	90.347 %	87.704 %	0.084 ppb	0.920 ppb	87.724 %
Concentration RSD	5.4 %	1.5 %	0.7 %	29.2 %	4.2 %	0.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	116	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417351-01 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:52:07 PM	Vial	27		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.532 %	101.047 %	0.318 ppb	76,425.403 ppb	64,278.247 ppb	13.638 ppb	35,921.516 ppb	408,740.716 ppb	93.837 %
Concentration per Run 1	102.020 %	105.236 %	0.300 ppb	71,465.782 ppb	59,719.679 ppb	10.995 ppb	34,206.178 ppb	412,364.206 ppb	94.394 %
Concentration per Run 2	105.121 %	112.304 %	0.341 ppb	71,278.774 ppb	59,353.749 ppb	10.852 ppb	34,100.041 ppb	411,028.025 ppb	94.925 %
Concentration per Run 3	106.456 %	85.602 %	0.313 ppb	86,531.653 ppb	73,761.312 ppb	19.068 ppb	39,458.328 ppb	402,829.917 ppb	92.191 %
Concentration RSD	2.2 %	13.7 %	6.6 %	11.5 %	12.8 %	34.5 %	8.5 %	1.3 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.295 ppb	0.394 ppb	11,589.724 ppb	329,100.726 ppb	49.679 ppb	22.118 ppb	1.603 ppb	252,668.566 ppb	86.645 %
Concentration per Run 1	0.271 ppb	0.336 ppb	11,431.416 ppb	328,096.715 ppb	49.590 ppb	22.262 ppb	1.585 ppb	256,628.725 ppb	82.093 %
Concentration per Run 2	0.141 ppb	0.380 ppb	11,279.154 ppb	320,362.291 ppb	48.896 ppb	22.361 ppb	1.392 ppb	254,803.711 ppb	89.509 %
Concentration per Run 3	0.474 ppb	0.466 ppb	12,058.601 ppb	338,843.173 ppb	50.550 ppb	21.731 ppb	1.830 ppb	246,573.260 ppb	88.331 %
Concentration RSD	56.8 %	16.8 %	3.6 %	2.8 %	1.7 %	1.5 %	13.7 %	2.1 %	4.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	5.877 ppb	1.410 ppb	1,202.879 ppb	0.607 ppb	77.991 %	0.002 ppb	7.655 ppb	81.793 %	0.117 ppb
Concentration per Run 1	6.310 ppb	1.118 ppb	1,229.864 ppb	0.788 ppb	76.095 %	-0.001 ppb	8.069 ppb	79.859 %	0.138 ppb
Concentration per Run 2	5.632 ppb	1.520 ppb	1,191.392 ppb	0.634 ppb	79.486 %	0.003 ppb	7.495 ppb	83.343 %	0.096 ppb
Concentration per Run 3	5.689 ppb	1.590 ppb	1,187.380 ppb	0.400 ppb	78.391 %	0.003 ppb	7.400 ppb	82.177 %	0.117 ppb
Concentration RSD	6.4 %	18.1 %	1.9 %	32.1 %	2.2 %	145.0 %	4.7 %	2.2 %	18.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	15.065 ppb	86.471 %	82.948 %	0.062 ppb	0.078 ppb	79.500 %
Concentration per Run 1	16.772 ppb	85.446 %	81.137 %	0.029 ppb	0.082 ppb	81.576 %
Concentration per Run 2	14.146 ppb	86.559 %	83.220 %	0.062 ppb	0.075 ppb	78.555 %
Concentration per Run 3	14.278 ppb	87.408 %	84.486 %	0.095 ppb	0.077 ppb	78.369 %
Concentration RSD	9.8 %	1.1 %	2.0 %	52.9 %	4.5 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	117	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417351-02 6020SL	Rack	2		
Analysis started at:	4/3/2024 7:56:36 PM	Vial	28		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	122.078 %	116.492 %	0.614 ppb	49,592.888 ppb	75,987.527 ppb	21.577 ppb	15,625.146 ppb	361,997.466 ppb	107.591 %
Concentration per Run 1	119.343 %	106.806 %	0.638 ppb	51,633.873 ppb	80,107.714 ppb	24.236 ppb	16,140.259 ppb	358,601.440 ppb	105.774 %
Concentration per Run 2	122.671 %	119.372 %	0.644 ppb	49,573.177 ppb	76,318.018 ppb	20.811 ppb	15,805.562 ppb	372,686.340 ppb	108.328 %
Concentration per Run 3	124.220 %	123.299 %	0.560 ppb	47,571.614 ppb	71,536.849 ppb	19.685 ppb	14,929.618 ppb	354,704.618 ppb	108.669 %
Concentration RSD	2.0 %	7.4 %	7.7 %	4.1 %	5.7 %	11.0 %	4.0 %	2.6 %	1.5 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.215 ppb	0.458 ppb	13,616.965 ppb	184,031.088 ppb	101.553 ppb	74.688 ppb	5.975 ppb	292,400.975 ppb	85.646 %
Concentration per Run 1	0.334 ppb	0.477 ppb	13,901.620 ppb	191,668.918 ppb	105.366 ppb	76.411 ppb	5.772 ppb	289,273.916 ppb	85.214 %
Concentration per Run 2	0.074 ppb	0.483 ppb	13,780.225 ppb	182,930.290 ppb	102.256 ppb	75.089 ppb	6.309 ppb	292,813.264 ppb	83.425 %
Concentration per Run 3	0.236 ppb	0.413 ppb	13,169.050 ppb	177,494.055 ppb	97.037 ppb	72.564 ppb	5.843 ppb	295,115.744 ppb	88.299 %
Concentration RSD	61.3 %	8.4 %	2.9 %	3.9 %	4.1 %	2.6 %	4.9 %	1.0 %	2.9 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	34.356 ppb	3.518 ppb	817.195 ppb	0.063 ppb	90.725 %	0.000 ppb	15.341 ppb	92.093 %	0.037 ppb
Concentration per Run 1	35.478 ppb	2.629 ppb	813.769 ppb	0.058 ppb	90.956 %	0.001 ppb	15.018 ppb	90.644 %	0.030 ppb
Concentration per Run 2	33.655 ppb	4.147 ppb	814.777 ppb	0.058 ppb	90.494 %	0.001 ppb	15.569 ppb	91.961 %	0.035 ppb
Concentration per Run 3	33.934 ppb	3.777 ppb	823.039 ppb	0.074 ppb	90.724 %	-0.001 ppb	15.436 ppb	93.673 %	0.045 ppb
Concentration RSD	2.9 %	22.5 %	0.6 %	14.6 %	0.3 %	999.2 %	1.9 %	1.6 %	21.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	11.504 ppb	100.518 %	97.698 %	0.143 ppb	0.169 ppb	95.780 %
Concentration per Run 1	11.277 ppb	101.300 %	97.907 %	0.122 ppb	0.150 ppb	95.010 %
Concentration per Run 2	11.863 ppb	98.085 %	96.101 %	0.162 ppb	0.186 ppb	95.651 %
Concentration per Run 3	11.373 ppb	102.168 %	99.085 %	0.145 ppb	0.172 ppb	96.679 %
Concentration RSD	2.7 %	2.1 %	1.5 %	14.0 %	10.8 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	118	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903804-6d5 6020SL	Rack	2		
Analysis started at:	4/3/2024 8:01:04 PM	Vial	25		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	108.627 %	91.623 %	0.008 ppb	114,576.622 ppb	1,706.192 ppb	2.934 ppb	9,938.217 ppb	14,255.405 ppb	96.420 %
Concentration per Run 1	107.624 %	88.743 %	0.017 ppb	116,481.175 ppb	1,707.582 ppb	3.261 ppb	10,026.564 ppb	15,198.217 ppb	94.096 %
Concentration per Run 2	107.433 %	83.246 %	0.002 ppb	118,999.280 ppb	1,792.984 ppb	3.344 ppb	10,078.063 ppb	13,376.030 ppb	96.420 %
Concentration per Run 3	110.824 %	102.880 %	0.006 ppb	108,249.410 ppb	1,618.009 ppb	2.198 ppb	9,710.023 ppb	14,191.970 ppb	98.744 %
Concentration RSD	1.8 %	11.1 %	91.3 %	4.9 %	5.1 %	21.8 %	2.0 %	6.4 %	2.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.186 ppb	0.238 ppb	136.052 ppb	196.209 ppb	0.325 ppb	1.797 ppb	0.138 ppb	227.037 ppb	87.128 %
Concentration per Run 1	0.216 ppb	0.307 ppb	144.671 ppb	266.966 ppb	0.374 ppb	1.945 ppb	0.089 ppb	325.570 ppb	80.625 %
Concentration per Run 2	0.126 ppb	0.194 ppb	133.387 ppb	201.263 ppb	0.322 ppb	1.956 ppb	0.144 ppb	206.462 ppb	89.108 %
Concentration per Run 3	0.216 ppb	0.214 ppb	130.098 ppb	120.398 ppb	0.280 ppb	1.490 ppb	0.181 ppb	149.079 ppb	91.651 %
Concentration RSD	27.8 %	25.2 %	5.6 %	37.4 %	14.5 %	14.8 %	33.4 %	39.7 %	6.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.530 ppb	0.245 ppb	73.796 ppb	6.930 ppb	90.701 %	0.001 ppb	0.020 ppb	87.105 %	0.168 ppb
Concentration per Run 1	0.789 ppb	0.269 ppb	76.360 ppb	7.052 ppb	88.207 %	0.003 ppb	0.041 ppb	87.801 %	0.176 ppb
Concentration per Run 2	0.438 ppb	0.338 ppb	73.332 ppb	6.491 ppb	87.521 %	0.001 ppb	0.007 ppb	82.108 %	0.120 ppb
Concentration per Run 3	0.362 ppb	0.128 ppb	71.697 ppb	7.246 ppb	96.374 %	-0.001 ppb	0.013 ppb	91.406 %	0.208 ppb
Concentration RSD	43.0 %	43.6 %	3.2 %	5.7 %	5.4 %	238.5 %	88.9 %	5.4 %	26.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	35.042 ppb	92.189 %	89.237 %	0.027 ppb	0.347 ppb	94.013 %
Concentration per Run 1	35.147 ppb	89.659 %	87.544 %	0.015 ppb	0.360 ppb	91.222 %
Concentration per Run 2	35.335 ppb	90.088 %	86.295 %	0.033 ppb	0.324 ppb	93.176 %
Concentration per Run 3	34.643 ppb	96.819 %	93.873 %	0.033 ppb	0.357 ppb	97.641 %
Concentration RSD	1.0 %	4.4 %	4.6 %	39.7 %	5.7 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	119	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 8:05:33 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	115.156 %	110.209 %	55.371 ppb	6,636.730 ppb	6,573.478 ppb	56.953 ppb	7,026.268 ppb	7,395.351 ppb	102.581 %
Concentration per Run 1	112.820 %	86.387 %	55.786 ppb	7,772.821 ppb	7,662.467 ppb	63.342 ppb	7,968.205 ppb	7,525.983 ppb	101.810 %
Concentration per Run 2	117.079 %	122.513 %	54.646 ppb	5,934.192 ppb	5,894.782 ppb	52.487 ppb	6,137.401 ppb	6,931.844 ppb	102.978 %
Concentration per Run 3	115.568 %	121.728 %	55.680 ppb	6,203.177 ppb	6,163.184 ppb	55.031 ppb	6,973.199 ppb	7,728.226 ppb	102.954 %
Recovery Percentage 1			92.285 %	110.612 %	109.558 %	94.922 %	117.104 %	123.256 %	
Concentration RSD	1.9 %	18.7 %	1.1 %	15.0 %	14.5 %	10.0 %	13.0 %	5.6 %	0.7 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	62.406 ppb	63.601 ppb	60.391 ppb	6,109.077 ppb	63.060 ppb	65.126 ppb	64.556 ppb	76.522 ppb	99.503 %
Concentration per Run 1	66.791 ppb	69.777 ppb	64.447 ppb	6,645.688 ppb	66.213 ppb	68.056 ppb	66.451 ppb	86.141 ppb	96.719 %
Concentration per Run 2	59.133 ppb	59.031 ppb	56.856 ppb	5,906.569 ppb	60.735 ppb	64.931 ppb	61.954 ppb	75.950 ppb	100.527 %
Concentration per Run 3	61.293 ppb	61.995 ppb	59.870 ppb	5,774.974 ppb	62.231 ppb	62.392 ppb	65.264 ppb	67.476 ppb	101.265 %
Recovery Percentage 1	104.010 %	106.001 %	100.651 %	101.818 %	105.100 %	108.544 %	107.594 %	127.537 %	
Concentration RSD	6.3 %	8.7 %	6.3 %	7.7 %	4.5 %	4.4 %	3.6 %	12.2 %	2.5 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	63.683 ppb	60.966 ppb	61.661 ppb	57.578 ppb	99.353 %	60.636 ppb	61.079 ppb	95.736 %	59.221 ppb
Concentration per Run 1	64.302 ppb	58.111 ppb	62.392 ppb	59.781 ppb	96.676 %	62.463 ppb	62.910 ppb	94.022 %	60.967 ppb
Concentration per Run 2	61.954 ppb	61.189 ppb	61.146 ppb	55.710 ppb	98.037 %	59.802 ppb	60.044 ppb	94.040 %	58.168 ppb
Concentration per Run 3	64.794 ppb	63.597 ppb	61.446 ppb	57.244 ppb	103.347 %	59.645 ppb	60.284 ppb	99.146 %	58.529 ppb
Recovery Percentage 1	106.139 %	101.609 %	102.769 %	95.964 %		101.061 %	101.799 %		98.702 %
Concentration RSD	2.4 %	4.5 %	1.1 %	3.6 %	3.5 %	2.6 %	2.6 %	3.1 %	2.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.301 ppb	99.607 %	96.782 %	62.422 ppb	62.710 ppb	100.406 %
Concentration per Run 1	59.291 ppb	99.236 %	98.247 %	61.688 ppb	62.853 ppb	101.646 %
Concentration per Run 2	55.535 ppb	96.242 %	93.494 %	61.722 ppb	62.816 ppb	98.012 %
Concentration per Run 3	60.078 ppb	103.342 %	98.604 %	63.857 ppb	62.462 ppb	101.561 %
Recovery Percentage 1	97.169 %			104.037 %	104.517 %	
Concentration RSD	4.2 %	3.6 %	2.9 %	2.0 %	0.3 %	2.1 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	120	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 8:10:04 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	113.683 %	110.733 %	0.022 ppb	136.820 ppb	0.083 ppb	-0.103 ppb	62.383 ppb	-10.793 ppb	92.724 %
Concentration per Run 1	112.705 %	114.660 %	0.025 ppb	126.449 ppb	0.757 ppb	-0.199 ppb	44.182 ppb	-22.342 ppb	92.707 %
Concentration per Run 2	114.288 %	111.518 %	0.021 ppb	145.847 ppb	0.445 ppb	-0.420 ppb	66.266 ppb	-8.809 ppb	90.895 %
Concentration per Run 3	114.055 %	106.021 %	0.021 ppb	138.163 ppb	-0.952 ppb	0.310 ppb	76.700 ppb	-1.228 ppb	94.570 %
Recovery Percentage 1			4.418 %	136.820 %	0.119 %	-1.029 %	62.383 %	-10.793 %	
Concentration RSD	0.8 %	3.9 %	11.5 %	7.1 %	1,090.7 %	363.7 %	26.6 %	99.1 %	2.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.054 ppb	0.117 ppb	0.127 ppb	6.512 ppb	0.005 ppb	-0.166 ppb	-0.017 ppb	2.911 ppb	136.556 %
Concentration per Run 1	0.059 ppb	0.119 ppb	0.142 ppb	4.353 ppb	0.003 ppb	-0.147 ppb	-0.022 ppb	1.455 ppb	142.293 %
Concentration per Run 2	-0.068 ppb	0.084 ppb	0.162 ppb	6.218 ppb	0.004 ppb	-0.174 ppb	-0.019 ppb	3.627 ppb	128.823 %
Concentration per Run 3	0.171 ppb	0.149 ppb	0.078 ppb	8.965 ppb	0.008 ppb	-0.177 ppb	-0.010 ppb	3.652 ppb	138.552 %
Recovery Percentage 1	1.085 %	11.701 %	12.711 %	13.024 %	0.982 %	-8.299 %	-1.674 %	58.225 %	
Concentration RSD	220.0 %	28.0 %	34.7 %	35.6 %	55.8 %	10.1 %	36.8 %	43.3 %	5.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.078 ppb	0.104 ppb	0.002 ppb	0.166 ppb	99.307 %	0.031 ppb	0.006 ppb	96.669 %	0.019 ppb
Concentration per Run 1	0.105 ppb	0.111 ppb	-0.007 ppb	0.070 ppb	102.457 %	0.025 ppb	0.012 ppb	96.805 %	0.007 ppb
Concentration per Run 2	0.055 ppb	0.218 ppb	0.009 ppb	0.132 ppb	97.573 %	0.041 ppb	0.006 ppb	97.108 %	0.015 ppb
Concentration per Run 3	0.073 ppb	-0.018 ppb	0.005 ppb	0.295 ppb	97.890 %	0.027 ppb	0.000 ppb	96.095 %	0.035 ppb
Recovery Percentage 1	15.548 %	2.074 %	0.022 %	8.291 %		7.723 %	3.058 %		0.471 %
Concentration RSD	32.9 %	114.3 %	388.8 %	70.0 %	2.8 %	27.8 %	99.5 %	0.5 %	78.0 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.009 ppb	101.999 %	98.370 %	0.459 ppb	0.011 ppb	100.742 %
Concentration per Run 1	-0.022 ppb	100.518 %	97.522 %	0.340 ppb	0.016 ppb	100.761 %
Concentration per Run 2	0.001 ppb	103.672 %	100.493 %	0.579 ppb	0.008 ppb	101.965 %
Concentration per Run 3	0.047 ppb	101.808 %	97.096 %	0.457 ppb	0.007 ppb	99.500 %
Recovery Percentage 1	1.702 %			45.854 %	1.061 %	
Concentration RSD	408.4 %	1.6 %	1.9 %	26.1 %	47.5 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 121
Analysis label: L2417351-03 6020SL
Analysis started at: 4/3/2024 8:14:37 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 29
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	108.499 %	106.283 %	0.301 ppb	200,622.675 ppb	229,069.260 ppb	21.882 ppb	50,781.675 ppb	348,963.780 ppb	104.031 %
Concentration per Run 1	106.194 %	95.026 %	0.311 ppb	211,524.389 ppb	239,886.522 ppb	21.553 ppb	49,860.829 ppb	303,322.065 ppb	102.132 %
Concentration per Run 2	109.432 %	109.162 %	0.290 ppb	191,759.179 ppb	221,293.531 ppb	23.030 ppb	49,677.638 ppb	357,551.004 ppb	106.155 %
Concentration per Run 3	109.873 %	114.660 %	0.301 ppb	198,584.456 ppb	226,027.727 ppb	21.061 ppb	52,806.558 ppb	386,018.269 ppb	103.807 %
Concentration RSD	1.9 %	9.5 %	3.7 %	5.0 %	4.2 %	4.7 %	3.5 %	12.0 %	1.9 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.744 ppb	0.893 ppb	83,664.153 ppb	362,789.420 ppb	134.764 ppb	129.232 ppb	5.327 ppb	2,377,177.059 ppb	107.159 %
Concentration per Run 1	0.721 ppb	0.821 ppb	76,887.911 ppb	337,464.408 ppb	123.012 ppb	118.347 ppb	4.837 ppb	2,092,688.986 ppb	119.793 %
Concentration per Run 2	0.764 ppb	0.916 ppb	84,556.665 ppb	366,967.799 ppb	136.313 ppb	130.934 ppb	5.257 ppb	2,379,249.345 ppb	103.859 %
Concentration per Run 3	0.748 ppb	0.940 ppb	89,547.881 ppb	383,936.053 ppb	144.968 ppb	138.414 ppb	5.888 ppb	2,659,592.846 ppb	97.826 %
Concentration RSD	2.9 %	7.1 %	7.6 %	6.5 %	8.2 %	7.8 %	9.9 %	11.9 %	10.6 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	39.982 ppb	11.440 ppb	1,677.538 ppb	0.465 ppb	87.864 %	0.022 ppb	620.938 ppb	94.408 %	0.038 ppb
Concentration per Run 1	34.231 ppb	10.087 ppb	1,575.213 ppb	0.578 ppb	85.830 %	0.047 ppb	632.687 ppb	93.346 %	0.058 ppb
Concentration per Run 2	41.141 ppb	10.856 ppb	1,629.790 ppb	0.390 ppb	85.615 %	0.014 ppb	614.873 ppb	89.991 %	0.019 ppb
Concentration per Run 3	44.575 ppb	13.377 ppb	1,827.611 ppb	0.426 ppb	92.148 %	0.005 ppb	615.255 ppb	99.886 %	0.038 ppb
Concentration RSD	13.2 %	15.0 %	7.9 %	21.4 %	4.2 %	102.6 %	1.6 %	5.3 %	50.6 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	14.460 ppb	100.344 %	93.260 %	0.302 ppb	0.741 ppb	89.416 %
Concentration per Run 1	14.634 ppb	100.064 %	91.715 %	0.260 ppb	0.778 ppb	88.925 %
Concentration per Run 2	14.475 ppb	95.603 %	90.359 %	0.329 ppb	0.724 ppb	87.258 %
Concentration per Run 3	14.271 ppb	105.366 %	97.707 %	0.318 ppb	0.722 ppb	92.064 %
Concentration RSD	1.3 %	4.9 %	4.2 %	12.2 %	4.3 %	2.7 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 122
Analysis label: L2417351-04 6020SL
Analysis started at: 4/3/2024 8:19:05 PM
User name ALPHALAB\a2-icpmsq2
Rack 2
Vial 30
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.667 %	114.136 %	0.075 ppb	162,837.493 ppb	86,304.205 ppb	11.761 ppb	7,283.370 ppb	126,079.540 ppb	102.725 %
Concentration per Run 1	114.591 %	118.586 %	0.066 ppb	159,993.260 ppb	86,152.828 ppb	10.588 ppb	7,023.623 ppb	126,781.975 ppb	102.605 %
Concentration per Run 2	116.405 %	100.524 %	0.086 ppb	170,944.069 ppb	89,694.025 ppb	12.434 ppb	7,483.144 ppb	122,447.460 ppb	104.195 %
Concentration per Run 3	113.006 %	123.299 %	0.073 ppb	157,575.149 ppb	83,065.763 ppb	12.262 ppb	7,343.344 ppb	129,009.185 ppb	101.376 %
Concentration RSD	1.5 %	10.5 %	13.1 %	4.4 %	3.8 %	8.7 %	3.2 %	2.6 %	1.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.127 ppb	0.203 ppb	8,049.229 ppb	404,669.390 ppb	36.466 ppb	16.891 ppb	0.292 ppb	63,858.003 ppb	134.640 %
Concentration per Run 1	0.012 ppb	0.186 ppb	8,311.104 ppb	413,640.184 ppb	37.680 ppb	17.260 ppb	0.335 ppb	66,255.409 ppb	132.852 %
Concentration per Run 2	0.204 ppb	0.233 ppb	7,864.910 ppb	398,707.346 ppb	35.929 ppb	16.481 ppb	0.300 ppb	60,367.484 ppb	136.462 %
Concentration per Run 3	0.165 ppb	0.191 ppb	7,971.673 ppb	401,660.640 ppb	35.789 ppb	16.931 ppb	0.242 ppb	64,951.116 ppb	134.605 %
Concentration RSD	80.2 %	12.9 %	2.9 %	2.0 %	2.9 %	2.3 %	16.2 %	4.8 %	1.3 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	15.042 ppb	0.004 ppb	421.374 ppb	0.149 ppb	93.767 %	0.008 ppb	6.329 ppb	95.971 %	0.017 ppb
Concentration per Run 1	14.895 ppb	0.024 ppb	438.911 ppb	0.180 ppb	92.637 %	0.013 ppb	6.822 ppb	94.977 %	0.027 ppb
Concentration per Run 2	14.506 ppb	-0.049 ppb	412.132 ppb	0.132 ppb	94.784 %	0.003 ppb	5.882 ppb	94.887 %	0.004 ppb
Concentration per Run 3	15.725 ppb	0.037 ppb	413.079 ppb	0.134 ppb	93.880 %	0.009 ppb	6.282 ppb	98.049 %	0.020 ppb
Concentration RSD	4.1 %	1,228.4 %	3.6 %	18.1 %	1.1 %	63.2 %	7.5 %	1.9 %	68.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	22.738 ppb	103.501 %	101.990 %	0.081 ppb	0.026 ppb	95.787 %
Concentration per Run 1	24.221 ppb	102.503 %	103.165 %	0.047 ppb	0.028 ppb	96.320 %
Concentration per Run 2	21.817 ppb	104.138 %	103.597 %	0.092 ppb	0.024 ppb	92.335 %
Concentration per Run 3	22.174 ppb	103.862 %	99.209 %	0.104 ppb	0.028 ppb	98.705 %
Concentration RSD	5.7 %	0.8 %	2.4 %	37.1 %	9.2 %	3.4 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	123	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417351-05 6020SL	Rack	2		
Analysis started at:	4/3/2024 8:23:34 PM	Vial	31		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	124.774 %	112.304 %	0.010 ppb	28,471.644 ppb	15,850.579 ppb	4.019 ppb	11,297.486 ppb	78,314.517 ppb	111.221 %
Concentration per Run 1	123.686 %	98.168 %	0.007 ppb	37,857.244 ppb	21,235.731 ppb	6.592 ppb	15,846.894 ppb	117,924.850 ppb	110.009 %
Concentration per Run 2	125.403 %	124.084 %	0.008 ppb	21,335.277 ppb	11,704.956 ppb	1.542 ppb	7,865.537 ppb	49,152.038 ppb	110.373 %
Concentration per Run 3	125.232 %	114.660 %	0.015 ppb	26,222.410 ppb	14,611.049 ppb	3.922 ppb	10,180.028 ppb	67,866.662 ppb	113.282 %
Concentration RSD	0.8 %	11.7 %	45.0 %	29.8 %	30.8 %	62.9 %	36.3 %	45.4 %	1.6 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	3.171 ppb	0.079 ppb	1,119.771 ppb	2,964.533 ppb	1.289 ppb	1.785 ppb	3.090 ppb	8,420.215 ppb	351.215 %
Concentration per Run 1	4.980 ppb	0.161 ppb	1,675.235 ppb	4,409.171 ppb	1.988 ppb	2.626 ppb	4.569 ppb	8,872.111 ppb	200.689 %
Concentration per Run 2	1.795 ppb	0.036 ppb	695.935 ppb	1,818.844 ppb	0.800 ppb	1.134 ppb	2.020 ppb	8,007.578 ppb	498.408 %
Concentration per Run 3	2.738 ppb	0.039 ppb	988.144 ppb	2,665.583 ppb	1.078 ppb	1.595 ppb	2.680 ppb	8,380.957 ppb	354.548 %
Concentration RSD	51.6 %	90.2 %	44.9 %	44.6 %	48.2 %	42.8 %	42.8 %	5.1 %	42.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.808 ppb	0.232 ppb	**164.972 ppb**	8.004 ppb	102.079 %	-0.001 ppb	11.475 ppb	105.757 %	0.099 ppb
Concentration per Run 1	1.418 ppb	0.384 ppb	234.769 ppb	10.318 ppb	97.908 %	-0.001 ppb	11.832 ppb	103.184 %	0.081 ppb
Concentration per Run 2	0.369 ppb	-0.002 ppb	112.524 ppb	6.593 ppb	104.320 %	0.001 ppb	11.469 ppb	109.267 %	0.096 ppb
Concentration per Run 3	0.637 ppb	0.314 ppb	147.622 ppb	7.102 ppb	104.010 %	-0.001 ppb	11.122 ppb	104.820 %	0.120 ppb
Concentration RSD	67.4 %	88.7 %	38.2 %	25.2 %	3.5 %	153.4 %	3.1 %	3.0 %	19.7 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	38.981 ppb	108.253 %	105.734 %	0.078 ppb	0.294 ppb	101.714 %
Concentration per Run 1	39.976 ppb	102.365 %	100.331 %	0.040 ppb	0.280 ppb	104.027 %
Concentration per Run 2	38.621 ppb	112.575 %	110.251 %	0.091 ppb	0.303 ppb	99.539 %
Concentration per Run 3	38.345 ppb	109.820 %	106.619 %	0.102 ppb	0.299 ppb	101.577 %
Concentration RSD	2.2 %	4.9 %	4.7 %	42.5 %	4.2 %	2.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	124	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417351-06 6020SL	Rack	2		
Analysis started at:	4/3/2024 8:28:02 PM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	119.403 %	118.325 %	0.109 ppb	182,110.009 ppb	144,641.690 ppb	12.701 ppb	20,603.617 ppb	342,376.232 ppb	106.133 %
Concentration per Run 1	116.585 %	103.665 %	0.097 ppb	210,585.559 ppb	167,228.905 ppb	14.352 ppb	23,278.417 ppb	360,105.466 ppb	105.418 %
Concentration per Run 2	120.484 %	134.293 %	0.101 ppb	163,316.054 ppb	129,204.566 ppb	10.786 ppb	18,608.473 ppb	337,207.733 ppb	107.743 %
Concentration per Run 3	121.140 %	117.016 %	0.129 ppb	172,428.414 ppb	137,491.599 ppb	12.964 ppb	19,923.960 ppb	329,815.498 ppb	105.237 %
Concentration RSD	2.1 %	13.0 %	16.3 %	13.8 %	13.8 %	14.1 %	11.7 %	4.6 %	1.3 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.143 ppb	0.370 ppb	23,957.657 ppb	334,654.287 ppb	150.955 ppb	126.256 ppb	5.278 ppb	508,878.236 ppb	110.560 %
Concentration per Run 1	0.089 ppb	0.407 ppb	26,454.708 ppb	362,644.143 ppb	162.204 ppb	136.050 ppb	5.351 ppb	554,412.694 ppb	109.722 %
Concentration per Run 2	0.046 ppb	0.333 ppb	22,376.100 ppb	319,155.313 ppb	143.858 ppb	120.701 ppb	5.355 ppb	497,131.894 ppb	111.780 %
Concentration per Run 3	0.293 ppb	0.369 ppb	23,042.163 ppb	322,163.406 ppb	146.802 ppb	122.018 ppb	5.128 ppb	475,090.121 ppb	110.178 %
Concentration RSD	92.5 %	10.0 %	9.1 %	7.3 %	6.5 %	6.7 %	2.5 %	8.0 %	1.0 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	26.164 ppb	1.613 ppb	1,121.426 ppb	0.952 ppb	98.482 %	-0.001 ppb	5,086.379 ppb	103.706 %	0.053 ppb
Concentration per Run 1	28.446 ppb	1.629 ppb	1,205.489 ppb	1.091 ppb	94.857 %	0.001 ppb	5,371.922 ppb	99.268 %	0.022 ppb
Concentration per Run 2	24.792 ppb	1.489 ppb	1,081.068 ppb	0.770 ppb	99.396 %	-0.001 ppb	5,004.653 ppb	104.853 %	0.079 ppb
Concentration per Run 3	25.254 ppb	1.722 ppb	1,077.722 ppb	0.997 ppb	101.194 %	-0.001 ppb	4,882.564 ppb	106.997 %	0.059 ppb
Concentration RSD	7.6 %	7.3 %	6.5 %	17.3 %	3.3 %	185.2 %	5.0 %	3.8 %	54.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	12.912 ppb	108.664 %	105.558 %	0.077 ppb	0.330 ppb	97.640 %
Concentration per Run 1	14.090 ppb	106.384 %	103.451 %	0.070 ppb	0.325 ppb	99.039 %
Concentration per Run 2	12.139 ppb	109.369 %	109.922 %	0.091 ppb	0.330 ppb	98.772 %
Concentration per Run 3	12.509 ppb	110.237 %	103.303 %	0.068 ppb	0.335 ppb	95.108 %
Concentration RSD	8.0 %	1.9 %	3.6 %	16.6 %	1.6 %	2.2 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index: 125 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: CCV Rack 0
Analysis started at: 4/3/2024 8:32:31 PM Vial 9

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	122.274 %	123.037 %	55.125 ppb	6,456.882 ppb	6,421.985 ppb	57.716 ppb	6,637.130 ppb	7,455.478 ppb	106.912 %
Concentration per Run 1	117.976 %	128.796 %	54.589 ppb	6,314.410 ppb	6,220.627 ppb	54.644 ppb	6,479.448 ppb	7,288.891 ppb	103.929 %
Concentration per Run 2	123.828 %	124.084 %	55.075 ppb	6,299.975 ppb	6,407.210 ppb	59.049 ppb	6,598.000 ppb	7,590.965 ppb	108.778 %
Concentration per Run 3	125.018 %	116.230 %	55.712 ppb	6,756.260 ppb	6,638.118 ppb	59.455 ppb	6,833.943 ppb	7,486.577 ppb	108.030 %
Recovery Percentage 1			91.875 %	107.615 %	107.033 %	96.193 %	110.619 %	124.258 %	
Concentration RSD	3.1 %	5.2 %	1.0 %	4.0 %	3.3 %	4.6 %	2.7 %	2.1 %	2.4 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	60.598 ppb	63.307 ppb	68.925 ppb	6,223.140 ppb	62.862 ppb	62.869 ppb	62.292 ppb	206.071 ppb	112.356 %
Concentration per Run 1	59.428 ppb	61.211 ppb	73.505 ppb	6,238.554 ppb	61.735 ppb	59.761 ppb	61.299 ppb	255.721 ppb	118.416 %
Concentration per Run 2	58.234 ppb	62.538 ppb	65.321 ppb	6,107.977 ppb	61.707 ppb	62.263 ppb	60.986 ppb	198.277 ppb	111.534 %
Concentration per Run 3	64.131 ppb	66.172 ppb	67.948 ppb	6,322.888 ppb	65.143 ppb	66.583 ppb	64.591 ppb	164.214 ppb	107.119 %
Recovery Percentage 1	100.996 %	105.512 %	114.874 %	103.719 %	104.770 %	104.781 %	103.820 %	343.451 %	
Concentration RSD	5.1 %	4.1 %	6.1 %	1.7 %	3.1 %	5.5 %	3.2 %	22.4 %	5.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	60.625 ppb	60.006 ppb	60.271 ppb	57.738 ppb	112.234 %	59.504 ppb	61.210 ppb	107.771 %	59.882 ppb
Concentration per Run 1	57.885 ppb	64.353 ppb	61.744 ppb	58.566 ppb	116.128 %	58.297 ppb	60.116 ppb	113.730 %	59.588 ppb
Concentration per Run 2	60.680 ppb	54.220 ppb	60.762 ppb	56.365 ppb	110.853 %	60.406 ppb	61.909 ppb	108.042 %	60.172 ppb
Concentration per Run 3	63.309 ppb	61.445 ppb	58.307 ppb	58.284 ppb	109.721 %	59.809 ppb	61.605 ppb	101.540 %	59.887 ppb
Recovery Percentage 1	101.041 %	100.010 %	100.452 %	96.231 %		99.173 %	102.017 %		99.804 %
Concentration RSD	4.5 %	8.7 %	2.9 %	2.1 %	3.0 %	1.8 %	1.6 %	5.7 %	0.5 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.803 ppb	115.491 %	112.753 %	60.497 ppb	61.692 ppb	116.952 %
Concentration per Run 1	60.927 ppb	119.917 %	117.057 %	57.692 ppb	60.028 ppb	121.661 %
Concentration per Run 2	59.639 ppb	116.842 %	111.511 %	61.421 ppb	62.132 ppb	115.789 %
Concentration per Run 3	58.843 ppb	109.714 %	109.690 %	62.378 ppb	62.915 ppb	113.406 %
Recovery Percentage 1	99.671 %			100.829 %	102.820 %	
Concentration RSD	1.8 %	4.5 %	3.4 %	4.1 %	2.4 %	3.6 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	126	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 8:37:02 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	120.434 %	122.775 %	0.021 ppb	134.183 ppb	4.145 ppb	-0.472 ppb	51.792 ppb	27.149 ppb	104.392 %
Concentration per Run 1	118.355 %	127.225 %	0.013 ppb	139.131 ppb	5.610 ppb	-0.187 ppb	69.128 ppb	-9.729 ppb	103.276 %
Concentration per Run 2	121.279 %	120.157 %	0.022 ppb	135.780 ppb	3.217 ppb	-1.365 ppb	38.295 ppb	69.378 ppb	105.298 %
Concentration per Run 3	121.669 %	120.942 %	0.027 ppb	127.637 ppb	3.609 ppb	0.135 ppb	47.952 ppb	21.797 ppb	104.601 %
Recovery Percentage 1			4.165 %	134.183 %	5.922 %	-4.721 %	51.792 %	27.149 %	
Concentration RSD	1.5 %	3.2 %	33.1 %	4.4 %	31.0 %	167.2 %	30.5 %	146.7 %	1.0 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.078 ppb	0.119 ppb	0.564 ppb	18.609 ppb	0.018 ppb	-0.104 ppb	0.063 ppb	18.714 ppb	111.363 %
Concentration per Run 1	0.163 ppb	0.164 ppb	0.452 ppb	21.611 ppb	0.026 ppb	-0.170 ppb	0.023 ppb	16.282 ppb	112.217 %
Concentration per Run 2	0.052 ppb	0.113 ppb	0.698 ppb	19.862 ppb	0.016 ppb	0.008 ppb	0.039 ppb	20.704 ppb	109.234 %
Concentration per Run 3	0.020 ppb	0.080 ppb	0.541 ppb	14.354 ppb	0.010 ppb	-0.150 ppb	0.126 ppb	19.155 ppb	112.637 %
Recovery Percentage 1	1.567 %	11.911 %	56.368 %	37.218 %	3.506 %	-5.200 %	6.258 %	374.272 %	
Concentration RSD	95.5 %	35.8 %	22.1 %	20.4 %	46.4 %	93.8 %	88.3 %	12.0 %	1.7 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.250 ppb	0.071 ppb	0.038 ppb	0.174 ppb	109.167 %	0.055 ppb	0.084 ppb	106.268 %	0.071 ppb
Concentration per Run 1	0.296 ppb	-0.028 ppb	0.041 ppb	0.099 ppb	110.912 %	0.061 ppb	0.082 ppb	110.033 %	0.080 ppb
Concentration per Run 2	0.287 ppb	0.170 ppb	0.044 ppb	0.183 ppb	109.927 %	0.046 ppb	0.099 ppb	108.767 %	0.057 ppb
Concentration per Run 3	0.167 ppb	0.071 ppb	0.028 ppb	0.241 ppb	106.662 %	0.057 ppb	0.071 ppb	100.005 %	0.076 ppb
Recovery Percentage 1	50.016 %	1.412 %	0.377 %	8.719 %		13.709 %	41.866 %		1.777 %
Concentration RSD	28.7 %	140.3 %	21.9 %	41.1 %	2.0 %	14.0 %	17.2 %	5.1 %	17.2 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.013 ppb	110.475 %	108.591 %	0.465 ppb	0.018 ppb	113.228 %
Concentration per Run 1	-0.002 ppb	114.686 %	111.929 %	0.362 ppb	0.027 ppb	117.400 %
Concentration per Run 2	0.020 ppb	109.447 %	109.902 %	0.542 ppb	0.023 ppb	112.744 %
Concentration per Run 3	0.022 ppb	107.292 %	103.944 %	0.491 ppb	0.004 ppb	109.540 %
Recovery Percentage 1	2.639 %			46.489 %	1.810 %	
Concentration RSD	97.9 %	3.4 %	3.8 %	19.9 %	68.6 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	127	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/3/2024 8:41:34 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	117.569 %	117.016 %	56.539 ppb	6,653.652 ppb	6,555.019 ppb	55.901 ppb	6,850.684 ppb	7,431.860 ppb	106.434 %
Concentration per Run 1	116.219 %	107.592 %	56.564 ppb	7,346.945 ppb	7,310.950 ppb	61.348 ppb	7,405.764 ppb	7,590.696 ppb	106.501 %
Concentration per Run 2	116.668 %	112.304 %	56.846 ppb	6,553.543 ppb	6,325.403 ppb	54.587 ppb	6,753.225 ppb	7,038.676 ppb	106.280 %
Concentration per Run 3	119.821 %	131.152 %	56.206 ppb	6,060.467 ppb	6,028.705 ppb	51.766 ppb	6,393.064 ppb	7,666.209 ppb	106.520 %
Recovery Percentage 1			94.231 %	110.894 %	109.250 %	93.168 %	114.178 %	123.864 %	
Concentration RSD	1.7 %	10.7 %	0.6 %	9.8 %	10.2 %	8.8 %	7.5 %	4.6 %	0.1 %

Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	60.474 ppb	62.949 ppb	64.668 ppb	6,188.398 ppb	63.145 ppb	62.990 ppb	62.626 ppb	69.716 ppb	107.092 %
Concentration per Run 1	62.647 ppb	63.662 ppb	63.410 ppb	6,246.806 ppb	63.180 ppb	61.891 ppb	61.539 ppb	66.654 ppb	111.406 %
Concentration per Run 2	58.829 ppb	63.427 ppb	68.267 ppb	6,248.576 ppb	64.061 ppb	64.379 ppb	63.668 ppb	70.586 ppb	107.286 %
Concentration per Run 3	59.947 ppb	61.758 ppb	62.327 ppb	6,069.811 ppb	62.195 ppb	62.699 ppb	62.671 ppb	71.908 ppb	102.585 %
Recovery Percentage 1	100.790 %	104.915 %	107.780 %	103.140 %	105.242 %	104.983 %	104.376 %	116.193 %	
Concentration RSD	3.2 %	1.6 %	4.9 %	1.7 %	1.5 %	2.0 %	1.7 %	3.9 %	4.1 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	63.544 ppb	60.698 ppb	61.930 ppb	57.779 ppb	108.857 %	59.615 ppb	60.185 ppb	106.852 %	59.303 ppb
Concentration per Run 1	63.544 ppb	59.321 ppb	63.242 ppb	55.261 ppb	112.074 %	57.572 ppb	57.208 ppb	114.779 %	57.691 ppb
Concentration per Run 2	61.783 ppb	64.477 ppb	60.347 ppb	57.194 ppb	107.579 %	60.856 ppb	62.054 ppb	102.015 %	59.806 ppb
Concentration per Run 3	65.307 ppb	58.297 ppb	62.202 ppb	60.880 ppb	106.918 %	60.417 ppb	61.294 ppb	103.761 %	60.413 ppb
Recovery Percentage 1	105.907 %	101.163 %	103.217 %	96.298 %		99.358 %	100.309 %		98.839 %
Concentration RSD	2.8 %	5.5 %	2.4 %	4.9 %	2.6 %	3.0 %	4.3 %	6.5 %	2.4 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.380 ppb	114.307 %	110.414 %	60.586 ppb	61.223 ppb	114.217 %
Concentration per Run 1	57.480 ppb	117.213 %	114.299 %	58.742 ppb	59.756 ppb	118.567 %
Concentration per Run 2	57.707 ppb	112.143 %	107.950 %	61.652 ppb	62.129 ppb	111.377 %
Concentration per Run 3	59.953 ppb	113.564 %	108.993 %	61.363 ppb	61.783 ppb	112.707 %
Recovery Percentage 1	97.300 %			100.977 %	102.038 %	
Concentration RSD	2.3 %	2.3 %	3.1 %	2.6 %	2.1 %	3.3 %

Alpha ICPMSQ2 Data with SRD

4/4/2024 7:18:24 AM

Analysis index:	128	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/3/2024 8:46:05 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	121.663 %	114.136 %	0.016 ppb	133.275 ppb	0.135 ppb	-0.075 ppb	51.085 ppb	12.894 ppb	100.513 %
Concentration per Run 1	120.196 %	113.089 %	0.013 ppb	138.457 ppb	-0.892 ppb	0.360 ppb	42.077 ppb	15.515 ppb	100.856 %
Concentration per Run 2	122.595 %	121.728 %	0.022 ppb	124.567 ppb	-0.984 ppb	-0.413 ppb	44.410 ppb	6.803 ppb	99.804 %
Concentration per Run 3	122.199 %	107.592 %	0.013 ppb	136.802 ppb	2.282 ppb	-0.172 ppb	66.767 ppb	16.365 ppb	100.878 %
Recovery Percentage 1			3.151 %	133.275 %	0.194 %	-0.746 %	51.085 %	12.894 %	
Concentration RSD	1.1 %	6.2 %	32.0 %	5.7 %	1,373.0 %	529.7 %	26.7 %	41.0 %	0.6 %

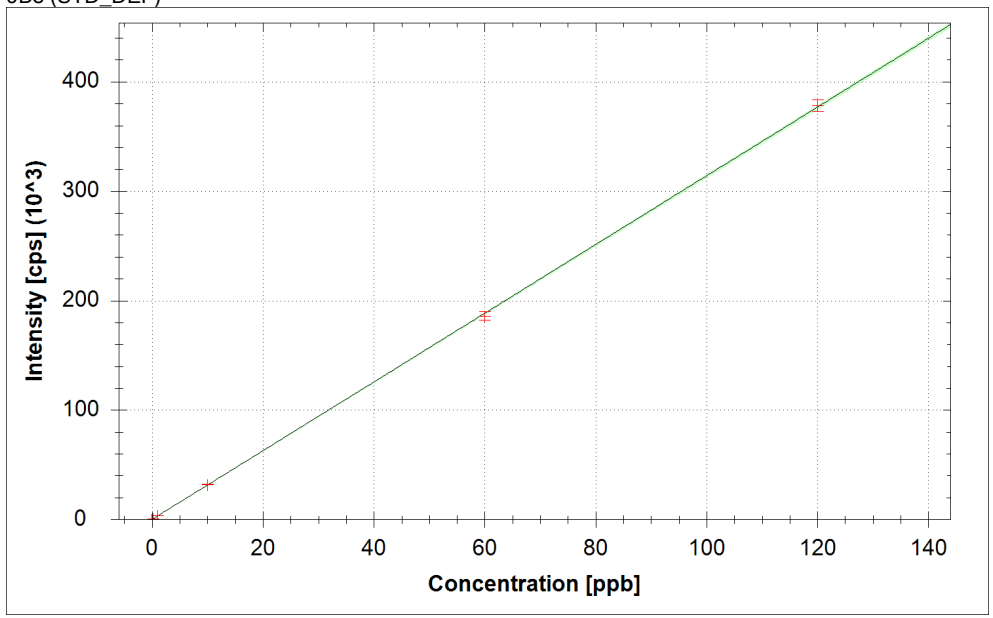
Category	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)	74Ge (KED AGD)
Concentration average	0.176 ppb	0.089 ppb	0.268 ppb	6.896 ppb	0.010 ppb	-0.171 ppb	0.002 ppb	7.971 ppb	102.137 %
Concentration per Run 1	0.156 ppb	0.065 ppb	0.239 ppb	5.979 ppb	0.024 ppb	-0.227 ppb	0.003 ppb	6.502 ppb	101.682 %
Concentration per Run 2	0.208 ppb	0.076 ppb	0.225 ppb	5.160 ppb	-0.006 ppb	-0.146 ppb	0.042 ppb	7.517 ppb	104.767 %
Concentration per Run 3	0.163 ppb	0.126 ppb	0.341 ppb	9.548 ppb	0.012 ppb	-0.141 ppb	-0.039 ppb	9.893 ppb	99.961 %
Recovery Percentage 1	3.514 %	8.883 %	26.843 %	13.791 %	1.983 %	-8.552 %	0.212 %	159.420 %	
Concentration RSD	15.8 %	36.4 %	23.7 %	33.8 %	152.9 %	28.1 %	1,899.7 %	21.8 %	2.4 %

Category	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)	121Sb (KED AGD)
Concentration average	0.232 ppb	-0.041 ppb	0.010 ppb	0.207 ppb	107.960 %	0.051 ppb	0.011 ppb	105.337 %	0.034 ppb
Concentration per Run 1	0.181 ppb	-0.102 ppb	-0.003 ppb	0.105 ppb	106.854 %	0.044 ppb	0.000 ppb	105.058 %	0.029 ppb
Concentration per Run 2	0.235 ppb	0.003 ppb	0.006 ppb	0.297 ppb	109.830 %	0.062 ppb	0.011 ppb	108.215 %	0.004 ppb
Concentration per Run 3	0.280 ppb	-0.023 ppb	0.026 ppb	0.220 ppb	107.194 %	0.046 ppb	0.023 ppb	102.739 %	0.067 ppb
Recovery Percentage 1	46.419 %	-0.814 %	0.097 %	10.363 %		12.666 %	5.682 %		0.842 %
Concentration RSD	21.3 %	135.1 %	148.4 %	46.7 %	1.5 %	18.8 %	101.4 %	2.6 %	94.1 %

Category	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.015 ppb	109.417 %	106.348 %	0.509 ppb	0.016 ppb	107.627 %
Concentration per Run 1	0.000 ppb	107.016 %	106.296 %	0.403 ppb	0.020 ppb	105.892 %
Concentration per Run 2	-0.022 ppb	111.925 %	108.219 %	0.605 ppb	0.019 ppb	109.015 %
Concentration per Run 3	-0.022 ppb	109.309 %	104.529 %	0.518 ppb	0.008 ppb	107.976 %
Recovery Percentage 1	-2.924 %			50.865 %	1.560 %	
Concentration RSD	83.8 %	2.2 %	1.7 %	19.9 %	43.0 %	1.5 %

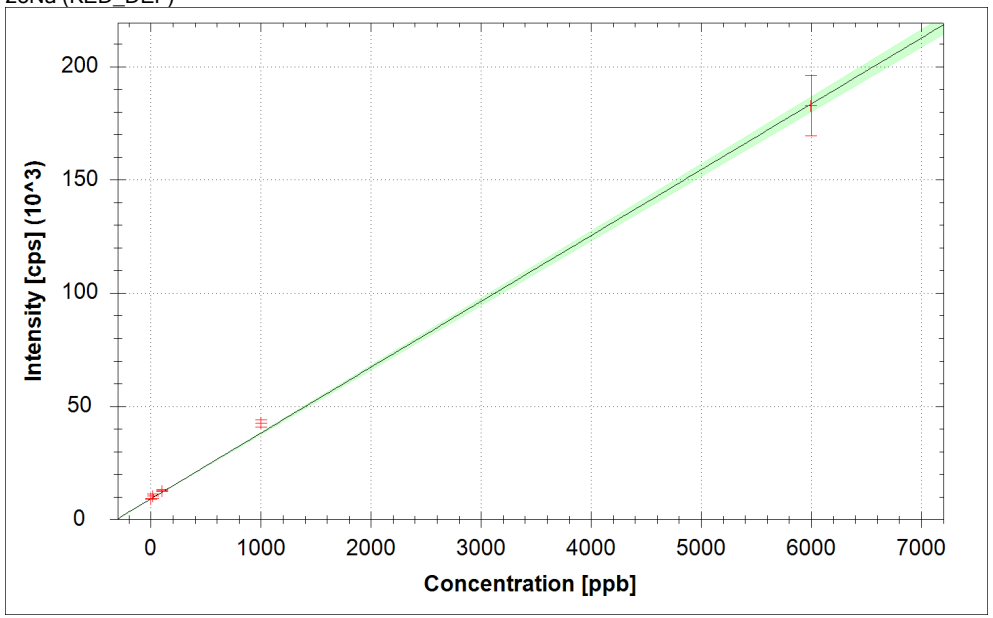
Calibration Curves:

9Be (STD_DEF)



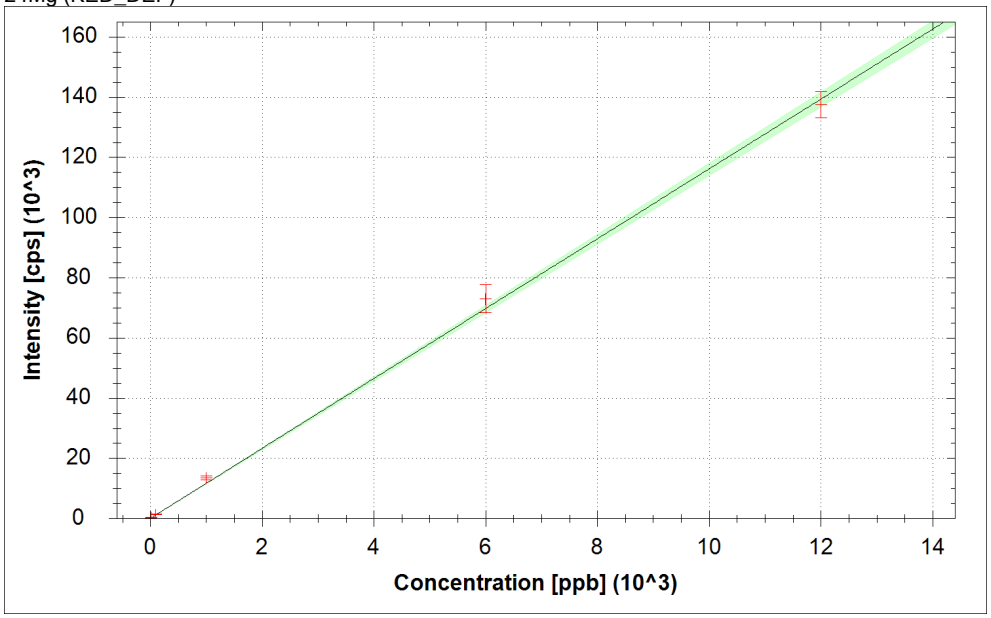
f(x) = 3139.5931*x + 57.5967
R² = 0.9999
BEC = 0.018 ppb
LoD = 0.0080 ppb

23Na (KED_DEF)



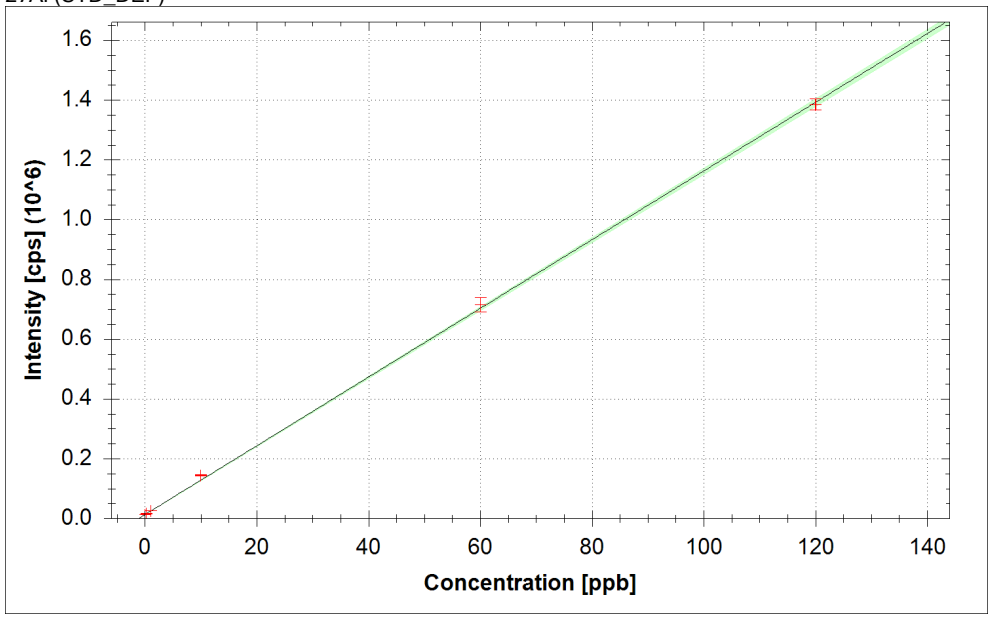
f(x) = 29.0627*x + 9070.0892
R² = 0.9991
BEC = 312.087 ppb
LoD = 26.3016 ppb

24Mg (KED_DEF)



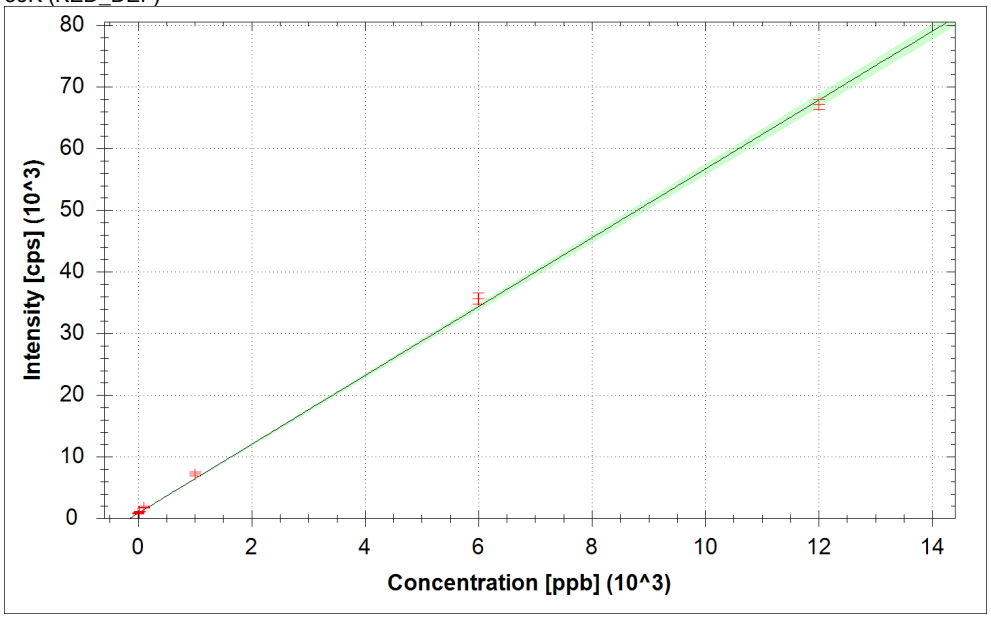
f(x) = 11.6026*x + 53.2500
R² = 0.9989
BEC = 4.590 ppb
LoD = 4.4796 ppb

27Al (STD_DEF)



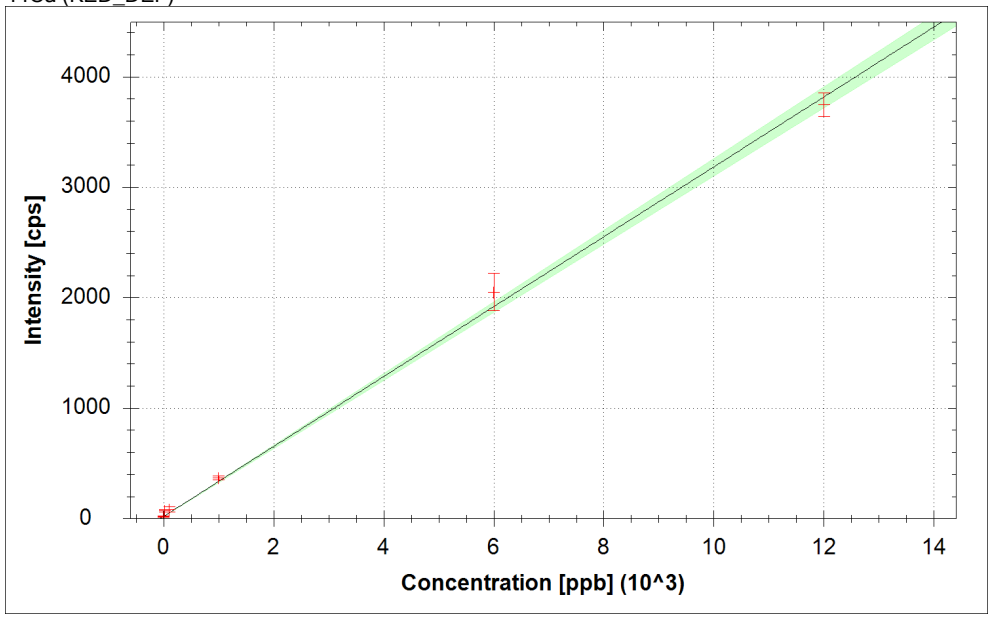
f(x) = 11490.7087*x + 13085.2957
R² = 0.9997
BEC = 1.139 ppb
LoD = 0.0593 ppb

39K (KED_DEF)



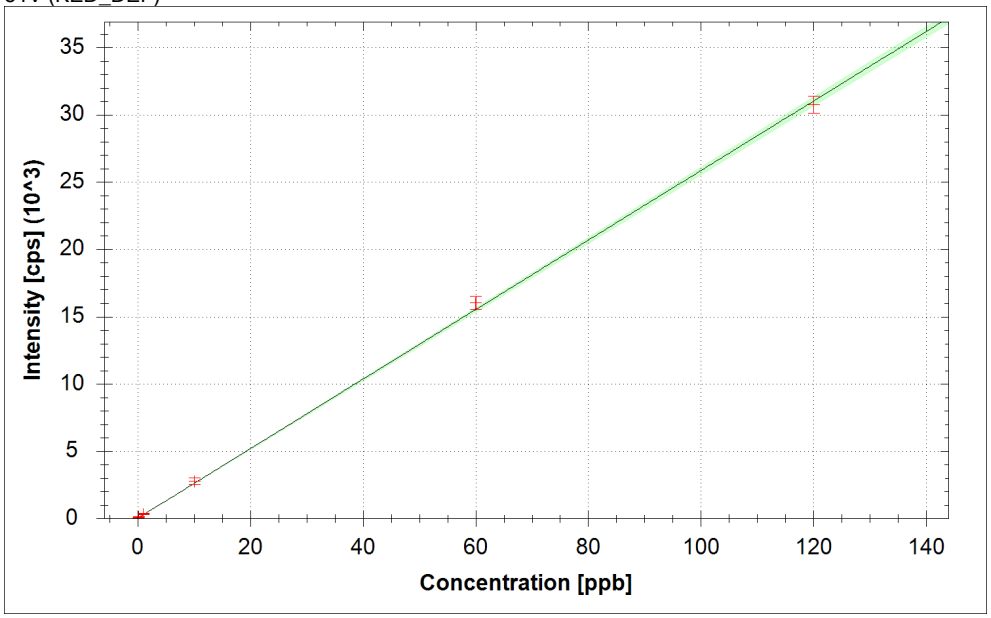
f(x) = 5.5829*x + 839.4978
R² = 0.9992
BEC = 150.369 ppb
LoD = 70.2919 ppb

44Ca (KED_DEF)



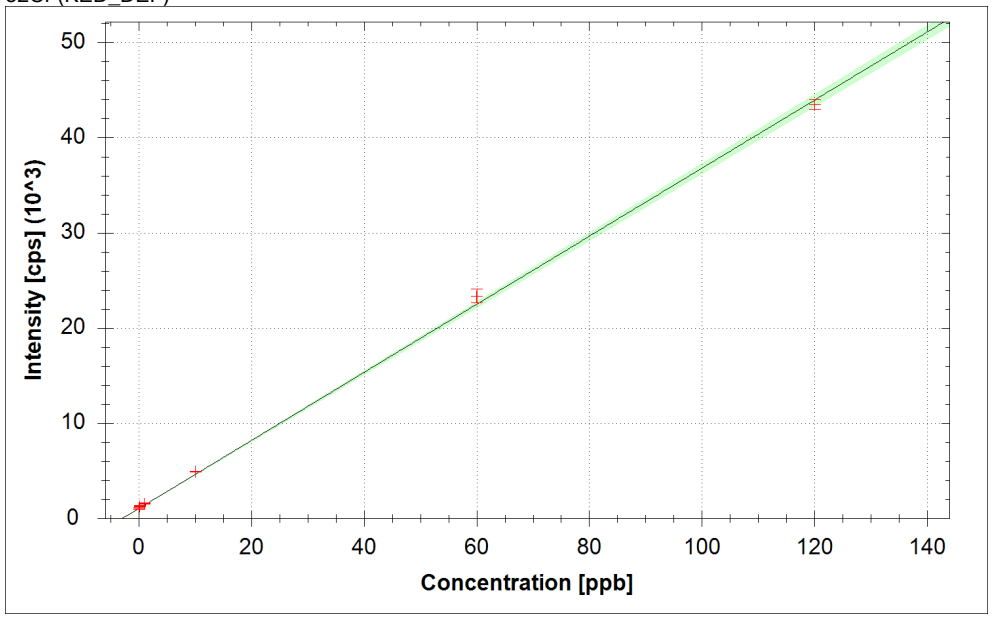
f(x) = 0.3164*x + 17.6144
R² = 0.9978
BEC = 55.663 ppb
LoD = 67.8918 ppb

51V (KED_DEF)



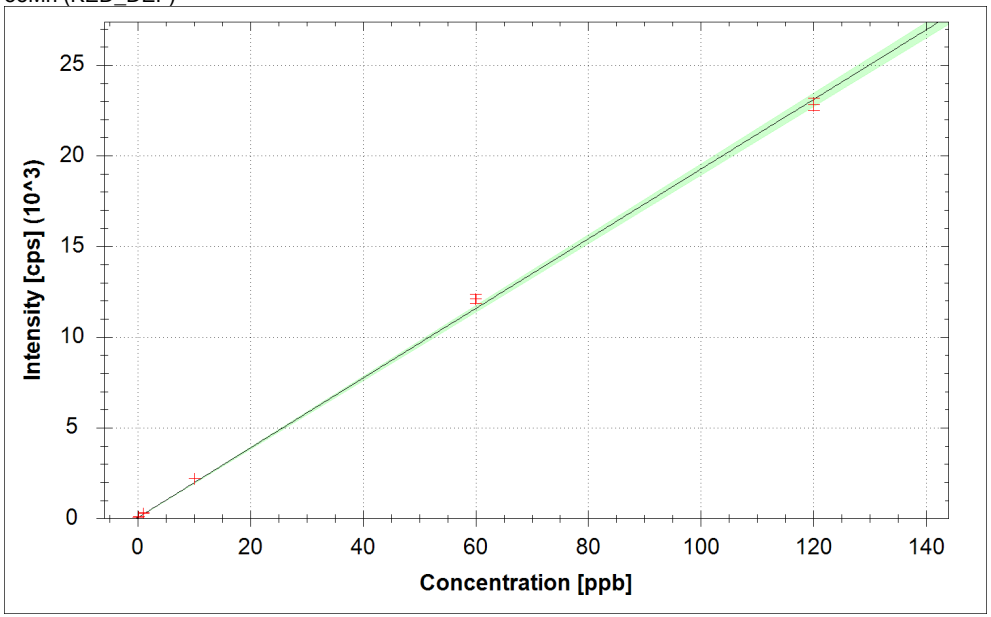
f(x) = 258.2486*x + 24.7631
R² = 0.9996
BEC = 0.096 ppb
LoD = 0.2045 ppb

52Cr (KED_DEF)



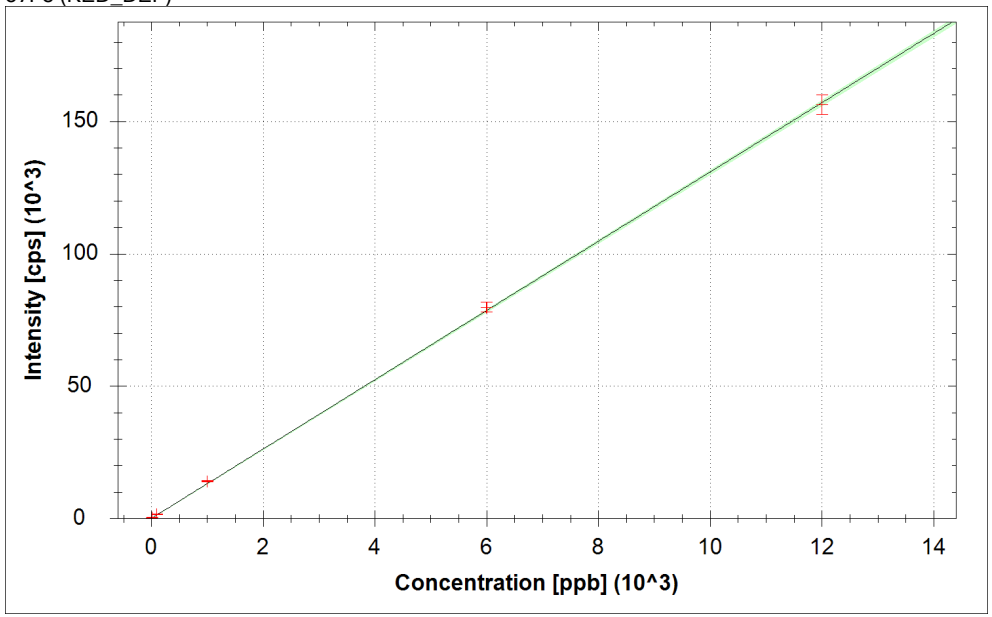
f(x) = 357.3067*x + 1042.5277
R² = 0.9993
BEC = 2.918 ppb
LoD = 0.6741 ppb

55Mn (KED_DEF)



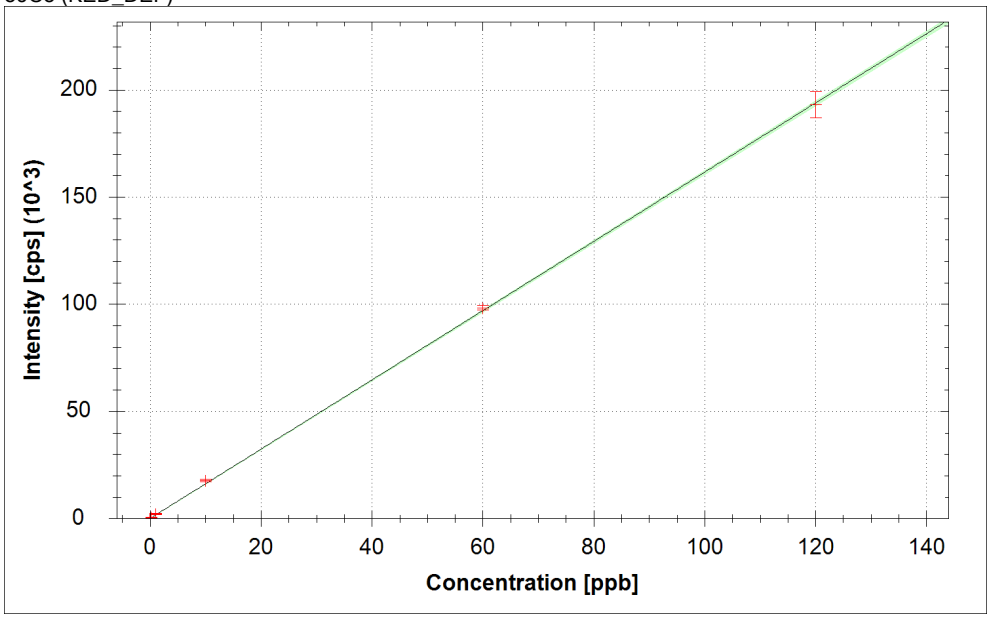
f(x) = 192.0149*x + 51.4976
R² = 0.9991
BEC = 0.268 ppb
LoD = 0.0453 ppb

57Fe (KED_DEF)



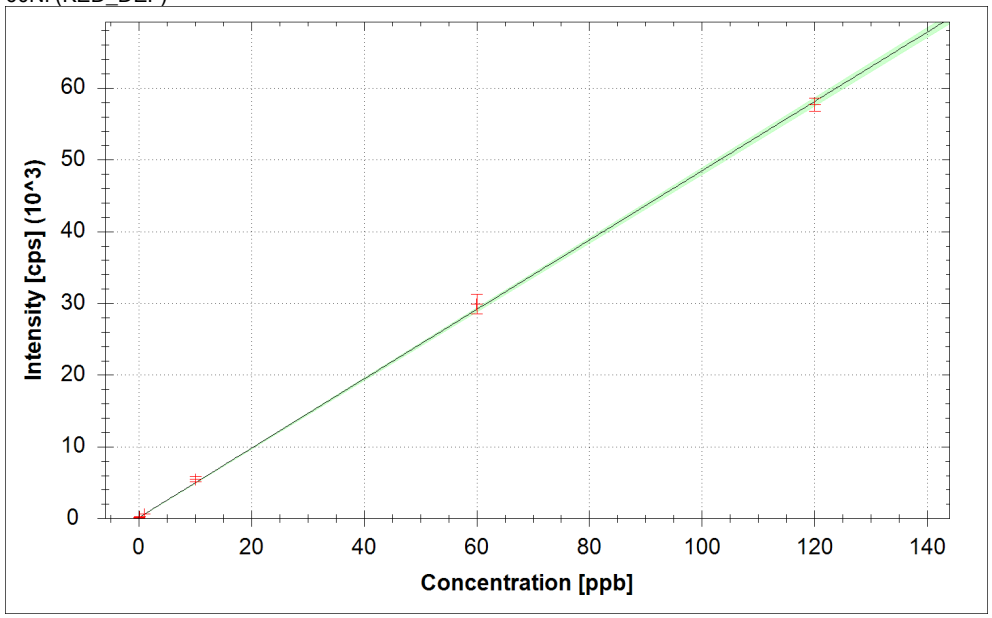
f(x) = 13.0785*x + 48.5090
R² = 0.9999
BEC = 3.709 ppb
LoD = 5.1064 ppb

59Co (KED_DEF)



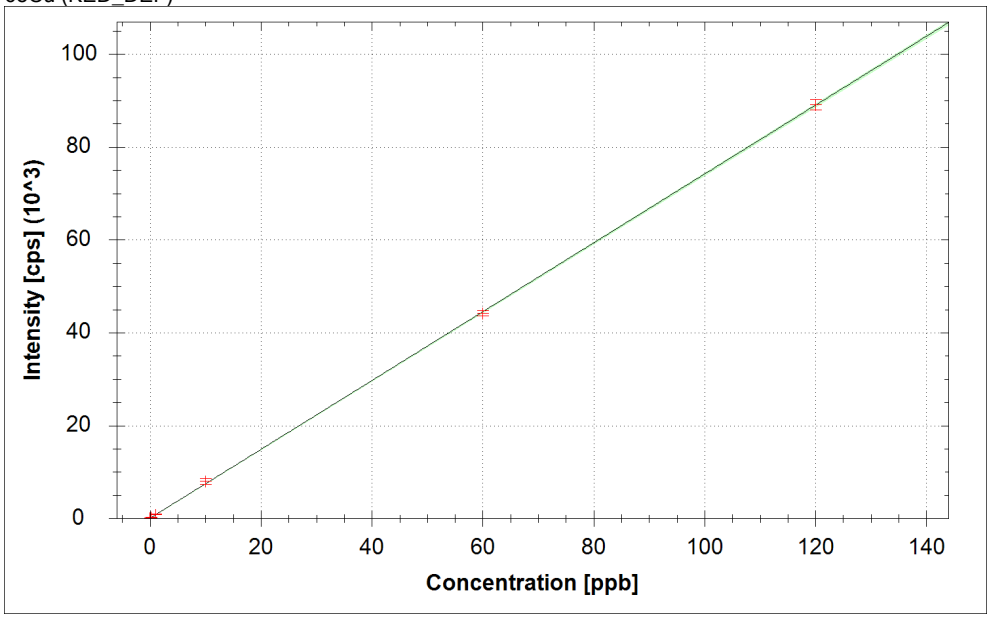
f(x) = 1615.1073*x + 17.8364
R² = 0.9999
BEC = 0.011 ppb
LoD = 0.0189 ppb

60Ni (KED_DEF)



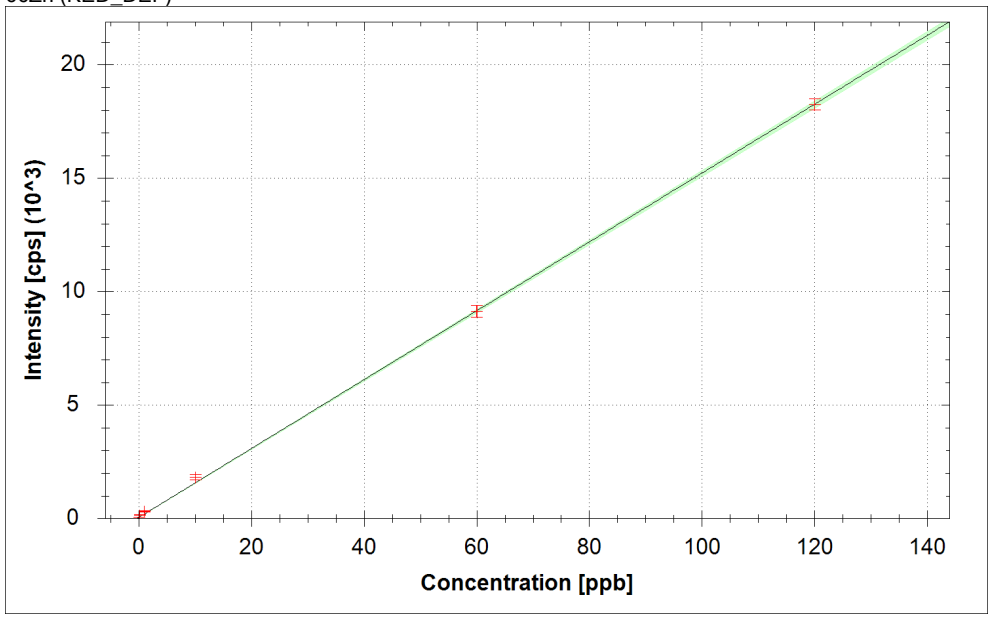
f(x) = 483.2004*x + 122.5460
R² = 0.9996
BEC = 0.254 ppb
LoD = 0.1692 ppb

65Cu (KED_DEF)



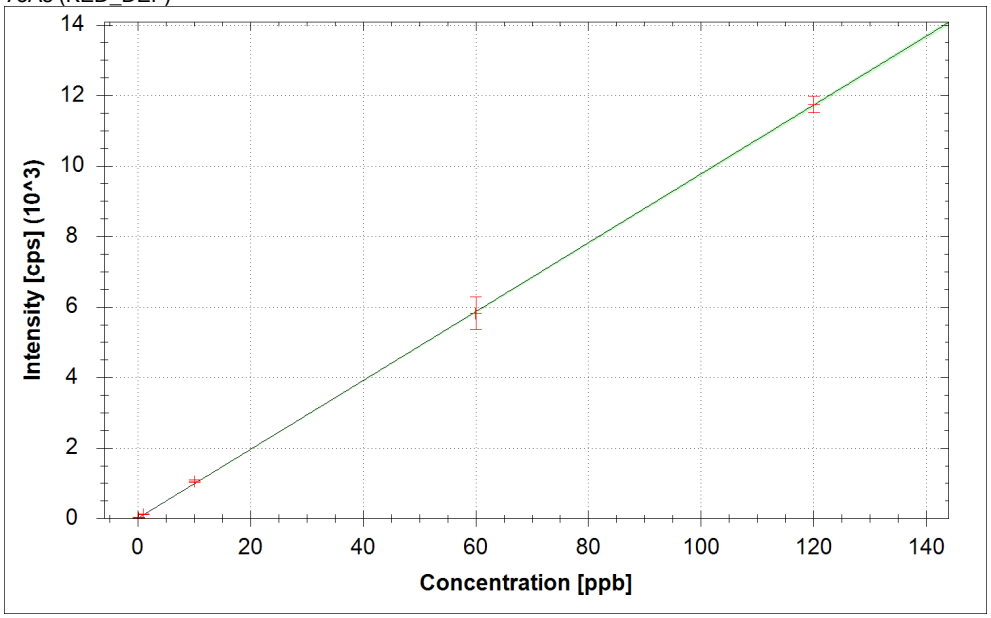
f(x) = 740.9103*x + 60.1066
R² = 0.9999
BEC = 0.081 ppb
LoD = 0.0495 ppb

66Zn (KED_DEF)



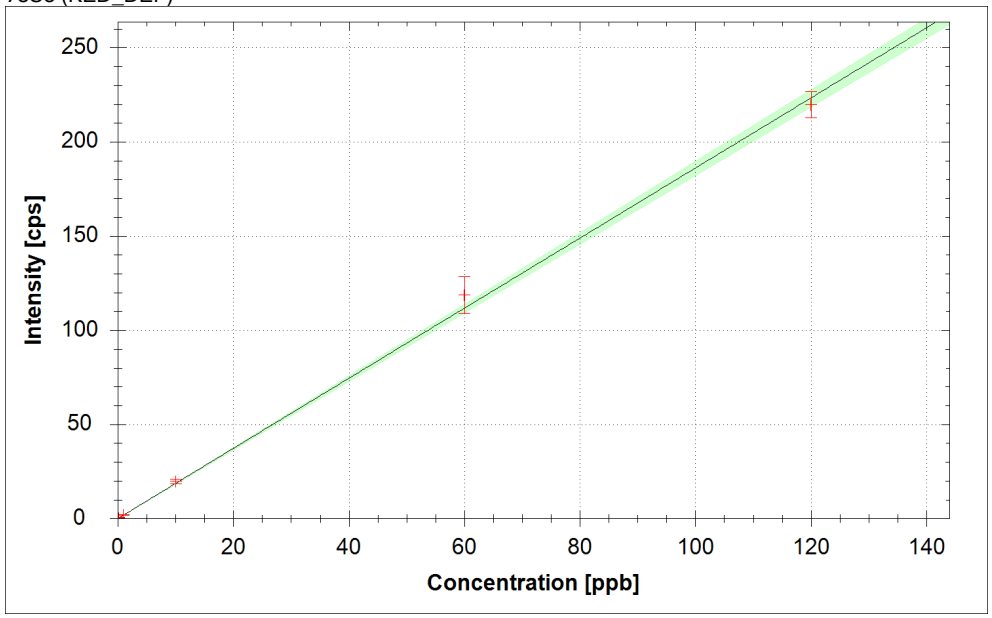
f(x) = 151.7006*x + 48.5234
R² = 0.9997
BEC = 0.320 ppb
LoD = 0.1245 ppb

75As (KED_DEF)



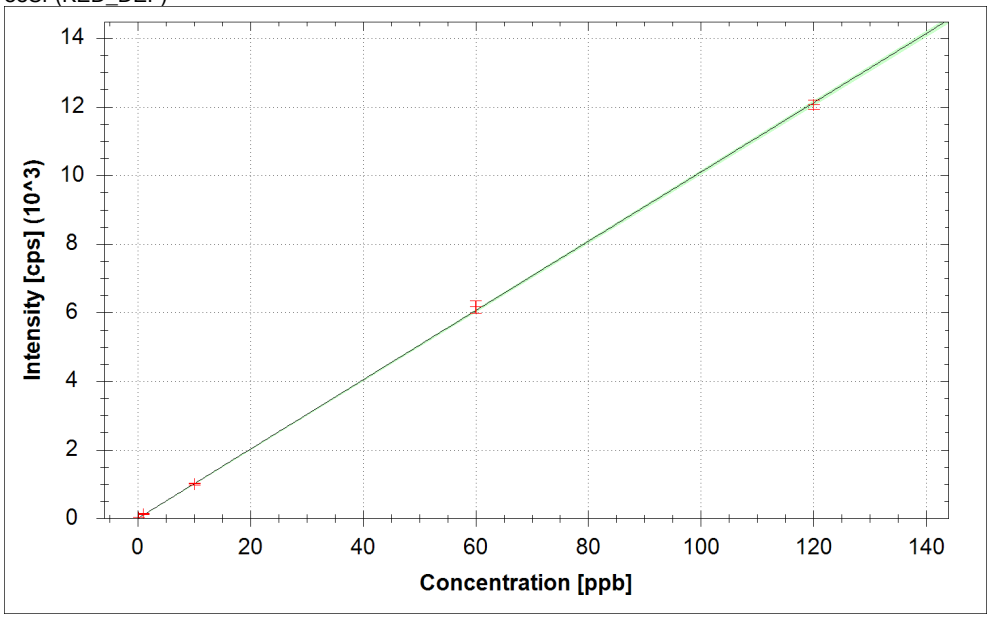
f(x) = 97.6055*x + 5.3072
R² = 0.9999
BEC = 0.054 ppb
LoD = 0.1794 ppb

78Se (KED_DEF)



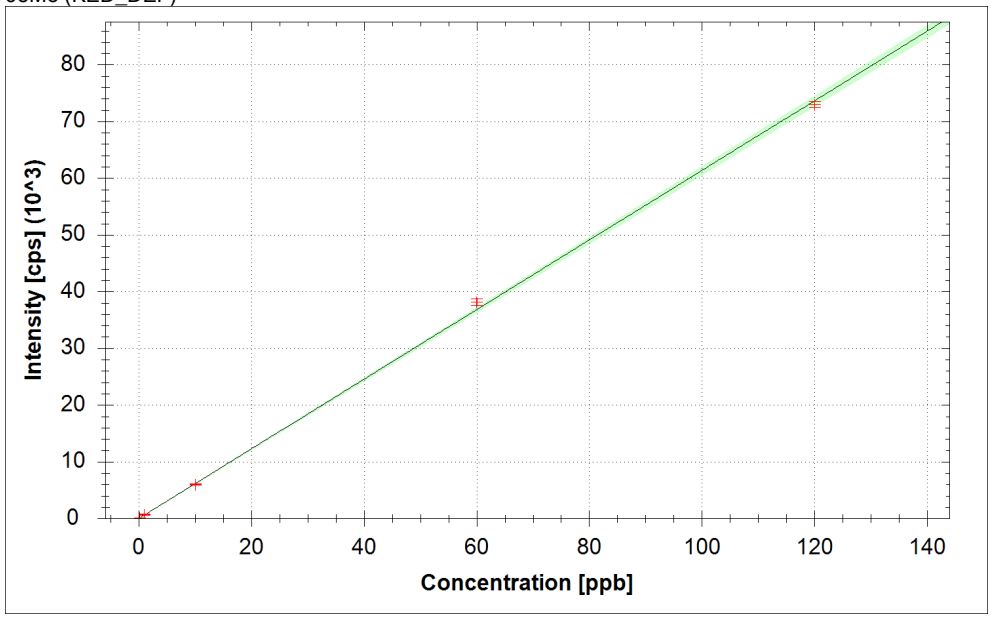
f(x) = 1.8610*x + -0.0407
R² = 0.9985
BEC = -0.022 ppb
LoD = 0.0335 ppb

88Sr (KED_DEF)



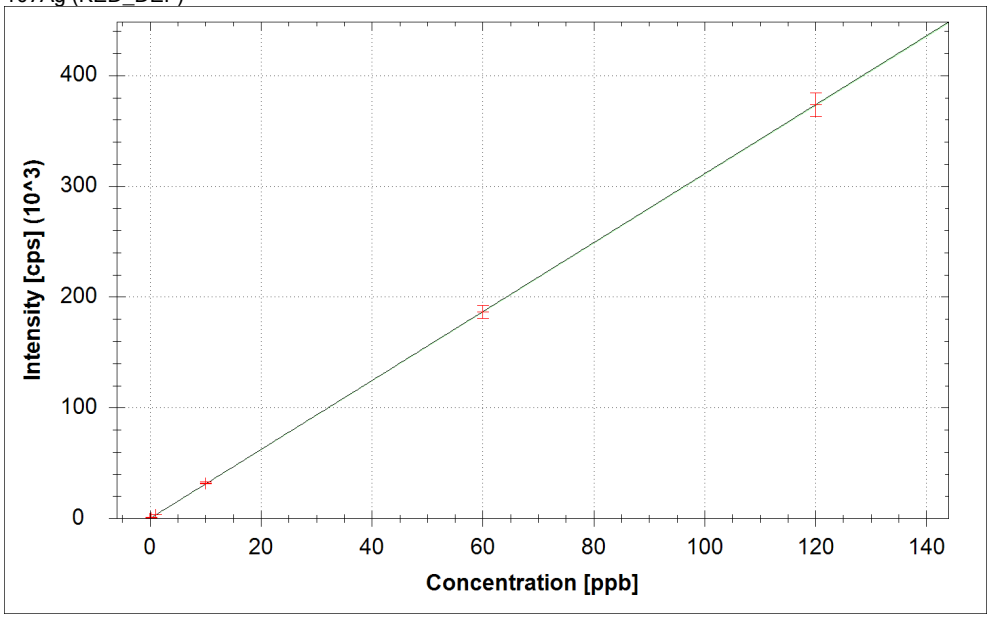
f(x) = 100.9352*x + 2.6664
R² = 0.9999
BEC = 0.026 ppb
LoD = 0.0395 ppb

95Mo (KED_DEF)



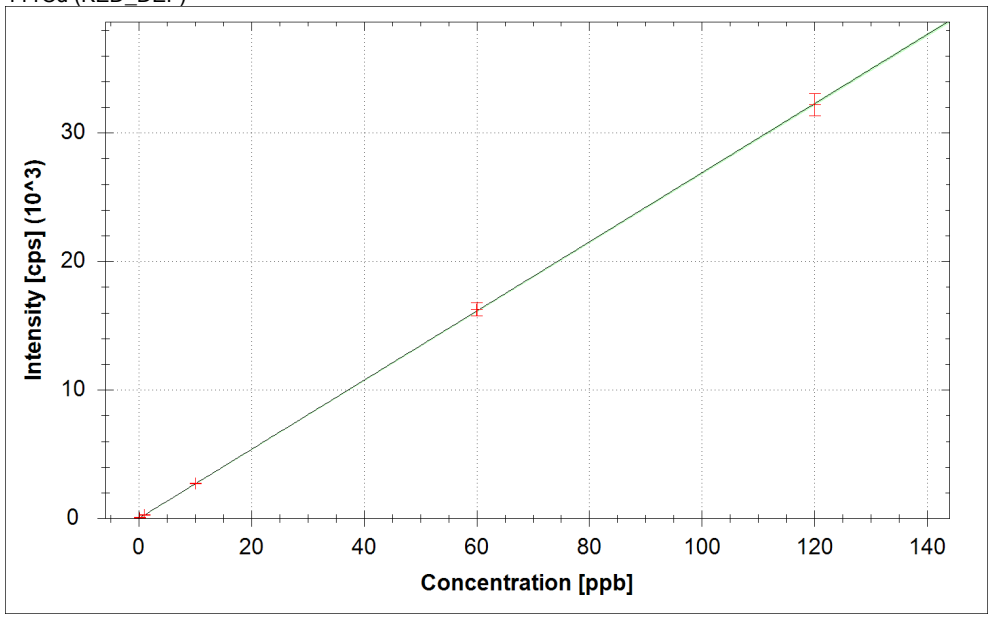
f(x) = 613.3807*x + 6.6727
R² = 0.9995
BEC = 0.011 ppb
LoD = 0.0327 ppb

107Ag (KED_DEF)



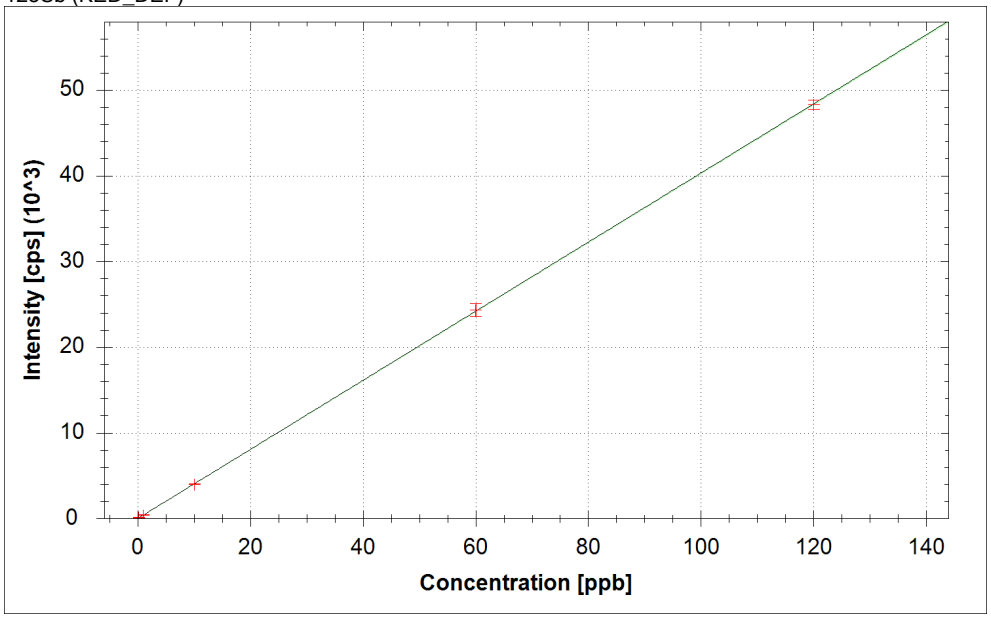
f(x) = 3111.9673*x + 8.8857
R² = 1.0000
BEC = 0.003 ppb
LoD = 0.0018 ppb

111Cd (KED_DEF)



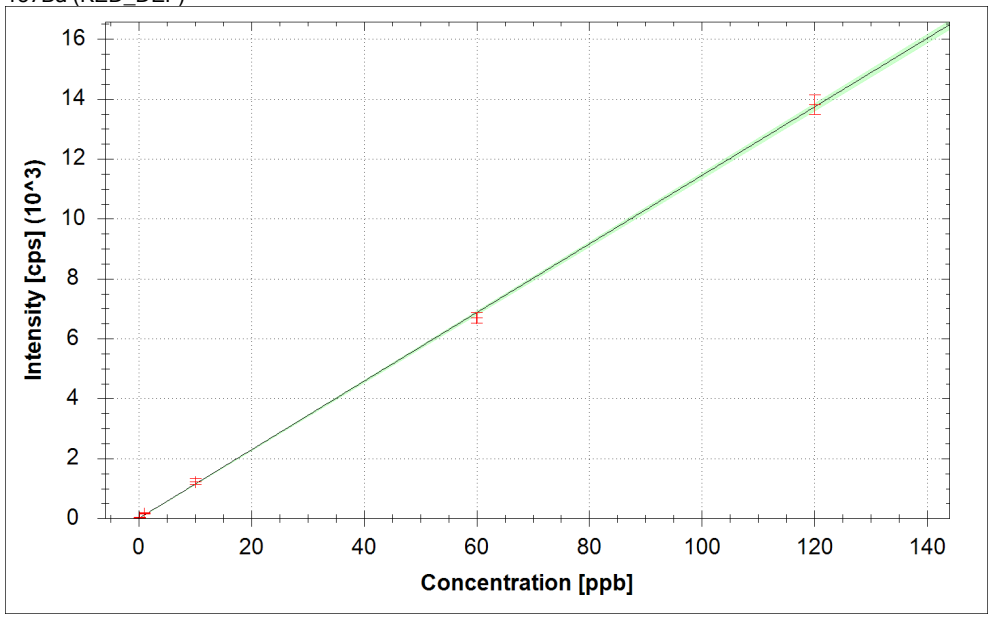
f(x) = 268.8496*x + 0.4466
R² = 1.0000
BEC = 0.002 ppb
LoD = 0.0086 ppb

123Sb (KED_DEF)



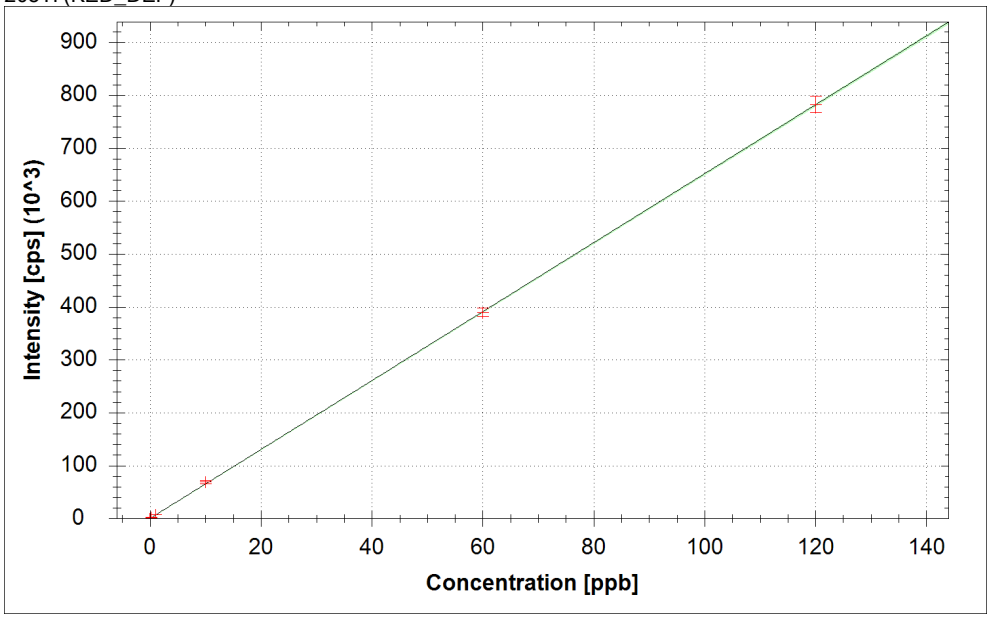
f(x) = 402.9407*x + 1.3329
R² = 1.0000
BEC = 0.003 ppb
LoD = 0.0100 ppb

137Ba (KED_DEF)



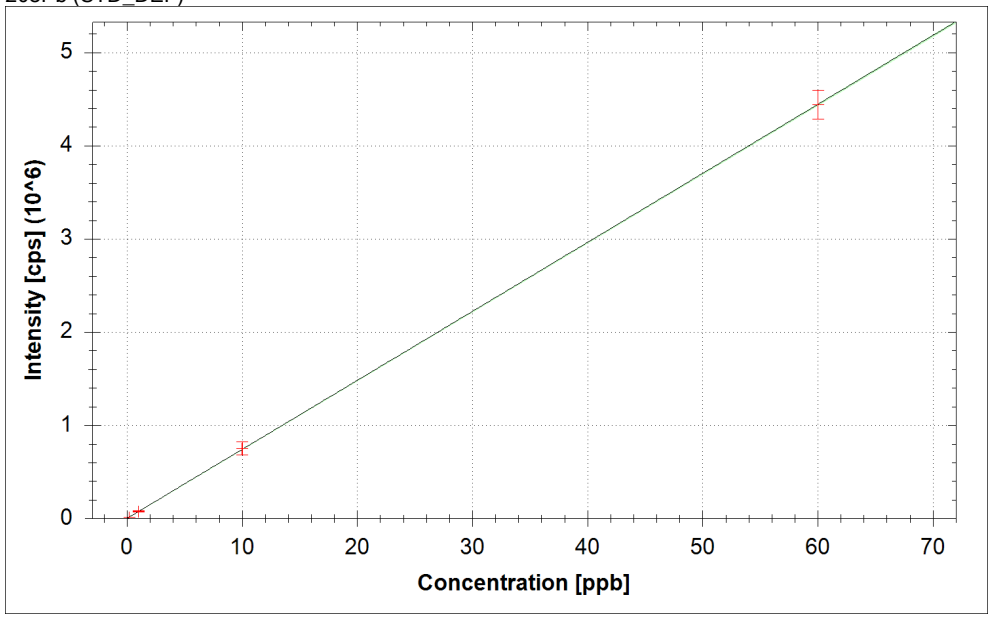
f(x) = 114.4124*x + 2.2510
R² = 0.9997
BEC = 0.020 ppb
LoD = 0.1022 ppb

205Tl (KED_DEF)



f(x) = 6512.9466*x + 57.0012
R² = 1.0000
BEC = 0.009 ppb
LoD = 0.0112 ppb

208Pb (STD_DEF)



f(x) = 74029.6456*x + 482.3855
R² = 1.0000
BEC = 0.007 ppb
LoD = 0.0010 ppb

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Standards:

Analysis Index: 5
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/4/2024 5:25:16 AM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	99.714 %	2.9 %		0.000 %
6Li (KED_DEF)	93.284 %	20.4 %		0.000 %
9Be (STD_DEF)	0.207 ppb	1.1 %	0.200 ppb	3.672 %
23Na (KED_DEF)	40.628 ppb	85.1 %	20.000 ppb	103.142 %
24Mg (KED_DEF)	24.923 ppb	13.3 %	20.000 ppb	24.614 %
27Al (STD_DEF)	0.268 ppb	36.5 %	0.200 ppb	33.827 %
39K (KED_DEF)	41.720 ppb	12.0 %	20.000 ppb	108.600 %
44Ca (KED_DEF)	164.536 ppb	24.1 %	20.000 ppb	722.678 %
45Sc (STD_DEF)	95.299 %	4.1 %		0.000 %
45Sc (KED_DEF)	92.047 %	6.1 %		0.000 %
51V (KED_DEF)	0.346 ppb	35.4 %	0.200 ppb	73.153 %
52Cr (KED_DEF)	0.688 ppb	21.9 %	0.200 ppb	243.992 %
55Mn (KED_DEF)	0.261 ppb	15.5 %	0.200 ppb	30.316 %
57Fe (KED_DEF)	22.537 ppb	3.2 %	20.000 ppb	12.685 %
59Co (KED_DEF)	0.252 ppb	22.5 %	0.200 ppb	25.763 %
60Ni (KED_DEF)	0.245 ppb	20.9 %	0.200 ppb	22.678 %
65Cu (KED_DEF)	0.199 ppb	33.3 %	0.200 ppb	0.527 %
66Zn (KED_DEF)	0.669 ppb	13.4 %	0.200 ppb	234.557 %
74Ge (STD_DEF)	101.210 %	1.3 %		0.000 %
74Ge (KED_DEF)	102.563 %	2.5 %		0.000 %
75As (KED_DEF)	0.131 ppb	142.2 %	0.200 ppb	34.483 %
78Se (KED_DEF)	0.192 ppb	88.9 %	0.200 ppb	3.796 %
88Sr (KED_DEF)	0.291 ppb	18.4 %	0.200 ppb	45.637 %
95Mo (KED_DEF)	0.152 ppb	8.5 %	0.200 ppb	24.220 %
103Rh (STD_DEF)	99.619 %	0.8 %		0.000 %
103Rh (KED_DEF)	96.264 %	3.2 %		0.000 %
107Ag (KED_DEF)	0.222 ppb	5.2 %	0.200 ppb	11.075 %
111Cd (KED_DEF)	0.211 ppb	22.2 %	0.200 ppb	5.332 %
115In (STD_DEF)	97.109 %	1.7 %		0.000 %
115In (KED_DEF)	95.321 %	3.7 %		0.000 %
123Sb (KED_DEF)	0.233 ppb	11.3 %	0.200 ppb	16.300 %
137Ba (KED_DEF)	0.237 ppb	23.4 %	0.200 ppb	18.632 %
159Tb (STD_DEF)	102.021 %	7.6 %		0.000 %
159Tb (KED_DEF)	94.494 %	4.3 %		0.000 %
175Lu (STD_DEF)	97.435 %	0.7 %		0.000 %
175Lu (KED_DEF)	94.410 %	3.2 %		0.000 %
205Tl (KED_DEF)	0.230 ppb	8.2 %	0.200 ppb	15.184 %
208Pb (STD_DEF)	0.190 ppb	1.9 %	0.200 ppb	5.010 %
209Bi (STD_DEF)	88.776 %	1.9 %		0.000 %
209Bi (KED_DEF)	88.373 %	3.0 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/4/2024 5:29:57 AM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	99.430 %	2.4 %		0.000 %
6Li (KED_DEF)	90.672 %	6.2 %		0.000 %
9Be (STD_DEF)	1.006 ppb	1.3 %	1.000 ppb	0.587 %
23Na (KED_DEF)	128.135 ppb	11.1 %	100.000 ppb	28.135 %
24Mg (KED_DEF)	109.133 ppb	5.8 %	100.000 ppb	9.133 %
27Al (STD_DEF)	1.061 ppb	4.0 %	1.000 ppb	6.076 %
39K (KED_DEF)	175.905 ppb	12.5 %	100.000 ppb	75.905 %
44Ca (KED_DEF)	198.083 ppb	36.2 %	100.000 ppb	98.083 %
45Sc (STD_DEF)	93.844 %	1.7 %		0.000 %
45Sc (KED_DEF)	90.795 %	4.2 %		0.000 %
51V (KED_DEF)	1.213 ppb	18.6 %	1.000 ppb	21.334 %
52Cr (KED_DEF)	1.440 ppb	15.6 %	1.000 ppb	44.040 %
55Mn (KED_DEF)	1.225 ppb	6.8 %	1.000 ppb	22.506 %
57Fe (KED_DEF)	119.759 ppb	10.2 %	100.000 ppb	19.759 %
59Co (KED_DEF)	1.226 ppb	13.8 %	1.000 ppb	22.648 %
60Ni (KED_DEF)	1.040 ppb	6.8 %	1.000 ppb	4.023 %
65Cu (KED_DEF)	1.052 ppb	7.1 %	1.000 ppb	5.175 %
66Zn (KED_DEF)	1.716 ppb	13.7 %	1.000 ppb	71.625 %
74Ge (STD_DEF)	100.054 %	1.1 %		0.000 %
74Ge (KED_DEF)	99.015 %	7.4 %		0.000 %
75As (KED_DEF)	1.180 ppb	9.9 %	1.000 ppb	17.997 %
78Se (KED_DEF)	1.038 ppb	6.0 %	1.000 ppb	3.799 %
88Sr (KED_DEF)	1.199 ppb	19.6 %	1.000 ppb	19.926 %
95Mo (KED_DEF)	1.029 ppb	19.0 %	1.000 ppb	2.853 %
103Rh (STD_DEF)	100.065 %	3.6 %		0.000 %
103Rh (KED_DEF)	93.972 %	4.1 %		0.000 %
107Ag (KED_DEF)	1.073 ppb	7.2 %	1.000 ppb	7.329 %
111Cd (KED_DEF)	1.074 ppb	9.3 %	1.000 ppb	7.372 %
115In (STD_DEF)	97.927 %	2.7 %		0.000 %
115In (KED_DEF)	97.089 %	6.0 %		0.000 %
123Sb (KED_DEF)	0.927 ppb	12.2 %	1.000 ppb	7.257 %
137Ba (KED_DEF)	1.454 ppb	8.0 %	1.000 ppb	45.430 %
159Tb (STD_DEF)	104.366 %	7.6 %		0.000 %
159Tb (KED_DEF)	92.775 %	5.5 %		0.000 %
175Lu (STD_DEF)	91.125 %	8.0 %		0.000 %
175Lu (KED_DEF)	93.799 %	4.0 %		0.000 %
205Tl (KED_DEF)	1.076 ppb	0.8 %	1.000 ppb	7.636 %
208Pb (STD_DEF)	1.009 ppb	6.5 %	1.000 ppb	0.853 %
209Bi (STD_DEF)	90.890 %	4.0 %		0.000 %
209Bi (KED_DEF)	88.562 %	1.2 %		0.000 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Standards:

Analysis Index: 7
Analysis Name: 10/10000 Cal
Analysis Type: STD
Analysis Started at: 4/4/2024 5:34:37 AM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	99.262 %	2.0 %		0.000 %
6Li (KED_DEF)	82.649 %	7.2 %		0.000 %
9Be (STD_DEF)	10.096 ppb	0.6 %	10.000 ppb	0.963 %
23Na (KED_DEF)	1,146.693 ppb	5.0 %	1,000.000 ppb	14.669 %
24Mg (KED_DEF)	1,152.607 ppb	4.5 %	1,000.000 ppb	15.261 %
27Al (STD_DEF)	11.446 ppb	1.6 %	10.000 ppb	14.464 %
39K (KED_DEF)	1,138.072 ppb	4.9 %	1,000.000 ppb	13.807 %
44Ca (KED_DEF)	1,097.240 ppb	5.5 %	1,000.000 ppb	9.724 %
45Sc (STD_DEF)	97.443 %	2.2 %		0.000 %
45Sc (KED_DEF)	97.307 %	4.4 %		0.000 %
51V (KED_DEF)	10.616 ppb	8.9 %	10.000 ppb	6.163 %
52Cr (KED_DEF)	10.816 ppb	1.7 %	10.000 ppb	8.163 %
55Mn (KED_DEF)	11.146 ppb	0.4 %	10.000 ppb	11.462 %
57Fe (KED_DEF)	1,076.842 ppb	2.0 %	1,000.000 ppb	7.684 %
59Co (KED_DEF)	10.843 ppb	3.5 %	10.000 ppb	8.429 %
60Ni (KED_DEF)	11.058 ppb	7.1 %	10.000 ppb	10.583 %
65Cu (KED_DEF)	10.638 ppb	8.8 %	10.000 ppb	6.379 %
66Zn (KED_DEF)	11.593 ppb	7.0 %	10.000 ppb	15.927 %
74Ge (STD_DEF)	102.731 %	2.3 %		0.000 %
74Ge (KED_DEF)	103.494 %	5.8 %		0.000 %
75As (KED_DEF)	10.735 ppb	3.4 %	10.000 ppb	7.353 %
78Se (KED_DEF)	10.556 ppb	5.8 %	10.000 ppb	5.557 %
88Sr (KED_DEF)	9.922 ppb	2.5 %	10.000 ppb	0.778 %
95Mo (KED_DEF)	9.764 ppb	2.6 %	10.000 ppb	2.363 %
103Rh (STD_DEF)	101.686 %	0.4 %		0.000 %
103Rh (KED_DEF)	99.362 %	0.2 %		0.000 %
107Ag (KED_DEF)	10.299 ppb	2.5 %	10.000 ppb	2.986 %
111Cd (KED_DEF)	10.141 ppb	1.0 %	10.000 ppb	1.405 %
115In (STD_DEF)	101.535 %	1.8 %		0.000 %
115In (KED_DEF)	99.194 %	1.8 %		0.000 %
123Sb (KED_DEF)	9.889 ppb	1.0 %	10.000 ppb	1.113 %
137Ba (KED_DEF)	10.708 ppb	8.0 %	10.000 ppb	7.077 %
159Tb (STD_DEF)	103.227 %	2.3 %		0.000 %
159Tb (KED_DEF)	98.813 %	2.9 %		0.000 %
175Lu (STD_DEF)	97.033 %	7.4 %		0.000 %
175Lu (KED_DEF)	96.174 %	4.6 %		0.000 %
205Tl (KED_DEF)	10.546 ppb	4.5 %	10.000 ppb	5.460 %
208Pb (STD_DEF)	10.162 ppb	9.3 %	10.000 ppb	1.616 %
209Bi (STD_DEF)	101.150 %	2.6 %		0.000 %
209Bi (KED_DEF)	97.700 %	2.7 %		0.000 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Standards:

Analysis Index: 8
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/4/2024 5:39:19 AM
Total Dilution Factor 166.66666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	97.613 %	4.3 %		0.000 %
6Li (KED_DEF)	92.351 %	10.9 %		0.000 %
9Be (STD_DEF)	59.129 ppb	2.1 %	60.000 ppb	1.451 %
23Na (KED_DEF)	5,975.014 ppb	7.6 %	6,000.000 ppb	0.416 %
24Mg (KED_DEF)	6,288.474 ppb	6.4 %	6,000.000 ppb	4.808 %
27Al (STD_DEF)	61.088 ppb	3.4 %	60.000 ppb	1.814 %
39K (KED_DEF)	6,235.451 ppb	2.7 %	6,000.000 ppb	3.924 %
44Ca (KED_DEF)	6,418.013 ppb	8.3 %	6,000.000 ppb	6.967 %
45Sc (STD_DEF)	105.643 %	4.0 %		0.000 %
45Sc (KED_DEF)	101.064 %	2.9 %		0.000 %
51V (KED_DEF)	61.902 ppb	3.0 %	60.000 ppb	3.170 %
52Cr (KED_DEF)	62.448 ppb	3.3 %	60.000 ppb	4.080 %
55Mn (KED_DEF)	62.716 ppb	2.1 %	60.000 ppb	4.527 %
57Fe (KED_DEF)	6,091.872 ppb	2.3 %	6,000.000 ppb	1.531 %
59Co (KED_DEF)	60.781 ppb	1.1 %	60.000 ppb	1.302 %
60Ni (KED_DEF)	61.570 ppb	4.7 %	60.000 ppb	2.617 %
65Cu (KED_DEF)	59.552 ppb	1.2 %	60.000 ppb	0.747 %
66Zn (KED_DEF)	59.870 ppb	2.9 %	60.000 ppb	0.216 %
74Ge (STD_DEF)	107.294 %	2.1 %		0.000 %
74Ge (KED_DEF)	105.580 %	4.7 %		0.000 %
75As (KED_DEF)	59.528 ppb	8.0 %	60.000 ppb	0.787 %
78Se (KED_DEF)	63.715 ppb	8.2 %	60.000 ppb	6.191 %
88Sr (KED_DEF)	61.029 ppb	2.8 %	60.000 ppb	1.715 %
95Mo (KED_DEF)	62.180 ppb	1.6 %	60.000 ppb	3.634 %
103Rh (STD_DEF)	106.785 %	2.2 %		0.000 %
103Rh (KED_DEF)	100.787 %	2.2 %		0.000 %
107Ag (KED_DEF)	59.840 ppb	3.2 %	60.000 ppb	0.267 %
111Cd (KED_DEF)	60.496 ppb	3.1 %	60.000 ppb	0.826 %
115In (STD_DEF)	105.409 %	4.3 %		0.000 %
115In (KED_DEF)	101.561 %	4.5 %		0.000 %
123Sb (KED_DEF)	60.361 ppb	3.2 %	60.000 ppb	0.601 %
137Ba (KED_DEF)	58.496 ppb	2.5 %	60.000 ppb	2.506 %
159Tb (STD_DEF)	110.730 %	2.5 %		0.000 %
159Tb (KED_DEF)	104.893 %	1.1 %		0.000 %
175Lu (STD_DEF)	97.649 %	2.9 %		0.000 %
175Lu (KED_DEF)	103.824 %	3.2 %		0.000 %
205Tl (KED_DEF)	59.776 ppb	1.9 %	60.000 ppb	0.373 %
208Pb (STD_DEF)	59.973 ppb	3.5 %	60.000 ppb	0.045 %
209Bi (STD_DEF)	116.022 %	4.2 %		0.000 %
209Bi (KED_DEF)	105.414 %	1.1 %		0.000 %

Standards:

Analysis Index: 9
Analysis Name: 120/120000 Cal
Analysis Type: STD
Analysis Started at: 4/4/2024 5:44:01 AM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	95.764 %	3.4 %		0.000 %
6Li (KED_DEF)	97.948 %	3.7 %		0.000 %
9Be (STD_DEF)	120.427 ppb	1.4 %	120.000 ppb	0.356 %
23Na (KED_DEF)	11,261.245 ppb	2.2 %	12,000.000 ppb	6.156 %
24Mg (KED_DEF)	11,842.961 ppb	3.2 %	12,000.000 ppb	1.309 %
27Al (STD_DEF)	119.335 ppb	1.4 %	120.000 ppb	0.554 %
39K (KED_DEF)	11,870.100 ppb	1.2 %	12,000.000 ppb	1.083 %
44Ca (KED_DEF)	11,781.832 ppb	2.8 %	12,000.000 ppb	1.818 %
45Sc (STD_DEF)	108.788 %	1.8 %		0.000 %
45Sc (KED_DEF)	106.920 %	1.3 %		0.000 %
51V (KED_DEF)	118.995 ppb	2.1 %	120.000 ppb	0.837 %
52Cr (KED_DEF)	118.703 ppb	1.2 %	120.000 ppb	1.081 %
55Mn (KED_DEF)	118.545 ppb	1.5 %	120.000 ppb	1.213 %
57Fe (KED_DEF)	11,947.492 ppb	2.4 %	12,000.000 ppb	0.438 %
59Co (KED_DEF)	119.537 ppb	3.2 %	120.000 ppb	0.386 %
60Ni (KED_DEF)	119.126 ppb	1.6 %	120.000 ppb	0.728 %
65Cu (KED_DEF)	120.170 ppb	1.2 %	120.000 ppb	0.142 %
66Zn (KED_DEF)	119.925 ppb	1.4 %	120.000 ppb	0.062 %
74Ge (STD_DEF)	107.618 %	2.6 %		0.000 %
74Ge (KED_DEF)	108.404 %	2.0 %		0.000 %
75As (KED_DEF)	120.173 ppb	2.0 %	120.000 ppb	0.145 %
78Se (KED_DEF)	118.096 ppb	3.2 %	120.000 ppb	1.587 %
88Sr (KED_DEF)	119.490 ppb	1.1 %	120.000 ppb	0.425 %
95Mo (KED_DEF)	118.929 ppb	0.7 %	120.000 ppb	0.892 %
103Rh (STD_DEF)	104.568 %	4.1 %		0.000 %
103Rh (KED_DEF)	101.959 %	2.7 %		0.000 %
107Ag (KED_DEF)	120.054 ppb	2.9 %	120.000 ppb	0.045 %
111Cd (KED_DEF)	119.740 ppb	2.7 %	120.000 ppb	0.217 %
115In (STD_DEF)	105.206 %	2.1 %		0.000 %
115In (KED_DEF)	104.172 %	3.1 %		0.000 %
123Sb (KED_DEF)	119.829 ppb	1.1 %	120.000 ppb	0.142 %
137Ba (KED_DEF)	120.689 ppb	2.4 %	120.000 ppb	0.574 %
159Tb (STD_DEF)	112.146 %	3.2 %		0.000 %
159Tb (KED_DEF)	105.321 %	3.5 %		0.000 %
175Lu (STD_DEF)	105.066 %	6.3 %		0.000 %
175Lu (KED_DEF)	106.334 %	3.7 %		0.000 %
205Tl (KED_DEF)	120.066 ppb	2.0 %	120.000 ppb	0.055 %
208Pb (STD_DEF)	106.339 ppb	5.9 %	120.000 ppb	11.384 %
209Bi (STD_DEF)	116.923 %	2.3 %		0.000 %
209Bi (KED_DEF)	111.101 %	1.0 %		0.000 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	1	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/4/2024 5:06:53 AM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.642 %	94.776 %	0.007 ppb	25.662 ppb	-1.763 ppb	0.176 ppb	30.704 ppb	-10.225 ppb	96.939 %
Concentration per Run 1	110.408 %	90.112 %	0.007 ppb	27.430 ppb	-2.853 ppb	0.106 ppb	26.214 ppb	-36.658 ppb	105.354 %
Concentration per Run 2	103.111 %	96.269 %	0.004 ppb	25.191 ppb	-2.353 ppb	0.180 ppb	40.576 ppb	-36.764 ppb	98.409 %
Concentration per Run 3	94.407 %	97.948 %	0.011 ppb	24.366 ppb	-0.082 ppb	0.241 ppb	25.322 ppb	42.746 ppb	87.053 %
Concentration RSD	7.8 %	4.4 %	45.8 %	6.2 %	83.8 %	38.4 %	27.9 %	448.6 %	9.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	108.986 %	0.186 ppb	0.031 ppb	0.120 ppb	1.477 ppb	-0.001 ppb	0.094 ppb	0.062 ppb	0.800 ppb
Concentration per Run 1	109.894 %	0.234 ppb	-0.090 ppb	0.135 ppb	2.821 ppb	0.008 ppb	0.088 ppb	0.068 ppb	0.795 ppb
Concentration per Run 2	110.364 %	0.042 ppb	-0.189 ppb	0.124 ppb	0.764 ppb	-0.004 ppb	0.095 ppb	0.035 ppb	0.863 ppb
Concentration per Run 3	106.700 %	0.282 ppb	0.372 ppb	0.101 ppb	0.845 ppb	-0.007 ppb	0.100 ppb	0.083 ppb	0.742 ppb
Concentration RSD	1.8 %	68.2 %	961.7 %	14.6 %	78.9 %	711.8 %	6.4 %	39.6 %	7.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	97.980 %	115.619 %	-0.044 ppb	0.056 ppb	0.021 ppb	0.006 ppb	98.919 %	105.623 %	0.001 ppb
Concentration per Run 1	102.705 %	108.410 %	-0.057 ppb	0.188 ppb	0.011 ppb	-0.001 ppb	105.773 %	103.554 %	0.000 ppb
Concentration per Run 2	99.486 %	119.080 %	-0.013 ppb	-0.025 ppb	0.009 ppb	0.009 ppb	97.074 %	106.067 %	0.001 ppb
Concentration per Run 3	91.750 %	119.368 %	-0.062 ppb	0.003 ppb	0.043 ppb	0.009 ppb	93.908 %	107.246 %	0.003 ppb
Concentration RSD	5.7 %	5.4 %	60.7 %	207.8 %	92.4 %	94.4 %	6.2 %	1.8 %	100.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.004 ppb	96.988 %	108.319 %	0.005 ppb	0.052 ppb	103.040 %	105.329 %	90.983 %	104.841 %
Concentration per Run 1	0.003 ppb	100.998 %	106.479 %	0.012 ppb	0.008 ppb	102.638 %	102.309 %	93.266 %	104.911 %
Concentration per Run 2	0.007 ppb	98.851 %	111.230 %	0.000 ppb	0.087 ppb	107.631 %	106.275 %	88.960 %	104.218 %
Concentration per Run 3	0.003 ppb	91.116 %	107.247 %	0.003 ppb	0.062 ppb	98.852 %	107.403 %	90.725 %	105.394 %
Concentration RSD	56.8 %	5.4 %	2.4 %	132.6 %	77.0 %	4.3 %	2.5 %	2.4 %	0.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.018 ppb	0.021 ppb	72.118 %	70.628 %
Concentration per Run 1	0.013 ppb	0.019 ppb	70.474 %	67.835 %
Concentration per Run 2	0.017 ppb	0.023 ppb	74.861 %	71.360 %
Concentration per Run 3	0.023 ppb	0.021 ppb	71.019 %	72.689 %
Concentration RSD	26.9 %	9.2 %	3.3 %	3.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	2	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CAL LOT #M24-1045	Rack	0		
Analysis started at:	4/4/2024 5:11:33 AM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	101.578 %	83.769 %	0.003 ppb	52.826 ppb	-0.207 ppb	0.082 ppb	37.214 ppb	-24.879 ppb	97.842 %
Concentration per Run 1	106.369 %	83.395 %	0.001 ppb	59.654 ppb	-0.605 ppb	0.067 ppb	61.330 ppb	-32.563 ppb	99.493 %
Concentration per Run 2	100.034 %	90.112 %	0.003 ppb	40.287 ppb	0.555 ppb	0.147 ppb	32.668 ppb	-8.483 ppb	95.321 %
Concentration per Run 3	98.331 %	77.798 %	0.006 ppb	58.537 ppb	-0.570 ppb	0.031 ppb	17.645 ppb	-33.592 ppb	98.711 %
Concentration RSD	4.2 %	7.4 %	76.5 %	20.6 %	319.2 %	72.5 %	59.6 %	57.1 %	2.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	91.233 %	0.198 ppb	0.674 ppb	0.141 ppb	2.341 ppb	0.001 ppb	0.107 ppb	0.069 ppb	0.666 ppb
Concentration per Run 1	90.169 %	0.158 ppb	1.001 ppb	0.137 ppb	1.764 ppb	0.015 ppb	0.143 ppb	0.061 ppb	0.703 ppb
Concentration per Run 2	88.478 %	0.130 ppb	0.245 ppb	0.160 ppb	1.709 ppb	-0.007 ppb	0.165 ppb	0.048 ppb	0.592 ppb
Concentration per Run 3	95.053 %	0.305 ppb	0.778 ppb	0.126 ppb	3.551 ppb	-0.007 ppb	0.011 ppb	0.098 ppb	0.701 ppb
Concentration RSD	3.7 %	47.5 %	57.6 %	12.5 %	44.7 %	2,086.4 %	78.5 %	37.9 %	9.5 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	100.056 %	100.754 %	0.030 ppb	0.131 ppb	0.014 ppb	0.004 ppb	99.145 %	96.706 %	0.000 ppb
Concentration per Run 1	99.114 %	97.333 %	-0.021 ppb	0.184 ppb	0.015 ppb	0.012 ppb	102.860 %	94.002 %	-0.002 ppb
Concentration per Run 2	99.937 %	102.020 %	0.009 ppb	0.011 ppb	0.027 ppb	0.011 ppb	98.838 %	96.782 %	0.004 ppb
Concentration per Run 3	101.116 %	102.908 %	0.103 ppb	0.197 ppb	0.000 ppb	-0.011 ppb	95.737 %	99.334 %	-0.001 ppb
Concentration RSD	1.0 %	3.0 %	214.1 %	79.4 %	98.2 %	314.8 %	3.6 %	2.8 %	630.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.005 ppb	99.809 %	95.147 %	0.007 ppb	0.011 ppb	111.069 %	95.718 %	99.878 %	94.717 %
Concentration per Run 1	0.004 ppb	103.654 %	90.925 %	0.008 ppb	0.044 ppb	111.530 %	91.900 %	101.314 %	89.628 %
Concentration per Run 2	0.003 ppb	97.824 %	97.503 %	0.004 ppb	-0.020 ppb	110.591 %	94.350 %	99.482 %	95.364 %
Concentration per Run 3	0.008 ppb	97.949 %	97.013 %	0.010 ppb	0.010 ppb	111.085 %	100.904 %	98.838 %	99.158 %
Concentration RSD	54.3 %	3.3 %	3.9 %	47.6 %	280.2 %	0.4 %	4.9 %	1.3 %	5.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.004 ppb	0.018 ppb	85.052 %	84.273 %
Concentration per Run 1	-0.001 ppb	0.017 ppb	89.183 %	87.279 %
Concentration per Run 2	0.008 ppb	0.017 ppb	80.218 %	83.174 %
Concentration per Run 3	0.006 ppb	0.019 ppb	85.754 %	82.365 %
Concentration RSD	113.2 %	6.5 %	5.3 %	3.1 %

Analysis index:	3	User name	ALPHALAB\ICPMSRQ	Comment	PROBE STUCK
Analysis label:	xBlank EJF ICPMSRQ	Rack	4		
Analysis started at:	4/4/2024 5:16:12 AM	Vial	49		

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	4	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Blank EJF ICPMSRQ	Rack	4		
Analysis started at:	4/4/2024 5:20:33 AM	Vial	49		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.0 %	0.1 %	0.0 %	0.3 %	0.0 %	0.2 %	0.4 %	0.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.7 %	0.1 %	0.1 %	0.5 %	0.6 %	0.2 %	0.2 %	0.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb
Concentration RSD	0.0 %	0.0 %	1.1 %	-0.5 %	0.5 %	1.0 %	0.0 %	0.0 %	0.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %	100.000 %	100.000 %	100.000 %
Concentration per Run	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %	100.000 %	100.000 %	100.000 %
Concentration RSD	1.7 %	0.0 %	0.0 %	1.0 %	1.7 %	0.0 %	0.0 %	0.0 %	0.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.000 ppb	0.000 ppb	100.000 %	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	100.000 %	100.000 %
Concentration RSD	0.4 %	0.0 %	0.0 %	0.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	5	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	0.2/20 Cal	Rack	0		
Analysis started at:	4/4/2024 5:25:16 AM	Vial	2		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.714 %	93.284 %	0.207 ppb	40.628 ppb	24.923 ppb	0.268 ppb	41.720 ppb	164.536 ppb	95.299 %
Concentration per Run 1	102.866 %	91.791 %	0.205 ppb	44.889 ppb	26.133 ppb	0.351 ppb	37.029 ppb	141.186 ppb	96.351 %
Concentration per Run 2	99.228 %	113.060 %	0.207 ppb	4.127 ppb	21.171 ppb	0.292 ppb	41.131 ppb	210.268 ppb	90.999 %
Concentration per Run 3	97.048 %	75.000 %	0.210 ppb	72.869 ppb	27.464 ppb	0.160 ppb	47.000 ppb	142.154 ppb	98.545 %
Concentration RSD	2.9 %	20.4 %	1.1 %	85.1 %	13.3 %	36.5 %	12.0 %	24.1 %	4.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.047 %	0.346 ppb	0.688 ppb	0.261 ppb	22.537 ppb	0.252 ppb	0.245 ppb	0.199 ppb	0.669 ppb
Concentration per Run 1	95.523 %	0.252 ppb	0.797 ppb	0.293 ppb	22.943 ppb	0.187 ppb	0.267 ppb	0.246 ppb	0.621 ppb
Concentration per Run 2	85.566 %	0.485 ppb	0.752 ppb	0.215 ppb	21.693 ppb	0.294 ppb	0.187 ppb	0.123 ppb	0.772 ppb
Concentration per Run 3	95.053 %	0.303 ppb	0.516 ppb	0.274 ppb	22.975 ppb	0.274 ppb	0.282 ppb	0.227 ppb	0.614 ppb
Concentration RSD	6.1 %	35.4 %	21.9 %	15.5 %	3.2 %	22.5 %	20.9 %	33.3 %	13.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	101.210 %	102.563 %	0.131 ppb	0.192 ppb	0.291 ppb	0.152 ppb	99.619 %	96.264 %	0.222 ppb
Concentration per Run 1	101.369 %	100.409 %	0.296 ppb	0.191 ppb	0.233 ppb	0.138 ppb	100.498 %	92.857 %	0.234 ppb
Concentration per Run 2	99.872 %	101.874 %	-0.071 ppb	0.364 ppb	0.302 ppb	0.163 ppb	99.438 %	98.964 %	0.211 ppb
Concentration per Run 3	102.389 %	105.407 %	0.168 ppb	0.022 ppb	0.339 ppb	0.153 ppb	98.921 %	96.970 %	0.222 ppb
Concentration RSD	1.3 %	2.5 %	142.2 %	88.9 %	18.4 %	8.5 %	0.8 %	3.2 %	5.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.211 ppb	97.109 %	95.321 %	0.233 ppb	0.237 ppb	102.021 %	94.494 %	97.435 %	94.410 %
Concentration per Run 1	0.198 ppb	97.513 %	91.317 %	0.261 ppb	0.300 ppb	110.359 %	90.976 %	96.855 %	90.959 %
Concentration per Run 2	0.262 ppb	98.521 %	97.029 %	0.227 ppb	0.194 ppb	94.907 %	93.634 %	97.210 %	96.283 %
Concentration per Run 3	0.171 ppb	95.293 %	97.616 %	0.210 ppb	0.218 ppb	100.797 %	98.874 %	98.240 %	95.988 %
Concentration RSD	22.2 %	1.7 %	3.7 %	11.3 %	23.4 %	7.6 %	4.3 %	0.7 %	3.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.230 ppb	0.190 ppb	88.776 %	88.373 %
Concentration per Run 1	0.250 ppb	0.188 ppb	90.014 %	90.922 %
Concentration per Run 2	0.213 ppb	0.194 ppb	89.432 %	85.661 %
Concentration per Run 3	0.228 ppb	0.188 ppb	86.883 %	88.535 %
Concentration RSD	8.2 %	1.9 %	1.9 %	3.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	6	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	1/100 Cal	Rack	0		
Analysis started at:	4/4/2024 5:29:57 AM	Vial	3		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.430 %	90.672 %	1.006 ppb	128.135 ppb	109.133 ppb	1.061 ppb	175.905 ppb	198.083 ppb	93.844 %
Concentration per Run 1	102.043 %	96.269 %	1.018 ppb	127.669 ppb	103.349 ppb	1.057 ppb	194.843 ppb	125.593 ppb	92.911 %
Concentration per Run 2	98.735 %	90.672 %	1.008 ppb	114.185 ppb	108.182 ppb	1.105 ppb	151.789 ppb	199.634 ppb	92.916 %
Concentration per Run 3	97.510 %	85.075 %	0.992 ppb	142.553 ppb	115.869 ppb	1.020 ppb	181.083 ppb	269.022 ppb	95.706 %
Concentration RSD	2.4 %	6.2 %	1.3 %	11.1 %	5.8 %	4.0 %	12.5 %	36.2 %	1.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.795 %	1.213 ppb	1.440 ppb	1.225 ppb	119.759 ppb	1.226 ppb	1.040 ppb	1.052 ppb	1.716 ppb
Concentration per Run 1	88.384 %	1.325 ppb	1.637 ppb	1.320 ppb	131.656 ppb	1.349 ppb	1.050 ppb	1.033 ppb	1.951 ppb
Concentration per Run 2	95.147 %	1.362 ppb	1.194 ppb	1.160 ppb	107.279 ppb	1.033 ppb	0.965 ppb	0.988 ppb	1.480 ppb
Concentration per Run 3	88.853 %	0.953 ppb	1.490 ppb	1.195 ppb	120.341 ppb	1.297 ppb	1.106 ppb	1.134 ppb	1.718 ppb
Concentration RSD	4.2 %	18.6 %	15.6 %	6.8 %	10.2 %	13.8 %	6.8 %	7.1 %	13.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	100.054 %	99.015 %	1.180 ppb	1.038 ppb	1.199 ppb	1.029 ppb	100.065 %	93.972 %	1.073 ppb
Concentration per Run 1	101.294 %	91.397 %	1.285 ppb	0.980 ppb	1.227 ppb	1.254 ppb	96.556 %	89.823 %	1.153 ppb
Concentration per Run 2	99.543 %	106.080 %	1.054 ppb	1.029 ppb	1.419 ppb	0.934 ppb	99.969 %	94.593 %	1.069 ppb
Concentration per Run 3	99.324 %	99.567 %	1.201 ppb	1.104 ppb	0.952 ppb	0.898 ppb	103.669 %	97.501 %	0.998 ppb
Concentration RSD	1.1 %	7.4 %	9.9 %	6.0 %	19.6 %	19.0 %	3.6 %	4.1 %	7.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	1.074 ppb	97.927 %	97.089 %	0.927 ppb	1.454 ppb	104.366 %	92.775 %	91.125 %	93.799 %
Concentration per Run 1	1.163 ppb	100.509 %	90.452 %	1.054 ppb	1.491 ppb	101.586 %	86.920 %	85.217 %	89.819 %
Concentration per Run 2	1.091 ppb	98.100 %	99.739 %	0.836 ppb	1.324 ppb	98.199 %	95.461 %	99.296 %	94.372 %
Concentration per Run 3	0.967 ppb	95.172 %	101.077 %	0.892 ppb	1.548 ppb	113.314 %	95.944 %	88.862 %	97.206 %
Concentration RSD	9.3 %	2.7 %	6.0 %	12.2 %	8.0 %	7.6 %	5.5 %	8.0 %	4.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	1.076 ppb	1.009 ppb	90.890 %	88.562 %
Concentration per Run 1	1.079 ppb	1.059 ppb	91.188 %	88.014 %
Concentration per Run 2	1.066 ppb	0.934 ppb	94.399 %	87.892 %
Concentration per Run 3	1.083 ppb	1.032 ppb	87.081 %	89.780 %
Concentration RSD	0.8 %	6.5 %	4.0 %	1.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	7	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	10/10000 Cal	Rack	0		
Analysis started at:	4/4/2024 5:34:37 AM	Vial	4		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.262 %	82.649 %	10.096 ppb	1,146.693 ppb	1,152.607 ppb	11.446 ppb	1,138.072 ppb	1,097.240 ppb	97.443 %
Concentration per Run 1	101.449 %	77.239 %	10.149 ppb	1,157.153 ppb	1,202.599 ppb	11.660 ppb	1,201.827 ppb	1,055.795 ppb	98.076 %
Concentration per Run 2	98.582 %	81.716 %	10.105 ppb	1,198.442 ppb	1,155.730 ppb	11.337 ppb	1,110.392 ppb	1,166.739 ppb	99.169 %
Concentration per Run 3	97.757 %	88.992 %	10.035 ppb	1,084.484 ppb	1,099.492 ppb	11.342 ppb	1,101.997 ppb	1,069.184 ppb	95.085 %
Concentration RSD	2.0 %	7.2 %	0.6 %	5.0 %	4.5 %	1.6 %	4.9 %	5.5 %	2.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	97.307 %	10.616 ppb	10.816 ppb	11.146 ppb	1,076.842 ppb	10.843 ppb	11.058 ppb	10.638 ppb	11.593 ppb
Concentration per Run 1	98.810 %	11.519 ppb	10.611 ppb	11.168 ppb	1,102.208 ppb	10.907 ppb	11.959 ppb	11.620 ppb	12.392 ppb
Concentration per Run 2	92.517 %	10.691 ppb	10.873 ppb	11.090 ppb	1,063.146 ppb	11.191 ppb	10.686 ppb	10.550 ppb	10.761 ppb
Concentration per Run 3	100.595 %	9.639 ppb	10.965 ppb	11.181 ppb	1,065.171 ppb	10.431 ppb	10.530 ppb	9.744 ppb	11.626 ppb
Concentration RSD	4.4 %	8.9 %	1.7 %	0.4 %	2.0 %	3.5 %	7.1 %	8.8 %	7.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	102.731 %	103.494 %	10.735 ppb	10.556 ppb	9.922 ppb	9.764 ppb	101.686 %	99.362 %	10.299 ppb
Concentration per Run 1	105.436 %	97.192 %	11.035 ppb	10.281 ppb	9.654 ppb	10.047 ppb	101.284 %	99.111 %	10.166 ppb
Concentration per Run 2	101.341 %	109.252 %	10.324 ppb	10.126 ppb	9.964 ppb	9.546 ppb	101.736 %	99.597 %	10.131 ppb
Concentration per Run 3	101.417 %	104.039 %	10.847 ppb	11.261 ppb	10.148 ppb	9.698 ppb	102.037 %	99.377 %	10.599 ppb
Concentration RSD	2.3 %	5.8 %	3.4 %	5.8 %	2.5 %	2.6 %	0.4 %	0.2 %	2.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	10.141 ppb	101.535 %	99.194 %	9.889 ppb	10.708 ppb	103.227 %	98.813 %	97.033 %	96.174 %
Concentration per Run 1	10.246 ppb	103.446 %	97.176 %	9.930 ppb	10.257 ppb	104.929 %	95.605 %	105.158 %	93.366 %
Concentration per Run 2	10.036 ppb	99.825 %	100.146 %	9.964 ppb	10.174 ppb	100.502 %	101.068 %	91.424 %	93.910 %
Concentration per Run 3	10.140 ppb	101.334 %	100.261 %	9.773 ppb	11.691 ppb	104.249 %	99.766 %	94.516 %	101.245 %
Concentration RSD	1.0 %	1.8 %	1.8 %	1.0 %	8.0 %	2.3 %	2.9 %	7.4 %	4.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	10.546 ppb	10.162 ppb	101.150 %	97.700 %
Concentration per Run 1	10.161 ppb	9.114 ppb	102.308 %	100.053 %
Concentration per Run 2	10.396 ppb	10.938 ppb	103.024 %	98.148 %
Concentration per Run 3	11.081 ppb	10.433 ppb	98.118 %	94.898 %
Concentration RSD	4.5 %	9.3 %	2.6 %	2.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	8	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/4/2024 5:39:19 AM	Vial	5		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.613 %	92.351 %	59.129 ppb	5,975.014 ppb	6,288.474 ppb	61.088 ppb	6,235.451 ppb	6,418.013 ppb	105.643 %
Concentration per Run 1	102.490 %	92.351 %	57.724 ppb	6,051.454 ppb	6,225.476 ppb	59.379 ppb	6,204.770 ppb	6,909.319 ppb	107.451 %
Concentration per Run 2	95.430 %	82.276 %	60.045 ppb	6,388.448 ppb	6,717.345 ppb	60.464 ppb	6,416.501 ppb	5,851.826 ppb	108.690 %
Concentration per Run 3	94.919 %	102.425 %	59.619 ppb	5,485.138 ppb	5,922.602 ppb	63.422 ppb	6,085.082 ppb	6,492.892 ppb	100.789 %
Concentration RSD	4.3 %	10.9 %	2.1 %	7.6 %	6.4 %	3.4 %	2.7 %	8.3 %	4.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	101.064 %	61.902 ppb	62.448 ppb	62.716 ppb	6,091.872 ppb	60.781 ppb	61.570 ppb	59.552 ppb	59.870 ppb
Concentration per Run 1	98.153 %	60.047 ppb	64.477 ppb	64.142 ppb	6,248.459 ppb	61.405 ppb	64.902 ppb	59.072 ppb	61.517 ppb
Concentration per Run 2	101.064 %	63.778 ppb	62.481 ppb	61.585 ppb	5,973.613 ppb	60.057 ppb	59.780 ppb	59.220 ppb	58.076 ppb
Concentration per Run 3	103.976 %	61.881 ppb	60.387 ppb	62.421 ppb	6,053.545 ppb	60.882 ppb	60.029 ppb	60.364 ppb	60.018 ppb
Concentration RSD	2.9 %	3.0 %	3.3 %	2.1 %	2.3 %	1.1 %	4.7 %	1.2 %	2.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.294 %	105.580 %	59.528 ppb	63.715 ppb	61.029 ppb	62.180 ppb	106.785 %	100.787 %	59.840 ppb
Concentration per Run 1	109.834 %	102.241 %	62.079 ppb	68.494 ppb	62.794 ppb	63.245 ppb	108.033 %	98.627 %	61.625 ppb
Concentration per Run 2	106.616 %	111.253 %	54.046 ppb	58.104 ppb	59.344 ppb	62.020 ppb	108.215 %	100.603 %	60.036 ppb
Concentration per Run 3	105.431 %	103.247 %	62.458 ppb	64.546 ppb	60.949 ppb	61.276 ppb	104.107 %	103.131 %	57.860 ppb
Concentration RSD	2.1 %	4.7 %	8.0 %	8.2 %	2.8 %	1.6 %	2.2 %	2.2 %	3.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	60.496 ppb	105.409 %	101.561 %	60.361 ppb	58.496 ppb	110.730 %	104.893 %	97.649 %	103.824 %
Concentration per Run 1	62.208 ppb	108.761 %	97.307 %	61.539 ppb	58.860 ppb	113.486 %	103.743 %	100.299 %	100.084 %
Concentration per Run 2	60.776 ppb	100.291 %	100.913 %	61.377 ppb	59.766 ppb	110.825 %	104.989 %	94.705 %	106.389 %
Concentration per Run 3	58.504 ppb	107.176 %	106.463 %	58.166 ppb	56.863 ppb	107.879 %	105.947 %	97.942 %	104.999 %
Concentration RSD	3.1 %	4.3 %	4.5 %	3.2 %	2.5 %	2.5 %	1.1 %	2.9 %	3.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	59.776 ppb	59.973 ppb	116.022 %	105.414 %
Concentration per Run 1	58.526 ppb	58.134 ppb	121.538 %	106.240 %
Concentration per Run 2	59.985 ppb	62.227 ppb	112.202 %	105.961 %
Concentration per Run 3	60.817 ppb	59.558 ppb	114.326 %	104.042 %
Concentration RSD	1.9 %	3.5 %	4.2 %	1.1 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	9	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	120/120000 Cal	Rack	0		
Analysis started at:	4/4/2024 5:44:01 AM	Vial	6		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.764 %	97.948 %	120.427 ppb	11,251.245 ppb	11,842.961 ppb	119.335 ppb	11,870.100 ppb	11,781.832 ppb	108.788 %
Concentration per Run 1	99.432 %	94.590 %	118.717 ppb	11,544.396 ppb	12,167.355 ppb	117.540 ppb	12,029.046 ppb	11,690.876 ppb	110.256 %
Concentration per Run 2	94.512 %	97.388 %	120.419 ppb	11,080.833 ppb	11,932.541 ppb	119.807 ppb	11,832.510 ppb	12,153.313 ppb	109.527 %
Concentration per Run 3	93.348 %	101.866 %	122.146 ppb	11,158.507 ppb	11,428.988 ppb	120.657 ppb	11,748.744 ppb	11,501.308 ppb	106.580 %
Concentration RSD	3.4 %	3.7 %	1.4 %	2.2 %	3.2 %	1.4 %	1.2 %	2.8 %	1.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	106.920 %	118.995 ppb	118.703 ppb	118.545 ppb	11,947.492 ppb	119.537 ppb	119.126 ppb	120.170 ppb	119.925 ppb
Concentration per Run 1	108.203 %	118.157 ppb	117.304 ppb	118.664 ppb	12,212.967 ppb	123.400 ppb	117.992 ppb	118.455 ppb	121.610 ppb
Concentration per Run 2	107.170 %	117.076 ppb	118.667 ppb	116.689 ppb	11,640.358 ppb	115.866 ppb	118.040 ppb	121.026 ppb	118.372 ppb
Concentration per Run 3	105.385 %	121.753 ppb	120.139 ppb	120.280 ppb	11,989.150 ppb	119.345 ppb	121.346 ppb	121.030 ppb	119.795 ppb
Concentration RSD	1.3 %	2.1 %	1.2 %	1.5 %	2.4 %	3.2 %	1.6 %	1.2 %	1.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.618 %	108.404 %	120.173 ppb	118.096 ppb	119.490 ppb	118.929 ppb	104.568 %	101.959 %	120.054 ppb
Concentration per Run 1	110.605 %	106.723 %	122.499 ppb	122.433 ppb	120.574 ppb	118.683 ppb	109.279 %	100.967 %	120.857 ppb
Concentration per Run 2	107.143 %	110.806 %	117.692 ppb	116.210 ppb	118.079 ppb	119.854 ppb	103.425 %	99.816 %	123.050 ppb
Concentration per Run 3	105.106 %	107.684 %	120.329 ppb	115.645 ppb	119.817 ppb	118.251 ppb	101.000 %	105.093 %	116.256 ppb
Concentration RSD	2.6 %	2.0 %	2.0 %	3.2 %	1.1 %	0.7 %	4.1 %	2.7 %	2.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	119.740 ppb	105.206 %	104.172 %	119.829 ppb	120.689 ppb	112.146 %	105.321 %	105.066 %	106.334 %
Concentration per Run 1	119.370 ppb	107.650 %	101.713 %	120.960 ppb	123.904 ppb	113.844 %	102.663 %	101.104 %	102.580 %
Concentration per Run 2	123.127 ppb	103.335 %	103.035 %	120.078 ppb	119.931 ppb	114.568 %	103.731 %	101.338 %	105.982 %
Concentration per Run 3	116.722 ppb	104.633 %	107.769 %	118.451 ppb	118.231 ppb	108.026 %	109.568 %	112.755 %	110.440 %
Concentration RSD	2.7 %	2.1 %	3.1 %	1.1 %	2.4 %	3.2 %	3.5 %	6.3 %	3.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	120.066 ppb	106.339 ppb	116.923 %	111.101 %
Concentration per Run 1	119.145 ppb	110.594 ppb	118.487 %	112.414 %
Concentration per Run 2	122.795 ppb	109.265 ppb	113.778 %	110.298 %
Concentration per Run 3	118.257 ppb	99.158 ppb	118.504 %	110.589 %
Concentration RSD	2.0 %	5.9 %	2.3 %	1.0 %

Analysis index:	10	User name	ALPHALAB\ICPMSRQ	Comment	PROBE STUCK
Analysis label:	xSr 200ppb	Rack	4		
Analysis started at:	4/4/2024 5:52:24 AM	Vial	55		

Alpha ICPMSRQ Data with SRD

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Analysis index:	11	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Sr 200ppb	Rack	4		
Analysis started at:	4/4/2024 5:56:38 AM	Vial	55		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.058 %	94.030 %	0.020 ppb	-18.500 ppb	3.785 ppb	0.540 ppb	8.817 ppb	-0.312 ppb	106.696 %
Concentration per Run 1	101.536 %	101.306 %	0.030 ppb	-35.637 ppb	5.047 ppb	0.553 ppb	8.587 ppb	-158.520 ppb	107.306 %
Concentration per Run 2	98.444 %	77.798 %	0.018 ppb	12.688 ppb	5.928 ppb	0.562 ppb	12.328 ppb	125.961 ppb	105.629 %
Concentration per Run 3	97.192 %	102.985 %	0.013 ppb	-32.552 ppb	0.381 ppb	0.505 ppb	5.536 ppb	31.623 ppb	107.153 %
Concentration RSD	2.3 %	15.0 %	43.9 %	146.2 %	78.8 %	5.7 %	38.6 %	46,442.2 %	0.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	101.785 %	-0.046 ppb	-0.375 ppb	0.035 ppb	2.482 ppb	-0.002 ppb	0.027 ppb	0.032 ppb	0.842 ppb
Concentration per Run 1	101.440 %	-0.046 ppb	-0.332 ppb	0.024 ppb	0.710 ppb	-0.003 ppb	0.050 ppb	0.021 ppb	0.929 ppb
Concentration per Run 2	98.622 %	-0.045 ppb	-0.360 ppb	0.091 ppb	4.180 ppb	0.001 ppb	-0.003 ppb	0.046 ppb	0.707 ppb
Concentration per Run 3	105.291 %	-0.047 ppb	-0.434 ppb	-0.009 ppb	2.556 ppb	-0.003 ppb	0.033 ppb	0.029 ppb	0.889 ppb
Concentration RSD	3.3 %	2.4 %	14.1 %	143.4 %	69.9 %	126.3 %	101.4 %	38.6 %	14.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	105.300 %	107.914 %	-0.033 ppb	0.008 ppb	200.547 ppb	0.037 ppb	106.345 %	104.659 %	0.002 ppb
Concentration per Run 1	105.725 %	107.160 %	-0.053 ppb	-0.009 ppb	200.851 ppb	0.031 ppb	108.818 %	101.751 %	0.000 ppb
Concentration per Run 2	108.269 %	110.140 %	-0.019 ppb	0.012 ppb	201.320 ppb	0.060 ppb	107.581 %	106.059 %	0.002 ppb
Concentration per Run 3	101.905 %	106.442 %	-0.026 ppb	0.022 ppb	199.468 ppb	0.020 ppb	102.637 %	106.168 %	0.002 ppb
Concentration RSD	3.0 %	1.8 %	55.0 %	188.4 %	0.5 %	56.1 %	3.1 %	2.4 %	68.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.000 ppb	106.481 %	104.695 %	0.022 ppb	0.026 ppb	108.695 %	105.661 %	96.773 %	104.483 %
Concentration per Run 1	0.003 ppb	109.269 %	99.625 %	0.023 ppb	-0.020 ppb	111.057 %	104.929 %	97.707 %	102.334 %
Concentration per Run 2	-0.002 ppb	104.588 %	107.002 %	0.009 ppb	0.090 ppb	109.304 %	104.747 %	97.544 %	105.982 %
Concentration per Run 3	-0.002 ppb	105.586 %	107.459 %	0.034 ppb	0.007 ppb	105.725 %	107.307 %	95.068 %	105.132 %
Concentration RSD	20,875.0 %	2.3 %	4.2 %	56.1 %	220.0 %	2.5 %	1.4 %	1.5 %	1.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.102 ppb	0.010 ppb	119.307 %	116.114 %
Concentration per Run 1	0.059 ppb	0.010 ppb	124.578 %	116.462 %
Concentration per Run 2	0.122 ppb	0.009 ppb	115.916 %	117.006 %
Concentration per Run 3	0.127 ppb	0.010 ppb	117.428 %	114.874 %
Concentration RSD	37.1 %	7.6 %	3.9 %	1.0 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	12	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	ICV	Rack	0		
Analysis started at:	4/4/2024 6:01:20 AM	Vial	7		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.264 %	86.007 %	52.386 ppb	5,330.409 ppb	5,447.861 ppb	54.413 ppb	5,482.611 ppb	5,753.122 ppb	106.846 %
Concentration per Run 1	101.515 %	101.306 %	50.380 ppb	5,400.338 ppb	5,429.070 ppb	50.793 ppb	5,472.669 ppb	6,310.256 ppb	113.253 %
Concentration per Run 2	95.744 %	78.918 %	53.193 ppb	5,366.162 ppb	5,219.502 ppb	55.254 ppb	5,606.128 ppb	6,252.979 ppb	108.867 %
Concentration per Run 3	94.532 %	77.798 %	53.585 ppb	5,224.725 ppb	5,695.011 ppb	57.193 ppb	5,369.037 ppb	4,696.131 ppb	98.420 %
Recovery Percentage 1			104.772 %	106.608 %	108.957 %	108.827 %	109.652 %	115.062 %	
Concentration RSD	3.8 %	15.4 %	3.3 %	1.7 %	4.4 %	6.0 %	2.2 %	15.9 %	7.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	102.160 %	52.237 ppb	54.539 ppb	55.200 ppb	5,438.537 ppb	54.990 ppb	53.362 ppb	52.262 ppb	53.617 ppb
Concentration per Run 1	102.380 %	51.816 ppb	54.889 ppb	54.723 ppb	5,426.628 ppb	55.734 ppb	53.862 ppb	53.056 ppb	53.421 ppb
Concentration per Run 2	100.407 %	53.834 ppb	50.700 ppb	55.020 ppb	5,263.975 ppb	54.230 ppb	52.657 ppb	50.606 ppb	52.544 ppb
Concentration per Run 3	103.695 %	51.062 ppb	58.028 ppb	55.857 ppb	5,625.007 ppb	55.007 ppb	53.565 ppb	53.125 ppb	54.887 ppb
Recovery Percentage 1		104.474 %	109.078 %	110.400 %	108.771 %	109.981 %	106.723 %	104.524 %	107.235 %
Concentration RSD	1.6 %	2.7 %	6.7 %	1.1 %	3.3 %	1.4 %	1.2 %	2.7 %	2.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.193 %	106.461 %	52.924 ppb	49.433 ppb	54.863 ppb	51.185 ppb	105.709 %	102.715 %	52.822 ppb
Concentration per Run 1	107.524 %	106.566 %	53.074 ppb	48.185 ppb	54.545 ppb	52.664 ppb	109.046 %	99.523 %	54.790 ppb
Concentration per Run 2	106.807 %	110.287 %	51.830 ppb	46.276 ppb	53.824 ppb	50.921 ppb	104.286 %	101.394 %	53.660 ppb
Concentration per Run 3	107.249 %	102.529 %	53.866 ppb	53.838 ppb	56.219 ppb	49.970 ppb	103.795 %	107.230 %	50.016 ppb
Recovery Percentage 1			105.847 %	98.866 %	109.725 %	102.370 %			105.644 %
Concentration RSD	0.3 %	3.6 %	1.9 %	8.0 %	2.2 %	2.7 %	2.7 %	3.9 %	4.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	52.888 ppb	104.471 %	101.762 %	53.175 ppb	52.901 ppb	110.878 %	104.077 %	99.262 %	105.335 %
Concentration per Run 1	53.580 ppb	107.392 %	99.575 %	54.885 ppb	52.803 ppb	113.150 %	101.462 %	99.266 %	102.377 %
Concentration per Run 2	52.882 ppb	101.767 %	101.696 %	52.076 ppb	53.069 ppb	110.068 %	105.799 %	97.077 %	110.133 %
Concentration per Run 3	52.202 ppb	104.255 %	104.014 %	52.565 ppb	52.830 ppb	109.417 %	104.971 %	101.444 %	103.496 %
Recovery Percentage 1	105.776 %			106.350 %	105.801 %				
Concentration RSD	1.3 %	2.7 %	2.2 %	2.8 %	0.3 %	1.8 %	2.2 %	2.2 %	4.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	52.192 ppb	53.644 ppb	118.659 %	109.277 %
Concentration per Run 1	56.991 ppb	53.547 ppb	123.696 %	102.374 %
Concentration per Run 2	48.337 ppb	55.268 ppb	116.891 %	114.301 %
Concentration per Run 3	51.246 ppb	52.117 ppb	115.389 %	111.155 %
Recovery Percentage 1	104.383 %	107.288 %		
Concentration RSD	8.4 %	2.9 %	3.7 %	5.7 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	13	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	ICB	Rack	0		
Analysis started at:	4/4/2024 6:06:03 AM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.657 %	102.239 %	0.027 ppb	-35.485 ppb	-0.898 ppb	-0.476 ppb	14.150 ppb	13.857 ppb	105.423 %
Concentration per Run 1	102.070 %	96.269 %	0.030 ppb	-19.901 ppb	-1.093 ppb	-0.492 ppb	11.125 ppb	-14.401 ppb	109.055 %
Concentration per Run 2	97.270 %	115.858 %	0.028 ppb	-63.934 ppb	1.187 ppb	-0.434 ppb	18.331 ppb	46.522 ppb	102.672 %
Concentration per Run 3	96.632 %	94.589 %	0.022 ppb	-22.621 ppb	-2.787 ppb	-0.501 ppb	12.992 ppb	9.450 ppb	104.542 %
Recovery Percentage 1			5.312 %	-35.485 %	-1.283 %	-4.760 %	14.150 %	13.857 %	
Concentration RSD	3.0 %	11.6 %	15.7 %	69.5 %	222.1 %	7.6 %	26.4 %	221.5 %	3.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	100.031 %	-0.036 ppb	-0.197 ppb	-0.021 ppb	3.507 ppb	-0.007 ppb	0.005 ppb	0.036 ppb	0.346 ppb
Concentration per Run 1	101.346 %	-0.096 ppb	-0.079 ppb	-0.025 ppb	4.861 ppb	-0.007 ppb	0.006 ppb	0.053 ppb	0.307 ppb
Concentration per Run 2	101.910 %	-0.020 ppb	-0.240 ppb	-0.026 ppb	4.819 ppb	-0.007 ppb	0.059 ppb	-0.010 ppb	0.391 ppb
Concentration per Run 3	96.838 %	0.009 ppb	-0.273 ppb	-0.012 ppb	0.843 ppb	-0.007 ppb	-0.050 ppb	0.067 ppb	0.341 ppb
Recovery Percentage 1		-0.714 %	-19.743 %	-2.061 %	7.015 %	-1.394 %	0.240 %	3.639 %	6.926 %
Concentration RSD	2.8 %	151.4 %	52.8 %	38.0 %	65.8 %	0.1 %	1,137.0 %	112.5 %	12.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.527 %	102.795 %	-0.059 ppb	0.070 ppb	0.038 ppb	0.148 ppb	106.126 %	103.152 %	0.003 ppb
Concentration per Run 1	113.628 %	100.794 %	0.035 ppb	0.189 ppb	0.026 ppb	0.193 ppb	109.973 %	101.338 %	0.003 ppb
Concentration per Run 2	108.086 %	101.201 %	-0.163 ppb	0.000 ppb	0.090 ppb	0.138 ppb	104.452 %	102.851 %	0.005 ppb
Concentration per Run 3	103.868 %	106.391 %	-0.050 ppb	0.022 ppb	-0.001 ppb	0.113 ppb	103.952 %	105.268 %	0.001 ppb
Recovery Percentage 1			-11.857 %	1.406 %	7.637 %	7.393 %			0.841 %
Concentration RSD	4.5 %	3.0 %	167.2 %	146.6 %	123.2 %	27.9 %	3.1 %	1.9 %	62.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	107.454 %	104.249 %	0.031 ppb	0.018 ppb	109.100 %	104.515 %	102.111 %	102.908 %
Concentration per Run 1	0.008 ppb	110.006 %	102.612 %	0.032 ppb	0.008 ppb	113.782 %	104.795 %	97.588 %	102.363 %
Concentration per Run 2	0.003 ppb	105.733 %	105.043 %	0.031 ppb	0.036 ppb	111.239 %	104.409 %	99.607 %	102.584 %
Concentration per Run 3	-0.002 ppb	106.623 %	105.092 %	0.028 ppb	0.008 ppb	102.278 %	104.342 %	109.136 %	103.778 %
Recovery Percentage 1				0.764 %	3.502 %				
Concentration RSD	153.6 %	2.1 %	1.4 %	6.7 %	91.3 %	5.5 %	0.2 %	6.0 %	0.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.328 ppb	0.013 ppb	120.689 %	113.778 %
Concentration per Run 1	0.210 ppb	0.014 ppb	123.094 %	113.564 %
Concentration per Run 2	0.380 ppb	0.015 ppb	115.893 %	114.240 %
Concentration per Run 3	0.394 ppb	0.010 ppb	123.080 %	113.530 %
Recovery Percentage 1	32.782 %	1.306 %		
Concentration RSD	31.3 %	17.4 %	3.4 %	0.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	14	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/4/2024 6:19:21 AM	Vial	53		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	83.701 %	91.791 %	0.045 ppb	200,353.811 ppb	104,783.001 ppb	76,389.978 ppb	101,323.050 ppb	302,032.274 ppb	106.635 %
Concentration per Run 1	85.391 %	87.873 %	0.040 ppb	212,163.370 ppb	111,581.365 ppb	75,561.954 ppb	107,082.508 ppb	310,950.063 ppb	106.856 %
Concentration per Run 2	82.946 %	94.030 %	0.052 ppb	195,829.493 ppb	101,641.028 ppb	77,787.233 ppb	103,686.981 ppb	306,607.335 ppb	105.876 %
Concentration per Run 3	82.767 %	93.470 %	0.044 ppb	193,068.570 ppb	101,126.610 ppb	75,820.747 ppb	93,199.661 ppb	288,539.423 ppb	107.174 %
Recovery Percentage 1			4.531 %	80.142 %	104.783 %	76.390 %	101.323 %	100.677 %	
Concentration RSD	1.8 %	3.7 %	14.2 %	5.2 %	5.6 %	1.6 %	7.1 %	3.9 %	0.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	113.902 %	0.047 ppb	0.697 ppb	4.560 ppb	239,460.096 ppb	2.335 ppb	3.092 ppb	1.241 ppb	3.087 ppb
Concentration per Run 1	109.800 %	0.138 ppb	0.702 ppb	4.663 ppb	256,409.118 ppb	2.462 ppb	3.560 ppb	1.204 ppb	3.154 ppb
Concentration per Run 2	110.458 %	-0.027 ppb	0.852 ppb	4.650 ppb	234,340.032 ppb	2.247 ppb	2.777 ppb	1.338 ppb	3.037 ppb
Concentration per Run 3	121.448 %	0.031 ppb	0.536 ppb	4.366 ppb	227,631.140 ppb	2.297 ppb	2.941 ppb	1.182 ppb	3.072 ppb
Recovery Percentage 1		0.946 %	21.120 %	79.996 %	95.784 %	81.371 %	50.696 %	44.021 %	27.083 %
Concentration RSD	5.7 %	176.8 %	22.7 %	3.7 %	6.3 %	4.8 %	13.4 %	6.8 %	1.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	118.084 %	119.113 %	0.651 ppb	3.865 ppb	2.616 ppb	2,152.819 ppb	100.449 %	104.931 %	0.031 ppb
Concentration per Run 1	116.858 %	112.978 %	0.385 ppb	3.501 ppb	2.754 ppb	2,196.725 ppb	102.104 %	101.364 %	0.030 ppb
Concentration per Run 2	118.566 %	121.364 %	0.738 ppb	3.475 ppb	2.439 ppb	2,072.783 ppb	100.115 %	106.337 %	0.028 ppb
Concentration per Run 3	118.828 %	122.998 %	0.829 ppb	4.618 ppb	2.654 ppb	2,188.948 ppb	99.129 %	107.091 %	0.036 ppb
Recovery Percentage 1			39.921 %	29.960 %	96.880 %	53.820 %			3.927 %
Concentration RSD	0.9 %	4.5 %	36.0 %	16.9 %	6.1 %	3.2 %	1.5 %	3.0 %	13.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.267 ppb	103.048 %	111.545 %	0.209 ppb	1.556 ppb	110.147 %	122.760 %	109.262 %	128.737 %
Concentration per Run 1	0.286 ppb	108.237 %	107.262 %	0.209 ppb	1.543 ppb	112.355 %	116.401 %	104.837 %	123.606 %
Concentration per Run 2	0.307 ppb	100.419 %	110.560 %	0.228 ppb	1.600 ppb	110.243 %	123.333 %	103.894 %	130.995 %
Concentration per Run 3	0.208 ppb	100.489 %	116.812 %	0.189 ppb	1.524 ppb	107.844 %	128.547 %	119.056 %	131.610 %
Recovery Percentage 1	66.741 %			2.609 %	82.752 %				
Concentration RSD	19.6 %	4.4 %	4.3 %	9.5 %	2.5 %	2.0 %	5.0 %	7.8 %	3.5 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.076 ppb	1.549 ppb	109.748 %	125.328 %
Concentration per Run 1	0.050 ppb	1.633 ppb	115.481 %	125.497 %
Concentration per Run 2	0.084 ppb	1.636 ppb	108.036 %	127.354 %
Concentration per Run 3	0.094 ppb	1.377 ppb	105.728 %	123.134 %
Recovery Percentage 1	3.796 %	49.954 %		
Concentration RSD	30.2 %	9.6 %	4.6 %	1.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	15	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	LDR Check - 10/1ppm	Rack	4		
Analysis started at:	4/4/2024 6:24:05 AM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	107.014 %	98.507 %	0.013 ppb	34.791 ppb	2.801 ppb	4.137 ppb	55.755 ppb	16.032 ppb	112.023 %
Concentration per Run 1	111.737 %	104.104 %	0.007 ppb	40.979 ppb	3.646 ppb	3.881 ppb	45.046 ppb	-18.012 ppb	115.368 %
Concentration per Run 2	104.512 %	93.470 %	0.013 ppb	43.969 ppb	2.614 ppb	3.991 ppb	72.337 ppb	6.139 ppb	108.406 %
Concentration per Run 3	104.792 %	97.948 %	0.019 ppb	19.423 ppb	2.143 ppb	4.540 ppb	49.882 ppb	59.970 ppb	112.295 %
Concentration RSD	3.8 %	5.4 %	43.4 %	38.5 %	27.5 %	8.5 %	26.1 %	249.0 %	3.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	103.757 %	-0.047 ppb	0.118 ppb	9,645.413 ppb	30.045 ppb	0.052 ppb	0.218 ppb	9,865.385 ppb	10,919.274 ppb
Concentration per Run 1	105.291 %	-0.023 ppb	0.066 ppb	9,605.346 ppb	29.157 ppb	0.058 ppb	0.157 ppb	10,221.026 ppb	11,029.889 ppb
Concentration per Run 2	98.341 %	-0.045 ppb	0.205 ppb	9,855.021 ppb	33.215 ppb	0.032 ppb	0.251 ppb	9,646.943 ppb	10,867.145 ppb
Concentration per Run 3	107.640 %	-0.072 ppb	0.084 ppb	9,475.871 ppb	27.762 ppb	0.067 ppb	0.245 ppb	9,728.186 ppb	10,860.788 ppb
Concentration RSD	4.7 %	52.8 %	63.8 %	2.0 %	9.4 %	35.2 %	24.1 %	3.1 %	0.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	115.152 %	112.472 %	1,114.023 ppb	0.264 ppb	0.288 ppb	2.353 ppb	108.823 %	106.175 %	0.040 ppb
Concentration per Run 1	119.282 %	109.467 %	1,175.235 ppb	0.311 ppb	0.305 ppb	2.274 ppb	113.418 %	105.441 %	0.033 ppb
Concentration per Run 2	112.896 %	114.251 %	1,069.713 ppb	0.003 ppb	0.299 ppb	2.467 ppb	106.695 %	104.877 %	0.052 ppb
Concentration per Run 3	113.279 %	113.697 %	1,097.121 ppb	0.478 ppb	0.259 ppb	2.317 ppb	106.356 %	108.205 %	0.035 ppb
Concentration RSD	3.1 %	2.3 %	4.9 %	91.4 %	8.7 %	4.3 %	3.7 %	1.7 %	26.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.012 ppb	108.616 %	108.379 %	0.015 ppb	10,962.508 ppb	109.484 %	102.324 %	100.135 %	105.625 %
Concentration per Run 1	0.013 ppb	112.445 %	104.798 %	0.009 ppb	10,977.771 ppb	114.640 %	99.412 %	99.490 %	102.835 %
Concentration per Run 2	0.008 ppb	107.063 %	109.565 %	0.015 ppb	10,790.957 ppb	106.305 %	106.542 %	106.731 %	106.547 %
Concentration per Run 3	0.016 ppb	106.339 %	110.772 %	0.021 ppb	11,118.797 ppb	107.506 %	101.017 %	94.183 %	107.494 %
Concentration RSD	36.6 %	3.1 %	2.9 %	38.2 %	1.5 %	4.1 %	3.7 %	6.3 %	2.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.036 ppb	9,644.516 ppb	118.538 %	107.712 %
Concentration per Run 1	0.015 ppb	9,350.744 ppb	123.193 %	106.057 %
Concentration per Run 2	0.050 ppb	9,177.468 ppb	118.373 %	107.126 %
Concentration per Run 3	0.044 ppb	10,405.338 ppb	114.049 %	109.953 %
Concentration RSD	51.3 %	6.9 %	3.9 %	1.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	16	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/4/2024 6:28:48 AM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	104.109 %	94.963 %	0.015 ppb	-7.027 ppb	1.944 ppb	0.071 ppb	26.439 ppb	-20.743 ppb	105.611 %
Concentration per Run 1	106.175 %	90.672 %	0.012 ppb	3.286 ppb	-0.862 ppb	0.200 ppb	24.979 ppb	-56.448 ppb	106.868 %
Concentration per Run 2	103.060 %	97.948 %	0.013 ppb	-6.031 ppb	3.094 ppb	-0.057 ppb	30.096 ppb	-12.151 ppb	104.611 %
Concentration per Run 3	103.091 %	96.269 %	0.019 ppb	-18.335 ppb	3.600 ppb	0.071 ppb	24.242 ppb	6.369 ppb	105.354 %
Concentration RSD	1.7 %	4.0 %	22.7 %	154.3 %	125.7 %	179.7 %	12.1 %	155.6 %	1.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	97.151 %	-0.052 ppb	-0.512 ppb	0.337 ppb	9.042 ppb	-0.004 ppb	0.095 ppb	0.418 ppb	1.326 ppb
Concentration per Run 1	94.583 %	-0.015 ppb	-0.430 ppb	0.293 ppb	9.429 ppb	0.002 ppb	0.241 ppb	0.302 ppb	1.379 ppb
Concentration per Run 2	96.368 %	-0.096 ppb	-0.665 ppb	0.381 ppb	7.573 ppb	-0.011 ppb	-0.033 ppb	0.451 ppb	1.340 ppb
Concentration per Run 3	100.501 %	-0.045 ppb	-0.441 ppb	0.337 ppb	10.125 ppb	-0.003 ppb	0.079 ppb	0.502 ppb	1.259 ppb
Concentration RSD	3.1 %	78.5 %	25.9 %	13.2 %	14.6 %	154.8 %	144.5 %	24.8 %	4.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.944 %	103.700 %	0.254 ppb	0.001 ppb	0.059 ppb	0.388 ppb	103.597 %	103.098 %	0.000 ppb
Concentration per Run 1	110.804 %	100.432 %	0.357 ppb	0.011 ppb	0.079 ppb	0.292 ppb	104.152 %	100.631 %	0.001 ppb
Concentration per Run 2	107.892 %	103.700 %	0.147 ppb	-0.010 ppb	-0.001 ppb	0.472 ppb	102.175 %	103.421 %	0.000 ppb
Concentration per Run 3	108.136 %	106.968 %	0.256 ppb	0.001 ppb	0.098 ppb	0.400 ppb	104.464 %	105.244 %	-0.002 ppb
Concentration RSD	1.5 %	3.2 %	41.3 %	1,102.0 %	89.5 %	23.4 %	1.2 %	2.3 %	3,028.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	103.986 %	102.654 %	0.012 ppb	0.338 ppb	108.343 %	102.912 %	99.741 %	101.764 %
Concentration per Run 1	-0.002 ppb	103.741 %	99.363 %	0.020 ppb	0.273 ppb	106.686 %	99.626 %	105.120 %	99.157 %
Concentration per Run 2	0.003 ppb	104.278 %	103.165 %	0.006 ppb	0.376 ppb	107.237 %	103.207 %	94.767 %	101.901 %
Concentration per Run 3	0.008 ppb	103.937 %	105.435 %	0.009 ppb	0.366 ppb	111.105 %	105.901 %	99.336 %	104.235 %
Concentration RSD	152.9 %	0.3 %	3.0 %	60.8 %	16.7 %	2.2 %	3.1 %	5.2 %	2.5 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.032 ppb	0.298 ppb	106.267 %	107.979 %
Concentration per Run 1	0.013 ppb	0.338 ppb	105.972 %	106.119 %
Concentration per Run 2	0.034 ppb	0.301 ppb	108.574 %	106.648 %
Concentration per Run 3	0.050 ppb	0.255 ppb	104.257 %	111.169 %
Concentration RSD	58.5 %	13.9 %	2.0 %	2.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	17	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 6:33:27 AM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	101.786 %	92.164 %	61.355 ppb	6,288.664 ppb	6,437.978 ppb	58.790 ppb	6,376.943 ppb	6,236.573 ppb	111.667 %
Concentration per Run 1	106.453 %	82.836 %	59.183 ppb	6,432.963 ppb	6,429.002 ppb	56.393 ppb	6,168.276 ppb	6,349.439 ppb	118.347 %
Concentration per Run 2	100.031 %	87.313 %	61.715 ppb	6,674.960 ppb	6,639.587 ppb	59.053 ppb	6,606.136 ppb	6,330.178 ppb	113.571 %
Concentration per Run 3	98.873 %	106.343 %	63.168 ppb	5,758.069 ppb	6,245.345 ppb	60.926 ppb	6,356.417 ppb	6,030.102 ppb	103.084 %
Recovery Percentage 1			102.258 %	104.811 %	107.300 %	97.984 %	106.282 %	103.943 %	
Concentration RSD	4.0 %	13.5 %	3.3 %	7.6 %	3.1 %	3.9 %	3.4 %	2.9 %	7.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	103.319 %	58.948 ppb	60.257 ppb	63.415 ppb	6,270.533 ppb	62.413 ppb	60.644 ppb	60.163 ppb	60.736 ppb
Concentration per Run 1	107.358 %	59.231 ppb	57.923 ppb	61.677 ppb	6,108.156 ppb	61.405 ppb	58.661 ppb	56.835 ppb	58.057 ppb
Concentration per Run 2	99.468 %	60.281 ppb	63.176 ppb	65.658 ppb	6,513.539 ppb	64.410 ppb	64.254 ppb	64.532 ppb	63.851 ppb
Concentration per Run 3	103.131 %	57.331 ppb	59.672 ppb	62.911 ppb	6,189.903 ppb	61.424 ppb	59.016 ppb	59.123 ppb	60.300 ppb
Recovery Percentage 1		98.246 %	100.428 %	105.692 %	104.509 %	104.022 %	101.073 %	100.272 %	101.227 %
Concentration RSD	3.8 %	2.5 %	4.4 %	3.2 %	3.4 %	2.8 %	5.2 %	6.6 %	4.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.604 %	106.447 %	60.498 ppb	63.165 ppb	62.255 ppb	61.636 ppb	106.594 %	98.716 %	60.740 ppb
Concentration per Run 1	113.254 %	105.966 %	59.695 ppb	63.985 ppb	60.157 ppb	62.319 ppb	112.922 %	98.795 %	62.594 ppb
Concentration per Run 2	110.509 %	102.794 %	62.698 ppb	61.917 ppb	64.780 ppb	65.160 ppb	104.396 %	95.920 %	62.248 ppb
Concentration per Run 3	108.049 %	110.581 %	59.102 ppb	63.594 ppb	61.829 ppb	57.429 ppb	102.463 %	101.435 %	57.378 ppb
Recovery Percentage 1			100.831 %	105.275 %	103.759 %	102.727 %			101.233 %
Concentration RSD	2.4 %	3.7 %	3.2 %	1.7 %	3.8 %	6.3 %	5.2 %	2.8 %	4.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	59.553 ppb	106.590 %	106.235 %	60.445 ppb	60.620 ppb	116.372 %	105.466 %	104.380 %	104.460 %
Concentration per Run 1	60.375 ppb	110.059 %	103.476 %	61.542 ppb	60.720 ppb	122.013 %	103.894 %	109.307 %	101.548 %
Concentration per Run 2	61.275 ppb	106.151 %	103.215 %	61.394 ppb	62.423 ppb	114.797 %	105.315 %	103.843 %	105.562 %
Concentration per Run 3	57.011 ppb	103.558 %	112.012 %	58.398 ppb	58.718 ppb	112.306 %	107.190 %	99.989 %	106.269 %
Recovery Percentage 1	99.256 %			100.742 %	101.034 %				
Concentration RSD	3.8 %	3.1 %	4.7 %	2.9 %	3.1 %	4.3 %	1.6 %	4.5 %	2.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	59.986 ppb	56.896 ppb	121.694 %	111.234 %
Concentration per Run 1	59.027 ppb	53.770 ppb	121.509 %	115.627 %
Concentration per Run 2	61.019 ppb	56.940 ppb	117.447 %	107.079 %
Concentration per Run 3	59.910 ppb	59.980 ppb	126.125 %	110.995 %
Recovery Percentage 1	99.976 %	94.827 %		
Concentration RSD	1.7 %	5.5 %	3.6 %	3.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	18	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 6:38:11 AM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.143 %	98.507 %	0.021 ppb	-32.554 ppb	-0.814 ppb	-0.423 ppb	20.682 ppb	-26.039 ppb	106.106 %
Concentration per Run 1	103.531 %	97.948 %	0.021 ppb	-29.362 ppb	-0.344 ppb	-0.468 ppb	13.036 ppb	-9.662 ppb	103.177 %
Concentration per Run 2	101.643 %	98.507 %	0.018 ppb	-34.823 ppb	0.749 ppb	-0.395 ppb	34.687 ppb	-33.889 ppb	107.630 %
Concentration per Run 3	101.255 %	99.067 %	0.025 ppb	-33.478 ppb	-2.845 ppb	-0.408 ppb	14.325 ppb	-34.566 ppb	107.510 %
Recovery Percentage 1			4.291 %	-32.554 %	-1.162 %	-4.234 %	20.682 %	-26.039 %	
Concentration RSD	1.2 %	0.6 %	14.9 %	8.7 %	226.5 %	9.2 %	58.7 %	54.5 %	2.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	94.834 %	-0.050 ppb	-0.615 ppb	0.029 ppb	6.431 ppb	0.000 ppb	-0.003 ppb	0.050 ppb	0.680 ppb
Concentration per Run 1	91.014 %	-0.012 ppb	-0.304 ppb	0.077 ppb	6.718 ppb	0.002 ppb	0.042 ppb	0.101 ppb	0.724 ppb
Concentration per Run 2	94.959 %	-0.042 ppb	-0.752 ppb	0.037 ppb	7.178 ppb	-0.003 ppb	0.025 ppb	-0.001 ppb	0.709 ppb
Concentration per Run 3	98.528 %	-0.096 ppb	-0.787 ppb	-0.026 ppb	5.396 ppb	0.001 ppb	-0.077 ppb	0.051 ppb	0.607 ppb
Recovery Percentage 1		-1.000 %	-61.452 %	2.932 %	12.861 %	0.050 %	-0.167 %	5.025 %	13.595 %
Concentration RSD	4.0 %	85.2 %	43.8 %	177.2 %	14.4 %	1,044.4 %	1,923.8 %	100.6 %	9.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.141 %	100.865 %	0.032 ppb	0.120 ppb	0.012 ppb	0.257 ppb	105.052 %	102.945 %	0.002 ppb
Concentration per Run 1	107.146 %	95.530 %	-0.069 ppb	0.174 ppb	0.001 ppb	0.209 ppb	101.809 %	100.395 %	0.001 ppb
Concentration per Run 2	107.837 %	103.100 %	0.059 ppb	0.185 ppb	0.024 ppb	0.280 ppb	106.233 %	105.230 %	0.006 ppb
Concentration per Run 3	106.440 %	103.965 %	0.106 ppb	0.001 ppb	0.012 ppb	0.283 ppb	107.113 %	103.208 %	-0.001 ppb
Recovery Percentage 1			6.403 %	2.397 %	2.449 %	12.865 %			0.567 %
Concentration RSD	0.7 %	4.6 %	283.2 %	86.1 %	97.0 %	16.4 %	2.7 %	2.4 %	157.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.014 ppb	103.629 %	104.896 %	0.023 ppb	0.017 ppb	112.894 %	106.438 %	102.597 %	109.500 %
Concentration per Run 1	0.008 ppb	102.668 %	101.844 %	0.029 ppb	0.037 ppb	113.456 %	104.096 %	103.202 %	105.805 %
Concentration per Run 2	0.017 ppb	105.162 %	109.041 %	0.024 ppb	0.007 ppb	113.063 %	107.516 %	103.997 %	110.044 %
Concentration per Run 3	0.017 ppb	103.056 %	103.802 %	0.016 ppb	0.008 ppb	112.162 %	107.702 %	100.592 %	112.652 %
Recovery Percentage 1				0.573 %	3.468 %				
Concentration RSD	36.9 %	1.3 %	3.5 %	29.4 %	97.8 %	0.6 %	1.9 %	1.7 %	3.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.340 ppb	0.053 ppb	112.963 %	118.427 %
Concentration per Run 1	0.222 ppb	0.053 ppb	112.751 %	114.285 %
Concentration per Run 2	0.399 ppb	0.054 ppb	116.812 %	120.302 %
Concentration per Run 3	0.397 ppb	0.054 ppb	109.325 %	120.695 %
Recovery Percentage 1	33.952 %	5.334 %		
Concentration RSD	29.9 %	1.1 %	3.3 %	3.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	19	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	LDR 10x ICSA	Rack	4		
Analysis started at:	4/4/2024 6:51:37 AM	Vial	2		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.517 %	92.537 %	0.020 ppb	42,758.376 ppb	21,560.743 ppb	15,432.483 ppb	20,273.314 ppb	62,669.289 ppb	111.795 %
Concentration per Run 1	98.326 %	94.590 %	0.017 ppb	42,179.426 ppb	21,821.019 ppb	15,745.737 ppb	20,347.561 ppb	58,884.383 ppb	115.094 %
Concentration per Run 2	94.545 %	90.672 %	0.025 ppb	43,167.082 ppb	21,975.309 ppb	15,642.466 ppb	20,021.866 ppb	65,243.170 ppb	109.495 %
Concentration per Run 3	93.679 %	92.351 %	0.017 ppb	42,928.619 ppb	20,885.902 ppb	14,909.247 ppb	20,450.516 ppb	63,880.313 ppb	110.796 %
Concentration RSD	2.6 %	2.1 %	23.0 %	1.2 %	2.7 %	3.0 %	1.1 %	5.3 %	2.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	105.918 %	-0.048 ppb	0.343 ppb	1.005 ppb	50,660.189 ppb	0.438 ppb	0.469 ppb	0.257 ppb	1.223 ppb
Concentration per Run 1	106.325 %	-0.048 ppb	0.455 ppb	1.145 ppb	50,992.105 ppb	0.441 ppb	0.629 ppb	0.268 ppb	1.260 ppb
Concentration per Run 2	105.385 %	-0.047 ppb	0.465 ppb	0.936 ppb	51,382.695 ppb	0.484 ppb	0.438 ppb	0.292 ppb	1.307 ppb
Concentration per Run 3	106.043 %	-0.048 ppb	0.109 ppb	0.935 ppb	49,605.768 ppb	0.390 ppb	0.339 ppb	0.212 ppb	1.102 ppb
Concentration RSD	0.5 %	0.5 %	59.2 %	12.0 %	1.8 %	10.8 %	31.4 %	15.9 %	8.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	115.564 %	110.541 %	-0.020 ppb	0.657 ppb	0.543 ppb	410.276 ppb	107.490 %	105.816 %	0.006 ppb
Concentration per Run 1	118.147 %	109.326 %	0.007 ppb	1.009 ppb	0.525 ppb	397.051 ppb	108.184 %	106.154 %	0.008 ppb
Concentration per Run 2	113.795 %	109.852 %	-0.003 ppb	0.146 ppb	0.499 ppb	403.493 ppb	106.602 %	106.224 %	0.010 ppb
Concentration per Run 3	114.749 %	112.447 %	-0.063 ppb	0.816 ppb	0.604 ppb	430.284 ppb	107.684 %	105.070 %	-0.001 ppb
Concentration RSD	2.0 %	1.5 %	189.3 %	69.0 %	10.1 %	4.3 %	0.8 %	0.6 %	100.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.055 ppb	110.855 %	108.313 %	0.043 ppb	0.260 ppb	121.313 %	121.290 %	113.058 %	128.207 %
Concentration per Run 1	0.039 ppb	109.710 %	109.858 %	0.029 ppb	0.209 ppb	123.875 %	119.119 %	118.237 %	125.568 %
Concentration per Run 2	0.073 ppb	111.781 %	105.646 %	0.052 ppb	0.339 ppb	124.591 %	121.643 %	110.627 %	130.609 %
Concentration per Run 3	0.053 ppb	111.073 %	109.434 %	0.047 ppb	0.231 ppb	115.472 %	123.107 %	110.309 %	128.442 %
Concentration RSD	30.7 %	0.9 %	2.1 %	27.5 %	26.8 %	4.2 %	1.7 %	4.0 %	2.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.045 ppb	0.346 ppb	121.442 %	129.200 %
Concentration per Run 1	0.026 ppb	0.332 ppb	119.350 %	134.626 %
Concentration per Run 2	0.048 ppb	0.351 ppb	120.413 %	127.904 %
Concentration per Run 3	0.060 ppb	0.355 ppb	124.563 %	125.071 %
Concentration RSD	38.3 %	3.6 %	2.3 %	3.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	20	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/4/2024 6:58:27 AM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.553 %	87.687 %	0.012 ppb	-20.816 ppb	-0.688 ppb	-0.135 ppb	28.143 ppb	-0.006 ppb	106.673 %
Concentration per Run 1	102.859 %	87.313 %	0.010 ppb	-24.561 ppb	-0.358 ppb	-0.172 ppb	13.181 ppb	45.080 ppb	109.512 %
Concentration per Run 2	100.318 %	87.873 %	0.014 ppb	-24.477 ppb	-0.922 ppb	-0.136 ppb	14.694 ppb	-56.307 ppb	106.762 %
Concentration per Run 3	98.481 %	87.873 %	0.011 ppb	-13.411 ppb	-0.785 ppb	-0.096 ppb	56.554 ppb	11.210 ppb	103.744 %
Concentration RSD	2.2 %	0.4 %	20.2 %	30.8 %	42.8 %	28.2 %	87.5 %	931,380.9 %	2.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	99.687 %	-0.054 ppb	-0.893 ppb	0.065 ppb	7.321 ppb	-0.002 ppb	-0.012 ppb	0.010 ppb	0.495 ppb
Concentration per Run 1	104.070 %	-0.023 ppb	-0.754 ppb	0.050 ppb	4.355 ppb	0.004 ppb	0.014 ppb	0.025 ppb	0.495 ppb
Concentration per Run 2	101.159 %	-0.071 ppb	-0.953 ppb	0.060 ppb	10.946 ppb	0.001 ppb	0.022 ppb	-0.014 ppb	0.446 ppb
Concentration per Run 3	93.832 %	-0.069 ppb	-0.973 ppb	0.084 ppb	6.661 ppb	-0.011 ppb	-0.073 ppb	0.017 ppb	0.545 ppb
Concentration RSD	5.3 %	50.4 %	13.6 %	27.2 %	45.7 %	398.1 %	423.8 %	214.7 %	10.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.661 %	108.594 %	-0.017 ppb	0.172 ppb	0.067 ppb	0.466 ppb	108.975 %	106.360 %	0.001 ppb
Concentration per Run 1	112.574 %	112.255 %	-0.026 ppb	0.002 ppb	0.094 ppb	0.380 ppb	111.185 %	106.938 %	-0.001 ppb
Concentration per Run 2	109.846 %	108.868 %	-0.080 ppb	0.341 ppb	0.059 ppb	0.582 ppb	108.585 %	107.958 %	0.004 ppb
Concentration per Run 3	109.563 %	104.661 %	0.056 ppb	0.172 ppb	0.049 ppb	0.437 ppb	107.154 %	104.184 %	0.000 ppb
Concentration RSD	1.5 %	3.5 %	410.3 %	98.6 %	34.8 %	22.3 %	1.9 %	1.8 %	235.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.001 ppb	108.057 %	112.122 %	0.003 ppb	0.048 ppb	120.547 %	117.646 %	110.028 %	118.689 %
Concentration per Run 1	-0.002 ppb	111.424 %	111.034 %	0.008 ppb	0.031 ppb	119.184 %	117.182 %	111.984 %	115.716 %
Concentration per Run 2	0.003 ppb	105.429 %	113.384 %	-0.003 ppb	0.056 ppb	121.387 %	118.039 %	107.540 %	121.345 %
Concentration per Run 3	0.003 ppb	107.320 %	111.948 %	0.003 ppb	0.056 ppb	121.069 %	117.718 %	110.560 %	119.005 %
Concentration RSD	194.6 %	2.8 %	1.1 %	228.9 %	29.9 %	1.0 %	0.4 %	2.1 %	2.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.035 ppb	0.041 ppb	124.016 %	127.049 %
Concentration per Run 1	0.013 ppb	0.040 ppb	126.077 %	130.971 %
Concentration per Run 2	0.045 ppb	0.042 ppb	123.854 %	125.666 %
Concentration per Run 3	0.046 ppb	0.041 ppb	122.117 %	124.511 %
Concentration RSD	55.1 %	1.8 %	1.6 %	2.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 21 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: L2415578-01 6020TL Rack 1
Analysis started at: 4/4/2024 7:03:06 AM Vial 1

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	107.452 %	94.963 %	0.344 ppb	106,344.383 ppb	88,054.416 ppb	329.386 ppb	28,161.453 ppb	364,608.950 ppb	114.995 %
Concentration per Run 1	109.089 %	97.948 %	0.357 ppb	105,778.700 ppb	87,239.070 ppb	328.300 ppb	28,089.568 ppb	368,932.487 ppb	118.938 %
Concentration per Run 2	107.259 %	94.590 %	0.349 ppb	105,539.224 ppb	87,967.102 ppb	330.830 ppb	28,983.034 ppb	363,180.249 ppb	114.227 %
Concentration per Run 3	106.009 %	92.351 %	0.326 ppb	107,715.225 ppb	88,957.075 ppb	329.028 ppb	27,411.757 ppb	361,714.113 ppb	111.819 %
Concentration RSD	1.4 %	3.0 %	4.7 %	1.1 %	1.0 %	0.4 %	2.8 %	1.0 %	3.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	105.104 %	31.242 ppb	7.491 ppb	2,949.803 ppb	9,322.916 ppb	31.307 ppb	270.323 ppb	130.591 ppb	66.808 ppb
Concentration per Run 1	103.789 %	32.926 ppb	7.622 ppb	3,034.408 ppb	9,953.107 ppb	32.707 ppb	285.597 ppb	140.672 ppb	69.124 ppb
Concentration per Run 2	104.446 %	30.902 ppb	7.631 ppb	2,935.703 ppb	9,042.491 ppb	30.947 ppb	268.021 ppb	123.213 ppb	65.163 ppb
Concentration per Run 3	107.076 %	29.899 ppb	7.220 ppb	2,879.296 ppb	8,973.151 ppb	30.266 ppb	257.351 ppb	127.887 ppb	66.137 ppb
Concentration RSD	1.7 %	4.9 %	3.1 %	2.7 %	5.9 %	4.0 %	5.3 %	6.9 %	3.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	116.426 %	108.645 %	62.179 ppb	2.209 ppb	6,049.490 ppb	103.087 ppb	105.706 %	100.359 %	0.014 ppb
Concentration per Run 1	117.711 %	100.697 %	65.416 ppb	2.441 ppb	6,209.314 ppb	107.348 ppb	105.908 %	99.138 %	0.014 ppb
Concentration per Run 2	116.655 %	112.214 %	60.896 ppb	2.186 ppb	5,985.844 ppb	99.273 ppb	104.752 %	98.407 %	0.016 ppb
Concentration per Run 3	114.911 %	113.024 %	60.227 ppb	1.999 ppb	5,953.311 ppb	102.638 ppb	106.457 %	103.531 %	0.010 ppb
Concentration RSD	1.2 %	6.3 %	4.5 %	10.1 %	2.3 %	3.9 %	0.8 %	2.8 %	22.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.282 ppb	104.257 %	105.712 %	2.395 ppb	3,095.083 ppb	115.550 %	111.669 %	104.048 %	114.811 %
Concentration per Run 1	0.286 ppb	102.209 %	105.549 %	2.390 ppb	3,061.811 ppb	115.357 %	109.069 %	105.916 %	113.173 %
Concentration per Run 2	0.291 ppb	105.490 %	103.296 %	2.572 ppb	3,098.041 ppb	116.287 %	113.361 %	102.790 %	115.755 %
Concentration per Run 3	0.268 ppb	105.071 %	108.291 %	2.224 ppb	3,125.397 ppb	115.007 %	112.576 %	103.438 %	115.506 %
Concentration RSD	4.3 %	1.7 %	2.4 %	7.3 %	1.0 %	0.6 %	2.0 %	1.6 %	1.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.102 ppb	3.388 ppb	108.301 %	109.880 %
Concentration per Run 1	0.082 ppb	3.237 ppb	105.393 %	112.925 %
Concentration per Run 2	0.111 ppb	3.429 ppb	107.774 %	109.647 %
Concentration per Run 3	0.114 ppb	3.497 ppb	111.736 %	107.067 %
Concentration RSD	17.4 %	4.0 %	3.0 %	2.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 22 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: L2415578-02 6020TL Rack 1
Analysis started at: 4/4/2024 7:07:45 AM Vial 2

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	96.309 %	97.201 %	0.899 ppb	143,259.470 ppb	143,887.052 ppb	1,018.171 ppb	22,059.454 ppb	663,162.213 ppb	138.109 %
Concentration per Run 1	99.031 %	88.992 %	0.863 ppb	150,541.542 ppb	150,443.165 ppb	971.609 ppb	21,789.281 ppb	676,859.603 ppb	147.083 %
Concentration per Run 2	95.213 %	100.746 %	0.925 ppb	139,029.563 ppb	142,609.320 ppb	1,122.688 ppb	22,260.915 ppb	655,149.204 ppb	118.166 %
Concentration per Run 3	94.683 %	101.866 %	0.910 ppb	140,207.304 ppb	138,608.672 ppb	960.218 ppb	22,128.165 ppb	657,477.833 ppb	149.079 %
Concentration RSD	2.5 %	7.3 %	3.6 %	4.4 %	4.2 %	8.9 %	1.1 %	1.8 %	12.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	136.321 %	29.462 ppb	65.817 ppb	7,639.397 ppb	354,745.787 ppb	10.116 ppb	16.773 ppb	81.543 ppb	14.436 ppb
Concentration per Run 1	136.853 %	29.051 ppb	68.853 ppb	7,806.443 ppb	372,851.738 ppb	10.515 ppb	17.874 ppb	84.954 ppb	15.617 ppb
Concentration per Run 2	135.914 %	30.572 ppb	64.676 ppb	7,480.815 ppb	339,396.979 ppb	9.715 ppb	15.805 ppb	80.017 ppb	13.689 ppb
Concentration per Run 3	136.196 %	28.764 ppb	63.921 ppb	7,630.934 ppb	351,988.644 ppb	10.118 ppb	16.641 ppb	79.657 ppb	14.002 ppb
Concentration RSD	0.4 %	3.3 %	4.0 %	2.1 %	4.8 %	4.0 %	6.2 %	3.6 %	7.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	135.388 %	132.055 %	50.575 ppb	5.186 ppb	11,819.941 ppb	2.324 ppb	118.705 %	110.069 %	0.049 ppb
Concentration per Run 1	138.851 %	120.764 %	54.685 ppb	6.255 ppb	12,029.006 ppb	2.542 ppb	120.025 %	108.041 %	0.044 ppb
Concentration per Run 2	133.579 %	139.204 %	48.089 ppb	4.971 ppb	11,634.945 ppb	2.224 ppb	116.305 %	110.170 %	0.043 ppb
Concentration per Run 3	133.735 %	136.195 %	48.951 ppb	4.331 ppb	11,795.874 ppb	2.206 ppb	119.785 %	111.995 %	0.061 ppb
Concentration RSD	2.2 %	7.5 %	7.1 %	18.9 %	1.7 %	8.1 %	1.8 %	1.8 %	20.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.008 ppb	119.956 %	125.689 %	0.490 ppb	10,899.995 ppb	132.814 %	135.924 %	124.361 %	144.751 %
Concentration per Run 1	0.007 ppb	120.444 %	120.437 %	0.520 ppb	10,877.648 ppb	133.415 %	133.188 %	128.126 %	137.413 %
Concentration per Run 2	0.006 ppb	121.509 %	127.441 %	0.516 ppb	11,044.521 ppb	131.588 %	134.644 %	123.811 %	146.150 %
Concentration per Run 3	0.010 ppb	117.915 %	129.189 %	0.433 ppb	10,777.817 ppb	133.440 %	139.941 %	121.146 %	150.690 %
Concentration RSD	27.2 %	1.5 %	3.7 %	10.0 %	1.2 %	0.8 %	2.6 %	2.8 %	4.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.044 ppb	2.021 ppb	134.326 %	142.188 %
Concentration per Run 1	0.030 ppb	1.932 ppb	136.088 %	138.770 %
Concentration per Run 2	0.051 ppb	2.022 ppb	132.572 %	143.461 %
Concentration per Run 3	0.052 ppb	2.110 ppb	134.317 %	144.334 %
Concentration RSD	28.0 %	4.4 %	1.3 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	23	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-03 6020TL	Rack	1		
Analysis started at:	4/4/2024 7:12:25 AM	Vial	3		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.680 %	87.500 %	1.357 ppb	178,905.809 ppb	185,656.523 ppb	4,631.168 ppb	24,724.198 ppb	776,895.247 ppb	147.238 %
Concentration per Run 1	103.912 %	77.798 %	1.347 ppb	196,713.362 ppb	201,752.154 ppb	4,672.140 ppb	26,087.324 ppb	807,010.010 ppb	148.605 %
Concentration per Run 2	102.148 %	87.313 %	1.363 ppb	179,433.852 ppb	187,115.479 ppb	4,613.565 ppb	24,433.258 ppb	781,745.243 ppb	147.052 %
Concentration per Run 3	101.981 %	97.388 %	1.362 ppb	160,570.215 ppb	168,101.934 ppb	4,607.799 ppb	23,652.012 ppb	741,930.487 ppb	146.057 %
Concentration RSD	1.0 %	11.2 %	0.7 %	10.1 %	9.1 %	0.8 %	5.0 %	4.2 %	0.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	129.996 %	28.856 ppb	21.449 ppb	8,487.222 ppb	359,892.180 ppb	24.325 ppb	31.695 ppb	264.323 ppb	43.201 ppb
Concentration per Run 1	129.150 %	30.146 ppb	22.777 ppb	8,749.877 ppb	365,821.834 ppb	25.533 ppb	32.674 ppb	277.878 ppb	46.534 ppb
Concentration per Run 2	128.211 %	28.648 ppb	21.346 ppb	8,413.004 ppb	363,963.881 ppb	23.685 ppb	31.478 ppb	261.227 ppb	41.383 ppb
Concentration per Run 3	132.626 %	27.774 ppb	20.224 ppb	8,298.784 ppb	349,890.826 ppb	23.756 ppb	30.933 ppb	253.864 ppb	41.685 ppb
Concentration RSD	1.8 %	4.2 %	6.0 %	2.8 %	2.4 %	4.3 %	2.8 %	4.7 %	6.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	130.789 %	130.859 %	28.756 ppb	10.012 ppb	14,656.991 ppb	2.383 ppb	112.950 %	114.277 %	0.140 ppb
Concentration per Run 1	132.004 %	124.867 %	31.145 ppb	11.021 ppb	15,350.417 ppb	2.350 ppb	112.508 %	110.723 %	0.136 ppb
Concentration per Run 2	129.778 %	132.978 %	27.867 ppb	8.565 ppb	14,585.189 ppb	2.287 ppb	114.650 %	113.939 %	0.134 ppb
Concentration per Run 3	130.587 %	134.731 %	27.257 ppb	10.450 ppb	14,035.366 ppb	2.513 ppb	111.693 %	118.167 %	0.151 ppb
Concentration RSD	0.9 %	4.0 %	7.3 %	12.8 %	4.5 %	4.9 %	1.4 %	3.3 %	6.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.025 ppb	115.119 %	129.793 %	0.452 ppb	12,302.730 ppb	135.264 %	149.466 %	123.491 %	162.520 %
Concentration per Run 1	0.032 ppb	120.221 %	121.677 %	0.488 ppb	13,205.708 ppb	133.270 %	142.136 %	124.234 %	153.682 %
Concentration per Run 2	0.030 ppb	114.316 %	130.870 %	0.460 ppb	11,993.048 ppb	134.011 %	153.239 %	124.677 %	164.413 %
Concentration per Run 3	0.014 ppb	110.821 %	136.831 %	0.409 ppb	11,709.434 ppb	138.512 %	153.021 %	121.564 %	169.464 %
Concentration RSD	40.2 %	4.1 %	5.9 %	8.9 %	6.5 %	2.1 %	4.2 %	1.4 %	5.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.089 ppb	5.054 ppb	126.413 %	145.553 %
Concentration per Run 1	0.074 ppb	5.030 ppb	129.800 %	144.620 %
Concentration per Run 2	0.091 ppb	5.065 ppb	124.378 %	144.052 %
Concentration per Run 3	0.102 ppb	5.066 ppb	125.062 %	147.988 %
Concentration RSD	15.9 %	0.4 %	2.3 %	1.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	24	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-04 6020TL	Rack	1		
Analysis started at:	4/4/2024 7:17:05 AM	Vial	4		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	113.122 %	97.575 %	0.660 ppb	140,928.025 ppb	138,536.897 ppb	163.208 ppb	16,813.650 ppb	592,467.950 ppb	150.778 %
Concentration per Run 1	115.471 %	92.910 %	0.666 ppb	147,727.607 ppb	144,814.128 ppb	160.881 ppb	17,419.209 ppb	599,797.149 ppb	152.545 %
Concentration per Run 2	112.189 %	103.545 %	0.628 ppb	137,402.704 ppb	134,090.225 ppb	164.964 ppb	17,251.015 ppb	618,967.043 ppb	150.263 %
Concentration per Run 3	111.704 %	96.269 %	0.685 ppb	137,653.763 ppb	136,706.340 ppb	163.778 ppb	15,770.725 ppb	558,639.658 ppb	149.526 %
Concentration RSD	1.8 %	5.6 %	4.4 %	4.2 %	4.0 %	1.3 %	5.4 %	5.2 %	1.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	117.534 %	13.590 ppb	10.344 ppb	61,804.105 ppb	238,056.222 ppb	116.798 ppb	59.565 ppb	41.355 ppb	25.161 ppb
Concentration per Run 1	115.248 %	13.802 ppb	10.653 ppb	62,904.431 ppb	246,210.193 ppb	121.362 ppb	60.950 ppb	43.859 ppb	25.809 ppb
Concentration per Run 2	111.115 %	14.392 ppb	11.261 ppb	63,910.097 ppb	246,245.476 ppb	118.660 ppb	63.086 ppb	41.118 ppb	25.812 ppb
Concentration per Run 3	126.239 %	12.576 ppb	9.120 ppb	58,597.786 ppb	221,712.996 ppb	110.371 ppb	54.660 ppb	39.088 ppb	23.862 ppb
Concentration RSD	6.7 %	6.8 %	10.7 %	4.6 %	5.9 %	4.9 %	7.4 %	5.8 %	4.5 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	133.756 %	122.155 %	13.603 ppb	6.279 ppb	7,783.878 ppb	1.023 ppb	117.173 %	113.733 %	0.018 ppb
Concentration per Run 1	138.033 %	121.222 %	13.352 ppb	5.398 ppb	7,694.968 ppb	1.063 ppb	118.462 %	111.742 %	0.020 ppb
Concentration per Run 2	132.910 %	117.575 %	13.866 ppb	7.371 ppb	7,916.177 ppb	1.176 ppb	116.879 %	112.080 %	0.013 ppb
Concentration per Run 3	130.324 %	127.668 %	13.590 ppb	6.069 ppb	7,740.490 ppb	0.830 ppb	116.177 %	117.377 %	0.021 ppb
Concentration RSD	2.9 %	4.2 %	1.9 %	16.0 %	1.5 %	17.2 %	1.0 %	2.8 %	23.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.029 ppb	122.997 %	135.634 %	0.533 ppb	14,315.949 ppb	146.085 %	152.677 %	136.225 %	175.734 %
Concentration per Run 1	0.026 ppb	123.954 %	132.161 %	0.514 ppb	14,488.888 ppb	150.912 %	150.924 %	139.576 %	170.992 %
Concentration per Run 2	0.026 ppb	123.882 %	134.675 %	0.560 ppb	14,335.808 ppb	141.619 %	150.231 %	131.908 %	173.770 %
Concentration per Run 3	0.036 ppb	121.155 %	140.066 %	0.524 ppb	14,123.151 ppb	145.723 %	156.876 %	137.190 %	182.440 %
Concentration RSD	19.7 %	1.3 %	3.0 %	4.5 %	1.3 %	3.2 %	2.4 %	2.9 %	3.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.024 ppb	7.191 ppb	152.495 %	159.073 %
Concentration per Run 1	0.009 ppb	6.975 ppb	152.668 %	159.453 %
Concentration per Run 2	0.031 ppb	7.537 ppb	158.314 %	150.591 %
Concentration per Run 3	0.032 ppb	7.062 ppb	146.502 %	167.174 %
Concentration RSD	54.1 %	4.2 %	3.9 %	5.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 25 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: L2415578-05 6020TL Rack 1
Analysis started at: 4/4/2024 7:21:45 AM Vial 5

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	103.204 %	73.507 %	0.072 ppb	246,244.890 ppb	52,642.663 ppb	106.448 ppb	19,491.017 ppb	394,569.911 ppb	114.703 %
Concentration per Run 1	104.811 %	74.440 %	0.077 ppb	243,593.562 ppb	51,481.430 ppb	104.111 ppb	19,587.558 ppb	382,040.427 ppb	116.477 %
Concentration per Run 2	102.728 %	72.201 %	0.073 ppb	253,162.094 ppb	53,658.862 ppb	109.643 ppb	19,911.409 ppb	409,220.928 ppb	115.399 %
Concentration per Run 3	102.073 %	73.880 %	0.065 ppb	241,979.015 ppb	52,787.696 ppb	105.590 ppb	18,974.085 ppb	392,448.376 ppb	112.232 %
Concentration RSD	1.4 %	1.6 %	8.1 %	2.5 %	2.1 %	2.7 %	2.4 %	3.5 %	1.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	95.491 %	2.749 ppb	0.189 ppb	8,506.036 ppb	71,435.323 ppb	6.618 ppb	7.734 ppb	8.436 ppb	7.337 ppb
Concentration per Run 1	97.025 %	2.782 ppb	0.160 ppb	9,083.088 ppb	72,317.624 ppb	6.417 ppb	8.241 ppb	8.877 ppb	7.394 ppb
Concentration per Run 2	92.329 %	2.708 ppb	0.336 ppb	7,578.783 ppb	71,864.895 ppb	6.898 ppb	7.280 ppb	7.922 ppb	7.731 ppb
Concentration per Run 3	97.119 %	2.758 ppb	0.070 ppb	8,856.238 ppb	70,123.451 ppb	6.539 ppb	7.683 ppb	8.508 ppb	6.887 ppb
Concentration RSD	2.9 %	1.4 %	71.6 %	9.5 %	1.6 %	3.8 %	6.2 %	5.7 %	5.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.516 %	106.127 %	8.129 ppb	0.457 ppb	4,179.395 ppb	3.167 ppb	100.992 %	101.454 %	0.014 ppb
Concentration per Run 1	113.569 %	100.720 %	8.484 ppb	0.889 ppb	4,286.009 ppb	3.250 ppb	101.013 %	100.664 %	0.013 ppb
Concentration per Run 2	111.685 %	108.964 %	7.893 ppb	0.002 ppb	4,126.334 ppb	3.056 ppb	100.436 %	99.440 %	0.013 ppb
Concentration per Run 3	109.295 %	108.698 %	8.009 ppb	0.479 ppb	4,125.843 ppb	3.194 ppb	101.528 %	104.258 %	0.017 ppb
Concentration RSD	1.9 %	4.4 %	3.9 %	97.3 %	2.2 %	3.1 %	0.5 %	2.5 %	14.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.075 ppb	105.059 %	119.648 %	0.870 ppb	1,118.918 ppb	128.245 %	139.831 %	119.305 %	157.412 %
Concentration per Run 1	0.056 ppb	107.127 %	117.890 %	0.831 ppb	1,111.627 ppb	132.614 %	136.690 %	119.651 %	153.069 %
Concentration per Run 2	0.076 ppb	105.272 %	122.413 %	0.898 ppb	1,110.863 ppb	125.402 %	139.975 %	120.710 %	159.472 %
Concentration per Run 3	0.094 ppb	102.778 %	118.641 %	0.882 ppb	1,134.266 ppb	126.718 %	142.829 %	117.555 %	159.695 %
Concentration RSD	25.5 %	2.1 %	2.0 %	4.0 %	1.2 %	3.0 %	2.2 %	1.3 %	2.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.017 ppb	1.873 ppb	129.450 %	151.066 %
Concentration per Run 1	0.010 ppb	1.868 ppb	131.917 %	150.942 %
Concentration per Run 2	0.018 ppb	1.875 ppb	127.168 %	149.207 %
Concentration per Run 3	0.023 ppb	1.875 ppb	129.265 %	153.048 %
Concentration RSD	38.1 %	0.2 %	1.8 %	1.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	26	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-06 6020TL	Rack	1		
Analysis started at:	4/4/2024 7:26:26 AM	Vial	6		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	94.220 %	69.963 %	0.103 ppb	559,772.672 ppb	66,692.598 ppb	298.974 ppb	12,934.770 ppb	270,987.626 ppb	101.854 %
Concentration per Run 1	94.941 %	78.358 %	0.097 ppb	535,003.926 ppb	64,227.021 ppb	296.650 ppb	12,899.841 ppb	274,076.480 ppb	97.121 %
Concentration per Run 2	93.974 %	59.888 %	0.109 ppb	598,795.737 ppb	71,223.135 ppb	307.518 ppb	13,386.508 ppb	275,661.712 ppb	105.156 %
Concentration per Run 3	93.745 %	71.642 %	0.103 ppb	545,518.353 ppb	64,627.638 ppb	292.754 ppb	12,517.961 ppb	263,224.686 ppb	103.286 %
Concentration RSD	0.7 %	13.4 %	5.8 %	6.1 %	5.9 %	2.6 %	3.4 %	2.5 %	4.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.701 %	1.804 ppb	-0.397 ppb	8,736.111 ppb	85,053.890 ppb	7.045 ppb	6.288 ppb	25.297 ppb	35.927 ppb
Concentration per Run 1	90.075 %	1.604 ppb	-0.461 ppb	8,827.237 ppb	86,250.121 ppb	7.280 ppb	6.687 ppb	26.365 ppb	36.732 ppb
Concentration per Run 2	88.572 %	2.038 ppb	-0.176 ppb	8,596.759 ppb	84,214.022 ppb	7.076 ppb	5.580 ppb	24.231 ppb	35.784 ppb
Concentration per Run 3	93.456 %	1.768 ppb	-0.554 ppb	8,784.337 ppb	84,697.526 ppb	6.780 ppb	6.598 ppb	25.296 ppb	35.265 ppb
Concentration RSD	2.8 %	12.1 %	49.5 %	1.4 %	1.3 %	3.6 %	9.8 %	4.2 %	2.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.383 %	105.568 %	4.524 ppb	1.301 ppb	2,187.480 ppb	1.092 ppb	95.821 %	98.523 %	0.111 ppb
Concentration per Run 1	105.820 %	102.354 %	4.677 ppb	2.251 ppb	2,229.331 ppb	1.055 ppb	95.701 %	96.197 %	0.109 ppb
Concentration per Run 2	105.368 %	110.790 %	4.203 ppb	0.782 ppb	2,138.876 ppb	1.070 ppb	96.407 %	99.469 %	0.114 ppb
Concentration per Run 3	101.961 %	103.558 %	4.693 ppb	0.870 ppb	2,194.233 ppb	1.152 ppb	95.354 %	99.903 %	0.110 ppb
Concentration RSD	2.0 %	4.3 %	6.2 %	63.4 %	2.1 %	4.8 %	0.6 %	2.1 %	2.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.040 ppb	96.904 %	116.578 %	1.302 ppb	1,978.366 ppb	121.562 %	138.500 %	117.280 %	159.660 %
Concentration per Run 1	0.035 ppb	97.032 %	113.204 %	1.331 ppb	1,977.979 ppb	121.636 %	141.211 %	114.079 %	159.181 %
Concentration per Run 2	0.048 ppb	97.621 %	115.359 %	1.320 ppb	1,976.348 ppb	122.648 %	135.651 %	124.397 %	159.652 %
Concentration per Run 3	0.037 ppb	96.059 %	121.172 %	1.255 ppb	1,980.771 ppb	120.401 %	138.636 %	113.363 %	160.147 %
Concentration RSD	16.8 %	0.8 %	3.5 %	3.1 %	0.1 %	0.9 %	2.0 %	5.3 %	0.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.019 ppb	10.234 ppb	115.133 %	147.134 %
Concentration per Run 1	0.011 ppb	10.289 ppb	116.505 %	149.506 %
Concentration per Run 2	0.024 ppb	9.798 ppb	115.961 %	144.727 %
Concentration per Run 3	0.021 ppb	10.616 ppb	112.934 %	147.169 %
Concentration RSD	36.7 %	4.0 %	1.7 %	1.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	27	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-07 6020TL	Rack	1		
Analysis started at:	4/4/2024 7:31:07 AM	Vial	7		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	125.950 %	80.037 %	0.298 ppb	329,178.905 ppb	82,148.604 ppb	1,174.988 ppb	16,675.566 ppb	268,551.766 ppb	109.359 %
Concentration per Run 1	127.907 %	88.433 %	0.292 ppb	315,056.279 ppb	79,707.015 ppb	1,175.976 ppb	17,018.153 ppb	278,354.788 ppb	109.939 %
Concentration per Run 2	124.637 %	73.321 %	0.307 ppb	340,539.297 ppb	84,921.568 ppb	1,200.122 ppb	16,546.990 ppb	258,402.484 ppb	106.198 %
Concentration per Run 3	125.305 %	78.358 %	0.296 ppb	331,941.138 ppb	81,817.230 ppb	1,148.866 ppb	16,461.555 ppb	268,898.025 ppb	111.939 %
Concentration RSD	1.4 %	9.6 %	2.7 %	3.9 %	3.2 %	2.2 %	1.8 %	3.7 %	2.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	95.022 %	4.513 ppb	1.427 ppb	11,581.006 ppb	113,381.187 ppb	11.719 ppb	14.571 ppb	52.445 ppb	44.885 ppb
Concentration per Run 1	92.611 %	4.631 ppb	1.696 ppb	11,939.481 ppb	115,254.584 ppb	12.294 ppb	15.454 ppb	53.937 ppb	47.043 ppb
Concentration per Run 2	95.992 %	4.571 ppb	1.281 ppb	11,509.643 ppb	116,368.436 ppb	11.340 ppb	14.336 ppb	52.669 ppb	44.919 ppb
Concentration per Run 3	96.462 %	4.336 ppb	1.302 ppb	11,293.893 ppb	108,520.542 ppb	11.523 ppb	13.924 ppb	50.729 ppb	42.695 ppb
Concentration RSD	2.2 %	3.5 %	16.4 %	2.8 %	3.7 %	4.3 %	5.4 %	3.1 %	4.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.610 %	108.933 %	7.297 ppb	2.176 ppb	4,349.871 ppb	1.912 ppb	98.676 %	98.470 %	0.080 ppb
Concentration per Run 1	108.952 %	104.327 %	7.785 ppb	2.816 ppb	4,447.501 ppb	1.930 ppb	99.646 %	95.591 %	0.078 ppb
Concentration per Run 2	106.015 %	107.929 %	7.573 ppb	1.410 ppb	4,382.479 ppb	1.797 ppb	98.312 %	99.182 %	0.072 ppb
Concentration per Run 3	110.863 %	114.544 %	6.534 ppb	2.301 ppb	4,219.634 ppb	2.007 ppb	98.070 %	100.638 %	0.091 ppb
Concentration RSD	2.2 %	4.8 %	9.2 %	32.7 %	2.7 %	5.6 %	0.9 %	2.6 %	12.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.051 ppb	101.965 %	120.959 %	1.495 ppb	3,957.931 ppb	127.548 %	141.116 %	118.518 %	163.350 %
Concentration per Run 1	0.039 ppb	102.463 %	117.171 %	1.600 ppb	4,118.015 ppb	129.899 %	137.014 %	121.479 %	158.032 %
Concentration per Run 2	0.059 ppb	101.864 %	120.992 %	1.381 ppb	3,930.749 ppb	126.724 %	144.399 %	117.493 %	166.576 %
Concentration per Run 3	0.054 ppb	101.567 %	124.714 %	1.506 ppb	3,825.028 ppb	126.021 %	141.934 %	116.583 %	165.442 %
Concentration RSD	20.8 %	0.4 %	3.1 %	7.3 %	3.7 %	1.6 %	2.7 %	2.2 %	2.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.023 ppb	13.165 ppb	126.286 %	157.424 %
Concentration per Run 1	0.014 ppb	12.646 ppb	126.236 %	157.102 %
Concentration per Run 2	0.026 ppb	13.286 ppb	126.453 %	160.452 %
Concentration per Run 3	0.030 ppb	13.562 ppb	126.167 %	154.718 %
Concentration RSD	34.3 %	3.6 %	0.1 %	1.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	28	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-08 6020TL	Rack	1		
Analysis started at:	4/4/2024 7:35:48 AM	Vial	8		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	111.278 %	81.343 %	0.658 ppb	302,677.293 ppb	90,729.948 ppb	866.886 ppb	17,782.487 ppb	282,134.591 ppb	105.514 %
Concentration per Run 1	111.559 %	79.478 %	0.654 ppb	320,360.611 ppb	93,774.567 ppb	866.736 ppb	19,204.406 ppb	295,367.988 ppb	104.759 %
Concentration per Run 2	111.230 %	87.313 %	0.640 ppb	284,042.130 ppb	87,389.761 ppb	859.270 ppb	17,175.785 ppb	281,416.092 ppb	105.840 %
Concentration per Run 3	111.044 %	77.239 %	0.679 ppb	303,629.138 ppb	91,025.515 ppb	874.652 ppb	16,967.270 ppb	269,619.691 ppb	105.943 %
Concentration RSD	0.2 %	6.5 %	3.0 %	6.0 %	3.5 %	0.9 %	6.9 %	4.6 %	0.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	91.953 %	4.461 ppb	1.400 ppb	6,809.265 ppb	101,082.489 ppb	5.278 ppb	15.335 ppb	36.015 ppb	27.078 ppb
Concentration per Run 1	87.163 %	5.021 ppb	1.486 ppb	7,220.722 ppb	105,527.384 ppb	5.958 ppb	17.483 ppb	38.666 ppb	28.694 ppb
Concentration per Run 2	92.986 %	4.165 ppb	1.412 ppb	6,630.389 ppb	100,201.851 ppb	5.066 ppb	14.810 ppb	34.520 ppb	25.999 ppb
Concentration per Run 3	95.710 %	4.197 ppb	1.300 ppb	6,576.685 ppb	97,518.231 ppb	4.811 ppb	13.712 ppb	34.859 ppb	26.539 ppb
Concentration RSD	4.7 %	10.9 %	6.7 %	5.2 %	4.0 %	11.4 %	12.6 %	6.4 %	5.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.223 %	107.275 %	4.833 ppb	2.757 ppb	6,338.216 ppb	2.868 ppb	97.880 %	98.739 %	0.147 ppb
Concentration per Run 1	106.372 %	99.934 %	5.354 ppb	3.677 ppb	6,548.207 ppb	3.095 ppb	98.580 %	97.714 %	0.146 ppb
Concentration per Run 2	105.329 %	112.136 %	4.318 ppb	2.373 ppb	6,226.318 ppb	2.986 ppb	97.334 %	97.543 %	0.139 ppb
Concentration per Run 3	109.969 %	109.755 %	4.827 ppb	2.222 ppb	6,240.123 ppb	2.523 ppb	97.727 %	100.960 %	0.155 ppb
Concentration RSD	2.3 %	6.0 %	10.7 %	29.0 %	2.9 %	10.6 %	0.7 %	1.9 %	5.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.030 ppb	97.682 %	115.169 %	1.835 ppb	6,106.130 ppb	124.382 %	139.159 %	117.109 %	161.257 %
Concentration per Run 1	0.040 ppb	96.367 %	112.796 %	1.892 ppb	6,219.569 ppb	125.066 %	134.990 %	118.201 %	159.351 %
Concentration per Run 2	0.021 ppb	99.713 %	113.971 %	1.876 ppb	6,127.614 ppb	122.886 %	142.882 %	115.536 %	161.164 %
Concentration per Run 3	0.029 ppb	96.968 %	118.739 %	1.739 ppb	5,971.208 ppb	125.194 %	139.605 %	117.591 %	163.256 %
Concentration RSD	31.0 %	1.8 %	2.7 %	4.6 %	2.1 %	1.0 %	2.8 %	1.2 %	1.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.020 ppb	6.532 ppb	112.000 %	146.376 %
Concentration per Run 1	0.011 ppb	6.288 ppb	109.081 %	148.966 %
Concentration per Run 2	0.021 ppb	6.746 ppb	114.094 %	145.214 %
Concentration per Run 3	0.027 ppb	6.562 ppb	112.826 %	144.950 %
Concentration RSD	41.8 %	3.5 %	2.3 %	1.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	29	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 7:40:30 AM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	104.545 %	77.985 %	55.862 ppb	6,305.943 ppb	5,842.092 ppb	65.989 ppb	5,784.956 ppb	5,893.478 ppb	100.941 %
Concentration per Run 1	106.293 %	68.283 %	54.515 ppb	6,806.360 ppb	5,914.036 ppb	65.728 ppb	5,812.929 ppb	6,197.190 ppb	103.264 %
Concentration per Run 2	104.178 %	85.634 %	57.025 ppb	5,966.281 ppb	5,911.468 ppb	65.749 ppb	5,643.336 ppb	5,207.694 ppb	99.171 %
Concentration per Run 3	103.164 %	80.037 %	56.046 ppb	6,145.187 ppb	5,700.771 ppb	66.489 ppb	5,898.603 ppb	6,275.549 ppb	100.387 %
Recovery Percentage 1			93.104 %	105.099 %	97.368 %	109.981 %	96.416 %	98.225 %	
Concentration RSD	1.5 %	11.4 %	2.3 %	7.0 %	2.1 %	0.7 %	2.2 %	10.1 %	2.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.707 %	59.916 ppb	60.647 ppb	63.399 ppb	6,129.676 ppb	58.518 ppb	59.479 ppb	56.219 ppb	60.666 ppb
Concentration per Run 1	91.765 %	67.475 ppb	70.064 ppb	64.264 ppb	6,227.666 ppb	59.196 ppb	60.308 ppb	55.505 ppb	61.093 ppb
Concentration per Run 2	94.395 %	55.102 ppb	54.266 ppb	63.413 ppb	6,316.212 ppb	59.103 ppb	60.361 ppb	58.196 ppb	62.078 ppb
Concentration per Run 3	94.959 %	57.171 ppb	57.611 ppb	62.519 ppb	5,845.150 ppb	57.255 ppb	57.769 ppb	54.957 ppb	58.825 ppb
Recovery Percentage 1		99.860 %	101.079 %	105.665 %	102.161 %	97.530 %	99.132 %	93.698 %	101.109 %
Concentration RSD	1.8 %	11.1 %	13.7 %	1.4 %	4.1 %	1.9 %	2.5 %	3.1 %	2.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	105.541 %	105.054 %	58.068 ppb	64.143 ppb	59.642 ppb	60.611 ppb	101.746 %	103.149 %	58.427 ppb
Concentration per Run 1	107.212 %	105.916 %	57.864 ppb	65.405 ppb	62.166 ppb	62.063 ppb	102.365 %	100.694 %	61.286 ppb
Concentration per Run 2	102.767 %	102.493 %	58.319 ppb	61.206 ppb	58.226 ppb	61.313 ppb	102.188 %	104.390 %	56.880 ppb
Concentration per Run 3	106.644 %	106.753 %	58.022 ppb	65.819 ppb	58.535 ppb	58.457 ppb	100.684 %	104.363 %	57.113 ppb
Recovery Percentage 1			96.780 %	106.905 %	99.404 %	101.019 %			97.378 %
Concentration RSD	2.3 %	2.1 %	0.4 %	4.0 %	3.7 %	3.1 %	0.9 %	2.1 %	4.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	59.266 ppb	103.605 %	122.718 %	61.978 ppb	63.443 ppb	128.831 %	140.502 %	118.364 %	161.649 %
Concentration per Run 1	62.939 ppb	105.141 %	116.585 %	66.088 ppb	66.229 ppb	129.177 %	137.095 %	119.535 %	158.801 %
Concentration per Run 2	57.862 ppb	103.251 %	125.972 %	59.690 ppb	62.159 ppb	129.259 %	141.965 %	116.020 %	160.188 %
Concentration per Run 3	56.995 ppb	102.422 %	125.597 %	60.158 ppb	61.939 ppb	128.058 %	142.445 %	119.536 %	165.957 %
Recovery Percentage 1	98.776 %			103.297 %	105.738 %				
Concentration RSD	5.4 %	1.3 %	4.3 %	5.8 %	3.8 %	0.5 %	2.1 %	1.7 %	2.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	55.659 ppb	55.041 ppb	128.574 %	161.821 %
Concentration per Run 1	55.651 ppb	54.155 ppb	131.540 %	162.936 %
Concentration per Run 2	56.513 ppb	57.590 ppb	128.796 %	160.928 %
Concentration per Run 3	54.812 ppb	53.377 ppb	125.387 %	161.599 %
Recovery Percentage 1	92.765 %	91.734 %		
Concentration RSD	1.5 %	4.1 %	2.4 %	0.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	30	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 7:45:14 AM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	103.261 %	72.015 %	0.017 ppb	3.122 ppb	3.224 ppb	-0.347 ppb	8.770 ppb	-8.311 ppb	95.403 %
Concentration per Run 1	104.402 %	69.403 %	0.016 ppb	15.010 ppb	8.034 ppb	-0.326 ppb	21.581 ppb	-56.631 ppb	96.358 %
Concentration per Run 2	103.281 %	68.843 %	0.017 ppb	7.905 ppb	0.591 ppb	-0.375 ppb	-0.009 ppb	14.722 ppb	95.037 %
Concentration per Run 3	102.102 %	77.798 %	0.017 ppb	-13.549 ppb	1.047 ppb	-0.339 ppb	4.738 ppb	16.976 ppb	94.815 %
Recovery Percentage 1			3.364 %	3.122 %	4.605 %	-3.467 %	8.770 %	-8.311 %	
Concentration RSD	1.1 %	7.0 %	2.4 %	476.3 %	129.4 %	7.3 %	129.4 %	503.7 %	0.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	86.850 %	-0.096 ppb	-1.283 ppb	0.233 ppb	8.234 ppb	0.012 ppb	-0.051 ppb	0.004 ppb	0.311 ppb
Concentration per Run 1	86.693 %	-0.096 ppb	-1.329 ppb	0.362 ppb	8.041 ppb	0.016 ppb	0.001 ppb	0.005 ppb	0.341 ppb
Concentration per Run 2	87.914 %	-0.096 ppb	-1.193 ppb	0.188 ppb	7.045 ppb	0.015 ppb	-0.053 ppb	-0.018 ppb	0.287 ppb
Concentration per Run 3	85.942 %	-0.096 ppb	-1.329 ppb	0.149 ppb	9.617 ppb	0.006 ppb	-0.099 ppb	0.025 ppb	0.304 ppb
Recovery Percentage 1		-1.918 %	-128.348 %	23.294 %	16.469 %	2.442 %	-2.526 %	0.395 %	6.210 %
Concentration RSD	1.1 %		6.1 %	48.7 %	15.7 %	44.8 %	98.7 %	536.5 %	9.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	101.653 %	103.764 %	-0.064 ppb	0.120 ppb	0.130 ppb	0.195 ppb	100.459 %	103.809 %	0.003 ppb
Concentration per Run 1	101.015 %	97.356 %	-0.098 ppb	0.000 ppb	0.093 ppb	0.216 ppb	99.927 %	101.813 %	0.000 ppb
Concentration per Run 2	101.707 %	104.565 %	-0.091 ppb	0.193 ppb	0.199 ppb	0.164 ppb	101.298 %	106.218 %	0.003 ppb
Concentration per Run 3	102.238 %	109.371 %	-0.002 ppb	0.167 ppb	0.098 ppb	0.206 ppb	100.153 %	103.396 %	0.006 ppb
Recovery Percentage 1			-12.701 %	2.395 %	25.997 %	9.771 %			0.760 %
Concentration RSD	0.6 %	5.8 %	84.5 %	87.5 %	46.2 %	14.2 %	0.7 %	2.1 %	97.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.008 ppb	102.056 %	119.299 %	0.101 ppb	0.133 ppb	125.692 %	134.735 %	116.306 %	152.335 %
Concentration per Run 1	0.016 ppb	104.190 %	121.089 %	0.104 ppb	0.255 ppb	124.269 %	133.116 %	112.338 %	146.101 %
Concentration per Run 2	0.007 ppb	99.662 %	117.971 %	0.084 ppb	0.141 ppb	127.084 %	136.039 %	118.779 %	153.834 %
Concentration per Run 3	0.003 ppb	102.317 %	118.836 %	0.116 ppb	0.003 ppb	125.724 %	135.049 %	117.801 %	157.070 %
Recovery Percentage 1				2.536 %	26.639 %				
Concentration RSD	77.9 %	2.2 %	1.3 %	16.0 %	94.8 %	1.1 %	1.1 %	3.0 %	3.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.345 ppb	0.018 ppb	119.716 %	153.650 %
Concentration per Run 1	0.220 ppb	0.021 ppb	122.301 %	162.311 %
Concentration per Run 2	0.402 ppb	0.018 ppb	116.401 %	148.774 %
Concentration per Run 3	0.411 ppb	0.015 ppb	120.446 %	149.865 %
Recovery Percentage 1	34.463 %	1.792 %		
Concentration RSD	31.3 %	15.0 %	2.5 %	4.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 31
Analysis label: WG1903849-1 2008TL
Analysis started at: 4/4/2024 7:58:33 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 9
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	103.451 %	71.642 %	0.007 ppb	-51.588 ppb	3.252 ppb	0.883 ppb	-6.975 ppb	34.639 ppb	101.004 %
Concentration per Run 1	106.318 %	74.440 %	0.004 ppb	-38.526 ppb	2.584 ppb	0.848 ppb	-9.561 ppb	89.602 ppb	106.060 %
Concentration per Run 2	102.948 %	69.963 %	0.004 ppb	-69.937 ppb	4.082 ppb	0.862 ppb	-11.313 ppb	4.332 ppb	100.449 %
Concentration per Run 3	101.087 %	70.522 %	0.012 ppb	-46.300 ppb	3.089 ppb	0.939 ppb	-0.050 ppb	9.983 ppb	96.503 %
Concentration RSD	2.6 %	3.4 %	71.9 %	31.7 %	23.4 %	5.5 %	86.9 %	137.7 %	4.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	95.930 %	-0.096 ppb	-0.665 ppb	0.054 ppb	0.368 ppb	0.001 ppb	-0.058 ppb	0.201 ppb	0.357 ppb
Concentration per Run 1	86.693 %	-0.096 ppb	-0.370 ppb	0.082 ppb	1.693 ppb	0.006 ppb	0.019 ppb	0.344 ppb	0.435 ppb
Concentration per Run 2	105.010 %	-0.096 ppb	-0.867 ppb	0.015 ppb	-0.413 ppb	0.000 ppb	-0.127 ppb	0.090 ppb	0.284 ppb
Concentration per Run 3	96.086 %	-0.096 ppb	-0.758 ppb	0.065 ppb	-0.174 ppb	-0.003 ppb	-0.065 ppb	0.169 ppb	0.352 ppb
Concentration RSD	9.5 %		39.3 %	64.1 %	313.0 %	383.6 %	126.8 %	64.6 %	21.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.400 %	108.651 %	-0.007 ppb	0.002 ppb	0.071 ppb	0.009 ppb	102.849 %	109.098 %	0.001 ppb
Concentration per Run 1	107.019 %	105.238 %	0.063 ppb	0.011 ppb	0.100 ppb	0.021 ppb	105.901 %	103.340 %	0.004 ppb
Concentration per Run 2	102.184 %	112.882 %	-0.056 ppb	0.003 ppb	0.066 ppb	-0.001 ppb	103.245 %	114.859 %	-0.001 ppb
Concentration per Run 3	103.997 %	107.833 %	-0.028 ppb	-0.008 ppb	0.047 ppb	0.009 ppb	99.400 %	109.095 %	0.001 ppb
Concentration RSD	2.3 %	3.6 %	856.0 %	523.1 %	38.1 %	116.2 %	3.2 %	5.3 %	203.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	-0.002 ppb	106.511 %	127.278 %	0.058 ppb	0.103 ppb	129.002 %	138.599 %	117.714 %	158.926 %
Concentration per Run 1	-0.002 ppb	111.850 %	120.502 %	0.056 ppb	0.049 ppb	132.023 %	134.079 %	122.669 %	150.558 %
Concentration per Run 2	-0.002 ppb	102.335 %	133.287 %	0.078 ppb	0.128 ppb	125.512 %	142.392 %	117.426 %	164.091 %
Concentration per Run 3	-0.002 ppb	105.347 %	128.045 %	0.040 ppb	0.133 ppb	129.471 %	139.326 %	113.048 %	162.130 %
Concentration RSD	0.0 %	4.6 %	5.0 %	32.7 %	45.6 %	2.5 %	3.0 %	4.1 %	4.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.031 ppb	0.011 ppb	131.083 %	172.210 %
Concentration per Run 1	0.017 ppb	0.011 ppb	137.027 %	172.679 %
Concentration per Run 2	0.034 ppb	0.011 ppb	129.629 %	175.352 %
Concentration per Run 3	0.041 ppb	0.011 ppb	126.591 %	168.599 %
Concentration RSD	39.5 %	0.7 %	4.1 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 32
Analysis label: WG1902884-1 2008TL
Analysis started at: 4/4/2024 8:03:15 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 14
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.463 %	77.985 %	0.006 ppb	-65.820 ppb	1.892 ppb	0.979 ppb	-1.122 ppb	-8.557 ppb	100.706 %
Concentration per Run 1	105.555 %	81.157 %	0.005 ppb	-65.928 ppb	1.669 ppb	1.073 ppb	9.129 ppb	18.793 ppb	107.100 %
Concentration per Run 2	98.539 %	72.761 %	0.009 ppb	-59.854 ppb	5.293 ppb	0.905 ppb	-10.201 ppb	-32.819 ppb	96.571 %
Concentration per Run 3	97.295 %	80.037 %	0.006 ppb	-71.678 ppb	-1.286 ppb	0.959 ppb	-2.294 ppb	-11.644 ppb	98.448 %
Concentration RSD	4.4 %	5.8 %	38.1 %	9.0 %	174.2 %	8.8 %	866.2 %	303.2 %	5.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.294 %	-0.087 ppb	-1.404 ppb	0.043 ppb	1.377 ppb	-0.003 ppb	-0.112 ppb	0.013 ppb	0.403 ppb
Concentration per Run 1	84.345 %	-0.096 ppb	-1.433 ppb	0.034 ppb	-1.457 ppb	-0.011 ppb	-0.134 ppb	0.033 ppb	0.493 ppb
Concentration per Run 2	91.484 %	-0.096 ppb	-1.411 ppb	0.057 ppb	3.647 ppb	-0.007 ppb	-0.071 ppb	-0.019 ppb	0.419 ppb
Concentration per Run 3	95.053 %	-0.069 ppb	-1.368 ppb	0.038 ppb	1.940 ppb	0.010 ppb	-0.130 ppb	0.025 ppb	0.298 ppb
Concentration RSD	6.0 %	17.6 %	2.4 %	28.0 %	188.8 %	395.7 %	31.3 %	212.8 %	24.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.444 %	103.140 %	-0.137 ppb	0.054 ppb	0.029 ppb	0.003 ppb	101.090 %	103.535 %	-0.001 ppb
Concentration per Run 1	110.871 %	99.329 %	-0.199 ppb	0.000 ppb	0.040 ppb	0.011 ppb	105.643 %	100.233 %	-0.001 ppb
Concentration per Run 2	101.624 %	104.853 %	-0.106 ppb	-0.020 ppb	0.012 ppb	0.000 ppb	99.411 %	102.565 %	0.000 ppb
Concentration per Run 3	100.836 %	105.238 %	-0.107 ppb	0.181 ppb	0.036 ppb	-0.001 ppb	98.218 %	107.809 %	-0.001 ppb
Concentration RSD	5.3 %	3.2 %	39.2 %	206.0 %	52.0 %	201.9 %	3.9 %	3.7 %	107.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.001 ppb	104.669 %	115.762 %	0.029 ppb	0.044 ppb	129.176 %	130.157 %	117.627 %	145.756 %
Concentration per Run 1	0.003 ppb	111.027 %	111.197 %	0.049 ppb	0.079 ppb	134.651 %	125.082 %	118.942 %	143.567 %
Concentration per Run 2	-0.002 ppb	102.746 %	118.314 %	0.024 ppb	0.027 ppb	127.717 %	133.401 %	116.685 %	148.930 %
Concentration per Run 3	0.003 ppb	100.233 %	117.776 %	0.013 ppb	0.027 ppb	125.161 %	131.987 %	117.253 %	144.772 %
Concentration RSD	195.9 %	5.4 %	3.4 %	64.0 %	68.2 %	3.8 %	3.4 %	1.0 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.026 ppb	0.007 ppb	130.163 %	150.636 %
Concentration per Run 1	0.012 ppb	0.007 ppb	135.146 %	150.333 %
Concentration per Run 2	0.028 ppb	0.007 ppb	130.670 %	150.905 %
Concentration per Run 3	0.039 ppb	0.007 ppb	124.673 %	150.670 %
Concentration RSD	52.6 %	2.0 %	4.0 %	0.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 33
Analysis label: xWG1903849-2d10 2008TL
Analysis started at: 4/4/2024 8:07:54 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 10
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.436 %	80.970 %	10.579 ppb	2,365.683 ppb	2,527.519 ppb	367.110 ppb	2,219.715 ppb	1,746.989 ppb	102.728 %
Concentration per Run 1	101.382 %	88.992 %	10.340 ppb	2,234.808 ppb	2,364.396 ppb	363.399 ppb	2,101.128 ppb	1,850.206 ppb	104.266 %
Concentration per Run 2	97.892 %	77.239 %	10.673 ppb	2,390.260 ppb	2,547.041 ppb	369.315 ppb	2,149.955 ppb	1,861.910 ppb	104.000 %
Concentration per Run 3	96.035 %	76.679 %	10.725 ppb	2,471.981 ppb	2,671.122 ppb	368.617 ppb	2,408.062 ppb	1,528.853 ppb	99.917 %
Concentration RSD	2.8 %	8.6 %	2.0 %	5.1 %	6.1 %	0.9 %	7.4 %	10.8 %	2.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	88.227 %	106.979 ppb	43.014 ppb	118.766 ppb	234.206 ppb	112.598 ppb	112.395 ppb	52.968 ppb	112.122 ppb
Concentration per Run 1	87.914 %	112.648 ppb	44.487 ppb	121.645 ppb	221.778 ppb	118.655 ppb	117.544 ppb	55.224 ppb	115.675 ppb
Concentration per Run 2	90.544 %	104.642 ppb	42.217 ppb	115.621 ppb	234.245 ppb	110.514 ppb	108.401 ppb	52.667 ppb	112.294 ppb
Concentration per Run 3	86.223 %	103.646 ppb	42.339 ppb	119.033 ppb	246.596 ppb	108.625 ppb	111.241 ppb	51.014 ppb	108.395 ppb
Concentration RSD	2.5 %	4.6 %	3.0 %	2.5 %	5.3 %	4.7 %	4.2 %	4.0 %	3.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.833 %	101.885 %	25.820 ppb	26.924 ppb	243.321 ppb	218.717 ppb	102.665 %	101.127 %	10.477 ppb
Concentration per Run 1	105.845 %	97.837 %	26.088 ppb	28.775 ppb	250.558 ppb	226.522 ppb	102.956 %	97.315 %	10.926 ppb
Concentration per Run 2	106.101 %	100.584 %	26.389 ppb	26.938 ppb	242.978 ppb	213.625 ppb	103.155 %	104.402 %	10.152 ppb
Concentration per Run 3	102.555 %	107.233 %	24.981 ppb	25.058 ppb	236.428 ppb	216.004 ppb	101.885 %	101.665 %	10.354 ppb
Concentration RSD	1.9 %	4.7 %	2.9 %	6.9 %	2.9 %	3.1 %	0.7 %	3.5 %	3.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	11.203 ppb	108.403 %	119.043 %	104.639 ppb	437.840 ppb	128.494 %	130.407 %	118.244 %	144.388 %
Concentration per Run 1	12.234 ppb	111.625 %	115.343 %	107.952 ppb	450.588 ppb	131.453 %	125.197 %	119.213 %	138.483 %
Concentration per Run 2	10.398 ppb	107.757 %	121.497 %	102.921 ppb	428.829 ppb	126.934 %	133.463 %	119.215 %	144.411 %
Concentration per Run 3	10.977 ppb	105.828 %	120.289 %	103.046 ppb	434.103 ppb	127.094 %	132.560 %	116.304 %	150.268 %
Concentration RSD	8.4 %	2.7 %	2.7 %	2.7 %	2.6 %	2.0 %	3.5 %	1.4 %	4.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	25.411 ppb	106.055 ppb	131.387 %	147.855 %
Concentration per Run 1	25.587 ppb	105.173 ppb	135.764 %	148.827 %
Concentration per Run 2	25.339 ppb	106.421 ppb	129.587 %	146.356 %
Concentration per Run 3	25.308 ppb	106.571 ppb	128.810 %	148.382 %
Concentration RSD	0.6 %	0.7 %	2.9 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 34
Analysis label: xWG1902884-2d10 2008TL
Analysis started at: 4/4/2024 8:12:36 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 15
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.199 %	84.701 %	0.009 ppb	-47.983 ppb	0.283 ppb	0.152 ppb	-2.133 ppb	-15.820 ppb	96.905 %
Concentration per Run 1	98.392 %	83.955 %	0.009 ppb	-51.063 ppb	-3.238 ppb	0.142 ppb	-8.660 ppb	17.072 ppb	97.803 %
Concentration per Run 2	96.833 %	80.597 %	0.008 ppb	-37.217 ppb	0.939 ppb	0.181 ppb	-7.538 ppb	-31.810 ppb	98.006 %
Concentration per Run 3	96.371 %	89.552 %	0.009 ppb	-55.668 ppb	3.149 ppb	0.135 ppb	9.799 ppb	-32.721 ppb	94.906 %
Concentration RSD	1.1 %	5.3 %	2.8 %	20.0 %	1,145.4 %	16.2 %	485.2 %	180.1 %	1.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	87.006 %	-0.019 ppb	-1.338 ppb	0.038 ppb	0.752 ppb	-0.001 ppb	-0.135 ppb	0.002 ppb	0.097 ppb
Concentration per Run 1	86.317 %	0.049 ppb	-1.250 ppb	0.038 ppb	1.847 ppb	-0.002 ppb	-0.091 ppb	-0.006 ppb	0.093 ppb
Concentration per Run 2	86.129 %	-0.037 ppb	-1.420 ppb	0.081 ppb	1.383 ppb	0.003 ppb	-0.148 ppb	0.045 ppb	0.181 ppb
Concentration per Run 3	88.572 %	-0.067 ppb	-1.343 ppb	-0.005 ppb	-0.973 ppb	-0.002 ppb	-0.166 ppb	-0.034 ppb	0.017 ppb
Concentration RSD	1.6 %	326.0 %	6.4 %	114.0 %	200.9 %	465.6 %	29.1 %	2,404.3 %	84.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	102.790 %	98.262 %	-0.079 ppb	0.179 ppb	0.057 ppb	0.556 ppb	100.864 %	101.036 %	0.001 ppb
Concentration per Run 1	102.657 %	99.448 %	-0.074 ppb	0.191 ppb	0.040 ppb	0.539 ppb	100.480 %	98.598 %	0.004 ppb
Concentration per Run 2	103.535 %	95.699 %	-0.066 ppb	-0.001 ppb	0.054 ppb	0.512 ppb	101.838 %	101.284 %	-0.001 ppb
Concentration per Run 3	102.179 %	99.640 %	-0.096 ppb	0.347 ppb	0.078 ppb	0.616 ppb	100.275 %	103.226 %	0.000 ppb
Concentration RSD	0.7 %	2.3 %	19.6 %	97.2 %	33.1 %	9.7 %	0.8 %	2.3 %	238.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.000 ppb	101.361 %	110.647 %	1.110 ppb	0.062 ppb	125.567 %	127.334 %	114.058 %	138.173 %
Concentration per Run 1	-0.002 ppb	103.086 %	105.908 %	1.163 ppb	0.057 ppb	125.234 %	121.070 %	114.137 %	132.624 %
Concentration per Run 2	-0.002 ppb	99.753 %	112.943 %	1.084 ppb	0.100 ppb	125.766 %	129.531 %	114.554 %	138.363 %
Concentration per Run 3	0.003 ppb	101.244 %	113.090 %	1.082 ppb	0.028 ppb	125.701 %	131.402 %	113.484 %	143.533 %
Concentration RSD	1,674.3 %	1.6 %	3.7 %	4.2 %	58.9 %	0.2 %	4.3 %	0.5 %	3.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.033 ppb	0.011 ppb	116.300 %	142.774 %
Concentration per Run 1	0.020 ppb	0.011 ppb	118.150 %	145.736 %
Concentration per Run 2	0.037 ppb	0.012 ppb	115.862 %	142.248 %
Concentration per Run 3	0.041 ppb	0.010 ppb	114.888 %	140.339 %
Concentration RSD	33.5 %	5.9 %	1.4 %	1.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	35	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-02d10 6020TL	Rack	1		
Analysis started at:	4/4/2024 8:17:15 AM	Vial	20		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	93.221 %	83.209 %	0.093 ppb	19,278.819 ppb	21,020.012 ppb	131.719 ppb	2,418.452 ppb	77,629.008 ppb	109.293 %
Concentration per Run 1	96.374 %	87.313 %	0.078 ppb	19,237.537 ppb	21,248.807 ppb	128.671 ppb	2,502.640 ppb	81,375.059 ppb	112.678 %
Concentration per Run 2	92.041 %	76.679 %	0.106 ppb	19,790.192 ppb	21,118.094 ppb	133.475 ppb	2,295.429 ppb	77,391.722 ppb	109.004 %
Concentration per Run 3	91.249 %	85.634 %	0.094 ppb	18,808.730 ppb	20,693.137 ppb	133.009 ppb	2,457.286 ppb	74,120.241 ppb	106.197 %
Concentration RSD	3.0 %	6.9 %	15.2 %	2.6 %	1.4 %	2.0 %	4.5 %	4.7 %	3.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.300 %	3.166 ppb	5.918 ppb	1,096.283 ppb	49,566.558 ppb	1.231 ppb	1.921 ppb	9.173 ppb	2.046 ppb
Concentration per Run 1	88.760 %	3.367 ppb	6.719 ppb	1,124.488 ppb	50,804.431 ppb	1.267 ppb	1.944 ppb	9.064 ppb	2.210 ppb
Concentration per Run 2	95.053 %	3.177 ppb	5.608 ppb	1,090.494 ppb	48,930.440 ppb	1.188 ppb	1.817 ppb	8.988 ppb	2.136 ppb
Concentration per Run 3	96.086 %	2.952 ppb	5.427 ppb	1,073.867 ppb	48,964.802 ppb	1.238 ppb	2.003 ppb	9.468 ppb	1.791 ppb
Concentration RSD	4.3 %	6.6 %	11.8 %	2.4 %	2.2 %	3.3 %	5.0 %	2.8 %	10.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.180 %	103.389 %	5.020 ppb	0.499 ppb	1,201.064 ppb	0.295 ppb	100.877 %	99.305 %	0.005 ppb
Concentration per Run 1	113.112 %	102.908 %	4.893 ppb	0.672 ppb	1,202.742 ppb	0.235 ppb	102.869 %	95.333 %	0.009 ppb
Concentration per Run 2	108.187 %	100.697 %	5.121 ppb	0.156 ppb	1,220.189 ppb	0.290 ppb	101.739 %	101.123 %	0.002 ppb
Concentration per Run 3	106.240 %	106.561 %	5.047 ppb	0.668 ppb	1,180.260 ppb	0.359 ppb	98.024 %	101.459 %	0.004 ppb
Concentration RSD	3.2 %	2.9 %	2.3 %	59.4 %	1.7 %	21.1 %	2.5 %	3.5 %	66.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.001 ppb	106.265 %	109.047 %	0.447 ppb	1,127.753 ppb	132.243 %	125.193 %	123.795 %	140.975 %
Concentration per Run 1	0.003 ppb	106.491 %	106.137 %	0.407 ppb	1,174.313 ppb	137.157 %	120.593 %	129.330 %	133.959 %
Concentration per Run 2	-0.002 ppb	105.573 %	111.049 %	0.457 ppb	1,093.622 ppb	128.283 %	128.698 %	121.972 %	143.409 %
Concentration per Run 3	0.003 ppb	106.731 %	109.956 %	0.477 ppb	1,115.323 ppb	131.289 %	126.290 %	120.082 %	145.558 %
Concentration RSD	183.0 %	0.6 %	2.4 %	8.0 %	3.7 %	3.4 %	3.3 %	3.9 %	4.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.018 ppb	0.195 ppb	132.361 %	159.834 %
Concentration per Run 1	0.007 ppb	0.182 ppb	129.601 %	176.724 %
Concentration per Run 2	0.021 ppb	0.199 ppb	132.175 %	147.705 %
Concentration per Run 3	0.026 ppb	0.204 ppb	135.307 %	155.073 %
Concentration RSD	56.4 %	6.0 %	2.2 %	9.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	36	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-03d10 6020TL	Rack	1		
Analysis started at:	4/4/2024 8:21:56 AM	Vial	21		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	93.018 %	80.783 %	0.158 ppb	24,243.184 ppb	26,102.799 ppb	647.183 ppb	2,725.049 ppb	89,818.759 ppb	104.528 %
Concentration per Run 1	93.235 %	78.918 %	0.159 ppb	24,264.843 ppb	26,200.861 ppb	674.135 ppb	2,626.850 ppb	88,042.442 ppb	103.600 %
Concentration per Run 2	92.634 %	82.836 %	0.157 ppb	24,154.533 ppb	26,186.615 ppb	634.109 ppb	2,803.904 ppb	93,630.830 ppb	107.069 %
Concentration per Run 3	93.186 %	80.597 %	0.159 ppb	24,310.177 ppb	25,920.922 ppb	633.304 ppb	2,744.394 ppb	87,783.004 ppb	102.914 %
Concentration RSD	0.4 %	2.4 %	1.0 %	0.3 %	0.6 %	3.6 %	3.3 %	3.7 %	2.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.141 %	2.985 ppb	1.278 ppb	1,207.594 ppb	49,331.622 ppb	2.823 ppb	3.809 ppb	31.482 ppb	5.165 ppb
Concentration per Run 1	94.865 %	3.106 ppb	1.265 ppb	1,198.537 ppb	49,872.545 ppb	2.897 ppb	3.664 ppb	31.637 ppb	5.703 ppb
Concentration per Run 2	89.041 %	2.933 ppb	1.276 ppb	1,213.444 ppb	49,169.067 ppb	2.756 ppb	3.704 ppb	31.479 ppb	5.064 ppb
Concentration per Run 3	92.517 %	2.916 ppb	1.294 ppb	1,210.801 ppb	48,953.254 ppb	2.817 ppb	4.059 ppb	31.329 ppb	4.729 ppb
Concentration RSD	3.2 %	3.5 %	1.2 %	0.7 %	1.0 %	2.5 %	5.7 %	0.5 %	9.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.823 %	101.587 %	3.035 ppb	0.671 ppb	1,458.932 ppb	0.339 ppb	102.502 %	100.121 %	0.016 ppb
Concentration per Run 1	110.560 %	100.098 %	2.842 ppb	0.304 ppb	1,458.873 ppb	0.329 ppb	103.188 %	98.811 %	0.022 ppb
Concentration per Run 2	110.216 %	103.604 %	3.090 ppb	0.490 ppb	1,432.983 ppb	0.407 ppb	101.761 %	100.669 %	0.015 ppb
Concentration per Run 3	108.694 %	101.059 %	3.173 ppb	1.220 ppb	1,484.939 ppb	0.280 ppb	102.557 %	100.882 %	0.011 ppb
Concentration RSD	0.9 %	1.8 %	5.7 %	72.1 %	1.8 %	18.9 %	0.7 %	1.1 %	34.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	-0.002 ppb	105.282 %	111.028 %	0.288 ppb	1,233.786 ppb	130.219 %	128.546 %	123.759 %	143.624 %
Concentration per Run 1	-0.002 ppb	102.323 %	110.952 %	0.273 ppb	1,251.312 ppb	130.855 %	126.888 %	124.053 %	139.589 %
Concentration per Run 2	-0.002 ppb	107.082 %	108.780 %	0.303 ppb	1,253.313 ppb	129.658 %	129.267 %	124.714 %	143.352 %
Concentration per Run 3	-0.002 ppb	106.442 %	113.351 %	0.290 ppb	1,196.734 ppb	130.144 %	129.483 %	122.509 %	147.932 %
Concentration RSD	0.0 %	2.5 %	2.1 %	5.2 %	2.6 %	0.5 %	1.1 %	0.9 %	2.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.023 ppb	0.489 ppb	120.314 %	136.215 %
Concentration per Run 1	0.013 ppb	0.482 ppb	116.580 %	138.161 %
Concentration per Run 2	0.029 ppb	0.494 ppb	123.534 %	135.421 %
Concentration per Run 3	0.027 ppb	0.493 ppb	120.829 %	135.063 %
Concentration RSD	37.8 %	1.3 %	2.9 %	1.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	37	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415578-04d10 6020TL	Rack	1		
Analysis started at:	4/4/2024 8:26:37 AM	Vial	22		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	94.550 %	84.328 %	0.090 ppb	19,451.074 ppb	19,790.988 ppb	26.861 ppb	1,866.748 ppb	70,334.536 ppb	109.194 %
Concentration per Run 1	97.314 %	80.597 %	0.082 ppb	20,325.176 ppb	20,874.947 ppb	26.090 ppb	1,937.713 ppb	73,275.865 ppb	109.902 %
Concentration per Run 2	93.834 %	86.194 %	0.094 ppb	19,269.039 ppb	19,294.572 ppb	26.966 ppb	1,931.156 ppb	72,457.646 ppb	110.485 %
Concentration per Run 3	92.501 %	86.194 %	0.093 ppb	18,759.008 ppb	19,203.445 ppb	27.527 ppb	1,731.376 ppb	65,270.097 ppb	107.195 %
Concentration RSD	2.6 %	3.8 %	7.3 %	4.1 %	4.7 %	2.7 %	6.3 %	6.3 %	1.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	87.069 %	1.441 ppb	0.075 ppb	8,494.852 ppb	31,012.563 ppb	13.201 ppb	6.729 ppb	4.581 ppb	2.971 ppb
Concentration per Run 1	84.533 %	1.726 ppb	0.265 ppb	8,850.189 ppb	33,096.346 ppb	13.268 ppb	7.378 ppb	4.917 ppb	3.138 ppb
Concentration per Run 2	85.660 %	1.443 ppb	0.169 ppb	8,472.067 ppb	30,943.082 ppb	13.607 ppb	6.484 ppb	4.152 ppb	2.850 ppb
Concentration per Run 3	91.014 %	1.153 ppb	-0.208 ppb	8,162.302 ppb	28,998.261 ppb	12.728 ppb	6.325 ppb	4.674 ppb	2.924 ppb
Concentration RSD	4.0 %	19.9 %	331.9 %	4.1 %	6.6 %	3.4 %	8.4 %	8.5 %	5.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.440 %	101.906 %	1.513 ppb	0.671 ppb	732.965 ppb	0.132 ppb	104.610 %	100.588 %	0.002 ppb
Concentration per Run 1	113.616 %	93.799 %	1.574 ppb	0.913 ppb	759.966 ppb	0.101 ppb	104.671 %	98.208 %	0.005 ppb
Concentration per Run 2	112.647 %	101.393 %	1.381 ppb	0.299 ppb	722.633 ppb	0.159 ppb	105.962 %	102.980 %	0.001 ppb
Concentration per Run 3	114.057 %	110.525 %	1.585 ppb	0.802 ppb	716.295 ppb	0.136 ppb	103.198 %	100.577 %	0.000 ppb
Concentration RSD	0.6 %	8.2 %	7.6 %	48.7 %	3.2 %	22.0 %	1.3 %	2.4 %	114.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.005 ppb	110.936 %	110.060 %	0.262 ppb	1,450.269 ppb	135.100 %	128.065 %	124.471 %	137.622 %
Concentration per Run 1	0.008 ppb	112.496 %	105.973 %	0.232 ppb	1,459.965 ppb	138.391 %	127.343 %	126.328 %	136.202 %
Concentration per Run 2	-0.002 ppb	112.935 %	110.755 %	0.335 ppb	1,430.160 ppb	133.088 %	130.479 %	124.285 %	140.649 %
Concentration per Run 3	0.007 ppb	107.376 %	113.451 %	0.220 ppb	1,460.683 ppb	133.821 %	126.372 %	122.801 %	136.015 %
Concentration RSD	118.2 %	2.8 %	3.4 %	24.3 %	1.2 %	2.1 %	1.7 %	1.4 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.012 ppb	0.730 ppb	140.931 %	145.399 %
Concentration per Run 1	0.003 ppb	0.706 ppb	146.632 %	143.152 %
Concentration per Run 2	0.018 ppb	0.750 ppb	142.407 %	136.692 %
Concentration per Run 3	0.015 ppb	0.735 ppb	133.754 %	156.354 %
Concentration RSD	63.2 %	3.1 %	4.7 %	6.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	38	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1903849-3d10 2008TL	Rack	1		
Analysis started at:	4/4/2024 8:31:18 AM	Vial	12		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	94.401 %	83.022 %	5.165 ppb	2,190.469 ppb	1,319.558 ppb	172.232 ppb	1,160.858 ppb	1,377.344 ppb	99.180 %
Concentration per Run 1	96.012 %	87.313 %	5.122 ppb	2,115.413 ppb	1,221.157 ppb	172.977 ppb	1,106.912 ppb	1,300.997 ppb	102.150 %
Concentration per Run 2	93.785 %	74.440 %	5.142 ppb	2,342.711 ppb	1,409.800 ppb	170.820 ppb	1,206.880 ppb	1,344.054 ppb	99.576 %
Concentration per Run 3	93.406 %	87.313 %	5.231 ppb	2,113.283 ppb	1,327.717 ppb	172.900 ppb	1,168.783 ppb	1,486.982 ppb	95.813 %
Concentration RSD	1.5 %	9.0 %	1.1 %	6.0 %	7.2 %	0.7 %	4.3 %	7.1 %	3.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.386 %	48.151 ppb	18.548 ppb	56.586 ppb	133.682 ppb	53.082 ppb	91.897 ppb	35.545 ppb	87.543 ppb
Concentration per Run 1	89.887 %	48.478 ppb	18.517 ppb	56.333 ppb	118.054 ppb	52.838 ppb	91.701 ppb	35.792 ppb	87.101 ppb
Concentration per Run 2	87.351 %	49.082 ppb	19.285 ppb	58.463 ppb	143.436 ppb	52.702 ppb	95.487 ppb	36.994 ppb	91.586 ppb
Concentration per Run 3	90.920 %	46.893 ppb	17.842 ppb	54.963 ppb	139.555 ppb	53.707 ppb	88.504 ppb	33.848 ppb	83.940 ppb
Concentration RSD	2.1 %	2.3 %	3.9 %	3.1 %	10.2 %	1.0 %	3.8 %	4.5 %	4.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.489 %	102.373 %	11.866 ppb	10.879 ppb	112.482 ppb	99.136 ppb	103.344 %	103.773 %	5.121 ppb
Concentration per Run 1	108.984 %	101.325 %	11.338 ppb	11.820 ppb	109.303 ppb	99.366 ppb	105.014 %	102.823 %	5.408 ppb
Concentration per Run 2	106.904 %	98.967 %	12.389 ppb	9.711 ppb	115.808 ppb	99.473 ppb	102.178 %	104.357 %	4.930 ppb
Concentration per Run 3	106.579 %	106.826 %	11.869 ppb	11.106 ppb	112.336 ppb	98.567 ppb	102.839 %	104.139 %	5.026 ppb
Concentration RSD	1.2 %	3.9 %	4.4 %	9.9 %	2.9 %	0.5 %	1.4 %	0.8 %	4.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.201 ppb	107.647 %	113.553 %	50.101 ppb	211.644 ppb	129.749 %	125.796 %	120.797 %	134.716 %
Concentration per Run 1	5.328 ppb	107.636 %	110.658 %	51.184 ppb	217.150 ppb	132.467 %	125.311 %	123.367 %	131.576 %
Concentration per Run 2	5.109 ppb	107.251 %	114.805 %	49.335 ppb	209.574 ppb	131.742 %	124.201 %	115.798 %	135.093 %
Concentration per Run 3	5.167 ppb	108.053 %	115.195 %	49.786 ppb	208.208 ppb	125.036 %	127.877 %	123.224 %	137.478 %
Concentration RSD	2.2 %	0.4 %	2.2 %	1.9 %	2.3 %	3.2 %	1.5 %	3.6 %	2.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	12.392 ppb	49.805 ppb	120.751 %	139.641 %
Concentration per Run 1	12.439 ppb	48.328 ppb	120.896 %	141.469 %
Concentration per Run 2	12.440 ppb	51.037 ppb	120.661 %	139.882 %
Concentration per Run 3	12.297 ppb	50.050 ppb	120.697 %	137.573 %
Concentration RSD	0.7 %	2.8 %	0.1 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	39	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1903849-4 2008TL	Rack	1		
Analysis started at:	4/4/2024 8:36:01 AM	Vial	13		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.751 %	75.186 %	0.010 ppb	11,371.919 ppb	1,613.086 ppb	13.015 ppb	621.784 ppb	6,225.046 ppb	106.905 %
Concentration per Run 1	95.431 %	61.007 %	0.010 ppb	12,808.375 ppb	1,811.509 ppb	13.014 ppb	633.402 ppb	6,972.015 ppb	111.304 %
Concentration per Run 2	91.970 %	83.395 %	0.009 ppb	10,751.990 ppb	1,490.584 ppb	12.958 ppb	630.356 ppb	6,130.078 ppb	107.593 %
Concentration per Run 3	90.852 %	81.157 %	0.010 ppb	10,555.393 ppb	1,537.165 ppb	13.073 ppb	601.593 ppb	5,573.044 ppb	101.817 %
Concentration RSD	2.6 %	16.4 %	3.9 %	11.0 %	10.8 %	0.4 %	2.8 %	11.3 %	4.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	88.102 %	-0.011 ppb	0.481 ppb	10.230 ppb	62.599 ppb	0.056 ppb	383.646 ppb	109.979 ppb	342.818 ppb
Concentration per Run 1	84.533 %	0.020 ppb	0.537 ppb	10.330 ppb	70.570 ppb	0.032 ppb	391.180 ppb	113.547 ppb	342.150 ppb
Concentration per Run 2	87.163 %	-0.011 ppb	0.546 ppb	10.294 ppb	63.537 ppb	0.084 ppb	379.261 ppb	107.240 ppb	345.126 ppb
Concentration per Run 3	92.611 %	-0.041 ppb	0.360 ppb	10.065 ppb	53.692 ppb	0.052 ppb	380.498 ppb	109.150 ppb	341.179 ppb
Concentration RSD	4.7 %	289.7 %	21.7 %	1.4 %	13.5 %	45.8 %	1.7 %	2.9 %	0.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.036 %	104.693 %	0.226 ppb	0.183 ppb	21.209 ppb	0.327 ppb	103.569 %	100.663 %	0.005 ppb
Concentration per Run 1	111.326 %	105.815 %	0.202 ppb	0.525 ppb	20.747 ppb	0.304 ppb	107.114 %	97.788 %	0.008 ppb
Concentration per Run 2	109.058 %	105.526 %	0.178 ppb	0.001 ppb	21.334 ppb	0.349 ppb	101.702 %	101.784 %	0.002 ppb
Concentration per Run 3	106.724 %	102.739 %	0.297 ppb	0.022 ppb	21.545 ppb	0.328 ppb	101.890 %	102.418 %	0.006 ppb
Concentration RSD	2.1 %	1.6 %	27.7 %	162.4 %	1.9 %	6.8 %	3.0 %	2.5 %	53.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.012 ppb	107.134 %	113.450 %	0.605 ppb	15.946 ppb	133.514 %	124.486 %	121.429 %	136.356 %
Concentration per Run 1	-0.002 ppb	108.187 %	110.086 %	0.642 ppb	16.614 ppb	137.129 %	119.742 %	124.729 %	130.676 %
Concentration per Run 2	0.025 ppb	105.179 %	114.935 %	0.551 ppb	16.093 ppb	133.109 %	125.942 %	121.311 %	137.764 %
Concentration per Run 3	0.012 ppb	108.035 %	115.327 %	0.621 ppb	15.130 ppb	130.303 %	127.776 %	118.248 %	140.628 %
Concentration RSD	114.3 %	1.6 %	2.6 %	7.8 %	4.7 %	2.6 %	3.4 %	2.7 %	3.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.032 ppb	2.715 ppb	131.087 %	146.053 %
Concentration per Run 1	0.021 ppb	2.612 ppb	129.770 %	144.257 %
Concentration per Run 2	0.041 ppb	2.666 ppb	131.306 %	146.489 %
Concentration per Run 3	0.035 ppb	2.867 ppb	132.186 %	147.413 %
Concentration RSD	32.6 %	4.9 %	0.9 %	1.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	40	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2416965-01 2008TL	Rack	1		
Analysis started at:	4/4/2024 8:40:40 AM	Vial	11		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.965 %	80.970 %	0.008 ppb	10,676.339 ppb	1,444.257 ppb	13.818 ppb	632.745 ppb	5,875.452 ppb	104.656 %
Concentration per Run 1	94.842 %	78.358 %	0.010 ppb	11,134.735 ppb	1,506.991 ppb	13.880 ppb	702.839 ppb	5,907.896 ppb	107.442 %
Concentration per Run 2	91.783 %	78.918 %	0.005 ppb	10,829.030 ppb	1,481.538 ppb	13.377 ppb	593.607 ppb	5,499.622 ppb	104.791 %
Concentration per Run 3	92.270 %	85.634 %	0.011 ppb	10,065.251 ppb	1,344.243 ppb	14.198 ppb	601.790 ppb	6,218.837 ppb	101.733 %
Concentration RSD	1.8 %	5.0 %	41.6 %	5.2 %	6.1 %	3.0 %	9.6 %	6.1 %	2.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.075 %	0.035 ppb	0.414 ppb	10.034 ppb	58.521 ppb	0.036 ppb	375.195 ppb	110.036 ppb	344.062 ppb
Concentration per Run 1	87.163 %	0.133 ppb	0.629 ppb	10.354 ppb	62.943 ppb	0.020 ppb	379.271 ppb	110.982 ppb	346.245 ppb
Concentration per Run 2	88.478 %	-0.040 ppb	0.401 ppb	9.816 ppb	55.945 ppb	0.036 ppb	382.293 ppb	108.804 ppb	341.667 ppb
Concentration per Run 3	94.583 %	0.012 ppb	0.210 ppb	9.933 ppb	56.675 ppb	0.052 ppb	364.023 ppb	110.323 ppb	344.276 ppb
Concentration RSD	4.4 %	252.4 %	50.7 %	2.8 %	6.6 %	45.5 %	2.6 %	1.0 %	0.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.285 %	102.179 %	0.284 ppb	0.293 ppb	20.832 ppb	0.149 ppb	103.164 %	102.110 %	0.009 ppb
Concentration per Run 1	109.902 %	102.020 %	0.250 ppb	0.187 ppb	20.559 ppb	0.162 ppb	101.785 %	99.934 %	0.009 ppb
Concentration per Run 2	109.882 %	103.892 %	0.332 ppb	0.680 ppb	21.203 ppb	0.093 ppb	105.827 %	104.220 %	0.008 ppb
Concentration per Run 3	105.072 %	100.624 %	0.272 ppb	0.011 ppb	20.733 ppb	0.192 ppb	101.881 %	102.178 %	0.009 ppb
Concentration RSD	2.6 %	1.6 %	15.0 %	118.4 %	1.6 %	33.9 %	2.2 %	2.1 %	6.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.014 ppb	106.760 %	111.469 %	0.271 ppb	16.488 ppb	131.382 %	124.133 %	121.666 %	136.849 %
Concentration per Run 1	0.008 ppb	110.501 %	107.883 %	0.276 ppb	15.994 ppb	131.850 %	119.924 %	122.533 %	134.725 %
Concentration per Run 2	0.016 ppb	103.512 %	111.800 %	0.266 ppb	16.967 ppb	133.676 %	125.256 %	122.801 %	137.277 %
Concentration per Run 3	0.016 ppb	106.266 %	114.723 %	0.271 ppb	16.504 ppb	128.621 %	127.218 %	119.664 %	138.545 %
Concentration RSD	36.9 %	3.3 %	3.1 %	1.9 %	3.0 %	1.9 %	3.0 %	1.4 %	1.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.022 ppb	2.658 ppb	133.510 %	146.427 %
Concentration per Run 1	0.017 ppb	2.612 ppb	134.304 %	147.443 %
Concentration per Run 2	0.020 ppb	2.641 ppb	130.739 %	144.605 %
Concentration per Run 3	0.028 ppb	2.720 ppb	135.488 %	147.232 %
Concentration RSD	26.1 %	2.1 %	1.9 %	1.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	41	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 8:45:22 AM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	91.253 %	82.276 %	61.857 ppb	6,366.966 ppb	6,148.586 ppb	62.415 ppb	6,135.944 ppb	6,200.467 ppb	99.492 %
Concentration per Run 1	91.308 %	83.395 %	62.228 ppb	6,300.943 ppb	6,568.087 ppb	63.877 ppb	6,176.447 ppb	6,024.448 ppb	96.508 %
Concentration per Run 2	91.011 %	74.440 %	61.940 ppb	6,812.402 ppb	5,990.964 ppb	62.102 ppb	6,356.502 ppb	5,992.040 ppb	102.332 %
Concentration per Run 3	91.440 %	88.992 %	61.403 ppb	5,987.554 ppb	5,886.706 ppb	61.265 ppb	5,874.883 ppb	6,584.913 ppb	99.638 %
Recovery Percentage 1			103.095 %	106.116 %	102.476 %	104.024 %	102.266 %	103.341 %	
Concentration RSD	0.2 %	8.9 %	0.7 %	6.5 %	6.0 %	2.1 %	4.0 %	5.4 %	2.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.229 %	60.509 ppb	57.521 ppb	62.962 ppb	6,217.052 ppb	61.328 ppb	60.788 ppb	57.886 ppb	60.873 ppb
Concentration per Run 1	88.666 %	62.149 ppb	60.011 ppb	64.731 ppb	6,321.982 ppb	64.081 ppb	61.150 ppb	58.223 ppb	62.296 ppb
Concentration per Run 2	88.008 %	63.022 ppb	56.735 ppb	64.292 ppb	6,049.592 ppb	62.134 ppb	63.318 ppb	59.088 ppb	60.618 ppb
Concentration per Run 3	91.014 %	56.356 ppb	55.817 ppb	59.864 ppb	6,279.581 ppb	57.770 ppb	57.895 ppb	56.346 ppb	59.703 ppb
Recovery Percentage 1		100.848 %	95.868 %	104.937 %	103.618 %	102.214 %	101.313 %	96.476 %	101.454 %
Concentration RSD	1.8 %	6.0 %	3.8 %	4.3 %	2.4 %	5.3 %	4.5 %	2.4 %	2.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	106.179 %	101.937 %	58.723 ppb	60.162 ppb	64.666 ppb	61.071 ppb	101.548 %	99.843 %	60.266 ppb
Concentration per Run 1	105.358 %	97.774 %	62.209 ppb	62.972 ppb	66.521 ppb	63.928 ppb	100.027 %	96.363 %	61.048 ppb
Concentration per Run 2	106.238 %	101.567 %	58.173 ppb	59.325 ppb	62.740 ppb	60.560 ppb	103.729 %	103.020 %	58.955 ppb
Concentration per Run 3	106.939 %	106.470 %	55.787 ppb	58.191 ppb	64.739 ppb	58.724 ppb	100.889 %	100.145 %	60.796 ppb
Recovery Percentage 1			97.872 %	100.271 %	107.777 %	101.785 %			100.444 %
Concentration RSD	0.7 %	4.3 %	5.5 %	4.2 %	2.9 %	4.3 %	1.9 %	3.3 %	1.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	60.470 ppb	104.094 %	107.633 %	62.807 ppb	60.933 ppb	129.945 %	122.519 %	119.343 %	133.276 %
Concentration per Run 1	61.617 ppb	104.508 %	106.071 %	63.898 ppb	62.180 ppb	130.399 %	120.713 %	117.677 %	129.822 %
Concentration per Run 2	59.942 ppb	103.887 %	108.667 %	62.146 ppb	60.357 ppb	132.462 %	122.454 %	122.457 %	136.018 %
Concentration per Run 3	59.850 ppb	103.886 %	108.160 %	62.376 ppb	60.262 ppb	126.974 %	124.390 %	117.894 %	133.989 %
Recovery Percentage 1	100.783 %			104.678 %	101.556 %				
Concentration RSD	1.6 %	0.3 %	1.3 %	1.5 %	1.8 %	2.1 %	1.5 %	2.3 %	2.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	59.804 ppb	55.547 ppb	121.802 %	134.862 %
Concentration per Run 1	59.030 ppb	55.271 ppb	115.331 %	138.567 %
Concentration per Run 2	59.729 ppb	53.765 ppb	126.148 %	135.878 %
Concentration per Run 3	60.653 ppb	57.606 ppb	123.926 %	130.141 %
Recovery Percentage 1	99.673 %	92.579 %		
Concentration RSD	1.4 %	3.5 %	4.7 %	3.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	42	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 8:50:06 AM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	93.741 %	90.858 %	0.018 ppb	-65.451 ppb	-2.273 ppb	-0.468 ppb	-8.539 ppb	21.541 ppb	97.619 %
Concentration per Run 1	95.278 %	92.351 %	0.021 ppb	-65.713 ppb	-2.725 ppb	-0.441 ppb	-3.183 ppb	35.026 ppb	100.027 %
Concentration per Run 2	93.986 %	97.948 %	0.017 ppb	-76.690 ppb	-1.511 ppb	-0.474 ppb	-8.872 ppb	15.492 ppb	99.558 %
Concentration per Run 3	91.960 %	82.276 %	0.015 ppb	-53.950 ppb	-2.584 ppb	-0.489 ppb	-13.562 ppb	14.105 ppb	93.272 %
Recovery Percentage 1			3.519 %	-65.451 %	-3.247 %	-4.679 %	-8.539 %	21.541 %	
Concentration RSD	1.8 %	8.7 %	16.8 %	17.4 %	29.2 %	5.3 %	60.9 %	54.3 %	3.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.231 %	-0.068 ppb	-1.400 ppb	-0.042 ppb	5.815 ppb	-0.005 ppb	-0.019 ppb	-0.011 ppb	0.297 ppb
Concentration per Run 1	92.517 %	-0.068 ppb	-1.361 ppb	-0.011 ppb	5.592 ppb	-0.007 ppb	-0.076 ppb	-0.014 ppb	0.262 ppb
Concentration per Run 2	87.914 %	-0.068 ppb	-1.529 ppb	-0.092 ppb	4.245 ppb	-0.003 ppb	-0.001 ppb	-0.001 ppb	0.213 ppb
Concentration per Run 3	90.262 %	-0.068 ppb	-1.309 ppb	-0.024 ppb	7.609 ppb	-0.007 ppb	0.020 ppb	-0.016 ppb	0.417 ppb
Recovery Percentage 1		-1.359 %	-139.967 %	-4.238 %	11.631 %	-1.060 %	-0.941 %	-1.059 %	5.945 %
Concentration RSD	2.6 %	0.2 %	8.2 %	103.3 %	29.1 %	44.5 %	270.0 %	75.9 %	35.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.300 %	100.858 %	0.030 ppb	0.129 ppb	0.030 ppb	0.204 ppb	104.672 %	102.100 %	0.005 ppb
Concentration per Run 1	106.087 %	94.088 %	0.174 ppb	0.188 ppb	0.028 ppb	0.255 ppb	108.577 %	99.579 %	0.002 ppb
Concentration per Run 2	104.699 %	107.787 %	-0.052 ppb	0.189 ppb	0.036 ppb	0.177 ppb	103.614 %	102.733 %	0.007 ppb
Concentration per Run 3	102.115 %	100.697 %	-0.032 ppb	0.011 ppb	0.025 ppb	0.179 ppb	101.824 %	103.987 %	0.005 ppb
Recovery Percentage 1			6.000 %	2.587 %	5.982 %	10.184 %			1.245 %
Concentration RSD	1.9 %	6.8 %	417.3 %	79.2 %	19.1 %	21.9 %	3.3 %	2.2 %	50.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.008 ppb	104.366 %	109.292 %	0.086 ppb	0.030 ppb	130.112 %	122.206 %	119.488 %	131.165 %
Concentration per Run 1	0.003 ppb	104.193 %	109.368 %	0.083 ppb	-0.020 ppb	133.861 %	118.643 %	118.325 %	126.417 %
Concentration per Run 2	0.008 ppb	102.986 %	110.952 %	0.090 ppb	0.105 ppb	131.301 %	122.712 %	117.894 %	132.312 %
Concentration per Run 3	0.012 ppb	105.919 %	107.557 %	0.083 ppb	0.005 ppb	125.173 %	125.263 %	122.244 %	134.767 %
Recovery Percentage 1				2.140 %	6.046 %				
Concentration RSD	61.2 %	1.4 %	1.6 %	4.8 %	218.2 %	3.4 %	2.7 %	2.0 %	3.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.412 ppb	0.013 ppb	121.065 %	137.022 %
Concentration per Run 1	0.275 ppb	0.014 ppb	121.427 %	145.012 %
Concentration per Run 2	0.486 ppb	0.013 ppb	119.849 %	131.926 %
Concentration per Run 3	0.474 ppb	0.011 ppb	121.919 %	134.127 %
Recovery Percentage 1	41.180 %	1.288 %		
Concentration RSD	28.7 %	9.7 %	0.9 %	5.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 43
Analysis label: WG1903397-1d10 6020TS
Analysis started at: 4/4/2024 9:05:12 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 23
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.788 %	91.045 %	0.006 ppb	-59.430 ppb	2.787 ppb	1.501 ppb	6.689 ppb	-6.889 ppb	98.374 %
Concentration per Run 1	98.557 %	93.470 %	0.004 ppb	-64.950 ppb	2.949 ppb	1.657 ppb	6.544 ppb	-8.867 ppb	99.973 %
Concentration per Run 2	95.085 %	104.664 %	0.007 ppb	-74.538 ppb	0.867 ppb	1.489 ppb	-6.824 ppb	44.382 ppb	98.973 %
Concentration per Run 3	93.720 %	75.000 %	0.009 ppb	-38.802 ppb	4.544 ppb	1.358 ppb	20.349 ppb	-56.182 ppb	96.175 %
Concentration RSD	2.6 %	16.5 %	40.7 %	31.1 %	66.2 %	10.0 %	203.1 %	730.3 %	2.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	87.351 %	-0.077 ppb	-0.487 ppb	0.068 ppb	9.496 ppb	-0.002 ppb	-0.039 ppb	0.021 ppb	0.227 ppb
Concentration per Run 1	89.135 %	-0.096 ppb	-0.582 ppb	0.068 ppb	5.525 ppb	-0.011 ppb	-0.065 ppb	0.039 ppb	0.240 ppb
Concentration per Run 2	83.218 %	-0.066 ppb	-0.289 ppb	0.108 ppb	13.923 ppb	0.003 ppb	-0.012 ppb	0.024 ppb	0.201 ppb
Concentration per Run 3	89.699 %	-0.068 ppb	-0.589 ppb	0.028 ppb	9.039 ppb	0.002 ppb	-0.041 ppb	0.000 ppb	0.239 ppb
Concentration RSD	4.1 %	21.8 %	35.2 %	59.0 %	44.4 %	341.5 %	67.9 %	94.7 %	9.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	103.377 %	101.361 %	-0.006 ppb	-0.007 ppb	0.033 ppb	0.014 ppb	104.062 %	104.323 %	-0.001 ppb
Concentration per Run 1	106.560 %	100.528 %	0.076 ppb	0.011 ppb	0.026 ppb	0.022 ppb	107.396 %	100.181 %	0.000 ppb
Concentration per Run 2	102.587 %	98.701 %	-0.125 ppb	-0.033 ppb	0.038 ppb	0.010 ppb	103.047 %	105.878 %	-0.001 ppb
Concentration per Run 3	100.984 %	104.853 %	0.032 ppb	0.001 ppb	0.036 ppb	0.010 ppb	101.744 %	106.910 %	-0.001 ppb
Concentration RSD	2.8 %	3.1 %	1,883.7 %	334.5 %	19.1 %	49.7 %	2.8 %	3.5 %	123.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.001 ppb	103.052 %	115.137 %	0.033 ppb	0.021 ppb	127.118 %	126.181 %	119.000 %	137.230 %
Concentration per Run 1	0.007 ppb	102.766 %	112.796 %	0.029 ppb	0.055 ppb	129.677 %	121.079 %	118.451 %	132.107 %
Concentration per Run 2	-0.002 ppb	102.397 %	117.580 %	0.033 ppb	0.004 ppb	125.989 %	128.165 %	118.526 %	140.326 %
Concentration per Run 3	-0.002 ppb	103.992 %	115.033 %	0.039 ppb	0.004 ppb	125.689 %	129.300 %	120.024 %	139.257 %
Concentration RSD	381.2 %	0.8 %	2.1 %	15.6 %	139.5 %	1.7 %	3.5 %	0.7 %	3.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.032 ppb	0.009 ppb	120.114 %	143.663 %
Concentration per Run 1	0.021 ppb	0.011 ppb	120.715 %	144.099 %
Concentration per Run 2	0.033 ppb	0.008 ppb	118.485 %	144.470 %
Concentration per Run 3	0.042 ppb	0.009 ppb	121.141 %	142.421 %
Concentration RSD	32.2 %	13.9 %	1.2 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 44
Analysis label: WG1903397-2d10 6020TS
Analysis started at: 4/4/2024 9:09:53 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 24
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.594 %	79.291 %	10.715 ppb	2,320.050 ppb	2,428.665 ppb	347.106 ppb	2,193.395 ppb	2,109.551 ppb	102.413 %
Concentration per Run 1	94.487 %	69.963 %	10.602 ppb	2,436.404 ppb	2,527.318 ppb	345.606 ppb	2,181.345 ppb	2,325.314 ppb	103.140 %
Concentration per Run 2	91.870 %	83.395 %	10.804 ppb	2,265.162 ppb	2,419.662 ppb	361.951 ppb	2,135.697 ppb	2,180.964 ppb	101.321 %
Concentration per Run 3	91.424 %	84.515 %	10.740 ppb	2,258.584 ppb	2,339.015 ppb	333.760 ppb	2,263.142 ppb	1,822.374 ppb	102.777 %
Concentration RSD	1.8 %	10.2 %	1.0 %	4.3 %	3.9 %	4.1 %	2.9 %	12.3 %	0.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.075 %	99.691 ppb	39.973 ppb	111.978 ppb	232.856 ppb	108.437 ppb	109.333 ppb	51.894 ppb	105.410 ppb
Concentration per Run 1	91.671 %	97.703 ppb	39.806 ppb	111.299 ppb	230.674 ppb	106.807 ppb	111.433 ppb	50.885 ppb	104.434 ppb
Concentration per Run 2	87.914 %	101.848 ppb	40.471 ppb	112.812 ppb	232.227 ppb	110.179 ppb	110.406 ppb	53.082 ppb	104.081 ppb
Concentration per Run 3	90.638 %	99.523 ppb	39.643 ppb	111.824 ppb	235.668 ppb	108.326 ppb	106.160 ppb	51.716 ppb	107.715 ppb
Concentration RSD	2.2 %	2.1 %	1.1 %	0.7 %	1.1 %	1.6 %	2.6 %	2.1 %	1.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	105.004 %	97.567 %	25.130 ppb	25.029 ppb	225.444 ppb	206.588 ppb	103.691 %	98.861 %	10.122 ppb
Concentration per Run 1	108.690 %	97.214 %	25.080 ppb	25.799 ppb	229.127 ppb	210.654 ppb	107.996 %	96.762 %	10.187 ppb
Concentration per Run 2	103.509 %	100.002 %	25.299 ppb	25.625 ppb	219.202 ppb	199.845 ppb	101.338 %	99.359 %	10.304 ppb
Concentration per Run 3	102.813 %	95.484 %	25.011 ppb	23.664 ppb	228.004 ppb	209.266 ppb	101.738 %	100.463 %	9.875 ppb
Concentration RSD	3.1 %	2.3 %	0.6 %	4.7 %	2.4 %	2.8 %	3.6 %	1.9 %	2.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	10.730 ppb	108.000 %	113.455 %	103.673 ppb	415.504 ppb	128.419 %	122.582 %	122.888 %	129.344 %
Concentration per Run 1	11.369 ppb	111.016 %	110.755 %	106.363 ppb	422.596 ppb	130.434 %	121.711 %	126.159 %	126.305 %
Concentration per Run 2	10.785 ppb	107.216 %	110.690 %	105.469 ppb	422.428 ppb	126.724 %	120.556 %	122.333 %	128.740 %
Concentration per Run 3	10.036 ppb	105.770 %	118.918 %	99.189 ppb	401.487 ppb	128.100 %	125.477 %	120.173 %	132.987 %
Concentration RSD	6.2 %	2.5 %	4.2 %	3.8 %	2.9 %	1.5 %	2.1 %	2.5 %	2.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	22.733 ppb	98.613 ppb	131.585 %	142.134 %
Concentration per Run 1	22.737 ppb	96.777 ppb	134.168 %	145.529 %
Concentration per Run 2	22.434 ppb	97.155 ppb	130.667 %	141.175 %
Concentration per Run 3	23.029 ppb	101.907 ppb	129.920 %	139.699 %
Concentration RSD	1.3 %	2.9 %	1.7 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	45	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1902884-3d10 2008TL	Rack	1		
Analysis started at:	4/4/2024 9:14:35 AM	Vial	17		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.994 %	85.634 %	5.325 ppb	1,536.415 ppb	1,775.501 ppb	168.872 ppb	1,187.449 ppb	9,874.023 ppb	104.942 %
Concentration per Run 1	95.506 %	86.194 %	5.236 ppb	1,558.139 ppb	1,788.572 ppb	165.980 ppb	1,195.613 ppb	10,593.693 ppb	106.674 %
Concentration per Run 2	92.129 %	83.955 %	5.360 ppb	1,496.409 ppb	1,726.183 ppb	175.721 ppb	1,155.437 ppb	8,825.239 ppb	104.082 %
Concentration per Run 3	91.348 %	86.754 %	5.380 ppb	1,554.696 ppb	1,811.750 ppb	164.914 ppb	1,211.298 ppb	10,203.137 ppb	104.070 %
Concentration RSD	2.4 %	1.7 %	1.5 %	2.3 %	2.5 %	3.5 %	2.4 %	9.4 %	1.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.542 %	48.875 ppb	19.369 ppb	54.760 ppb	113.206 ppb	53.395 ppb	51.612 ppb	28.662 ppb	53.339 ppb
Concentration per Run 1	85.848 %	51.074 ppb	20.256 ppb	56.458 ppb	119.768 ppb	56.412 ppb	55.450 ppb	31.478 ppb	57.436 ppb
Concentration per Run 2	94.677 %	46.443 ppb	18.094 ppb	52.954 ppb	119.215 ppb	50.591 ppb	49.628 ppb	27.639 ppb	51.156 ppb
Concentration per Run 3	88.102 %	49.109 ppb	19.756 ppb	54.867 ppb	100.635 ppb	53.182 ppb	49.757 ppb	26.871 ppb	51.426 ppb
Concentration RSD	5.1 %	4.8 %	5.8 %	3.2 %	9.6 %	5.5 %	6.4 %	8.6 %	6.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.238 %	103.029 %	11.851 ppb	13.461 ppb	159.346 ppb	101.835 ppb	104.220 %	99.908 %	5.120 ppb
Concentration per Run 1	113.204 %	95.891 %	12.874 ppb	15.517 ppb	169.370 ppb	107.770 ppb	105.647 %	95.753 %	5.098 ppb
Concentration per Run 2	106.869 %	105.408 %	10.972 ppb	12.675 ppb	154.603 ppb	98.559 ppb	104.613 %	100.649 %	5.141 ppb
Concentration per Run 3	104.640 %	107.788 %	11.706 ppb	12.192 ppb	154.066 ppb	99.175 ppb	102.402 %	103.323 %	5.120 ppb
Concentration RSD	4.1 %	6.1 %	8.1 %	13.3 %	5.5 %	5.1 %	1.6 %	3.8 %	0.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.432 ppb	109.139 %	111.490 %	49.461 ppb	215.017 ppb	131.892 %	120.207 %	123.082 %	129.796 %
Concentration per Run 1	5.297 ppb	109.393 %	109.238 %	49.432 ppb	215.292 ppb	131.740 %	117.266 %	126.377 %	127.431 %
Concentration per Run 2	5.441 ppb	107.699 %	110.691 %	49.760 ppb	217.817 ppb	134.957 %	118.252 %	124.042 %	130.540 %
Concentration per Run 3	5.558 ppb	110.327 %	114.543 %	49.191 ppb	211.942 ppb	128.978 %	125.102 %	118.828 %	131.417 %
Concentration RSD	2.4 %	1.2 %	2.5 %	0.6 %	1.4 %	2.3 %	3.6 %	3.1 %	1.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	11.870 ppb	49.551 ppb	132.650 %	144.102 %
Concentration per Run 1	11.898 ppb	47.625 ppb	132.412 %	145.043 %
Concentration per Run 2	12.069 ppb	49.313 ppb	131.757 %	142.797 %
Concentration per Run 3	11.644 ppb	51.716 ppb	133.780 %	144.466 %
Concentration RSD	1.8 %	4.1 %	0.8 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	46	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1902884-4 2008TL	Rack	1		
Analysis started at:	4/4/2024 9:20:36 AM	Vial	18		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	90.838 %	81.716 %	0.018 ppb	4,431.433 ppb	6,072.822 ppb	2.843 ppb	694.203 ppb	94,398.450 ppb	99.055 %
Concentration per Run 1	92.302 %	77.239 %	0.018 ppb	4,899.143 ppb	6,626.956 ppb	2.839 ppb	794.220 ppb	105,061.170 ppb	99.780 %
Concentration per Run 2	90.816 %	91.791 %	0.020 ppb	4,023.183 ppb	5,441.018 ppb	2.864 ppb	639.604 ppb	89,986.697 ppb	100.170 %
Concentration per Run 3	89.397 %	76.119 %	0.017 ppb	4,371.972 ppb	6,150.491 ppb	2.825 ppb	648.787 ppb	88,147.483 ppb	97.216 %
Concentration RSD	1.6 %	10.7 %	8.6 %	10.0 %	9.8 %	0.7 %	12.5 %	9.8 %	1.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.887 %	-0.004 ppb	-1.161 ppb	0.906 ppb	53.642 ppb	0.034 ppb	0.271 ppb	37.518 ppb	15.637 ppb
Concentration per Run 1	82.936 %	-0.036 ppb	-1.007 ppb	1.034 ppb	47.486 ppb	0.056 ppb	0.268 ppb	39.582 ppb	16.080 ppb
Concentration per Run 2	91.765 %	0.014 ppb	-1.076 ppb	0.778 ppb	53.127 ppb	0.015 ppb	0.273 ppb	36.754 ppb	15.572 ppb
Concentration per Run 3	94.959 %	0.011 ppb	-1.401 ppb	0.907 ppb	60.313 ppb	0.030 ppb	0.272 ppb	36.217 ppb	15.258 ppb
Concentration RSD	6.9 %	734.4 %	18.1 %	14.1 %	12.0 %	62.3 %	0.9 %	4.8 %	2.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.663 %	102.499 %	0.057 ppb	0.018 ppb	519.346 ppb	0.473 ppb	99.754 %	97.386 %	0.004 ppb
Concentration per Run 1	108.222 %	101.489 %	0.099 ppb	0.022 ppb	542.633 ppb	0.495 ppb	101.620 %	91.994 %	0.008 ppb
Concentration per Run 2	107.028 %	101.924 %	0.041 ppb	0.011 ppb	503.330 ppb	0.503 ppb	98.911 %	101.348 %	0.001 ppb
Concentration per Run 3	107.740 %	104.084 %	0.032 ppb	0.022 ppb	512.074 ppb	0.423 ppb	98.731 %	98.815 %	0.001 ppb
Concentration RSD	0.6 %	1.4 %	63.9 %	33.7 %	4.0 %	9.3 %	1.6 %	5.0 %	112.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.014 ppb	102.073 %	107.356 %	0.447 ppb	15.563 ppb	127.112 %	118.793 %	115.648 %	129.753 %
Concentration per Run 1	0.013 ppb	99.561 %	102.023 %	0.424 ppb	16.102 ppb	129.422 %	111.599 %	117.855 %	119.924 %
Concentration per Run 2	0.026 ppb	101.077 %	110.691 %	0.447 ppb	14.813 ppb	126.413 %	124.248 %	116.200 %	135.025 %
Concentration per Run 3	0.003 ppb	105.582 %	109.353 %	0.469 ppb	15.773 ppb	125.502 %	120.531 %	112.890 %	134.311 %
Concentration RSD	81.3 %	3.1 %	4.3 %	5.0 %	4.3 %	1.6 %	5.5 %	2.2 %	6.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.070 ppb	0.196 ppb	113.688 %	133.449 %
Concentration per Run 1	0.049 ppb	0.188 ppb	110.611 %	127.783 %
Concentration per Run 2	0.076 ppb	0.193 ppb	116.998 %	137.732 %
Concentration per Run 3	0.085 ppb	0.207 ppb	113.454 %	134.833 %
Concentration RSD	26.7 %	4.9 %	2.8 %	3.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	47	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1903849-2d10 2008TL	Rack	1		
Analysis started at:	4/4/2024 9:27:22 AM	Vial	37		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	93.945 %	77.425 %	5.322 ppb	1,188.668 ppb	1,268.731 ppb	164.071 ppb	1,150.610 ppb	1,259.047 ppb	105.169 %
Concentration per Run 1	95.753 %	72.201 %	5.329 ppb	1,247.408 ppb	1,293.294 ppb	163.933 ppb	1,121.892 ppb	1,159.445 ppb	106.758 %
Concentration per Run 2	93.056 %	77.798 %	5.303 ppb	1,155.470 ppb	1,262.179 ppb	161.446 ppb	1,143.960 ppb	1,267.068 ppb	105.962 %
Concentration per Run 3	93.027 %	82.276 %	5.335 ppb	1,163.126 ppb	1,250.719 ppb	166.834 ppb	1,185.978 ppb	1,350.628 ppb	102.787 %
Concentration RSD	1.7 %	6.5 %	0.3 %	4.3 %	1.7 %	1.6 %	2.8 %	7.6 %	2.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	91.421 %	50.594 ppb	19.022 ppb	56.223 ppb	119.755 ppb	52.839 ppb	53.370 ppb	25.607 ppb	52.132 ppb
Concentration per Run 1	91.390 %	49.391 ppb	18.674 ppb	57.134 ppb	122.159 ppb	52.796 ppb	52.916 ppb	26.240 ppb	50.643 ppb
Concentration per Run 2	92.517 %	49.740 ppb	18.816 ppb	56.596 ppb	129.285 ppb	53.680 ppb	53.457 ppb	26.216 ppb	53.912 ppb
Concentration per Run 3	90.356 %	52.649 ppb	19.577 ppb	54.938 ppb	107.821 ppb	52.041 ppb	53.739 ppb	24.364 ppb	51.841 ppb
Concentration RSD	1.2 %	3.5 %	2.6 %	2.0 %	9.1 %	1.6 %	0.8 %	4.2 %	3.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	105.441 %	102.467 %	11.977 ppb	11.563 ppb	109.402 ppb	99.501 ppb	102.127 %	103.492 %	4.877 ppb
Concentration per Run 1	107.273 %	103.485 %	12.087 ppb	12.621 ppb	108.540 ppb	97.628 ppb	104.679 %	104.366 %	4.999 ppb
Concentration per Run 2	103.498 %	97.740 %	12.304 ppb	10.569 ppb	111.473 ppb	101.138 ppb	101.389 %	102.502 %	4.931 ppb
Concentration per Run 3	105.553 %	106.176 %	11.539 ppb	11.501 ppb	108.195 ppb	99.739 ppb	100.313 %	103.609 %	4.702 ppb
Concentration RSD	1.8 %	4.2 %	3.3 %	8.9 %	1.6 %	1.8 %	2.2 %	0.9 %	3.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.368 ppb	104.568 %	111.480 %	49.953 ppb	213.313 ppb	128.893 %	119.243 %	117.264 %	128.359 %
Concentration per Run 1	5.583 ppb	105.323 %	115.016 %	49.091 ppb	217.311 ppb	129.025 %	118.597 %	119.288 %	126.076 %
Concentration per Run 2	5.355 ppb	102.459 %	106.528 %	51.502 ppb	211.435 ppb	130.460 %	116.179 %	114.380 %	129.070 %
Concentration per Run 3	5.166 ppb	105.923 %	112.895 %	49.267 ppb	211.194 ppb	127.194 %	122.952 %	118.123 %	129.932 %
Concentration RSD	3.9 %	1.8 %	4.0 %	2.7 %	1.6 %	1.3 %	2.9 %	2.2 %	1.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	12.584 ppb	50.042 ppb	115.570 %	132.554 %
Concentration per Run 1	12.048 ppb	50.861 ppb	112.836 %	140.459 %
Concentration per Run 2	12.933 ppb	50.295 ppb	116.230 %	129.423 %
Concentration per Run 3	12.770 ppb	48.970 ppb	117.643 %	127.779 %
Concentration RSD	3.7 %	1.9 %	2.1 %	5.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	48	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1902884-2d10 2008TL	Rack	1		
Analysis started at:	4/4/2024 9:32:01 AM	Vial	38		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.633 %	85.075 %	5.356 ppb	1,133.384 ppb	1,168.651 ppb	174.243 ppb	1,115.713 ppb	743.591 ppb	99.297 %
Concentration per Run 1	94.222 %	69.963 %	5.340 ppb	1,226.060 ppb	1,161.856 ppb	177.542 ppb	1,044.010 ppb	552.387 ppb	98.696 %
Concentration per Run 2	91.864 %	93.470 %	5.416 ppb	1,082.589 ppb	1,179.284 ppb	175.816 ppb	1,184.402 ppb	924.901 ppb	99.910 %
Concentration per Run 3	91.813 %	91.791 %	5.313 ppb	1,091.505 ppb	1,164.813 ppb	169.371 ppb	1,118.727 ppb	753.484 ppb	99.284 %
Concentration RSD	1.5 %	15.4 %	1.0 %	7.1 %	0.8 %	2.5 %	6.3 %	25.1 %	0.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	88.791 %	50.164 ppb	20.132 ppb	57.484 ppb	110.761 ppb	54.408 ppb	54.169 ppb	26.044 ppb	54.147 ppb
Concentration per Run 1	93.174 %	47.981 ppb	18.777 ppb	55.162 ppb	109.869 ppb	51.711 ppb	51.869 ppb	25.742 ppb	52.466 ppb
Concentration per Run 2	86.223 %	51.230 ppb	20.875 ppb	58.707 ppb	103.550 ppb	56.247 ppb	57.035 ppb	26.384 ppb	55.467 ppb
Concentration per Run 3	86.975 %	51.282 ppb	20.744 ppb	58.582 ppb	118.864 ppb	55.264 ppb	53.604 ppb	26.006 ppb	54.507 ppb
Concentration RSD	4.3 %	3.8 %	5.8 %	3.5 %	6.9 %	4.4 %	4.9 %	1.2 %	2.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.101 %	97.342 %	12.718 ppb	12.188 ppb	111.514 ppb	103.393 ppb	100.914 %	97.560 %	5.124 ppb
Concentration per Run 1	105.812 %	99.041 %	12.081 ppb	14.341 ppb	108.063 ppb	100.063 ppb	100.402 %	96.875 %	5.115 ppb
Concentration per Run 2	103.415 %	96.084 %	13.287 ppb	10.635 ppb	112.164 ppb	107.195 ppb	102.782 %	95.406 %	5.314 ppb
Concentration per Run 3	103.075 %	96.903 %	12.785 ppb	11.587 ppb	114.317 ppb	102.921 ppb	99.558 %	100.400 %	4.943 ppb
Concentration RSD	1.4 %	1.6 %	4.8 %	15.8 %	2.8 %	3.5 %	1.7 %	2.6 %	3.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.596 ppb	103.304 %	107.279 %	51.051 ppb	220.050 ppb	123.353 %	112.547 %	113.451 %	120.990 %
Concentration per Run 1	5.480 ppb	102.541 %	106.137 %	51.138 ppb	215.054 ppb	122.513 %	112.905 %	114.515 %	120.829 %
Concentration per Run 2	5.955 ppb	102.059 %	105.680 %	51.688 ppb	227.138 ppb	124.956 %	109.421 %	116.721 %	118.210 %
Concentration per Run 3	5.352 ppb	105.312 %	110.021 %	50.326 ppb	217.959 ppb	122.589 %	115.315 %	109.117 %	123.931 %
Concentration RSD	5.7 %	1.7 %	2.2 %	1.3 %	2.9 %	1.1 %	2.6 %	3.4 %	2.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	12.579 ppb	52.593 ppb	116.806 %	127.832 %
Concentration per Run 1	11.761 ppb	53.025 ppb	116.242 %	135.967 %
Concentration per Run 2	13.153 ppb	50.230 ppb	113.791 %	124.395 %
Concentration per Run 3	12.822 ppb	54.523 ppb	120.386 %	123.135 %
Concentration RSD	5.8 %	4.1 %	2.9 %	5.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	49	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 9:38:40 AM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	88.333 %	85.448 %	63.813 ppb	6,410.586 ppb	6,417.106 ppb	61.235 ppb	6,312.654 ppb	6,448.886 ppb	100.107 %
Concentration per Run 1	93.218 %	80.597 %	60.794 ppb	6,594.777 ppb	6,566.738 ppb	56.042 ppb	6,619.663 ppb	7,159.820 ppb	105.332 %
Concentration per Run 2	84.967 %	88.433 %	66.307 ppb	6,080.171 ppb	6,271.197 ppb	64.597 ppb	6,043.043 ppb	5,476.032 ppb	98.922 %
Concentration per Run 3	86.813 %	87.313 %	64.339 ppb	6,556.811 ppb	6,413.382 ppb	63.067 ppb	6,275.255 ppb	6,710.806 ppb	96.065 %
Recovery Percentage 1			106.356 %	106.843 %	106.952 %	102.059 %	105.211 %	107.481 %	
Concentration RSD	4.9 %	5.0 %	4.4 %	4.5 %	2.3 %	7.5 %	4.6 %	13.5 %	4.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.141 %	60.647 ppb	60.048 ppb	64.436 ppb	6,342.906 ppb	63.005 ppb	63.824 ppb	59.938 ppb	61.856 ppb
Concentration per Run 1	86.599 %	62.908 ppb	62.186 ppb	65.633 ppb	6,610.607 ppb	66.546 ppb	67.880 ppb	60.668 ppb	63.294 ppb
Concentration per Run 2	98.622 %	56.847 ppb	56.296 ppb	61.905 ppb	6,185.399 ppb	59.338 ppb	62.690 ppb	60.001 ppb	61.711 ppb
Concentration per Run 3	91.202 %	62.186 ppb	61.661 ppb	65.771 ppb	6,232.710 ppb	63.130 ppb	60.900 ppb	59.145 ppb	60.564 ppb
Recovery Percentage 1		101.079 %	100.079 %	107.394 %	105.715 %	105.008 %	106.373 %	99.897 %	103.094 %
Concentration RSD	6.6 %	5.5 %	5.4 %	3.4 %	3.7 %	5.7 %	5.7 %	1.3 %	2.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.637 %	99.353 %	59.969 ppb	59.252 ppb	63.990 ppb	62.127 ppb	99.138 %	101.305 %	60.227 ppb
Concentration per Run 1	110.531 %	97.644 %	60.634 ppb	62.576 ppb	64.501 ppb	63.723 ppb	105.067 %	97.367 %	62.823 ppb
Concentration per Run 2	100.517 %	98.588 %	59.690 ppb	57.484 ppb	65.072 ppb	61.031 ppb	96.181 %	102.198 %	60.110 ppb
Concentration per Run 3	102.862 %	101.828 %	59.583 ppb	57.696 ppb	62.395 ppb	61.628 ppb	96.166 %	104.350 %	57.747 ppb
Recovery Percentage 1			99.948 %	98.753 %	106.649 %	103.545 %			100.378 %
Concentration RSD	5.0 %	2.2 %	1.0 %	4.9 %	2.2 %	2.3 %	5.2 %	3.5 %	4.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	60.444 ppb	102.250 %	107.665 %	63.105 ppb	62.289 ppb	125.317 %	119.651 %	115.292 %	128.897 %
Concentration per Run 1	62.345 ppb	108.875 %	100.015 %	66.163 ppb	65.316 ppb	131.890 %	111.780 %	120.046 %	127.660 %
Concentration per Run 2	59.374 ppb	96.216 %	109.972 %	62.228 ppb	60.159 ppb	121.613 %	123.169 %	113.157 %	126.934 %
Concentration per Run 3	59.614 ppb	101.660 %	113.009 %	60.925 ppb	61.390 ppb	122.447 %	124.004 %	112.674 %	132.097 %
Recovery Percentage 1	100.740 %			105.175 %	103.814 %				
Concentration RSD	2.7 %	6.2 %	6.3 %	4.3 %	4.3 %	4.6 %	5.7 %	3.6 %	2.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	57.277 ppb	57.173 ppb	120.834 %	139.223 %
Concentration per Run 1	56.203 ppb	54.369 ppb	131.947 %	136.574 %
Concentration per Run 2	57.476 ppb	58.475 ppb	115.465 %	139.009 %
Concentration per Run 3	58.152 ppb	58.674 ppb	115.089 %	142.085 %
Recovery Percentage 1	95.462 %	95.288 %		
Concentration RSD	1.7 %	4.3 %	8.0 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	50	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 9:43:25 AM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	91.973 %	83.769 %	0.021 ppb	-33.348 ppb	-0.046 ppb	-0.484 ppb	18.409 ppb	29.872 ppb	96.419 %
Concentration per Run 1	93.318 %	75.560 %	0.020 ppb	-8.226 ppb	-0.148 ppb	-0.458 ppb	21.221 ppb	155.019 ppb	95.488 %
Concentration per Run 2	91.236 %	88.433 %	0.018 ppb	-50.235 ppb	-1.248 ppb	-0.522 ppb	35.996 ppb	-56.331 ppb	99.012 %
Concentration per Run 3	91.363 %	87.313 %	0.025 ppb	-41.584 ppb	1.259 ppb	-0.472 ppb	-1.988 ppb	-9.071 ppb	94.757 %
Recovery Percentage 1			4.214 %	-33.348 %	-0.065 %	-4.840 %	18.409 %	29.872 %	
Concentration RSD	1.3 %	8.5 %	15.9 %	66.5 %	2,758.4 %	7.0 %	104.0 %	371.3 %	2.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	84.282 %	-0.057 ppb	-1.281 ppb	0.010 ppb	3.873 ppb	0.003 ppb	-0.003 ppb	0.000 ppb	0.330 ppb
Concentration per Run 1	80.024 %	-0.096 ppb	-1.325 ppb	0.063 ppb	7.296 ppb	0.004 ppb	0.009 ppb	-0.008 ppb	0.335 ppb
Concentration per Run 2	83.124 %	-0.036 ppb	-1.392 ppb	-0.025 ppb	4.269 ppb	0.003 ppb	0.034 ppb	0.005 ppb	0.361 ppb
Concentration per Run 3	89.699 %	-0.040 ppb	-1.126 ppb	-0.010 ppb	0.055 ppb	0.002 ppb	-0.053 ppb	0.001 ppb	0.295 ppb
Recovery Percentage 1		-1.146 %	-128.071 %	0.960 %	7.747 %	0.550 %	-0.162 %	-0.030 %	6.609 %
Concentration RSD	5.9 %	58.5 %	10.8 %	487.9 %	93.9 %	33.0 %	1,382.1 %	2,225.0 %	10.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	104.437 %	96.195 %	0.133 ppb	0.062 ppb	0.027 ppb	0.212 ppb	102.945 %	99.845 %	0.004 ppb
Concentration per Run 1	105.160 %	88.129 %	0.217 ppb	0.010 ppb	0.002 ppb	0.174 ppb	101.208 %	96.053 %	0.005 ppb
Concentration per Run 2	102.945 %	98.413 %	-0.092 ppb	0.011 ppb	0.054 ppb	0.275 ppb	104.588 %	99.078 %	0.005 ppb
Concentration per Run 3	105.206 %	102.043 %	0.272 ppb	0.165 ppb	0.025 ppb	0.188 ppb	103.039 %	104.403 %	0.002 ppb
Recovery Percentage 1			26.509 %	1.236 %	5.398 %	10.624 %			0.977 %
Concentration RSD	1.2 %	7.5 %	148.0 %	144.5 %	95.7 %	25.6 %	1.6 %	4.2 %	36.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.002 ppb	104.627 %	102.616 %	0.197 ppb	0.045 ppb	126.294 %	113.935 %	115.553 %	121.737 %
Concentration per Run 1	0.003 ppb	103.576 %	98.791 %	0.240 ppb	0.093 ppb	125.937 %	108.551 %	114.363 %	115.484 %
Concentration per Run 2	0.003 ppb	106.589 %	104.357 %	0.150 ppb	0.061 ppb	124.035 %	113.103 %	114.904 %	123.299 %
Concentration per Run 3	-0.002 ppb	103.717 %	104.700 %	0.200 ppb	-0.020 ppb	128.911 %	120.150 %	117.393 %	126.428 %
Recovery Percentage 1				4.915 %	8.919 %				
Concentration RSD	174.5 %	1.6 %	3.2 %	23.1 %	129.9 %	1.9 %	5.1 %	1.4 %	4.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.418 ppb	0.013 ppb	119.103 %	127.471 %
Concentration per Run 1	0.280 ppb	0.014 ppb	115.029 %	131.052 %
Concentration per Run 2	0.512 ppb	0.013 ppb	120.664 %	120.591 %
Concentration per Run 3	0.463 ppb	0.012 ppb	121.617 %	130.770 %
Recovery Percentage 1	41.813 %	1.309 %		
Concentration RSD	29.2 %	9.0 %	3.0 %	4.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	51	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417275-01 2008TL	Rack	1		
Analysis started at:	4/4/2024 9:53:30 AM	Vial	16		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.542 %	83.209 %	0.020 ppb	4,615.278 ppb	6,366.354 ppb	4.099 ppb	746.622 ppb	100,168.435 ppb	100.011 %
Concentration per Run 1	94.157 %	80.597 %	0.020 ppb	4,759.828 ppb	6,564.151 ppb	3.943 ppb	850.569 ppb	104,119.619 ppb	101.772 %
Concentration per Run 2	92.323 %	84.515 %	0.020 ppb	4,663.118 ppb	6,417.037 ppb	4.089 ppb	729.011 ppb	102,455.903 ppb	99.949 %
Concentration per Run 3	91.146 %	84.515 %	0.021 ppb	4,422.888 ppb	6,117.875 ppb	4.265 ppb	660.286 ppb	93,929.783 ppb	98.312 %
Concentration RSD	1.6 %	2.7 %	4.5 %	3.8 %	3.6 %	3.9 %	12.9 %	5.5 %	1.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.073 %	0.081 ppb	-1.179 ppb	0.682 ppb	54.629 ppb	0.048 ppb	0.283 ppb	39.400 ppb	16.216 ppb
Concentration per Run 1	88.008 %	0.133 ppb	-1.274 ppb	0.690 ppb	51.760 ppb	0.037 ppb	0.319 ppb	41.177 ppb	16.462 ppb
Concentration per Run 2	85.754 %	-0.009 ppb	-1.221 ppb	0.701 ppb	56.921 ppb	0.063 ppb	0.268 ppb	39.569 ppb	16.424 ppb
Concentration per Run 3	93.456 %	0.120 ppb	-1.042 ppb	0.655 ppb	55.206 ppb	0.043 ppb	0.263 ppb	37.454 ppb	15.762 ppb
Concentration RSD	4.4 %	96.9 %	10.3 %	3.5 %	4.8 %	28.0 %	10.9 %	4.7 %	2.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.030 %	102.531 %	0.135 ppb	0.121 ppb	521.895 ppb	0.268 ppb	100.442 %	100.399 %	0.004 ppb
Concentration per Run 1	110.682 %	99.640 %	0.415 ppb	0.372 ppb	541.859 ppb	0.224 ppb	102.633 %	96.437 %	0.004 ppb
Concentration per Run 2	106.883 %	104.062 %	0.003 ppb	-0.010 ppb	511.853 ppb	0.288 ppb	100.479 %	101.033 %	0.004 ppb
Concentration per Run 3	106.525 %	103.892 %	-0.015 ppb	0.001 ppb	511.971 ppb	0.293 ppb	98.214 %	103.727 %	0.005 ppb
Concentration RSD	2.1 %	2.4 %	180.6 %	179.5 %	3.3 %	14.4 %	2.2 %	3.7 %	19.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.020 ppb	102.647 %	108.601 %	0.129 ppb	15.795 ppb	127.896 %	120.659 %	117.795 %	132.732 %
Concentration per Run 1	0.013 ppb	104.733 %	105.565 %	0.092 ppb	16.342 ppb	133.557 %	117.040 %	121.027 %	127.533 %
Concentration per Run 2	0.021 ppb	103.463 %	111.686 %	0.134 ppb	16.251 ppb	125.360 %	122.543 %	115.224 %	135.045 %
Concentration per Run 3	0.026 ppb	99.744 %	108.552 %	0.161 ppb	14.792 ppb	124.772 %	122.395 %	117.134 %	135.617 %
Concentration RSD	33.5 %	2.5 %	2.8 %	26.8 %	5.5 %	3.8 %	2.6 %	2.5 %	3.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.066 ppb	0.192 ppb	117.458 %	132.587 %
Concentration per Run 1	0.034 ppb	0.188 ppb	116.579 %	135.470 %
Concentration per Run 2	0.080 ppb	0.199 ppb	119.953 %	130.458 %
Concentration per Run 3	0.083 ppb	0.189 ppb	115.842 %	131.832 %
Concentration RSD	42.0 %	3.2 %	1.9 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 52 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: L2416936-01 2008TL Rack 1
Analysis started at: 4/4/2024 9:58:10 AM Vial 19

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	87.956 %	76.492 %	0.015 ppb	260,875.794 ppb	17,801.781 ppb	4.652 ppb	1,017.612 ppb	23,172.596 ppb	100.639 %
Concentration per Run 1	91.398 %	75.000 %	0.013 ppb	267,019.925 ppb	18,118.475 ppb	4.288 ppb	1,122.973 ppb	23,361.402 ppb	105.982 %
Concentration per Run 2	82.955 %	77.798 %	0.018 ppb	258,998.064 ppb	17,872.649 ppb	4.912 ppb	1,006.428 ppb	25,155.918 ppb	96.634 %
Concentration per Run 3	89.516 %	76.679 %	0.014 ppb	256,609.392 ppb	17,414.220 ppb	4.755 ppb	923.434 ppb	21,000.470 ppb	99.300 %
Concentration RSD	5.0 %	1.8 %	18.8 %	2.1 %	2.0 %	7.0 %	9.9 %	9.0 %	4.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	86.662 %	0.175 ppb	-0.201 ppb	1.664 ppb	67.502 ppb	0.231 ppb	1.818 ppb	73.049 ppb	1,269.789 ppb
Concentration per Run 1	83.030 %	0.146 ppb	-0.182 ppb	1.738 ppb	66.351 ppb	0.268 ppb	1.709 ppb	76.121 ppb	1,301.045 ppb
Concentration per Run 2	84.814 %	0.202 ppb	-0.117 ppb	1.712 ppb	70.060 ppb	0.225 ppb	2.016 ppb	76.367 ppb	1,302.370 ppb
Concentration per Run 3	92.141 %	0.178 ppb	-0.305 ppb	1.542 ppb	66.096 ppb	0.201 ppb	1.728 ppb	66.660 ppb	1,205.951 ppb
Concentration RSD	5.6 %	16.2 %	47.4 %	6.4 %	3.3 %	14.5 %	9.5 %	7.6 %	4.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	105.455 %	97.060 %	1.352 ppb	0.760 ppb	130.659 ppb	1.391 ppb	97.630 %	95.100 %	0.002 ppb
Concentration per Run 1	108.020 %	95.145 %	1.324 ppb	0.953 ppb	129.052 ppb	1.547 ppb	100.961 %	93.863 %	0.004 ppb
Concentration per Run 2	99.860 %	93.607 %	1.433 ppb	0.776 ppb	136.261 ppb	1.267 ppb	92.075 %	93.535 %	0.000 ppb
Concentration per Run 3	108.485 %	102.428 %	1.299 ppb	0.550 ppb	126.663 ppb	1.359 ppb	99.854 %	97.901 %	0.001 ppb
Concentration RSD	4.6 %	4.9 %	5.2 %	26.6 %	3.8 %	10.2 %	5.0 %	2.6 %	94.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.250 ppb	100.083 %	104.075 %	0.818 ppb	10.337 ppb	123.966 %	121.676 %	116.180 %	132.125 %
Concentration per Run 1	0.245 ppb	107.244 %	98.123 %	0.868 ppb	10.190 ppb	130.723 %	118.210 %	122.690 %	124.060 %
Concentration per Run 2	0.265 ppb	94.169 %	106.904 %	0.776 ppb	10.373 ppb	116.418 %	121.308 %	109.404 %	135.616 %
Concentration per Run 3	0.241 ppb	98.836 %	107.197 %	0.811 ppb	10.448 ppb	124.758 %	125.510 %	116.445 %	136.699 %
Concentration RSD	5.0 %	6.6 %	5.0 %	5.7 %	1.3 %	5.8 %	3.0 %	5.7 %	5.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.079 ppb	1.592 ppb	120.969 %	141.275 %
Concentration per Run 1	0.067 ppb	1.479 ppb	127.218 %	139.794 %
Concentration per Run 2	0.086 ppb	1.728 ppb	119.008 %	139.895 %
Concentration per Run 3	0.086 ppb	1.570 ppb	116.680 %	144.135 %
Concentration RSD	14.1 %	7.9 %	4.6 %	1.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 53
Analysis label: WG1903397-3d10 6020TS
Analysis started at: 4/4/2024 10:02:50 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 26
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	104.782 %	87.873 %	10.810 ppb	2,270.335 ppb	9,597.186 ppb	21,558.722 ppb	3,229.545 ppb	4,732.055 ppb	115.477 %
Concentration per Run 1	105.779 %	75.560 %	11.004 ppb	2,518.776 ppb	10,572.437 ppb	21,770.801 ppb	3,327.724 ppb	5,210.210 ppb	117.945 %
Concentration per Run 2	104.965 %	89.552 %	10.781 ppb	2,188.396 ppb	9,204.283 ppb	21,711.078 ppb	3,152.066 ppb	5,001.357 ppb	113.454 %
Concentration per Run 3	103.603 %	98.507 %	10.646 ppb	2,103.834 ppb	9,014.837 ppb	21,194.287 ppb	3,208.847 ppb	3,984.596 ppb	115.031 %
Concentration RSD	1.0 %	13.2 %	1.7 %	9.7 %	8.9 %	1.5 %	2.8 %	13.9 %	2.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	96.493 %	152.382 ppb	76.730 ppb	788.053 ppb	47,497.939 ppb	113.605 ppb	129.735 ppb	78.948 ppb	213.930 ppb
Concentration per Run 1	91.953 %	166.635 ppb	80.463 ppb	842.901 ppb	53,142.199 ppb	121.176 ppb	140.493 ppb	83.258 ppb	231.142 ppb
Concentration per Run 2	97.213 %	142.401 ppb	73.856 ppb	765.495 ppb	45,421.228 ppb	110.190 ppb	125.202 ppb	78.469 ppb	206.075 ppb
Concentration per Run 3	100.313 %	148.110 ppb	75.870 ppb	755.762 ppb	43,930.391 ppb	109.450 ppb	123.509 ppb	75.117 ppb	204.573 ppb
Concentration RSD	4.4 %	8.3 %	4.4 %	6.1 %	10.4 %	5.8 %	7.2 %	5.2 %	7.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.072 %	104.694 %	31.784 ppb	28.016 ppb	235.060 ppb	194.399 ppb	104.263 %	99.191 %	9.915 ppb
Concentration per Run 1	104.768 %	96.954 %	34.441 ppb	30.980 ppb	252.301 ppb	206.870 ppb	102.426 %	93.876 %	10.597 ppb
Concentration per Run 2	108.260 %	109.047 %	31.045 ppb	26.303 ppb	223.550 ppb	187.560 ppb	104.869 %	103.317 %	9.619 ppb
Concentration per Run 3	108.187 %	108.081 %	29.868 ppb	26.764 ppb	229.330 ppb	188.769 ppb	105.495 %	100.382 %	9.530 ppb
Concentration RSD	1.9 %	6.4 %	7.5 %	9.2 %	6.5 %	5.6 %	1.6 %	4.9 %	6.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	10.514 ppb	107.116 %	111.164 %	84.469 ppb	559.140 ppb	132.884 %	126.527 %	122.465 %	135.049 %
Concentration per Run 1	11.419 ppb	107.037 %	104.586 %	89.668 ppb	585.166 ppb	132.050 %	123.253 %	124.965 %	129.124 %
Concentration per Run 2	9.916 ppb	106.806 %	114.739 %	82.017 ppb	551.169 ppb	133.303 %	125.879 %	121.485 %	136.145 %
Concentration per Run 3	10.206 ppb	107.505 %	114.167 %	81.723 ppb	541.086 ppb	133.300 %	130.447 %	120.943 %	139.879 %
Concentration RSD	7.6 %	0.3 %	5.1 %	5.3 %	4.1 %	0.5 %	2.9 %	1.8 %	4.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	22.399 ppb	136.524 ppb	129.554 %	142.581 %
Concentration per Run 1	22.676 ppb	134.701 ppb	126.306 %	143.609 %
Concentration per Run 2	22.631 ppb	135.574 ppb	130.303 %	142.482 %
Concentration per Run 3	21.888 ppb	139.298 ppb	132.053 %	141.653 %
Concentration RSD	2.0 %	1.8 %	2.3 %	0.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	54	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1903397-5d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:07:29 AM	Vial	28		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.919 %	93.470 %	48.209 ppb	4,879.460 ppb	13,901.296 ppb	20,700.650 ppb	5,508.973 ppb	6,350.514 ppb	118.379 %
Concentration per Run 1	104.934 %	94.030 %	47.333 ppb	4,843.285 ppb	14,020.055 ppb	20,541.987 ppb	5,559.447 ppb	6,201.904 ppb	122.432 %
Concentration per Run 2	102.339 %	97.388 %	48.257 ppb	4,692.650 ppb	13,604.567 ppb	20,283.261 ppb	5,473.960 ppb	6,051.114 ppb	116.921 %
Concentration per Run 3	101.485 %	88.993 %	49.038 ppb	5,102.445 ppb	14,079.267 ppb	21,276.702 ppb	5,493.511 ppb	6,798.522 ppb	115.785 %
Concentration RSD	1.7 %	4.5 %	1.8 %	4.2 %	1.9 %	2.5 %	0.8 %	6.2 %	3.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	107.107 %	95.711 ppb	78.108 ppb	1,841.382 ppb	53,544.556 ppb	69.167 ppb	85.309 ppb	81.723 ppb	172.646 ppb
Concentration per Run 1	107.170 %	95.802 ppb	77.540 ppb	1,833.530 ppb	53,284.896 ppb	71.004 ppb	85.170 ppb	82.055 ppb	175.029 ppb
Concentration per Run 2	108.297 %	92.987 ppb	77.761 ppb	1,819.566 ppb	52,737.950 ppb	66.866 ppb	86.256 ppb	81.073 ppb	167.041 ppb
Concentration per Run 3	105.855 %	98.344 ppb	79.022 ppb	1,871.049 ppb	54,610.823 ppb	69.631 ppb	84.502 ppb	82.042 ppb	175.867 ppb
Concentration RSD	1.1 %	2.8 %	1.0 %	1.4 %	1.8 %	3.0 %	1.0 %	0.7 %	2.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.768 %	107.999 %	55.473 ppb	53.526 ppb	74.294 ppb	51.603 ppb	105.001 %	101.005 %	3.310 ppb
Concentration per Run 1	113.109 %	107.056 %	54.316 ppb	51.827 ppb	75.256 ppb	52.655 ppb	110.025 %	97.700 %	3.402 ppb
Concentration per Run 2	110.252 %	110.466 %	55.331 ppb	49.791 ppb	73.347 ppb	51.810 ppb	103.536 %	101.362 %	3.346 ppb
Concentration per Run 3	108.942 %	106.475 %	56.772 ppb	58.959 ppb	74.280 ppb	50.344 ppb	101.441 %	103.953 %	3.182 ppb
Concentration RSD	1.9 %	2.0 %	2.2 %	9.0 %	1.3 %	2.3 %	4.3 %	3.1 %	3.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	49.515 ppb	106.747 %	110.495 %	52.379 ppb	229.787 ppb	133.632 %	124.395 %	121.437 %	132.903 %
Concentration per Run 1	50.630 ppb	107.185 %	107.687 %	52.894 ppb	240.031 ppb	136.874 %	122.799 %	124.037 %	133.374 %
Concentration per Run 2	49.467 ppb	105.824 %	109.009 %	53.082 ppb	222.831 ppb	134.179 %	127.001 %	120.733 %	134.390 %
Concentration per Run 3	48.449 ppb	107.232 %	114.788 %	51.162 ppb	226.499 ppb	129.843 %	123.384 %	119.541 %	130.946 %
Concentration RSD	2.2 %	0.7 %	3.4 %	2.0 %	3.9 %	2.7 %	1.8 %	1.9 %	1.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	46.284 ppb	91.596 ppb	132.921 %	143.243 %
Concentration per Run 1	46.494 ppb	89.008 ppb	135.211 %	142.815 %
Concentration per Run 2	44.448 ppb	91.808 ppb	131.416 %	146.477 %
Concentration per Run 3	47.910 ppb	93.971 ppb	132.135 %	140.437 %
Concentration RSD	3.8 %	2.7 %	1.5 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 55
Analysis label: WG1903397-4d10 6020TS
Analysis started at: 4/4/2024 10:12:09 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 27
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.809 %	81.343 %	1.938 ppb	106.615 ppb	11,751.405 ppb	22,264.258 ppb	1,425.125 ppb	1,762.961 ppb	120.369 %
Concentration per Run 1	105.263 %	72.201 %	1.901 ppb	138.771 ppb	12,595.770 ppb	22,271.365 ppb	1,437.789 ppb	2,152.308 ppb	123.596 %
Concentration per Run 2	101.333 %	89.552 %	1.967 ppb	85.304 ppb	11,372.968 ppb	22,573.086 ppb	1,448.035 ppb	1,698.958 ppb	118.706 %
Concentration per Run 3	101.831 %	82.276 %	1.947 ppb	95.771 ppb	11,285.477 ppb	21,948.322 ppb	1,389.550 ppb	1,437.615 ppb	118.807 %
Concentration RSD	2.1 %	10.7 %	1.7 %	26.6 %	6.2 %	1.4 %	2.2 %	20.5 %	2.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	103.225 %	62.464 ppb	46.511 ppb	1,160.455 ppb	62,952.969 ppb	24.882 ppb	44.658 ppb	47.546 ppb	127.479 ppb
Concentration per Run 1	100.031 %	63.810 ppb	47.352 ppb	1,193.042 ppb	63,948.632 ppb	25.639 ppb	45.294 ppb	48.941 ppb	130.334 ppb
Concentration per Run 2	103.131 %	61.952 ppb	48.048 ppb	1,172.096 ppb	63,824.335 ppb	24.952 ppb	45.012 ppb	48.453 ppb	129.082 ppb
Concentration per Run 3	106.513 %	61.631 ppb	44.133 ppb	1,116.228 ppb	61,085.940 ppb	24.057 ppb	43.668 ppb	45.245 ppb	123.022 ppb
Concentration RSD	3.1 %	1.9 %	4.5 %	3.4 %	2.6 %	3.2 %	1.9 %	4.2 %	3.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.044 %	101.164 %	11.002 ppb	6.223 ppb	15.060 ppb	1.133 ppb	103.265 %	101.446 %	0.063 ppb
Concentration per Run 1	112.753 %	98.542 %	11.195 ppb	6.282 ppb	15.021 ppb	1.167 ppb	106.881 %	97.547 %	0.066 ppb
Concentration per Run 2	107.815 %	99.266 %	11.194 ppb	6.713 ppb	16.018 ppb	1.077 ppb	101.601 %	102.916 %	0.062 ppb
Concentration per Run 3	109.563 %	105.683 %	10.618 ppb	5.674 ppb	14.141 ppb	1.155 ppb	101.313 %	103.873 %	0.062 ppb
Concentration RSD	2.3 %	3.9 %	3.0 %	8.4 %	6.2 %	4.3 %	3.0 %	3.4 %	3.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.268 ppb	106.051 %	108.236 %	0.625 ppb	148.173 ppb	128.403 %	119.743 %	117.244 %	126.779 %
Concentration per Run 1	0.237 ppb	108.140 %	103.932 %	0.583 ppb	149.070 ppb	131.985 %	122.270 %	121.554 %	123.979 %
Concentration per Run 2	0.270 ppb	104.952 %	110.265 %	0.671 ppb	148.818 ppb	125.731 %	116.276 %	111.858 %	127.349 %
Concentration per Run 3	0.296 ppb	105.060 %	110.510 %	0.621 ppb	146.632 ppb	127.493 %	120.682 %	118.320 %	129.008 %
Concentration RSD	11.0 %	1.7 %	3.4 %	7.1 %	0.9 %	2.5 %	2.6 %	4.2 %	2.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.542 ppb	40.857 ppb	129.042 %	138.027 %
Concentration per Run 1	0.436 ppb	38.795 ppb	126.194 %	136.242 %
Concentration per Run 2	0.598 ppb	43.257 ppb	132.352 %	135.125 %
Concentration per Run 3	0.592 ppb	40.520 ppb	128.581 %	142.713 %
Concentration RSD	17.0 %	5.5 %	2.4 %	3.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	56	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-01d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:16:48 AM	Vial	25		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	101.410 %	97.761 %	1.622 ppb	140.221 ppb	8,750.448 ppb	20,501.156 ppb	1,153.000 ppb	2,576.154 ppb	114.233 %
Concentration per Run 1	105.548 %	97.388 %	1.561 ppb	140.477 ppb	9,068.263 ppb	20,110.243 ppb	1,207.912 ppb	2,470.460 ppb	117.767 %
Concentration per Run 2	97.193 %	94.590 %	1.704 ppb	143.416 ppb	8,708.935 ppb	21,654.423 ppb	1,076.750 ppb	2,549.867 ppb	110.608 %
Concentration per Run 3	101.489 %	101.306 %	1.600 ppb	136.771 ppb	8,474.148 ppb	19,738.802 ppb	1,174.338 ppb	2,708.135 ppb	114.325 %
Concentration RSD	4.1 %	3.5 %	4.6 %	2.4 %	3.4 %	5.0 %	5.9 %	4.7 %	3.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	100.125 %	56.691 ppb	38.667 ppb	1,864.148 ppb	51,336.425 ppb	24.491 ppb	41.265 ppb	38.524 ppb	128.954 ppb
Concentration per Run 1	95.992 %	61.879 ppb	41.991 ppb	1,946.416 ppb	52,065.502 ppb	25.488 ppb	42.842 ppb	40.255 ppb	130.935 ppb
Concentration per Run 2	103.131 %	53.521 ppb	35.422 ppb	1,813.766 ppb	51,132.335 ppb	24.605 ppb	40.117 ppb	38.180 ppb	127.085 ppb
Concentration per Run 3	101.252 %	54.673 ppb	38.587 ppb	1,832.263 ppb	50,811.439 ppb	23.379 ppb	40.836 ppb	37.135 ppb	128.841 ppb
Concentration RSD	3.7 %	8.0 %	8.5 %	3.9 %	1.3 %	4.3 %	3.4 %	4.1 %	1.5 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.650 %	106.354 %	9.505 ppb	7.270 ppb	20.135 ppb	1.196 ppb	103.518 %	99.500 %	0.073 ppb
Concentration per Run 1	111.730 %	102.635 %	9.679 ppb	7.761 ppb	20.364 ppb	1.074 ppb	107.306 %	99.260 %	0.086 ppb
Concentration per Run 2	103.173 %	108.081 %	9.151 ppb	6.858 ppb	19.537 ppb	1.272 ppb	97.828 %	98.068 %	0.070 ppb
Concentration per Run 3	108.046 %	108.347 %	9.684 ppb	7.190 ppb	20.504 ppb	1.243 ppb	105.420 %	101.172 %	0.062 ppb
Concentration RSD	4.0 %	3.0 %	3.2 %	6.3 %	2.6 %	8.9 %	4.8 %	1.6 %	16.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.301 ppb	103.960 %	104.069 %	0.648 ppb	179.026 ppb	125.414 %	116.024 %	112.719 %	121.090 %
Concentration per Run 1	0.351 ppb	104.763 %	102.154 %	0.613 ppb	181.501 ppb	131.551 %	110.577 %	117.444 %	120.864 %
Concentration per Run 2	0.315 ppb	98.379 %	103.606 %	0.714 ppb	178.359 ppb	117.210 %	120.010 %	106.801 %	119.638 %
Concentration per Run 3	0.235 ppb	108.737 %	106.447 %	0.616 ppb	177.218 ppb	127.479 %	117.487 %	113.911 %	122.770 %
Concentration RSD	19.8 %	5.0 %	2.1 %	8.9 %	1.2 %	5.9 %	4.2 %	4.8 %	1.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.301 ppb	46.731 ppb	123.057 %	134.982 %
Concentration per Run 1	0.245 ppb	44.484 ppb	125.794 %	133.679 %
Concentration per Run 2	0.309 ppb	49.014 ppb	118.306 %	135.277 %
Concentration per Run 3	0.348 ppb	46.697 ppb	125.070 %	135.991 %
Concentration RSD	17.2 %	4.8 %	3.4 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	57	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-02d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:21:27 AM	Vial	30		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.092 %	93.284 %	1.582 ppb	50.383 ppb	7,330.195 ppb	18,875.382 ppb	794.500 ppb	1,880.501 ppb	118.265 %
Concentration per Run 1	100.833 %	89.552 %	1.509 ppb	67.583 ppb	7,977.334 ppb	18,928.472 ppb	919.080 ppb	2,211.132 ppb	118.108 %
Concentration per Run 2	98.991 %	92.910 %	1.649 ppb	37.499 ppb	7,081.132 ppb	18,943.825 ppb	736.503 ppb	1,714.112 ppb	118.671 %
Concentration per Run 3	97.453 %	97.388 %	1.587 ppb	46.068 ppb	6,932.121 ppb	18,753.849 ppb	727.918 ppb	1,716.260 ppb	118.017 %
Concentration RSD	1.7 %	4.2 %	4.4 %	30.8 %	7.7 %	0.6 %	13.6 %	15.2 %	0.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	100.188 %	60.246 ppb	37.505 ppb	2,426.402 ppb	52,886.559 ppb	35.302 ppb	36.761 ppb	54.908 ppb	112.069 ppb
Concentration per Run 1	88.384 %	65.826 ppb	39.838 ppb	2,551.303 ppb	55,576.780 ppb	36.133 ppb	37.911 ppb	54.791 ppb	113.010 ppb
Concentration per Run 2	106.137 %	55.940 ppb	37.053 ppb	2,411.224 ppb	53,705.665 ppb	36.344 ppb	38.187 ppb	57.466 ppb	115.772 ppb
Concentration per Run 3	106.043 %	58.973 ppb	35.625 ppb	2,316.678 ppb	49,377.233 ppb	33.429 ppb	34.184 ppb	52.467 ppb	107.425 ppb
Concentration RSD	10.2 %	8.4 %	5.7 %	4.9 %	6.0 %	4.6 %	6.1 %	4.6 %	3.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.322 %	105.574 %	10.946 ppb	8.526 ppb	11.787 ppb	1.238 ppb	104.473 %	97.688 %	0.169 ppb
Concentration per Run 1	110.648 %	108.182 %	10.939 ppb	7.293 ppb	11.364 ppb	1.285 ppb	106.436 %	95.492 %	0.168 ppb
Concentration per Run 2	110.026 %	98.226 %	12.223 ppb	9.544 ppb	12.596 ppb	1.241 ppb	103.893 %	98.115 %	0.164 ppb
Concentration per Run 3	107.293 %	110.315 %	9.676 ppb	8.740 ppb	11.402 ppb	1.188 ppb	103.090 %	99.458 %	0.175 ppb
Concentration RSD	1.6 %	6.1 %	11.6 %	13.4 %	5.9 %	3.9 %	1.7 %	2.1 %	3.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.286 ppb	104.866 %	102.981 %	0.682 ppb	182.226 ppb	124.735 %	114.507 %	112.775 %	120.176 %
Concentration per Run 1	0.284 ppb	107.008 %	100.669 %	0.662 ppb	188.576 ppb	125.865 %	110.893 %	114.221 %	117.939 %
Concentration per Run 2	0.265 ppb	102.490 %	104.276 %	0.640 ppb	178.939 ppb	123.082 %	116.331 %	112.388 %	120.174 %
Concentration per Run 3	0.308 ppb	105.101 %	103.998 %	0.744 ppb	179.164 ppb	125.257 %	116.298 %	111.714 %	122.414 %
Concentration RSD	7.5 %	2.2 %	1.9 %	8.1 %	3.0 %	1.2 %	2.7 %	1.2 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.249 ppb	56.923 ppb	127.092 %	131.050 %
Concentration per Run 1	0.224 ppb	55.234 ppb	128.782 %	128.338 %
Concentration per Run 2	0.240 ppb	57.155 ppb	127.793 %	132.097 %
Concentration per Run 3	0.284 ppb	58.379 ppb	124.700 %	132.717 %
Concentration RSD	12.4 %	2.8 %	1.7 %	1.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	58	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-03d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:26:07 AM	Vial	31		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.621 %	86.754 %	1.466 ppb	96.475 ppb	12,230.220 ppb	18,219.512 ppb	982.497 ppb	3,650.590 ppb	114.248 %
Concentration per Run 1	101.917 %	79.478 %	1.443 ppb	104.465 ppb	12,666.900 ppb	18,746.610 ppb	1,016.524 ppb	3,310.780 ppb	113.513 %
Concentration per Run 2	98.341 %	83.395 %	1.463 ppb	115.302 ppb	12,744.813 ppb	18,300.800 ppb	995.050 ppb	3,895.437 ppb	113.903 %
Concentration per Run 3	98.605 %	97.388 %	1.492 ppb	69.657 ppb	11,278.948 ppb	17,611.125 ppb	935.916 ppb	3,745.552 ppb	115.327 %
Concentration RSD	2.0 %	10.9 %	1.7 %	24.7 %	6.7 %	3.1 %	4.2 %	8.3 %	0.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	97.746 %	61.566 ppb	39.484 ppb	1,342.772 ppb	55,309.963 ppb	23.923 ppb	45.207 ppb	80.974 ppb	148.039 ppb
Concentration per Run 1	101.440 %	62.245 ppb	37.926 ppb	1,337.291 ppb	55,260.945 ppb	24.587 ppb	45.575 ppb	80.276 ppb	150.803 ppb
Concentration per Run 2	92.423 %	59.569 ppb	41.425 ppb	1,375.086 ppb	57,085.610 ppb	24.296 ppb	46.759 ppb	83.791 ppb	149.066 ppb
Concentration per Run 3	99.374 %	62.884 ppb	39.103 ppb	1,315.939 ppb	53,583.334 ppb	22.884 ppb	43.287 ppb	78.855 ppb	144.248 ppb
Concentration RSD	4.8 %	2.9 %	4.5 %	2.2 %	3.2 %	3.8 %	3.9 %	3.1 %	2.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.732 %	102.773 %	8.887 ppb	4.628 ppb	14.760 ppb	1.053 ppb	102.890 %	96.360 %	0.115 ppb
Concentration per Run 1	112.260 %	99.023 %	9.851 ppb	4.861 ppb	14.870 ppb	1.087 ppb	105.101 %	94.874 %	0.122 ppb
Concentration per Run 2	109.581 %	103.133 %	8.501 ppb	4.326 ppb	15.292 ppb	1.113 ppb	101.802 %	96.895 %	0.100 ppb
Concentration per Run 3	104.354 %	106.164 %	8.309 ppb	4.697 ppb	14.119 ppb	0.959 ppb	101.767 %	97.311 %	0.123 ppb
Concentration RSD	3.7 %	3.5 %	9.5 %	5.9 %	4.0 %	7.8 %	1.9 %	1.4 %	11.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.292 ppb	101.608 %	100.941 %	0.542 ppb	120.837 ppb	122.309 %	110.557 %	110.055 %	115.213 %
Concentration per Run 1	0.349 ppb	100.719 %	98.971 %	0.492 ppb	124.210 ppb	119.903 %	108.990 %	108.500 %	111.700 %
Concentration per Run 2	0.257 ppb	102.833 %	101.158 %	0.581 ppb	119.441 ppb	128.380 %	111.931 %	108.952 %	115.796 %
Concentration per Run 3	0.269 ppb	101.273 %	102.692 %	0.553 ppb	118.861 ppb	118.646 %	110.749 %	112.712 %	118.144 %
Concentration RSD	17.2 %	1.1 %	1.9 %	8.3 %	2.4 %	4.3 %	1.3 %	2.1 %	2.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.209 ppb	40.972 ppb	115.496 %	120.770 %
Concentration per Run 1	0.182 ppb	40.614 ppb	116.609 %	122.045 %
Concentration per Run 2	0.215 ppb	41.449 ppb	114.899 %	119.336 %
Concentration per Run 3	0.230 ppb	40.854 ppb	114.981 %	120.929 %
Concentration RSD	11.8 %	1.0 %	0.8 %	1.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	59	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-04d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:30:47 AM	Vial	32		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	96.136 %	87.127 %	1.860 ppb	74.940 ppb	4,883.509 ppb	16,969.902 ppb	917.012 ppb	3,209.473 ppb	115.326 %
Concentration per Run 1	98.117 %	81.157 %	1.817 ppb	97.542 ppb	5,138.328 ppb	16,687.655 ppb	1,021.173 ppb	3,230.658 ppb	116.685 %
Concentration per Run 2	95.839 %	91.791 %	1.888 ppb	56.059 ppb	4,547.094 ppb	17,268.305 ppb	809.362 ppb	2,954.506 ppb	115.396 %
Concentration per Run 3	94.451 %	88.433 %	1.873 ppb	71.220 ppb	4,965.106 ppb	16,953.745 ppb	920.499 ppb	3,443.256 ppb	113.896 %
Concentration RSD	1.9 %	6.2 %	2.0 %	28.0 %	6.2 %	1.7 %	11.6 %	7.6 %	1.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	99.656 %	52.920 ppb	33.779 ppb	4,504.894 ppb	53,996.035 ppb	31.431 ppb	32.159 ppb	19.619 ppb	101.902 ppb
Concentration per Run 1	93.926 %	55.897 ppb	35.847 ppb	4,698.160 ppb	58,278.896 ppb	33.030 ppb	34.260 ppb	20.070 ppb	105.287 ppb
Concentration per Run 2	105.385 %	49.932 ppb	32.291 ppb	4,340.243 ppb	51,654.764 ppb	30.898 ppb	30.770 ppb	18.487 ppb	100.787 ppb
Concentration per Run 3	99.655 %	52.930 ppb	33.200 ppb	4,476.280 ppb	52,054.445 ppb	30.365 ppb	31.447 ppb	20.301 ppb	99.631 ppb
Concentration RSD	5.7 %	5.6 %	5.5 %	4.0 %	6.9 %	4.5 %	5.8 %	5.0 %	2.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.788 %	102.662 %	9.192 ppb	7.503 ppb	14.890 ppb	1.937 ppb	105.387 %	97.252 %	0.072 ppb
Concentration per Run 1	114.217 %	101.041 %	9.793 ppb	6.802 ppb	15.319 ppb	1.908 ppb	106.978 %	94.494 %	0.078 ppb
Concentration per Run 2	106.660 %	101.838 %	8.697 ppb	8.464 ppb	14.737 ppb	1.870 ppb	103.647 %	98.490 %	0.069 ppb
Concentration per Run 3	105.487 %	105.106 %	9.086 ppb	7.244 ppb	14.615 ppb	2.033 ppb	105.535 %	98.772 %	0.069 ppb
Concentration RSD	4.4 %	2.1 %	6.0 %	11.5 %	2.5 %	4.4 %	1.6 %	2.5 %	7.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.336 ppb	105.541 %	104.613 %	0.541 ppb	204.777 ppb	125.212 %	112.483 %	113.400 %	115.190 %
Concentration per Run 1	0.318 ppb	107.154 %	101.648 %	0.555 ppb	207.345 ppb	127.108 %	109.738 %	114.535 %	110.260 %
Concentration per Run 2	0.375 ppb	105.015 %	104.716 %	0.583 ppb	203.621 ppb	124.580 %	112.370 %	112.707 %	118.304 %
Concentration per Run 3	0.316 ppb	104.454 %	107.475 %	0.486 ppb	203.365 ppb	123.947 %	115.341 %	112.960 %	117.007 %
Concentration RSD	10.0 %	1.4 %	2.8 %	9.2 %	1.1 %	1.3 %	2.5 %	0.9 %	3.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.170 ppb	56.070 ppb	127.452 %	136.102 %
Concentration per Run 1	0.149 ppb	55.480 ppb	128.837 %	137.116 %
Concentration per Run 2	0.174 ppb	56.040 ppb	125.279 %	135.012 %
Concentration per Run 3	0.187 ppb	56.690 ppb	128.239 %	136.178 %
Concentration RSD	11.2 %	1.1 %	1.5 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	60	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1903397-6d50 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:35:28 AM	Vial	29		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.547 %	83.209 %	0.363 ppb	46.211 ppb	2,149.022 ppb	4,608.233 ppb	307.157 ppb	556.505 ppb	107.373 %
Concentration per Run 1	97.273 %	72.761 %	0.371 ppb	69.755 ppb	2,329.670 ppb	4,741.018 ppb	315.989 ppb	554.708 ppb	110.060 %
Concentration per Run 2	95.210 %	96.269 %	0.363 ppb	24.642 ppb	1,954.771 ppb	4,629.563 ppb	307.341 ppb	613.262 ppb	104.432 %
Concentration per Run 3	94.157 %	80.597 %	0.356 ppb	44.237 ppb	2,162.625 ppb	4,454.119 ppb	298.140 ppb	501.545 ppb	107.626 %
Concentration RSD	1.7 %	14.4 %	2.1 %	49.0 %	8.7 %	3.1 %	2.9 %	10.0 %	2.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.638 %	11.475 ppb	7.713 ppb	429.252 ppb	11,650.154 ppb	5.620 ppb	9.104 ppb	8.593 ppb	27.994 ppb
Concentration per Run 1	88.760 %	11.923 ppb	7.741 ppb	433.251 ppb	11,649.318 ppb	5.821 ppb	8.699 ppb	8.657 ppb	28.758 ppb
Concentration per Run 2	86.411 %	11.840 ppb	8.095 ppb	439.197 ppb	11,852.199 ppb	5.509 ppb	9.579 ppb	8.679 ppb	28.173 ppb
Concentration per Run 3	96.744 %	10.661 ppb	7.304 ppb	415.308 ppb	11,448.946 ppb	5.531 ppb	9.034 ppb	8.443 ppb	27.052 ppb
Concentration RSD	6.0 %	6.2 %	5.1 %	2.9 %	1.7 %	3.1 %	4.9 %	1.5 %	3.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.208 %	102.774 %	2.163 ppb	1.035 ppb	4.295 ppb	0.253 ppb	105.619 %	101.319 %	0.012 ppb
Concentration per Run 1	110.425 %	98.949 %	2.188 ppb	1.618 ppb	4.229 ppb	0.252 ppb	107.381 %	99.102 %	0.013 ppb
Concentration per Run 2	109.401 %	105.769 %	2.201 ppb	0.450 ppb	4.279 ppb	0.276 ppb	102.577 %	100.846 %	0.013 ppb
Concentration per Run 3	107.798 %	103.604 %	2.101 ppb	1.038 ppb	4.377 ppb	0.230 ppb	106.899 %	104.008 %	0.010 ppb
Concentration RSD	1.2 %	3.4 %	2.5 %	56.4 %	1.8 %	9.2 %	2.5 %	2.5 %	12.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.072 ppb	102.856 %	107.170 %	0.129 ppb	36.346 ppb	124.789 %	111.507 %	111.916 %	119.129 %
Concentration per Run 1	0.046 ppb	101.635 %	105.173 %	0.131 ppb	36.148 ppb	125.332 %	108.336 %	114.791 %	116.612 %
Concentration per Run 2	0.069 ppb	104.768 %	107.442 %	0.125 ppb	35.480 ppb	123.431 %	113.040 %	109.891 %	122.030 %
Concentration per Run 3	0.100 ppb	102.166 %	108.895 %	0.129 ppb	37.410 ppb	125.603 %	113.144 %	111.065 %	118.743 %
Concentration RSD	37.5 %	1.6 %	1.8 %	2.6 %	2.7 %	0.9 %	2.5 %	2.3 %	2.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.073 ppb	9.796 ppb	117.251 %	124.418 %
Concentration per Run 1	0.054 ppb	9.425 ppb	116.202 %	125.423 %
Concentration per Run 2	0.074 ppb	9.982 ppb	116.950 %	124.287 %
Concentration per Run 3	0.089 ppb	9.980 ppb	118.601 %	123.544 %
Concentration RSD	24.4 %	3.3 %	1.0 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 61 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: CCV Rack 0
Analysis started at: 4/4/2024 10:40:08 AM Vial 9

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	89.102 %	87.313 %	63.553 ppb	6,322.041 ppb	6,588.548 ppb	59.823 ppb	6,054.884 ppb	5,731.769 ppb	104.473 %
Concentration per Run 1	90.337 %	83.955 %	63.910 ppb	6,478.169 ppb	6,891.548 ppb	60.029 ppb	6,303.169 ppb	5,297.338 ppb	103.814 %
Concentration per Run 2	89.273 %	92.351 %	63.622 ppb	6,067.108 ppb	6,222.005 ppb	60.350 ppb	5,977.773 ppb	5,771.428 ppb	105.409 %
Concentration per Run 3	87.697 %	85.634 %	63.125 ppb	6,420.847 ppb	6,652.092 ppb	59.091 ppb	5,883.711 ppb	6,126.542 ppb	104.196 %
Recovery Percentage 1			105.921 %	105.367 %	109.809 %	99.705 %	100.915 %	95.529 %	
Concentration RSD	1.5 %	5.1 %	0.6 %	3.5 %	5.1 %	1.1 %	3.6 %	7.3 %	0.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	95.523 %	57.139 ppb	55.168 ppb	63.259 ppb	6,357.031 ppb	63.836 ppb	62.943 ppb	60.018 ppb	61.562 ppb
Concentration per Run 1	92.423 %	58.345 ppb	58.911 ppb	65.758 ppb	6,696.438 ppb	68.444 ppb	70.059 ppb	65.425 ppb	65.499 ppb
Concentration per Run 2	97.307 %	56.890 ppb	52.149 ppb	61.688 ppb	6,006.206 ppb	60.565 ppb	59.526 ppb	57.599 ppb	59.423 ppb
Concentration per Run 3	96.838 %	56.182 ppb	54.442 ppb	62.331 ppb	6,368.447 ppb	62.499 ppb	59.243 ppb	57.029 ppb	59.762 ppb
Recovery Percentage 1		95.232 %	91.946 %	105.432 %	105.951 %	106.393 %	104.904 %	100.030 %	102.603 %
Concentration RSD	2.8 %	1.9 %	6.2 %	3.5 %	5.4 %	6.4 %	9.8 %	7.8 %	5.5 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.141 %	99.014 %	61.391 ppb	59.441 ppb	64.232 ppb	60.341 ppb	105.142 %	99.685 %	60.114 ppb
Concentration per Run 1	112.366 %	90.898 %	67.228 ppb	63.402 ppb	67.501 ppb	66.188 ppb	106.574 %	93.557 %	63.592 ppb
Concentration per Run 2	108.511 %	102.840 %	58.323 ppb	59.004 ppb	61.769 ppb	54.440 ppb	103.532 %	103.478 %	57.625 ppb
Concentration per Run 3	109.546 %	103.303 %	58.623 ppb	55.917 ppb	63.425 ppb	60.395 ppb	105.319 %	102.021 %	59.126 ppb
Recovery Percentage 1			102.319 %	99.068 %	107.053 %	100.569 %			100.190 %
Concentration RSD	1.8 %	7.1 %	8.2 %	6.3 %	4.6 %	9.7 %	1.5 %	5.4 %	5.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	59.707 ppb	104.443 %	105.255 %	61.821 ppb	61.764 ppb	128.931 %	114.017 %	118.000 %	123.123 %
Concentration per Run 1	62.996 ppb	104.113 %	101.697 %	64.245 ppb	63.847 ppb	128.199 %	107.391 %	116.998 %	116.511 %
Concentration per Run 2	56.578 ppb	107.970 %	110.365 %	58.629 ppb	58.106 ppb	132.922 %	118.673 %	117.863 %	128.277 %
Concentration per Run 3	59.545 ppb	101.246 %	103.705 %	62.589 ppb	63.339 ppb	125.673 %	115.987 %	119.138 %	124.582 %
Recovery Percentage 1	99.511 %			103.035 %	102.940 %				
Concentration RSD	5.4 %	3.2 %	4.3 %	4.7 %	5.1 %	2.9 %	5.2 %	0.9 %	4.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	60.296 ppb	57.501 ppb	120.160 %	126.745 %
Concentration per Run 1	60.658 ppb	57.631 ppb	119.260 %	124.044 %
Concentration per Run 2	58.543 ppb	58.461 ppb	122.711 %	129.528 %
Concentration per Run 3	61.686 ppb	56.412 ppb	118.510 %	126.663 %
Recovery Percentage 1	100.493 %	95.835 %		
Concentration RSD	2.7 %	1.8 %	1.9 %	2.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	62	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 10:44:53 AM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.426 %	90.485 %	0.025 ppb	-30.357 ppb	1.156 ppb	-0.331 ppb	3.889 ppb	-16.389 ppb	104.981 %
Concentration per Run 1	94.117 %	80.037 %	0.022 ppb	-10.826 ppb	0.166 ppb	-0.326 ppb	5.030 ppb	38.042 ppb	103.088 %
Concentration per Run 2	91.826 %	97.388 %	0.028 ppb	-43.353 ppb	1.057 ppb	-0.285 ppb	2.429 ppb	-31.136 ppb	106.349 %
Concentration per Run 3	91.335 %	94.030 %	0.027 ppb	-36.891 ppb	2.246 ppb	-0.382 ppb	4.206 ppb	-56.072 ppb	105.508 %
Recovery Percentage 1			5.098 %	-30.357 %	1.652 %	-3.314 %	3.889 %	-16.389 %	
Concentration RSD	1.6 %	10.2 %	13.5 %	56.7 %	90.3 %	14.7 %	34.2 %	297.5 %	1.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	88.446 %	-0.029 ppb	-1.277 ppb	-0.047 ppb	7.111 ppb	0.001 ppb	-0.056 ppb	0.038 ppb	0.354 ppb
Concentration per Run 1	89.887 %	0.047 ppb	-1.342 ppb	-0.024 ppb	9.719 ppb	0.007 ppb	-0.027 ppb	0.027 ppb	0.425 ppb
Concentration per Run 2	84.815 %	-0.037 ppb	-1.109 ppb	-0.076 ppb	4.646 ppb	0.007 ppb	-0.017 ppb	0.097 ppb	0.336 ppb
Concentration per Run 3	90.638 %	-0.096 ppb	-1.381 ppb	-0.041 ppb	6.968 ppb	-0.011 ppb	-0.125 ppb	-0.008 ppb	0.301 ppb
Recovery Percentage 1		-0.576 %	-127.729 %	-4.691 %	14.222 %	0.185 %	-2.819 %	3.845 %	7.078 %
Concentration RSD	3.6 %	248.7 %	11.5 %	57.0 %	35.7 %	1,120.1 %	106.1 %	139.4 %	18.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.618 %	98.734 %	-0.062 ppb	0.062 ppb	0.013 ppb	0.195 ppb	104.645 %	102.980 %	0.003 ppb
Concentration per Run 1	111.669 %	92.838 %	-0.189 ppb	-0.001 ppb	0.014 ppb	0.129 ppb	106.325 %	103.853 %	0.002 ppb
Concentration per Run 2	105.671 %	101.008 %	-0.027 ppb	-0.010 ppb	-0.001 ppb	0.243 ppb	102.138 %	103.308 %	0.000 ppb
Concentration per Run 3	108.513 %	102.354 %	0.032 ppb	0.197 ppb	0.025 ppb	0.213 ppb	105.472 %	101.778 %	0.006 ppb
Recovery Percentage 1			-12.312 %	1.236 %	2.584 %	9.758 %			0.729 %
Concentration RSD	2.8 %	5.2 %	185.6 %	189.6 %	100.4 %	30.2 %	2.1 %	1.0 %	108.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	106.178 %	110.500 %	0.047 ppb	0.048 ppb	129.626 %	119.677 %	117.621 %	124.404 %
Concentration per Run 1	0.003 ppb	106.292 %	111.555 %	0.041 ppb	0.006 ppb	130.413 %	119.299 %	116.179 %	124.157 %
Concentration per Run 2	0.003 ppb	107.447 %	110.364 %	0.065 ppb	0.056 ppb	126.168 %	120.372 %	118.963 %	121.800 %
Concentration per Run 3	0.003 ppb	104.796 %	109.581 %	0.035 ppb	0.082 ppb	132.298 %	119.360 %	117.721 %	127.254 %
Recovery Percentage 1				1.171 %	9.586 %				
Concentration RSD	1.5 %	1.3 %	0.9 %	33.2 %	81.2 %	2.4 %	0.5 %	1.2 %	2.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.399 ppb	0.012 ppb	121.378 %	131.467 %
Concentration per Run 1	0.243 ppb	0.014 ppb	122.297 %	136.246 %
Concentration per Run 2	0.473 ppb	0.012 ppb	123.997 %	130.221 %
Concentration per Run 3	0.479 ppb	0.011 ppb	117.841 %	127.934 %
Recovery Percentage 1	39.851 %	1.226 %		
Concentration RSD	33.7 %	12.0 %	2.6 %	3.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	63	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-05d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:54:09 AM	Vial	33		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.199 %	85.821 %	1.321 ppb	60.498 ppb	6,079.010 ppb	15,334.963 ppb	700.631 ppb	2,689.748 ppb	118.482 %
Concentration per Run 1	98.506 %	90.112 %	1.336 ppb	49.472 ppb	5,748.778 ppb	15,779.569 ppb	711.564 ppb	2,630.627 ppb	120.382 %
Concentration per Run 2	97.341 %	73.880 %	1.317 ppb	91.890 ppb	6,568.873 ppb	15,341.800 ppb	706.298 ppb	2,759.882 ppb	116.287 %
Concentration per Run 3	95.748 %	93.470 %	1.309 ppb	40.131 ppb	5,919.381 ppb	14,883.521 ppb	684.032 ppb	2,678.734 ppb	118.777 %
Concentration RSD	1.4 %	12.2 %	1.0 %	45.6 %	7.1 %	2.9 %	2.1 %	2.4 %	1.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	104.039 %	60.925 ppb	37.189 ppb	958.689 ppb	55,208.930 ppb	18.071 ppb	33.360 ppb	39.070 ppb	106.983 ppb
Concentration per Run 1	105.291 %	60.380 ppb	37.493 ppb	972.306 ppb	55,998.806 ppb	18.253 ppb	33.835 ppb	40.637 ppb	111.423 ppb
Concentration per Run 2	103.883 %	60.721 ppb	36.777 ppb	933.039 ppb	52,563.818 ppb	17.912 ppb	31.165 ppb	38.129 ppb	101.997 ppb
Concentration per Run 3	102.943 %	61.675 ppb	37.296 ppb	970.723 ppb	57,064.166 ppb	18.047 ppb	35.079 ppb	38.446 ppb	107.527 ppb
Concentration RSD	1.1 %	1.1 %	1.0 %	2.3 %	4.3 %	0.9 %	6.0 %	3.5 %	4.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.246 %	107.412 %	9.679 ppb	7.495 ppb	12.476 ppb	1.274 ppb	104.744 %	103.171 %	0.078 ppb
Concentration per Run 1	109.319 %	101.160 %	10.041 ppb	8.180 ppb	12.565 ppb	1.309 ppb	107.483 %	101.335 %	0.083 ppb
Concentration per Run 2	109.281 %	113.396 %	9.250 ppb	7.113 ppb	11.612 ppb	1.149 ppb	103.113 %	103.041 %	0.080 ppb
Concentration per Run 3	109.139 %	107.679 %	9.747 ppb	7.192 ppb	13.252 ppb	1.365 ppb	103.636 %	105.137 %	0.072 ppb
Concentration RSD	0.1 %	5.7 %	4.1 %	7.9 %	6.6 %	8.8 %	2.3 %	1.8 %	7.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.259 ppb	104.044 %	108.944 %	0.543 ppb	118.719 ppb	126.939 %	119.141 %	113.274 %	125.937 %
Concentration per Run 1	0.206 ppb	102.606 %	107.328 %	0.554 ppb	119.864 ppb	130.287 %	114.790 %	116.572 %	123.603 %
Concentration per Run 2	0.274 ppb	103.259 %	110.396 %	0.542 ppb	116.705 ppb	122.113 %	120.132 %	109.023 %	127.057 %
Concentration per Run 3	0.297 ppb	106.266 %	109.107 %	0.534 ppb	119.589 ppb	128.416 %	122.499 %	114.226 %	127.152 %
Concentration RSD	18.4 %	1.9 %	1.4 %	1.9 %	1.5 %	3.4 %	3.3 %	3.4 %	1.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.184 ppb	41.460 ppb	116.823 %	132.795 %
Concentration per Run 1	0.162 ppb	39.162 ppb	116.004 %	134.632 %
Concentration per Run 2	0.189 ppb	43.726 ppb	118.599 %	132.271 %
Concentration per Run 3	0.201 ppb	41.491 ppb	115.864 %	131.482 %
Concentration RSD	10.8 %	5.5 %	1.3 %	1.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	64	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-06d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 10:58:50 AM	Vial	34		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.109 %	94.776 %	1.682 ppb	47.466 ppb	7,902.100 ppb	19,762.534 ppb	924.928 ppb	3,342.313 ppb	118.252 %
Concentration per Run 1	100.524 %	99.627 %	1.690 ppb	46.121 ppb	7,683.435 ppb	20,107.753 ppb	931.307 ppb	3,473.709 ppb	118.705 %
Concentration per Run 2	98.399 %	90.112 %	1.743 ppb	53.643 ppb	7,975.970 ppb	19,559.069 ppb	979.774 ppb	3,191.167 ppb	118.257 %
Concentration per Run 3	98.403 %	94.590 %	1.612 ppb	42.633 ppb	8,046.894 ppb	19,620.781 ppb	863.702 ppb	3,362.064 ppb	117.793 %
Concentration RSD	1.2 %	5.0 %	3.9 %	11.9 %	2.4 %	1.5 %	6.3 %	4.3 %	0.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	98.027 %	52.670 ppb	39.703 ppb	1,439.868 ppb	51,530.600 ppb	22.898 ppb	40.729 ppb	87.600 ppb	169.734 ppb
Concentration per Run 1	94.114 %	55.411 ppb	42.199 ppb	1,472.843 ppb	52,360.301 ppb	24.066 ppb	41.731 ppb	88.261 ppb	173.924 ppb
Concentration per Run 2	98.153 %	52.622 ppb	38.375 ppb	1,443.876 ppb	51,266.422 ppb	21.873 ppb	40.493 ppb	86.664 ppb	166.433 ppb
Concentration per Run 3	101.816 %	49.977 ppb	38.534 ppb	1,402.886 ppb	50,965.076 ppb	22.755 ppb	39.963 ppb	87.876 ppb	168.844 ppb
Concentration RSD	3.9 %	5.2 %	5.4 %	2.4 %	1.4 %	4.8 %	2.2 %	1.0 %	2.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.712 %	103.422 %	11.262 ppb	6.682 ppb	15.228 ppb	2.599 ppb	102.806 %	97.107 %	0.162 ppb
Concentration per Run 1	109.200 %	100.753 %	11.163 ppb	6.339 ppb	15.587 ppb	2.571 ppb	101.772 %	95.357 %	0.171 ppb
Concentration per Run 2	107.997 %	105.665 %	11.064 ppb	5.142 ppb	14.854 ppb	2.496 ppb	104.968 %	98.076 %	0.167 ppb
Concentration per Run 3	108.939 %	103.847 %	11.559 ppb	8.566 ppb	15.242 ppb	2.730 ppb	101.677 %	97.888 %	0.147 ppb
Concentration RSD	0.6 %	2.4 %	2.3 %	26.0 %	2.4 %	4.6 %	1.8 %	1.6 %	7.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.506 ppb	103.984 %	101.719 %	0.535 ppb	306.570 ppb	125.665 %	114.172 %	112.289 %	120.049 %
Concentration per Run 1	0.449 ppb	105.642 %	99.265 %	0.515 ppb	321.058 ppb	128.855 %	111.222 %	111.007 %	117.551 %
Concentration per Run 2	0.510 ppb	104.415 %	102.236 %	0.579 ppb	293.332 ppb	123.702 %	114.897 %	112.971 %	119.364 %
Concentration per Run 3	0.559 ppb	101.896 %	103.655 %	0.512 ppb	305.319 ppb	124.438 %	116.399 %	112.890 %	123.231 %
Concentration RSD	10.9 %	1.8 %	2.2 %	7.1 %	4.5 %	2.2 %	2.3 %	1.0 %	2.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.217 ppb	52.292 ppb	125.817 %	131.378 %
Concentration per Run 1	0.193 ppb	52.376 ppb	125.945 %	130.613 %
Concentration per Run 2	0.210 ppb	52.183 ppb	126.942 %	133.451 %
Concentration per Run 3	0.248 ppb	52.315 ppb	124.564 %	130.069 %
Concentration RSD	12.8 %	0.2 %	0.9 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	65	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-07d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 11:07:29 AM	Vial	35		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	101.588 %	91.978 %	1.624 ppb	47.720 ppb	7,509.693 ppb	24,883.931 ppb	922.081 ppb	3,129.183 ppb	115.534 %
Concentration per Run 1	103.631 %	88.992 %	1.632 ppb	63.744 ppb	7,610.177 ppb	25,023.373 ppb	958.549 ppb	3,253.316 ppb	118.076 %
Concentration per Run 2	100.615 %	87.313 %	1.591 ppb	40.202 ppb	7,556.561 ppb	25,072.294 ppb	889.110 ppb	2,866.598 ppb	114.334 %
Concentration per Run 3	100.517 %	99.627 %	1.649 ppb	39.214 ppb	7,362.341 ppb	24,556.127 ppb	918.585 ppb	3,267.634 ppb	114.192 %
Concentration RSD	1.7 %	7.3 %	1.8 %	29.1 %	1.7 %	1.1 %	3.8 %	7.3 %	1.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	111.021 %	55.197 ppb	43.969 ppb	1,565.192 ppb	47,079.894 ppb	26.611 ppb	38.855 ppb	199.691 ppb	237.687 ppb
Concentration per Run 1	107.170 %	58.051 ppb	46.307 ppb	1,636.005 ppb	48,455.821 ppb	28.177 ppb	39.054 ppb	203.527 ppb	244.992 ppb
Concentration per Run 2	118.160 %	52.364 ppb	42.700 ppb	1,518.731 ppb	46,737.252 ppb	26.327 ppb	39.276 ppb	203.268 ppb	245.940 ppb
Concentration per Run 3	107.734 %	55.175 ppb	42.900 ppb	1,540.841 ppb	46,046.609 ppb	25.328 ppb	38.235 ppb	192.278 ppb	222.129 ppb
Concentration RSD	5.6 %	5.2 %	4.6 %	4.0 %	2.6 %	5.4 %	1.4 %	3.2 %	5.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	112.095 %	112.361 %	14.048 ppb	8.281 ppb	34.056 ppb	3.050 ppb	105.935 %	104.993 %	0.748 ppb
Concentration per Run 1	113.274 %	109.020 %	13.877 ppb	9.005 ppb	35.077 ppb	2.957 ppb	106.205 %	103.123 %	0.777 ppb
Concentration per Run 2	113.115 %	106.571 %	15.274 ppb	8.792 ppb	34.585 ppb	3.192 ppb	106.911 %	105.156 %	0.742 ppb
Concentration per Run 3	109.894 %	121.493 %	12.993 ppb	7.046 ppb	32.507 ppb	3.001 ppb	104.691 %	106.701 %	0.726 ppb
Concentration RSD	1.7 %	7.1 %	8.2 %	13.0 %	4.0 %	4.1 %	1.1 %	1.7 %	3.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.603 ppb	104.255 %	112.911 %	0.723 ppb	415.334 ppb	127.958 %	122.418 %	116.810 %	129.604 %
Concentration per Run 1	0.674 ppb	105.046 %	112.568 %	0.736 ppb	428.089 ppb	131.119 %	118.926 %	117.658 %	127.396 %
Concentration per Run 2	0.620 ppb	104.930 %	113.809 %	0.709 ppb	408.698 ppb	127.201 %	124.044 %	113.906 %	128.918 %
Concentration per Run 3	0.515 ppb	102.789 %	112.356 %	0.725 ppb	409.213 ppb	125.554 %	124.283 %	118.867 %	132.499 %
Concentration RSD	13.4 %	1.2 %	0.7 %	1.9 %	2.7 %	2.2 %	2.5 %	2.2 %	2.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.193 ppb	53.440 ppb	153.794 %	182.149 %
Concentration per Run 1	0.170 ppb	53.783 ppb	150.546 %	187.226 %
Concentration per Run 2	0.200 ppb	53.296 ppb	154.722 %	183.889 %
Concentration per Run 3	0.210 ppb	53.242 ppb	156.113 %	175.331 %
Concentration RSD	10.8 %	0.6 %	1.9 %	3.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	66	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2416870-08d10 6020TS	Rack	1		
Analysis started at:	4/4/2024 11:12:11 AM	Vial	36		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.803 %	94.030 %	1.596 ppb	66.644 ppb	11,241.468 ppb	22,388.190 ppb	751.948 ppb	2,724.157 ppb	113.936 %
Concentration per Run 1	102.227 %	89.552 %	1.594 ppb	68.457 ppb	11,254.158 ppb	22,342.068 ppb	756.431 ppb	2,879.807 ppb	117.459 %
Concentration per Run 2	100.784 %	102.425 %	1.594 ppb	53.150 ppb	11,225.918 ppb	22,657.871 ppb	768.683 ppb	2,653.530 ppb	111.657 %
Concentration per Run 3	99.397 %	90.112 %	1.600 ppb	78.326 ppb	11,244.328 ppb	22,164.631 ppb	730.729 ppb	2,639.136 ppb	112.691 %
Concentration RSD	1.4 %	7.7 %	0.2 %	19.0 %	0.1 %	1.1 %	2.6 %	5.0 %	2.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	100.031 %	78.177 ppb	51.148 ppb	1,342.502 ppb	50,823.219 ppb	20.143 ppb	46.184 ppb	151.652 ppb	194.325 ppb
Concentration per Run 1	99.374 %	83.365 ppb	51.229 ppb	1,357.113 ppb	52,632.870 ppb	20.680 ppb	47.924 ppb	156.288 ppb	198.553 ppb
Concentration per Run 2	98.716 %	73.949 ppb	52.143 ppb	1,347.212 ppb	50,473.359 ppb	19.872 ppb	46.003 ppb	150.589 ppb	192.127 ppb
Concentration per Run 3	102.004 %	77.216 ppb	50.071 ppb	1,323.181 ppb	49,363.429 ppb	19.876 ppb	44.624 ppb	148.080 ppb	192.297 ppb
Concentration RSD	1.7 %	6.1 %	2.0 %	1.3 %	3.3 %	2.3 %	3.6 %	2.8 %	1.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.768 %	101.644 %	8.835 ppb	6.589 ppb	14.702 ppb	1.197 ppb	104.305 %	98.781 %	0.246 ppb
Concentration per Run 1	108.597 %	97.275 %	8.883 ppb	6.842 ppb	15.093 ppb	1.176 ppb	103.906 %	97.034 %	0.235 ppb
Concentration per Run 2	106.296 %	104.575 %	8.520 ppb	6.131 ppb	14.539 ppb	1.310 ppb	103.469 %	98.753 %	0.267 ppb
Concentration per Run 3	108.412 %	103.083 %	9.100 ppb	6.794 ppb	14.473 ppb	1.106 ppb	105.539 %	100.557 %	0.236 ppb
Concentration RSD	1.2 %	3.8 %	3.3 %	6.0 %	2.3 %	8.7 %	1.0 %	1.8 %	7.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.361 ppb	102.490 %	102.295 %	0.430 ppb	221.910 ppb	122.703 %	115.505 %	110.799 %	118.555 %
Concentration per Run 1	0.297 ppb	102.306 %	103.280 %	0.398 ppb	218.180 ppb	119.144 %	116.292 %	110.475 %	116.672 %
Concentration per Run 2	0.376 ppb	102.657 %	102.414 %	0.455 ppb	227.624 ppb	124.458 %	115.205 %	112.512 %	119.163 %
Concentration per Run 3	0.411 ppb	102.507 %	101.191 %	0.437 ppb	219.927 ppb	124.507 %	115.018 %	109.409 %	119.830 %
Concentration RSD	16.1 %	0.2 %	1.0 %	6.8 %	2.3 %	2.5 %	0.6 %	1.4 %	1.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.218 ppb	50.648 ppb	114.080 %	123.580 %
Concentration per Run 1	0.211 ppb	51.129 ppb	113.620 %	124.943 %
Concentration per Run 2	0.224 ppb	50.155 ppb	116.235 %	121.602 %
Concentration per Run 3	0.218 ppb	50.660 ppb	112.385 %	124.196 %
Concentration RSD	2.9 %	1.0 %	1.7 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	67	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 11:24:10 AM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	93.730 %	89.366 %	62.425 ppb	6,083.250 ppb	6,325.708 ppb	58.243 ppb	5,818.908 ppb	5,616.993 ppb	114.121 %
Concentration per Run 1	96.643 %	90.672 %	61.296 ppb	6,104.555 ppb	6,404.586 ppb	57.726 ppb	5,887.427 ppb	6,414.480 ppb	114.519 %
Concentration per Run 2	93.179 %	85.075 %	63.229 ppb	5,998.327 ppb	6,258.306 ppb	58.609 ppb	5,615.191 ppb	4,896.896 ppb	114.768 %
Concentration per Run 3	91.366 %	92.351 %	62.751 ppb	6,146.868 ppb	6,314.234 ppb	58.396 ppb	5,954.105 ppb	5,539.604 ppb	113.075 %
Recovery Percentage 1			104.042 %	101.387 %	105.428 %	97.072 %	96.982 %	93.617 %	
Concentration RSD	2.9 %	4.3 %	1.6 %	1.3 %	1.2 %	0.8 %	3.1 %	13.6 %	0.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	109.330 %	54.926 ppb	53.907 ppb	59.036 ppb	5,830.264 ppb	57.765 ppb	55.134 ppb	54.838 ppb	57.093 ppb
Concentration per Run 1	108.015 %	57.790 ppb	55.810 ppb	60.025 ppb	5,859.302 ppb	59.255 ppb	56.602 ppb	54.775 ppb	58.188 ppb
Concentration per Run 2	113.463 %	51.881 ppb	51.656 ppb	56.650 ppb	5,608.330 ppb	55.490 ppb	51.871 ppb	52.696 ppb	55.164 ppb
Concentration per Run 3	106.512 %	55.107 ppb	54.256 ppb	60.433 ppb	6,023.161 ppb	58.551 ppb	56.930 ppb	57.043 ppb	57.926 ppb
Recovery Percentage 1		91.543 %	89.845 %	98.393 %	97.171 %	96.275 %	91.890 %	91.397 %	95.155 %
Concentration RSD	3.3 %	5.4 %	3.9 %	3.5 %	3.6 %	3.5 %	5.1 %	4.0 %	2.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.148 %	108.473 %	59.474 ppb	58.660 ppb	64.878 ppb	58.860 ppb	105.287 %	106.754 %	57.444 ppb
Concentration per Run 1	110.724 %	107.692 %	61.064 ppb	57.710 ppb	67.213 ppb	60.667 ppb	106.278 %	103.535 %	57.377 ppb
Concentration per Run 2	111.680 %	111.276 %	57.647 ppb	62.357 ppb	62.756 ppb	56.926 ppb	104.612 %	108.654 %	57.376 ppb
Concentration per Run 3	108.042 %	106.452 %	59.712 ppb	55.914 ppb	64.665 ppb	58.987 ppb	104.973 %	108.073 %	57.578 ppb
Recovery Percentage 1			99.124 %	97.767 %	108.130 %	98.100 %			95.740 %
Concentration RSD	1.7 %	2.3 %	2.9 %	5.7 %	3.4 %	3.2 %	0.8 %	2.6 %	0.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	58.165 ppb	108.560 %	118.075 %	59.287 ppb	61.225 ppb	133.188 %	126.876 %	122.618 %	134.697 %
Concentration per Run 1	58.452 ppb	110.008 %	121.122 %	58.842 ppb	60.554 ppb	137.117 %	125.512 %	124.521 %	130.367 %
Concentration per Run 2	58.716 ppb	109.058 %	114.510 %	59.867 ppb	62.141 ppb	134.076 %	126.205 %	119.517 %	138.500 %
Concentration per Run 3	57.328 ppb	106.615 %	118.592 %	59.152 ppb	60.978 ppb	128.373 %	128.912 %	123.816 %	135.224 %
Recovery Percentage 1	96.942 %			98.811 %	102.041 %				
Concentration RSD	1.3 %	1.6 %	2.8 %	0.9 %	1.3 %	3.3 %	1.4 %	2.2 %	3.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	57.300 ppb	55.842 ppb	135.482 %	153.582 %
Concentration per Run 1	60.306 ppb	54.200 ppb	139.551 %	151.396 %
Concentration per Run 2	54.981 ppb	55.856 ppb	136.272 %	160.370 %
Concentration per Run 3	56.613 ppb	57.469 ppb	130.624 %	148.981 %
Recovery Percentage 1	95.500 %	93.070 %		
Concentration RSD	4.8 %	2.9 %	3.3 %	3.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	68	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 11:28:55 AM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	93.289 %	88.246 %	0.024 ppb	-41.175 ppb	0.308 ppb	-0.464 ppb	3.033 ppb	-2.653 ppb	105.378 %
Concentration per Run 1	95.415 %	82.276 %	0.028 ppb	-24.587 ppb	3.937 ppb	-0.454 ppb	-10.267 ppb	-11.211 ppb	106.888 %
Concentration per Run 2	92.382 %	86.754 %	0.024 ppb	-45.427 ppb	-2.619 ppb	-0.481 ppb	20.509 ppb	15.639 ppb	104.377 %
Concentration per Run 3	92.069 %	95.709 %	0.022 ppb	-53.512 ppb	-0.395 ppb	-0.457 ppb	-1.143 ppb	-12.387 ppb	104.869 %
Recovery Percentage 1			4.888 %	-41.175 %	0.440 %	-4.639 %	3.033 %	-2.653 %	
Concentration RSD	2.0 %	7.8 %	11.2 %	36.2 %	1,083.1 %	3.1 %	521.1 %	597.5 %	1.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.736 %	-0.022 ppb	-1.356 ppb	-0.072 ppb	8.196 ppb	0.006 ppb	-0.040 ppb	-0.013 ppb	0.385 ppb
Concentration per Run 1	93.832 %	-0.069 ppb	-1.474 ppb	-0.070 ppb	4.201 ppb	-0.003 ppb	-0.041 ppb	0.001 ppb	0.383 ppb
Concentration per Run 2	88.290 %	0.019 ppb	-1.232 ppb	-0.067 ppb	11.232 ppb	0.016 ppb	0.013 ppb	-0.015 ppb	0.383 ppb
Concentration per Run 3	96.086 %	-0.015 ppb	-1.363 ppb	-0.079 ppb	9.155 ppb	0.006 ppb	-0.094 ppb	-0.024 ppb	0.388 ppb
Recovery Percentage 1		-0.434 %	-135.646 %	-7.180 %	16.392 %	1.297 %	-2.025 %	-1.250 %	7.696 %
Concentration RSD	4.3 %	203.2 %	8.9 %	8.5 %	44.1 %	140.3 %	131.9 %	101.1 %	0.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.361 %	97.309 %	-0.050 ppb	0.188 ppb	0.040 ppb	0.161 ppb	105.420 %	103.079 %	0.001 ppb
Concentration per Run 1	109.607 %	100.675 %	-0.017 ppb	0.011 ppb	0.053 ppb	0.174 ppb	107.467 %	99.858 %	0.008 ppb
Concentration per Run 2	105.883 %	97.548 %	-0.053 ppb	-0.011 ppb	0.013 ppb	0.116 ppb	104.585 %	104.614 %	-0.003 ppb
Concentration per Run 3	106.594 %	93.703 %	-0.081 ppb	0.563 ppb	0.054 ppb	0.192 ppb	104.206 %	104.766 %	-0.001 ppb
Recovery Percentage 1			-10.070 %	3.753 %	7.938 %	8.034 %			0.321 %
Concentration RSD	1.8 %	3.6 %	64.2 %	173.4 %	58.6 %	24.7 %	1.7 %	2.7 %	429.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.008 ppb	109.285 %	110.152 %	0.031 ppb	0.048 ppb	128.927 %	119.884 %	118.099 %	127.368 %
Concentration per Run 1	0.008 ppb	110.274 %	109.091 %	0.021 ppb	0.058 ppb	132.794 %	116.854 %	118.317 %	124.642 %
Concentration per Run 2	0.007 ppb	109.307 %	112.078 %	0.032 ppb	0.030 ppb	126.353 %	121.103 %	116.202 %	127.996 %
Concentration per Run 3	0.008 ppb	108.274 %	109.286 %	0.041 ppb	0.056 ppb	127.633 %	121.694 %	119.778 %	129.464 %
Recovery Percentage 1				0.779 %	9.600 %				
Concentration RSD	2.0 %	0.9 %	1.5 %	33.0 %	32.0 %	2.6 %	2.2 %	1.5 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.344 ppb	0.013 ppb	129.993 %	143.350 %
Concentration per Run 1	0.233 ppb	0.012 ppb	130.125 %	140.868 %
Concentration per Run 2	0.401 ppb	0.014 ppb	134.055 %	143.195 %
Concentration per Run 3	0.400 ppb	0.012 ppb	125.798 %	145.989 %
Recovery Percentage 1	34.449 %	1.273 %		
Concentration RSD	28.1 %	7.4 %	3.2 %	1.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 69
Analysis label: wg1902467-1 CT-6020TL
Analysis started at: 4/4/2024 11:36:51 AM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 39
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	94.475 %	87.313 %	0.014 ppb	-44.227 ppb	0.548 ppb	0.901 ppb	-10.811 ppb	-41.640 ppb	101.543 %
Concentration per Run 1	95.573 %	78.918 %	0.009 ppb	-26.518 ppb	3.398 ppb	0.924 ppb	0.692 ppb	-56.350 ppb	100.303 %
Concentration per Run 2	93.912 %	87.873 %	0.015 ppb	-50.705 ppb	-0.769 ppb	0.943 ppb	-19.555 ppb	-55.763 ppb	99.521 %
Concentration per Run 3	93.939 %	95.149 %	0.018 ppb	-55.458 ppb	-0.984 ppb	0.835 ppb	-13.569 ppb	-12.807 ppb	104.804 %
Concentration RSD	1.0 %	9.3 %	32.1 %	35.1 %	450.5 %	6.4 %	96.2 %	60.0 %	2.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	94.708 %	-0.061 ppb	-1.359 ppb	-0.043 ppb	0.044 ppb	-0.007 ppb	-0.031 ppb	0.076 ppb	0.158 ppb
Concentration per Run 1	94.959 %	-0.069 ppb	-1.304 ppb	-0.040 ppb	-0.577 ppb	-0.003 ppb	-0.057 ppb	0.073 ppb	0.227 ppb
Concentration per Run 2	92.986 %	-0.069 ppb	-1.386 ppb	-0.060 ppb	1.407 ppb	-0.007 ppb	-0.090 ppb	0.083 ppb	0.134 ppb
Concentration per Run 3	96.180 %	-0.044 ppb	-1.386 ppb	-0.030 ppb	-0.696 ppb	-0.011 ppb	0.055 ppb	0.073 ppb	0.113 ppb
Concentration RSD	1.7 %	24.2 %	3.5 %	35.6 %	2,658.0 %	61.2 %	247.0 %	7.8 %	38.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.338 %	106.544 %	0.001 ppb	0.118 ppb	0.048 ppb	0.006 ppb	107.134 %	105.730 %	-0.001 ppb
Concentration per Run 1	107.850 %	101.489 %	0.011 ppb	0.352 ppb	0.063 ppb	0.000 ppb	107.424 %	105.297 %	-0.003 ppb
Concentration per Run 2	110.138 %	109.083 %	-0.050 ppb	0.012 ppb	-0.014 ppb	-0.001 ppb	107.681 %	106.242 %	0.000 ppb
Concentration per Run 3	107.026 %	109.060 %	0.040 ppb	-0.008 ppb	0.097 ppb	0.020 ppb	106.298 %	105.652 %	-0.001 ppb
Concentration RSD	1.5 %	4.1 %	8,194.9 %	170.8 %	117.1 %	189.7 %	0.7 %	0.5 %	124.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.001 ppb	105.626 %	113.079 %	0.018 ppb	0.038 ppb	130.003 %	123.500 %	117.494 %	134.501 %
Concentration per Run 1	-0.002 ppb	106.580 %	112.257 %	0.020 ppb	0.054 ppb	126.544 %	123.829 %	115.581 %	130.346 %
Concentration per Run 2	0.003 ppb	105.634 %	114.445 %	0.022 ppb	0.054 ppb	130.780 %	122.076 %	117.189 %	136.735 %
Concentration per Run 3	0.003 ppb	104.666 %	112.535 %	0.011 ppb	0.005 ppb	132.686 %	124.594 %	119.713 %	136.422 %
Concentration RSD	195.8 %	0.9 %	1.1 %	33.3 %	75.4 %	2.4 %	1.0 %	1.8 %	2.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.072 ppb	0.007 ppb	121.056 %	140.614 %
Concentration per Run 1	0.040 ppb	0.007 ppb	121.370 %	138.811 %
Concentration per Run 2	0.081 ppb	0.007 ppb	120.527 %	142.488 %
Concentration per Run 3	0.094 ppb	0.007 ppb	121.271 %	140.542 %
Concentration RSD	39.1 %	2.5 %	0.4 %	1.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	70	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1902467-2d10 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 11:41:31 AM	Vial	40		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	94.607 %	90.298 %	5.036 ppb	1,041.906 ppb	1,117.847 ppb	156.816 ppb	1,030.458 ppb	1,029.545 ppb	107.949 %
Concentration per Run 1	98.322 %	90.672 %	4.913 ppb	1,045.943 ppb	1,119.569 ppb	155.312 ppb	956.533 ppb	1,055.198 ppb	111.932 %
Concentration per Run 2	93.343 %	86.194 %	5.127 ppb	1,071.405 ppb	1,138.304 ppb	153.004 ppb	1,093.153 ppb	1,262.346 ppb	107.881 %
Concentration per Run 3	92.157 %	94.030 %	5.067 ppb	1,008.371 ppb	1,095.669 ppb	162.132 ppb	1,041.689 ppb	771.091 ppb	104.032 %
Concentration RSD	3.5 %	4.4 %	2.2 %	3.0 %	1.9 %	3.0 %	6.7 %	24.0 %	3.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	91.452 %	49.277 ppb	18.739 ppb	53.134 ppb	107.967 ppb	50.662 ppb	51.532 ppb	24.909 ppb	50.812 ppb
Concentration per Run 1	87.445 %	50.589 ppb	19.442 ppb	55.793 ppb	122.758 ppb	53.052 ppb	53.041 ppb	25.176 ppb	52.976 ppb
Concentration per Run 2	90.920 %	48.303 ppb	18.232 ppb	51.051 ppb	95.964 ppb	51.028 ppb	49.940 ppb	24.338 ppb	50.598 ppb
Concentration per Run 3	95.992 %	48.941 ppb	18.543 ppb	52.558 ppb	105.179 ppb	47.908 ppb	51.613 ppb	25.213 ppb	48.862 ppb
Concentration RSD	4.7 %	2.4 %	3.4 %	4.6 %	12.6 %	5.1 %	3.0 %	2.0 %	4.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.444 %	99.800 %	12.173 ppb	11.978 ppb	106.944 ppb	97.291 ppb	106.642 %	101.292 %	4.775 ppb
Concentration per Run 1	114.585 %	94.331 %	12.385 ppb	10.983 ppb	109.467 ppb	100.910 ppb	110.272 %	96.868 %	4.965 ppb
Concentration per Run 2	111.190 %	102.331 %	11.673 ppb	11.386 ppb	103.514 ppb	95.951 ppb	104.450 %	101.765 %	4.652 ppb
Concentration per Run 3	108.556 %	102.739 %	12.461 ppb	13.564 ppb	107.853 ppb	95.013 ppb	105.203 %	105.241 %	4.708 ppb
Concentration RSD	2.7 %	4.8 %	3.6 %	11.6 %	2.9 %	3.3 %	3.0 %	4.2 %	3.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.212 ppb	113.583 %	108.345 %	49.638 ppb	206.247 ppb	135.853 %	116.916 %	124.188 %	125.321 %
Concentration per Run 1	5.058 ppb	119.543 %	103.606 %	52.443 ppb	208.547 ppb	141.790 %	112.245 %	129.108 %	119.121 %
Concentration per Run 2	5.272 ppb	110.803 %	109.515 %	48.659 ppb	202.138 ppb	134.193 %	118.986 %	120.757 %	127.256 %
Concentration per Run 3	5.307 ppb	110.402 %	111.914 %	47.813 ppb	208.057 ppb	131.574 %	119.515 %	122.700 %	129.586 %
Concentration RSD	2.6 %	4.5 %	3.9 %	5.0 %	1.7 %	3.9 %	3.5 %	3.5 %	4.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	11.747 ppb	48.180 ppb	135.751 %	135.465 %
Concentration per Run 1	11.866 ppb	44.581 ppb	135.667 %	132.162 %
Concentration per Run 2	11.641 ppb	49.984 ppb	135.770 %	135.937 %
Concentration per Run 3	11.735 ppb	49.976 ppb	135.816 %	138.295 %
Concentration RSD	1.0 %	6.5 %	0.1 %	2.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	71	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-01 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 11:46:10 AM	Vial	41		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	89.071 %	81.716 %	0.025 ppb	26,498.304 ppb	88,201.395 ppb	98.471 ppb	1,592.557 ppb	47,090.515 ppb	110.713 %
Concentration per Run 1	89.484 %	89.552 %	0.018 ppb	25,028.686 ppb	82,221.256 ppb	112.241 ppb	1,528.625 ppb	46,361.336 ppb	112.025 %
Concentration per Run 2	88.875 %	70.522 %	0.026 ppb	29,034.174 ppb	95,931.160 ppb	90.257 ppb	1,726.231 ppb	47,897.516 ppb	113.800 %
Concentration per Run 3	88.854 %	85.075 %	0.030 ppb	25,432.051 ppb	86,451.768 ppb	92.915 ppb	1,522.815 ppb	47,012.694 ppb	106.314 %
Concentration RSD	0.4 %	12.2 %	23.2 %	8.3 %	8.0 %	12.2 %	7.3 %	1.6 %	3.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.675 %	0.762 ppb	-0.349 ppb	429.444 ppb	6,239.292 ppb	3.425 ppb	12.361 ppb	1.082 ppb	6.732 ppb
Concentration per Run 1	94.959 %	0.778 ppb	-0.556 ppb	418.168 ppb	6,192.859 ppb	3.318 ppb	12.501 ppb	1.110 ppb	6.664 ppb
Concentration per Run 2	90.920 %	0.725 ppb	-0.471 ppb	438.878 ppb	6,196.032 ppb	3.564 ppb	12.319 ppb	1.052 ppb	6.541 ppb
Concentration per Run 3	95.147 %	0.783 ppb	-0.021 ppb	431.287 ppb	6,328.986 ppb	3.392 ppb	12.263 ppb	1.084 ppb	6.991 ppb
Concentration RSD	2.5 %	4.2 %	82.4 %	2.4 %	1.2 %	3.7 %	1.0 %	2.7 %	3.5 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	112.771 %	106.297 %	7.489 ppb	0.378 ppb	169.828 ppb	1.954 ppb	103.397 %	99.804 %	0.001 ppb
Concentration per Run 1	113.910 %	107.380 %	7.383 ppb	0.466 ppb	168.670 ppb	1.757 ppb	102.738 %	99.157 %	0.000 ppb
Concentration per Run 2	112.734 %	107.618 %	7.308 ppb	0.505 ppb	165.885 ppb	2.096 ppb	104.643 %	100.747 %	0.002 ppb
Concentration per Run 3	111.669 %	103.892 %	7.777 ppb	0.164 ppb	174.930 ppb	2.007 ppb	102.810 %	99.507 %	0.000 ppb
Concentration RSD	1.0 %	2.0 %	3.4 %	49.4 %	2.7 %	9.0 %	1.0 %	0.8 %	118.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.006 ppb	104.079 %	103.492 %	0.494 ppb	42.809 ppb	133.841 %	124.275 %	124.769 %	133.217 %
Concentration per Run 1	0.003 ppb	104.388 %	105.124 %	0.465 ppb	42.641 ppb	131.994 %	121.259 %	124.482 %	132.892 %
Concentration per Run 2	0.008 ppb	103.058 %	101.745 %	0.507 ppb	43.972 ppb	136.166 %	123.489 %	126.315 %	134.250 %
Concentration per Run 3	0.008 ppb	104.792 %	103.606 %	0.511 ppb	41.816 ppb	133.364 %	128.077 %	123.508 %	132.507 %
Concentration RSD	44.3 %	0.9 %	1.6 %	5.1 %	2.5 %	1.6 %	2.8 %	1.1 %	0.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.056 ppb	0.118 ppb	120.043 %	130.494 %
Concentration per Run 1	0.021 ppb	0.117 ppb	118.519 %	130.191 %
Concentration per Run 2	0.073 ppb	0.118 ppb	120.028 %	130.457 %
Concentration per Run 3	0.074 ppb	0.117 ppb	121.582 %	130.835 %
Concentration RSD	54.6 %	0.6 %	1.3 %	0.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	72	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-03 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 11:50:50 AM	Vial	42		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	84.822 %	81.530 %	0.036 ppb	166,778.361 ppb	48,666.597 ppb	270.418 ppb	1,489.931 ppb	87,838.462 ppb	109.894 %
Concentration per Run 1	85.587 %	77.798 %	0.031 ppb	173,363.493 ppb	50,243.312 ppb	273.278 ppb	1,546.539 ppb	89,119.968 ppb	112.596 %
Concentration per Run 2	84.682 %	83.955 %	0.042 ppb	161,694.959 ppb	47,490.572 ppb	267.827 ppb	1,380.537 ppb	84,745.774 ppb	107.585 %
Concentration per Run 3	84.195 %	82.836 %	0.036 ppb	165,276.632 ppb	48,265.906 ppb	270.148 ppb	1,542.716 ppb	89,649.644 ppb	109.501 %
Concentration RSD	0.8 %	4.0 %	14.6 %	3.6 %	2.9 %	1.0 %	6.4 %	3.1 %	2.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.763 %	2.358 ppb	0.696 ppb	6,407.821 ppb	23,095.575 ppb	3.752 ppb	14.862 ppb	7.591 ppb	37.228 ppb
Concentration per Run 1	90.262 %	2.561 ppb	0.824 ppb	6,591.143 ppb	24,325.848 ppb	3.946 ppb	15.742 ppb	8.352 ppb	39.011 ppb
Concentration per Run 2	93.362 %	2.370 ppb	0.342 ppb	6,191.291 ppb	22,410.261 ppb	3.567 ppb	15.142 ppb	7.461 ppb	36.591 ppb
Concentration per Run 3	88.666 %	2.144 ppb	0.923 ppb	6,441.030 ppb	22,550.616 ppb	3.742 ppb	13.702 ppb	6.960 ppb	36.081 ppb
Concentration RSD	2.6 %	8.9 %	44.7 %	3.2 %	4.6 %	5.1 %	7.1 %	9.3 %	4.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.537 %	101.274 %	3.691 ppb	0.239 ppb	253.714 ppb	3.350 ppb	105.285 %	98.006 %	0.027 ppb
Concentration per Run 1	115.366 %	95.411 %	4.116 ppb	0.386 ppb	261.607 ppb	3.420 ppb	105.861 %	94.908 %	0.029 ppb
Concentration per Run 2	112.893 %	102.643 %	3.464 ppb	0.330 ppb	250.069 ppb	3.315 ppb	105.679 %	98.094 %	0.028 ppb
Concentration per Run 3	112.352 %	105.769 %	3.493 ppb	0.001 ppb	249.466 ppb	3.314 ppb	104.316 %	101.017 %	0.023 ppb
Concentration RSD	1.4 %	5.2 %	10.0 %	87.0 %	2.7 %	1.8 %	0.8 %	3.1 %	12.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.139 ppb	106.037 %	105.369 %	0.272 ppb	109.222 ppb	133.085 %	124.831 %	124.523 %	137.867 %
Concentration per Run 1	0.097 ppb	105.011 %	102.791 %	0.269 ppb	110.349 ppb	130.350 %	119.448 %	126.653 %	133.443 %
Concentration per Run 2	0.172 ppb	107.738 %	105.206 %	0.295 ppb	108.009 ppb	135.963 %	124.659 %	124.637 %	138.284 %
Concentration per Run 3	0.148 ppb	105.361 %	108.111 %	0.253 ppb	109.309 ppb	132.941 %	130.385 %	122.279 %	141.875 %
Concentration RSD	27.4 %	1.4 %	2.5 %	7.7 %	1.1 %	2.1 %	4.4 %	1.8 %	3.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.040 ppb	1.912 ppb	123.068 %	133.881 %
Concentration per Run 1	0.024 ppb	1.869 ppb	120.401 %	135.390 %
Concentration per Run 2	0.047 ppb	1.916 ppb	124.155 %	130.970 %
Concentration per Run 3	0.050 ppb	1.953 ppb	124.648 %	135.282 %
Concentration RSD	35.3 %	2.2 %	1.9 %	1.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	73	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-05 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 11:55:31 AM	Vial	43		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	87.961 %	69.776 %	0.021 ppb	551,163.455 ppb	81,569.663 ppb	18.681 ppb	3,041.242 ppb	72,232.641 ppb	105.140 %
Concentration per Run 1	90.582 %	72.201 %	0.011 ppb	537,350.551 ppb	81,440.032 ppb	18.039 ppb	3,120.247 ppb	75,300.899 ppb	109.236 %
Concentration per Run 2	85.998 %	62.686 %	0.031 ppb	591,213.544 ppb	86,975.871 ppb	18.807 ppb	3,150.252 ppb	73,285.632 ppb	102.721 %
Concentration per Run 3	87.302 %	74.440 %	0.021 ppb	524,926.270 ppb	76,293.086 ppb	19.198 ppb	2,853.227 ppb	68,111.393 ppb	103.463 %
Concentration RSD	2.7 %	8.9 %	47.8 %	6.4 %	6.5 %	3.2 %	5.4 %	5.1 %	3.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	83.249 %	0.402 ppb	2.809 ppb	11,102.051 ppb	11,251.353 ppb	0.832 ppb	1.640 ppb	1.104 ppb	12.307 ppb
Concentration per Run 1	79.179 %	0.449 ppb	3.095 ppb	11,217.012 ppb	11,462.257 ppb	0.785 ppb	1.764 ppb	1.050 ppb	12.067 ppb
Concentration per Run 2	85.378 %	0.190 ppb	2.518 ppb	10,921.583 ppb	11,086.764 ppb	0.815 ppb	1.624 ppb	1.112 ppb	12.564 ppb
Concentration per Run 3	85.190 %	0.568 ppb	2.815 ppb	11,167.558 ppb	11,205.037 ppb	0.896 ppb	1.532 ppb	1.150 ppb	12.289 ppb
Concentration RSD	4.2 %	48.0 %	10.3 %	1.4 %	1.7 %	6.9 %	7.1 %	4.6 %	2.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.918 %	107.890 %	2.629 ppb	0.111 ppb	649.130 ppb	2.663 ppb	98.108 %	98.518 %	0.037 ppb
Concentration per Run 1	112.973 %	108.602 %	2.550 ppb	0.148 ppb	631.248 ppb	2.713 ppb	101.267 %	99.132 %	0.042 ppb
Concentration per Run 2	105.441 %	109.275 %	2.609 ppb	0.002 ppb	649.259 ppb	2.565 ppb	95.962 %	98.239 %	0.027 ppb
Concentration per Run 3	111.340 %	105.792 %	2.729 ppb	0.182 ppb	666.882 ppb	2.710 ppb	97.095 %	98.185 %	0.042 ppb
Concentration RSD	3.6 %	1.7 %	3.5 %	86.7 %	2.7 %	3.2 %	2.8 %	0.5 %	23.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.027 ppb	101.664 %	110.043 %	0.123 ppb	167.716 ppb	127.958 %	130.705 %	120.147 %	147.110 %
Concentration per Run 1	0.022 ppb	104.679 %	109.368 %	0.141 ppb	164.937 ppb	130.055 %	127.912 %	126.325 %	138.512 %
Concentration per Run 2	0.041 ppb	98.456 %	106.430 %	0.110 ppb	172.674 ppb	125.841 %	132.664 %	117.044 %	146.996 %
Concentration per Run 3	0.017 ppb	101.856 %	114.331 %	0.118 ppb	165.537 ppb	127.977 %	131.540 %	117.072 %	155.823 %
Concentration RSD	49.3 %	3.1 %	3.6 %	13.0 %	2.6 %	1.6 %	1.9 %	4.5 %	5.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.026 ppb	0.139 ppb	127.978 %	146.437 %
Concentration per Run 1	0.006 ppb	0.130 ppb	132.622 %	145.401 %
Concentration per Run 2	0.032 ppb	0.144 ppb	124.799 %	147.747 %
Concentration per Run 3	0.039 ppb	0.143 ppb	126.512 %	146.162 %
Concentration RSD	67.6 %	5.7 %	3.2 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	74	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-07 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 12:00:11 PM	Vial	44		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.862 %	69.776 %	0.033 ppb	156,783.348 ppb	17,244.454 ppb	235.204 ppb	38,052.902 ppb	34,161.063 ppb	111.794 %
Concentration per Run 1	97.660 %	82.276 %	0.031 ppb	144,943.024 ppb	16,177.103 ppb	230.229 ppb	38,313.453 ppb	34,658.299 ppb	113.658 %
Concentration per Run 2	95.712 %	62.127 %	0.033 ppb	165,118.852 ppb	18,289.844 ppb	230.162 ppb	38,840.859 ppb	32,642.339 ppb	111.168 %
Concentration per Run 3	94.212 %	64.925 %	0.033 ppb	160,288.169 ppb	17,266.415 ppb	245.221 ppb	37,004.394 ppb	35,182.550 ppb	110.557 %
Concentration RSD	1.8 %	15.6 %	3.0 %	6.7 %	6.1 %	3.7 %	2.5 %	3.9 %	1.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.417 %	1.737 ppb	0.678 ppb	36.160 ppb	570.706 ppb	3.587 ppb	36.366 ppb	1.938 ppb	3.779 ppb
Concentration per Run 1	88.102 %	1.815 ppb	0.776 ppb	37.859 ppb	564.032 ppb	3.639 ppb	39.203 ppb	2.192 ppb	4.112 ppb
Concentration per Run 2	89.135 %	1.810 ppb	0.829 ppb	36.588 ppb	594.062 ppb	3.718 ppb	35.661 ppb	1.835 ppb	3.872 ppb
Concentration per Run 3	91.014 %	1.587 ppb	0.428 ppb	34.031 ppb	554.024 ppb	3.405 ppb	34.235 ppb	1.787 ppb	3.354 ppb
Concentration RSD	1.7 %	7.5 %	32.2 %	5.4 %	3.7 %	4.5 %	7.0 %	11.4 %	10.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.698 %	107.241 %	0.142 ppb	0.919 ppb	207.668 ppb	0.147 ppb	103.907 %	101.829 %	0.096 ppb
Concentration per Run 1	114.408 %	99.832 %	0.024 ppb	1.077 ppb	211.822 ppb	0.131 ppb	105.469 %	99.644 %	0.099 ppb
Concentration per Run 2	108.698 %	103.581 %	0.266 ppb	0.888 ppb	212.813 ppb	0.169 ppb	104.413 %	102.032 %	0.097 ppb
Concentration per Run 3	108.988 %	118.311 %	0.136 ppb	0.792 ppb	198.369 ppb	0.140 ppb	101.839 %	103.809 %	0.093 ppb
Concentration RSD	2.9 %	9.1 %	85.3 %	15.8 %	3.9 %	13.7 %	1.8 %	2.1 %	3.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.026 ppb	108.226 %	114.429 %	0.070 ppb	112.537 ppb	132.522 %	137.275 %	123.850 %	154.088 %
Concentration per Run 1	0.026 ppb	107.643 %	111.622 %	0.077 ppb	115.625 ppb	133.992 %	132.720 %	126.462 %	149.554 %
Concentration per Run 2	0.039 ppb	106.186 %	112.453 %	0.053 ppb	111.343 ppb	133.889 %	139.765 %	123.537 %	156.692 %
Concentration per Run 3	0.011 ppb	110.848 %	119.213 %	0.080 ppb	110.643 ppb	129.686 %	139.341 %	121.549 %	156.019 %
Concentration RSD	54.6 %	2.2 %	3.6 %	21.1 %	2.4 %	1.9 %	2.9 %	2.0 %	2.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.028 ppb	0.310 ppb	133.698 %	158.256 %
Concentration per Run 1	0.016 ppb	0.295 ppb	133.817 %	155.896 %
Concentration per Run 2	0.034 ppb	0.308 ppb	133.258 %	158.510 %
Concentration per Run 3	0.034 ppb	0.328 ppb	134.019 %	160.361 %
Concentration RSD	37.0 %	5.3 %	0.3 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	75	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-08 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 12:04:52 PM	Vial	45		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.266 %	82.276 %	1.989 ppb	129,838.437 ppb	30,269.590 ppb	13,857.207 ppb	10,759.943 ppb	44,272.076 ppb	186.677 %
Concentration per Run 1	97.983 %	83.395 %	1.961 ppb	131,682.203 ppb	30,569.085 ppb	13,940.489 ppb	11,019.548 ppb	45,116.035 ppb	187.923 %
Concentration per Run 2	98.511 %	82.836 %	2.005 ppb	128,363.928 ppb	30,494.711 ppb	13,812.381 ppb	10,986.381 ppb	43,623.110 ppb	185.910 %
Concentration per Run 3	98.303 %	80.597 %	2.001 ppb	129,469.181 ppb	29,744.974 ppb	13,818.753 ppb	10,273.901 ppb	44,077.082 ppb	186.200 %
Concentration RSD	0.3 %	1.8 %	1.2 %	1.3 %	1.5 %	0.5 %	3.9 %	1.7 %	0.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	185.544 %	66.031 ppb	12.624 ppb	7,938.620 ppb	44,017.787 ppb	30.140 ppb	33.561 ppb	55.589 ppb	92.079 ppb
Concentration per Run 1	182.225 %	68.265 ppb	13.750 ppb	8,269.283 ppb	46,555.395 ppb	31.933 ppb	35.782 ppb	61.137 ppb	98.673 ppb
Concentration per Run 2	184.292 %	67.276 ppb	12.310 ppb	7,950.102 ppb	44,578.727 ppb	30.510 ppb	34.743 ppb	55.575 ppb	91.981 ppb
Concentration per Run 3	190.116 %	62.551 ppb	11.812 ppb	7,596.474 ppb	40,919.240 ppb	27.978 ppb	30.158 ppb	50.055 ppb	85.584 ppb
Concentration RSD	2.2 %	4.6 %	8.0 %	4.2 %	6.5 %	6.6 %	8.9 %	10.0 %	7.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	112.220 %	108.204 %	6.608 ppb	11.304 ppb	410.628 ppb	0.572 ppb	102.361 %	98.651 %	0.078 ppb
Concentration per Run 1	112.120 %	97.581 %	7.033 ppb	13.595 ppb	442.411 ppb	0.704 ppb	101.652 %	93.013 %	0.073 ppb
Concentration per Run 2	111.441 %	108.036 %	6.920 ppb	9.362 ppb	403.811 ppb	0.414 ppb	102.519 %	100.224 %	0.083 ppb
Concentration per Run 3	113.099 %	118.994 %	5.872 ppb	10.955 ppb	385.661 ppb	0.597 ppb	102.912 %	102.716 %	0.078 ppb
Concentration RSD	0.7 %	9.9 %	9.7 %	18.9 %	7.1 %	25.7 %	0.6 %	5.1 %	6.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.676 ppb	105.064 %	112.954 %	0.118 ppb	388.839 ppb	136.562 %	139.825 %	126.430 %	153.922 %
Concentration per Run 1	0.694 ppb	107.209 %	105.385 %	0.108 ppb	415.373 ppb	137.183 %	132.440 %	126.635 %	147.500 %
Concentration per Run 2	0.719 ppb	105.393 %	117.188 %	0.119 ppb	375.106 ppb	137.152 %	144.543 %	126.805 %	156.915 %
Concentration per Run 3	0.615 ppb	102.590 %	116.290 %	0.128 ppb	376.037 ppb	135.351 %	142.491 %	125.850 %	157.352 %
Concentration RSD	8.0 %	2.2 %	5.8 %	8.6 %	5.9 %	0.8 %	4.6 %	0.4 %	3.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.294 ppb	19.137 ppb	121.885 %	141.977 %
Concentration per Run 1	0.284 ppb	19.175 ppb	118.983 %	141.563 %
Concentration per Run 2	0.287 ppb	19.205 ppb	123.556 %	140.974 %
Concentration per Run 3	0.310 ppb	19.031 ppb	123.117 %	143.394 %
Concentration RSD	5.0 %	0.5 %	2.1 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	76	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-10 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 12:09:33 PM	Vial	46		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	106.292 %	78.918 %	0.033 ppb	114,918.184 ppb	43,158.706 ppb	87.584 ppb	7,060.298 ppb	102,367.891 ppb	110.474 %
Concentration per Run 1	105.975 %	73.881 %	0.031 ppb	122,150.632 ppb	46,268.335 ppb	77.941 ppb	7,596.676 ppb	111,981.296 ppb	113.562 %
Concentration per Run 2	105.959 %	86.754 %	0.034 ppb	107,185.135 ppb	39,994.668 ppb	92.369 ppb	6,643.320 ppb	95,487.741 ppb	109.871 %
Concentration per Run 3	106.941 %	76.119 %	0.035 ppb	115,418.786 ppb	43,213.115 ppb	92.443 ppb	6,940.897 ppb	99,634.637 ppb	107.989 %
Concentration RSD	0.5 %	8.7 %	6.5 %	6.5 %	7.3 %	9.5 %	6.9 %	8.4 %	2.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	94.051 %	0.633 ppb	-0.832 ppb	992.623 ppb	567.488 ppb	34.474 ppb	50.404 ppb	1.671 ppb	5.459 ppb
Concentration per Run 1	86.505 %	0.570 ppb	-0.606 ppb	1,077.358 ppb	611.537 ppb	37.288 ppb	52.462 ppb	1.636 ppb	5.835 ppb
Concentration per Run 2	101.065 %	0.505 ppb	-1.141 ppb	924.844 ppb	523.757 ppb	32.519 ppb	48.552 ppb	1.920 ppb	5.371 ppb
Concentration per Run 3	94.583 %	0.823 ppb	-0.749 ppb	975.668 ppb	567.172 ppb	33.616 ppb	50.199 ppb	1.456 ppb	5.171 ppb
Concentration RSD	7.8 %	26.6 %	33.3 %	7.8 %	7.7 %	7.2 %	3.9 %	14.0 %	6.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.801 %	107.705 %	0.077 ppb	0.223 ppb	362.493 ppb	0.473 ppb	101.404 %	100.745 %	0.005 ppb
Concentration per Run 1	109.071 %	99.374 %	0.041 ppb	0.000 ppb	376.825 ppb	0.448 ppb	101.144 %	99.611 %	0.007 ppb
Concentration per Run 2	112.022 %	111.005 %	0.127 ppb	0.176 ppb	359.439 ppb	0.519 ppb	101.320 %	99.448 %	0.007 ppb
Concentration per Run 3	114.309 %	112.735 %	0.063 ppb	0.494 ppb	351.216 ppb	0.451 ppb	101.747 %	103.177 %	0.000 ppb
Concentration RSD	2.3 %	6.7 %	58.2 %	112.2 %	3.6 %	8.4 %	0.3 %	2.1 %	85.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.288 ppb	105.978 %	115.224 %	0.031 ppb	83.557 ppb	129.917 %	133.633 %	123.448 %	152.258 %
Concentration per Run 1	0.315 ppb	110.760 %	109.842 %	0.034 ppb	85.613 ppb	128.268 %	131.502 %	121.262 %	149.668 %
Concentration per Run 2	0.274 ppb	103.559 %	115.050 %	0.044 ppb	85.203 ppb	129.025 %	133.476 %	124.766 %	154.199 %
Concentration per Run 3	0.275 ppb	103.614 %	120.780 %	0.015 ppb	79.853 ppb	132.459 %	135.920 %	124.316 %	152.906 %
Concentration RSD	8.2 %	3.9 %	4.7 %	46.6 %	3.8 %	1.7 %	1.7 %	1.5 %	1.5 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.045 ppb	0.145 ppb	126.468 %	148.321 %
Concentration per Run 1	0.039 ppb	0.145 ppb	131.709 %	147.453 %
Concentration per Run 2	0.052 ppb	0.145 ppb	125.285 %	148.867 %
Concentration per Run 3	0.043 ppb	0.143 ppb	122.408 %	148.642 %
Concentration RSD	14.5 %	0.9 %	3.8 %	0.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	77	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-11 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 12:14:15 PM	Vial	47		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.738 %	74.067 %	0.024 ppb	150,686.554 ppb	45,153.474 ppb	8.234 ppb	50,099.011 ppb	65,571.543 ppb	106.219 %
Concentration per Run 1	98.684 %	63.806 %	0.030 ppb	160,551.349 ppb	48,606.158 ppb	8.417 ppb	50,045.497 ppb	64,488.783 ppb	106.864 %
Concentration per Run 2	97.701 %	75.000 %	0.028 ppb	150,896.017 ppb	45,404.650 ppb	8.278 ppb	51,997.290 ppb	68,547.599 ppb	105.241 %
Concentration per Run 3	96.828 %	83.395 %	0.013 ppb	140,612.297 ppb	41,449.615 ppb	8.007 ppb	48,254.245 ppb	63,678.247 ppb	106.552 %
Concentration RSD	0.9 %	13.3 %	37.5 %	6.6 %	7.9 %	2.5 %	3.7 %	4.0 %	0.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.229 %	0.482 ppb	-1.000 ppb	1,270.478 ppb	26.688 ppb	1.196 ppb	18.423 ppb	0.785 ppb	7.424 ppb
Concentration per Run 1	92.141 %	0.480 ppb	-1.119 ppb	1,266.258 ppb	23.361 ppb	1.261 ppb	18.241 ppb	0.904 ppb	7.558 ppb
Concentration per Run 2	84.721 %	0.571 ppb	-1.160 ppb	1,300.641 ppb	32.926 ppb	1.188 ppb	18.939 ppb	0.792 ppb	7.419 ppb
Concentration per Run 3	90.826 %	0.396 ppb	-0.722 ppb	1,244.534 ppb	23.778 ppb	1.138 ppb	18.089 ppb	0.660 ppb	7.295 ppb
Concentration RSD	4.4 %	18.2 %	24.2 %	2.2 %	20.3 %	5.2 %	2.5 %	15.6 %	1.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.776 %	105.240 %	0.010 ppb	0.500 ppb	444.601 ppb	0.299 ppb	101.030 %	98.869 %	0.062 ppb
Concentration per Run 1	109.391 %	101.562 %	0.084 ppb	0.334 ppb	457.511 ppb	0.357 ppb	99.994 %	96.046 %	0.062 ppb
Concentration per Run 2	113.401 %	105.289 %	-0.012 ppb	0.677 ppb	443.056 ppb	0.206 ppb	103.384 %	98.543 %	0.067 ppb
Concentration per Run 3	109.536 %	108.868 %	-0.043 ppb	0.489 ppb	433.237 ppb	0.334 ppb	99.710 %	102.020 %	0.055 ppb
Concentration RSD	2.1 %	3.5 %	680.2 %	34.3 %	2.7 %	27.3 %	2.0 %	3.0 %	9.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.921 ppb	102.325 %	111.093 %	0.036 ppb	332.476 ppb	130.602 %	131.358 %	122.749 %	150.581 %
Concentration per Run 1	1.009 ppb	101.691 %	108.029 %	0.023 ppb	338.235 ppb	129.866 %	128.018 %	122.065 %	147.733 %
Concentration per Run 2	0.929 ppb	103.043 %	109.825 %	0.049 ppb	337.879 ppb	129.582 %	129.363 %	121.443 %	149.445 %
Concentration per Run 3	0.825 ppb	102.243 %	115.425 %	0.036 ppb	321.314 ppb	132.357 %	136.692 %	124.740 %	154.564 %
Concentration RSD	10.0 %	0.7 %	3.5 %	35.9 %	2.9 %	1.2 %	3.6 %	1.4 %	2.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.058 ppb	0.037 ppb	120.905 %	144.060 %
Concentration per Run 1	0.050 ppb	0.038 ppb	122.135 %	146.240 %
Concentration per Run 2	0.059 ppb	0.037 ppb	119.985 %	143.346 %
Concentration per Run 3	0.065 ppb	0.036 ppb	120.594 %	142.595 %
Concentration RSD	12.8 %	3.7 %	0.9 %	1.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	78	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-13 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 12:18:57 PM	Vial	48		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.800 %	78.172 %	0.413 ppb	44,099.738 ppb	22,857.538 ppb	6,510.279 ppb	2,025.720 ppb	62,304.581 ppb	130.341 %
Concentration per Run 1	105.164 %	82.276 %	0.413 ppb	44,244.214 ppb	22,690.574 ppb	6,436.601 ppb	2,132.433 ppb	62,958.203 ppb	130.453 %
Concentration per Run 2	103.310 %	77.239 %	0.419 ppb	43,730.775 ppb	22,454.487 ppb	6,686.664 ppb	1,889.896 ppb	61,639.483 ppb	129.817 %
Concentration per Run 3	99.924 %	75.000 %	0.408 ppb	44,324.224 ppb	23,427.553 ppb	6,407.571 ppb	2,054.829 ppb	62,316.056 ppb	130.754 %
Concentration RSD	2.6 %	4.8 %	1.4 %	0.7 %	2.2 %	2.4 %	6.1 %	1.1 %	0.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	104.884 %	24.031 ppb	20.865 ppb	4,413.395 ppb	33,058.460 ppb	67.718 ppb	20.152 ppb	65.245 ppb	381.495 ppb
Concentration per Run 1	99.280 %	26.476 ppb	22.434 ppb	4,604.918 ppb	33,863.236 ppb	70.414 ppb	20.770 ppb	69.813 ppb	385.658 ppb
Concentration per Run 2	107.546 %	22.381 ppb	20.465 ppb	4,351.243 ppb	32,654.278 ppb	67.532 ppb	19.175 ppb	62.501 ppb	380.925 ppb
Concentration per Run 3	107.828 %	23.236 ppb	19.696 ppb	4,284.025 ppb	32,657.865 ppb	65.209 ppb	20.511 ppb	63.421 ppb	377.903 ppb
Concentration RSD	4.6 %	9.0 %	6.8 %	3.8 %	2.1 %	3.9 %	4.2 %	6.1 %	1.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	118.116 %	105.809 %	3.506 ppb	3.431 ppb	201.331 ppb	1.345 ppb	109.931 %	104.558 %	0.263 ppb
Concentration per Run 1	120.515 %	105.096 %	4.009 ppb	5.049 ppb	202.578 ppb	1.538 ppb	111.110 %	102.373 %	0.279 ppb
Concentration per Run 2	116.749 %	104.135 %	3.206 ppb	3.027 ppb	200.529 ppb	1.206 ppb	110.100 %	105.878 %	0.247 ppb
Concentration per Run 3	117.083 %	108.195 %	3.303 ppb	2.216 ppb	200.886 ppb	1.289 ppb	108.582 %	105.421 %	0.262 ppb
Concentration RSD	1.8 %	2.0 %	12.5 %	42.5 %	0.5 %	12.9 %	1.2 %	1.8 %	6.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.683 ppb	113.340 %	119.163 %	0.571 ppb	607.682 ppb	144.407 %	141.887 %	133.858 %	161.708 %
Concentration per Run 1	0.708 ppb	117.304 %	112.306 %	0.550 ppb	632.969 ppb	147.225 %	136.552 %	135.865 %	155.431 %
Concentration per Run 2	0.663 ppb	112.782 %	122.853 %	0.640 ppb	588.499 ppb	143.506 %	145.518 %	134.319 %	163.454 %
Concentration per Run 3	0.678 ppb	109.933 %	122.331 %	0.524 ppb	601.577 ppb	142.490 %	143.590 %	131.390 %	166.239 %
Concentration RSD	3.4 %	3.3 %	5.0 %	10.7 %	3.8 %	1.7 %	3.3 %	1.7 %	3.5 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.133 ppb	14.209 ppb	147.930 %	164.687 %
Concentration per Run 1	0.126 ppb	13.792 ppb	148.281 %	165.031 %
Concentration per Run 2	0.128 ppb	14.104 ppb	149.356 %	164.303 %
Concentration per Run 3	0.147 ppb	14.731 ppb	146.154 %	164.727 %
Concentration RSD	8.7 %	3.4 %	1.1 %	0.2 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	79	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 12:23:39 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.868 %	86.940 %	60.776 ppb	6,488.292 ppb	6,298.007 ppb	65.863 ppb	6,500.907 ppb	6,423.788 ppb	100.608 %
Concentration per Run 1	102.873 %	78.918 %	59.594 ppb	7,178.681 ppb	7,085.147 ppb	64.930 ppb	6,999.323 ppb	6,923.197 ppb	101.468 %
Concentration per Run 2	100.250 %	87.313 %	61.387 ppb	6,360.850 ppb	5,872.724 ppb	65.372 ppb	6,137.863 ppb	5,875.546 ppb	102.785 %
Concentration per Run 3	99.481 %	94.590 %	61.348 ppb	5,925.346 ppb	5,936.149 ppb	67.287 ppb	6,365.534 ppb	6,472.620 ppb	97.570 %
Recovery Percentage 1			101.294 %	108.138 %	104.967 %	109.772 %	108.348 %	107.063 %	
Concentration RSD	1.8 %	9.0 %	1.7 %	9.8 %	10.8 %	1.9 %	6.9 %	8.2 %	2.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.419 %	57.085 ppb	57.257 ppb	59.302 ppb	6,468.230 ppb	64.196 ppb	63.258 ppb	59.618 ppb	64.195 ppb
Concentration per Run 1	86.317 %	62.174 ppb	60.930 ppb	63.488 ppb	6,870.657 ppb	68.898 ppb	69.285 ppb	65.521 ppb	70.008 ppb
Concentration per Run 2	91.202 %	53.725 ppb	56.325 ppb	56.797 ppb	6,099.078 ppb	63.096 ppb	59.620 ppb	55.392 ppb	61.454 ppb
Concentration per Run 3	93.738 %	55.357 ppb	54.517 ppb	57.622 ppb	6,434.956 ppb	60.594 ppb	60.868 ppb	57.941 ppb	61.122 ppb
Recovery Percentage 1		95.142 %	95.429 %	98.837 %	107.804 %	106.994 %	105.430 %	99.363 %	106.991 %
Concentration RSD	4.2 %	7.9 %	5.8 %	6.2 %	6.0 %	6.6 %	8.3 %	8.8 %	7.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.765 %	106.960 %	60.919 ppb	63.640 ppb	61.602 ppb	64.114 ppb	106.313 %	104.233 %	61.015 ppb
Concentration per Run 1	114.228 %	96.767 %	67.523 ppb	72.104 ppb	64.781 ppb	67.371 ppb	107.903 %	97.585 %	65.459 ppb
Concentration per Run 2	111.670 %	111.994 %	57.070 ppb	57.899 ppb	58.975 ppb	62.599 ppb	105.856 %	107.633 %	58.165 ppb
Concentration per Run 3	109.398 %	112.118 %	58.164 ppb	60.917 ppb	61.050 ppb	62.372 ppb	105.179 %	107.481 %	59.422 ppb
Recovery Percentage 1			101.532 %	106.066 %	102.670 %	106.857 %			101.692 %
Concentration RSD	2.2 %	8.3 %	9.4 %	11.8 %	4.8 %	4.4 %	1.3 %	5.5 %	6.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	61.848 ppb	108.016 %	118.429 %	64.589 ppb	64.083 ppb	137.325 %	132.739 %	128.019 %	150.769 %
Concentration per Run 1	66.205 ppb	106.723 %	113.089 %	68.052 ppb	65.546 ppb	142.189 %	125.089 %	129.694 %	147.928 %
Concentration per Run 2	58.984 ppb	107.479 %	123.311 %	61.984 ppb	62.945 ppb	136.627 %	136.186 %	129.949 %	153.798 %
Concentration per Run 3	60.353 ppb	109.846 %	118.887 %	63.731 ppb	63.758 ppb	133.158 %	136.941 %	124.414 %	150.581 %
Recovery Percentage 1	103.079 %			107.649 %	106.805 %				
Concentration RSD	6.2 %	1.5 %	4.3 %	4.8 %	2.1 %	3.3 %	5.0 %	2.4 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	59.992 ppb	55.902 ppb	130.222 %	151.220 %
Concentration per Run 1	62.811 ppb	54.353 ppb	127.718 %	148.365 %
Concentration per Run 2	57.707 ppb	54.319 ppb	130.969 %	153.669 %
Concentration per Run 3	59.458 ppb	59.035 ppb	131.979 %	151.626 %
Recovery Percentage 1	99.987 %	93.171 %		
Concentration RSD	4.3 %	4.9 %	1.7 %	1.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	80	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 12:28:24 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	103.689 %	86.194 %	0.017 ppb	-9.378 ppb	3.268 ppb	-0.338 ppb	-14.291 ppb	-26.419 ppb	103.932 %
Concentration per Run 1	104.561 %	85.634 %	0.017 ppb	-2.894 ppb	1.772 ppb	-0.329 ppb	-4.379 ppb	-35.062 ppb	104.072 %
Concentration per Run 2	103.278 %	72.761 %	0.018 ppb	35.543 ppb	2.447 ppb	-0.329 ppb	-22.148 ppb	-33.961 ppb	101.998 %
Concentration per Run 3	103.229 %	100.187 %	0.015 ppb	-60.783 ppb	5.585 ppb	-0.356 ppb	-16.345 ppb	-10.234 ppb	105.728 %
Recovery Percentage 1			3.320 %	-9.378 %	4.669 %	-3.376 %	-14.291 %	-26.419 %	
Concentration RSD	0.7 %	15.9 %	7.7 %	517.1 %	62.3 %	4.6 %	63.4 %	53.1 %	1.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	95.867 %	-0.016 ppb	-1.635 ppb	0.028 ppb	7.498 ppb	0.003 ppb	-0.089 ppb	0.019 ppb	0.330 ppb
Concentration per Run 1	99.468 %	-0.044 ppb	-1.628 ppb	0.043 ppb	9.537 ppb	-0.007 ppb	-0.130 ppb	0.026 ppb	0.284 ppb
Concentration per Run 2	96.838 %	-0.018 ppb	-1.869 ppb	0.032 ppb	9.840 ppb	-0.003 ppb	-0.066 ppb	0.005 ppb	0.315 ppb
Concentration per Run 3	91.296 %	0.014 ppb	-1.410 ppb	0.008 ppb	3.119 ppb	0.018 ppb	-0.072 ppb	0.026 ppb	0.391 ppb
Recovery Percentage 1		-0.321 %	-163.543 %	2.754 %	14.997 %	0.569 %	-4.448 %	1.901 %	6.601 %
Concentration RSD	4.4 %	180.4 %	14.0 %	65.5 %	50.6 %	479.7 %	39.8 %	64.9 %	16.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.536 %	104.806 %	0.080 ppb	0.067 ppb	0.037 ppb	0.145 ppb	108.771 %	105.106 %	0.001 ppb
Concentration per Run 1	111.790 %	100.890 %	-0.065 ppb	0.011 ppb	0.063 ppb	0.188 ppb	109.650 %	105.271 %	0.001 ppb
Concentration per Run 2	110.343 %	108.314 %	0.250 ppb	0.178 ppb	-0.001 ppb	0.145 ppb	108.212 %	103.334 %	-0.001 ppb
Concentration per Run 3	109.473 %	105.215 %	0.055 ppb	0.012 ppb	0.048 ppb	0.102 ppb	108.450 %	106.712 %	0.002 ppb
Recovery Percentage 1			16.014 %	1.339 %	7.352 %	7.233 %			0.178 %
Concentration RSD	1.1 %	3.6 %	198.6 %	143.9 %	92.3 %	29.7 %	0.7 %	1.6 %	200.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	110.385 %	118.130 %	0.029 ppb	0.019 ppb	138.731 %	131.645 %	129.011 %	147.193 %
Concentration per Run 1	0.003 ppb	107.583 %	118.479 %	0.016 ppb	0.027 ppb	137.183 %	132.129 %	128.628 %	148.789 %
Concentration per Run 2	0.007 ppb	112.248 %	114.298 %	0.022 ppb	0.004 ppb	136.867 %	133.833 %	127.494 %	145.069 %
Concentration per Run 3	-0.002 ppb	111.324 %	121.613 %	0.051 ppb	0.027 ppb	142.144 %	128.974 %	130.910 %	147.723 %
Recovery Percentage 1				0.736 %	3.831 %				
Concentration RSD	161.5 %	2.2 %	3.1 %	62.9 %	69.4 %	2.1 %	1.9 %	1.3 %	1.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.391 ppb	0.011 ppb	130.322 %	154.034 %
Concentration per Run 1	0.275 ppb	0.011 ppb	131.759 %	157.435 %
Concentration per Run 2	0.454 ppb	0.011 ppb	133.536 %	151.117 %
Concentration per Run 3	0.446 ppb	0.010 ppb	125.670 %	153.551 %
Recovery Percentage 1	39.136 %	1.072 %		
Concentration RSD	25.8 %	4.5 %	3.2 %	2.1 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	81	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-15 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 1:01:22 PM	Vial	49		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.514 %	83.209 %	0.016 ppb	148,162.451 ppb	4,457.345 ppb	81.023 ppb	1,909.803 ppb	16,073.372 ppb	114.611 %
Concentration per Run 1	101.161 %	81.157 %	0.016 ppb	151,572.643 ppb	4,394.391 ppb	80.796 ppb	1,913.408 ppb	16,135.137 ppb	115.251 %
Concentration per Run 2	98.123 %	80.037 %	0.018 ppb	151,152.840 ppb	4,559.961 ppb	82.020 ppb	1,882.462 ppb	15,563.927 ppb	115.630 %
Concentration per Run 3	96.259 %	88.433 %	0.014 ppb	141,761.871 ppb	4,417.683 ppb	80.254 ppb	1,933.539 ppb	16,521.051 ppb	112.952 %
Concentration RSD	2.5 %	5.5 %	12.8 %	3.7 %	2.0 %	1.1 %	1.3 %	3.0 %	1.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	104.446 %	2.838 ppb	8.774 ppb	463.664 ppb	1,756.356 ppb	12.898 ppb	68.472 ppb	2.817 ppb	3.247 ppb
Concentration per Run 1	103.601 %	3.147 ppb	9.411 ppb	470.227 ppb	1,868.278 ppb	13.299 ppb	71.349 ppb	2.994 ppb	3.422 ppb
Concentration per Run 2	106.231 %	2.552 ppb	8.262 ppb	453.535 ppb	1,658.106 ppb	12.813 ppb	66.006 ppb	2.640 ppb	3.073 ppb
Concentration per Run 3	103.507 %	2.814 ppb	8.650 ppb	467.231 ppb	1,742.685 ppb	12.581 ppb	68.061 ppb	2.816 ppb	3.247 ppb
Concentration RSD	1.5 %	10.5 %	6.7 %	1.9 %	6.0 %	2.8 %	3.9 %	6.3 %	5.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	114.488 %	117.647 %	0.596 ppb	0.493 ppb	86.276 ppb	0.227 ppb	106.369 %	106.412 %	0.694 ppb
Concentration per Run 1	118.352 %	114.635 %	0.535 ppb	0.745 ppb	85.567 ppb	0.221 ppb	107.437 %	105.453 %	0.719 ppb
Concentration per Run 2	111.515 %	120.499 %	0.531 ppb	0.118 ppb	86.452 ppb	0.228 ppb	104.856 %	105.064 %	0.674 ppb
Concentration per Run 3	113.597 %	117.807 %	0.722 ppb	0.618 ppb	86.810 ppb	0.233 ppb	106.812 %	108.719 %	0.689 ppb
Concentration RSD	3.1 %	2.5 %	18.3 %	67.1 %	0.7 %	2.8 %	1.3 %	1.9 %	3.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.187 ppb	112.337 %	125.689 %	0.046 ppb	59.399 ppb	140.534 %	144.438 %	132.390 %	165.607 %
Concentration per Run 1	0.218 ppb	115.055 %	126.494 %	0.053 ppb	58.761 ppb	143.187 %	145.626 %	136.832 %	164.200 %
Concentration per Run 2	0.180 ppb	110.215 %	123.392 %	0.031 ppb	61.788 ppb	139.802 %	139.929 %	128.295 %	168.207 %
Concentration per Run 3	0.162 ppb	111.742 %	127.181 %	0.055 ppb	57.649 ppb	138.613 %	147.758 %	132.043 %	164.415 %
Concentration RSD	15.3 %	2.2 %	1.6 %	29.0 %	3.6 %	1.7 %	2.8 %	3.2 %	1.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.040 ppb	0.184 ppb	144.983 %	173.127 %
Concentration per Run 1	0.030 ppb	0.172 ppb	146.687 %	177.377 %
Concentration per Run 2	0.047 ppb	0.190 ppb	143.672 %	168.473 %
Concentration per Run 3	0.043 ppb	0.190 ppb	144.591 %	173.529 %
Concentration RSD	21.8 %	5.6 %	1.1 %	2.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	82	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-18 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 1:06:02 PM	Vial	50		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	96.561 %	80.410 %	0.035 ppb	126,455.620 ppb	61,059.999 ppb	208.625 ppb	708.138 ppb	18,360.457 ppb	115.502 %
Concentration per Run 1	98.573 %	83.395 %	0.039 ppb	123,151.600 ppb	58,788.116 ppb	211.394 ppb	696.917 ppb	18,132.347 ppb	116.488 %
Concentration per Run 2	95.406 %	76.119 %	0.031 ppb	134,230.548 ppb	65,199.929 ppb	205.106 ppb	761.988 ppb	19,896.174 ppb	115.487 %
Concentration per Run 3	95.704 %	81.716 %	0.035 ppb	121,984.713 ppb	59,191.952 ppb	209.376 ppb	665.509 ppb	17,052.849 ppb	114.530 %
Concentration RSD	1.8 %	4.7 %	11.3 %	5.3 %	5.9 %	1.5 %	6.9 %	7.8 %	0.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	95.335 %	2.588 ppb	36.752 ppb	5,393.489 ppb	14,487.951 ppb	18.837 ppb	49.965 ppb	2.204 ppb	19.576 ppb
Concentration per Run 1	97.119 %	2.563 ppb	36.845 ppb	5,435.301 ppb	14,890.277 ppb	19.701 ppb	49.835 ppb	2.279 ppb	20.487 ppb
Concentration per Run 2	89.041 %	2.700 ppb	38.704 ppb	5,555.458 ppb	15,016.245 ppb	18.994 ppb	50.246 ppb	2.135 ppb	19.796 ppb
Concentration per Run 3	99.843 %	2.502 ppb	34.707 ppb	5,189.710 ppb	13,557.332 ppb	17.817 ppb	49.814 ppb	2.197 ppb	18.446 ppb
Concentration RSD	5.9 %	3.9 %	5.4 %	3.5 %	5.6 %	5.1 %	0.5 %	3.3 %	5.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.073 %	107.730 %	1.497 ppb	0.377 ppb	109.104 ppb	2.645 ppb	105.252 %	103.247 %	0.047 ppb
Concentration per Run 1	113.934 %	101.681 %	1.474 ppb	0.332 ppb	112.269 ppb	2.622 ppb	106.327 %	100.368 %	0.045 ppb
Concentration per Run 2	111.082 %	109.467 %	1.582 ppb	0.476 ppb	106.865 ppb	2.723 ppb	104.462 %	104.323 %	0.048 ppb
Concentration per Run 3	114.205 %	112.040 %	1.435 ppb	0.325 ppb	108.178 ppb	2.590 ppb	104.967 %	105.052 %	0.047 ppb
Concentration RSD	1.5 %	5.0 %	5.1 %	22.6 %	2.6 %	2.6 %	0.9 %	2.4 %	3.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.076 ppb	110.049 %	118.337 %	0.070 ppb	43.730 ppb	136.579 %	135.990 %	129.214 %	156.576 %
Concentration per Run 1	0.097 ppb	110.513 %	116.241 %	0.080 ppb	43.435 ppb	140.421 %	132.300 %	126.480 %	153.693 %
Concentration per Run 2	0.063 ppb	111.562 %	120.633 %	0.058 ppb	43.318 ppb	133.174 %	138.800 %	128.560 %	153.833 %
Concentration per Run 3	0.068 ppb	108.072 %	118.136 %	0.073 ppb	44.437 ppb	136.141 %	136.870 %	132.603 %	162.202 %
Concentration RSD	24.0 %	1.6 %	1.9 %	15.9 %	1.4 %	2.7 %	2.5 %	2.4 %	3.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.018 ppb	0.384 ppb	135.917 %	158.462 %
Concentration per Run 1	0.006 ppb	0.381 ppb	134.046 %	156.033 %
Concentration per Run 2	0.024 ppb	0.390 ppb	137.698 %	159.317 %
Concentration per Run 3	0.023 ppb	0.380 ppb	136.006 %	160.035 %
Concentration RSD	55.4 %	1.5 %	1.3 %	1.3 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	83	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-20 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 1:10:42 PM	Vial	51		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.270 %	68.843 %	0.045 ppb	382,555.775 ppb	48,518.870 ppb	57.292 ppb	4,978.997 ppb	117,685.764 ppb	112.705 %
Concentration per Run 1	99.646 %	66.045 %	0.042 ppb	406,762.645 ppb	49,267.936 ppb	58.682 ppb	5,270.454 ppb	125,288.276 ppb	117.209 %
Concentration per Run 2	96.090 %	72.201 %	0.047 ppb	358,750.651 ppb	46,132.105 ppb	60.824 ppb	4,775.433 ppb	109,542.859 ppb	109.987 %
Concentration per Run 3	96.075 %	68.283 %	0.046 ppb	382,154.029 ppb	50,156.569 ppb	52.369 ppb	4,891.105 ppb	118,226.157 ppb	110.919 %
Concentration RSD	2.1 %	4.5 %	5.6 %	6.3 %	4.4 %	7.7 %	5.2 %	6.7 %	3.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	91.045 %	0.478 ppb	13.466 ppb	82.789 ppb	565.165 ppb	0.421 ppb	11.350 ppb	2.610 ppb	8.021 ppb
Concentration per Run 1	85.378 %	0.548 ppb	13.747 ppb	85.259 ppb	601.095 ppb	0.411 ppb	12.536 ppb	2.637 ppb	8.252 ppb
Concentration per Run 2	95.710 %	0.571 ppb	12.726 ppb	80.410 ppb	544.272 ppb	0.389 ppb	11.144 ppb	2.396 ppb	7.615 ppb
Concentration per Run 3	92.047 %	0.314 ppb	13.924 ppb	82.699 ppb	550.130 ppb	0.463 ppb	10.369 ppb	2.797 ppb	8.195 ppb
Concentration RSD	5.8 %	29.7 %	4.8 %	2.9 %	5.5 %	9.1 %	9.7 %	7.7 %	4.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.719 %	100.954 %	0.030 ppb	0.433 ppb	605.854 ppb	0.233 ppb	100.442 %	99.790 %	0.173 ppb
Concentration per Run 1	114.143 %	98.894 %	0.202 ppb	0.865 ppb	604.028 ppb	0.303 ppb	103.295 %	96.138 %	0.180 ppb
Concentration per Run 2	108.582 %	100.748 %	-0.054 ppb	0.323 ppb	596.538 ppb	0.214 ppb	97.769 %	102.061 %	0.183 ppb
Concentration per Run 3	109.433 %	103.219 %	-0.058 ppb	0.111 ppb	616.995 ppb	0.181 ppb	100.264 %	101.170 %	0.156 ppb
Concentration RSD	2.7 %	2.1 %	494.7 %	89.8 %	1.7 %	27.1 %	2.8 %	3.2 %	8.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.328 ppb	106.904 %	113.145 %	0.038 ppb	291.545 ppb	132.011 %	132.404 %	125.148 %	152.784 %
Concentration per Run 1	0.333 ppb	110.938 %	107.605 %	0.038 ppb	295.376 ppb	138.465 %	126.248 %	134.658 %	144.576 %
Concentration per Run 2	0.329 ppb	105.679 %	115.490 %	0.030 ppb	292.402 ppb	130.401 %	135.376 %	119.324 %	154.951 %
Concentration per Run 3	0.324 ppb	104.095 %	116.339 %	0.046 ppb	286.857 ppb	127.166 %	135.588 %	121.462 %	158.825 %
Concentration RSD	1.4 %	3.4 %	4.3 %	21.4 %	1.5 %	4.4 %	4.0 %	6.6 %	4.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.031 ppb	0.131 ppb	134.436 %	148.178 %
Concentration per Run 1	0.026 ppb	0.118 ppb	135.912 %	146.557 %
Concentration per Run 2	0.031 ppb	0.142 ppb	137.146 %	148.626 %
Concentration per Run 3	0.038 ppb	0.134 ppb	130.248 %	149.351 %
Concentration RSD	19.3 %	9.2 %	2.7 %	1.0 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	84	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-22 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 1:15:22 PM	Vial	52		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	101.772 %	79.478 %	0.032 ppb	129,542.898 ppb	6,178.470 ppb	496.585 ppb	1,229.101 ppb	19,755.909 ppb	117.447 %
Concentration per Run 1	103.239 %	83.955 %	0.029 ppb	125,353.750 ppb	5,965.504 ppb	508.726 ppb	1,313.251 ppb	18,951.228 ppb	113.020 %
Concentration per Run 2	101.017 %	71.082 %	0.036 ppb	138,311.894 ppb	6,601.436 ppb	490.790 ppb	1,254.967 ppb	19,750.810 ppb	119.603 %
Concentration per Run 3	101.059 %	83.395 %	0.031 ppb	124,963.050 ppb	5,968.470 ppb	490.239 ppb	1,119.084 ppb	20,565.687 ppb	119.717 %
Concentration RSD	1.2 %	9.2 %	11.8 %	5.9 %	5.9 %	2.1 %	8.1 %	4.1 %	3.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.331 %	7.300 ppb	35.684 ppb	350.782 ppb	1,148.978 ppb	162.807 ppb	593.813 ppb	8.245 ppb	3.939 ppb
Concentration per Run 1	94.208 %	7.457 ppb	35.615 ppb	348.763 ppb	1,179.913 ppb	165.958 ppb	595.845 ppb	7.922 ppb	4.180 ppb
Concentration per Run 2	90.638 %	6.963 ppb	35.708 ppb	355.010 ppb	1,125.883 ppb	160.724 ppb	591.279 ppb	8.091 ppb	3.841 ppb
Concentration per Run 3	95.147 %	7.479 ppb	35.729 ppb	348.573 ppb	1,141.140 ppb	161.738 ppb	594.315 ppb	8.722 ppb	3.796 ppb
Concentration RSD	2.5 %	4.0 %	0.2 %	1.0 %	2.4 %	1.7 %	0.4 %	5.1 %	5.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	117.049 %	112.279 %	1.048 ppb	0.707 ppb	21.413 ppb	1,631.753 ppb	108.111 %	105.037 %	0.545 ppb
Concentration per Run 1	118.222 %	111.390 %	1.175 ppb	0.998 ppb	21.446 ppb	1,662.852 ppb	107.928 %	101.894 %	0.546 ppb
Concentration per Run 2	116.239 %	115.715 %	1.003 ppb	0.804 ppb	20.950 ppb	1,595.158 ppb	109.037 %	106.933 %	0.542 ppb
Concentration per Run 3	116.685 %	109.733 %	0.967 ppb	0.320 ppb	21.843 ppb	1,637.248 ppb	107.368 %	106.285 %	0.547 ppb
Concentration RSD	0.9 %	2.8 %	10.6 %	49.4 %	2.1 %	2.1 %	0.8 %	2.6 %	0.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.120 ppb	112.584 %	121.438 %	0.695 ppb	5.305 ppb	140.728 %	140.523 %	131.990 %	163.260 %
Concentration per Run 1	0.135 ppb	112.978 %	117.400 %	0.735 ppb	5.852 ppb	142.205 %	137.641 %	132.619 %	156.311 %
Concentration per Run 2	0.128 ppb	112.496 %	124.307 %	0.679 ppb	4.711 ppb	139.617 %	141.788 %	130.716 %	164.356 %
Concentration per Run 3	0.096 ppb	112.280 %	122.608 %	0.671 ppb	5.351 ppb	140.362 %	142.141 %	132.634 %	169.112 %
Concentration RSD	17.6 %	0.3 %	3.0 %	5.0 %	10.8 %	0.9 %	1.8 %	0.8 %	4.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.023 ppb	0.767 ppb	141.369 %	166.691 %
Concentration per Run 1	0.014 ppb	0.752 ppb	138.216 %	167.628 %
Concentration per Run 2	0.030 ppb	0.791 ppb	145.866 %	165.308 %
Concentration per Run 3	0.027 ppb	0.759 ppb	140.023 %	167.136 %
Concentration RSD	36.3 %	2.7 %	2.8 %	0.7 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	85	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-24 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 1:20:02 PM	Vial	53		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.411 %	73.880 %	0.017 ppb	281,341.853 ppb	30,761.347 ppb	56.112 ppb	2,865.890 ppb	76,537.003 ppb	102.629 %
Concentration per Run 1	99.119 %	74.440 %	0.015 ppb	274,909.083 ppb	30,139.339 ppb	60.622 ppb	2,820.230 ppb	72,786.959 ppb	101.420 %
Concentration per Run 2	98.340 %	76.679 %	0.020 ppb	278,220.815 ppb	31,328.168 ppb	53.458 ppb	2,957.268 ppb	78,026.147 ppb	102.744 %
Concentration per Run 3	97.775 %	70.522 %	0.017 ppb	290,895.660 ppb	30,816.534 ppb	54.256 ppb	2,820.171 ppb	78,797.902 ppb	103.722 %
Concentration RSD	0.7 %	4.2 %	14.6 %	3.0 %	1.9 %	7.0 %	2.8 %	4.3 %	1.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	87.664 %	0.260 ppb	33.946 ppb	153.415 ppb	298.748 ppb	3.381 ppb	201.639 ppb	1.323 ppb	2.734 ppb
Concentration per Run 1	92.423 %	0.255 ppb	32.057 ppb	148.922 ppb	301.245 ppb	3.249 ppb	202.508 ppb	1.337 ppb	2.692 ppb
Concentration per Run 2	85.660 %	0.337 ppb	34.905 ppb	158.048 ppb	310.568 ppb	3.388 ppb	202.830 ppb	1.370 ppb	2.894 ppb
Concentration per Run 3	84.908 %	0.187 ppb	34.875 ppb	153.277 ppb	284.432 ppb	3.505 ppb	199.578 ppb	1.262 ppb	2.615 ppb
Concentration RSD	4.7 %	28.8 %	4.8 %	3.0 %	4.4 %	3.8 %	0.9 %	4.2 %	5.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.355 %	109.083 %	0.192 ppb	0.319 ppb	329.488 ppb	4.778 ppb	100.571 %	102.578 %	0.170 ppb
Concentration per Run 1	109.645 %	107.449 %	0.179 ppb	0.179 ppb	322.163 ppb	4.165 ppb	99.429 %	103.572 %	0.165 ppb
Concentration per Run 2	112.598 %	104.469 %	-0.013 ppb	0.303 ppb	342.864 ppb	5.166 ppb	101.797 %	101.428 %	0.163 ppb
Concentration per Run 3	111.821 %	115.331 %	0.410 ppb	0.476 ppb	323.439 ppb	5.004 ppb	100.487 %	102.734 %	0.181 ppb
Concentration RSD	1.4 %	5.1 %	110.3 %	46.6 %	3.5 %	11.2 %	1.2 %	1.1 %	5.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.567 ppb	102.082 %	113.928 %	0.049 ppb	163.961 ppb	130.223 %	134.718 %	122.766 %	155.286 %
Concentration per Run 1	0.575 ppb	101.538 %	114.510 %	0.036 ppb	158.759 ppb	129.222 %	136.525 %	122.527 %	151.873 %
Concentration per Run 2	0.537 ppb	101.660 %	110.984 %	0.066 ppb	169.531 ppb	133.681 %	133.987 %	121.962 %	157.449 %
Concentration per Run 3	0.588 ppb	103.048 %	116.290 %	0.047 ppb	163.592 ppb	127.766 %	133.643 %	123.810 %	156.536 %
Concentration RSD	4.8 %	0.8 %	2.4 %	30.7 %	3.3 %	2.4 %	1.2 %	0.8 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.015 ppb	0.065 ppb	121.351 %	152.651 %
Concentration per Run 1	0.008 ppb	0.065 ppb	120.800 %	158.046 %
Concentration per Run 2	0.015 ppb	0.069 ppb	121.088 %	149.582 %
Concentration per Run 3	0.020 ppb	0.062 ppb	122.165 %	150.325 %
Concentration RSD	41.0 %	5.0 %	0.6 %	3.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	86	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-26 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 1:24:42 PM	Vial	54		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.198 %	76.119 %	0.014 ppb	286,774.569 ppb	20,322.801 ppb	25.106 ppb	3,258.636 ppb	64,264.906 ppb	100.774 %
Concentration per Run 1	100.657 %	72.761 %	0.012 ppb	297,811.270 ppb	20,674.863 ppb	25.153 ppb	3,283.669 ppb	64,635.344 ppb	97.627 %
Concentration per Run 2	98.083 %	77.798 %	0.014 ppb	280,263.000 ppb	19,953.086 ppb	24.580 ppb	3,205.469 ppb	64,924.022 ppb	103.738 %
Concentration per Run 3	98.853 %	77.798 %	0.017 ppb	282,249.438 ppb	20,340.454 ppb	25.585 ppb	3,286.771 ppb	63,235.354 ppb	100.957 %
Concentration RSD	1.3 %	3.8 %	18.6 %	3.4 %	1.8 %	2.0 %	1.4 %	1.4 %	3.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.638 %	1.826 ppb	128.275 ppb	2.607 ppb	1,135.947 ppb	0.092 ppb	4.715 ppb	3.062 ppb	3.007 ppb
Concentration per Run 1	90.732 %	1.822 ppb	131.753 ppb	2.598 ppb	1,132.503 ppb	0.056 ppb	4.671 ppb	3.162 ppb	3.239 ppb
Concentration per Run 2	90.638 %	1.884 ppb	126.413 ppb	2.580 ppb	1,116.609 ppb	0.128 ppb	5.096 ppb	2.942 ppb	2.867 ppb
Concentration per Run 3	90.544 %	1.771 ppb	126.660 ppb	2.644 ppb	1,158.730 ppb	0.094 ppb	4.377 ppb	3.082 ppb	2.915 ppb
Concentration RSD	0.1 %	3.1 %	2.3 %	1.3 %	1.9 %	39.0 %	7.7 %	3.6 %	6.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.455 %	107.128 %	0.047 ppb	0.430 ppb	287.965 ppb	1.392 ppb	102.559 %	99.673 %	0.067 ppb
Concentration per Run 1	107.867 %	107.641 %	0.158 ppb	0.497 ppb	286.731 ppb	1.318 ppb	102.163 %	97.875 %	0.076 ppb
Concentration per Run 2	112.955 %	106.391 %	0.059 ppb	0.130 ppb	287.896 ppb	1.394 ppb	102.267 %	99.411 %	0.065 ppb
Concentration per Run 3	110.542 %	107.353 %	-0.075 ppb	0.663 ppb	289.266 ppb	1.462 ppb	103.247 %	101.733 %	0.061 ppb
Concentration RSD	2.3 %	0.6 %	246.0 %	63.5 %	0.4 %	5.2 %	0.6 %	1.9 %	11.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.071 ppb	102.658 %	117.330 %	0.046 ppb	146.396 ppb	131.763 %	135.390 %	123.570 %	159.047 %
Concentration per Run 1	0.076 ppb	102.729 %	114.005 %	0.056 ppb	147.223 ppb	130.717 %	131.047 %	118.743 %	155.410 %
Concentration per Run 2	0.061 ppb	104.575 %	117.645 %	0.038 ppb	144.053 ppb	131.716 %	136.161 %	128.158 %	160.367 %
Concentration per Run 3	0.077 ppb	100.669 %	120.340 %	0.045 ppb	147.911 ppb	132.857 %	138.961 %	123.808 %	161.364 %
Concentration RSD	12.8 %	1.9 %	2.7 %	20.0 %	1.4 %	0.8 %	3.0 %	3.8 %	2.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.022 ppb	0.113 ppb	120.317 %	147.564 %
Concentration per Run 1	0.009 ppb	0.117 ppb	118.722 %	148.206 %
Concentration per Run 2	0.028 ppb	0.109 ppb	120.314 %	142.919 %
Concentration per Run 3	0.027 ppb	0.113 ppb	121.915 %	151.568 %
Concentration RSD	50.0 %	3.6 %	1.3 %	3.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	87	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2415605-22d10 CT-6020TL	Rack	1		
Analysis started at:	4/4/2024 1:33:59 PM	Vial	55		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	113.418 %	77.985 %	0.008 ppb	15,498.429 ppb	636.214 ppb	63.177 ppb	107.007 ppb	1,934.089 ppb	106.694 %
Concentration per Run 1	117.366 %	70.522 %	0.008 ppb	15,993.029 ppb	643.468 ppb	62.242 ppb	121.264 ppb	1,757.551 ppb	110.983 %
Concentration per Run 2	112.392 %	78.918 %	0.009 ppb	15,345.275 ppb	670.929 ppb	64.407 ppb	110.031 ppb	1,712.486 ppb	104.722 %
Concentration per Run 3	110.497 %	84.515 %	0.008 ppb	15,156.983 ppb	594.245 ppb	62.881 ppb	89.724 ppb	2,332.228 ppb	104.377 %
Concentration RSD	3.1 %	9.0 %	2.8 %	2.8 %	6.1 %	1.8 %	14.9 %	17.9 %	3.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	99.656 %	0.667 ppb	2.014 ppb	35.609 ppb	111.746 ppb	16.234 ppb	60.267 ppb	0.804 ppb	0.328 ppb
Concentration per Run 1	102.004 %	0.683 ppb	1.874 ppb	36.682 ppb	120.083 ppb	16.700 ppb	63.638 ppb	0.894 ppb	0.387 ppb
Concentration per Run 2	99.468 %	0.600 ppb	1.886 ppb	35.260 ppb	113.375 ppb	16.187 ppb	57.250 ppb	0.761 ppb	0.291 ppb
Concentration per Run 3	97.495 %	0.719 ppb	2.283 ppb	34.885 ppb	101.779 ppb	15.815 ppb	59.915 ppb	0.757 ppb	0.304 ppb
Concentration RSD	2.3 %	9.2 %	11.5 %	2.7 %	8.3 %	2.7 %	5.3 %	9.7 %	16.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.233 %	114.290 %	0.081 ppb	0.205 ppb	2.414 ppb	156.959 ppb	109.844 %	110.983 %	0.058 ppb
Concentration per Run 1	113.805 %	105.288 %	0.014 ppb	0.150 ppb	2.502 ppb	163.591 ppb	113.750 %	110.166 %	0.060 ppb
Concentration per Run 2	111.867 %	121.098 %	0.127 ppb	0.454 ppb	2.491 ppb	156.044 ppb	106.810 %	108.305 %	0.052 ppb
Concentration per Run 3	108.028 %	116.484 %	0.104 ppb	0.013 ppb	2.249 ppb	151.241 ppb	108.973 %	114.477 %	0.062 ppb
Concentration RSD	2.6 %	7.1 %	73.5 %	110.0 %	5.9 %	4.0 %	3.2 %	2.9 %	8.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.017 ppb	115.068 %	128.698 %	0.057 ppb	0.491 ppb	142.208 %	145.374 %	132.078 %	169.715 %
Concentration per Run 1	0.023 ppb	121.366 %	128.600 %	0.072 ppb	0.554 ppb	149.097 %	145.502 %	138.711 %	168.695 %
Concentration per Run 2	0.019 ppb	114.412 %	128.878 %	0.059 ppb	0.447 ppb	140.843 %	145.632 %	129.087 %	171.502 %
Concentration per Run 3	0.010 ppb	109.427 %	128.617 %	0.039 ppb	0.470 ppb	136.683 %	144.987 %	128.434 %	168.949 %
Concentration RSD	36.4 %	5.2 %	0.1 %	28.9 %	11.5 %	4.4 %	0.2 %	4.4 %	0.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.006 ppb	0.077 ppb	142.133 %	171.465 %
Concentration per Run 1	0.001 ppb	0.070 ppb	144.828 %	177.275 %
Concentration per Run 2	0.006 ppb	0.080 ppb	140.902 %	166.895 %
Concentration per Run 3	0.012 ppb	0.081 ppb	140.669 %	170.225 %
Concentration RSD	90.6 %	7.9 %	1.6 %	3.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 88
Analysis label: L2415605-24d10 CT-6020TL
Analysis started at: 4/4/2024 1:38:40 PM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 56
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	108.579 %	73.881 %	0.008 ppb	31,761.526 ppb	3,012.418 ppb	5.429 ppb	262.213 ppb	7,313.048 ppb	105.824 %
Concentration per Run 1	112.682 %	64.925 %	0.010 ppb	34,508.748 ppb	3,317.904 ppb	5.376 ppb	277.748 ppb	7,539.503 ppb	108.873 %
Concentration per Run 2	107.421 %	85.634 %	0.009 ppb	28,866.156 ppb	2,766.675 ppb	5.634 ppb	246.679 ppb	7,507.103 ppb	102.954 %
Concentration per Run 3	105.635 %	71.082 %	0.005 ppb	31,909.673 ppb	2,952.675 ppb	5.277 ppb	262.211 ppb	6,892.539 ppb	105.645 %
Concentration RSD	3.4 %	14.4 %	33.3 %	8.9 %	9.3 %	3.4 %	5.9 %	5.0 %	2.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	96.211 %	0.132 ppb	1.940 ppb	15.085 ppb	24.566 ppb	0.301 ppb	19.786 ppb	0.093 ppb	0.237 ppb
Concentration per Run 1	94.020 %	0.173 ppb	2.051 ppb	15.309 ppb	23.344 ppb	0.315 ppb	20.790 ppb	0.098 ppb	0.298 ppb
Concentration per Run 2	95.335 %	0.165 ppb	1.689 ppb	15.189 ppb	29.041 ppb	0.299 ppb	19.649 ppb	0.044 ppb	0.192 ppb
Concentration per Run 3	99.280 %	0.058 ppb	2.081 ppb	14.757 ppb	21.312 ppb	0.288 ppb	18.920 ppb	0.136 ppb	0.222 ppb
Concentration RSD	2.8 %	48.6 %	11.2 %	1.9 %	16.3 %	4.7 %	4.8 %	49.8 %	23.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.651 %	107.449 %	-0.037 ppb	0.072 ppb	33.490 ppb	0.676 ppb	107.379 %	104.356 %	0.015 ppb
Concentration per Run 1	114.769 %	103.604 %	-0.114 ppb	0.011 ppb	34.593 ppb	0.590 ppb	109.800 %	100.456 %	0.018 ppb
Concentration per Run 2	110.250 %	113.216 %	0.031 ppb	0.012 ppb	32.073 ppb	0.879 ppb	105.023 %	105.305 %	0.013 ppb
Concentration per Run 3	109.934 %	105.526 %	-0.029 ppb	0.191 ppb	33.802 ppb	0.559 ppb	107.313 %	107.306 %	0.015 ppb
Concentration RSD	2.4 %	4.7 %	196.5 %	144.8 %	3.8 %	26.1 %	2.2 %	3.4 %	18.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.057 ppb	111.729 %	119.484 %	0.008 ppb	16.073 ppb	139.019 %	138.930 %	128.805 %	159.888 %
Concentration per Run 1	0.048 ppb	113.547 %	115.653 %	0.011 ppb	16.917 ppb	141.334 %	134.500 %	133.197 %	154.954 %
Concentration per Run 2	0.071 ppb	110.311 %	120.453 %	0.005 ppb	15.492 ppb	138.522 %	141.402 %	128.325 %	161.287 %
Concentration per Run 3	0.053 ppb	111.330 %	122.347 %	0.010 ppb	15.809 ppb	137.201 %	140.887 %	124.892 %	163.423 %
Concentration RSD	21.6 %	1.5 %	2.9 %	38.4 %	4.7 %	1.5 %	2.8 %	3.2 %	2.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.004 ppb	0.008 ppb	140.435 %	165.267 %
Concentration per Run 1	0.000 ppb	0.007 ppb	142.283 %	164.113 %
Concentration per Run 2	0.003 ppb	0.008 ppb	138.368 %	164.868 %
Concentration per Run 3	0.009 ppb	0.009 ppb	140.653 %	166.821 %
Concentration RSD	122.7 %	10.5 %	1.4 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 89 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: CCV Rack 0
Analysis started at: 4/4/2024 1:45:31 PM Vial 9

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	105.243 %	83.955 %	58.943 ppb	6,525.510 ppb	6,211.541 ppb	65.100 ppb	5,916.268 ppb	5,829.993 ppb	108.624 %
Concentration per Run 1	107.126 %	70.522 %	58.755 ppb	7,589.325 ppb	6,601.792 ppb	65.292 ppb	6,547.111 ppb	6,768.218 ppb	108.426 %
Concentration per Run 2	104.505 %	96.828 %	59.204 ppb	5,632.293 ppb	5,795.912 ppb	65.904 ppb	5,450.915 ppb	5,145.597 ppb	107.502 %
Concentration per Run 3	104.098 %	84.515 %	58.871 ppb	6,354.911 ppb	6,236.921 ppb	64.102 ppb	5,750.779 ppb	5,576.163 ppb	109.942 %
Recovery Percentage 1			98.239 %	108.758 %	103.526 %	108.499 %	98.604 %	97.167 %	
Concentration RSD	1.6 %	15.7 %	0.4 %	15.2 %	6.5 %	1.4 %	9.6 %	14.4 %	1.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	101.879 %	55.001 ppb	54.518 ppb	62.765 ppb	6,259.463 ppb	59.952 ppb	59.637 ppb	55.163 ppb	59.845 ppb
Concentration per Run 1	93.268 %	58.903 ppb	60.737 ppb	68.298 ppb	6,940.474 ppb	65.020 ppb	63.501 ppb	59.749 ppb	63.869 ppb
Concentration per Run 2	108.767 %	49.938 ppb	48.596 ppb	58.388 ppb	5,769.676 ppb	55.055 ppb	55.487 ppb	50.071 ppb	55.228 ppb
Concentration per Run 3	103.601 %	56.163 ppb	54.222 ppb	61.609 ppb	6,068.239 ppb	59.781 ppb	59.923 ppb	55.670 ppb	60.438 ppb
Recovery Percentage 1		91.669 %	90.863 %	104.608 %	104.324 %	99.920 %	99.394 %	91.939 %	99.742 %
Concentration RSD	7.7 %	8.4 %	11.1 %	8.1 %	9.7 %	8.3 %	6.7 %	8.8 %	7.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.899 %	112.246 %	58.045 ppb	62.241 ppb	57.868 ppb	60.598 ppb	106.780 %	109.217 %	58.311 ppb
Concentration per Run 1	108.594 %	106.328 %	62.034 ppb	70.675 ppb	61.645 ppb	62.895 ppb	106.071 %	103.726 %	61.945 ppb
Concentration per Run 2	111.540 %	117.790 %	53.992 ppb	59.438 ppb	53.621 ppb	55.901 ppb	106.453 %	113.871 %	54.752 ppb
Concentration per Run 3	109.563 %	112.622 %	58.108 ppb	56.611 ppb	58.337 ppb	62.998 ppb	107.818 %	110.053 %	58.236 ppb
Recovery Percentage 1			96.742 %	103.735 %	96.446 %	100.996 %			97.185 %
Concentration RSD	1.4 %	5.1 %	6.9 %	12.0 %	7.0 %	6.7 %	0.9 %	4.7 %	6.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	59.354 ppb	114.360 %	129.287 %	61.980 ppb	62.852 ppb	141.875 %	142.733 %	131.437 %	163.200 %
Concentration per Run 1	64.847 ppb	119.372 %	119.327 %	67.066 ppb	67.711 ppb	145.102 %	133.794 %	130.550 %	154.914 %
Concentration per Run 2	54.092 ppb	110.677 %	139.559 %	56.967 ppb	56.849 ppb	139.183 %	150.831 %	132.649 %	168.789 %
Concentration per Run 3	59.125 ppb	113.031 %	128.975 %	61.908 ppb	63.995 ppb	141.341 %	143.575 %	131.111 %	165.896 %
Recovery Percentage 1	98.924 %			103.300 %	104.753 %				
Concentration RSD	9.1 %	3.9 %	7.8 %	8.1 %	8.8 %	2.1 %	6.0 %	0.8 %	4.5 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	56.025 ppb	56.055 ppb	149.129 %	169.652 %
Concentration per Run 1	59.841 ppb	55.479 ppb	152.586 %	162.035 %
Concentration per Run 2	52.732 ppb	55.646 ppb	151.406 %	177.460 %
Concentration per Run 3	55.501 ppb	57.040 ppb	143.394 %	169.461 %
Recovery Percentage 1	93.375 %	93.424 %		
Concentration RSD	6.4 %	1.5 %	3.4 %	4.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	90	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 1:50:16 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	106.800 %	88.246 %	0.021 ppb	-40.724 ppb	-0.648 ppb	-0.439 ppb	-5.357 ppb	-20.877 ppb	103.951 %
Concentration per Run 1	107.781 %	80.037 %	0.026 ppb	-32.441 ppb	0.644 ppb	-0.424 ppb	5.339 ppb	-34.408 ppb	103.184 %
Concentration per Run 2	106.919 %	87.313 %	0.019 ppb	-27.039 ppb	-1.962 ppb	-0.435 ppb	3.701 ppb	-31.832 ppb	105.672 %
Concentration per Run 3	105.701 %	97.388 %	0.019 ppb	-62.692 ppb	-0.626 ppb	-0.458 ppb	-25.111 ppb	3.610 ppb	102.997 %
Recovery Percentage 1			4.297 %	-40.724 %	-0.925 %	-4.390 %	-5.357 %	-20.877 %	
Concentration RSD	1.0 %	9.9 %	17.9 %	47.2 %	201.1 %	4.0 %	319.7 %	101.8 %	1.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	96.932 %	-0.059 ppb	-1.780 ppb	-0.061 ppb	3.896 ppb	0.002 ppb	-0.102 ppb	0.005 ppb	0.352 ppb
Concentration per Run 1	96.932 %	-0.070 ppb	-1.806 ppb	-0.017 ppb	3.296 ppb	0.001 ppb	-0.093 ppb	0.022 ppb	0.379 ppb
Concentration per Run 2	87.633 %	-0.011 ppb	-1.833 ppb	-0.083 ppb	3.249 ppb	0.006 ppb	-0.197 ppb	0.009 ppb	0.272 ppb
Concentration per Run 3	106.231 %	-0.096 ppb	-1.701 ppb	-0.083 ppb	5.144 ppb	0.000 ppb	-0.016 ppb	-0.017 ppb	0.404 ppb
Recovery Percentage 1		-1.180 %	-177.986 %	-6.135 %	7.793 %	0.487 %	-5.093 %	0.452 %	7.035 %
Concentration RSD	9.6 %	73.6 %	3.9 %	62.1 %	27.7 %	130.3 %	89.2 %	429.1 %	19.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.010 %	109.596 %	0.014 ppb	0.012 ppb	0.022 ppb	0.223 ppb	109.121 %	110.106 %	0.001 ppb
Concentration per Run 1	109.351 %	108.891 %	0.120 ppb	0.002 ppb	0.047 ppb	0.191 ppb	111.566 %	107.432 %	0.000 ppb
Concentration per Run 2	109.609 %	106.007 %	-0.043 ppb	0.022 ppb	-0.002 ppb	0.276 ppb	111.193 %	111.109 %	0.000 ppb
Concentration per Run 3	108.072 %	113.889 %	-0.036 ppb	0.012 ppb	0.020 ppb	0.202 ppb	104.605 %	111.778 %	0.002 ppb
Recovery Percentage 1			2.726 %	0.240 %	4.345 %	11.151 %			0.138 %
Concentration RSD	0.8 %	3.6 %	676.4 %	83.6 %	112.7 %	20.9 %	3.6 %	2.1 %	186.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.002 ppb	111.101 %	124.704 %	0.026 ppb	0.010 ppb	138.993 %	142.149 %	129.805 %	156.952 %
Concentration per Run 1	-0.002 ppb	112.474 %	122.625 %	0.023 ppb	0.025 ppb	141.324 %	140.369 %	130.468 %	156.096 %
Concentration per Run 2	-0.002 ppb	110.562 %	125.777 %	0.022 ppb	0.002 ppb	141.187 %	144.226 %	127.496 %	155.315 %
Concentration per Run 3	0.011 ppb	110.268 %	125.712 %	0.033 ppb	0.002 ppb	134.468 %	141.851 %	131.452 %	159.446 %
Recovery Percentage 1				0.650 %	1.910 %				
Concentration RSD	291.4 %	1.1 %	1.4 %	22.4 %	136.8 %	2.8 %	1.4 %	1.6 %	1.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.391 ppb	0.010 ppb	144.319 %	175.014 %
Concentration per Run 1	0.257 ppb	0.012 ppb	146.151 %	172.292 %
Concentration per Run 2	0.448 ppb	0.010 ppb	142.141 %	175.658 %
Concentration per Run 3	0.469 ppb	0.009 ppb	144.665 %	177.092 %
Recovery Percentage 1	39.105 %	1.025 %		
Concentration RSD	29.8 %	11.2 %	1.4 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 91 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: wg1903897-1 6020TL Rack 1
Analysis started at: 4/4/2024 2:02:15 PM Vial 57

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	106.758 %	86.381 %	0.006 ppb	-55.341 ppb	-0.171 ppb	0.176 ppb	-1.858 ppb	0.338 ppb	105.781 %
Concentration per Run 1	110.817 %	85.075 %	0.006 ppb	-43.668 ppb	1.983 ppb	0.118 ppb	1.932 ppb	-32.471 ppb	110.794 %
Concentration per Run 2	106.047 %	94.030 %	0.008 ppb	-75.088 ppb	-0.479 ppb	0.206 ppb	-8.510 ppb	26.350 ppb	102.692 %
Concentration per Run 3	103.410 %	80.037 %	0.005 ppb	-47.268 ppb	-2.016 ppb	0.204 ppb	1.002 ppb	7.136 ppb	103.859 %
Concentration RSD	3.5 %	8.2 %	22.6 %	31.1 %	1,182.6 %	28.7 %	311.0 %	8,868.1 %	4.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	97.526 %	-0.038 ppb	-0.970 ppb	-0.083 ppb	-0.385 ppb	-0.003 ppb	-0.069 ppb	0.004 ppb	0.077 ppb
Concentration per Run 1	90.169 %	-0.096 ppb	-0.674 ppb	-0.076 ppb	-0.018 ppb	0.002 ppb	-0.099 ppb	0.008 ppb	0.061 ppb
Concentration per Run 2	102.286 %	0.003 ppb	-1.077 ppb	-0.118 ppb	-1.800 ppb	-0.007 ppb	-0.011 ppb	0.009 ppb	0.119 ppb
Concentration per Run 3	100.125 %	-0.020 ppb	-1.159 ppb	-0.055 ppb	0.663 ppb	-0.003 ppb	-0.098 ppb	-0.006 ppb	0.053 ppb
Concentration RSD	6.6 %	136.7 %	26.8 %	38.7 %	330.2 %	150.4 %	73.2 %	238.5 %	46.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.880 %	110.293 %	-0.006 ppb	0.161 ppb	0.032 ppb	0.037 ppb	112.001 %	113.169 %	-0.001 ppb
Concentration per Run 1	115.410 %	105.911 %	-0.156 ppb	0.329 ppb	-0.002 ppb	0.030 ppb	114.883 %	107.729 %	-0.001 ppb
Concentration per Run 2	108.786 %	113.216 %	0.019 ppb	0.160 ppb	0.043 ppb	0.055 ppb	113.238 %	116.382 %	-0.002 ppb
Concentration per Run 3	108.444 %	111.751 %	0.118 ppb	-0.007 ppb	0.055 ppb	0.027 ppb	107.881 %	115.396 %	0.000 ppb
Concentration RSD	3.5 %	3.5 %	2,218.7 %	104.6 %	93.2 %	41.3 %	3.3 %	4.2 %	85.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	-0.002 ppb	113.612 %	129.902 %	0.005 ppb	0.009 ppb	142.652 %	142.617 %	131.281 %	159.440 %
Concentration per Run 1	-0.002 ppb	116.404 %	120.813 %	0.002 ppb	0.003 ppb	145.065 %	135.411 %	137.103 %	149.761 %
Concentration per Run 2	-0.002 ppb	109.030 %	135.183 %	0.011 ppb	-0.020 ppb	144.971 %	145.967 %	129.001 %	161.213 %
Concentration per Run 3	-0.002 ppb	115.400 %	133.712 %	0.002 ppb	0.043 ppb	137.919 %	146.472 %	127.739 %	167.346 %
Concentration RSD	0.0 %	3.5 %	6.1 %	109.9 %	362.8 %	2.9 %	4.4 %	3.9 %	5.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.041 ppb	0.003 ppb	144.102 %	179.152 %
Concentration per Run 1	0.021 ppb	0.002 ppb	146.733 %	179.574 %
Concentration per Run 2	0.048 ppb	0.004 ppb	142.383 %	179.326 %
Concentration per Run 3	0.053 ppb	0.002 ppb	143.190 %	178.555 %
Concentration RSD	41.8 %	38.3 %	1.6 %	0.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	92	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903897-2d10 6020TL	Rack	1		
Analysis started at:	4/4/2024 2:06:57 PM	Vial	58		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	104.262 %	80.410 %	5.047 ppb	1,140.940 ppb	1,198.737 ppb	187.592 ppb	1,057.926 ppb	674.334 ppb	101.960 %
Concentration per Run 1	105.298 %	79.478 %	5.045 ppb	1,166.989 ppb	1,178.279 ppb	189.439 ppb	1,070.394 ppb	582.204 ppb	97.889 %
Concentration per Run 2	104.344 %	82.836 %	5.085 ppb	1,094.816 ppb	1,177.000 ppb	186.171 ppb	1,126.704 ppb	630.195 ppb	106.065 %
Concentration per Run 3	103.144 %	78.918 %	5.011 ppb	1,161.015 ppb	1,240.931 ppb	187.167 ppb	976.679 ppb	810.602 ppb	101.927 %
Concentration RSD	1.0 %	2.6 %	0.7 %	3.5 %	3.0 %	0.9 %	7.2 %	17.9 %	4.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.112 %	50.526 ppb	18.040 ppb	54.985 ppb	105.414 ppb	51.317 ppb	51.552 ppb	24.169 ppb	51.741 ppb
Concentration per Run 1	93.550 %	48.967 ppb	17.743 ppb	54.160 ppb	110.521 ppb	50.469 ppb	50.411 ppb	23.276 ppb	50.169 ppb
Concentration per Run 2	92.047 %	51.402 ppb	17.998 ppb	55.184 ppb	112.527 ppb	51.152 ppb	51.924 ppb	24.927 ppb	53.210 ppb
Concentration per Run 3	93.738 %	51.208 ppb	18.380 ppb	55.612 ppb	93.193 ppb	52.330 ppb	52.322 ppb	24.306 ppb	51.843 ppb
Concentration RSD	1.0 %	2.7 %	1.8 %	1.4 %	10.1 %	1.8 %	2.0 %	3.5 %	2.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.145 %	107.009 %	12.021 ppb	13.620 ppb	114.455 ppb	99.461 ppb	107.158 %	105.403 %	5.028 ppb
Concentration per Run 1	106.785 %	109.060 %	11.285 ppb	11.564 ppb	111.362 ppb	98.276 ppb	105.989 %	105.278 %	5.065 ppb
Concentration per Run 2	109.818 %	107.019 %	12.264 ppb	14.283 ppb	116.586 ppb	100.155 ppb	108.716 %	104.585 %	5.013 ppb
Concentration per Run 3	110.832 %	104.949 %	12.513 ppb	15.013 ppb	115.417 ppb	99.953 ppb	106.769 %	106.345 %	5.006 ppb
Concentration RSD	1.9 %	1.9 %	5.4 %	13.3 %	2.4 %	1.0 %	1.3 %	0.8 %	0.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.335 ppb	109.177 %	120.447 %	50.279 ppb	207.017 ppb	138.778 %	137.401 %	130.107 %	151.342 %
Concentration per Run 1	5.150 ppb	109.499 %	119.065 %	49.556 ppb	205.752 ppb	138.383 %	137.242 %	128.439 %	147.189 %
Concentration per Run 2	5.371 ppb	109.412 %	119.816 %	50.979 ppb	207.774 ppb	138.710 %	138.719 %	129.951 %	151.718 %
Concentration per Run 3	5.484 ppb	108.620 %	122.460 %	50.303 ppb	207.525 ppb	139.241 %	136.243 %	131.931 %	155.117 %
Concentration RSD	3.2 %	0.4 %	1.5 %	1.4 %	0.5 %	0.3 %	0.9 %	1.3 %	2.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	12.080 ppb	49.310 ppb	134.132 %	156.223 %
Concentration per Run 1	11.963 ppb	48.306 ppb	140.805 %	159.776 %
Concentration per Run 2	12.531 ppb	50.408 ppb	133.351 %	153.522 %
Concentration per Run 3	11.745 ppb	49.215 ppb	128.241 %	155.372 %
Concentration RSD	3.4 %	2.1 %	4.7 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	93	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903897-3d10 6020TL	Rack	1		
Analysis started at:	4/4/2024 2:11:39 PM	Vial	60		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.937 %	82.463 %	5.097 ppb	49,372.584 ppb	2,310.090 ppb	560.672 ppb	4,952.985 ppb	6,744.537 ppb	105.948 %
Concentration per Run 1	99.391 %	71.082 %	5.122 ppb	53,699.893 ppb	2,489.529 ppb	570.222 ppb	5,393.860 ppb	7,084.351 ppb	104.701 %
Concentration per Run 2	98.141 %	80.597 %	5.156 ppb	49,728.984 ppb	2,329.443 ppb	559.457 ppb	5,043.820 ppb	6,278.898 ppb	107.443 %
Concentration per Run 3	99.278 %	95.709 %	5.013 ppb	44,688.874 ppb	2,111.296 ppb	552.336 ppb	4,421.276 ppb	6,870.362 ppb	105.699 %
Concentration RSD	0.7 %	15.1 %	1.5 %	9.1 %	8.2 %	1.6 %	9.9 %	6.2 %	1.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	85.566 %	49.366 ppb	19.132 ppb	142.298 ppb	1,272.293 ppb	52.191 ppb	52.738 ppb	25.842 ppb	53.663 ppb
Concentration per Run 1	82.091 %	52.786 ppb	20.517 ppb	149.147 ppb	1,313.318 ppb	54.881 ppb	56.895 ppb	27.132 ppb	55.461 ppb
Concentration per Run 2	85.566 %	49.089 ppb	19.028 ppb	139.218 ppb	1,225.693 ppb	50.212 ppb	51.166 ppb	25.528 ppb	51.478 ppb
Concentration per Run 3	89.041 %	46.223 ppb	17.851 ppb	138.531 ppb	1,277.867 ppb	51.480 ppb	50.153 ppb	24.867 ppb	54.050 ppb
Concentration RSD	4.1 %	6.7 %	7.0 %	4.2 %	3.5 %	4.6 %	6.9 %	4.5 %	3.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	112.288 %	103.799 %	11.556 ppb	9.963 ppb	145.048 ppb	95.927 ppb	105.667 %	101.372 %	4.795 ppb
Concentration per Run 1	111.535 %	96.541 %	12.243 ppb	12.171 ppb	151.562 ppb	97.473 ppb	104.345 %	100.755 %	4.937 ppb
Concentration per Run 2	113.334 %	108.800 %	10.564 ppb	7.738 ppb	140.533 ppb	95.325 ppb	105.342 %	100.791 %	4.802 ppb
Concentration per Run 3	111.994 %	106.057 %	11.861 ppb	9.980 ppb	143.049 ppb	94.984 ppb	107.315 %	102.571 %	4.646 ppb
Concentration RSD	0.8 %	6.2 %	7.6 %	22.3 %	4.0 %	1.4 %	1.4 %	1.0 %	3.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.133 ppb	109.604 %	114.015 %	46.357 ppb	223.335 ppb	138.232 %	131.559 %	128.718 %	145.279 %
Concentration per Run 1	5.164 ppb	111.292 %	112.812 %	46.058 ppb	222.114 ppb	139.407 %	129.401 %	128.152 %	143.064 %
Concentration per Run 2	5.148 ppb	108.068 %	114.004 %	45.889 ppb	224.468 ppb	136.314 %	131.943 %	126.836 %	145.969 %
Concentration per Run 3	5.087 ppb	109.452 %	115.229 %	47.123 ppb	223.423 ppb	138.974 %	133.333 %	131.167 %	146.804 %
Concentration RSD	0.8 %	1.5 %	1.1 %	1.4 %	0.5 %	1.2 %	1.5 %	1.7 %	1.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	11.738 ppb	48.131 ppb	128.511 %	146.232 %
Concentration per Run 1	11.458 ppb	46.465 ppb	126.663 %	148.096 %
Concentration per Run 2	11.742 ppb	49.497 ppb	127.076 %	143.721 %
Concentration per Run 3	12.014 ppb	48.431 ppb	131.795 %	146.879 %
Concentration RSD	2.4 %	3.2 %	2.2 %	1.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	94	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903897-5d10 6020TL	Rack	2		
Analysis started at:	4/4/2024 2:16:21 PM	Vial	2		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.479 %	76.306 %	51.415 ppb	49,739.532 ppb	7,011.235 ppb	339.884 ppb	8,586.485 ppb	10,244.750 ppb	108.795 %
Concentration per Run 1	98.785 %	77.239 %	51.066 ppb	50,879.125 ppb	7,080.168 ppb	337.253 ppb	8,537.113 ppb	9,875.113 ppb	111.192 %
Concentration per Run 2	97.193 %	73.321 %	52.038 ppb	48,686.737 ppb	7,140.634 ppb	344.236 ppb	8,798.662 ppb	10,467.202 ppb	108.275 %
Concentration per Run 3	96.459 %	78.358 %	51.142 ppb	49,652.735 ppb	6,812.902 ppb	338.163 ppb	8,423.680 ppb	10,391.934 ppb	106.917 %
Concentration RSD	1.2 %	3.5 %	1.1 %	2.2 %	2.5 %	1.1 %	2.2 %	3.1 %	2.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.955 %	48.955 ppb	46.504 ppb	134.215 ppb	6,495.080 ppb	52.039 ppb	52.340 ppb	49.918 ppb	57.537 ppb
Concentration per Run 1	91.390 %	49.518 ppb	47.381 ppb	134.766 ppb	6,573.738 ppb	52.284 ppb	53.384 ppb	49.594 ppb	58.124 ppb
Concentration per Run 2	92.517 %	49.677 ppb	46.619 ppb	134.206 ppb	6,485.482 ppb	51.829 ppb	51.463 ppb	50.145 ppb	57.114 ppb
Concentration per Run 3	94.959 %	47.668 ppb	45.511 ppb	133.674 ppb	6,426.022 ppb	52.004 ppb	52.172 ppb	50.015 ppb	57.372 ppb
Concentration RSD	2.0 %	2.3 %	2.0 %	0.4 %	1.1 %	0.4 %	1.9 %	0.6 %	0.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.695 %	100.269 %	52.378 ppb	52.824 ppb	96.433 ppb	54.311 ppb	107.451 %	102.516 %	2.274 ppb
Concentration per Run 1	113.947 %	98.542 %	52.004 ppb	53.120 ppb	97.688 ppb	55.812 ppb	108.672 %	97.940 %	2.219 ppb
Concentration per Run 2	114.932 %	101.325 %	52.827 ppb	55.303 ppb	94.945 ppb	53.139 ppb	106.934 %	103.753 %	2.274 ppb
Concentration per Run 3	112.207 %	100.940 %	52.303 ppb	50.048 ppb	96.665 ppb	53.982 ppb	106.749 %	105.856 %	2.329 ppb
Concentration RSD	1.2 %	1.5 %	0.8 %	5.0 %	1.4 %	2.5 %	1.0 %	4.0 %	2.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	50.482 ppb	111.337 %	116.285 %	53.232 ppb	73.307 ppb	140.367 %	133.232 %	132.825 %	146.707 %
Concentration per Run 1	52.718 ppb	109.304 %	110.495 %	55.097 ppb	77.099 ppb	145.396 %	127.844 %	137.355 %	141.730 %
Concentration per Run 2	48.951 ppb	112.183 %	121.563 %	51.954 ppb	69.374 ppb	138.946 %	134.736 %	131.111 %	146.105 %
Concentration per Run 3	49.776 ppb	112.524 %	116.797 %	52.645 ppb	73.449 ppb	136.758 %	137.117 %	130.008 %	152.288 %
Concentration RSD	3.9 %	1.6 %	4.8 %	3.1 %	5.3 %	3.2 %	3.6 %	3.0 %	3.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	46.274 ppb	45.955 ppb	140.864 %	157.465 %
Concentration per Run 1	46.079 ppb	42.581 ppb	138.680 %	157.563 %
Concentration per Run 2	45.953 ppb	46.838 ppb	143.805 %	159.559 %
Concentration per Run 3	46.790 ppb	48.446 ppb	140.106 %	155.275 %
Concentration RSD	1.0 %	6.6 %	1.9 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	95	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903897-4 6020TL	Rack	2		
Analysis started at:	4/4/2024 2:21:01 PM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.317 %	68.470 %	0.452 ppb	446,578.674 ppb	12,104.986 ppb	3,391.341 ppb	36,088.111 ppb	56,073.521 ppb	114.491 %
Concentration per Run 1	93.706 %	66.045 %	0.456 ppb	460,118.759 ppb	12,350.380 ppb	3,447.353 ppb	36,096.422 ppb	54,402.857 ppb	114.731 %
Concentration per Run 2	91.980 %	72.201 %	0.436 ppb	444,110.953 ppb	12,054.431 ppb	3,351.562 ppb	36,527.542 ppb	59,273.765 ppb	118.114 %
Concentration per Run 3	91.264 %	67.164 %	0.464 ppb	435,506.311 ppb	11,910.146 ppb	3,375.107 ppb	35,640.369 ppb	54,543.941 ppb	110.628 %
Concentration RSD	1.4 %	4.8 %	3.2 %	2.8 %	1.9 %	1.5 %	1.2 %	4.9 %	3.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	91.703 %	7.765 ppb	10.073 ppb	848.328 ppb	11,866.979 ppb	4.338 ppb	13.682 ppb	15.753 ppb	35.628 ppb
Concentration per Run 1	90.450 %	8.081 ppb	10.696 ppb	874.708 ppb	12,353.292 ppb	4.427 ppb	15.114 ppb	16.918 ppb	36.695 ppb
Concentration per Run 2	89.229 %	8.087 ppb	10.590 ppb	846.454 ppb	11,883.783 ppb	4.342 ppb	13.238 ppb	15.163 ppb	35.735 ppb
Concentration per Run 3	95.429 %	7.127 ppb	8.932 ppb	823.821 ppb	11,363.860 ppb	4.245 ppb	12.693 ppb	15.176 ppb	34.455 ppb
Concentration RSD	3.6 %	7.1 %	9.8 %	3.0 %	4.2 %	2.1 %	9.3 %	6.4 %	3.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.827 %	104.755 %	2.647 ppb	4.190 ppb	383.108 ppb	23.818 ppb	101.580 %	98.092 %	0.034 ppb
Concentration per Run 1	113.078 %	97.361 %	3.404 ppb	3.518 ppb	393.526 ppb	24.108 ppb	102.944 %	95.909 %	0.031 ppb
Concentration per Run 2	110.820 %	109.353 %	2.240 ppb	5.812 ppb	373.904 ppb	23.041 ppb	98.803 %	97.951 %	0.035 ppb
Concentration per Run 3	105.584 %	107.550 %	2.298 ppb	3.240 ppb	381.894 ppb	24.303 ppb	102.993 %	100.416 %	0.036 ppb
Concentration RSD	3.5 %	6.2 %	24.8 %	33.7 %	2.6 %	2.9 %	2.4 %	2.3 %	8.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.128 ppb	106.237 %	112.736 %	0.590 ppb	217.826 ppb	135.518 %	136.073 %	126.262 %	153.304 %
Concentration per Run 1	0.123 ppb	107.514 %	106.707 %	0.576 ppb	226.029 ppb	138.155 %	132.919 %	129.991 %	144.165 %
Concentration per Run 2	0.099 ppb	105.367 %	114.331 %	0.608 ppb	211.959 ppb	136.228 %	137.174 %	125.643 %	156.534 %
Concentration per Run 3	0.163 ppb	105.831 %	117.171 %	0.587 ppb	215.489 ppb	132.170 %	138.127 %	123.152 %	159.212 %
Concentration RSD	25.3 %	1.1 %	4.8 %	2.8 %	3.4 %	2.3 %	2.0 %	2.7 %	5.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.428 ppb	10.084 ppb	133.882 %	152.434 %
Concentration per Run 1	0.312 ppb	9.638 ppb	133.361 %	150.623 %
Concentration per Run 2	0.477 ppb	10.055 ppb	133.828 %	151.874 %
Concentration per Run 3	0.497 ppb	10.559 ppb	134.457 %	154.805 %
Concentration RSD	23.7 %	4.6 %	0.4 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	96	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417070-02 6020TL	Rack	1		
Analysis started at:	4/4/2024 2:25:42 PM	Vial	59		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.879 %	72.388 %	0.432 ppb	446,918.445 ppb	11,869.886 ppb	3,439.553 ppb	38,092.864 ppb	60,285.179 ppb	110.236 %
Concentration per Run 1	97.252 %	67.724 %	0.433 ppb	474,599.377 ppb	12,778.493 ppb	3,392.679 ppb	40,026.339 ppb	63,050.537 ppb	112.649 %
Concentration per Run 2	95.487 %	73.881 %	0.426 ppb	430,657.698 ppb	11,195.233 ppb	3,393.832 ppb	35,833.665 ppb	58,616.931 ppb	111.733 %
Concentration per Run 3	94.898 %	75.560 %	0.438 ppb	435,498.258 ppb	11,635.932 ppb	3,532.148 ppb	38,418.589 ppb	59,188.069 ppb	106.327 %
Concentration RSD	1.3 %	5.7 %	1.3 %	5.4 %	6.9 %	2.3 %	5.6 %	4.0 %	3.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	86.756 %	8.485 ppb	10.962 ppb	873.187 ppb	12,165.959 ppb	4.594 ppb	14.515 ppb	15.377 ppb	35.029 ppb
Concentration per Run 1	85.096 %	8.648 ppb	11.146 ppb	888.672 ppb	12,396.807 ppb	4.603 ppb	14.201 ppb	15.321 ppb	35.929 ppb
Concentration per Run 2	89.887 %	8.283 ppb	9.889 ppb	840.214 ppb	11,715.794 ppb	4.501 ppb	13.598 ppb	14.866 ppb	35.111 ppb
Concentration per Run 3	85.284 %	8.526 ppb	11.852 ppb	890.676 ppb	12,385.277 ppb	4.678 ppb	15.746 ppb	15.945 ppb	34.047 ppb
Concentration RSD	3.1 %	2.2 %	9.1 %	3.3 %	3.2 %	1.9 %	7.6 %	3.5 %	2.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.909 %	111.619 %	3.005 ppb	4.606 ppb	382.767 ppb	22.670 ppb	100.360 %	101.753 %	0.032 ppb
Concentration per Run 1	115.047 %	110.530 %	3.520 ppb	4.760 ppb	377.112 ppb	23.037 ppb	99.242 %	101.377 %	0.036 ppb
Concentration per Run 2	111.415 %	114.132 %	2.707 ppb	4.526 ppb	383.426 ppb	22.219 ppb	101.492 %	99.873 %	0.030 ppb
Concentration per Run 3	109.267 %	110.196 %	2.789 ppb	4.533 ppb	387.765 ppb	22.754 ppb	100.347 %	104.011 %	0.031 ppb
Concentration RSD	2.6 %	2.0 %	14.9 %	2.9 %	1.4 %	1.8 %	1.1 %	2.1 %	10.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.097 ppb	103.842 %	115.000 %	0.588 ppb	224.569 ppb	134.172 %	137.769 %	125.548 %	158.892 %
Concentration per Run 1	0.100 ppb	102.116 %	116.812 %	0.541 ppb	215.600 ppb	135.232 %	136.785 %	126.768 %	157.261 %
Concentration per Run 2	0.115 ppb	104.990 %	115.539 %	0.663 ppb	227.890 ppb	133.457 %	135.739 %	126.320 %	158.857 %
Concentration per Run 3	0.075 ppb	104.419 %	112.650 %	0.561 ppb	230.219 ppb	133.826 %	140.783 %	123.557 %	160.557 %
Concentration RSD	20.9 %	1.5 %	1.9 %	11.1 %	3.5 %	0.7 %	1.9 %	1.4 %	1.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.159 ppb	10.026 ppb	119.839 %	148.994 %
Concentration per Run 1	0.105 ppb	9.644 ppb	115.505 %	152.487 %
Concentration per Run 2	0.189 ppb	9.944 ppb	122.858 %	148.094 %
Concentration per Run 3	0.182 ppb	10.492 ppb	121.155 %	146.401 %
Concentration RSD	29.4 %	4.3 %	3.2 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	97	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417070-03 6020TL	Rack	2		
Analysis started at:	4/4/2024 2:30:24 PM	Vial	4		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	104.467 %	72.761 %	1.341 ppb	89,395.312 ppb	12,103.824 ppb	11,268.999 ppb	6,142.963 ppb	24,512.207 ppb	136.005 %
Concentration per Run 1	104.783 %	75.000 %	1.326 ppb	88,745.529 ppb	11,941.103 ppb	11,407.349 ppb	6,234.504 ppb	24,449.429 ppb	136.332 %
Concentration per Run 2	104.591 %	68.843 %	1.325 ppb	90,062.167 ppb	12,192.725 ppb	11,058.615 ppb	6,116.417 ppb	23,466.507 ppb	137.445 %
Concentration per Run 3	104.029 %	74.440 %	1.372 ppb	89,378.239 ppb	12,177.645 ppb	11,341.033 ppb	6,077.969 ppb	25,620.685 ppb	134.239 %
Concentration RSD	0.4 %	4.7 %	2.0 %	0.7 %	1.2 %	1.6 %	1.3 %	4.4 %	1.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	106.763 %	25.703 ppb	25.080 ppb	1,039.729 ppb	20,337.026 ppb	8.561 ppb	27.544 ppb	32.123 ppb	115.441 ppb
Concentration per Run 1	106.137 %	27.640 ppb	25.734 ppb	1,058.526 ppb	20,789.373 ppb	8.967 ppb	28.456 ppb	32.932 ppb	119.862 ppb
Concentration per Run 2	109.424 %	24.828 ppb	24.810 ppb	1,027.198 ppb	20,187.930 ppb	8.229 ppb	26.486 ppb	31.641 ppb	113.040 ppb
Concentration per Run 3	104.728 %	24.641 ppb	24.695 ppb	1,033.464 ppb	20,033.774 ppb	8.487 ppb	27.689 ppb	31.797 ppb	113.422 ppb
Concentration RSD	2.3 %	6.5 %	2.3 %	1.6 %	2.0 %	4.4 %	3.6 %	2.2 %	3.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	115.940 %	115.793 %	3.772 ppb	15.111 ppb	147.843 ppb	8.165 ppb	103.972 %	104.587 %	0.075 ppb
Concentration per Run 1	115.581 %	109.743 %	4.143 ppb	14.015 ppb	150.592 ppb	8.714 ppb	103.015 %	106.167 %	0.079 ppb
Concentration per Run 2	115.571 %	115.867 %	3.084 ppb	14.980 ppb	144.581 ppb	7.881 ppb	105.781 %	105.189 %	0.067 ppb
Concentration per Run 3	116.668 %	121.769 %	4.088 ppb	16.340 ppb	148.356 ppb	7.899 ppb	103.119 %	102.405 %	0.079 ppb
Concentration RSD	0.5 %	5.2 %	15.8 %	7.7 %	2.1 %	5.8 %	1.5 %	1.9 %	9.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.382 ppb	105.789 %	118.630 %	0.712 ppb	222.327 ppb	141.838 %	147.837 %	126.364 %	162.596 %
Concentration per Run 1	0.336 ppb	106.303 %	116.666 %	0.706 ppb	225.816 ppb	142.500 %	144.710 %	124.961 %	157.614 %
Concentration per Run 2	0.359 ppb	105.105 %	120.780 %	0.663 ppb	221.627 ppb	142.589 %	149.780 %	129.526 %	165.818 %
Concentration per Run 3	0.450 ppb	105.958 %	118.444 %	0.765 ppb	219.538 ppb	140.423 %	149.022 %	124.606 %	164.357 %
Concentration RSD	15.8 %	0.6 %	1.7 %	7.2 %	1.4 %	0.9 %	1.8 %	2.2 %	2.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.229 ppb	17.245 ppb	125.005 %	148.242 %
Concentration per Run 1	0.184 ppb	17.412 ppb	123.543 %	152.477 %
Concentration per Run 2	0.252 ppb	16.813 ppb	126.493 %	145.277 %
Concentration per Run 3	0.250 ppb	17.509 ppb	124.978 %	146.972 %
Concentration RSD	16.9 %	2.2 %	1.2 %	2.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	98	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903897-6d5 6020TL	Rack	2		
Analysis started at:	4/4/2024 2:35:04 PM	Vial	3		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	104.755 %	76.306 %	0.096 ppb	85,086.546 ppb	2,241.483 ppb	637.662 ppb	7,243.737 ppb	11,769.835 ppb	112.469 %
Concentration per Run 1	108.066 %	75.560 %	0.091 ppb	87,090.777 ppb	2,380.884 ppb	608.671 ppb	7,750.185 ppb	12,747.082 ppb	118.947 %
Concentration per Run 2	103.044 %	69.403 %	0.105 ppb	89,140.699 ppb	2,245.611 ppb	643.004 ppb	7,043.075 ppb	11,204.788 ppb	108.501 %
Concentration per Run 3	103.155 %	83.955 %	0.092 ppb	79,028.163 ppb	2,097.953 ppb	661.312 ppb	6,937.951 ppb	11,357.636 ppb	109.958 %
Concentration RSD	2.7 %	9.6 %	8.2 %	6.3 %	6.3 %	4.2 %	6.1 %	7.2 %	5.0 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.675 %	1.767 ppb	0.701 ppb	173.069 ppb	2,413.346 ppb	0.860 ppb	2.565 ppb	3.283 ppb	7.686 ppb
Concentration per Run 1	91.390 %	1.965 ppb	0.809 ppb	176.956 ppb	2,519.728 ppb	0.820 ppb	2.709 ppb	3.331 ppb	7.623 ppb
Concentration per Run 2	94.677 %	1.757 ppb	0.683 ppb	174.220 ppb	2,415.325 ppb	0.860 ppb	2.398 ppb	3.560 ppb	7.921 ppb
Concentration per Run 3	94.959 %	1.581 ppb	0.612 ppb	168.029 ppb	2,304.984 ppb	0.900 ppb	2.588 ppb	2.958 ppb	7.515 ppb
Concentration RSD	2.1 %	10.9 %	14.3 %	2.6 %	4.4 %	4.7 %	6.1 %	9.3 %	2.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	115.157 %	105.952 %	0.479 ppb	1.285 ppb	78.957 ppb	4.868 ppb	107.195 %	101.583 %	0.007 ppb
Concentration per Run 1	118.769 %	103.796 %	0.529 ppb	1.710 ppb	81.057 ppb	5.113 ppb	109.649 %	97.277 %	0.006 ppb
Concentration per Run 2	112.250 %	101.805 %	0.479 ppb	1.530 ppb	80.954 ppb	4.709 ppb	106.451 %	102.113 %	0.005 ppb
Concentration per Run 3	114.452 %	112.255 %	0.427 ppb	0.617 ppb	74.859 ppb	4.783 ppb	105.484 %	105.360 %	0.009 ppb
Concentration RSD	2.9 %	5.2 %	10.7 %	45.6 %	4.5 %	4.4 %	2.0 %	4.0 %	31.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.028 ppb	112.467 %	115.762 %	0.142 ppb	45.491 ppb	141.331 %	135.315 %	129.470 %	153.131 %
Concentration per Run 1	0.031 ppb	118.361 %	111.801 %	0.129 ppb	46.819 ppb	147.099 %	128.741 %	128.945 %	147.244 %
Concentration per Run 2	0.025 ppb	111.516 %	116.339 %	0.137 ppb	44.431 ppb	139.315 %	138.703 %	127.979 %	154.671 %
Concentration per Run 3	0.029 ppb	107.523 %	119.147 %	0.161 ppb	45.225 ppb	137.580 %	138.503 %	131.487 %	157.479 %
Concentration RSD	10.4 %	4.9 %	3.2 %	11.8 %	2.7 %	3.6 %	4.2 %	1.4 %	3.5 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.057 ppb	1.986 ppb	144.456 %	147.173 %
Concentration per Run 1	0.035 ppb	1.926 ppb	151.089 %	144.427 %
Concentration per Run 2	0.056 ppb	2.081 ppb	146.252 %	145.450 %
Concentration per Run 3	0.079 ppb	1.952 ppb	136.028 %	151.642 %
Concentration RSD	38.8 %	4.2 %	5.3 %	2.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	99	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 2:44:10 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	106.154 %	73.880 %	59.572 ppb	6,596.754 ppb	6,240.552 ppb	66.253 ppb	6,381.798 ppb	6,863.724 ppb	106.344 %
Concentration per Run 1	108.462 %	76.119 %	58.808 ppb	6,564.921 ppb	6,351.560 ppb	66.381 ppb	6,312.459 ppb	7,002.512 ppb	109.629 %
Concentration per Run 2	105.449 %	73.321 %	59.566 ppb	6,677.513 ppb	6,300.618 ppb	66.510 ppb	6,584.797 ppb	7,273.185 ppb	108.099 %
Concentration per Run 3	104.551 %	72.201 %	60.343 ppb	6,547.827 ppb	6,069.477 ppb	65.867 ppb	6,248.140 ppb	6,315.474 ppb	101.303 %
Recovery Percentage 1			99.287 %	109.946 %	104.009 %	110.421 %	106.363 %	114.395 %	
Concentration RSD	1.9 %	2.7 %	1.3 %	1.1 %	2.4 %	0.5 %	2.8 %	7.2 %	4.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	98.434 %	54.349 ppb	54.885 ppb	61.901 ppb	6,422.463 ppb	62.401 ppb	61.228 ppb	57.368 ppb	61.603 ppb
Concentration per Run 1	100.219 %	53.808 ppb	54.325 ppb	62.783 ppb	6,331.944 ppb	64.845 ppb	62.008 ppb	57.735 ppb	62.784 ppb
Concentration per Run 2	96.368 %	55.387 ppb	55.531 ppb	61.027 ppb	6,463.951 ppb	61.016 ppb	60.858 ppb	58.424 ppb	61.396 ppb
Concentration per Run 3	98.716 %	53.853 ppb	54.800 ppb	61.892 ppb	6,471.493 ppb	61.342 ppb	60.817 ppb	55.946 ppb	60.628 ppb
Recovery Percentage 1		90.582 %	91.476 %	103.168 %	107.041 %	104.002 %	102.046 %	95.614 %	102.671 %
Concentration RSD	2.0 %	1.7 %	1.1 %	1.4 %	1.2 %	3.4 %	1.1 %	2.2 %	1.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.992 %	112.456 %	58.941 ppb	60.282 ppb	61.387 ppb	62.670 ppb	107.887 %	108.641 %	59.711 ppb
Concentration per Run 1	111.976 %	110.315 %	61.892 ppb	60.574 ppb	65.014 ppb	63.861 ppb	109.883 %	106.038 %	62.204 ppb
Concentration per Run 2	113.766 %	114.160 %	56.809 ppb	61.694 ppb	62.313 ppb	62.282 ppb	106.848 %	107.696 %	60.278 ppb
Concentration per Run 3	110.235 %	112.893 %	58.121 ppb	58.579 ppb	56.835 ppb	61.866 ppb	106.929 %	112.188 %	56.652 ppb
Recovery Percentage 1			98.234 %	100.471 %	102.312 %	104.449 %			99.519 %
Concentration RSD	1.6 %	1.7 %	4.5 %	2.6 %	6.8 %	1.7 %	1.6 %	2.9 %	4.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	60.804 ppb	108.546 %	125.445 %	63.487 ppb	65.421 ppb	138.086 %	138.433 %	126.363 %	156.637 %
Concentration per Run 1	63.255 ppb	111.284 %	120.111 %	66.262 ppb	69.461 ppb	137.078 %	132.426 %	127.799 %	154.085 %
Concentration per Run 2	61.013 ppb	106.910 %	122.969 %	65.140 ppb	65.506 ppb	138.865 %	137.959 %	126.983 %	156.079 %
Concentration per Run 3	58.143 ppb	107.443 %	133.256 %	59.058 ppb	61.297 ppb	138.314 %	144.914 %	124.308 %	159.746 %
Recovery Percentage 1	101.340 %			105.811 %	109.036 %				
Concentration RSD	4.2 %	2.2 %	5.5 %	6.1 %	6.2 %	0.7 %	4.5 %	1.4 %	1.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	58.532 ppb	55.492 ppb	126.819 %	156.947 %
Concentration per Run 1	59.098 ppb	55.313 ppb	127.814 %	153.444 %
Concentration per Run 2	60.359 ppb	55.202 ppb	123.311 %	153.180 %
Concentration per Run 3	56.138 ppb	55.962 ppb	129.333 %	164.217 %
Recovery Percentage 1	97.553 %	92.487 %		
Concentration RSD	3.7 %	0.7 %	2.5 %	4.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	100	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 2:48:55 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	107.713 %	85.634 %	0.020 ppb	43.493 ppb	-2.049 ppb	-0.384 ppb	30.148 ppb	-40.705 ppb	107.931 %
Concentration per Run 1	111.121 %	79.478 %	0.019 ppb	57.038 ppb	-0.841 ppb	-0.416 ppb	40.605 ppb	-33.256 ppb	111.127 %
Concentration per Run 2	106.237 %	88.433 %	0.024 ppb	36.794 ppb	-2.180 ppb	-0.395 ppb	19.678 ppb	-55.871 ppb	109.000 %
Concentration per Run 3	105.781 %	88.992 %	0.018 ppb	36.647 ppb	-3.126 ppb	-0.340 ppb	30.160 ppb	-32.989 ppb	103.665 %
Recovery Percentage 1			4.086 %	43.493 %	-2.927 %	-3.836 %	30.148 %	-40.705 %	
Concentration RSD	2.7 %	6.2 %	16.9 %	27.0 %	56.0 %	10.2 %	34.7 %	32.3 %	3.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.983 %	-0.059 ppb	-1.720 ppb	-0.088 ppb	4.674 ppb	-0.004 ppb	0.003 ppb	-0.005 ppb	0.311 ppb
Concentration per Run 1	92.705 %	-0.096 ppb	-1.701 ppb	-0.091 ppb	4.623 ppb	-0.011 ppb	0.011 ppb	-0.010 ppb	0.302 ppb
Concentration per Run 2	89.323 %	-0.068 ppb	-1.749 ppb	-0.096 ppb	4.045 ppb	-0.007 ppb	-0.049 ppb	0.005 ppb	0.313 ppb
Concentration per Run 3	90.920 %	-0.013 ppb	-1.710 ppb	-0.076 ppb	5.355 ppb	0.006 ppb	0.046 ppb	-0.008 ppb	0.319 ppb
Recovery Percentage 1		-1.181 %	-171.977 %	-8.755 %	9.349 %	-0.792 %	0.132 %	-0.453 %	6.223 %
Concentration RSD	1.9 %	71.6 %	1.5 %	12.0 %	14.0 %	225.8 %	1,807.4 %	178.4 %	2.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.371 %	106.416 %	-0.068 ppb	0.118 ppb	0.019 ppb	0.172 ppb	107.887 %	107.744 %	0.003 ppb
Concentration per Run 1	110.918 %	105.238 %	-0.001 ppb	0.183 ppb	0.025 ppb	0.181 ppb	107.682 %	100.850 %	0.001 ppb
Concentration per Run 2	109.626 %	111.774 %	-0.028 ppb	0.182 ppb	-0.003 ppb	0.144 ppb	108.234 %	112.108 %	0.000 ppb
Concentration per Run 3	110.568 %	102.236 %	-0.175 ppb	-0.010 ppb	0.036 ppb	0.190 ppb	107.746 %	110.273 %	0.006 ppb
Recovery Percentage 1			-13.607 %	2.366 %	3.856 %	8.591 %			0.632 %
Concentration RSD	0.6 %	4.6 %	137.7 %	93.7 %	103.3 %	14.1 %	0.3 %	5.6 %	135.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.006 ppb	114.373 %	119.746 %	0.044 ppb	0.018 ppb	139.407 %	133.776 %	125.155 %	147.391 %
Concentration per Run 1	0.012 ppb	113.995 %	115.914 %	0.044 ppb	-0.020 ppb	139.124 %	127.827 %	124.951 %	140.684 %
Concentration per Run 2	0.003 ppb	117.680 %	117.857 %	0.029 ppb	0.026 ppb	138.545 %	136.762 %	126.606 %	153.019 %
Concentration per Run 3	0.002 ppb	111.445 %	125.466 %	0.059 ppb	0.047 ppb	140.551 %	136.739 %	123.909 %	148.470 %
Recovery Percentage 1				1.106 %	3.561 %				
Concentration RSD	94.9 %	2.7 %	4.2 %	33.4 %	191.5 %	0.7 %	3.9 %	1.1 %	4.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.374 ppb	0.011 ppb	138.188 %	156.455 %
Concentration per Run 1	0.235 ppb	0.012 ppb	139.918 %	155.248 %
Concentration per Run 2	0.458 ppb	0.010 ppb	140.271 %	154.037 %
Concentration per Run 3	0.428 ppb	0.011 ppb	134.375 %	160.080 %
Recovery Percentage 1	37.370 %	1.099 %		
Concentration RSD	32.3 %	7.5 %	2.4 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 101
Analysis label: wg1903862-1 6020TL
Analysis started at: 4/4/2024 3:13:11 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 5
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	109.721 %	85.448 %	0.012 ppb	-12.971 ppb	2.066 ppb	1.037 ppb	-11.217 ppb	-15.929 ppb	104.795 %
Concentration per Run 1	112.318 %	81.157 %	0.009 ppb	-14.129 ppb	-2.120 ppb	1.028 ppb	-4.299 ppb	2.911 ppb	108.536 %
Concentration per Run 2	108.840 %	94.030 %	0.010 ppb	-27.710 ppb	6.584 ppb	1.117 ppb	-11.729 ppb	5.512 ppb	103.550 %
Concentration per Run 3	108.005 %	81.157 %	0.018 ppb	2.925 ppb	1.734 ppb	0.967 ppb	-17.624 ppb	-56.210 ppb	102.300 %
Concentration RSD	2.1 %	8.7 %	42.0 %	118.3 %	211.1 %	7.3 %	59.5 %	219.1 %	3.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	103.726 %	-0.096 ppb	-0.713 ppb	0.116 ppb	0.086 ppb	0.002 ppb	0.060 ppb	0.063 ppb	0.339 ppb
Concentration per Run 1	106.982 %	-0.096 ppb	-0.573 ppb	0.120 ppb	-0.888 ppb	0.004 ppb	0.013 ppb	0.051 ppb	0.323 ppb
Concentration per Run 2	102.004 %	-0.096 ppb	-0.693 ppb	0.143 ppb	2.054 ppb	0.001 ppb	0.158 ppb	0.084 ppb	0.316 ppb
Concentration per Run 3	102.192 %	-0.096 ppb	-0.872 ppb	0.085 ppb	-0.908 ppb	0.000 ppb	0.008 ppb	0.053 ppb	0.379 ppb
Concentration RSD	2.7 %		21.2 %	25.1 %	1,977.3 %	135.0 %	143.6 %	29.8 %	10.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.475 %	113.834 %	-0.084 ppb	0.000 ppb	0.075 ppb	0.002 ppb	108.206 %	113.729 %	-0.001 ppb
Concentration per Run 1	116.313 %	110.406 %	0.030 ppb	0.022 ppb	0.094 ppb	-0.011 ppb	109.288 %	109.529 %	-0.001 ppb
Concentration per Run 2	112.492 %	112.017 %	-0.232 ppb	-0.007 ppb	0.089 ppb	0.008 ppb	107.745 %	116.654 %	-0.001 ppb
Concentration per Run 3	111.620 %	119.080 %	-0.051 ppb	-0.015 ppb	0.041 ppb	0.008 ppb	107.587 %	115.003 %	0.000 ppb
Concentration RSD	2.2 %	4.1 %	159.2 %	33,423.3 %	38.9 %	660.6 %	0.9 %	3.3 %	65.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.001 ppb	108.120 %	129.988 %	0.013 ppb	0.016 ppb	136.568 %	139.016 %	125.540 %	155.083 %
Concentration per Run 1	0.002 ppb	106.133 %	126.135 %	0.004 ppb	0.003 ppb	138.676 %	135.243 %	128.173 %	149.832 %
Concentration per Run 2	0.002 ppb	108.793 %	131.981 %	0.004 ppb	0.001 ppb	136.697 %	143.820 %	125.406 %	159.937 %
Concentration per Run 3	-0.002 ppb	109.435 %	131.850 %	0.029 ppb	0.045 ppb	134.331 %	137.986 %	123.039 %	155.481 %
Concentration RSD	228.9 %	1.6 %	2.6 %	114.1 %	151.7 %	1.6 %	3.2 %	2.0 %	3.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.031 ppb	0.010 ppb	124.876 %	169.506 %
Concentration per Run 1	0.017 ppb	0.009 ppb	125.121 %	174.148 %
Concentration per Run 2	0.035 ppb	0.011 ppb	125.627 %	165.902 %
Concentration per Run 3	0.041 ppb	0.010 ppb	123.882 %	168.469 %
Concentration RSD	39.4 %	8.5 %	0.7 %	2.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	102	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903862-2d10 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:17:51 PM	Vial	6		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	105.495 %	85.261 %	4.939 ppb	1,164.979 ppb	1,221.506 ppb	175.133 ppb	1,093.502 ppb	578.719 ppb	109.654 %
Concentration per Run 1	106.024 %	87.873 %	5.075 ppb	1,148.038 ppb	1,166.775 ppb	185.755 ppb	998.940 ppb	522.869 ppb	104.576 %
Concentration per Run 2	104.429 %	77.239 %	5.014 ppb	1,252.828 ppb	1,306.814 ppb	178.805 ppb	1,185.833 ppb	602.081 ppb	107.122 %
Concentration per Run 3	106.032 %	90.672 %	4.729 ppb	1,094.070 ppb	1,190.927 ppb	160.840 ppb	1,095.734 ppb	611.206 ppb	117.265 %
Concentration RSD	0.9 %	8.3 %	3.7 %	6.9 %	6.1 %	7.3 %	8.5 %	8.4 %	6.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.112 %	45.983 ppb	17.848 ppb	55.725 ppb	108.850 ppb	51.474 ppb	51.879 ppb	25.265 ppb	52.189 ppb
Concentration per Run 1	95.053 %	47.747 ppb	18.000 ppb	54.784 ppb	111.409 ppb	52.257 ppb	50.971 ppb	25.212 ppb	51.683 ppb
Concentration per Run 2	90.544 %	44.986 ppb	18.711 ppb	57.356 ppb	112.877 ppb	52.272 ppb	52.507 ppb	24.945 ppb	54.363 ppb
Concentration per Run 3	93.738 %	45.216 ppb	16.833 ppb	55.035 ppb	102.265 ppb	49.893 ppb	52.160 ppb	25.638 ppb	50.521 ppb
Concentration RSD	2.5 %	3.3 %	5.3 %	2.5 %	5.3 %	2.7 %	1.6 %	1.4 %	3.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.544 %	105.386 %	11.764 ppb	11.961 ppb	115.166 ppb	103.407 ppb	106.845 %	103.344 %	5.009 ppb
Concentration per Run 1	110.742 %	103.993 %	12.086 ppb	12.465 ppb	116.684 ppb	105.349 ppb	101.944 %	101.447 %	5.227 ppb
Concentration per Run 2	108.452 %	103.151 %	11.333 ppb	12.692 ppb	115.746 ppb	102.192 ppb	107.649 %	103.485 %	4.906 ppb
Concentration per Run 3	112.439 %	109.014 %	11.873 ppb	10.725 ppb	113.068 ppb	102.680 ppb	110.943 %	105.100 %	4.894 ppb
Concentration RSD	1.8 %	3.0 %	3.3 %	9.0 %	1.6 %	1.6 %	4.3 %	1.8 %	3.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.335 ppb	118.244 %	117.748 %	50.928 ppb	213.101 ppb	141.159 %	129.103 %	130.042 %	142.775 %
Concentration per Run 1	5.510 ppb	107.644 %	115.702 %	51.941 ppb	215.045 ppb	136.038 %	125.397 %	125.269 %	138.552 %
Concentration per Run 2	5.468 ppb	117.588 %	117.612 %	50.815 ppb	211.779 ppb	137.375 %	129.966 %	126.807 %	144.208 %
Concentration per Run 3	5.028 ppb	129.500 %	119.930 %	50.028 ppb	212.478 ppb	150.062 %	131.946 %	138.050 %	145.564 %
Concentration RSD	5.0 %	9.3 %	1.8 %	1.9 %	0.8 %	5.5 %	2.6 %	5.4 %	2.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	11.891 ppb	46.532 ppb	144.717 %	147.309 %
Concentration per Run 1	11.776 ppb	45.439 ppb	121.519 %	150.638 %
Concentration per Run 2	12.143 ppb	49.158 ppb	123.513 %	144.603 %
Concentration per Run 3	11.755 ppb	45.000 ppb	189.119 %	146.686 %
Concentration RSD	1.8 %	4.9 %	26.6 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	103	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903862-3d10 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:22:32 PM	Vial	8		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.883 %	80.783 %	5.166 ppb	2,636.997 ppb	1,978.275 ppb	193.752 ppb	1,452.665 ppb	3,512.145 ppb	107.023 %
Concentration per Run 1	104.217 %	87.313 %	5.144 ppb	2,478.030 ppb	1,869.133 ppb	195.751 ppb	1,431.133 ppb	3,599.485 ppb	107.227 %
Concentration per Run 2	102.091 %	74.440 %	5.154 ppb	2,786.413 ppb	2,114.045 ppb	195.146 ppb	1,545.711 ppb	3,715.081 ppb	107.634 %
Concentration per Run 3	102.340 %	80.597 %	5.200 ppb	2,646.547 ppb	1,951.645 ppb	190.358 ppb	1,381.150 ppb	3,221.868 ppb	106.207 %
Concentration RSD	1.1 %	8.0 %	0.6 %	5.9 %	6.3 %	1.5 %	5.8 %	7.3 %	0.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	91.014 %	48.374 ppb	17.960 ppb	665.335 ppb	145.025 ppb	51.811 ppb	50.503 ppb	23.995 ppb	51.025 ppb
Concentration per Run 1	90.168 %	49.357 ppb	18.405 ppb	673.057 ppb	148.883 ppb	53.126 ppb	51.501 ppb	25.134 ppb	52.503 ppb
Concentration per Run 2	88.760 %	51.220 ppb	18.595 ppb	673.109 ppb	153.435 ppb	52.021 ppb	49.327 ppb	22.984 ppb	50.110 ppb
Concentration per Run 3	94.114 %	44.544 ppb	16.879 ppb	649.840 ppb	132.757 ppb	50.287 ppb	50.681 ppb	23.866 ppb	50.462 ppb
Concentration RSD	3.0 %	7.1 %	5.2 %	2.0 %	7.5 %	2.8 %	2.2 %	4.5 %	2.5 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.130 %	108.212 %	11.490 ppb	11.736 ppb	120.105 ppb	99.977 ppb	107.966 %	102.626 %	5.000 ppb
Concentration per Run 1	114.153 %	103.174 %	11.888 ppb	11.660 ppb	121.953 ppb	101.872 ppb	110.864 %	102.046 %	4.829 ppb
Concentration per Run 2	110.795 %	111.033 %	10.992 ppb	11.278 ppb	120.403 ppb	98.614 ppb	106.384 %	102.066 %	5.110 ppb
Concentration per Run 3	114.441 %	110.428 %	11.592 ppb	12.269 ppb	117.959 ppb	99.443 ppb	106.650 %	103.765 %	5.062 ppb
Concentration RSD	1.8 %	4.0 %	4.0 %	4.3 %	1.7 %	1.7 %	2.3 %	1.0 %	3.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.280 ppb	111.565 %	118.244 %	52.654 ppb	213.131 ppb	137.039 %	127.681 %	124.668 %	141.103 %
Concentration per Run 1	5.272 ppb	112.685 %	116.699 %	52.072 ppb	214.841 ppb	140.185 %	123.900 %	123.560 %	138.300 %
Concentration per Run 2	5.394 ppb	111.018 %	117.857 %	53.715 ppb	210.771 ppb	134.457 %	129.906 %	124.920 %	140.754 %
Concentration per Run 3	5.174 ppb	110.991 %	120.175 %	52.173 ppb	213.781 ppb	136.475 %	129.236 %	125.525 %	144.256 %
Concentration RSD	2.1 %	0.9 %	1.5 %	1.7 %	1.0 %	2.1 %	2.6 %	0.8 %	2.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	12.150 ppb	50.725 ppb	124.724 %	143.532 %
Concentration per Run 1	11.839 ppb	50.335 ppb	125.681 %	147.830 %
Concentration per Run 2	12.269 ppb	50.084 ppb	126.280 %	142.090 %
Concentration per Run 3	12.342 ppb	51.756 ppb	122.212 %	140.676 %
Concentration RSD	2.2 %	1.8 %	1.8 %	2.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	104	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903862-4d10 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:27:13 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.600 %	77.052 %	5.384 ppb	2,874.768 ppb	2,159.089 ppb	195.186 ppb	1,518.112 ppb	3,932.096 ppb	110.318 %
Concentration per Run 1	105.168 %	82.276 %	5.396 ppb	2,760.962 ppb	2,056.890 ppb	193.494 ppb	1,569.526 ppb	3,743.789 ppb	109.402 %
Concentration per Run 2	102.578 %	68.843 %	5.403 ppb	3,111.954 ppb	2,251.259 ppb	196.757 ppb	1,508.870 ppb	3,745.027 ppb	113.802 %
Concentration per Run 3	100.055 %	80.037 %	5.355 ppb	2,751.388 ppb	2,169.118 ppb	195.309 ppb	1,475.939 ppb	4,307.473 ppb	107.750 %
Concentration RSD	2.5 %	9.3 %	0.5 %	7.1 %	4.5 %	0.8 %	3.1 %	8.3 %	2.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.198 %	52.325 ppb	19.597 ppb	715.293 ppb	139.687 ppb	55.449 ppb	55.916 ppb	26.251 ppb	57.101 ppb
Concentration per Run 1	85.754 %	54.111 ppb	20.607 ppb	730.522 ppb	147.068 ppb	57.113 ppb	55.833 ppb	24.950 ppb	56.240 ppb
Concentration per Run 2	87.539 %	54.098 ppb	19.735 ppb	724.351 ppb	145.126 ppb	56.360 ppb	57.666 ppb	27.680 ppb	60.370 ppb
Concentration per Run 3	94.302 %	48.766 ppb	18.448 ppb	691.005 ppb	126.867 ppb	52.875 ppb	54.248 ppb	26.124 ppb	54.694 ppb
Concentration RSD	5.1 %	5.9 %	5.5 %	3.0 %	8.0 %	4.1 %	3.1 %	5.2 %	5.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	112.151 %	102.373 %	12.979 ppb	12.338 ppb	127.473 ppb	104.544 ppb	108.407 %	104.858 %	5.193 ppb
Concentration per Run 1	111.924 %	102.405 %	13.415 ppb	9.623 ppb	127.196 ppb	105.625 ppb	111.214 %	103.002 %	5.330 ppb
Concentration per Run 2	112.952 %	98.656 %	13.265 ppb	14.020 ppb	128.831 ppb	107.010 ppb	108.956 %	106.428 %	5.147 ppb
Concentration per Run 3	111.576 %	106.058 %	12.259 ppb	13.369 ppb	126.391 ppb	100.997 ppb	105.050 %	105.143 %	5.100 ppb
Concentration RSD	0.6 %	3.6 %	4.8 %	19.2 %	1.0 %	3.0 %	2.9 %	1.7 %	2.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.455 ppb	115.031 %	118.473 %	54.652 ppb	222.740 ppb	138.838 %	127.408 %	127.709 %	141.825 %
Concentration per Run 1	5.466 ppb	119.971 %	113.400 %	56.289 ppb	224.368 ppb	142.589 %	123.178 %	129.910 %	136.699 %
Concentration per Run 2	5.465 ppb	111.516 %	117.581 %	54.719 ppb	220.926 ppb	139.949 %	128.870 %	127.076 %	144.291 %
Concentration per Run 3	5.433 ppb	113.606 %	124.437 %	52.949 ppb	222.928 ppb	133.975 %	130.175 %	126.142 %	144.486 %
Concentration RSD	0.3 %	3.8 %	4.7 %	3.1 %	0.8 %	3.2 %	2.9 %	1.5 %	3.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	12.066 ppb	51.131 ppb	137.727 %	148.185 %
Concentration per Run 1	11.737 ppb	50.986 ppb	138.719 %	153.287 %
Concentration per Run 2	11.973 ppb	50.944 ppb	138.158 %	146.938 %
Concentration per Run 3	12.489 ppb	51.463 ppb	136.304 %	144.331 %
Concentration RSD	3.2 %	0.6 %	0.9 %	3.1 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	105	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	wg1903862-5d10 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:31:55 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	102.395 %	85.634 %	0.020 ppb	1,421.264 ppb	763.300 ppb	12.309 ppb	338.805 ppb	3,185.485 ppb	108.849 %
Concentration per Run 1	104.937 %	84.515 %	0.020 ppb	1,481.342 ppb	768.706 ppb	12.053 ppb	373.721 ppb	3,302.079 ppb	111.285 %
Concentration per Run 2	101.037 %	86.754 %	0.023 ppb	1,353.925 ppb	770.852 ppb	12.467 ppb	304.890 ppb	2,527.433 ppb	107.442 %
Concentration per Run 3	101.212 %	85.634 %	0.018 ppb	1,428.523 ppb	750.343 ppb	12.406 ppb	337.804 ppb	3,726.941 ppb	107.819 %
Concentration RSD	2.2 %	1.3 %	11.6 %	4.5 %	1.5 %	1.8 %	10.2 %	19.1 %	1.9 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.986 %	0.013 ppb	-1.334 ppb	641.981 ppb	28.474 ppb	0.099 ppb	0.064 ppb	0.074 ppb	0.169 ppb
Concentration per Run 1	88.854 %	0.073 ppb	-1.143 ppb	677.388 ppb	26.582 ppb	0.123 ppb	0.107 ppb	0.057 ppb	0.118 ppb
Concentration per Run 2	95.523 %	-0.017 ppb	-1.437 ppb	623.106 ppb	29.862 ppb	0.103 ppb	0.019 ppb	0.084 ppb	0.239 ppb
Concentration per Run 3	94.583 %	-0.017 ppb	-1.422 ppb	625.448 ppb	28.979 ppb	0.070 ppb	0.068 ppb	0.080 ppb	0.151 ppb
Concentration RSD	3.9 %	393.0 %	12.4 %	4.8 %	6.0 %	27.6 %	68.9 %	20.1 %	37.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.698 %	106.576 %	-0.008 ppb	0.054 ppb	9.671 ppb	0.572 ppb	108.931 %	106.837 %	0.000 ppb
Concentration per Run 1	115.300 %	101.874 %	-0.058 ppb	0.011 ppb	10.416 ppb	0.549 ppb	110.924 %	103.379 %	-0.001 ppb
Concentration per Run 2	115.200 %	106.872 %	-0.039 ppb	0.169 ppb	8.747 ppb	0.659 ppb	108.232 %	109.450 %	0.001 ppb
Concentration per Run 3	110.594 %	110.982 %	0.071 ppb	-0.018 ppb	9.852 ppb	0.510 ppb	107.637 %	107.682 %	-0.001 ppb
Concentration RSD	2.4 %	4.3 %	815.4 %	185.3 %	8.8 %	13.5 %	1.6 %	2.9 %	383.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	113.420 %	117.645 %	0.222 ppb	2.086 ppb	136.431 %	128.759 %	129.019 %	141.567 %
Concentration per Run 1	0.003 ppb	114.627 %	113.580 %	0.188 ppb	2.071 ppb	140.642 %	126.075 %	131.617 %	139.515 %
Concentration per Run 2	0.003 ppb	114.381 %	118.266 %	0.288 ppb	2.279 ppb	137.281 %	130.193 %	129.980 %	140.460 %
Concentration per Run 3	0.003 ppb	111.253 %	121.090 %	0.191 ppb	1.906 ppb	131.369 %	130.010 %	125.458 %	144.725 %
Concentration RSD	4.9 %	1.7 %	3.2 %	25.6 %	8.9 %	3.4 %	1.8 %	2.5 %	2.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.104 ppb	0.038 ppb	138.667 %	153.507 %
Concentration per Run 1	0.077 ppb	0.037 ppb	140.023 %	153.161 %
Concentration per Run 2	0.121 ppb	0.039 ppb	137.607 %	153.843 %
Concentration per Run 3	0.113 ppb	0.039 ppb	138.372 %	153.515 %
Concentration RSD	22.9 %	2.3 %	0.9 %	0.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 106
Analysis label: wg1903862-6d5 6020TL
Analysis started at: 4/4/2024 3:36:36 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 11
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	101.498 %	77.798 %	0.021 ppb	3,008.944 ppb	1,623.530 ppb	21.918 ppb	685.035 ppb	5,896.727 ppb	111.092 %
Concentration per Run 1	102.885 %	73.321 %	0.024 ppb	3,201.550 ppb	1,610.108 ppb	21.258 ppb	666.248 ppb	6,715.313 ppb	111.985 %
Concentration per Run 2	100.659 %	74.440 %	0.021 ppb	3,023.819 ppb	1,710.702 ppb	20.849 ppb	753.627 ppb	5,059.268 ppb	112.936 %
Concentration per Run 3	100.949 %	85.634 %	0.016 ppb	2,801.463 ppb	1,549.780 ppb	23.647 ppb	635.229 ppb	5,915.601 ppb	108.354 %
Concentration RSD	1.2 %	8.8 %	19.3 %	6.7 %	5.0 %	6.9 %	9.0 %	14.0 %	2.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.016 %	0.139 ppb	-1.170 ppb	1,250.413 ppb	51.877 ppb	0.147 ppb	0.216 ppb	0.112 ppb	0.229 ppb
Concentration per Run 1	89.511 %	0.210 ppb	-1.092 ppb	1,278.874 ppb	52.341 ppb	0.188 ppb	0.224 ppb	0.106 ppb	0.329 ppb
Concentration per Run 2	92.329 %	0.119 ppb	-1.175 ppb	1,243.851 ppb	60.920 ppb	0.139 ppb	0.233 ppb	0.081 ppb	0.219 ppb
Concentration per Run 3	94.208 %	0.090 ppb	-1.242 ppb	1,228.515 ppb	42.371 ppb	0.115 ppb	0.192 ppb	0.150 ppb	0.138 ppb
Concentration RSD	2.6 %	45.0 %	6.4 %	2.1 %	17.9 %	25.2 %	10.1 %	31.2 %	41.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	116.404 %	109.100 %	-0.027 ppb	0.103 ppb	18.896 ppb	0.466 ppb	111.366 %	105.204 %	0.001 ppb
Concentration per Run 1	117.459 %	106.176 %	0.039 ppb	0.171 ppb	19.164 ppb	0.409 ppb	109.367 %	102.567 %	0.002 ppb
Concentration per Run 2	116.127 %	111.293 %	-0.076 ppb	-0.008 ppb	19.303 ppb	0.489 ppb	114.094 %	104.868 %	-0.001 ppb
Concentration per Run 3	115.625 %	109.829 %	-0.043 ppb	0.146 ppb	18.221 ppb	0.499 ppb	110.636 %	108.178 %	0.001 ppb
Concentration RSD	0.8 %	2.4 %	223.6 %	93.9 %	3.1 %	10.6 %	2.2 %	2.7 %	212.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.004 ppb	113.529 %	119.512 %	0.082 ppb	3.980 ppb	137.992 %	130.552 %	127.955 %	139.883 %
Concentration per Run 1	0.003 ppb	115.094 %	114.902 %	0.093 ppb	4.327 ppb	136.748 %	123.715 %	123.554 %	134.809 %
Concentration per Run 2	0.003 ppb	112.101 %	121.336 %	0.064 ppb	3.599 ppb	141.122 %	133.084 %	131.090 %	139.509 %
Concentration per Run 3	0.007 ppb	113.393 %	122.299 %	0.090 ppb	4.014 ppb	136.106 %	134.856 %	129.223 %	145.331 %
Concentration RSD	57.6 %	1.3 %	3.4 %	19.6 %	9.2 %	2.0 %	4.6 %	3.1 %	3.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.051 ppb	0.037 ppb	140.762 %	155.532 %
Concentration per Run 1	0.033 ppb	0.038 ppb	142.646 %	153.803 %
Concentration per Run 2	0.056 ppb	0.035 ppb	141.368 %	156.797 %
Concentration per Run 3	0.062 ppb	0.037 ppb	138.271 %	155.997 %
Concentration RSD	29.7 %	3.9 %	1.6 %	1.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	107	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417074-01 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:41:18 PM	Vial	7		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.086 %	77.425 %	0.025 ppb	14,592.773 ppb	7,877.940 ppb	100.833 ppb	3,253.022 ppb	30,354.457 ppb	107.794 %
Concentration per Run 1	99.247 %	74.440 %	0.030 ppb	14,638.897 ppb	7,777.528 ppb	99.205 ppb	3,065.921 ppb	29,224.256 ppb	109.695 %
Concentration per Run 2	97.774 %	86.194 %	0.020 ppb	13,891.655 ppb	7,694.930 ppb	105.406 ppb	3,298.141 ppb	31,924.523 ppb	105.789 %
Concentration per Run 3	97.235 %	71.642 %	0.025 ppb	15,247.767 ppb	8,161.362 ppb	97.888 ppb	3,395.005 ppb	29,914.592 ppb	107.899 %
Concentration RSD	1.1 %	10.0 %	20.1 %	4.7 %	3.2 %	4.0 %	5.2 %	4.6 %	1.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.986 %	0.486 ppb	0.386 ppb	6,122.778 ppb	254.234 ppb	0.814 ppb	0.903 ppb	0.770 ppb	1.133 ppb
Concentration per Run 1	97.025 %	0.298 ppb	0.360 ppb	6,047.188 ppb	266.699 ppb	0.794 ppb	1.000 ppb	0.817 ppb	0.962 ppb
Concentration per Run 2	89.041 %	0.486 ppb	0.294 ppb	6,299.264 ppb	268.365 ppb	0.843 ppb	0.830 ppb	0.751 ppb	1.346 ppb
Concentration per Run 3	92.892 %	0.675 ppb	0.506 ppb	6,021.882 ppb	227.638 ppb	0.804 ppb	0.880 ppb	0.743 ppb	1.092 ppb
Concentration RSD	4.3 %	38.7 %	28.1 %	2.5 %	9.1 %	3.2 %	9.7 %	5.3 %	17.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	118.593 %	108.466 %	0.141 ppb	0.175 ppb	94.720 ppb	1.526 ppb	109.727 %	102.409 %	0.000 ppb
Concentration per Run 1	118.095 %	103.123 %	0.085 ppb	0.011 ppb	97.629 ppb	1.699 ppb	109.329 %	100.251 %	-0.001 ppb
Concentration per Run 2	120.175 %	108.891 %	0.361 ppb	0.022 ppb	93.735 ppb	1.326 ppb	109.193 %	102.178 %	0.000 ppb
Concentration per Run 3	117.509 %	113.385 %	-0.022 ppb	0.491 ppb	92.796 ppb	1.551 ppb	110.659 %	104.798 %	0.001 ppb
Concentration RSD	1.2 %	4.7 %	139.8 %	156.8 %	2.7 %	12.3 %	0.7 %	2.2 %	533.1 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.023 ppb	111.396 %	111.518 %	0.113 ppb	20.866 ppb	138.904 %	127.745 %	128.791 %	141.101 %
Concentration per Run 1	0.022 ppb	109.766 %	108.764 %	0.106 ppb	20.978 ppb	137.991 %	126.316 %	127.236 %	136.576 %
Concentration per Run 2	0.030 ppb	111.155 %	112.373 %	0.101 ppb	20.302 ppb	139.879 %	125.364 %	131.465 %	143.610 %
Concentration per Run 3	0.016 ppb	113.268 %	113.418 %	0.133 ppb	21.319 ppb	138.842 %	131.556 %	127.670 %	143.117 %
Concentration RSD	30.8 %	1.6 %	2.2 %	15.3 %	2.5 %	0.7 %	2.6 %	1.8 %	2.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.125 ppb	0.183 ppb	131.920 %	145.214 %
Concentration per Run 1	0.104 ppb	0.183 ppb	126.516 %	147.943 %
Concentration per Run 2	0.133 ppb	0.177 ppb	134.018 %	143.243 %
Concentration per Run 3	0.137 ppb	0.188 ppb	135.227 %	144.455 %
Concentration RSD	14.4 %	2.9 %	3.6 %	1.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	108	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417074-04 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:45:59 PM	Vial	12		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.507 %	83.769 %	0.030 ppb	12,716.220 ppb	6,757.323 ppb	234.609 ppb	2,263.907 ppb	20,545.514 ppb	111.872 %
Concentration per Run 1	100.764 %	80.597 %	0.034 ppb	13,097.611 ppb	6,832.933 ppb	227.133 ppb	2,357.277 ppb	19,987.502 ppb	114.372 %
Concentration per Run 2	97.523 %	82.276 %	0.030 ppb	12,667.678 ppb	6,618.274 ppb	243.213 ppb	2,274.556 ppb	20,250.245 ppb	108.393 %
Concentration per Run 3	97.234 %	88.433 %	0.026 ppb	12,383.373 ppb	6,820.762 ppb	233.480 ppb	2,159.888 ppb	21,398.795 ppb	112.851 %
Concentration RSD	2.0 %	4.9 %	13.5 %	2.8 %	1.8 %	3.5 %	4.4 %	3.7 %	2.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.670 %	0.667 ppb	-0.227 ppb	9.598 ppb	300.395 ppb	0.140 ppb	0.322 ppb	0.386 ppb	1.194 ppb
Concentration per Run 1	90.920 %	0.615 ppb	-0.268 ppb	9.442 ppb	300.058 ppb	0.126 ppb	0.244 ppb	0.471 ppb	1.279 ppb
Concentration per Run 2	92.235 %	0.637 ppb	-0.157 ppb	9.457 ppb	292.697 ppb	0.131 ppb	0.412 ppb	0.316 ppb	1.062 ppb
Concentration per Run 3	88.854 %	0.751 ppb	-0.258 ppb	9.894 ppb	308.430 ppb	0.163 ppb	0.310 ppb	0.371 ppb	1.241 ppb
Concentration RSD	1.9 %	11.0 %	27.1 %	2.7 %	2.6 %	14.3 %	26.2 %	20.3 %	9.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	115.068 %	105.279 %	0.343 ppb	0.394 ppb	87.742 ppb	0.093 ppb	107.856 %	104.321 %	0.000 ppb
Concentration per Run 1	117.972 %	108.076 %	0.332 ppb	0.671 ppb	88.499 ppb	0.085 ppb	108.713 %	100.155 %	0.001 ppb
Concentration per Run 2	114.707 %	106.273 %	0.372 ppb	0.149 ppb	86.129 ppb	0.111 ppb	109.174 %	107.621 %	-0.001 ppb
Concentration per Run 3	112.524 %	101.489 %	0.325 ppb	0.362 ppb	88.598 ppb	0.083 ppb	105.682 %	105.187 %	-0.001 ppb
Concentration RSD	2.4 %	3.2 %	7.4 %	66.6 %	1.6 %	16.7 %	1.8 %	3.6 %	665.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.011 ppb	111.295 %	115.762 %	0.053 ppb	19.657 ppb	140.428 %	128.625 %	128.772 %	143.307 %
Concentration per Run 1	0.003 ppb	112.084 %	112.388 %	0.054 ppb	18.764 ppb	142.451 %	125.261 %	131.555 %	137.563 %
Concentration per Run 2	0.020 ppb	109.329 %	116.502 %	0.052 ppb	20.035 ppb	141.969 %	130.212 %	129.735 %	145.331 %
Concentration per Run 3	0.011 ppb	112.472 %	118.397 %	0.052 ppb	20.171 ppb	136.865 %	130.402 %	125.024 %	147.028 %
Concentration RSD	75.1 %	1.5 %	2.7 %	2.8 %	3.9 %	2.2 %	2.3 %	2.6 %	3.5 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.028 ppb	0.245 ppb	137.572 %	154.960 %
Concentration per Run 1	0.024 ppb	0.242 ppb	138.848 %	154.598 %
Concentration per Run 2	0.024 ppb	0.242 ppb	135.659 %	153.859 %
Concentration per Run 3	0.035 ppb	0.252 ppb	138.208 %	156.424 %
Concentration RSD	22.3 %	2.3 %	1.2 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	109	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417074-05 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:50:42 PM	Vial	13		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.794 %	82.276 %	0.022 ppb	15,170.180 ppb	6,828.514 ppb	33.414 ppb	2,578.053 ppb	14,113.232 ppb	105.881 %
Concentration per Run 1	98.836 %	70.522 %	0.018 ppb	16,037.560 ppb	7,440.555 ppb	31.057 ppb	2,587.305 ppb	14,507.410 ppb	107.189 %
Concentration per Run 2	97.839 %	90.672 %	0.029 ppb	14,408.043 ppb	6,286.527 ppb	35.814 ppb	2,532.233 ppb	13,921.619 ppb	104.163 %
Concentration per Run 3	96.706 %	85.634 %	0.018 ppb	15,064.937 ppb	6,758.461 ppb	33.370 ppb	2,614.621 ppb	13,910.667 ppb	106.291 %
Concentration RSD	1.1 %	12.7 %	29.1 %	5.4 %	8.5 %	7.1 %	1.6 %	2.4 %	1.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	88.290 %	0.260 ppb	0.277 ppb	6.077 ppb	62.634 ppb	0.109 ppb	0.519 ppb	0.510 ppb	1.188 ppb
Concentration per Run 1	89.041 %	0.267 ppb	0.298 ppb	5.972 ppb	61.578 ppb	0.108 ppb	0.494 ppb	0.589 ppb	1.086 ppb
Concentration per Run 2	89.417 %	0.353 ppb	0.381 ppb	6.076 ppb	64.124 ppb	0.136 ppb	0.551 ppb	0.505 ppb	1.293 ppb
Concentration per Run 3	86.411 %	0.160 ppb	0.151 ppb	6.185 ppb	62.199 ppb	0.083 ppb	0.512 ppb	0.436 ppb	1.184 ppb
Concentration RSD	1.9 %	37.2 %	42.0 %	1.8 %	2.1 %	24.3 %	5.6 %	15.0 %	8.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.442 %	105.207 %	0.207 ppb	0.008 ppb	106.406 ppb	0.054 ppb	103.882 %	99.508 %	0.000 ppb
Concentration per Run 1	110.394 %	105.961 %	0.102 ppb	0.022 ppb	105.118 ppb	0.011 ppb	104.980 %	98.761 %	-0.001 ppb
Concentration per Run 2	114.019 %	102.162 %	0.391 ppb	0.000 ppb	109.765 ppb	0.110 ppb	102.340 %	98.139 %	0.001 ppb
Concentration per Run 3	115.912 %	107.499 %	0.127 ppb	0.001 ppb	104.333 ppb	0.042 ppb	104.325 %	101.624 %	-0.002 ppb
Concentration RSD	2.5 %	2.6 %	77.5 %	152.9 %	2.8 %	93.6 %	1.3 %	1.9 %	380.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.009 ppb	106.337 %	112.095 %	0.092 ppb	28.926 ppb	135.576 %	125.056 %	124.009 %	137.559 %
Concentration per Run 1	0.008 ppb	106.768 %	111.882 %	0.075 ppb	28.972 ppb	134.405 %	124.117 %	117.364 %	134.508 %
Concentration per Run 2	0.008 ppb	104.564 %	109.907 %	0.093 ppb	29.861 ppb	139.021 %	126.288 %	127.208 %	138.023 %
Concentration per Run 3	0.012 ppb	107.680 %	114.494 %	0.108 ppb	27.944 ppb	133.303 %	124.762 %	127.456 %	140.145 %
Concentration RSD	26.9 %	1.5 %	2.1 %	17.8 %	3.3 %	2.2 %	0.9 %	4.6 %	2.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.020 ppb	0.107 ppb	122.538 %	141.496 %
Concentration per Run 1	0.005 ppb	0.115 ppb	122.583 %	147.390 %
Concentration per Run 2	0.029 ppb	0.102 ppb	122.950 %	137.818 %
Concentration per Run 3	0.028 ppb	0.105 ppb	122.081 %	139.281 %
Concentration RSD	67.2 %	6.1 %	0.4 %	3.6 %

Alpha ICPMSRQ Data with SRD

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Analysis index:	110	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417074-06 6020TL	Rack	2		
Analysis started at:	4/4/2024 3:55:23 PM	Vial	14		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.900 %	84.515 %	0.024 ppb	4,415.638 ppb	1,023.138 ppb	10.789 ppb	1,453.187 ppb	3,768.216 ppb	103.980 %
Concentration per Run 1	102.332 %	86.194 %	0.027 ppb	4,353.056 ppb	1,011.457 ppb	11.145 ppb	1,467.521 ppb	3,737.863 ppb	101.186 %
Concentration per Run 2	100.971 %	97.388 %	0.024 ppb	4,010.631 ppb	937.353 ppb	10.777 ppb	1,445.343 ppb	3,581.252 ppb	105.265 %
Concentration per Run 3	99.398 %	69.963 %	0.022 ppb	4,883.226 ppb	1,120.604 ppb	10.446 ppb	1,446.698 ppb	3,985.533 ppb	105.490 %
Concentration RSD	1.5 %	16.3 %	10.2 %	10.0 %	9.0 %	3.2 %	0.9 %	5.4 %	2.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.574 %	0.079 ppb	-0.247 ppb	2.846 ppb	6.174 ppb	0.028 ppb	0.046 ppb	0.195 ppb	1.175 ppb
Concentration per Run 1	88.947 %	0.044 ppb	-0.354 ppb	3.007 ppb	3.226 ppb	0.036 ppb	0.044 ppb	0.153 ppb	1.149 ppb
Concentration per Run 2	89.605 %	0.041 ppb	0.121 ppb	2.725 ppb	8.629 ppb	0.026 ppb	0.045 ppb	0.217 ppb	1.011 ppb
Concentration per Run 3	90.169 %	0.151 ppb	-0.509 ppb	2.806 ppb	6.666 ppb	0.022 ppb	0.049 ppb	0.214 ppb	1.365 ppb
Concentration RSD	0.7 %	79.6 %	132.8 %	5.1 %	44.3 %	25.6 %	5.3 %	18.6 %	15.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	113.184 %	109.117 %	-0.028 ppb	0.162 ppb	16.861 ppb	0.027 ppb	105.457 %	103.983 %	-0.001 ppb
Concentration per Run 1	116.543 %	104.927 %	-0.022 ppb	0.162 ppb	17.279 ppb	0.021 ppb	106.266 %	102.161 %	-0.001 ppb
Concentration per Run 2	112.832 %	112.690 %	-0.017 ppb	0.002 ppb	16.463 ppb	0.030 ppb	104.744 %	104.619 %	-0.001 ppb
Concentration per Run 3	110.177 %	109.733 %	-0.046 ppb	0.320 ppb	16.842 ppb	0.030 ppb	105.360 %	105.168 %	-0.002 ppb
Concentration RSD	2.8 %	3.6 %	56.7 %	98.4 %	2.4 %	19.5 %	0.7 %	1.5 %	50.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.023 ppb	107.390 %	112.154 %	0.030 ppb	11.352 ppb	137.248 %	125.514 %	125.989 %	135.705 %
Concentration per Run 1	0.035 ppb	109.203 %	109.760 %	0.029 ppb	11.019 ppb	137.704 %	123.037 %	126.082 %	132.727 %
Concentration per Run 2	0.007 ppb	106.089 %	112.063 %	0.023 ppb	11.315 ppb	139.255 %	124.427 %	129.358 %	137.236 %
Concentration per Run 3	0.025 ppb	106.878 %	114.640 %	0.039 ppb	11.720 ppb	134.786 %	129.079 %	122.527 %	137.154 %
Concentration RSD	62.6 %	1.5 %	2.2 %	27.1 %	3.1 %	1.7 %	2.5 %	2.7 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.014 ppb	0.017 ppb	123.667 %	146.036 %
Concentration per Run 1	0.003 ppb	0.018 ppb	123.537 %	148.349 %
Concentration per Run 2	0.020 ppb	0.016 ppb	123.050 %	146.792 %
Concentration per Run 3	0.020 ppb	0.016 ppb	124.412 %	142.967 %
Concentration RSD	65.7 %	5.7 %	0.6 %	1.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	111	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 4:00:04 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.332 %	91.231 %	60.328 ppb	6,180.581 ppb	6,560.548 ppb	59.937 ppb	5,778.870 ppb	5,997.912 ppb	110.610 %
Concentration per Run 1	100.709 %	86.754 %	59.537 ppb	6,487.351 ppb	6,941.103 ppb	59.536 ppb	6,111.391 ppb	6,962.529 ppb	112.233 %
Concentration per Run 2	97.686 %	98.507 %	60.806 ppb	5,716.759 ppb	6,084.249 ppb	58.751 ppb	5,258.279 ppb	5,167.336 ppb	109.703 %
Concentration per Run 3	96.600 %	88.433 %	60.641 ppb	6,337.633 ppb	6,656.292 ppb	61.526 ppb	5,966.940 ppb	5,863.871 ppb	109.896 %
Recovery Percentage 1			100.547 %	103.010 %	109.342 %	99.896 %	96.315 %	99.965 %	
Concentration RSD	2.2 %	7.0 %	1.1 %	6.6 %	6.7 %	2.4 %	7.9 %	15.1 %	1.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	99.405 %	54.139 ppb	53.521 ppb	61.826 ppb	6,219.160 ppb	59.753 ppb	58.102 ppb	56.845 ppb	58.641 ppb
Concentration per Run 1	93.926 %	56.943 ppb	57.793 ppb	64.570 ppb	6,409.147 ppb	62.210 ppb	59.166 ppb	58.341 ppb	58.488 ppb
Concentration per Run 2	102.943 %	51.794 ppb	50.129 ppb	60.009 ppb	5,875.011 ppb	58.156 ppb	56.908 ppb	55.637 ppb	57.612 ppb
Concentration per Run 3	101.346 %	53.679 ppb	52.642 ppb	60.899 ppb	6,373.321 ppb	58.892 ppb	58.233 ppb	56.558 ppb	59.824 ppb
Recovery Percentage 1		90.231 %	89.202 %	103.044 %	103.653 %	99.588 %	96.837 %	94.742 %	97.735 %
Concentration RSD	4.8 %	4.8 %	7.3 %	3.9 %	4.8 %	3.6 %	2.0 %	2.4 %	1.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.377 %	105.228 %	58.666 ppb	62.725 ppb	65.117 ppb	60.348 ppb	107.025 %	103.757 %	58.687 ppb
Concentration per Run 1	111.600 %	105.508 %	58.674 ppb	66.408 ppb	65.916 ppb	62.159 ppb	108.946 %	101.503 %	59.009 ppb
Concentration per Run 2	111.396 %	104.858 %	57.526 ppb	62.204 ppb	63.275 ppb	58.719 ppb	106.525 %	104.667 %	58.043 ppb
Concentration per Run 3	111.135 %	105.316 %	59.798 ppb	59.564 ppb	66.159 ppb	60.164 ppb	105.605 %	105.101 %	59.011 ppb
Recovery Percentage 1			97.777 %	104.542 %	108.528 %	100.579 %			97.812 %
Concentration RSD	0.2 %	0.3 %	1.9 %	5.5 %	2.5 %	2.9 %	1.6 %	1.9 %	1.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	58.913 ppb	109.489 %	115.089 %	61.219 ppb	61.194 ppb	139.289 %	129.659 %	127.729 %	140.188 %
Concentration per Run 1	60.381 ppb	110.138 %	110.903 %	63.073 ppb	61.105 ppb	140.047 %	125.978 %	129.330 %	131.634 %
Concentration per Run 2	58.702 ppb	108.123 %	115.492 %	59.787 ppb	62.513 ppb	138.834 %	131.252 %	129.299 %	141.724 %
Concentration per Run 3	57.657 ppb	110.204 %	118.871 %	60.798 ppb	59.965 ppb	138.988 %	131.745 %	124.557 %	147.206 %
Recovery Percentage 1	98.189 %			102.032 %	101.991 %				
Concentration RSD	2.3 %	1.1 %	3.5 %	2.7 %	2.1 %	0.5 %	2.5 %	2.2 %	5.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	53.862 ppb	55.006 ppb	138.525 %	156.099 %
Concentration per Run 1	54.949 ppb	53.501 ppb	138.854 %	153.290 %
Concentration per Run 2	52.511 ppb	54.537 ppb	140.796 %	160.073 %
Concentration per Run 3	54.125 ppb	56.979 ppb	135.924 %	154.934 %
Recovery Percentage 1	89.769 %	91.676 %		
Concentration RSD	2.3 %	3.2 %	1.8 %	2.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	112	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 4:04:49 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.728 %	92.164 %	0.019 ppb	0.340 ppb	0.997 ppb	-0.384 ppb	9.325 ppb	-31.625 ppb	104.729 %
Concentration per Run 1	100.901 %	96.828 %	0.018 ppb	-9.437 ppb	0.460 ppb	-0.356 ppb	-4.886 ppb	-56.102 ppb	102.512 %
Concentration per Run 2	101.014 %	92.351 %	0.018 ppb	-8.237 ppb	2.440 ppb	-0.386 ppb	8.614 ppb	-32.142 ppb	107.375 %
Concentration per Run 3	100.268 %	87.313 %	0.022 ppb	18.696 ppb	0.090 ppb	-0.410 ppb	24.246 ppb	-6.631 ppb	104.300 %
Recovery Percentage 1			3.898 %	0.340 %	1.424 %	-3.839 %	9.325 %	-31.625 %	
Concentration RSD	0.4 %	5.2 %	10.1 %	4,674.7 %	126.7 %	7.1 %	156.3 %	78.2 %	2.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	85.222 %	-0.048 ppb	-1.497 ppb	-0.064 ppb	7.442 ppb	0.010 ppb	1.263 ppb	0.775 ppb	0.829 ppb
Concentration per Run 1	84.251 %	-0.096 ppb	-1.582 ppb	-0.069 ppb	9.308 ppb	0.012 ppb	1.601 ppb	0.790 ppb	0.788 ppb
Concentration per Run 2	87.069 %	0.019 ppb	-1.326 ppb	-0.021 ppb	10.150 ppb	0.016 ppb	1.109 ppb	0.751 ppb	1.013 ppb
Concentration per Run 3	84.345 %	-0.067 ppb	-1.583 ppb	-0.101 ppb	2.867 ppb	0.002 ppb	1.080 ppb	0.784 ppb	0.687 ppb
Recovery Percentage 1		-0.955 %	-149.706 %	-6.380 %	14.884 %	1.956 %	63.157 %	77.503 %	16.585 %
Concentration RSD	1.9 %	125.7 %	9.9 %	63.8 %	53.5 %	71.4 %	23.2 %	2.8 %	20.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.121 %	100.833 %	-0.087 ppb	0.060 ppb	0.050 ppb	0.209 ppb	108.365 %	104.879 %	0.002 ppb
Concentration per Run 1	110.096 %	98.317 %	-0.133 ppb	0.000 ppb	0.026 ppb	0.181 ppb	108.193 %	103.016 %	0.003 ppb
Concentration per Run 2	109.085 %	98.871 %	-0.067 ppb	0.190 ppb	0.051 ppb	0.207 ppb	109.532 %	106.782 %	0.000 ppb
Concentration per Run 3	108.183 %	105.311 %	-0.062 ppb	-0.009 ppb	0.074 ppb	0.238 ppb	107.371 %	104.839 %	0.004 ppb
Recovery Percentage 1			-17.454 %	1.205 %	10.069 %	10.440 %			0.613 %
Concentration RSD	0.9 %	3.9 %	45.0 %	186.8 %	47.7 %	13.5 %	1.0 %	1.8 %	84.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.000 ppb	109.834 %	113.547 %	0.052 ppb	0.029 ppb	137.836 %	126.635 %	126.871 %	135.814 %
Concentration per Run 1	0.003 ppb	110.835 %	110.069 %	0.026 ppb	0.030 ppb	136.562 %	125.578 %	125.202 %	127.921 %
Concentration per Run 2	-0.002 ppb	109.986 %	112.323 %	0.066 ppb	0.078 ppb	137.339 %	126.637 %	127.680 %	137.022 %
Concentration per Run 3	-0.002 ppb	108.679 %	118.250 %	0.063 ppb	-0.020 ppb	139.607 %	127.690 %	127.732 %	142.501 %
Recovery Percentage 1				1.289 %	5.865 %				
Concentration RSD	2,099.3 %	1.0 %	3.7 %	43.0 %	166.3 %	1.1 %	0.8 %	1.1 %	5.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.411 ppb	0.010 ppb	127.233 %	143.180 %
Concentration per Run 1	0.276 ppb	0.010 ppb	126.577 %	145.654 %
Concentration per Run 2	0.473 ppb	0.011 ppb	126.610 %	141.769 %
Concentration per Run 3	0.482 ppb	0.009 ppb	128.512 %	142.118 %
Recovery Percentage 1	41.051 %	0.992 %		
Concentration RSD	28.3 %	10.7 %	0.9 %	1.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 113 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: L2417074-07 6020TL Rack 2
Analysis started at: 4/4/2024 4:11:13 PM Vial 15

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	101.475 %	81.343 %	0.014 ppb	76.134 ppb	9.075 ppb	104.310 ppb	143.322 ppb	40.242 ppb	104.288 %
Concentration per Run 1	103.187 %	87.873 %	0.015 ppb	57.555 ppb	7.389 ppb	94.065 ppb	153.687 ppb	10.337 ppb	107.535 %
Concentration per Run 2	101.244 %	81.157 %	0.013 ppb	75.504 ppb	9.075 ppb	111.902 ppb	128.335 ppb	74.894 ppb	102.625 %
Concentration per Run 3	99.995 %	75.000 %	0.014 ppb	95.342 ppb	10.762 ppb	106.964 ppb	147.943 ppb	35.496 ppb	102.706 %
Concentration RSD	1.6 %	7.9 %	6.5 %	24.8 %	18.6 %	8.8 %	9.3 %	80.9 %	2.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	94.176 %	-0.025 ppb	-0.455 ppb	1.643 ppb	11.932 ppb	0.017 ppb	0.407 ppb	1.570 ppb	6.289 ppb
Concentration per Run 1	94.959 %	-0.042 ppb	-0.525 ppb	1.591 ppb	15.675 ppb	0.023 ppb	0.451 ppb	1.584 ppb	6.477 ppb
Concentration per Run 2	96.650 %	-0.018 ppb	-0.663 ppb	1.626 ppb	8.380 ppb	0.013 ppb	0.259 ppb	1.464 ppb	6.167 ppb
Concentration per Run 3	90.920 %	-0.014 ppb	-0.176 ppb	1.712 ppb	11.740 ppb	0.014 ppb	0.511 ppb	1.660 ppb	6.224 ppb
Concentration RSD	3.1 %	61.6 %	55.2 %	3.8 %	30.6 %	32.5 %	32.4 %	6.3 %	2.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.796 %	106.231 %	-0.020 ppb	0.083 ppb	0.113 ppb	0.023 ppb	108.018 %	106.624 %	-0.002 ppb
Concentration per Run 1	115.654 %	100.624 %	0.018 ppb	0.000 ppb	0.063 ppb	0.000 ppb	109.227 %	105.242 %	0.001 ppb
Concentration per Run 2	110.221 %	107.641 %	-0.043 ppb	-0.019 ppb	0.072 ppb	0.050 ppb	109.326 %	107.703 %	-0.003 ppb
Concentration per Run 3	109.513 %	110.428 %	-0.036 ppb	0.268 ppb	0.204 ppb	0.019 ppb	105.501 %	106.925 %	-0.003 ppb
Concentration RSD	3.0 %	4.8 %	164.5 %	192.5 %	69.9 %	110.4 %	2.0 %	1.2 %	148.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.000 ppb	107.192 %	117.068 %	0.053 ppb	0.490 ppb	140.540 %	130.919 %	127.529 %	140.086 %
Concentration per Run 1	-0.002 ppb	108.281 %	114.804 %	0.048 ppb	0.533 ppb	140.477 %	127.691 %	127.373 %	137.052 %
Concentration per Run 2	0.003 ppb	107.763 %	115.033 %	0.075 ppb	0.454 ppb	137.557 %	131.157 %	129.962 %	139.944 %
Concentration per Run 3	-0.002 ppb	105.533 %	121.368 %	0.037 ppb	0.483 ppb	143.584 %	133.908 %	125.253 %	143.262 %
Concentration RSD	1,317.5 %	1.4 %	3.2 %	37.2 %	8.2 %	2.1 %	2.4 %	1.8 %	2.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.094 ppb	0.042 ppb	124.172 %	151.067 %
Concentration per Run 1	0.054 ppb	0.042 ppb	122.065 %	157.150 %
Concentration per Run 2	0.107 ppb	0.042 ppb	123.030 %	149.094 %
Concentration per Run 3	0.122 ppb	0.043 ppb	127.419 %	146.958 %
Concentration RSD	37.9 %	1.9 %	2.3 %	3.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 114
Analysis label: WG1904738-1D10 SPLP-6020T
Analysis started at: 4/4/2024 4:26:28 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 16
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	104.475 %	89.925 %	0.010 ppb	175.739 ppb	4.573 ppb	0.377 ppb	8.628 ppb	40.125 ppb	104.030 %
Concentration per Run 1	106.401 %	84.515 %	0.015 ppb	184.519 ppb	5.588 ppb	0.379 ppb	6.461 ppb	-13.187 ppb	105.812 %
Concentration per Run 2	104.667 %	94.590 %	0.008 ppb	177.768 ppb	4.022 ppb	0.327 ppb	2.069 ppb	34.514 ppb	104.875 %
Concentration per Run 3	102.356 %	90.672 %	0.009 ppb	164.931 ppb	4.109 ppb	0.424 ppb	17.355 ppb	99.047 ppb	101.402 %
Concentration RSD	1.9 %	5.6 %	36.2 %	5.7 %	19.2 %	12.8 %	91.2 %	140.4 %	2.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	94.583 %	-0.042 ppb	-1.100 ppb	0.098 ppb	0.996 ppb	0.001 ppb	-0.101 ppb	0.023 ppb	0.383 ppb
Concentration per Run 1	97.119 %	-0.096 ppb	-1.009 ppb	0.157 ppb	0.407 ppb	0.006 ppb	-0.087 ppb	0.000 ppb	0.432 ppb
Concentration per Run 2	92.047 %	0.065 ppb	-1.077 ppb	0.060 ppb	2.345 ppb	-0.003 ppb	-0.133 ppb	0.028 ppb	0.373 ppb
Concentration per Run 3	94.583 %	-0.096 ppb	-1.215 ppb	0.076 ppb	0.236 ppb	0.001 ppb	-0.084 ppb	0.042 ppb	0.344 ppb
Concentration RSD	2.7 %	218.4 %	9.5 %	53.5 %	117.6 %	384.8 %	27.3 %	93.4 %	11.7 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	108.084 %	110.477 %	0.012 ppb	0.009 ppb	0.127 ppb	0.013 ppb	108.253 %	107.369 %	-0.002 ppb
Concentration per Run 1	107.929 %	101.851 %	-0.049 ppb	0.011 ppb	0.112 ppb	-0.001 ppb	108.948 %	107.845 %	-0.003 ppb
Concentration per Run 2	108.009 %	113.770 %	0.033 ppb	0.003 ppb	0.127 ppb	0.009 ppb	108.660 %	110.067 %	0.000 ppb
Concentration per Run 3	108.315 %	115.811 %	0.052 ppb	0.012 ppb	0.141 ppb	0.030 ppb	107.152 %	104.194 %	-0.002 ppb
Concentration RSD	0.2 %	6.8 %	444.8 %	60.8 %	11.5 %	123.4 %	0.9 %	2.8 %	89.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.000 ppb	107.412 %	119.849 %	0.029 ppb	0.126 ppb	137.396 %	132.800 %	126.275 %	147.332 %
Concentration per Run 1	0.003 ppb	110.342 %	116.910 %	0.022 ppb	0.099 ppb	134.928 %	128.273 %	124.817 %	142.611 %
Concentration per Run 2	-0.002 ppb	103.920 %	122.265 %	0.034 ppb	0.230 ppb	135.127 %	134.042 %	129.516 %	149.803 %
Concentration per Run 3	-0.002 ppb	107.973 %	120.372 %	0.032 ppb	0.048 ppb	142.133 %	136.086 %	124.492 %	149.583 %
Concentration RSD	1,198.5 %	3.0 %	2.3 %	22.3 %	74.5 %	3.0 %	3.1 %	2.2 %	2.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.031 ppb	0.005 ppb	127.702 %	155.535 %
Concentration per Run 1	0.020 ppb	0.006 ppb	127.380 %	157.363 %
Concentration per Run 2	0.036 ppb	0.005 ppb	126.554 %	155.906 %
Concentration per Run 3	0.036 ppb	0.004 ppb	129.173 %	153.335 %
Concentration RSD	30.8 %	18.0 %	1.0 %	1.3 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	115	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1904738-2D10 SPLP-6020T	Rack	2		
Analysis started at:	4/4/2024 4:31:09 PM	Vial	17		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.094 %	89.366 %	5.288 ppb	1,162.224 ppb	1,200.203 ppb	185.152 ppb	1,156.938 ppb	886.415 ppb	100.255 %
Concentration per Run 1	99.042 %	81.157 %	5.310 ppb	1,312.608 ppb	1,319.361 ppb	187.218 ppb	1,312.537 ppb	690.771 ppb	97.366 %
Concentration per Run 2	99.031 %	100.746 %	5.375 ppb	1,009.561 ppb	1,106.861 ppb	184.694 ppb	1,036.495 ppb	946.053 ppb	100.946 %
Concentration per Run 3	99.211 %	86.194 %	5.179 ppb	1,164.502 ppb	1,174.388 ppb	183.543 ppb	1,121.782 ppb	1,022.420 ppb	102.452 %
Concentration RSD	0.1 %	11.4 %	1.9 %	13.0 %	9.0 %	1.0 %	12.2 %	19.6 %	2.6 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	87.914 %	51.966 ppb	19.678 ppb	59.035 ppb	114.384 ppb	55.224 ppb	55.335 ppb	25.769 ppb	54.712 ppb
Concentration per Run 1	80.869 %	55.623 ppb	21.033 ppb	62.834 ppb	131.195 ppb	59.048 ppb	56.671 ppb	26.040 ppb	56.913 ppb
Concentration per Run 2	91.578 %	50.985 ppb	19.222 ppb	57.647 ppb	99.868 ppb	53.803 ppb	56.254 ppb	26.473 ppb	54.050 ppb
Concentration per Run 3	91.296 %	49.290 ppb	18.780 ppb	56.625 ppb	112.088 ppb	52.820 ppb	53.081 ppb	24.793 ppb	53.172 ppb
Concentration RSD	6.9 %	6.3 %	6.1 %	5.6 %	13.8 %	6.1 %	3.5 %	3.4 %	3.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	107.763 %	100.882 %	12.740 ppb	11.902 ppb	115.585 ppb	107.502 ppb	105.192 %	100.156 %	5.146 ppb
Concentration per Run 1	106.159 %	98.221 %	13.508 ppb	11.180 ppb	121.525 ppb	111.889 ppb	105.009 %	96.067 %	5.418 ppb
Concentration per Run 2	107.936 %	98.633 %	13.062 ppb	11.948 ppb	112.418 ppb	105.433 ppb	104.353 %	100.873 %	5.206 ppb
Concentration per Run 3	109.194 %	105.792 %	11.650 ppb	12.577 ppb	112.810 ppb	105.184 ppb	106.215 %	103.527 %	4.812 ppb
Concentration RSD	1.4 %	4.2 %	7.6 %	5.9 %	4.5 %	3.5 %	0.9 %	3.8 %	6.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.503 ppb	108.221 %	113.667 %	53.844 ppb	217.421 ppb	135.991 %	122.193 %	125.612 %	134.736 %
Concentration per Run 1	5.964 ppb	109.182 %	109.483 %	55.784 ppb	228.449 ppb	133.649 %	116.885 %	124.053 %	123.231 %
Concentration per Run 2	5.319 ppb	108.513 %	116.503 %	51.771 ppb	211.688 ppb	135.279 %	125.635 %	125.742 %	140.543 %
Concentration per Run 3	5.226 ppb	106.968 %	115.017 %	53.976 ppb	212.126 ppb	139.044 %	124.060 %	127.042 %	140.435 %
Concentration RSD	7.3 %	1.0 %	3.3 %	3.7 %	4.4 %	2.0 %	3.8 %	1.2 %	7.4 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	12.125 ppb	49.856 ppb	125.230 %	137.969 %
Concentration per Run 1	12.669 ppb	52.361 ppb	121.817 %	135.673 %
Concentration per Run 2	12.056 ppb	49.313 ppb	126.105 %	137.262 %
Concentration per Run 3	11.648 ppb	47.894 ppb	127.769 %	140.973 %
Concentration RSD	4.2 %	4.6 %	2.5 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	116	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1904738-3D10 SPLP-6020T	Rack	2		
Analysis started at:	4/4/2024 4:35:50 PM	Vial	19		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.749 %	89.739 %	5.180 ppb	2,823.033 ppb	1,551.806 ppb	809.917 ppb	1,110.026 ppb	1,044.703 ppb	110.343 %
Concentration per Run 1	101.647 %	83.395 %	5.165 ppb	2,928.430 ppb	1,588.552 ppb	810.023 ppb	1,172.851 ppb	1,241.161 ppb	109.671 %
Concentration per Run 2	99.006 %	90.672 %	5.204 ppb	2,805.549 ppb	1,545.837 ppb	802.884 ppb	1,093.222 ppb	757.870 ppb	111.826 %
Concentration per Run 3	98.596 %	95.149 %	5.172 ppb	2,735.122 ppb	1,521.030 ppb	816.842 ppb	1,064.005 ppb	1,135.078 ppb	109.533 %
Concentration RSD	1.7 %	6.6 %	0.4 %	3.5 %	2.2 %	0.9 %	5.1 %	24.3 %	1.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.550 %	48.561 ppb	18.730 ppb	62.999 ppb	716.158 ppb	52.627 ppb	53.105 ppb	25.529 ppb	59.704 ppb
Concentration per Run 1	95.147 %	48.921 ppb	18.217 ppb	62.054 ppb	709.501 ppb	53.446 ppb	54.782 ppb	25.219 ppb	61.056 ppb
Concentration per Run 2	97.025 %	48.478 ppb	18.165 ppb	61.784 ppb	723.669 ppb	51.403 ppb	53.021 ppb	25.601 ppb	60.611 ppb
Concentration per Run 3	88.478 %	48.282 ppb	19.809 ppb	65.159 ppb	715.305 ppb	53.033 ppb	51.511 ppb	25.768 ppb	57.445 ppb
Concentration RSD	4.8 %	0.7 %	5.0 %	3.0 %	1.0 %	2.1 %	3.1 %	1.1 %	3.3 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.301 %	102.573 %	11.664 ppb	11.939 ppb	110.243 ppb	97.877 ppb	107.438 %	102.827 %	4.932 ppb
Concentration per Run 1	109.812 %	101.585 %	11.630 ppb	13.578 ppb	108.534 ppb	98.521 ppb	107.009 %	100.937 %	5.041 ppb
Concentration per Run 2	111.342 %	99.402 %	12.000 ppb	9.439 ppb	114.635 ppb	98.874 ppb	108.160 %	102.842 %	4.928 ppb
Concentration per Run 3	109.750 %	106.731 %	11.363 ppb	12.799 ppb	107.561 ppb	96.238 ppb	107.145 %	104.703 %	4.827 ppb
Concentration RSD	0.8 %	3.7 %	2.7 %	18.4 %	3.5 %	1.5 %	0.6 %	1.8 %	2.2 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	5.374 ppb	111.316 %	115.866 %	46.995 ppb	220.603 ppb	140.215 %	124.849 %	128.264 %	136.050 %
Concentration per Run 1	5.357 ppb	113.306 %	111.817 %	48.732 ppb	227.575 ppb	141.325 %	122.043 %	126.294 %	131.639 %
Concentration per Run 2	5.454 ppb	109.982 %	116.307 %	46.967 ppb	214.224 ppb	139.655 %	128.200 %	126.710 %	138.041 %
Concentration per Run 3	5.311 ppb	110.661 %	119.476 %	45.287 ppb	220.011 ppb	139.664 %	124.305 %	131.787 %	138.471 %
Concentration RSD	1.4 %	1.6 %	3.3 %	3.7 %	3.0 %	0.7 %	2.5 %	2.4 %	2.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	10.950 ppb	51.256 ppb	134.003 %	148.968 %
Concentration per Run 1	11.676 ppb	51.573 ppb	133.140 %	144.426 %
Concentration per Run 2	10.832 ppb	52.411 ppb	136.787 %	149.917 %
Concentration per Run 3	10.340 ppb	49.783 ppb	132.083 %	152.562 %
Concentration RSD	6.2 %	2.6 %	1.8 %	2.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	117	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1904738-5D10 SPLP-6020T	Rack	2		
Analysis started at:	4/4/2024 4:40:31 PM	Vial	21		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.549 %	89.739 %	50.781 ppb	6,978.440 ppb	5,848.446 ppb	503.800 ppb	5,094.305 ppb	5,148.283 ppb	106.544 %
Concentration per Run 1	96.749 %	92.910 %	50.132 ppb	6,824.430 ppb	5,529.840 ppb	507.172 ppb	4,941.500 ppb	4,838.242 ppb	108.276 %
Concentration per Run 2	94.624 %	86.754 %	51.256 ppb	7,050.038 ppb	5,929.743 ppb	507.631 ppb	5,167.361 ppb	5,381.960 ppb	103.724 %
Concentration per Run 3	95.272 %	89.552 %	50.955 ppb	7,060.852 ppb	6,085.755 ppb	496.598 ppb	5,174.055 ppb	5,224.646 ppb	107.633 %
Concentration RSD	1.1 %	3.4 %	1.1 %	1.9 %	4.9 %	1.2 %	2.6 %	5.4 %	2.3 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.517 %	48.264 ppb	45.917 ppb	61.757 ppb	5,712.770 ppb	52.223 ppb	52.610 ppb	50.046 ppb	59.433 ppb
Concentration per Run 1	93.644 %	48.166 ppb	46.018 ppb	61.093 ppb	5,734.492 ppb	50.497 ppb	51.965 ppb	50.907 ppb	60.170 ppb
Concentration per Run 2	90.920 %	49.133 ppb	47.621 ppb	63.468 ppb	5,731.220 ppb	53.161 ppb	54.088 ppb	49.932 ppb	59.956 ppb
Concentration per Run 3	92.986 %	47.493 ppb	44.112 ppb	60.708 ppb	5,672.598 ppb	53.010 ppb	51.776 ppb	49.297 ppb	58.173 ppb
Concentration RSD	1.5 %	1.7 %	3.8 %	2.4 %	0.6 %	2.9 %	2.4 %	1.6 %	1.8 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.615 %	97.319 %	50.051 ppb	48.975 ppb	60.029 ppb	49.823 ppb	105.734 %	100.525 %	4.196 ppb
Concentration per Run 1	110.844 %	96.263 %	50.193 ppb	51.359 ppb	60.130 ppb	48.887 ppb	107.205 %	98.734 %	4.260 ppb
Concentration per Run 2	110.397 %	96.501 %	49.560 ppb	46.812 ppb	59.646 ppb	48.191 ppb	103.708 %	101.128 %	4.200 ppb
Concentration per Run 3	110.603 %	99.193 %	50.400 ppb	48.754 ppb	60.309 ppb	52.391 ppb	106.291 %	101.713 %	4.127 ppb
Concentration RSD	0.2 %	1.7 %	0.9 %	4.7 %	0.6 %	4.5 %	1.7 %	1.6 %	1.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	49.245 ppb	108.268 %	111.158 %	51.124 ppb	63.376 ppb	137.800 %	123.026 %	127.737 %	132.479 %
Concentration per Run 1	50.024 ppb	107.358 %	108.128 %	52.931 ppb	64.266 ppb	140.680 %	120.462 %	129.378 %	130.087 %
Concentration per Run 2	49.317 ppb	110.417 %	111.637 %	50.542 ppb	63.971 ppb	131.270 %	123.655 %	125.326 %	130.869 %
Concentration per Run 3	48.395 ppb	107.028 %	113.711 %	49.898 ppb	61.892 ppb	141.449 %	124.960 %	128.506 %	136.480 %
Concentration RSD	1.7 %	1.7 %	2.5 %	3.1 %	2.0 %	4.1 %	1.9 %	1.7 %	2.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	48.346 ppb	47.429 ppb	124.581 %	140.664 %
Concentration per Run 1	47.403 ppb	46.450 ppb	121.217 %	144.821 %
Concentration per Run 2	48.197 ppb	47.150 ppb	128.443 %	139.698 %
Concentration per Run 3	49.437 ppb	48.686 ppb	124.084 %	137.473 %
Concentration RSD	2.1 %	2.4 %	2.9 %	2.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 118
Analysis label: WG1904738-4D10 SPLP-6020T
Analysis started at: 4/4/2024 4:45:12 PM

User name ALPHALAB\ICPMSRQ
Rack 2
Vial 20

Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.336 %	89.739 %	0.087 ppb	1,886.432 ppb	297.002 ppb	505.752 ppb	139.122 ppb	237.947 ppb	106.957 %
Concentration per Run 1	100.191 %	88.992 %	0.083 ppb	1,844.824 ppb	304.304 ppb	503.670 ppb	128.357 ppb	160.157 ppb	104.250 %
Concentration per Run 2	99.258 %	85.075 %	0.090 ppb	2,014.134 ppb	316.226 ppb	504.070 ppb	159.782 ppb	303.388 ppb	108.257 %
Concentration per Run 3	98.559 %	95.149 %	0.089 ppb	1,800.339 ppb	270.474 ppb	509.517 ppb	129.228 ppb	250.296 ppb	108.363 %
Concentration RSD	0.8 %	5.7 %	4.5 %	6.0 %	8.0 %	0.6 %	12.9 %	30.4 %	2.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	89.668 %	1.668 ppb	2.025 ppb	9.169 ppb	634.628 ppb	0.721 ppb	5.477 ppb	1.124 ppb	8.319 ppb
Concentration per Run 1	91.671 %	1.921 ppb	1.749 ppb	9.185 ppb	614.616 ppb	0.687 ppb	5.128 ppb	1.135 ppb	8.108 ppb
Concentration per Run 2	85.096 %	1.575 ppb	1.790 ppb	9.480 ppb	624.980 ppb	0.747 ppb	5.574 ppb	1.244 ppb	8.344 ppb
Concentration per Run 3	92.235 %	1.510 ppb	2.535 ppb	8.843 ppb	664.290 ppb	0.731 ppb	5.730 ppb	0.992 ppb	8.506 ppb
Concentration RSD	4.4 %	13.2 %	21.8 %	3.5 %	4.1 %	4.3 %	5.7 %	11.3 %	2.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.245 %	99.016 %	0.328 ppb	0.708 ppb	1.669 ppb	0.802 ppb	107.641 %	102.654 %	0.037 ppb
Concentration per Run 1	110.934 %	100.318 %	0.356 ppb	0.735 ppb	1.805 ppb	0.772 ppb	108.180 %	101.674 %	0.023 ppb
Concentration per Run 2	109.164 %	99.567 %	-0.090 ppb	0.852 ppb	1.450 ppb	0.853 ppb	108.045 %	102.806 %	0.047 ppb
Concentration per Run 3	110.638 %	97.164 %	0.718 ppb	0.537 ppb	1.753 ppb	0.780 ppb	106.698 %	103.481 %	0.040 ppb
Concentration RSD	0.9 %	1.7 %	123.5 %	22.5 %	11.5 %	5.6 %	0.8 %	0.9 %	33.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.007 ppb	110.285 %	111.746 %	0.150 ppb	15.008 ppb	140.392 %	123.056 %	126.526 %	131.201 %
Concentration per Run 1	0.012 ppb	109.724 %	108.486 %	0.144 ppb	15.277 ppb	144.062 %	118.947 %	125.320 %	129.607 %
Concentration per Run 2	-0.002 ppb	111.882 %	110.690 %	0.172 ppb	14.856 ppb	137.564 %	124.359 %	125.654 %	130.344 %
Concentration per Run 3	0.012 ppb	109.248 %	116.061 %	0.134 ppb	14.891 ppb	139.551 %	125.864 %	128.604 %	133.652 %
Concentration RSD	106.0 %	1.3 %	3.5 %	13.1 %	1.6 %	2.4 %	3.0 %	1.4 %	1.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.423 ppb	1.979 ppb	127.620 %	142.484 %
Concentration per Run 1	0.281 ppb	1.973 ppb	129.127 %	140.890 %
Concentration per Run 2	0.475 ppb	2.028 ppb	129.179 %	146.366 %
Concentration per Run 3	0.514 ppb	1.937 ppb	124.555 %	140.196 %
Concentration RSD	29.6 %	2.3 %	2.1 %	2.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	119	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	L2417292-01d10 SPLP-6020T	Rack	2		
Analysis started at:	4/4/2024 4:49:53 PM	Vial	18		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.743 %	91.045 %	0.078 ppb	1,833.247 ppb	287.526 ppb	471.284 ppb	166.894 ppb	251.077 ppb	106.417 %
Concentration per Run 1	100.090 %	82.836 %	0.067 ppb	1,922.761 ppb	299.227 ppb	481.511 ppb	157.621 ppb	262.766 ppb	107.349 %
Concentration per Run 2	98.631 %	87.873 %	0.091 ppb	1,912.046 ppb	303.328 ppb	462.469 ppb	189.031 ppb	345.110 ppb	106.013 %
Concentration per Run 3	97.507 %	102.425 %	0.076 ppb	1,664.935 ppb	260.022 ppb	469.871 ppb	154.031 ppb	145.355 ppb	105.890 %
Concentration RSD	1.3 %	11.2 %	15.6 %	8.0 %	8.3 %	2.0 %	11.5 %	40.0 %	0.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	88.071 %	1.732 ppb	-0.632 ppb	7.921 ppb	535.501 ppb	0.444 ppb	1.143 ppb	0.936 ppb	7.570 ppb
Concentration per Run 1	89.417 %	1.708 ppb	-0.418 ppb	8.021 ppb	567.615 ppb	0.460 ppb	1.106 ppb	0.995 ppb	8.147 ppb
Concentration per Run 2	86.317 %	1.567 ppb	-0.582 ppb	7.975 ppb	516.036 ppb	0.419 ppb	1.275 ppb	0.857 ppb	7.330 ppb
Concentration per Run 3	88.478 %	1.922 ppb	-0.895 ppb	7.767 ppb	522.851 ppb	0.453 ppb	1.047 ppb	0.956 ppb	7.234 ppb
Concentration RSD	1.8 %	10.3 %	38.4 %	1.7 %	5.2 %	4.9 %	10.4 %	7.6 %	6.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	112.000 %	101.193 %	0.243 ppb	0.421 ppb	1.552 ppb	0.120 ppb	106.218 %	102.634 %	0.017 ppb
Concentration per Run 1	116.392 %	93.104 %	0.281 ppb	0.392 ppb	1.570 ppb	0.123 ppb	106.916 %	99.118 %	0.008 ppb
Concentration per Run 2	108.751 %	104.373 %	0.154 ppb	0.881 ppb	1.628 ppb	0.073 ppb	103.934 %	103.158 %	0.018 ppb
Concentration per Run 3	110.857 %	106.103 %	0.294 ppb	-0.009 ppb	1.458 ppb	0.164 ppb	107.802 %	105.627 %	0.025 ppb
Concentration RSD	3.5 %	7.0 %	31.8 %	105.8 %	5.6 %	37.9 %	1.9 %	3.2 %	51.8 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	109.825 %	109.330 %	0.065 ppb	13.688 ppb	137.636 %	124.371 %	128.596 %	133.085 %
Concentration per Run 1	0.003 ppb	107.312 %	106.609 %	0.048 ppb	14.199 ppb	140.538 %	120.033 %	130.160 %	125.807 %
Concentration per Run 2	0.003 ppb	111.033 %	108.977 %	0.083 ppb	13.556 ppb	135.471 %	121.954 %	126.644 %	134.669 %
Concentration per Run 3	0.003 ppb	111.130 %	112.404 %	0.062 ppb	13.309 ppb	136.898 %	131.124 %	128.984 %	138.780 %
Concentration RSD	4.4 %	2.0 %	2.7 %	27.0 %	3.4 %	1.9 %	4.8 %	1.4 %	5.0 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.140 ppb	1.846 ppb	127.606 %	143.535 %
Concentration per Run 1	0.083 ppb	1.843 ppb	127.224 %	142.350 %
Concentration per Run 2	0.172 ppb	1.841 ppb	128.579 %	140.520 %
Concentration per Run 3	0.164 ppb	1.853 ppb	127.014 %	147.736 %
Concentration RSD	35.3 %	0.3 %	0.7 %	2.6 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 120
Analysis label: L2417292-03d10 SPLP-6020T
Analysis started at: 4/4/2024 4:54:35 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 23
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.162 %	89.739 %	0.051 ppb	1,400.230 ppb	193.624 ppb	246.282 ppb	103.473 ppb	173.566 ppb	106.390 %
Concentration per Run 1	99.702 %	83.395 %	0.054 ppb	1,444.711 ppb	201.580 ppb	249.046 ppb	106.969 ppb	100.232 ppb	109.181 %
Concentration per Run 2	99.577 %	96.828 %	0.048 ppb	1,352.880 ppb	178.162 ppb	246.190 ppb	118.227 ppb	202.357 ppb	106.492 %
Concentration per Run 3	98.206 %	88.992 %	0.052 ppb	1,403.100 ppb	201.130 ppb	243.609 ppb	85.223 ppb	218.110 ppb	103.498 %
Concentration RSD	0.8 %	7.5 %	5.4 %	3.3 %	6.9 %	1.1 %	16.2 %	36.9 %	2.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.262 %	0.685 ppb	-0.753 ppb	11.792 ppb	288.229 ppb	0.238 ppb	0.627 ppb	0.233 ppb	3.827 ppb
Concentration per Run 1	92.329 %	0.459 ppb	-0.715 ppb	11.713 ppb	317.538 ppb	0.222 ppb	0.538 ppb	0.232 ppb	3.895 ppb
Concentration per Run 2	88.008 %	0.732 ppb	-0.658 ppb	11.784 ppb	277.939 ppb	0.253 ppb	0.568 ppb	0.284 ppb	3.742 ppb
Concentration per Run 3	90.450 %	0.866 ppb	-0.885 ppb	11.879 ppb	269.209 ppb	0.240 ppb	0.775 ppb	0.183 ppb	3.844 ppb
Concentration RSD	2.4 %	30.2 %	15.7 %	0.7 %	8.9 %	6.7 %	20.6 %	21.7 %	2.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.564 %	101.042 %	-0.010 ppb	0.718 ppb	0.589 ppb	0.035 ppb	107.436 %	103.117 %	0.008 ppb
Concentration per Run 1	112.178 %	95.869 %	-0.007 ppb	0.371 ppb	0.543 ppb	0.011 ppb	106.221 %	99.068 %	0.007 ppb
Concentration per Run 2	110.672 %	99.736 %	-0.040 ppb	1.268 ppb	0.539 ppb	0.031 ppb	106.459 %	106.005 %	0.016 ppb
Concentration per Run 3	111.844 %	107.522 %	0.017 ppb	0.514 ppb	0.684 ppb	0.061 ppb	109.629 %	104.279 %	0.002 ppb
Concentration RSD	0.7 %	5.9 %	277.3 %	67.2 %	14.0 %	73.3 %	1.8 %	3.5 %	86.0 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.000 ppb	111.916 %	108.694 %	0.028 ppb	7.169 ppb	138.022 %	124.763 %	129.045 %	131.190 %
Concentration per Run 1	-0.002 ppb	110.716 %	106.104 %	0.021 ppb	7.120 ppb	139.051 %	122.417 %	128.834 %	128.276 %
Concentration per Run 2	-0.002 ppb	111.423 %	108.454 %	0.032 ppb	7.294 ppb	135.393 %	125.788 %	130.044 %	132.965 %
Concentration per Run 3	0.003 ppb	113.610 %	111.524 %	0.031 ppb	7.092 ppb	139.622 %	126.085 %	128.258 %	132.328 %
Concentration RSD	1,795.3 %	1.3 %	2.5 %	22.4 %	1.5 %	1.7 %	1.6 %	0.7 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.089 ppb	0.244 ppb	126.611 %	140.563 %
Concentration per Run 1	0.051 ppb	0.244 ppb	127.807 %	141.545 %
Concentration per Run 2	0.113 ppb	0.248 ppb	126.112 %	137.393 %
Concentration per Run 3	0.103 ppb	0.240 ppb	125.913 %	142.752 %
Concentration RSD	37.2 %	1.6 %	0.8 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 121
Analysis label: L2417292-05d10 SPLP-6020T
Analysis started at: 4/4/2024 4:59:17 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 24
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	99.244 %	90.858 %	0.047 ppb	1,163.462 ppb	202.690 ppb	280.335 ppb	123.636 ppb	65.794 ppb	111.072 %
Concentration per Run 1	101.165 %	80.037 %	0.042 ppb	1,331.556 ppb	232.227 ppb	273.169 ppb	140.566 ppb	35.694 ppb	115.724 %
Concentration per Run 2	98.786 %	97.948 %	0.048 ppb	1,036.043 ppb	175.693 ppb	272.392 ppb	114.307 ppb	88.805 ppb	109.598 %
Concentration per Run 3	97.781 %	94.590 %	0.050 ppb	1,122.788 ppb	200.149 ppb	295.445 ppb	116.034 ppb	72.884 ppb	107.895 %
Concentration RSD	1.8 %	10.5 %	8.4 %	13.1 %	14.0 %	4.7 %	11.9 %	41.4 %	3.7 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.799 %	0.665 ppb	-0.698 ppb	5.109 ppb	349.944 ppb	0.287 ppb	0.485 ppb	0.313 ppb	4.482 ppb
Concentration per Run 1	85.378 %	0.689 ppb	-0.362 ppb	5.327 ppb	382.872 ppb	0.307 ppb	0.495 ppb	0.309 ppb	4.484 ppb
Concentration per Run 2	98.434 %	0.685 ppb	-0.861 ppb	5.076 ppb	335.852 ppb	0.310 ppb	0.489 ppb	0.302 ppb	4.545 ppb
Concentration per Run 3	94.583 %	0.622 ppb	-0.870 ppb	4.925 ppb	331.108 ppb	0.244 ppb	0.472 ppb	0.330 ppb	4.418 ppb
Concentration RSD	7.2 %	5.6 %	41.7 %	4.0 %	8.2 %	13.0 %	2.5 %	4.6 %	1.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.287 %	103.685 %	-0.061 ppb	0.178 ppb	0.735 ppb	0.028 ppb	107.636 %	102.826 %	0.007 ppb
Concentration per Run 1	113.839 %	102.162 %	-0.073 ppb	0.187 ppb	0.881 ppb	0.022 ppb	108.323 %	98.632 %	0.004 ppb
Concentration per Run 2	108.073 %	102.213 %	-0.072 ppb	0.186 ppb	0.703 ppb	0.031 ppb	108.049 %	104.407 %	0.005 ppb
Concentration per Run 3	111.950 %	106.679 %	-0.036 ppb	0.159 ppb	0.621 ppb	0.030 ppb	106.537 %	105.438 %	0.010 ppb
Concentration RSD	2.6 %	2.5 %	34.8 %	8.9 %	18.1 %	18.3 %	0.9 %	3.6 %	46.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	113.915 %	112.584 %	0.024 ppb	6.403 ppb	139.964 %	122.475 %	128.978 %	132.907 %
Concentration per Run 1	0.003 ppb	122.100 %	108.682 %	0.015 ppb	6.572 ppb	137.891 %	118.495 %	130.976 %	129.944 %
Concentration per Run 2	-0.002 ppb	111.377 %	115.098 %	0.028 ppb	5.913 ppb	141.381 %	123.591 %	129.502 %	134.529 %
Concentration per Run 3	0.007 ppb	108.267 %	113.972 %	0.031 ppb	6.725 ppb	140.619 %	125.339 %	126.457 %	134.249 %
Concentration RSD	154.9 %	6.4 %	3.0 %	35.3 %	6.7 %	1.3 %	2.9 %	1.8 %	1.9 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.058 ppb	0.319 ppb	143.698 %	148.765 %
Concentration per Run 1	0.033 ppb	0.312 ppb	148.009 %	146.715 %
Concentration per Run 2	0.070 ppb	0.324 ppb	143.999 %	152.245 %
Concentration per Run 3	0.071 ppb	0.321 ppb	139.087 %	147.336 %
Concentration RSD	37.8 %	1.9 %	3.1 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 122
Analysis label: WG1904738-6D50 SPLP-6020T
Analysis started at: 4/4/2024 5:03:59 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 22
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.577 %	88.806 %	0.027 ppb	375.256 ppb	52.910 ppb	108.031 ppb	30.394 ppb	74.621 ppb	105.675 %
Concentration per Run 1	98.497 %	86.754 %	0.028 ppb	407.461 ppb	51.093 ppb	99.827 ppb	39.875 ppb	182.893 ppb	103.956 %
Concentration per Run 2	97.409 %	95.709 %	0.028 ppb	332.497 ppb	50.465 ppb	111.688 ppb	27.881 ppb	-34.870 ppb	106.796 %
Concentration per Run 3	96.825 %	83.955 %	0.023 ppb	385.812 ppb	57.173 ppb	112.578 ppb	23.425 ppb	75.840 ppb	106.274 %
Concentration RSD	0.9 %	6.9 %	10.3 %	10.3 %	7.0 %	6.6 %	28.0 %	145.9 %	1.4 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.669 %	0.286 ppb	-1.339 ppb	1.625 ppb	115.666 ppb	0.082 ppb	0.120 ppb	0.188 ppb	1.700 ppb
Concentration per Run 1	86.599 %	0.373 ppb	-1.049 ppb	1.719 ppb	128.263 ppb	0.076 ppb	0.296 ppb	0.253 ppb	1.995 ppb
Concentration per Run 2	91.859 %	0.178 ppb	-1.499 ppb	1.556 ppb	102.717 ppb	0.065 ppb	0.042 ppb	0.180 ppb	1.395 ppb
Concentration per Run 3	93.550 %	0.307 ppb	-1.469 ppb	1.601 ppb	116.018 ppb	0.105 ppb	0.022 ppb	0.130 ppb	1.708 ppb
Concentration RSD	4.0 %	34.7 %	18.8 %	5.2 %	11.0 %	25.1 %	127.2 %	32.9 %	17.6 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.052 %	101.265 %	-0.032 ppb	0.056 ppb	0.435 ppb	0.028 ppb	108.049 %	101.501 %	0.006 ppb
Concentration per Run 1	110.541 %	93.895 %	-0.013 ppb	0.166 ppb	0.590 ppb	0.012 ppb	107.681 %	94.819 %	0.008 ppb
Concentration per Run 2	109.464 %	103.700 %	-0.030 ppb	0.001 ppb	0.239 ppb	0.010 ppb	110.718 %	105.017 %	0.004 ppb
Concentration per Run 3	110.150 %	106.199 %	-0.054 ppb	0.001 ppb	0.475 ppb	0.062 ppb	105.748 %	104.666 %	0.006 ppb
Concentration RSD	0.5 %	6.4 %	63.9 %	169.8 %	41.1 %	104.8 %	2.3 %	5.7 %	33.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.002 ppb	107.941 %	107.926 %	0.021 ppb	3.061 ppb	136.624 %	119.719 %	127.582 %	128.165 %
Concentration per Run 1	0.003 ppb	109.408 %	98.432 %	0.020 ppb	3.309 ppb	135.321 %	113.420 %	133.145 %	121.671 %
Concentration per Run 2	0.003 ppb	105.726 %	111.441 %	0.014 ppb	2.875 ppb	137.762 %	124.089 %	123.030 %	133.241 %
Concentration per Run 3	-0.002 ppb	108.688 %	113.906 %	0.028 ppb	2.998 ppb	136.788 %	121.650 %	126.572 %	129.582 %
Concentration RSD	180.3 %	1.8 %	7.7 %	34.4 %	7.3 %	0.9 %	4.7 %	4.0 %	4.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.038 ppb	0.385 ppb	124.620 %	134.223 %
Concentration per Run 1	0.018 ppb	0.366 ppb	124.803 %	133.446 %
Concentration per Run 2	0.040 ppb	0.394 ppb	123.163 %	133.664 %
Concentration per Run 3	0.057 ppb	0.395 ppb	125.895 %	135.559 %
Concentration RSD	51.9 %	4.2 %	1.1 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	123	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 5:08:41 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	93.429 %	83.022 %	62.587 ppb	**7,081.495 ppb**	7,309.385 ppb	61.671 ppb	6,781.070 ppb	6,946.105 ppb	104.427 %
Concentration per Run 1	94.681 %	76.119 %	63.561 ppb	7,849.355 ppb	7,810.016 ppb	62.322 ppb	7,416.213 ppb	7,166.606 ppb	103.212 %
Concentration per Run 2	93.511 %	84.515 %	61.925 ppb	7,004.069 ppb	7,317.020 ppb	61.608 ppb	6,592.419 ppb	7,147.070 ppb	106.210 %
Concentration per Run 3	92.095 %	88.433 %	62.277 ppb	6,391.060 ppb	6,801.118 ppb	61.084 ppb	6,334.577 ppb	6,524.637 ppb	103.858 %
Recovery Percentage 1			104.312 %	118.025 %	121.823 %	102.786 %	113.018 %	115.768 %	
Concentration RSD	1.4 %	7.6 %	1.4 %	10.3 %	6.9 %	1.0 %	8.3 %	5.3 %	1.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	85.065 %	62.024 ppb	62.090 ppb	63.001 ppb	6,654.210 ppb	66.009 ppb	64.909 ppb	61.747 ppb	64.923 ppb
Concentration per Run 1	80.963 %	65.368 ppb	67.249 ppb	69.163 ppb	7,369.206 ppb	69.387 ppb	69.888 ppb	68.023 ppb	69.728 ppb
Concentration per Run 2	84.345 %	62.995 ppb	61.395 ppb	60.117 ppb	6,355.662 ppb	66.254 ppb	62.972 ppb	58.872 ppb	64.466 ppb
Concentration per Run 3	89.887 %	57.709 ppb	57.627 ppb	59.722 ppb	6,237.760 ppb	62.386 ppb	61.867 ppb	58.346 ppb	60.575 ppb
Recovery Percentage 1		103.374 %	103.484 %	105.001 %	110.903 %	110.015 %	108.182 %	102.912 %	108.205 %
Concentration RSD	5.3 %	6.3 %	7.8 %	8.5 %	9.3 %	5.3 %	6.7 %	8.8 %	7.1 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.512 %	101.290 %	59.518 ppb	63.905 ppb	65.726 ppb	62.198 ppb	105.019 %	99.898 %	62.723 ppb
Concentration per Run 1	110.690 %	96.620 %	64.092 ppb	66.661 ppb	72.190 ppb	64.936 ppb	105.755 %	93.638 %	67.916 ppb
Concentration per Run 2	112.608 %	101.934 %	58.388 ppb	62.687 ppb	63.606 ppb	60.766 ppb	102.678 %	102.325 %	61.005 ppb
Concentration per Run 3	111.236 %	105.316 %	56.073 ppb	62.367 ppb	61.382 ppb	60.893 ppb	106.624 %	103.731 %	59.248 ppb
Recovery Percentage 1			99.196 %	106.509 %	109.543 %	103.664 %			104.538 %
Concentration RSD	0.9 %	4.3 %	6.9 %	3.7 %	8.7 %	3.8 %	2.0 %	5.5 %	7.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	63.287 ppb	106.501 %	105.679 %	65.950 ppb	64.220 ppb	135.953 %	119.153 %	127.657 %	129.516 %
Concentration per Run 1	68.069 ppb	105.263 %	100.604 %	69.839 ppb	68.907 ppb	135.922 %	111.323 %	125.235 %	121.114 %
Concentration per Run 2	62.110 ppb	106.732 %	106.446 %	66.063 ppb	61.126 ppb	136.279 %	120.247 %	128.997 %	131.625 %
Concentration per Run 3	59.681 ppb	107.507 %	109.988 %	61.948 ppb	62.626 ppb	135.657 %	125.889 %	128.739 %	135.809 %
Recovery Percentage 1	105.478 %			109.917 %	107.033 %				
Concentration RSD	6.8 %	1.1 %	4.5 %	6.0 %	6.4 %	0.2 %	6.2 %	1.6 %	5.8 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	61.957 ppb	55.270 ppb	124.909 %	131.553 %
Concentration per Run 1	65.648 ppb	56.287 ppb	124.621 %	129.788 %
Concentration per Run 2	61.911 ppb	54.670 ppb	125.111 %	130.370 %
Concentration per Run 3	58.310 ppb	54.854 ppb	124.995 %	134.502 %
Recovery Percentage 1	103.261 %	92.117 %		
Concentration RSD	5.9 %	1.6 %	0.2 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	124	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 5:13:26 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	97.208 %	88.246 %	0.024 ppb	-4.810 ppb	1.055 ppb	-0.350 ppb	-2.275 ppb	-41.309 ppb	103.442 %
Concentration per Run 1	98.065 %	82.276 %	0.022 ppb	3.439 ppb	2.492 ppb	-0.309 ppb	-3.413 ppb	-55.950 ppb	104.721 %
Concentration per Run 2	97.411 %	89.552 %	0.025 ppb	2.381 ppb	-0.153 ppb	-0.377 ppb	10.011 ppb	-33.443 ppb	102.360 %
Concentration per Run 3	96.147 %	92.910 %	0.025 ppb	-20.250 ppb	0.825 ppb	-0.365 ppb	-13.424 ppb	-34.533 ppb	103.246 %
Recovery Percentage 1			4.795 %	-4.810 %	1.507 %	-3.504 %	-2.275 %	-41.309 %	
Concentration RSD	1.0 %	6.2 %	6.6 %	278.2 %	126.8 %	10.4 %	516.8 %	30.7 %	1.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	95.961 %	-0.035 ppb	-1.586 ppb	-0.076 ppb	4.073 ppb	-0.004 ppb	1.939 ppb	0.986 ppb	0.903 ppb
Concentration per Run 1	97.401 %	-0.016 ppb	-1.342 ppb	-0.069 ppb	2.670 ppb	-0.002 ppb	1.913 ppb	1.095 ppb	0.821 ppb
Concentration per Run 2	91.953 %	-0.096 ppb	-1.584 ppb	-0.051 ppb	4.241 ppb	-0.003 ppb	2.074 ppb	0.846 ppb	1.043 ppb
Concentration per Run 3	98.528 %	0.007 ppb	-1.831 ppb	-0.106 ppb	5.308 ppb	-0.007 ppb	1.831 ppb	1.019 ppb	0.844 ppb
Recovery Percentage 1		-0.696 %	-158.559 %	-7.572 %	8.146 %	-0.796 %	96.970 %	98.646 %	18.053 %
Concentration RSD	3.7 %	155.5 %	15.4 %	37.0 %	32.6 %	65.9 %	6.4 %	12.9 %	13.5 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	110.996 %	100.754 %	-0.019 ppb	0.122 ppb	0.030 ppb	0.180 ppb	109.096 %	103.039 %	0.007 ppb
Concentration per Run 1	114.633 %	93.754 %	0.068 ppb	0.010 ppb	0.015 ppb	0.189 ppb	110.834 %	99.129 %	0.006 ppb
Concentration per Run 2	109.155 %	102.162 %	-0.008 ppb	0.186 ppb	0.063 ppb	0.157 ppb	107.871 %	103.727 %	0.008 ppb
Concentration per Run 3	109.199 %	106.346 %	-0.118 ppb	0.170 ppb	0.011 ppb	0.194 ppb	108.582 %	106.262 %	0.007 ppb
Recovery Percentage 1			-3.894 %	2.442 %	5.934 %	9.010 %			1.733 %
Concentration RSD	2.8 %	6.4 %	480.2 %	79.5 %	98.8 %	11.0 %	1.4 %	3.5 %	20.5 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.007 ppb	111.222 %	110.947 %	0.032 ppb	0.038 ppb	138.854 %	123.834 %	127.588 %	129.720 %
Concentration per Run 1	0.003 ppb	115.482 %	108.504 %	0.024 ppb	0.031 ppb	139.687 %	120.930 %	128.743 %	122.765 %
Concentration per Run 2	0.008 ppb	109.131 %	107.687 %	0.038 ppb	0.055 ppb	134.494 %	124.921 %	125.581 %	132.845 %
Concentration per Run 3	0.011 ppb	109.054 %	116.650 %	0.033 ppb	0.028 ppb	142.381 %	125.651 %	128.441 %	133.551 %
Recovery Percentage 1				0.793 %	7.668 %				
Concentration RSD	57.1 %	3.3 %	4.5 %	23.8 %	38.9 %	2.9 %	2.1 %	1.4 %	4.7 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.436 ppb	0.010 ppb	126.129 %	141.164 %
Concentration per Run 1	0.292 ppb	0.011 ppb	127.180 %	142.456 %
Concentration per Run 2	0.506 ppb	0.011 ppb	126.307 %	138.439 %
Concentration per Run 3	0.508 ppb	0.010 ppb	124.899 %	142.598 %
Recovery Percentage 1	43.562 %	1.047 %		
Concentration RSD	28.5 %	7.3 %	0.9 %	1.7 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 125
Analysis label: L2417292-06d10 SPLP-6020T
Analysis started at: 4/4/2024 5:21:16 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 25
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	100.403 %	95.895 %	0.057 ppb	1,589.539 ppb	304.460 ppb	508.993 ppb	108.459 ppb	230.576 ppb	108.221 %
Concentration per Run 1	102.113 %	87.873 %	0.055 ppb	1,714.155 ppb	318.894 ppb	510.347 ppb	102.358 ppb	157.347 ppb	108.609 %
Concentration per Run 2	100.646 %	95.709 %	0.063 ppb	1,564.842 ppb	311.886 ppb	512.471 ppb	110.364 ppb	130.878 ppb	108.863 %
Concentration per Run 3	98.449 %	104.104 %	0.052 ppb	1,489.619 ppb	282.599 ppb	504.162 ppb	112.654 ppb	403.503 ppb	107.191 %
Concentration RSD	1.8 %	8.5 %	10.0 %	7.2 %	6.3 %	0.8 %	5.0 %	65.2 %	0.8 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	97.934 %	1.010 ppb	-0.665 ppb	12.279 ppb	627.785 ppb	0.449 ppb	0.923 ppb	0.762 ppb	5.598 ppb
Concentration per Run 1	95.710 %	0.940 ppb	-0.669 ppb	12.821 ppb	627.894 ppb	0.488 ppb	0.953 ppb	0.758 ppb	5.693 ppb
Concentration per Run 2	98.434 %	1.022 ppb	-0.432 ppb	12.299 ppb	643.579 ppb	0.396 ppb	1.090 ppb	0.798 ppb	5.783 ppb
Concentration per Run 3	99.656 %	1.068 ppb	-0.895 ppb	11.716 ppb	611.882 ppb	0.464 ppb	0.727 ppb	0.731 ppb	5.317 ppb
Concentration RSD	2.1 %	6.4 %	34.8 %	4.5 %	2.5 %	10.7 %	19.9 %	4.4 %	4.4 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.220 %	105.600 %	0.016 ppb	0.182 ppb	0.817 ppb	0.057 ppb	108.051 %	105.773 %	0.003 ppb
Concentration per Run 1	111.922 %	103.027 %	-0.047 ppb	0.174 ppb	0.962 ppb	0.020 ppb	108.466 %	105.647 %	0.009 ppb
Concentration per Run 2	111.580 %	102.716 %	0.091 ppb	0.358 ppb	0.809 ppb	0.061 ppb	108.036 %	106.114 %	0.002 ppb
Concentration per Run 3	110.157 %	111.056 %	0.005 ppb	0.012 ppb	0.680 ppb	0.091 ppb	107.649 %	105.559 %	-0.002 ppb
Concentration RSD	0.8 %	4.5 %	429.7 %	95.5 %	17.2 %	61.6 %	0.4 %	0.3 %	180.6 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.006 ppb	111.400 %	116.540 %	0.019 ppb	9.555 ppb	140.733 %	129.330 %	129.927 %	141.547 %
Concentration per Run 1	0.007 ppb	112.916 %	118.902 %	0.008 ppb	8.467 ppb	142.343 %	126.926 %	132.626 %	137.360 %
Concentration per Run 2	0.007 ppb	110.901 %	116.666 %	0.025 ppb	9.341 ppb	141.203 %	129.247 %	129.051 %	146.208 %
Concentration per Run 3	0.003 ppb	110.385 %	114.053 %	0.025 ppb	10.859 ppb	138.654 %	131.817 %	128.103 %	141.073 %
Concentration RSD	43.6 %	1.2 %	2.1 %	51.6 %	12.7 %	1.3 %	1.9 %	1.8 %	3.1 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.096 ppb	0.548 ppb	129.107 %	150.581 %
Concentration per Run 1	0.057 ppb	0.535 ppb	126.857 %	152.819 %
Concentration per Run 2	0.108 ppb	0.541 ppb	131.662 %	150.258 %
Concentration per Run 3	0.123 ppb	0.570 ppb	128.802 %	148.667 %
Concentration RSD	35.9 %	3.4 %	1.9 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 126
Analysis label: L2417292-07d10 SPLP-6020T
Analysis started at: 4/4/2024 5:25:58 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 26
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.943 %	94.776 %	0.090 ppb	1,900.818 ppb	471.951 ppb	729.021 ppb	147.337 ppb	210.969 ppb	110.645 %
Concentration per Run 1	100.303 %	91.231 %	0.094 ppb	1,967.278 ppb	501.967 ppb	724.386 ppb	187.442 ppb	211.776 ppb	109.824 %
Concentration per Run 2	97.986 %	86.754 %	0.079 ppb	2,018.884 ppb	468.696 ppb	738.608 ppb	147.460 ppb	270.522 ppb	112.014 %
Concentration per Run 3	98.539 %	106.343 %	0.097 ppb	1,716.291 ppb	445.190 ppb	724.069 ppb	107.109 ppb	150.609 ppb	110.099 %
Concentration RSD	1.2 %	10.8 %	10.3 %	8.5 %	6.0 %	1.1 %	27.3 %	28.4 %	1.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.548 %	1.540 ppb	-0.235 ppb	22.890 ppb	933.776 ppb	0.882 ppb	1.450 ppb	0.963 ppb	10.777 ppb
Concentration per Run 1	91.202 %	1.503 ppb	0.028 ppb	23.484 ppb	970.722 ppb	0.892 ppb	1.377 ppb	0.861 ppb	11.425 ppb
Concentration per Run 2	88.478 %	1.583 ppb	-0.387 ppb	23.191 ppb	962.926 ppb	0.812 ppb	1.436 ppb	0.969 ppb	10.510 ppb
Concentration per Run 3	97.965 %	1.534 ppb	-0.345 ppb	21.995 ppb	867.682 ppb	0.942 ppb	1.537 ppb	1.061 ppb	10.397 ppb
Concentration RSD	5.3 %	2.6 %	97.5 %	3.4 %	6.1 %	7.5 %	5.6 %	10.4 %	5.2 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	112.346 %	105.543 %	0.148 ppb	0.615 ppb	1.051 ppb	0.042 ppb	109.321 %	102.659 %	0.004 ppb
Concentration per Run 1	113.819 %	103.027 %	0.289 ppb	0.361 ppb	1.230 ppb	0.054 ppb	111.818 %	98.667 %	0.010 ppb
Concentration per Run 2	110.605 %	106.849 %	0.104 ppb	1.176 ppb	0.843 ppb	0.040 ppb	109.517 %	105.944 %	0.001 ppb
Concentration per Run 3	112.615 %	106.753 %	0.050 ppb	0.308 ppb	1.079 ppb	0.031 ppb	106.629 %	103.367 %	0.002 ppb
Concentration RSD	1.4 %	2.1 %	84.9 %	79.2 %	18.6 %	28.4 %	2.4 %	3.6 %	108.4 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.001 ppb	110.565 %	111.458 %	0.023 ppb	12.828 ppb	139.296 %	123.283 %	130.329 %	132.208 %
Concentration per Run 1	-0.002 ppb	114.828 %	108.928 %	0.021 ppb	13.017 ppb	137.767 %	119.938 %	131.415 %	127.897 %
Concentration per Run 2	-0.002 ppb	109.748 %	113.335 %	0.022 ppb	12.521 ppb	143.458 %	128.303 %	129.407 %	137.208 %
Concentration per Run 3	0.007 ppb	107.119 %	112.111 %	0.026 ppb	12.946 ppb	136.664 %	121.608 %	130.166 %	131.518 %
Concentration RSD	383.8 %	3.5 %	2.0 %	11.5 %	2.1 %	2.6 %	3.6 %	0.8 %	3.6 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.076 ppb	0.688 ppb	131.920 %	142.913 %
Concentration per Run 1	0.043 ppb	0.677 ppb	135.809 %	149.198 %
Concentration per Run 2	0.082 ppb	0.702 ppb	129.340 %	142.181 %
Concentration per Run 3	0.102 ppb	0.683 ppb	130.613 %	137.360 %
Concentration RSD	39.5 %	1.9 %	2.6 %	4.2 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index: 127
Analysis label: L2417292-09d10 SPLP-6020T
Analysis started at: 4/4/2024 5:30:39 PM
User name ALPHALAB\ICPMSRQ
Rack 2
Vial 27
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	98.590 %	94.216 %	0.038 ppb	1,207.872 ppb	127.866 ppb	181.126 ppb	70.788 ppb	84.877 ppb	109.166 %
Concentration per Run 1	99.895 %	84.515 %	0.040 ppb	1,310.713 ppb	125.752 ppb	179.880 ppb	75.493 ppb	124.867 ppb	107.844 %
Concentration per Run 2	97.859 %	104.664 %	0.038 ppb	1,116.416 ppb	135.029 ppb	177.868 ppb	70.219 ppb	77.920 ppb	111.764 %
Concentration per Run 3	98.016 %	93.470 %	0.036 ppb	1,196.487 ppb	122.818 ppb	185.629 ppb	66.653 ppb	51.843 ppb	107.891 %
Concentration RSD	1.1 %	10.7 %	4.4 %	8.1 %	5.0 %	2.2 %	6.3 %	43.6 %	2.1 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	92.235 %	0.372 ppb	-0.834 ppb	8.989 ppb	196.374 ppb	0.229 ppb	0.331 ppb	0.264 ppb	2.857 ppb
Concentration per Run 1	91.484 %	0.381 ppb	-0.710 ppb	9.290 ppb	206.595 ppb	0.229 ppb	0.474 ppb	0.343 ppb	2.954 ppb
Concentration per Run 2	91.014 %	0.457 ppb	-0.828 ppb	8.950 ppb	204.037 ppb	0.237 ppb	0.288 ppb	0.238 ppb	2.816 ppb
Concentration per Run 3	94.208 %	0.279 ppb	-0.963 ppb	8.727 ppb	178.490 ppb	0.221 ppb	0.230 ppb	0.211 ppb	2.802 ppb
Concentration RSD	1.9 %	24.1 %	15.1 %	3.2 %	7.9 %	3.5 %	38.7 %	26.6 %	2.9 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	111.344 %	100.592 %	0.000 ppb	0.057 ppb	0.537 ppb	0.042 ppb	110.577 %	104.007 %	0.002 ppb
Concentration per Run 1	115.368 %	94.184 %	-0.160 ppb	-0.012 ppb	0.513 ppb	0.033 ppb	112.409 %	101.866 %	-0.001 ppb
Concentration per Run 2	107.735 %	102.354 %	-0.006 ppb	0.011 ppb	0.574 ppb	0.083 ppb	108.024 %	104.548 %	0.002 ppb
Concentration per Run 3	110.929 %	105.238 %	0.167 ppb	0.171 ppb	0.525 ppb	0.010 ppb	111.298 %	105.607 %	0.004 ppb
Concentration RSD	3.4 %	5.7 %	52,096.5 %	176.3 %	6.0 %	89.8 %	2.1 %	1.9 %	135.9 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.003 ppb	112.895 %	111.926 %	0.017 ppb	4.411 ppb	138.676 %	122.598 %	131.949 %	133.295 %
Concentration per Run 1	0.008 ppb	114.139 %	110.070 %	0.014 ppb	4.195 ppb	140.649 %	119.427 %	131.227 %	130.098 %
Concentration per Run 2	0.003 ppb	109.930 %	110.968 %	0.005 ppb	4.679 ppb	137.035 %	122.195 %	130.269 %	133.910 %
Concentration per Run 3	-0.002 ppb	114.616 %	114.739 %	0.031 ppb	4.358 ppb	138.346 %	126.173 %	134.351 %	135.877 %
Concentration RSD	157.3 %	2.3 %	2.2 %	75.7 %	5.6 %	1.3 %	2.8 %	1.6 %	2.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.055 ppb	0.133 ppb	132.013 %	140.979 %
Concentration per Run 1	0.031 ppb	0.130 ppb	129.517 %	142.884 %
Concentration per Run 2	0.060 ppb	0.137 ppb	133.541 %	141.284 %
Concentration per Run 3	0.073 ppb	0.131 ppb	132.980 %	138.769 %
Concentration RSD	39.4 %	2.9 %	1.7 %	1.5 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	128	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/4/2024 5:37:51 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	92.718 %	81.903 %	61.907 ppb	**6,854.704 ppb**	7,213.875 ppb	60.188 ppb	6,291.624 ppb	5,841.931 ppb	105.076 %
Concentration per Run 1	93.943 %	81.716 %	61.755 ppb	6,832.427 ppb	7,174.501 ppb	62.597 ppb	6,083.278 ppb	5,803.494 ppb	102.007 %
Concentration per Run 2	91.861 %	78.358 %	62.218 ppb	7,133.372 ppb	7,550.900 ppb	59.542 ppb	6,637.651 ppb	5,869.962 ppb	106.819 %
Concentration per Run 3	92.350 %	85.634 %	61.748 ppb	6,598.314 ppb	6,916.223 ppb	58.425 ppb	6,153.943 ppb	5,852.337 ppb	106.401 %
Recovery Percentage 1			103.179 %	114.245 %	120.231 %	100.313 %	104.860 %	97.366 %	
Concentration RSD	1.2 %	4.4 %	0.4 %	3.9 %	4.4 %	3.6 %	4.8 %	0.6 %	2.5 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	93.957 %	57.994 ppb	56.532 ppb	65.260 ppb	6,367.687 ppb	63.255 ppb	62.360 ppb	59.691 ppb	61.984 ppb
Concentration per Run 1	97.401 %	56.465 ppb	57.496 ppb	64.448 ppb	6,505.200 ppb	61.253 ppb	64.569 ppb	63.412 ppb	65.462 ppb
Concentration per Run 2	89.511 %	61.470 ppb	57.274 ppb	66.155 ppb	6,306.103 ppb	65.036 ppb	61.236 ppb	56.947 ppb	59.406 ppb
Concentration per Run 3	94.959 %	56.047 ppb	54.826 ppb	65.177 ppb	6,291.758 ppb	63.475 ppb	61.274 ppb	58.713 ppb	61.083 ppb
Recovery Percentage 1		96.657 %	94.220 %	108.767 %	106.128 %	105.424 %	103.933 %	99.485 %	103.306 %
Concentration RSD	4.3 %	5.2 %	2.6 %	1.3 %	1.9 %	3.0 %	3.1 %	5.6 %	5.0 %

Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.900 %	101.852 %	59.453 ppb	63.666 ppb	65.727 ppb	61.142 ppb	104.161 %	101.328 %	61.350 ppb
Concentration per Run 1	111.091 %	96.552 %	63.032 ppb	63.282 ppb	67.832 ppb	62.591 ppb	102.199 %	100.528 %	63.104 ppb
Concentration per Run 2	108.071 %	106.260 %	56.331 ppb	56.258 ppb	63.499 ppb	58.124 ppb	106.339 %	102.095 %	59.821 ppb
Concentration per Run 3	110.538 %	102.744 %	58.995 ppb	71.456 ppb	65.849 ppb	62.711 ppb	103.945 %	101.361 %	61.124 ppb
Recovery Percentage 1			99.088 %	106.109 %	109.544 %	101.903 %			102.250 %
Concentration RSD	1.5 %	4.8 %	5.7 %	11.9 %	3.3 %	4.3 %	2.0 %	0.8 %	2.7 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	61.599 ppb	106.439 %	109.086 %	64.125 ppb	64.958 ppb	133.535 %	122.846 %	127.127 %	133.811 %
Concentration per Run 1	63.589 ppb	108.226 %	105.402 %	66.135 ppb	65.539 ppb	132.586 %	119.637 %	126.124 %	127.455 %
Concentration per Run 2	60.599 ppb	106.461 %	111.083 %	63.330 ppb	65.039 ppb	132.871 %	122.855 %	130.497 %	138.366 %
Concentration per Run 3	60.609 ppb	104.630 %	110.772 %	62.911 ppb	64.297 ppb	135.148 %	126.046 %	124.758 %	135.613 %
Recovery Percentage 1	102.664 %			106.876 %	108.264 %				
Concentration RSD	2.8 %	1.7 %	2.9 %	2.7 %	1.0 %	1.1 %	2.6 %	2.4 %	4.2 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	60.948 ppb	54.477 ppb	123.370 %	137.926 %
Concentration per Run 1	60.939 ppb	53.652 ppb	125.228 %	138.018 %
Concentration per Run 2	61.248 ppb	53.708 ppb	121.855 %	138.922 %
Concentration per Run 3	60.659 ppb	56.069 ppb	123.026 %	136.839 %
Recovery Percentage 1	101.581 %	90.794 %		
Concentration RSD	0.5 %	2.5 %	1.4 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/4/2024 5:48:12 PM

Analysis index:	129	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/4/2024 5:42:36 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)	45Sc (STD_DEF)
Concentration average	95.566 %	89.925 %	0.030 ppb	-2.838 ppb	1.574 ppb	-0.354 ppb	11.662 ppb	-17.105 ppb	105.595 %
Concentration per Run 1	97.072 %	86.194 %	0.033 ppb	6.497 ppb	2.640 ppb	-0.328 ppb	19.754 ppb	15.000 ppb	111.913 %
Concentration per Run 2	95.382 %	93.470 %	0.030 ppb	-7.517 ppb	2.220 ppb	-0.380 ppb	16.590 ppb	-33.389 ppb	102.672 %
Concentration per Run 3	94.244 %	90.112 %	0.028 ppb	-7.495 ppb	-0.138 ppb	-0.355 ppb	-1.358 ppb	-32.928 ppb	102.199 %
Recovery Percentage 1			6.082 %	-2.838 %	2.249 %	-3.542 %	11.662 %	-17.105 %	
Concentration RSD	1.5 %	4.0 %	8.2 %	284.9 %	95.1 %	7.3 %	97.6 %	162.6 %	5.2 %

Category	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)	66Zn (KED_DEF)
Concentration average	90.513 %	-0.058 ppb	-1.559 ppb	-0.015 ppb	5.166 ppb	-0.003 ppb	1.644 ppb	1.000 ppb	0.884 ppb
Concentration per Run 1	88.854 %	-0.038 ppb	-1.473 ppb	0.038 ppb	7.845 ppb	-0.006 ppb	1.861 ppb	1.261 ppb	1.112 ppb
Concentration per Run 2	92.047 %	-0.069 ppb	-1.637 ppb	-0.049 ppb	5.153 ppb	-0.007 ppb	1.540 ppb	0.858 ppb	0.817 ppb
Concentration per Run 3	90.638 %	-0.069 ppb	-1.566 ppb	-0.033 ppb	2.498 ppb	0.005 ppb	1.531 ppb	0.881 ppb	0.723 ppb
Recovery Percentage 1		-1.166 %	-155.869 %	-1.453 %	10.331 %	-0.516 %	82.203 %	99.988 %	17.680 %
Concentration RSD	1.8 %	30.8 %	5.2 %	320.5 %	51.8 %	271.2 %	11.4 %	22.7 %	23.0 %

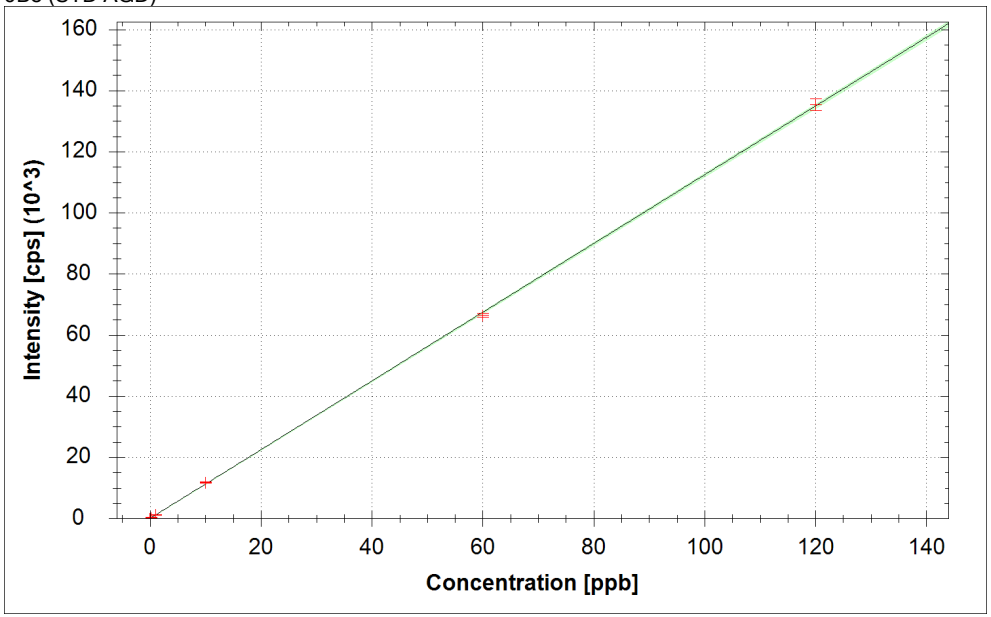
Category	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)	107Ag (KED_DEF)
Concentration average	109.648 %	101.009 %	-0.089 ppb	0.074 ppb	0.042 ppb	0.118 ppb	107.382 %	104.148 %	0.001 ppb
Concentration per Run 1	111.251 %	87.360 %	-0.076 ppb	0.198 ppb	0.044 ppb	0.101 ppb	108.100 %	100.799 %	0.002 ppb
Concentration per Run 2	108.430 %	105.911 %	-0.088 ppb	0.012 ppb	0.049 ppb	0.114 ppb	108.508 %	104.436 %	-0.002 ppb
Concentration per Run 3	109.264 %	109.756 %	-0.103 ppb	0.012 ppb	0.034 ppb	0.140 ppb	105.539 %	107.209 %	0.001 ppb
Recovery Percentage 1			-17.835 %	1.478 %	8.489 %	5.913 %			0.128 %
Concentration RSD	1.3 %	11.9 %	15.7 %	145.7 %	17.3 %	16.9 %	1.5 %	3.1 %	421.3 %

Category	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)	175Lu (KED_DEF)
Concentration average	0.009 ppb	108.644 %	112.024 %	0.033 ppb	0.006 ppb	135.978 %	122.579 %	123.549 %	131.304 %
Concentration per Run 1	0.022 ppb	108.066 %	107.540 %	0.036 ppb	0.032 ppb	136.395 %	118.762 %	127.953 %	122.915 %
Concentration per Run 2	0.007 ppb	110.579 %	113.808 %	0.034 ppb	0.005 ppb	134.894 %	125.246 %	121.170 %	139.462 %
Concentration per Run 3	-0.002 ppb	107.286 %	114.723 %	0.028 ppb	-0.020 ppb	136.646 %	123.728 %	121.525 %	131.534 %
Recovery Percentage 1				0.814 %	1.123 %				
Concentration RSD	129.5 %	1.6 %	3.5 %	12.7 %	458.6 %	0.7 %	2.8 %	3.1 %	6.3 %

Category	205Tl (KED_DEF)	208Pb (STD_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	0.405 ppb	0.012 ppb	126.357 %	146.339 %
Concentration per Run 1	0.283 ppb	0.012 ppb	129.895 %	142.844 %
Concentration per Run 2	0.447 ppb	0.012 ppb	125.253 %	153.342 %
Concentration per Run 3	0.484 ppb	0.012 ppb	123.921 %	142.831 %
Recovery Percentage 1	40.483 %	1.225 %		
Concentration RSD	26.4 %	1.2 %	2.5 %	4.1 %

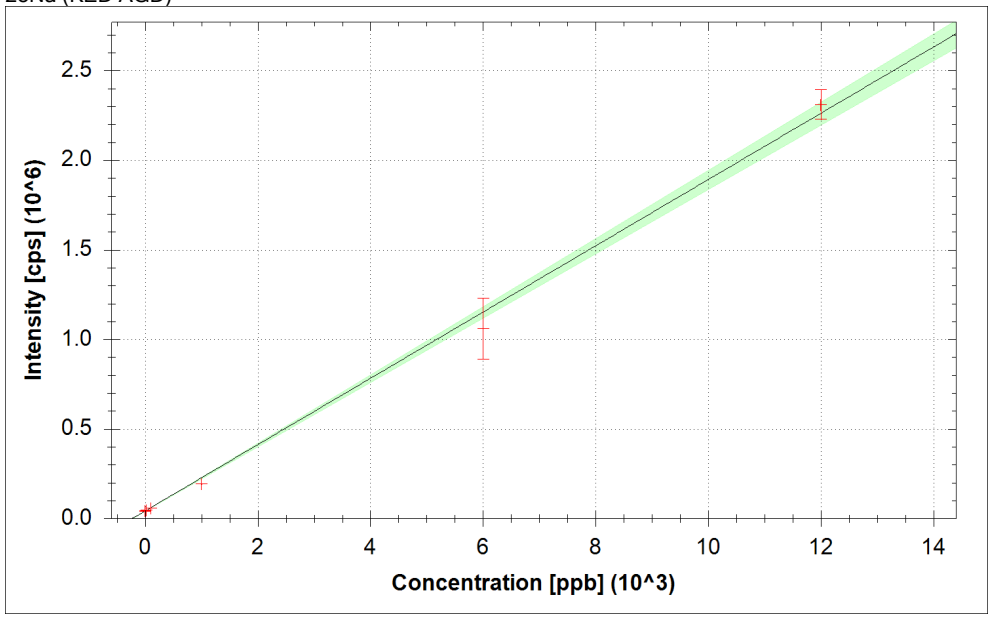
Calibration Curves:

9Be (STD AGD)



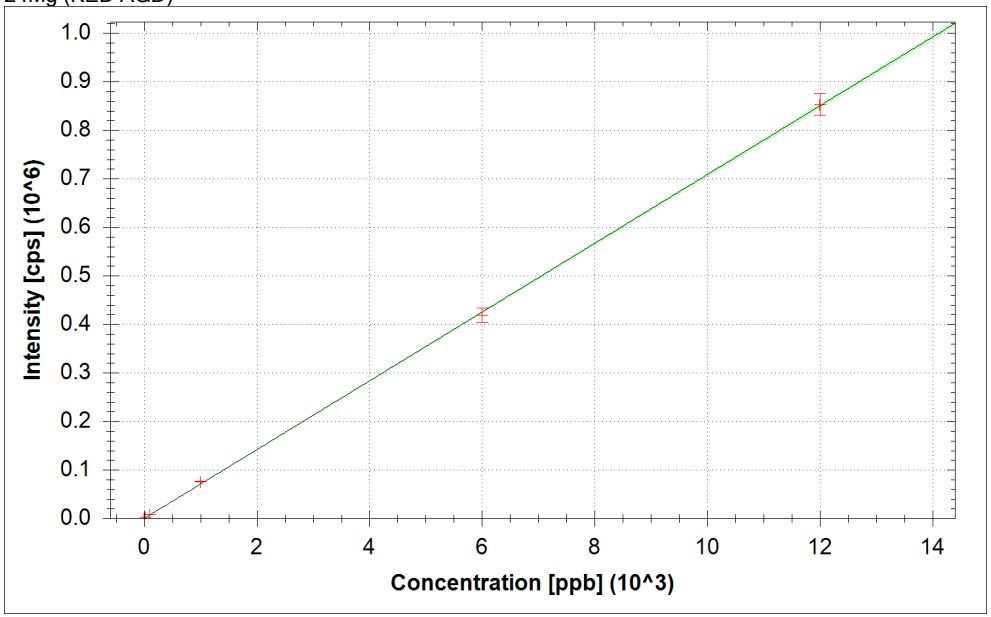
f(x) = 1123.8388*x + 24.4069
R² = 0.9999
BEC = 0.022 ppb
LoD = 0.0169 ppb

23Na (KED AGD)



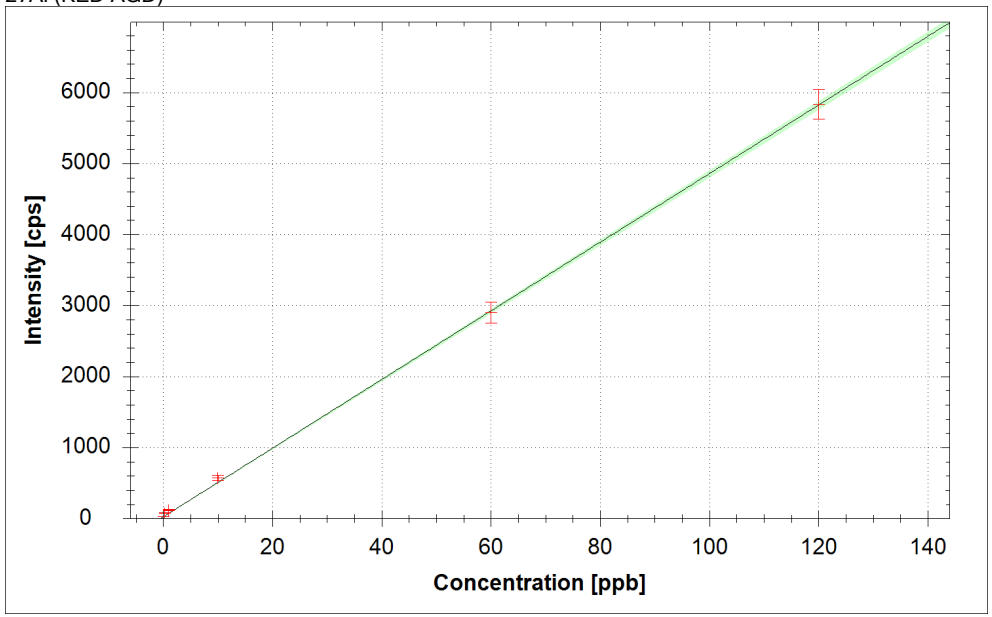
f(x) = 184.9464*x + 42104.4020
R² = 0.9972
BEC = 227.657 ppb
LoD = 25.1594 ppb

24Mg (KED AGD)



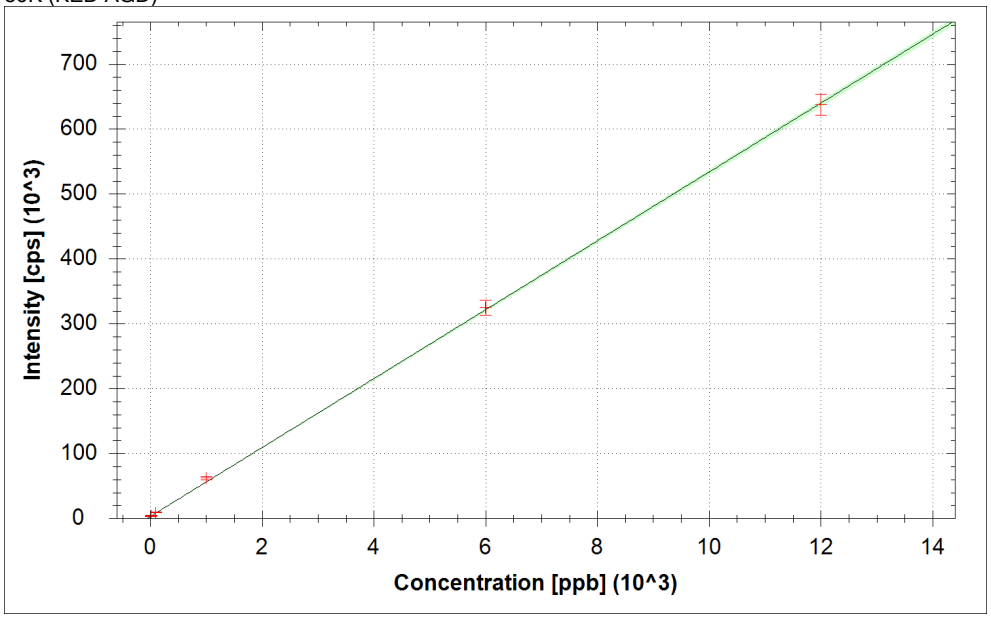
f(x) = 70.8157*x + 45.1652
R² = 0.9999
BEC = 0.638 ppb
LoD = 0.9618 ppb

27Al (KED AGD)



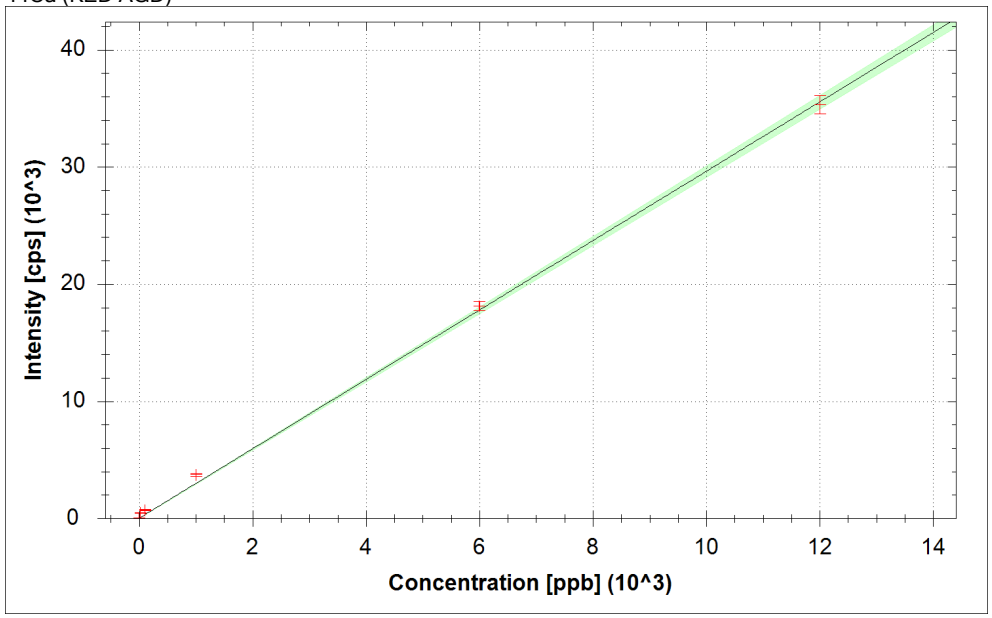
f(x) = 48.3173*x + 22.7180
R² = 0.9997
BEC = 0.470 ppb
LoD = 0.1404 ppb

39K (KED AGD)



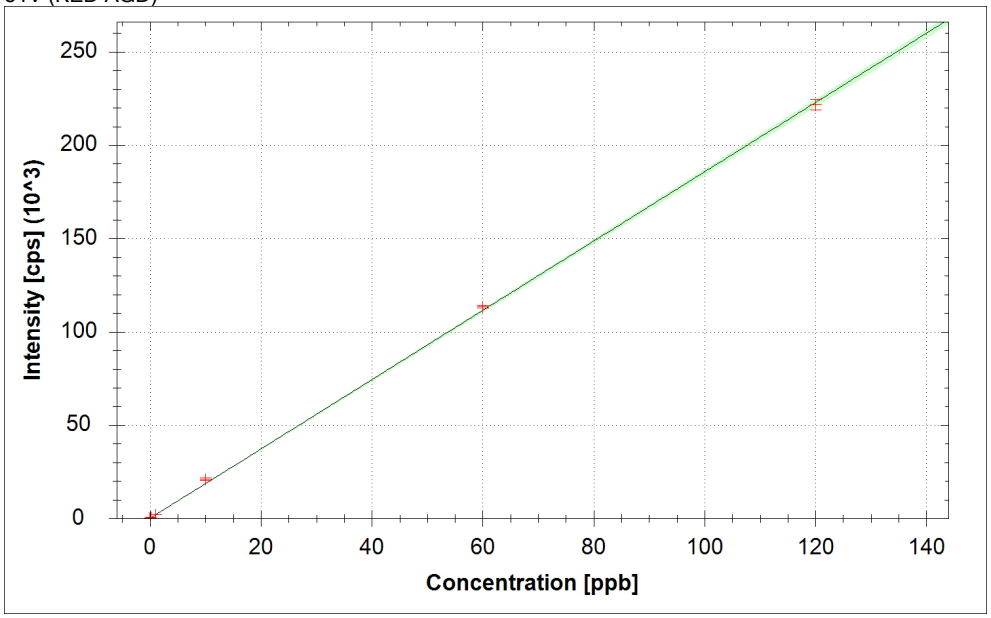
f(x) = 53.0552*x + 3105.1100
R² = 0.9998
BEC = 58.526 ppb
LoD = 9.1245 ppb

44Ca (KED AGD)



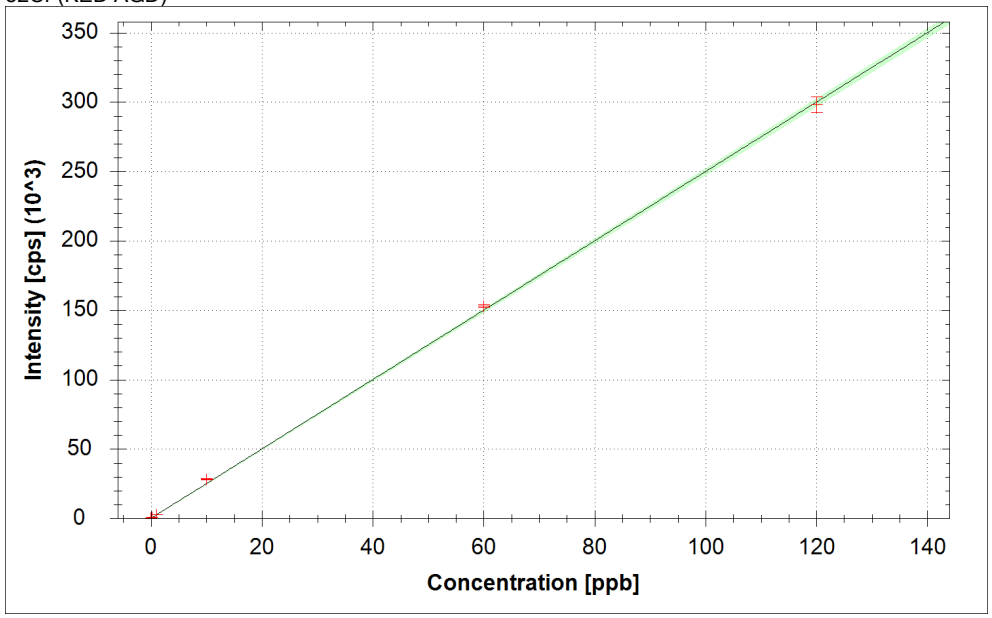
f(x) = 2.9605*x + 19.8258
R² = 0.9990
BEC = 6.697 ppb
LoD = 2.0470 ppb

51V (KED AGD)



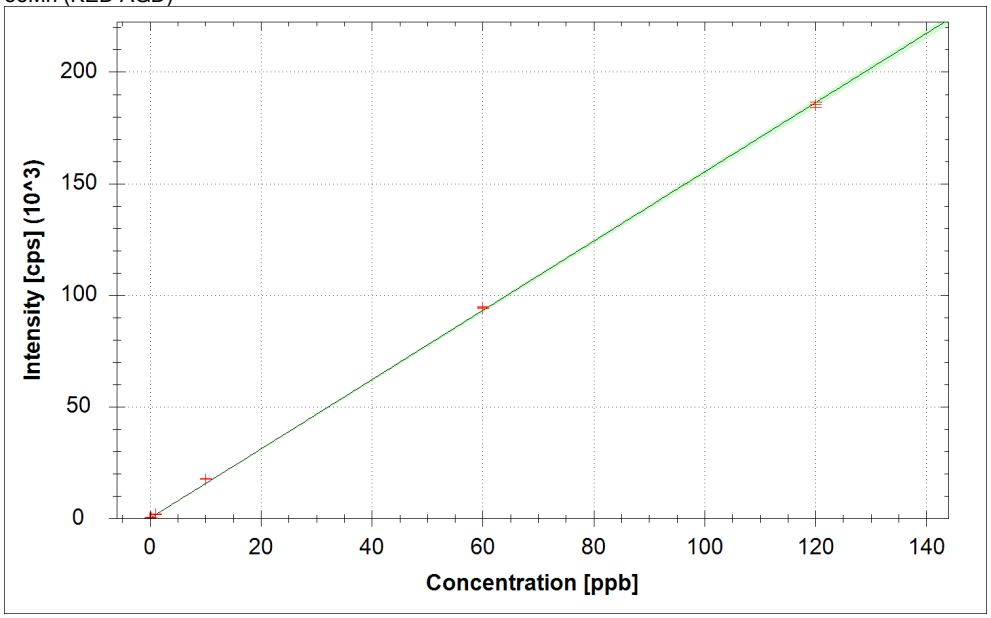
f(x) = 1855.5945*x + 114.1169
R² = 0.9998
BEC = 0.061 ppb
LoD = 0.0373 ppb

52Cr (KED AGD)



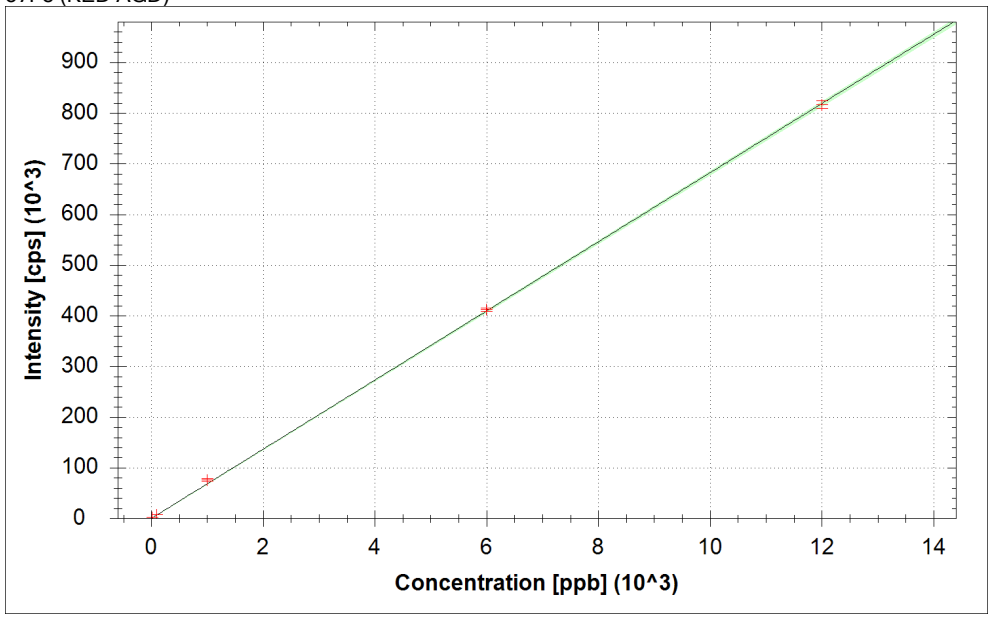
f(x) = 2498.0187*x + 140.4675
R² = 0.9997
BEC = 0.056 ppb
LoD = 0.0238 ppb

55Mn (KED AGD)



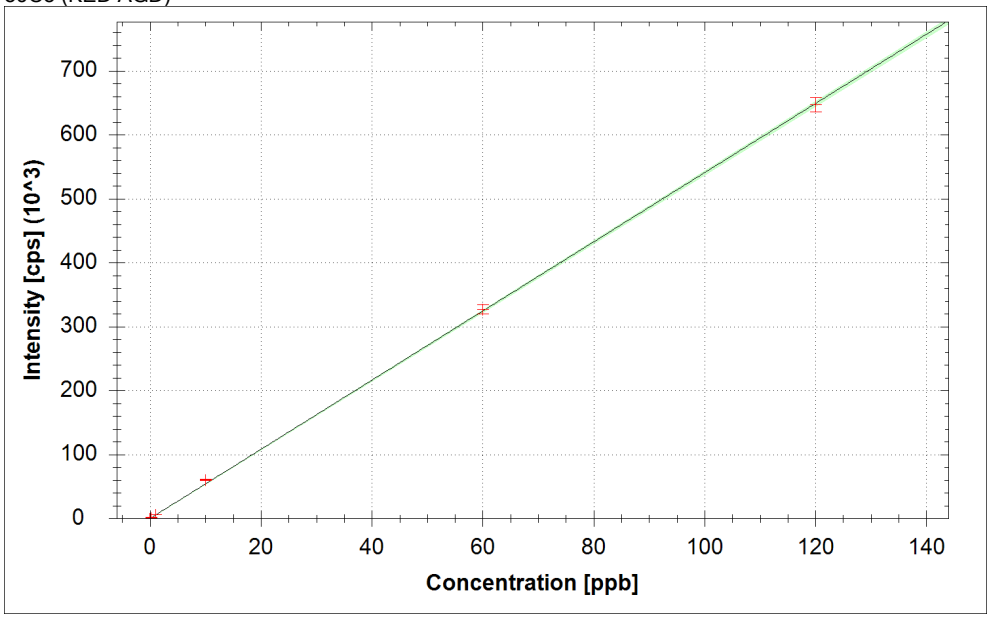
f(x) = 1550.9066*x + 98.4240
R² = 0.9998
BEC = 0.063 ppb
LoD = 0.0372 ppb

57Fe (KED AGD)



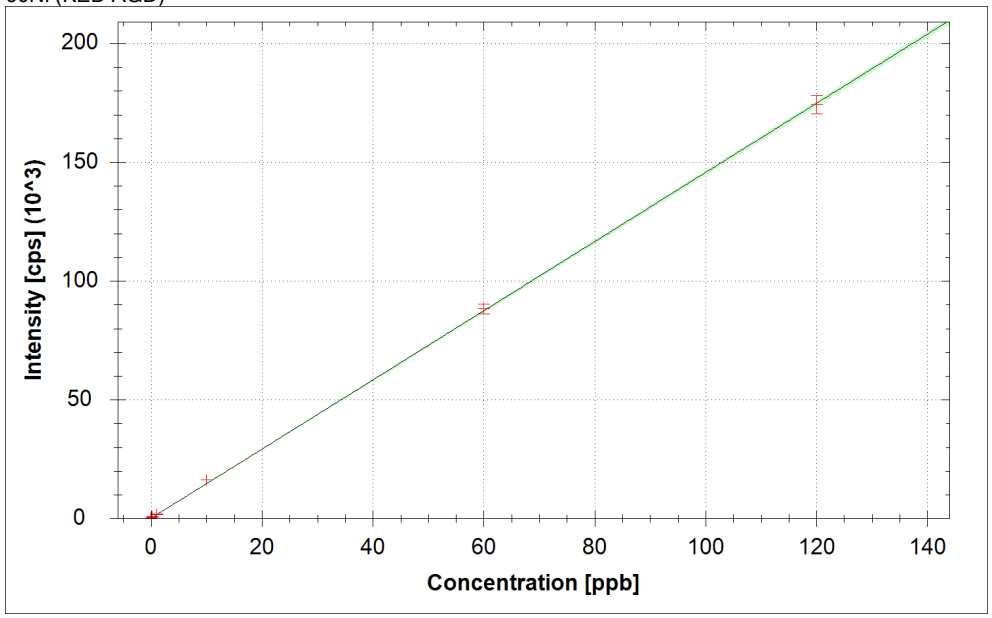
f(x) = 68.2004*x + 151.1915
R² = 0.9999
BEC = 2.217 ppb
LoD = 2.9017 ppb

59Co (KED AGD)



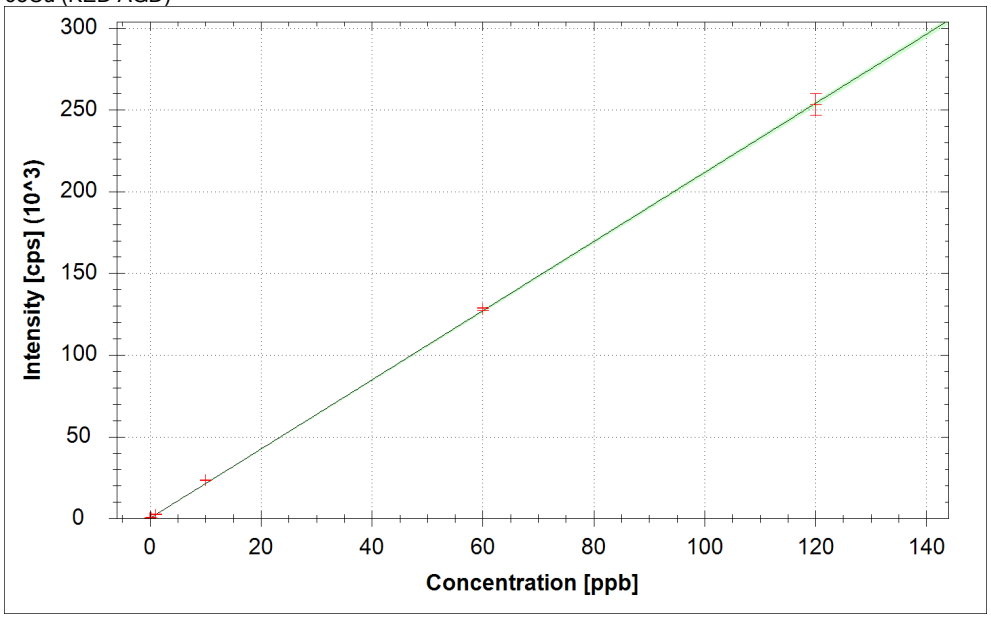
f(x) = 5405.0613*x + 10.8022
R² = 0.9999
BEC = 0.002 ppb
LoD = 0.0055 ppb

60Ni (KED AGD)



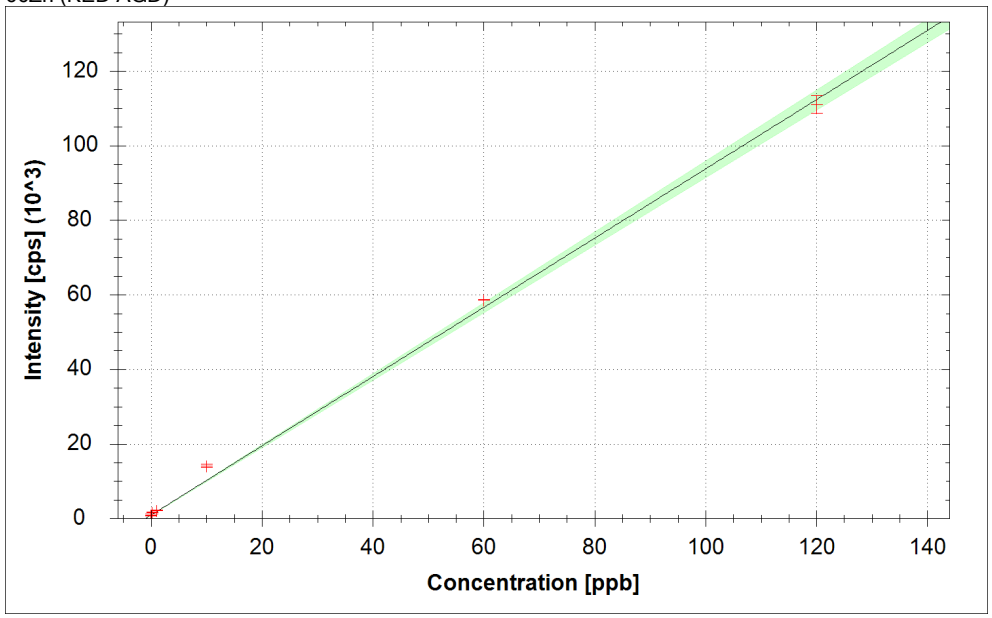
f(x) = 1455.6193*x + 89.2782
R² = 0.9999
BEC = 0.061 ppb
LoD = 0.0290 ppb

65Cu (KED AGD)



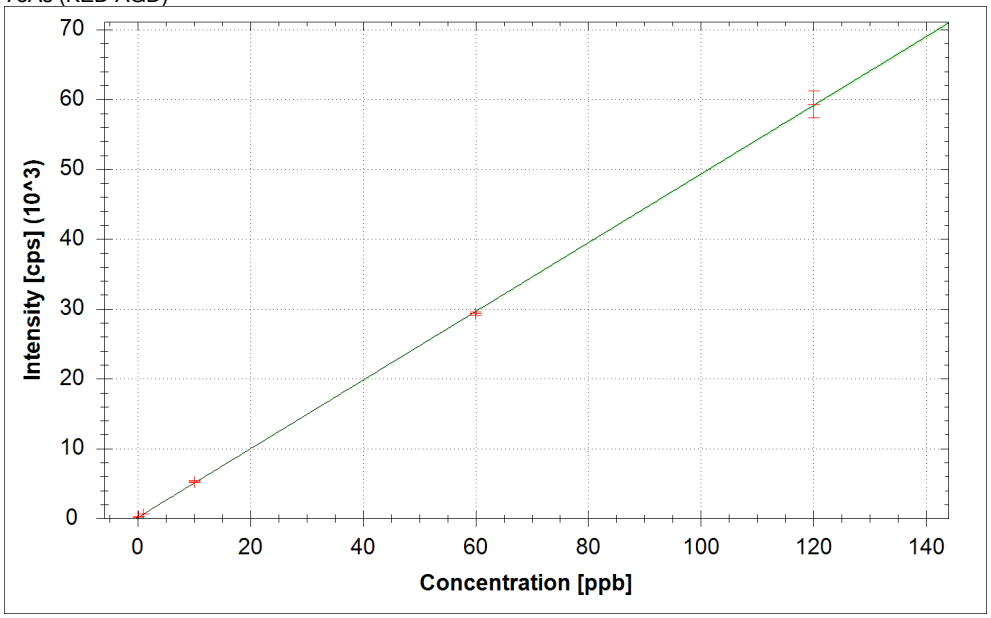
f(x) = 2114.0429*x + 172.9246
R² = 0.9999
BEC = 0.082 ppb
LoD = 0.0478 ppb

66Zn (KED AGD)



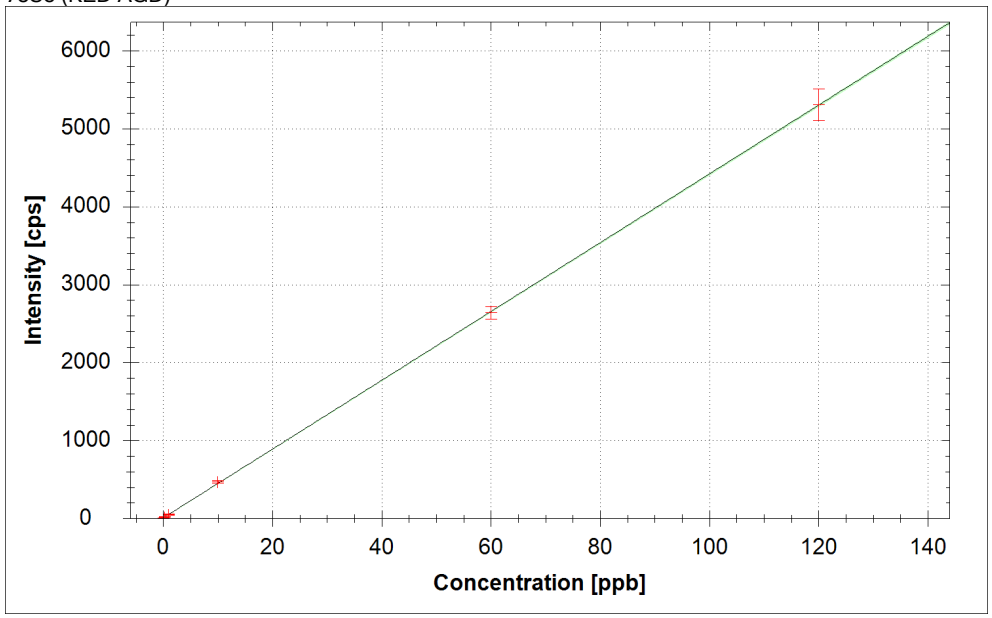
f(x) = 928.3161*x + 900.3599
R² = 0.9979
BEC = 0.970 ppb
LoD = 0.6324 ppb

75As (KED AGD)



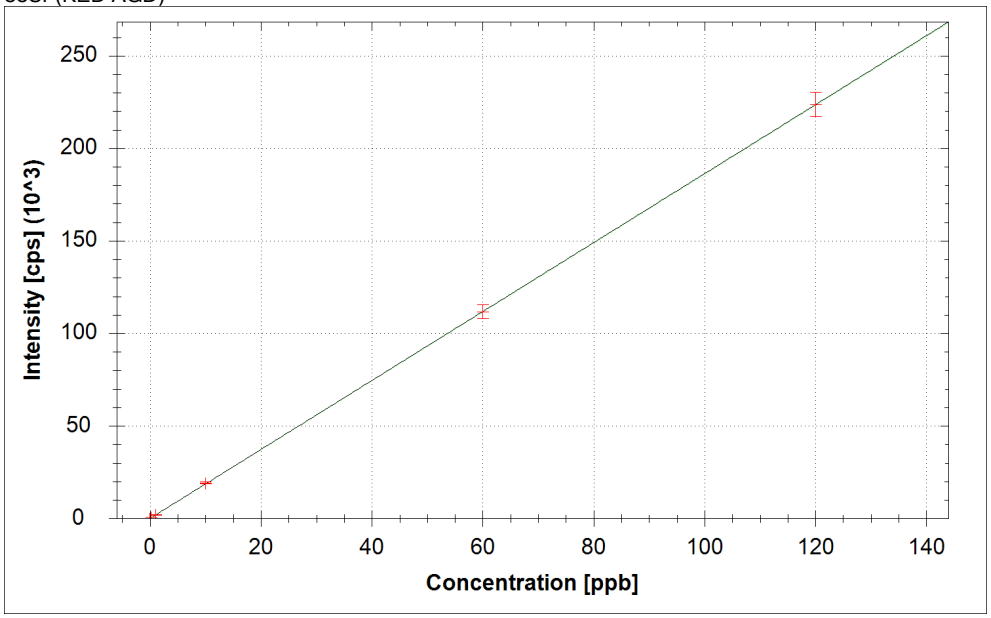
f(x) = 491.5981*x + 139.2002
R² = 1.0000
BEC = 0.283 ppb
LoD = 0.0740 ppb

78Se (KED AGD)



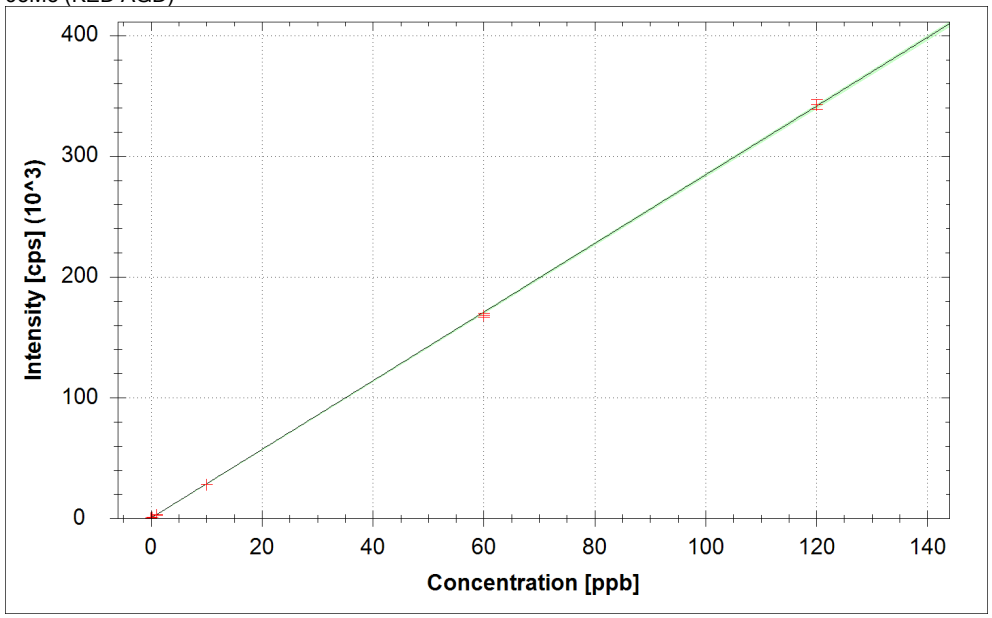
f(x) = 44.1061*x + 7.5366
R² = 1.0000
BEC = 0.171 ppb
LoD = 0.1145 ppb

88Sr (KED AGD)



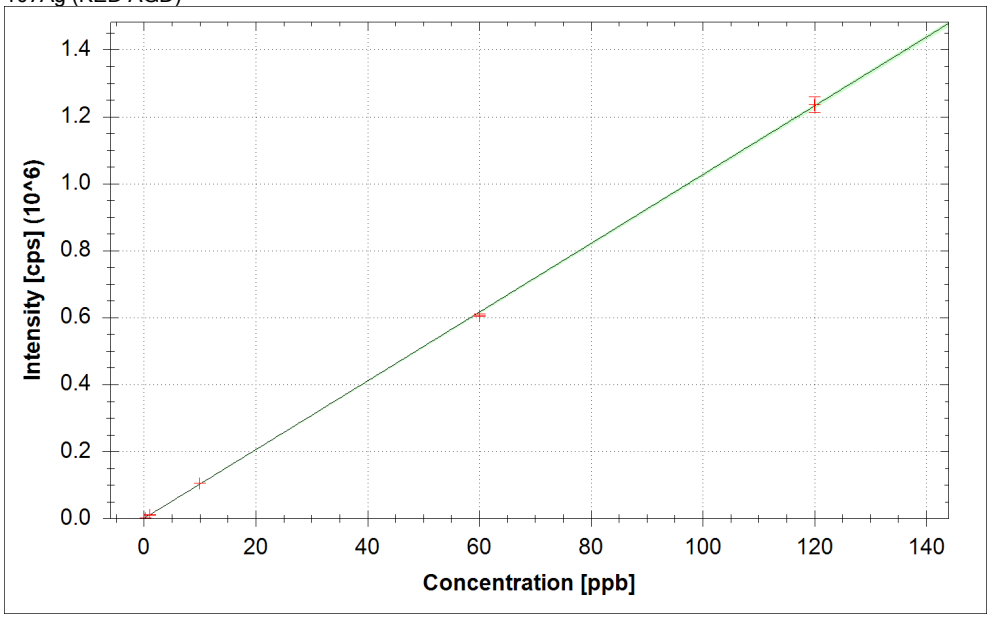
f(x) = 1862.6627*x + 25.3367
R² = 1.0000
BEC = 0.014 ppb
LoD = 0.0009 ppb

95Mo (KED AGD)



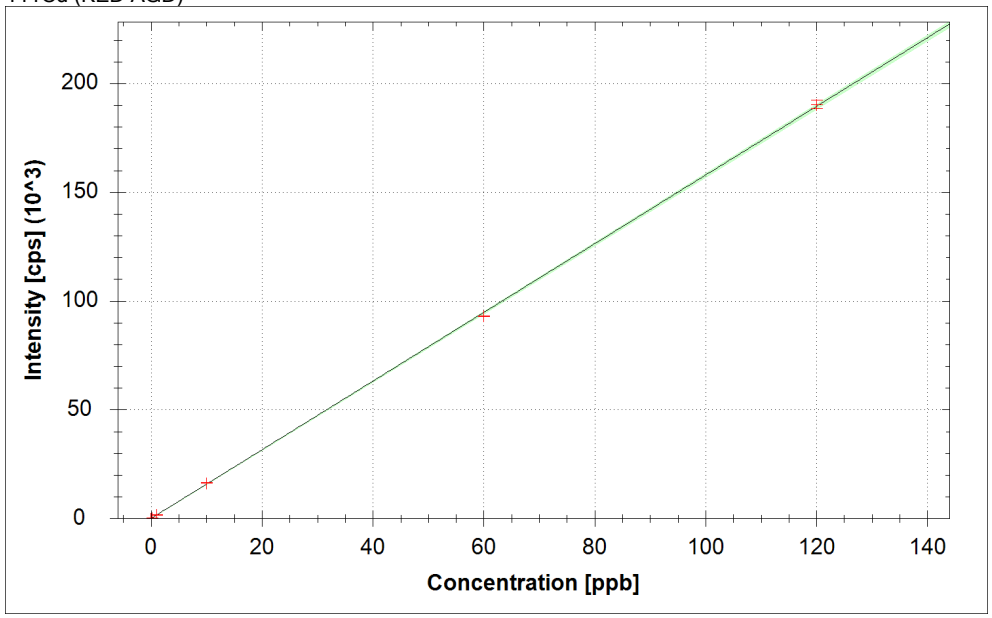
f(x) = 2842.0382*x + 311.8718
R² = 0.9999
BEC = 0.110 ppb
LoD = 0.0610 ppb

107Ag (KED AGD)



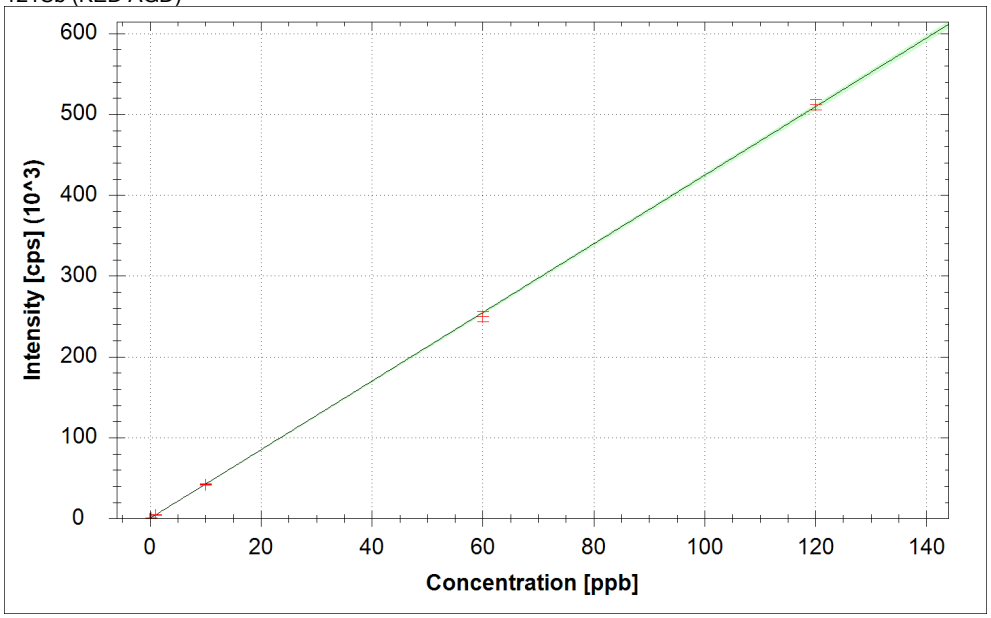
f(x) = 10263.2703*x + 34.3880
R² = 0.9999
BEC = 0.003 ppb
LoD = 0.0013 ppb

111Cd (KED AGD)



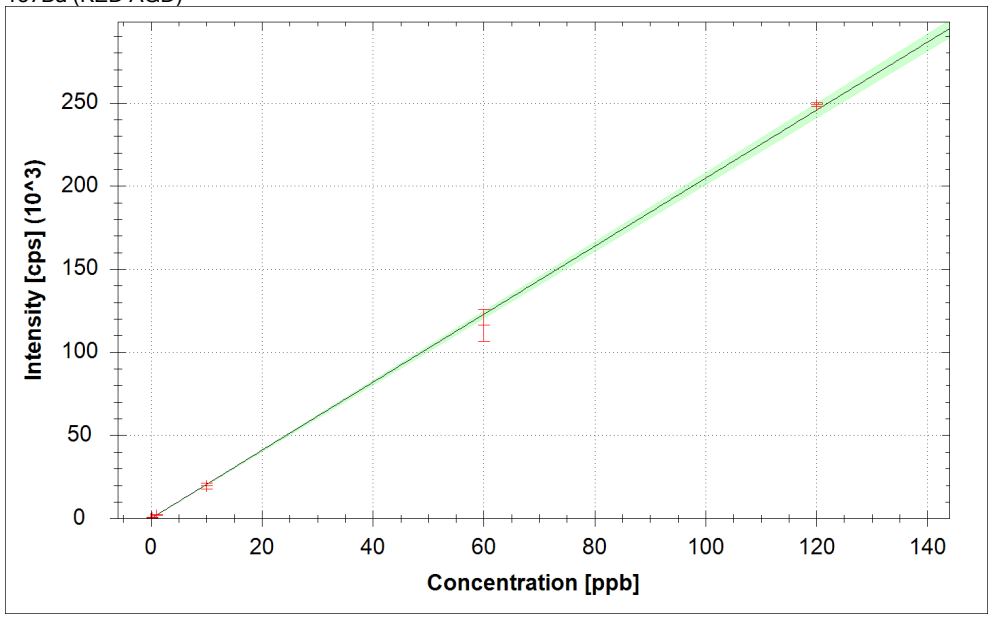
f(x) = 1578.4942*x + 1.7962
R² = 0.9999
BEC = 0.001 ppb
LoD = 0.0030 ppb

121Sb (KED AGD)



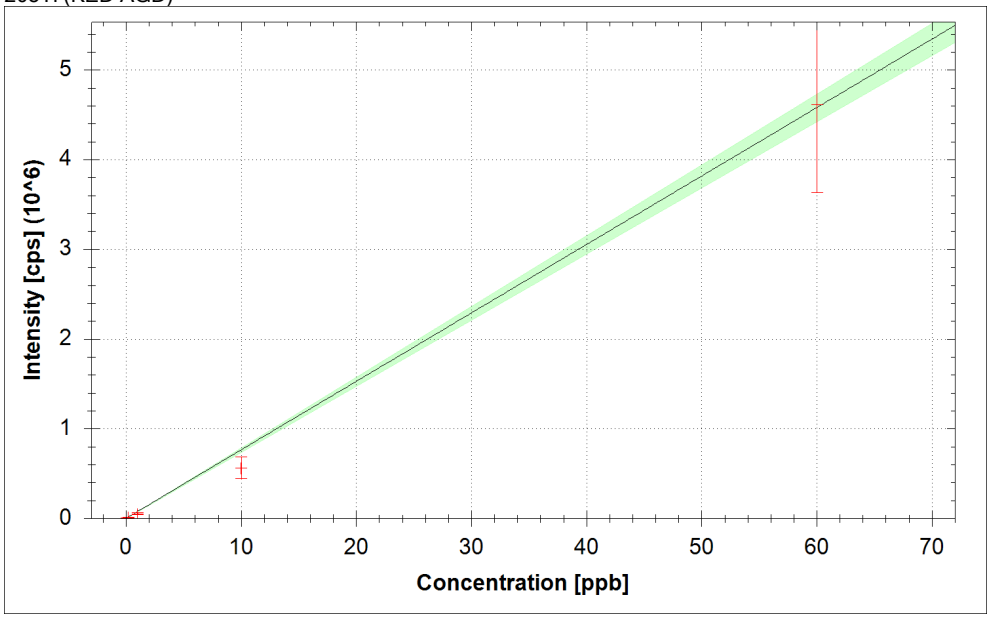
f(x) = 4242.6692*x + 103.9669
R² = 0.9998
BEC = 0.025 ppb
LoD = 0.0153 ppb

137Ba (KED AGD)



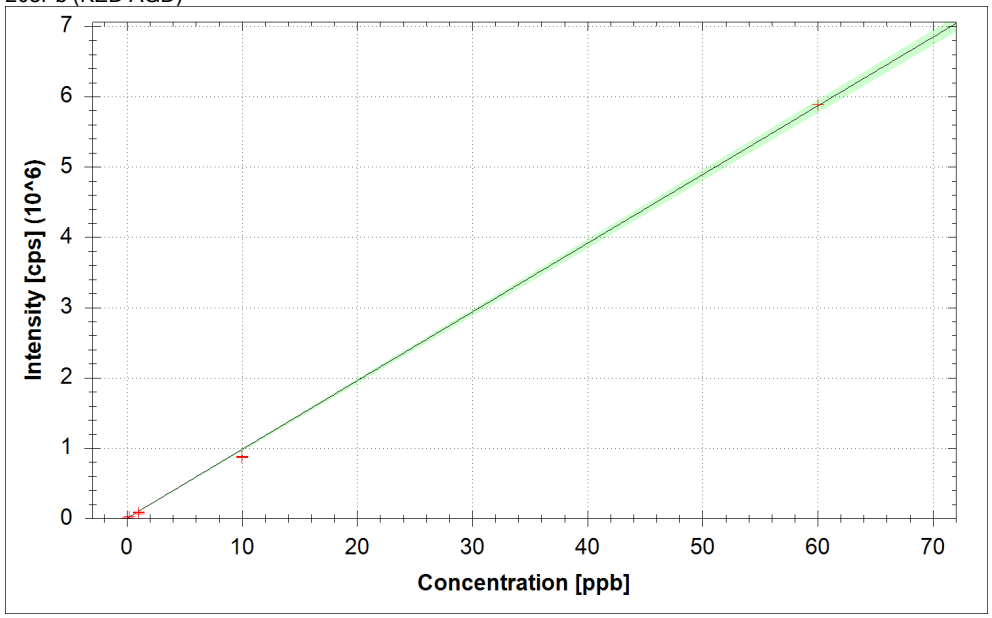
f(x) = 2045.8089*x + 23.2829
R² = 0.9989
BEC = 0.011 ppb
LoD = 0.0069 ppb

205Tl (KED AGD)



f(x) = 76282.8041*x + 1195.8568
R² = 0.9974
BEC = 0.016 ppb
LoD = 0.0166 ppb

208Pb (KED AGD)



f(x) = 97702.7836*x + 4045.5285
R² = 0.9995
BEC = 0.041 ppb
LoD = 0.0162 ppb

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/5/2024 7:43:37 AM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	97.696 %	1.1 %		0.000 %
6Li (KED AGD)	96.893 %	3.2 %		0.000 %
9Be (STD AGD)	0.195 ppb	9.3 %	0.200 ppb	2.556 %
23Na (KED AGD)	20.707 ppb	28.3 %	20.000 ppb	3.533 %
24Mg (KED AGD)	24.544 ppb	2.0 %	20.000 ppb	22.720 %
27Al (KED AGD)	1.095 ppb	15.8 %	0.200 ppb	447.518 %
39K (KED AGD)	24.141 ppb	15.0 %	20.000 ppb	20.706 %
44Ca (KED AGD)	154.175 ppb	6.9 %	20.000 ppb	670.876 %
45Sc (STD AGD)	98.127 %	0.4 %		0.000 %
45Sc (KED AGD)	99.407 %	2.5 %		0.000 %
51V (KED AGD)	0.229 ppb	16.7 %	0.200 ppb	14.512 %
52Cr (KED AGD)	0.230 ppb	6.7 %	0.200 ppb	14.809 %
55Mn (KED AGD)	0.234 ppb	2.8 %	0.200 ppb	17.073 %
57Fe (KED AGD)	22.594 ppb	4.3 %	20.000 ppb	12.970 %
59Co (KED AGD)	0.227 ppb	3.8 %	0.200 ppb	13.723 %
60Ni (KED AGD)	0.385 ppb	7.5 %	0.200 ppb	92.498 %
65Cu (KED AGD)	0.198 ppb	9.9 %	0.200 ppb	0.976 %
66Zn (KED AGD)	0.588 ppb	43.9 %	0.200 ppb	194.064 %
74Ge (KED AGD)	101.608 %	2.8 %		0.000 %
75As (KED AGD)	0.233 ppb	11.4 %	0.200 ppb	16.294 %
78Se (KED AGD)	0.195 ppb	44.6 %	0.200 ppb	2.574 %
88Sr (KED AGD)	0.247 ppb	1.6 %	0.200 ppb	23.569 %
95Mo (KED AGD)	0.201 ppb	9.5 %	0.200 ppb	0.631 %
103Rh (KED AGD)	99.887 %	1.0 %		0.000 %
107Ag (KED AGD)	0.209 ppb	4.3 %	0.200 ppb	4.372 %
111Cd (KED AGD)	0.217 ppb	1.8 %	0.200 ppb	8.435 %
115In (KED AGD)	99.804 %	2.7 %		0.000 %
121Sb (KED AGD)	0.188 ppb	1.1 %	0.200 ppb	5.874 %
137Ba (KED AGD)	0.194 ppb	16.3 %	0.200 ppb	2.938 %
159Tb (KED AGD)	99.781 %	16.1 %		0.000 %
175Lu (KED AGD)	89.807 %	0.9 %		0.000 %
205Tl (KED AGD)	0.139 ppb	28.7 %	0.200 ppb	30.277 %
208Pb (KED AGD)	0.184 ppb	3.8 %	0.200 ppb	7.873 %
209Bi (KED AGD)	99.971 %	25.4 %		0.000 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/5/2024 7:48:13 AM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	98.042 %	2.6 %		0.000 %
6Li (KED AGD)	102.954 %	6.2 %		0.000 %
9Be (STD AGD)	0.987 ppb	4.0 %	1.000 ppb	1.314 %
23Na (KED AGD)	77.694 ppb	3.1 %	100.000 ppb	22.306 %
24Mg (KED AGD)	107.064 ppb	0.5 %	100.000 ppb	7.064 %
27Al (KED AGD)	2.033 ppb	9.8 %	1.000 ppb	103.328 %
39K (KED AGD)	111.302 ppb	6.7 %	100.000 ppb	11.302 %
44Ca (KED AGD)	229.578 ppb	10.1 %	100.000 ppb	129.578 %
45Sc (STD AGD)	99.635 %	1.3 %		0.000 %
45Sc (KED AGD)	101.786 %	7.2 %		0.000 %
51V (KED AGD)	1.040 ppb	3.6 %	1.000 ppb	3.955 %
52Cr (KED AGD)	1.097 ppb	0.4 %	1.000 ppb	9.732 %
55Mn (KED AGD)	1.177 ppb	10.4 %	1.000 ppb	17.702 %
57Fe (KED AGD)	107.851 ppb	4.9 %	100.000 ppb	7.851 %
59Co (KED AGD)	1.068 ppb	2.5 %	1.000 ppb	6.756 %
60Ni (KED AGD)	1.133 ppb	9.0 %	1.000 ppb	13.305 %
65Cu (KED AGD)	1.060 ppb	5.1 %	1.000 ppb	5.950 %
66Zn (KED AGD)	1.282 ppb	8.1 %	1.000 ppb	28.179 %
74Ge (KED AGD)	102.816 %	4.0 %		0.000 %
75As (KED AGD)	0.965 ppb	6.2 %	1.000 ppb	3.549 %
78Se (KED AGD)	0.947 ppb	19.0 %	1.000 ppb	5.302 %
88Sr (KED AGD)	1.031 ppb	5.7 %	1.000 ppb	3.070 %
95Mo (KED AGD)	0.895 ppb	5.8 %	1.000 ppb	10.463 %
103Rh (KED AGD)	99.223 %	1.9 %		0.000 %
107Ag (KED AGD)	1.001 ppb	2.9 %	1.000 ppb	0.102 %
111Cd (KED AGD)	1.016 ppb	4.6 %	1.000 ppb	1.629 %
115In (KED AGD)	100.884 %	7.1 %		0.000 %
121Sb (KED AGD)	0.985 ppb	3.3 %	1.000 ppb	1.514 %
137Ba (KED AGD)	0.969 ppb	7.5 %	1.000 ppb	3.067 %
159Tb (KED AGD)	91.409 %	17.1 %		0.000 %
175Lu (KED AGD)	100.425 %	19.5 %		0.000 %
205Tl (KED AGD)	0.673 ppb	24.9 %	1.000 ppb	32.746 %
208Pb (KED AGD)	0.785 ppb	17.7 %	1.000 ppb	21.545 %
209Bi (KED AGD)	98.998 %	24.8 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 10/1000 Cal
Analysis Type: STD
Analysis Started at: 4/5/2024 7:52:51 AM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	97.937 %	1.1 %		0.000 %
6Li (KED AGD)	101.688 %	4.3 %		0.000 %
9Be (STD AGD)	10.427 ppb	1.6 %	10.000 ppb	4.271 %
23Na (KED AGD)	816.976 ppb	0.8 %	1,000.000 ppb	18.302 %
24Mg (KED AGD)	1,066.967 ppb	0.9 %	1,000.000 ppb	6.697 %
27Al (KED AGD)	11.293 ppb	7.0 %	10.000 ppb	12.929 %
39K (KED AGD)	1,110.539 ppb	4.7 %	1,000.000 ppb	11.054 %
44Ca (KED AGD)	1,248.001 ppb	4.3 %	1,000.000 ppb	24.800 %
45Sc (STD AGD)	101.032 %	0.9 %		0.000 %
45Sc (KED AGD)	102.385 %	5.1 %		0.000 %
51V (KED AGD)	11.253 ppb	3.2 %	10.000 ppb	12.531 %
52Cr (KED AGD)	11.227 ppb	1.1 %	10.000 ppb	12.268 %
55Mn (KED AGD)	11.316 ppb	1.4 %	10.000 ppb	13.159 %
57Fe (KED AGD)	1,106.321 ppb	3.2 %	1,000.000 ppb	10.632 %
59Co (KED AGD)	11.150 ppb	2.4 %	10.000 ppb	11.498 %
60Ni (KED AGD)	11.112 ppb	0.4 %	10.000 ppb	11.116 %
65Cu (KED AGD)	11.028 ppb	0.6 %	10.000 ppb	10.279 %
66Zn (KED AGD)	14.188 ppb	3.5 %	10.000 ppb	41.878 %
74Ge (KED AGD)	101.735 %	2.9 %		0.000 %
75As (KED AGD)	10.420 ppb	2.6 %	10.000 ppb	4.204 %
78Se (KED AGD)	10.388 ppb	3.8 %	10.000 ppb	3.880 %
88Sr (KED AGD)	10.253 ppb	2.9 %	10.000 ppb	2.528 %
95Mo (KED AGD)	9.787 ppb	0.2 %	10.000 ppb	2.133 %
103Rh (KED AGD)	99.205 %	1.6 %		0.000 %
107Ag (KED AGD)	10.255 ppb	0.7 %	10.000 ppb	2.548 %
111Cd (KED AGD)	10.275 ppb	0.8 %	10.000 ppb	2.750 %
115In (KED AGD)	100.954 %	3.2 %		0.000 %
121Sb (KED AGD)	9.883 ppb	1.4 %	10.000 ppb	1.170 %
137Ba (KED AGD)	9.497 ppb	9.8 %	10.000 ppb	5.035 %
159Tb (KED AGD)	100.709 %	17.8 %		0.000 %
175Lu (KED AGD)	90.523 %	2.3 %		0.000 %
205Tl (KED AGD)	7.379 ppb	21.9 %	10.000 ppb	26.208 %
208Pb (KED AGD)	8.875 ppb	0.9 %	10.000 ppb	11.246 %
209Bi (KED AGD)	101.280 %	25.6 %		0.000 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/5/2024 7:57:29 AM
Total Dilution Factor 166.6666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	94.262 %	1.6 %		0.000 %
6Li (KED AGD)	98.389 %	3.7 %		0.000 %
9Be (STD AGD)	59.069 ppb	1.0 %	60.000 ppb	1.551 %
23Na (KED AGD)	5,503.700 ppb	16.7 %	6,000.000 ppb	8.272 %
24Mg (KED AGD)	5,913.195 ppb	3.6 %	6,000.000 ppb	1.447 %
27Al (KED AGD)	59.503 ppb	5.1 %	60.000 ppb	0.829 %
39K (KED AGD)	6,064.360 ppb	3.6 %	6,000.000 ppb	1.073 %
44Ca (KED AGD)	6,112.257 ppb	2.1 %	6,000.000 ppb	1.871 %
45Sc (STD AGD)	102.778 %	2.2 %		0.000 %
45Sc (KED AGD)	105.932 %	4.6 %		0.000 %
51V (KED AGD)	60.980 ppb	0.7 %	60.000 ppb	1.634 %
52Cr (KED AGD)	61.221 ppb	0.5 %	60.000 ppb	2.034 %
55Mn (KED AGD)	60.872 ppb	0.5 %	60.000 ppb	1.453 %
57Fe (KED AGD)	6,040.981 ppb	0.7 %	6,000.000 ppb	0.683 %
59Co (KED AGD)	60.430 ppb	2.2 %	60.000 ppb	0.717 %
60Ni (KED AGD)	60.534 ppb	2.3 %	60.000 ppb	0.890 %
65Cu (KED AGD)	60.516 ppb	0.8 %	60.000 ppb	0.860 %
66Zn (KED AGD)	62.124 ppb	0.1 %	60.000 ppb	3.540 %
74Ge (KED AGD)	99.149 %	2.9 %		0.000 %
75As (KED AGD)	59.437 ppb	0.8 %	60.000 ppb	0.939 %
78Se (KED AGD)	59.586 ppb	3.0 %	60.000 ppb	0.690 %
88Sr (KED AGD)	59.926 ppb	3.3 %	60.000 ppb	0.124 %
95Mo (KED AGD)	59.125 ppb	0.9 %	60.000 ppb	1.458 %
103Rh (KED AGD)	96.080 %	2.7 %		0.000 %
107Ag (KED AGD)	59.143 ppb	0.7 %	60.000 ppb	1.429 %
111Cd (KED AGD)	58.902 ppb	0.1 %	60.000 ppb	1.830 %
115In (KED AGD)	96.813 %	4.4 %		0.000 %
121Sb (KED AGD)	58.789 ppb	2.6 %	60.000 ppb	2.018 %
137Ba (KED AGD)	56.784 ppb	8.3 %	60.000 ppb	5.359 %
159Tb (KED AGD)	89.609 %	18.0 %		0.000 %
175Lu (KED AGD)	88.946 %	1.8 %		0.000 %
205Tl (KED AGD)	60.442 ppb	21.3 %	60.000 ppb	0.737 %
208Pb (KED AGD)	60.191 ppb	0.0 %	60.000 ppb	0.318 %
209Bi (KED AGD)	98.347 %	26.5 %		0.000 %

Standards:

Analysis Index: 8
Analysis Name: 120/12000 Cal
Analysis Type: STD
Analysis Started at: 4/5/2024 8:02:07 AM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	91.162 %	1.5 %		0.000 %
6Li (KED AGD)	93.287 %	6.1 %		0.000 %
9Be (STD AGD)	120.430 ppb	1.4 %	120.000 ppb	0.358 %
23Na (KED AGD)	12,263.587 ppb	3.7 %	12,000.000 ppb	2.197 %
24Mg (KED AGD)	12,037.756 ppb	2.6 %	12,000.000 ppb	0.315 %
27Al (KED AGD)	120.131 ppb	3.6 %	120.000 ppb	0.109 %
39K (KED AGD)	11,958.507 ppb	2.6 %	12,000.000 ppb	0.346 %
44Ca (KED AGD)	11,921.901 ppb	2.2 %	12,000.000 ppb	0.651 %
45Sc (STD AGD)	101.135 %	0.8 %		0.000 %
45Sc (KED AGD)	105.839 %	3.6 %		0.000 %
51V (KED AGD)	119.405 ppb	1.3 %	120.000 ppb	0.496 %
52Cr (KED AGD)	119.287 ppb	1.9 %	120.000 ppb	0.594 %
55Mn (KED AGD)	119.453 ppb	0.7 %	120.000 ppb	0.456 %
57Fe (KED AGD)	11,970.580 ppb	1.0 %	12,000.000 ppb	0.245 %
59Co (KED AGD)	119.688 ppb	1.7 %	120.000 ppb	0.260 %
60Ni (KED AGD)	119.639 ppb	2.2 %	120.000 ppb	0.301 %
65Cu (KED AGD)	119.656 ppb	2.6 %	120.000 ppb	0.287 %
66Zn (KED AGD)	118.586 ppb	2.1 %	120.000 ppb	1.178 %
74Ge (KED AGD)	94.999 %	2.3 %		0.000 %
75As (KED AGD)	120.247 ppb	3.2 %	120.000 ppb	0.206 %
78Se (KED AGD)	120.175 ppb	3.8 %	120.000 ppb	0.146 %
88Sr (KED AGD)	120.016 ppb	2.9 %	120.000 ppb	0.013 %
95Mo (KED AGD)	120.456 ppb	1.2 %	120.000 ppb	0.380 %
103Rh (KED AGD)	91.982 %	1.5 %		0.000 %
107Ag (KED AGD)	120.407 ppb	1.9 %	120.000 ppb	0.339 %
111Cd (KED AGD)	120.526 ppb	1.0 %	120.000 ppb	0.438 %
115In (KED AGD)	92.228 %	3.8 %		0.000 %
121Sb (KED AGD)	120.615 ppb	1.3 %	120.000 ppb	0.513 %
137Ba (KED AGD)	121.650 ppb	0.5 %	120.000 ppb	1.375 %
159Tb (KED AGD)	79.036 %	2.1 %		0.000 %
175Lu (KED AGD)	87.376 %	1.7 %		0.000 %
205Tl (KED AGD)	136.711 ppb	4.5 %	120.000 ppb	13.926 %
208Pb (KED AGD)	136.385 ppb	4.0 %	120.000 ppb	13.655 %
209Bi (KED AGD)	83.757 %	5.5 %		0.000 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	1	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/5/2024 7:29:43 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.341 %	105.332 %	0.001 ppb	18.839 ppb	1.393 ppb	0.668 ppb	36.967 ppb	17.668 ppb	102.816 %
Concentration per Run 1	106.760 %	102.302 %	0.004 ppb	18.167 ppb	1.032 ppb	0.578 ppb	34.494 ppb	19.151 ppb	104.471 %
Concentration per Run 2	103.266 %	104.143 %	-0.002 ppb	18.314 ppb	1.208 ppb	0.575 ppb	36.677 ppb	14.424 ppb	102.433 %
Concentration per Run 3	102.999 %	109.551 %	0.002 ppb	20.037 ppb	1.938 ppb	0.851 ppb	39.730 ppb	19.429 ppb	101.543 %
Concentration RSD	2.0 %	3.6 %	226.3 %	5.5 %	34.5 %	23.7 %	7.1 %	15.9 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.263 %	0.017 ppb	0.020 ppb	0.172 ppb	3.741 ppb	0.002 ppb	0.079 ppb	0.174 ppb	0.881 ppb
Concentration per Run 1	100.519 %	-0.001 ppb	0.052 ppb	0.192 ppb	2.811 ppb	0.004 ppb	0.083 ppb	0.201 ppb	0.896 ppb
Concentration per Run 2	99.481 %	0.014 ppb	0.008 ppb	0.167 ppb	3.217 ppb	0.000 ppb	0.097 ppb	0.188 ppb	0.899 ppb
Concentration per Run 3	109.789 %	0.037 ppb	-0.001 ppb	0.156 ppb	5.197 ppb	0.003 ppb	0.056 ppb	0.132 ppb	0.850 ppb
Concentration RSD	5.5 %	114.6 %	147.3 %	10.6 %	34.1 %	77.9 %	26.7 %	21.2 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.475 %	0.027 ppb	-0.016 ppb	0.008 ppb	0.059 ppb	101.136 %	0.004 ppb	0.002 ppb	103.486 %
Concentration per Run 1	101.926 %	0.018 ppb	-0.029 ppb	0.008 ppb	0.053 ppb	100.907 %	0.004 ppb	0.002 ppb	101.116 %
Concentration per Run 2	102.544 %	0.018 ppb	-0.039 ppb	0.008 ppb	0.053 ppb	100.447 %	0.001 ppb	0.001 ppb	102.198 %
Concentration per Run 3	108.955 %	0.046 ppb	0.019 ppb	0.009 ppb	0.073 ppb	102.054 %	0.005 ppb	0.002 ppb	107.143 %
Concentration RSD	3.7 %	59.1 %	192.4 %	8.4 %	19.8 %	0.8 %	61.6 %	58.4 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.008 ppb	0.070 ppb	102.372 %	102.054 %	0.002 ppb	0.064 ppb	150.794 %
Concentration per Run 1	0.005 ppb	0.069 ppb	110.097 %	89.546 %	0.000 ppb	0.082 ppb	181.747 %
Concentration per Run 2	0.007 ppb	0.079 ppb	85.146 %	92.879 %	0.004 ppb	0.069 ppb	139.170 %
Concentration per Run 3	0.011 ppb	0.062 ppb	111.873 %	123.738 %	0.002 ppb	0.040 ppb	131.465 %
Concentration RSD	44.4 %	12.6 %	14.6 %	18.5 %	104.9 %	33.3 %	18.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 2
Analysis label: CAL LOT #M24-1045
Analysis started at: 4/5/2024 7:34:19 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.532 %	102.225 %	0.007 ppb	14.152 ppb	1.260 ppb	0.811 ppb	33.733 ppb	17.111 ppb	99.713 %
Concentration per Run 1	101.846 %	98.964 %	-0.002 ppb	22.317 ppb	1.789 ppb	1.180 ppb	41.815 ppb	18.977 ppb	101.823 %
Concentration per Run 2	98.680 %	107.710 %	0.016 ppb	13.231 ppb	0.906 ppb	0.923 ppb	31.463 ppb	16.348 ppb	98.495 %
Concentration per Run 3	98.071 %	100.000 %	0.006 ppb	6.908 ppb	1.084 ppb	0.331 ppb	27.921 ppb	16.007 ppb	98.820 %
Concentration RSD	2.0 %	4.7 %	133.0 %	54.7 %	37.1 %	53.7 %	21.4 %	9.5 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.537 %	0.018 ppb	0.004 ppb	0.152 ppb	3.335 ppb	0.005 ppb	0.099 ppb	0.186 ppb	0.825 ppb
Concentration per Run 1	103.095 %	0.005 ppb	-0.015 ppb	0.140 ppb	2.213 ppb	0.004 ppb	0.084 ppb	0.163 ppb	0.593 ppb
Concentration per Run 2	98.925 %	0.014 ppb	0.024 ppb	0.138 ppb	4.113 ppb	0.007 ppb	0.102 ppb	0.223 ppb	0.989 ppb
Concentration per Run 3	96.590 %	0.035 ppb	0.004 ppb	0.179 ppb	3.680 ppb	0.004 ppb	0.111 ppb	0.171 ppb	0.893 ppb
Concentration RSD	3.3 %	86.4 %	443.9 %	15.1 %	29.9 %	29.0 %	14.0 %	17.5 %	25.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.190 %	0.006 ppb	-0.051 ppb	0.007 ppb	0.037 ppb	99.810 %	0.001 ppb	0.001 ppb	99.713 %
Concentration per Run 1	104.610 %	-0.001 ppb	-0.077 ppb	0.008 ppb	0.022 ppb	100.277 %	0.001 ppb	0.002 ppb	101.371 %
Concentration per Run 2	102.428 %	0.005 ppb	-0.055 ppb	0.006 ppb	0.013 ppb	100.324 %	0.002 ppb	0.001 ppb	101.057 %
Concentration per Run 3	99.531 %	0.013 ppb	-0.021 ppb	0.007 ppb	0.075 ppb	98.829 %	0.000 ppb	-0.001 ppb	96.710 %
Concentration RSD	2.5 %	121.3 %	55.3 %	12.3 %	90.5 %	0.9 %	100.3 %	213.7 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.002 ppb	0.080 ppb	91.613 %	89.456 %	0.003 ppb	0.061 ppb	104.927 %
Concentration per Run 1	0.001 ppb	0.074 ppb	82.649 %	89.496 %	-0.004 ppb	0.066 ppb	133.316 %
Concentration per Run 2	-0.002 ppb	0.088 ppb	82.374 %	90.158 %	0.006 ppb	0.059 ppb	92.151 %
Concentration per Run 3	0.007 ppb	0.077 ppb	109.816 %	88.715 %	0.007 ppb	0.059 ppb	89.315 %
Concentration RSD	252.8 %	9.5 %	17.2 %	0.8 %	224.2 %	7.0 %	23.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	3	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Blank EJF ICPMSQ	Rack	4		
Analysis started at:	4/5/2024 7:38:55 AM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.0 %	0.3 %	0.0 %	0.5 %	0.1 %	0.1 %	0.1 %	0.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.1 %	0.2 %	0.1 %	0.2 %	0.4 %	0.9 %	0.2 %	0.2 %	0.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.1 %	0.2 %	0.0 %	0.2 %	0.0 %	0.1 %	0.9 %	0.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.2 %	0.2 %	0.2 %	0.2 %	0.4 %	0.1 %	0.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	4	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	0.2/20 Cal	Rack	0		
Analysis started at:	4/5/2024 7:43:37 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.696 %	96.893 %	0.195 ppb	20.707 ppb	24.544 ppb	1.095 ppb	24.141 ppb	154.175 ppb	98.127 %
Concentration per Run 1	98.664 %	98.389 %	0.189 ppb	22.037 ppb	24.941 ppb	1.028 ppb	23.646 ppb	147.572 ppb	98.288 %
Concentration per Run 2	97.924 %	93.325 %	0.181 ppb	25.785 ppb	24.001 ppb	1.291 ppb	27.982 ppb	148.529 ppb	98.463 %
Concentration per Run 3	96.500 %	98.964 %	0.215 ppb	14.297 ppb	24.690 ppb	0.966 ppb	20.795 ppb	166.424 ppb	97.629 %
Concentration RSD	1.1 %	3.2 %	9.3 %	28.3 %	2.0 %	15.8 %	15.0 %	6.9 %	0.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.407 %	0.229 ppb	0.230 ppb	0.234 ppb	22.594 ppb	0.227 ppb	0.385 ppb	0.198 ppb	0.588 ppb
Concentration per Run 1	102.131 %	0.230 ppb	0.232 ppb	0.234 ppb	22.282 ppb	0.234 ppb	0.367 ppb	0.213 ppb	0.294 ppb
Concentration per Run 2	98.925 %	0.190 ppb	0.213 ppb	0.228 ppb	23.690 ppb	0.231 ppb	0.418 ppb	0.206 ppb	0.776 ppb
Concentration per Run 3	97.164 %	0.267 ppb	0.244 ppb	0.241 ppb	21.810 ppb	0.218 ppb	0.370 ppb	0.176 ppb	0.695 ppb
Concentration RSD	2.5 %	16.7 %	6.7 %	2.8 %	4.3 %	3.8 %	7.5 %	9.9 %	43.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.608 %	0.233 ppb	0.195 ppb	0.247 ppb	0.201 ppb	99.887 %	0.209 ppb	0.217 ppb	99.804 %
Concentration per Run 1	103.147 %	0.215 ppb	0.258 ppb	0.247 ppb	0.179 ppb	100.791 %	0.216 ppb	0.221 ppb	101.419 %
Concentration per Run 2	103.343 %	0.219 ppb	0.096 ppb	0.251 ppb	0.211 ppb	100.026 %	0.211 ppb	0.213 ppb	101.269 %
Concentration per Run 3	98.333 %	0.263 ppb	0.231 ppb	0.243 ppb	0.213 ppb	98.844 %	0.199 ppb	0.216 ppb	96.724 %
Concentration RSD	2.8 %	11.4 %	44.6 %	1.6 %	9.5 %	1.0 %	4.3 %	1.8 %	2.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.188 ppb	0.194 ppb	99.781 %	89.807 %	0.139 ppb	0.184 ppb	99.971 %
Concentration per Run 1	0.190 ppb	0.181 ppb	109.148 %	89.963 %	0.094 ppb	0.192 ppb	129.285 %
Concentration per Run 2	0.187 ppb	0.172 ppb	108.927 %	90.544 %	0.156 ppb	0.178 ppb	85.553 %
Concentration per Run 3	0.188 ppb	0.230 ppb	81.267 %	88.916 %	0.169 ppb	0.183 ppb	85.074 %
Concentration RSD	1.1 %	16.3 %	16.1 %	0.9 %	28.7 %	3.8 %	25.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	5	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	1/100 Cal	Rack	0		
Analysis started at:	4/5/2024 7:48:13 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.042 %	102.954 %	0.987 ppb	77.694 ppb	107.064 ppb	2.033 ppb	111.302 ppb	229.578 ppb	99.635 %
Concentration per Run 1	100.630 %	110.242 %	1.027 ppb	75.719 ppb	107.349 ppb	2.125 ppb	119.488 ppb	256.233 ppb	100.545 %
Concentration per Run 2	97.895 %	100.230 %	0.986 ppb	77.026 ppb	106.492 ppb	1.804 ppb	109.505 ppb	213.603 ppb	100.201 %
Concentration per Run 3	95.601 %	98.389 %	0.948 ppb	80.336 ppb	107.351 ppb	2.171 ppb	104.913 ppb	218.899 ppb	98.159 %
Concentration RSD	2.6 %	6.2 %	4.0 %	3.1 %	0.5 %	9.8 %	6.7 %	10.1 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.786 %	1.040 ppb	1.097 ppb	1.177 ppb	107.851 ppb	1.068 ppb	1.133 ppb	1.060 ppb	1.282 ppb
Concentration per Run 1	108.898 %	1.065 ppb	1.101 ppb	1.304 ppb	106.613 ppb	1.048 ppb	1.056 ppb	1.005 ppb	1.287 ppb
Concentration per Run 2	102.280 %	1.057 ppb	1.092 ppb	1.060 ppb	103.247 ppb	1.098 ppb	1.094 ppb	1.062 ppb	1.176 ppb
Concentration per Run 3	94.180 %	0.996 ppb	1.098 ppb	1.167 ppb	113.693 ppb	1.056 ppb	1.249 ppb	1.112 ppb	1.383 ppb
Concentration RSD	7.2 %	3.6 %	0.4 %	10.4 %	4.9 %	2.5 %	9.0 %	5.1 %	8.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.816 %	0.965 ppb	0.947 ppb	1.031 ppb	0.895 ppb	99.223 %	1.001 ppb	1.016 ppb	100.884 %
Concentration per Run 1	106.724 %	1.033 ppb	1.150 ppb	1.091 ppb	0.854 ppb	100.253 %	1.033 ppb	0.963 ppb	107.111 %
Concentration per Run 2	103.140 %	0.939 ppb	0.886 ppb	1.029 ppb	0.879 ppb	100.319 %	0.979 ppb	1.054 ppb	102.451 %
Concentration per Run 3	98.584 %	0.921 ppb	0.806 ppb	0.973 ppb	0.954 ppb	97.097 %	0.990 ppb	1.031 ppb	93.091 %
Concentration RSD	4.0 %	6.2 %	19.0 %	5.7 %	5.8 %	1.9 %	2.9 %	4.6 %	7.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.985 ppb	0.969 ppb	91.409 %	100.425 %	0.673 ppb	0.785 ppb	98.998 %
Concentration per Run 1	1.010 ppb	1.007 ppb	83.591 %	123.047 %	0.480 ppb	0.624 ppb	127.383 %
Concentration per Run 2	0.996 ppb	1.016 ppb	81.257 %	90.349 %	0.751 ppb	0.861 ppb	85.719 %
Concentration per Run 3	0.948 ppb	0.885 ppb	109.378 %	87.877 %	0.786 ppb	0.868 ppb	83.894 %
Concentration RSD	3.3 %	7.5 %	17.1 %	19.5 %	24.9 %	17.7 %	24.8 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 6
Analysis label: 10/1000 Cal
Analysis started at: 4/5/2024 7:52:51 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 4
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.937 %	101.688 %	10.427 ppb	816.976 ppb	1,066.967 ppb	11.293 ppb	1,110.539 ppb	1,248.001 ppb	101.032 %
Concentration per Run 1	98.619 %	105.294 %	10.496 ppb	813.475 ppb	1,061.037 ppb	10.928 ppb	1,133.897 ppb	1,287.796 ppb	101.833 %
Concentration per Run 2	98.466 %	102.877 %	10.553 ppb	813.113 ppb	1,077.536 ppb	12.204 ppb	1,146.410 ppb	1,268.560 ppb	101.232 %
Concentration per Run 3	96.725 %	96.893 %	10.232 ppb	824.339 ppb	1,062.329 ppb	10.747 ppb	1,051.311 ppb	1,187.648 ppb	100.033 %
Concentration RSD	1.1 %	4.3 %	1.6 %	0.8 %	0.9 %	7.0 %	4.7 %	4.3 %	0.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.385 %	11.253 ppb	11.227 ppb	11.316 ppb	1,106.321 ppb	11.150 ppb	11.112 ppb	11.028 ppb	14.188 ppb
Concentration per Run 1	108.045 %	10.839 ppb	11.133 ppb	11.260 ppb	1,086.598 ppb	10.870 ppb	11.116 ppb	10.972 ppb	13.689 ppb
Concentration per Run 2	101.464 %	11.402 ppb	11.178 ppb	11.492 ppb	1,147.198 ppb	11.394 ppb	11.156 ppb	11.102 ppb	14.683 ppb
Concentration per Run 3	97.647 %	11.518 ppb	11.370 ppb	11.195 ppb	1,085.168 ppb	11.186 ppb	11.063 ppb	11.010 ppb	14.191 ppb
Concentration RSD	5.1 %	3.2 %	1.1 %	1.4 %	3.2 %	2.4 %	0.4 %	0.6 %	3.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.735 %	10.420 ppb	10.388 ppb	10.253 ppb	9.787 ppb	99.205 %	10.255 ppb	10.275 ppb	100.954 %
Concentration per Run 1	103.849 %	10.611 ppb	10.753 ppb	10.534 ppb	9.782 ppb	100.597 %	10.308 ppb	10.233 ppb	102.572 %
Concentration per Run 2	103.019 %	10.541 ppb	10.436 ppb	10.282 ppb	9.774 ppb	99.549 %	10.175 ppb	10.220 ppb	103.082 %
Concentration per Run 3	98.337 %	10.110 ppb	9.975 ppb	9.943 ppb	9.804 ppb	97.470 %	10.281 ppb	10.371 ppb	97.208 %
Concentration RSD	2.9 %	2.6 %	3.8 %	2.9 %	0.2 %	1.6 %	0.7 %	0.8 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	9.883 ppb	9.497 ppb	100.709 %	90.523 %	7.379 ppb	8.875 ppb	101.280 %
Concentration per Run 1	9.925 ppb	9.239 ppb	110.914 %	92.455 %	5.521 ppb	8.795 ppb	131.166 %
Concentration per Run 2	9.728 ppb	8.722 ppb	111.252 %	90.851 %	8.152 ppb	8.874 ppb	88.036 %
Concentration per Run 3	9.996 ppb	10.528 ppb	79.961 %	88.264 %	8.465 ppb	8.958 ppb	84.636 %
Concentration RSD	1.4 %	9.8 %	17.8 %	2.3 %	21.9 %	0.9 %	25.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 7
Analysis label: 60/6000 Cal
Analysis started at: 4/5/2024 7:57:29 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 5
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.262 %	98.389 %	59.069 ppb	5,503.700 ppb	5,913.195 ppb	59.503 ppb	6,064.360 ppb	6,112.257 ppb	102.778 %
Concentration per Run 1	95.870 %	102.647 %	58.402 ppb	5,921.606 ppb	5,815.775 ppb	58.493 ppb	6,144.551 ppb	6,242.341 ppb	104.445 %
Concentration per Run 2	94.015 %	96.202 %	59.203 ppb	6,137.060 ppb	6,159.585 ppb	62.924 ppb	6,229.405 ppb	6,102.296 ppb	103.659 %
Concentration per Run 3	92.902 %	96.318 %	59.603 ppb	4,452.435 ppb	5,764.223 ppb	57.091 ppb	5,819.123 ppb	5,992.133 ppb	100.229 %
Concentration RSD	1.6 %	3.7 %	1.0 %	16.7 %	3.6 %	5.1 %	3.6 %	2.1 %	2.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.932 %	60.980 ppb	61.221 ppb	60.872 ppb	6,040.981 ppb	60.430 ppb	60.534 ppb	60.516 ppb	62.124 ppb
Concentration per Run 1	110.473 %	60.585 ppb	61.603 ppb	60.935 ppb	6,073.951 ppb	58.918 ppb	60.128 ppb	61.050 ppb	62.048 ppb
Concentration per Run 2	106.450 %	60.977 ppb	61.075 ppb	60.564 ppb	6,059.669 ppb	61.092 ppb	59.401 ppb	60.189 ppb	62.219 ppb
Concentration per Run 3	100.871 %	61.379 ppb	60.984 ppb	61.117 ppb	5,989.322 ppb	61.281 ppb	62.072 ppb	60.309 ppb	62.105 ppb
Concentration RSD	4.6 %	0.7 %	0.5 %	0.5 %	0.7 %	2.2 %	2.3 %	0.8 %	0.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.149 %	59.437 ppb	59.586 ppb	59.926 ppb	59.125 ppb	96.080 %	59.143 ppb	58.902 ppb	96.813 %
Concentration per Run 1	100.905 %	59.983 ppb	60.984 ppb	61.673 ppb	59.265 ppb	98.472 %	59.543 ppb	58.856 ppb	100.647 %
Concentration per Run 2	100.751 %	59.291 ppb	60.163 ppb	60.284 ppb	58.532 ppb	96.448 %	58.706 ppb	58.936 ppb	97.498 %
Concentration per Run 3	95.791 %	59.036 ppb	57.611 ppb	57.821 ppb	59.579 ppb	93.321 %	59.180 ppb	58.913 ppb	92.293 %
Concentration RSD	2.9 %	0.8 %	3.0 %	3.3 %	0.9 %	2.7 %	0.7 %	0.1 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.789 ppb	56.784 ppb	89.609 %	88.946 %	60.442 ppb	60.191 ppb	98.347 %
Concentration per Run 1	57.055 ppb	51.508 ppb	108.244 %	90.478 %	45.612 ppb	60.180 ppb	128.433 %
Concentration per Run 2	59.753 ppb	60.591 ppb	81.065 %	89.008 %	67.598 ppb	60.201 ppb	84.285 %
Concentration per Run 3	59.560 ppb	58.254 ppb	79.518 %	87.352 %	68.118 ppb	60.192 ppb	82.322 %
Concentration RSD	2.6 %	8.3 %	18.0 %	1.8 %	21.3 %	0.0 %	26.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	8	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	120/12000 Cal	Rack	0		
Analysis started at:	4/5/2024 8:02:07 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.162 %	93.287 %	120.430 ppb	12,263.587 ppb	12,037.756 ppb	120.131 ppb	11,958.507 ppb	11,921.901 ppb	101.135 %
Concentration per Run 1	92.735 %	91.024 %	118.471 ppb	12,747.795 ppb	12,367.299 ppb	123.870 ppb	12,313.120 ppb	12,222.251 ppb	102.075 %
Concentration per Run 2	90.460 %	89.068 %	121.460 ppb	12,178.598 ppb	12,003.831 ppb	115.450 ppb	11,780.261 ppb	11,719.518 ppb	100.405 %
Concentration per Run 3	90.292 %	99.770 %	121.359 ppb	11,864.367 ppb	11,742.137 ppb	121.072 ppb	11,782.141 ppb	11,823.935 ppb	100.926 %
Concentration RSD	1.5 %	6.1 %	1.4 %	3.7 %	2.6 %	3.6 %	2.6 %	2.2 %	0.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.839 %	119.405 ppb	119.287 ppb	119.453 ppb	11,970.580 ppb	119.688 ppb	119.639 ppb	119.656 ppb	118.586 ppb
Concentration per Run 1	107.581 %	120.778 ppb	120.909 ppb	118.737 ppb	12,068.525 ppb	121.398 ppb	120.602 ppb	121.763 ppb	120.946 ppb
Concentration per Run 2	101.465 %	119.643 ppb	120.201 ppb	119.278 ppb	12,002.876 ppb	120.268 ppb	121.644 ppb	121.130 ppb	118.905 ppb
Concentration per Run 3	108.471 %	117.794 ppb	116.751 ppb	120.344 ppb	11,840.338 ppb	117.399 ppb	116.672 ppb	116.074 ppb	115.907 ppb
Concentration RSD	3.6 %	1.3 %	1.9 %	0.7 %	1.0 %	1.7 %	2.2 %	2.6 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.999 %	120.247 ppb	120.175 ppb	120.016 ppb	120.456 ppb	91.982 %	120.407 ppb	120.526 ppb	92.228 %
Concentration per Run 1	94.981 %	124.736 ppb	124.809 ppb	123.970 ppb	120.186 ppb	93.448 %	122.135 ppb	121.849 ppb	94.852 %
Concentration per Run 2	92.839 %	118.084 ppb	115.713 ppb	117.217 ppb	119.186 ppb	90.726 %	121.315 ppb	120.361 ppb	88.256 %
Concentration per Run 3	97.178 %	117.921 ppb	120.003 ppb	118.861 ppb	121.997 ppb	91.771 %	117.773 ppb	119.368 ppb	93.577 %
Concentration RSD	2.3 %	3.2 %	3.8 %	2.9 %	1.2 %	1.5 %	1.9 %	1.0 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	120.615 ppb	121.650 ppb	79.036 %	87.376 %	136.711 ppb	136.385 ppb	83.757 %
Concentration per Run 1	119.926 ppb	121.697 ppb	80.499 %	88.265 %	129.692 ppb	138.764 ppb	89.023 %
Concentration per Run 2	122.390 ppb	122.235 ppb	77.226 %	85.685 %	140.784 ppb	140.205 ppb	80.601 %
Concentration per Run 3	119.530 ppb	121.018 ppb	79.384 %	88.178 %	139.659 ppb	130.188 ppb	81.648 %
Concentration RSD	1.3 %	0.5 %	2.1 %	1.7 %	4.5 %	4.0 %	5.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 9
Analysis label: Sr 200ppb
Analysis started at: 4/5/2024 8:12:02 AM
User name ALPHALAB\Metals-Instrument
Rack 4
Vial 55
Comment Sr Inteference Check

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.441 %	98.005 %	0.005 ppb	7.216 ppb	2.184 ppb	0.843 ppb	0.068 ppb	-0.146 ppb	92.881 %
Concentration per Run 1	97.083 %	97.929 %	0.002 ppb	0.979 ppb	1.634 ppb	0.708 ppb	-4.395 ppb	77.213 ppb	95.066 %
Concentration per Run 2	94.027 %	103.337 %	0.000 ppb	-1.716 ppb	2.937 ppb	0.625 ppb	-0.045 ppb	-76.100 ppb	92.040 %
Concentration per Run 3	92.213 %	92.750 %	0.014 ppb	22.384 ppb	1.980 ppb	1.195 ppb	4.643 ppb	-1.549 ppb	91.538 %
Concentration RSD	2.6 %	5.4 %	152.4 %	183.0 %	30.9 %	36.6 %	6,654.7 %	52,641.0 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.273 %	-0.008 ppb	0.035 ppb	0.040 ppb	8.344 ppb	0.002 ppb	0.000 ppb	-0.004 ppb	0.474 ppb
Concentration per Run 1	92.216 %	-0.030 ppb	0.047 ppb	0.021 ppb	7.277 ppb	0.001 ppb	-0.011 ppb	-0.002 ppb	0.430 ppb
Concentration per Run 2	96.256 %	0.017 ppb	0.020 ppb	0.057 ppb	9.784 ppb	0.006 ppb	0.024 ppb	-0.010 ppb	0.532 ppb
Concentration per Run 3	94.347 %	-0.012 ppb	0.037 ppb	0.041 ppb	7.971 ppb	0.001 ppb	-0.013 ppb	0.001 ppb	0.459 ppb
Concentration RSD	2.1 %	280.5 %	39.2 %	46.0 %	15.5 %	125.2 %	677,150.2 %	144.5 %	11.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.216 %	0.048 ppb	0.097 ppb	195.652 ppb	0.425 ppb	95.294 %	0.005 ppb	0.007 ppb	96.265 %
Concentration per Run 1	90.820 %	0.041 ppb	0.056 ppb	191.830 ppb	0.325 ppb	93.689 %	0.004 ppb	0.011 ppb	92.654 %
Concentration per Run 2	95.920 %	0.060 ppb	-0.009 ppb	198.199 ppb	0.474 ppb	95.623 %	0.007 ppb	0.007 ppb	96.788 %
Concentration per Run 3	95.908 %	0.044 ppb	0.242 ppb	196.926 ppb	0.477 ppb	96.571 %	0.004 ppb	0.003 ppb	99.354 %
Concentration RSD	3.1 %	20.8 %	135.1 %	1.7 %	20.5 %	1.5 %	33.8 %	54.8 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.042 ppb	0.036 ppb	86.597 %	86.615 %	0.091 ppb	0.014 ppb	106.789 %
Concentration per Run 1	0.043 ppb	0.042 ppb	76.945 %	83.449 %	0.054 ppb	0.020 ppb	145.723 %
Concentration per Run 2	0.040 ppb	0.024 ppb	103.738 %	88.943 %	0.108 ppb	0.012 ppb	89.014 %
Concentration per Run 3	0.043 ppb	0.040 ppb	79.106 %	87.454 %	0.111 ppb	0.012 ppb	85.630 %
Concentration RSD	3.7 %	27.4 %	17.2 %	3.3 %	35.2 %	31.3 %	31.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	10	User name	ALPHALAB\Metals-Instrument	Comment	ICV
Analysis label:	ICV	Rack	0		
Analysis started at:	4/5/2024 8:16:43 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.146 %	97.392 %	52.726 ppb	4,582.983 ppb	5,399.205 ppb	52.093 ppb	5,098.835 ppb	5,230.090 ppb	94.161 %
Concentration per Run 1	94.755 %	98.734 %	52.144 ppb	5,396.826 ppb	5,323.931 ppb	47.969 ppb	4,770.024 ppb	5,035.479 ppb	95.488 %
Concentration per Run 2	91.981 %	96.202 %	53.093 ppb	4,198.591 ppb	5,439.683 ppb	54.956 ppb	5,286.903 ppb	5,412.052 ppb	94.551 %
Concentration per Run 3	89.702 %	97.238 %	52.941 ppb	4,153.531 ppb	5,434.000 ppb	53.355 ppb	5,239.579 ppb	5,242.738 ppb	92.442 %
Recovery Percentage 1			105.452 %	91.660 %	107.984 %	104.187 %	101.977 %	104.602 %	
Concentration RSD	2.7 %	1.3 %	1.0 %	15.4 %	1.2 %	7.0 %	5.6 %	3.6 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.492 %	51.649 ppb	51.411 ppb	52.168 ppb	5,265.620 ppb	54.871 ppb	54.552 ppb	52.865 ppb	53.472 ppb
Concentration per Run 1	92.884 %	49.866 ppb	50.472 ppb	50.539 ppb	5,190.983 ppb	56.220 ppb	55.541 ppb	54.214 ppb	53.940 ppb
Concentration per Run 2	99.870 %	53.421 ppb	52.784 ppb	53.334 ppb	5,325.005 ppb	54.267 ppb	53.956 ppb	52.076 ppb	53.652 ppb
Concentration per Run 3	99.722 %	51.660 ppb	50.977 ppb	52.631 ppb	5,280.872 ppb	54.126 ppb	54.158 ppb	52.304 ppb	52.826 ppb
Recovery Percentage 1		103.298 %	102.822 %	104.337 %	105.312 %	109.742 %	109.103 %	105.730 %	106.945 %
Concentration RSD	4.1 %	3.4 %	2.4 %	2.8 %	1.3 %	2.1 %	1.6 %	2.2 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.705 %	51.473 ppb	50.920 ppb	53.631 ppb	52.044 ppb	94.404 %	51.497 ppb	51.580 ppb	97.140 %
Concentration per Run 1	97.283 %	50.904 ppb	50.801 ppb	53.195 ppb	51.751 ppb	93.841 %	52.419 ppb	52.644 ppb	95.147 %
Concentration per Run 2	99.840 %	51.874 ppb	50.896 ppb	53.616 ppb	51.362 ppb	94.032 %	50.872 ppb	51.041 ppb	98.376 %
Concentration per Run 3	98.992 %	51.642 ppb	51.062 ppb	54.081 ppb	53.018 ppb	95.339 %	51.198 ppb	51.055 ppb	97.898 %
Recovery Percentage 1		102.947 %	101.840 %	107.262 %	104.087 %		102.993 %	103.160 %	
Concentration RSD	1.3 %	1.0 %	0.3 %	0.8 %	1.7 %	0.9 %	1.6 %	1.8 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	50.391 ppb	49.278 ppb	88.883 %	88.987 %	52.542 ppb	53.514 ppb	86.093 %
Concentration per Run 1	51.776 ppb	52.027 ppb	80.158 %	87.436 %	52.898 ppb	54.890 ppb	90.833 %
Concentration per Run 2	50.505 ppb	51.021 ppb	80.368 %	90.625 %	51.807 ppb	52.275 ppb	83.924 %
Concentration per Run 3	48.894 ppb	44.787 ppb	106.123 %	88.899 %	52.921 ppb	53.378 ppb	83.521 %
Recovery Percentage 1	100.783 %	98.557 %			105.084 %	107.029 %	
Concentration RSD	2.9 %	8.0 %	16.8 %	1.8 %	1.2 %	2.5 %	4.8 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 11
Analysis label: ICB
Analysis started at: 4/5/2024 8:21:23 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment ICB

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.464 %	97.507 %	0.002 ppb	12.911 ppb	0.872 ppb	0.042 ppb	4.629 ppb	3.888 ppb	91.395 %
Concentration per Run 1	94.847 %	100.575 %	0.011 ppb	9.816 ppb	0.922 ppb	-0.024 ppb	-1.357 ppb	1.970 ppb	92.627 %
Concentration per Run 2	92.360 %	95.282 %	-0.002 ppb	15.232 ppb	0.945 ppb	0.124 ppb	6.775 ppb	5.947 ppb	91.882 %
Concentration per Run 3	90.185 %	96.663 %	-0.003 ppb	13.684 ppb	0.748 ppb	0.024 ppb	8.469 ppb	3.747 ppb	89.676 %
Recovery Percentage 1			0.342 %	12.911 %	1.245 %	0.416 %	4.629 %	3.888 %	
Concentration RSD	2.5 %	2.8 %	464.2 %	21.6 %	12.4 %	182.0 %	113.5 %	51.3 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.389 %	0.015 ppb	0.005 ppb	0.013 ppb	9.022 ppb	0.004 ppb	-0.014 ppb	-0.010 ppb	-0.045 ppb
Concentration per Run 1	91.863 %	0.020 ppb	0.003 ppb	0.015 ppb	12.166 ppb	0.002 ppb	-0.008 ppb	0.004 ppb	-0.163 ppb
Concentration per Run 2	95.032 %	0.014 ppb	0.012 ppb	0.027 ppb	8.349 ppb	0.003 ppb	-0.013 ppb	-0.022 ppb	-0.081 ppb
Concentration per Run 3	93.272 %	0.012 ppb	0.001 ppb	-0.004 ppb	6.551 ppb	0.006 ppb	-0.022 ppb	-0.011 ppb	0.110 ppb
Recovery Percentage 1		0.302 %	0.531 %	1.259 %	18.044 %	0.734 %	-0.724 %	-0.973 %	-0.896 %
Concentration RSD	1.7 %	28.0 %	117.8 %	122.2 %	31.8 %	55.3 %	50.0 %	138.3 %	312.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.466 %	0.078 ppb	0.225 ppb	0.012 ppb	0.931 ppb	94.203 %	0.005 ppb	0.006 ppb	95.620 %
Concentration per Run 1	96.536 %	0.046 ppb	0.228 ppb	0.009 ppb	0.886 ppb	93.421 %	0.005 ppb	0.006 ppb	95.319 %
Concentration per Run 2	95.676 %	0.094 ppb	0.167 ppb	0.012 ppb	0.970 ppb	94.373 %	0.007 ppb	0.010 ppb	95.380 %
Concentration per Run 3	94.185 %	0.093 ppb	0.281 ppb	0.015 ppb	0.939 ppb	94.816 %	0.004 ppb	0.002 ppb	96.161 %
Recovery Percentage 1		15.527 %	4.508 %	0.118 %	46.573 %		1.306 %	3.134 %	
Concentration RSD	1.2 %	35.8 %	25.3 %	25.0 %	4.6 %	0.8 %	22.7 %	64.1 %	0.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.076 ppb	0.018 ppb	77.454 %	96.945 %	0.202 ppb	0.009 ppb	83.411 %
Concentration per Run 1	0.063 ppb	0.006 ppb	77.579 %	85.956 %	0.201 ppb	0.019 ppb	87.474 %
Concentration per Run 2	0.074 ppb	0.019 ppb	77.003 %	117.141 %	0.181 ppb	-0.002 ppb	81.073 %
Concentration per Run 3	0.091 ppb	0.030 ppb	77.780 %	87.738 %	0.224 ppb	0.010 ppb	81.686 %
Recovery Percentage 1	1.900 %	3.619 %			20.175 %	0.896 %	
Concentration RSD	18.3 %	67.1 %	0.5 %	18.1 %	10.6 %	115.9 %	4.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	12	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/5/2024 8:47:32 AM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	80.603 %	93.057 %	0.030 ppb	252,955.085 ppb	121,882.675 ppb	121,149.167 ppb	102,698.778 ppb	282,138.948 ppb	98.575 %
Concentration per Run 1	82.695 %	89.413 %	0.029 ppb	253,194.982 ppb	120,913.693 ppb	118,951.313 ppb	99,689.059 ppb	289,212.915 ppb	98.601 %
Concentration per Run 2	79.828 %	102.877 %	0.037 ppb	241,522.306 ppb	121,125.081 ppb	123,382.031 ppb	103,646.220 ppb	277,663.827 ppb	98.858 %
Concentration per Run 3	79.284 %	86.881 %	0.025 ppb	264,147.969 ppb	123,609.252 ppb	121,114.156 ppb	104,761.055 ppb	279,540.102 ppb	98.267 %
Recovery Percentage 1			3.038 %	101.182 %	121.883 %	121.149 %	102.699 %	94.046 %	
Concentration RSD	2.3 %	9.2 %	19.0 %	4.5 %	1.2 %	1.8 %	2.6 %	2.2 %	0.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.377 %	0.136 ppb	1.498 ppb	4.522 ppb	341,633.792 ppb	2.054 ppb	2.804 ppb	1.040 ppb	1.996 ppb
Concentration per Run 1	102.391 %	0.116 ppb	1.566 ppb	4.336 ppb	336,157.331 ppb	2.076 ppb	2.684 ppb	0.987 ppb	1.966 ppb
Concentration per Run 2	112.309 %	0.152 ppb	1.441 ppb	4.582 ppb	348,559.147 ppb	1.933 ppb	2.786 ppb	1.078 ppb	1.953 ppb
Concentration per Run 3	104.430 %	0.139 ppb	1.487 ppb	4.647 ppb	340,184.897 ppb	2.153 ppb	2.942 ppb	1.055 ppb	2.069 ppb
Recovery Percentage 1		2.714 %	45.398 %	79.325 %	136.654 %	71.576 %	45.966 %	36.880 %	17.511 %
Concentration RSD	4.9 %	13.6 %	4.2 %	3.6 %	1.9 %	5.4 %	4.6 %	4.5 %	3.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.572 %	0.541 ppb	3.478 ppb	2.589 ppb	2,914.604 ppb	84.790 %	0.040 ppb	0.513 ppb	92.280 %
Concentration per Run 1	97.656 %	0.561 ppb	3.430 ppb	2.536 ppb	2,899.359 ppb	83.389 %	0.040 ppb	0.531 ppb	89.524 %
Concentration per Run 2	106.047 %	0.552 ppb	3.434 ppb	2.639 ppb	2,886.514 ppb	86.034 %	0.041 ppb	0.523 ppb	96.304 %
Concentration per Run 3	101.013 %	0.510 ppb	3.569 ppb	2.591 ppb	2,957.941 ppb	84.947 %	0.040 ppb	0.485 ppb	91.012 %
Recovery Percentage 1		33.192 %	26.959 %	95.870 %	145.730 %		5.053 %	128.208 %	
Concentration RSD	4.2 %	5.1 %	2.3 %	2.0 %	1.3 %	1.6 %	1.2 %	4.8 %	3.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.283 ppb	1.233 ppb	83.412 %	82.510 %	0.483 ppb	1.340 ppb	73.633 %
Concentration per Run 1	0.270 ppb	1.296 ppb	73.531 %	80.433 %	0.533 ppb	1.377 ppb	74.494 %
Concentration per Run 2	0.303 ppb	1.307 ppb	75.753 %	84.079 %	0.534 ppb	1.323 ppb	73.867 %
Concentration per Run 3	0.274 ppb	1.096 ppb	100.953 %	83.018 %	0.383 ppb	1.321 ppb	72.537 %
Recovery Percentage 1	3.532 %	65.570 %			24.154 %	43.240 %	
Concentration RSD	6.4 %	9.6 %	18.3 %	2.3 %	18.0 %	2.4 %	1.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	13	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	LDR Check - 10/1ppm	Rack	4		
Analysis started at:	4/5/2024 8:52:14 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.199 %	114.231 %	0.012 ppb	72.775 ppb	4.759 ppb	3.703 ppb	17.507 ppb	26.104 ppb	115.296 %
Concentration per Run 1	104.039 %	117.837 %	0.013 ppb	82.724 ppb	4.294 ppb	3.657 ppb	21.518 ppb	29.927 ppb	115.822 %
Concentration per Run 2	101.299 %	116.686 %	0.010 ppb	62.555 ppb	5.364 ppb	3.582 ppb	15.530 ppb	26.749 ppb	113.679 %
Concentration per Run 3	101.259 %	108.170 %	0.012 ppb	73.048 ppb	4.621 ppb	3.870 ppb	15.472 ppb	21.636 ppb	116.388 %
Concentration RSD	1.6 %	4.6 %	16.1 %	13.9 %	11.5 %	4.0 %	19.8 %	16.0 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	113.291 %	-0.018 ppb	0.031 ppb	13,785.489 ppb	86.661 ppb	0.053 ppb	0.260 ppb	14,682.542 ppb	13,336.104 ppb
Concentration per Run 1	110.695 %	-0.004 ppb	0.032 ppb	14,018.357 ppb	104.258 ppb	0.052 ppb	0.239 ppb	14,901.085 ppb	13,612.530 ppb
Concentration per Run 2	118.778 %	-0.032 ppb	0.017 ppb	13,339.039 ppb	82.241 ppb	0.053 ppb	0.280 ppb	14,116.295 ppb	12,948.169 ppb
Concentration per Run 3	110.400 %	-0.020 ppb	0.044 ppb	13,999.071 ppb	73.485 ppb	0.054 ppb	0.261 ppb	15,030.245 ppb	13,447.614 ppb
Concentration RSD	4.2 %	75.8 %	44.7 %	2.8 %	18.3 %	1.5 %	8.0 %	3.4 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	120.774 %	971.074 ppb	0.080 ppb	0.227 ppb	10.714 ppb	116.184 %	0.044 ppb	0.017 ppb	117.244 %
Concentration per Run 1	118.172 %	1,002.846 ppb	0.112 ppb	0.236 ppb	11.626 ppb	114.765 %	0.044 ppb	0.022 ppb	115.923 %
Concentration per Run 2	127.746 %	941.548 ppb	0.036 ppb	0.225 ppb	10.751 ppb	116.036 %	0.044 ppb	0.016 ppb	120.424 %
Concentration per Run 3	116.406 %	968.828 ppb	0.092 ppb	0.219 ppb	9.766 ppb	117.751 %	0.043 ppb	0.014 ppb	115.384 %
Concentration RSD	5.1 %	3.2 %	49.4 %	3.9 %	8.7 %	1.3 %	1.7 %	22.5 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.030 ppb	11,969.861 ppb	121.286 %	122.103 %	0.063 ppb	9,861.051 ppb	93.374 %
Concentration per Run 1	0.022 ppb	12,155.140 ppb	119.979 %	133.682 %	0.039 ppb	8,781.571 ppb	94.791 %
Concentration per Run 2	0.028 ppb	11,896.270 ppb	121.851 %	100.552 %	0.088 ppb	11,814.793 ppb	92.563 %
Concentration per Run 3	0.039 ppb	11,858.172 ppb	122.028 %	132.076 %	0.062 ppb	8,986.791 ppb	92.767 %
Concentration RSD	27.6 %	1.3 %	0.9 %	15.3 %	38.9 %	17.2 %	1.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	14	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/5/2024 8:56:54 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.561 %	104.066 %	0.008 ppb	38.475 ppb	1.385 ppb	1.057 ppb	45.684 ppb	16.745 ppb	102.729 %
Concentration per Run 1	98.002 %	111.047 %	0.014 ppb	35.881 ppb	1.551 ppb	1.107 ppb	54.356 ppb	14.358 ppb	104.139 %
Concentration per Run 2	95.438 %	103.567 %	0.003 ppb	35.951 ppb	1.518 ppb	0.936 ppb	43.486 ppb	24.558 ppb	103.678 %
Concentration per Run 3	93.242 %	97.583 %	0.006 ppb	43.594 ppb	1.085 ppb	1.127 ppb	39.210 ppb	11.320 ppb	100.370 %
Concentration RSD	2.5 %	6.5 %	75.5 %	11.5 %	18.8 %	10.0 %	17.1 %	41.4 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.080 %	-0.027 ppb	0.009 ppb	0.333 ppb	25.838 ppb	0.003 ppb	0.109 ppb	0.383 ppb	1.927 ppb
Concentration per Run 1	112.716 %	-0.014 ppb	0.009 ppb	0.343 ppb	26.875 ppb	0.006 ppb	0.116 ppb	0.398 ppb	1.926 ppb
Concentration per Run 2	106.246 %	-0.045 ppb	0.009 ppb	0.334 ppb	26.826 ppb	-0.001 ppb	0.071 ppb	0.353 ppb	2.098 ppb
Concentration per Run 3	99.278 %	-0.022 ppb	0.009 ppb	0.322 ppb	23.811 ppb	0.004 ppb	0.140 ppb	0.397 ppb	1.758 ppb
Concentration RSD	6.3 %	59.4 %	0.2 %	3.1 %	6.8 %	115.0 %	32.4 %	6.8 %	8.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.436 %	0.814 ppb	0.052 ppb	0.009 ppb	2.211 ppb	106.254 %	0.003 ppb	0.002 ppb	107.393 %
Concentration per Run 1	113.992 %	0.939 ppb	0.079 ppb	0.009 ppb	2.052 ppb	107.792 %	0.003 ppb	0.002 ppb	113.233 %
Concentration per Run 2	108.976 %	0.828 ppb	0.098 ppb	0.009 ppb	2.289 ppb	106.807 %	0.001 ppb	0.006 ppb	108.394 %
Concentration per Run 3	105.339 %	0.676 ppb	-0.023 ppb	0.008 ppb	2.291 ppb	104.162 %	0.004 ppb	0.000 ppb	100.553 %
Concentration RSD	4.0 %	16.2 %	126.2 %	2.9 %	6.2 %	1.8 %	53.8 %	126.2 %	6.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.011 ppb	0.134 ppb	102.185 %	93.534 %	0.038 ppb	0.631 ppb	128.251 %
Concentration per Run 1	0.004 ppb	0.131 ppb	85.949 %	96.559 %	0.024 ppb	0.721 ppb	135.530 %
Concentration per Run 2	0.013 ppb	0.115 ppb	110.533 %	92.659 %	0.046 ppb	0.622 ppb	125.369 %
Concentration per Run 3	0.016 ppb	0.157 ppb	110.072 %	91.383 %	0.045 ppb	0.550 ppb	123.852 %
Concentration RSD	54.0 %	15.8 %	13.8 %	2.9 %	31.8 %	13.6 %	5.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	15	User name	ALPHALAB\Metals-Instrument	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 9:01:30 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.966 %	104.757 %	62.598 ppb	6,392.521 ppb	6,278.830 ppb	64.015 ppb	6,531.983 ppb	6,489.703 ppb	99.111 %
Concentration per Run 1	91.817 %	107.135 %	61.593 ppb	6,489.255 ppb	6,367.340 ppb	65.132 ppb	6,630.441 ppb	6,452.826 ppb	100.799 %
Concentration per Run 2	89.883 %	105.294 %	62.792 ppb	6,329.183 ppb	6,253.812 ppb	63.649 ppb	6,527.781 ppb	6,453.560 ppb	98.826 %
Concentration per Run 3	88.200 %	101.841 %	63.410 ppb	6,359.126 ppb	6,215.339 ppb	63.262 ppb	6,437.728 ppb	6,562.722 ppb	97.708 %
Recovery Percentage 1			104.330 %	106.542 %	104.647 %	106.691 %	108.866 %	108.162 %	
Concentration RSD	2.0 %	2.6 %	1.5 %	1.3 %	1.3 %	1.5 %	1.5 %	1.0 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.196 %	64.020 ppb	64.857 ppb	64.257 ppb	6,426.694 ppb	64.099 ppb	64.366 ppb	63.531 ppb	62.499 ppb
Concentration per Run 1	118.148 %	63.423 ppb	63.626 ppb	64.026 ppb	6,418.309 ppb	63.793 ppb	64.091 ppb	63.626 ppb	62.705 ppb
Concentration per Run 2	113.031 %	61.938 ppb	63.670 ppb	63.432 ppb	6,353.796 ppb	63.161 ppb	63.249 ppb	62.429 ppb	62.470 ppb
Concentration per Run 3	99.407 %	66.701 ppb	67.276 ppb	65.313 ppb	6,507.976 ppb	65.344 ppb	65.757 ppb	64.536 ppb	62.322 ppb
Recovery Percentage 1		106.701 %	108.095 %	107.095 %	107.112 %	106.832 %	107.276 %	105.884 %	104.165 %
Concentration RSD	8.8 %	3.8 %	3.2 %	1.5 %	1.2 %	1.8 %	2.0 %	1.7 %	0.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.734 %	61.363 ppb	60.931 ppb	60.470 ppb	61.923 ppb	100.482 %	62.005 ppb	62.153 ppb	100.482 %
Concentration per Run 1	109.730 %	62.953 ppb	61.775 ppb	62.321 ppb	60.798 ppb	103.647 %	62.708 ppb	63.233 ppb	104.255 %
Concentration per Run 2	106.727 %	60.801 ppb	61.541 ppb	60.526 ppb	61.601 ppb	101.350 %	61.586 ppb	61.276 ppb	102.536 %
Concentration per Run 3	100.745 %	60.336 ppb	59.475 ppb	58.564 ppb	63.369 ppb	96.451 %	61.720 ppb	61.951 ppb	94.656 %
Recovery Percentage 1		102.272 %	101.551 %	100.784 %	103.205 %		103.341 %	103.589 %	
Concentration RSD	4.3 %	2.3 %	2.1 %	3.1 %	2.1 %	3.7 %	1.0 %	1.6 %	5.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.964 ppb	56.886 ppb	101.173 %	101.732 %	58.363 ppb	58.271 ppb	88.925 %
Concentration per Run 1	59.908 ppb	55.883 ppb	111.462 %	94.349 %	62.443 ppb	63.345 ppb	96.204 %
Concentration per Run 2	58.861 ppb	54.482 ppb	111.788 %	122.017 %	47.636 ppb	47.702 ppb	87.416 %
Concentration per Run 3	61.124 ppb	60.294 ppb	80.268 %	88.831 %	65.009 ppb	63.766 ppb	83.156 %
Recovery Percentage 1	99.940 %	94.811 %			97.271 %	97.118 %	
Concentration RSD	1.9 %	5.3 %	17.9 %	17.5 %	16.1 %	15.7 %	7.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	16	User name	ALPHALAB\Metals-Instrument	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/5/2024 9:06:11 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.230 %	96.778 %	0.007 ppb	20.174 ppb	-0.244 ppb	-0.189 ppb	-0.522 ppb	-2.654 ppb	89.776 %
Concentration per Run 1	90.968 %	97.238 %	0.011 ppb	27.242 ppb	-0.050 ppb	-0.139 ppb	-1.593 ppb	-0.588 ppb	91.543 %
Concentration per Run 2	87.128 %	90.909 %	0.000 ppb	18.873 ppb	-0.326 ppb	-0.165 ppb	2.918 ppb	-4.762 ppb	89.513 %
Concentration per Run 3	86.594 %	102.186 %	0.010 ppb	14.405 ppb	-0.356 ppb	-0.263 ppb	-2.891 ppb	-2.612 ppb	88.272 %
Recovery Percentage 1			1.376 %	20.174 %	-0.348 %	-1.891 %	-0.522 %	-2.654 %	
Concentration RSD	2.7 %	5.8 %	86.7 %	32.3 %	69.1 %	34.5 %	584.1 %	78.6 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.211 %	-0.025 ppb	-0.003 ppb	0.046 ppb	16.607 ppb	0.001 ppb	0.001 ppb	0.012 ppb	0.086 ppb
Concentration per Run 1	94.754 %	-0.024 ppb	0.002 ppb	0.070 ppb	18.725 ppb	0.003 ppb	0.019 ppb	0.015 ppb	0.007 ppb
Concentration per Run 2	90.067 %	-0.030 ppb	-0.011 ppb	0.039 ppb	16.808 ppb	-0.002 ppb	0.008 ppb	-0.001 ppb	0.139 ppb
Concentration per Run 3	97.813 %	-0.021 ppb	0.000 ppb	0.029 ppb	14.287 ppb	0.002 ppb	-0.024 ppb	0.022 ppb	0.111 ppb
Recovery Percentage 1		-0.500 %	-0.301 %	4.618 %	33.213 %	0.192 %	0.043 %	1.167 %	1.715 %
Concentration RSD	4.1 %	18.2 %	233.6 %	46.8 %	13.4 %	275.4 %	2,594.2 %	100.9 %	80.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.611 %	0.168 ppb	0.216 ppb	-0.004 ppb	1.409 ppb	97.593 %	0.002 ppb	0.003 ppb	97.541 %
Concentration per Run 1	99.288 %	0.123 ppb	0.229 ppb	-0.003 ppb	1.427 ppb	97.734 %	0.004 ppb	0.006 ppb	101.001 %
Concentration per Run 2	95.932 %	0.183 ppb	0.196 ppb	-0.003 ppb	1.395 ppb	97.803 %	0.002 ppb	0.003 ppb	94.036 %
Concentration per Run 3	97.613 %	0.198 ppb	0.223 ppb	-0.004 ppb	1.404 ppb	97.241 %	0.002 ppb	0.000 ppb	97.586 %
Recovery Percentage 1		33.625 %	4.318 %	-0.036 %	70.433 %		0.603 %	1.582 %	
Concentration RSD	1.7 %	23.5 %	8.2 %	22.0 %	1.2 %	0.3 %	41.4 %	106.6 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.046 ppb	0.007 ppb	103.952 %	86.766 %	0.233 ppb	0.194 ppb	85.176 %
Concentration per Run 1	0.034 ppb	0.006 ppb	103.567 %	87.508 %	0.202 ppb	0.215 ppb	89.455 %
Concentration per Run 2	0.050 ppb	0.005 ppb	102.075 %	84.780 %	0.274 ppb	0.196 ppb	82.395 %
Concentration per Run 3	0.053 ppb	0.009 ppb	106.214 %	88.011 %	0.224 ppb	0.171 ppb	83.678 %
Recovery Percentage 1	1.145 %	1.386 %			23.337 %	19.420 %	
Concentration RSD	22.4 %	31.7 %	2.0 %	2.0 %	15.9 %	11.4 %	4.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 17
Analysis label: WG1903435-1 6020SL
Analysis started at: 4/5/2024 9:21:33 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.523 %	98.696 %	-0.002 ppb	-13.294 ppb	1.933 ppb	2.010 ppb	-16.457 ppb	21.003 ppb	118.082 %
Concentration per Run 1	101.181 %	94.937 %	-0.008 ppb	-47.894 ppb	2.095 ppb	1.715 ppb	-28.205 ppb	10.491 ppb	119.415 %
Concentration per Run 2	97.988 %	101.956 %	-0.009 ppb	-7.479 ppb	2.419 ppb	2.153 ppb	-13.218 ppb	20.170 ppb	115.747 %
Concentration per Run 3	99.398 %	99.194 %	0.011 ppb	15.493 ppb	1.285 ppb	2.160 ppb	-7.948 ppb	32.347 ppb	119.082 %
Concentration RSD	1.6 %	3.6 %	644.5 %	241.4 %	30.2 %	12.7 %	63.9 %	52.1 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	153.648 %	-0.043 ppb	0.053 ppb	0.028 ppb	10.822 ppb	0.006 ppb	0.021 ppb	0.265 ppb	0.112 ppb
Concentration per Run 1	195.324 %	-0.041 ppb	0.018 ppb	0.040 ppb	11.580 ppb	0.006 ppb	-0.008 ppb	0.279 ppb	-0.005 ppb
Concentration per Run 2	147.990 %	-0.051 ppb	0.054 ppb	0.030 ppb	10.944 ppb	0.005 ppb	0.026 ppb	0.265 ppb	0.102 ppb
Concentration per Run 3	117.629 %	-0.036 ppb	0.086 ppb	0.014 ppb	9.942 ppb	0.008 ppb	0.044 ppb	0.251 ppb	0.238 ppb
Concentration RSD	25.5 %	17.8 %	64.4 %	47.7 %	7.6 %	26.8 %	127.0 %	5.3 %	109.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.346 %	0.103 ppb	0.084 ppb	0.018 ppb	0.868 ppb	104.321 %	0.001 ppb	0.001 ppb	111.386 %
Concentration per Run 1	98.246 %	0.112 ppb	0.051 ppb	0.019 ppb	1.159 ppb	109.123 %	0.002 ppb	0.003 ppb	123.271 %
Concentration per Run 2	106.261 %	0.100 ppb	0.108 ppb	0.017 ppb	0.777 ppb	103.152 %	0.000 ppb	0.000 ppb	110.717 %
Concentration per Run 3	99.532 %	0.096 ppb	0.094 ppb	0.019 ppb	0.669 ppb	100.687 %	0.002 ppb	0.001 ppb	100.168 %
Concentration RSD	4.2 %	8.0 %	35.2 %	6.8 %	29.7 %	4.2 %	84.8 %	112.0 %	10.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.246 ppb	0.045 ppb	93.308 %	115.664 %	0.063 ppb	0.110 ppb	198.616 %
Concentration per Run 1	0.210 ppb	0.053 ppb	118.259 %	134.224 %	0.050 ppb	0.103 ppb	291.431 %
Concentration per Run 2	0.263 ppb	0.036 ppb	82.349 %	123.447 %	0.066 ppb	0.095 ppb	168.541 %
Concentration per Run 3	0.264 ppb	0.045 ppb	79.316 %	89.321 %	0.072 ppb	0.132 ppb	135.877 %
Concentration RSD	12.6 %	19.6 %	23.2 %	20.3 %	18.0 %	17.7 %	41.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 18
Analysis label: WG1903435-2d10 6020SL
Analysis started at: 4/5/2024 9:26:09 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 2
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.145 %	101.151 %	5.320 ppb	863.357 ppb	1,090.443 ppb	210.653 ppb	1,161.370 ppb	1,091.736 ppb	96.681 %
Concentration per Run 1	93.776 %	103.452 %	5.206 ppb	872.618 ppb	1,099.255 ppb	214.458 ppb	1,162.274 ppb	1,011.642 ppb	96.990 %
Concentration per Run 2	92.148 %	103.107 %	5.317 ppb	835.367 ppb	1,052.503 ppb	208.230 ppb	1,178.856 ppb	1,145.548 ppb	97.084 %
Concentration per Run 3	90.510 %	96.893 %	5.437 ppb	882.084 ppb	1,119.571 ppb	209.269 ppb	1,142.981 ppb	1,118.017 ppb	95.969 %
Concentration RSD	1.8 %	3.6 %	2.2 %	2.9 %	3.2 %	1.6 %	1.5 %	6.5 %	0.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.265 %	52.064 ppb	21.041 ppb	53.591 ppb	112.904 ppb	51.857 ppb	52.013 ppb	25.826 ppb	50.960 ppb
Concentration per Run 1	111.772 %	51.704 ppb	21.142 ppb	52.722 ppb	110.599 ppb	50.858 ppb	50.682 ppb	25.518 ppb	50.227 ppb
Concentration per Run 2	104.726 %	51.558 ppb	20.984 ppb	52.730 ppb	113.106 ppb	51.767 ppb	51.647 ppb	25.493 ppb	51.070 ppb
Concentration per Run 3	102.298 %	52.930 ppb	20.997 ppb	55.323 ppb	115.008 ppb	52.946 ppb	53.709 ppb	26.469 ppb	51.583 ppb
Concentration RSD	4.6 %	1.4 %	0.4 %	2.8 %	2.0 %	2.0 %	3.0 %	2.2 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.463 %	12.113 ppb	12.129 ppb	101.301 ppb	97.244 ppb	99.322 %	5.003 ppb	5.319 ppb	102.700 %
Concentration per Run 1	107.260 %	12.515 ppb	12.171 ppb	103.754 ppb	95.326 ppb	102.433 %	4.912 ppb	5.252 ppb	108.908 %
Concentration per Run 2	105.321 %	11.826 ppb	11.752 ppb	99.476 ppb	97.082 ppb	99.028 %	4.975 ppb	5.249 ppb	102.283 %
Concentration per Run 3	100.810 %	12.000 ppb	12.464 ppb	100.673 ppb	99.324 ppb	96.504 %	5.123 ppb	5.454 ppb	96.908 %
Concentration RSD	3.2 %	3.0 %	3.0 %	2.2 %	2.1 %	3.0 %	2.2 %	2.2 %	5.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	42.154 ppb	202.616 ppb	81.303 %	91.157 %	10.184 ppb	54.946 ppb	103.362 %
Concentration per Run 1	41.173 ppb	200.848 ppb	82.954 %	93.677 %	10.077 ppb	53.948 ppb	134.139 %
Concentration per Run 2	41.826 ppb	201.010 ppb	81.470 %	91.190 %	10.090 ppb	54.966 ppb	89.971 %
Concentration per Run 3	43.464 ppb	205.989 ppb	79.486 %	88.604 %	10.383 ppb	55.924 ppb	85.976 %
Concentration RSD	2.8 %	1.4 %	2.1 %	2.8 %	1.7 %	1.8 %	25.9 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	19	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1903435-3d10 6020SL	Rack	1		
Analysis started at:	4/5/2024 9:30:46 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.537 %	100.767 %	5.173 ppb	1,166.492 ppb	1,156.787 ppb	212.153 ppb	1,348.686 ppb	1,525.506 ppb	91.943 %
Concentration per Run 1	92.565 %	101.956 %	5.050 ppb	1,212.526 ppb	1,203.483 ppb	226.814 ppb	1,411.231 ppb	1,557.830 ppb	93.789 %
Concentration per Run 2	90.607 %	100.345 %	5.154 ppb	1,152.019 ppb	1,148.497 ppb	210.601 ppb	1,324.909 ppb	1,507.819 ppb	90.835 %
Concentration per Run 3	88.438 %	100.000 %	5.315 ppb	1,134.930 ppb	1,118.380 ppb	199.045 ppb	1,309.919 ppb	1,510.868 ppb	91.205 %
Concentration RSD	2.3 %	1.0 %	2.6 %	3.5 %	3.7 %	6.6 %	4.1 %	1.8 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.767 %	53.980 ppb	21.745 ppb	55.697 ppb	111.186 ppb	53.021 ppb	52.743 ppb	25.775 ppb	52.722 ppb
Concentration per Run 1	106.582 %	53.791 ppb	21.817 ppb	56.669 ppb	114.805 ppb	52.961 ppb	53.456 ppb	25.754 ppb	52.896 ppb
Concentration per Run 2	97.331 %	55.381 ppb	22.104 ppb	55.854 ppb	112.457 ppb	53.881 ppb	53.057 ppb	25.614 ppb	52.853 ppb
Concentration per Run 3	98.387 %	52.769 ppb	21.313 ppb	54.568 ppb	106.297 ppb	52.222 ppb	51.715 ppb	25.957 ppb	52.419 ppb
Concentration RSD	5.0 %	2.4 %	1.8 %	1.9 %	4.0 %	1.6 %	1.7 %	0.7 %	0.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.496 %	12.055 ppb	12.746 ppb	103.652 ppb	99.802 ppb	96.844 %	5.067 ppb	5.359 ppb	99.566 %
Concentration per Run 1	103.248 %	12.422 ppb	13.368 ppb	108.584 ppb	98.912 ppb	98.319 %	5.107 ppb	5.384 ppb	103.350 %
Concentration per Run 2	101.568 %	11.894 ppb	11.872 ppb	100.959 ppb	99.747 ppb	96.655 %	5.061 ppb	5.407 ppb	98.601 %
Concentration per Run 3	96.670 %	11.848 ppb	12.999 ppb	101.414 ppb	100.746 ppb	95.558 %	5.033 ppb	5.286 ppb	96.746 %
Concentration RSD	3.4 %	2.6 %	6.1 %	4.1 %	0.9 %	1.4 %	0.7 %	1.2 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	42.575 ppb	206.248 ppb	78.895 %	88.830 %	10.264 ppb	55.391 ppb	96.616 %
Concentration per Run 1	42.094 ppb	207.158 ppb	80.172 %	90.112 %	10.153 ppb	55.796 ppb	122.270 %
Concentration per Run 2	42.547 ppb	206.705 ppb	78.857 %	88.637 %	10.374 ppb	55.129 ppb	84.107 %
Concentration per Run 3	43.085 ppb	204.881 ppb	77.655 %	87.742 %	10.265 ppb	55.247 ppb	83.469 %
Concentration RSD	1.2 %	0.6 %	1.6 %	1.3 %	1.1 %	0.6 %	23.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 20
Analysis label: WG1903435-4d10 6020SL
Analysis started at: 4/5/2024 9:35:24 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 5
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.095 %	97.698 %	5.007 ppb	1,150.877 ppb	1,151.039 ppb	206.624 ppb	1,273.083 ppb	1,450.719 ppb	89.325 %
Concentration per Run 1	90.789 %	102.992 %	4.848 ppb	1,185.483 ppb	1,167.032 ppb	211.905 ppb	1,314.194 ppb	1,484.998 ppb	88.099 %
Concentration per Run 2	89.051 %	95.512 %	5.096 ppb	1,146.847 ppb	1,165.596 ppb	207.391 ppb	1,286.233 ppb	1,439.001 ppb	89.573 %
Concentration per Run 3	87.444 %	94.591 %	5.079 ppb	1,120.303 ppb	1,120.488 ppb	200.575 ppb	1,218.823 ppb	1,428.157 ppb	90.302 %
Concentration RSD	1.9 %	4.7 %	2.8 %	2.8 %	2.3 %	2.8 %	3.9 %	2.1 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.782 %	52.635 ppb	21.381 ppb	55.130 ppb	108.037 ppb	51.603 ppb	51.729 ppb	25.354 ppb	51.480 ppb
Concentration per Run 1	104.988 %	52.077 ppb	20.823 ppb	54.904 ppb	105.470 ppb	50.142 ppb	51.221 ppb	25.120 ppb	51.893 ppb
Concentration per Run 2	95.904 %	51.588 ppb	21.187 ppb	54.615 ppb	101.226 ppb	51.613 ppb	51.542 ppb	24.824 ppb	51.162 ppb
Concentration per Run 3	89.455 %	54.238 ppb	22.132 ppb	55.871 ppb	117.415 ppb	53.054 ppb	52.424 ppb	26.119 ppb	51.384 ppb
Concentration RSD	8.1 %	2.7 %	3.2 %	1.2 %	7.8 %	2.8 %	1.2 %	2.7 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.050 %	11.862 ppb	12.012 ppb	98.420 ppb	96.549 ppb	94.234 %	4.911 ppb	5.244 ppb	95.963 %
Concentration per Run 1	101.863 %	12.046 ppb	12.599 ppb	103.835 ppb	95.763 ppb	95.664 %	4.975 ppb	5.295 ppb	100.850 %
Concentration per Run 2	98.968 %	11.682 ppb	11.877 ppb	96.721 ppb	96.497 ppb	95.329 %	4.879 ppb	5.155 ppb	97.581 %
Concentration per Run 3	93.318 %	11.858 ppb	11.561 ppb	94.704 ppb	97.388 ppb	91.708 %	4.880 ppb	5.281 ppb	89.459 %
Concentration RSD	4.4 %	1.5 %	4.4 %	4.9 %	0.8 %	2.3 %	1.1 %	1.5 %	6.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	42.308 ppb	199.194 ppb	76.887 %	87.846 %	10.155 ppb	53.870 ppb	85.159 %
Concentration per Run 1	41.574 ppb	202.674 ppb	77.684 %	89.168 %	10.031 ppb	53.589 ppb	90.896 %
Concentration per Run 2	41.326 ppb	198.185 ppb	77.023 %	87.542 %	10.131 ppb	54.476 ppb	83.387 %
Concentration per Run 3	44.025 ppb	196.724 ppb	75.954 %	86.828 %	10.303 ppb	53.546 ppb	81.196 %
Concentration RSD	3.5 %	1.6 %	1.1 %	1.4 %	1.4 %	1.0 %	6.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	21	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1903435-5d10 6020SL	Rack	1		
Analysis started at:	4/5/2024 9:40:02 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	87.205 %	99.348 %	51.455 ppb	5,710.197 ppb	5,341.392 ppb	53.535 ppb	5,750.572 ppb	5,999.829 ppb	90.266 %
Concentration per Run 1	90.190 %	105.409 %	51.040 ppb	5,912.928 ppb	5,554.744 ppb	57.672 ppb	6,279.742 ppb	6,446.132 ppb	92.727 %
Concentration per Run 2	87.510 %	98.274 %	51.728 ppb	5,614.105 ppb	5,262.622 ppb	54.007 ppb	5,515.729 ppb	5,886.648 ppb	89.515 %
Concentration per Run 3	83.914 %	94.361 %	51.599 ppb	5,603.557 ppb	5,206.811 ppb	48.927 ppb	5,456.245 ppb	5,666.707 ppb	88.557 %
Concentration RSD	3.6 %	5.6 %	0.7 %	3.1 %	3.5 %	8.2 %	8.0 %	6.7 %	2.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.652 %	54.256 ppb	53.837 ppb	54.446 ppb	5,345.907 ppb	52.806 ppb	52.267 ppb	51.241 ppb	52.113 ppb
Concentration per Run 1	101.076 %	54.948 ppb	54.168 ppb	55.481 ppb	5,375.013 ppb	52.269 ppb	51.259 ppb	50.195 ppb	52.060 ppb
Concentration per Run 2	97.627 %	52.994 ppb	52.861 ppb	54.282 ppb	5,242.367 ppb	51.625 ppb	50.820 ppb	50.393 ppb	51.394 ppb
Concentration per Run 3	91.252 %	54.825 ppb	54.483 ppb	53.577 ppb	5,420.342 ppb	54.525 ppb	54.721 ppb	53.137 ppb	52.886 ppb
Concentration RSD	5.2 %	2.0 %	1.6 %	1.8 %	1.7 %	2.9 %	4.1 %	3.2 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.646 %	49.359 ppb	51.382 ppb	53.705 ppb	50.935 ppb	92.985 %	6.261 ppb	50.234 ppb	96.223 %
Concentration per Run 1	103.302 %	49.582 ppb	54.046 ppb	56.771 ppb	51.465 ppb	93.948 %	6.269 ppb	50.259 ppb	102.739 %
Concentration per Run 2	98.596 %	48.722 ppb	49.368 ppb	52.150 ppb	50.404 ppb	94.366 %	6.309 ppb	50.107 ppb	95.663 %
Concentration per Run 3	91.039 %	49.774 ppb	50.732 ppb	52.194 ppb	50.937 ppb	90.642 %	6.205 ppb	50.335 ppb	90.268 %
Concentration RSD	6.3 %	1.1 %	4.7 %	4.9 %	1.0 %	2.2 %	0.8 %	0.2 %	6.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	52.566 ppb	52.053 ppb	76.708 %	87.423 %	51.597 ppb	51.957 ppb	94.477 %
Concentration per Run 1	52.717 ppb	53.207 ppb	77.617 %	90.876 %	49.192 ppb	50.669 ppb	91.027 %
Concentration per Run 2	52.607 ppb	51.954 ppb	78.381 %	87.176 %	51.562 ppb	52.001 ppb	83.803 %
Concentration per Run 3	52.373 ppb	50.999 ppb	74.127 %	84.217 %	54.037 ppb	53.202 ppb	108.600 %
Concentration RSD	0.3 %	2.1 %	3.0 %	3.8 %	4.7 %	2.4 %	13.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 22
Analysis label: I2417074-01 6020SL
Analysis started at: 4/5/2024 9:44:40 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 3
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.945 %	100.038 %	0.023 ppb	3,313.418 ppb	843.595 ppb	8.610 ppb	1,496.458 ppb	3,787.783 ppb	90.471 %
Concentration per Run 1	91.828 %	104.028 %	0.016 ppb	4,025.434 ppb	862.469 ppb	9.254 ppb	1,581.340 ppb	3,935.710 ppb	91.981 %
Concentration per Run 2	88.116 %	100.921 %	0.025 ppb	2,924.680 ppb	828.337 ppb	8.578 ppb	1,473.501 ppb	3,647.355 ppb	88.373 %
Concentration per Run 3	89.891 %	95.167 %	0.027 ppb	2,990.141 ppb	839.977 ppb	7.998 ppb	1,434.533 ppb	3,780.285 ppb	91.059 %
Concentration RSD	2.1 %	4.5 %	26.9 %	18.6 %	2.1 %	7.3 %	5.1 %	3.8 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.601 %	0.146 ppb	0.907 ppb	2.864 ppb	11.347 ppb	0.025 ppb	0.124 ppb	0.145 ppb	1.845 ppb
Concentration per Run 1	97.925 %	0.107 ppb	0.934 ppb	3.051 ppb	12.146 ppb	0.029 ppb	0.124 ppb	0.147 ppb	1.594 ppb
Concentration per Run 2	95.885 %	0.148 ppb	0.867 ppb	2.749 ppb	10.206 ppb	0.024 ppb	0.063 ppb	0.168 ppb	1.905 ppb
Concentration per Run 3	89.992 %	0.183 ppb	0.921 ppb	2.791 ppb	11.690 ppb	0.022 ppb	0.186 ppb	0.121 ppb	2.036 ppb
Concentration RSD	4.4 %	26.3 %	3.9 %	5.7 %	8.9 %	15.1 %	49.6 %	16.3 %	12.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.998 %	0.090 ppb	0.294 ppb	15.401 ppb	1.641 ppb	92.864 %	0.000 ppb	0.020 ppb	95.266 %
Concentration per Run 1	99.771 %	0.122 ppb	0.276 ppb	15.973 ppb	1.534 ppb	93.280 %	-0.002 ppb	0.024 ppb	100.889 %
Concentration per Run 2	96.170 %	0.105 ppb	0.345 ppb	15.339 ppb	1.671 ppb	94.028 %	0.003 ppb	0.024 ppb	95.051 %
Concentration per Run 3	95.053 %	0.042 ppb	0.260 ppb	14.890 ppb	1.720 ppb	91.285 %	0.000 ppb	0.011 ppb	89.857 %
Concentration RSD	2.5 %	47.1 %	15.5 %	3.5 %	5.9 %	1.5 %	1,019.9 %	37.8 %	5.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.026 ppb	11.145 ppb	76.641 %	86.806 %	0.224 ppb	0.080 ppb	84.839 %
Concentration per Run 1	0.962 ppb	11.291 ppb	76.847 %	88.069 %	0.189 ppb	0.089 ppb	87.850 %
Concentration per Run 2	1.069 ppb	11.279 ppb	77.710 %	88.090 %	0.254 ppb	0.079 ppb	84.141 %
Concentration per Run 3	1.046 ppb	10.866 ppb	75.367 %	84.259 %	0.230 ppb	0.073 ppb	82.526 %
Concentration RSD	5.5 %	2.2 %	1.5 %	2.5 %	14.5 %	10.0 %	3.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 23
Analysis label: I2416485-02 6020SL
Analysis started at: 4/5/2024 9:49:18 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 8
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.867 %	89.451 %	0.003 ppb	1,250,700.767 ppb	108,029.734 ppb	7.337 ppb	1,474.488 ppb	268,003.787 ppb	110.030 %
Concentration per Run 1	95.723 %	89.873 %	0.006 ppb	1,262,998.641 ppb	108,985.294 ppb	7.592 ppb	1,464.576 ppb	269,840.009 ppb	111.547 %
Concentration per Run 2	92.534 %	92.635 %	0.001 ppb	1,241,695.677 ppb	106,503.380 ppb	7.496 ppb	1,495.068 ppb	270,384.944 ppb	109.758 %
Concentration per Run 3	90.345 %	85.845 %	0.003 ppb	1,247,407.982 ppb	108,600.527 ppb	6.924 ppb	1,463.821 ppb	263,786.409 ppb	108.784 %
Concentration RSD	2.9 %	3.8 %	79.9 %	0.9 %	1.2 %	4.9 %	1.2 %	1.4 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.439 %	0.028 ppb	0.078 ppb	290.948 ppb	10,061.774 ppb	2.885 ppb	7.314 ppb	0.320 ppb	1.524 ppb
Concentration per Run 1	86.656 %	0.009 ppb	0.057 ppb	287.475 ppb	9,928.736 ppb	2.823 ppb	7.452 ppb	0.267 ppb	1.375 ppb
Concentration per Run 2	86.248 %	0.021 ppb	0.090 ppb	293.427 ppb	10,120.323 ppb	2.855 ppb	7.189 ppb	0.374 ppb	1.572 ppb
Concentration per Run 3	83.413 %	0.053 ppb	0.087 ppb	291.942 ppb	10,136.263 ppb	2.976 ppb	7.301 ppb	0.318 ppb	1.624 ppb
Concentration RSD	2.1 %	83.9 %	23.8 %	1.1 %	1.1 %	2.8 %	1.8 %	16.7 %	8.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.487 %	3.886 ppb	0.147 ppb	1,267.759 ppb	9.054 ppb	81.614 %	0.007 ppb	0.002 ppb	86.526 %
Concentration per Run 1	89.487 %	3.967 ppb	0.226 ppb	1,292.469 ppb	8.910 ppb	81.074 %	0.007 ppb	0.002 ppb	87.417 %
Concentration per Run 2	90.667 %	3.857 ppb	0.148 ppb	1,265.542 ppb	9.105 ppb	84.134 %	0.003 ppb	0.004 ppb	88.932 %
Concentration per Run 3	88.307 %	3.835 ppb	0.067 ppb	1,245.266 ppb	9.146 ppb	79.635 %	0.011 ppb	0.002 ppb	83.228 %
Concentration RSD	1.3 %	1.8 %	54.1 %	1.9 %	1.4 %	2.8 %	57.4 %	41.9 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	1.116 ppb	518.944 ppb	72.619 %	81.601 %	0.055 ppb	0.590 ppb	68.759 %
Concentration per Run 1	1.091 ppb	525.223 ppb	73.255 %	81.949 %	0.043 ppb	0.595 ppb	73.829 %
Concentration per Run 2	1.127 ppb	517.357 ppb	73.349 %	83.441 %	0.062 ppb	0.578 ppb	67.659 %
Concentration per Run 3	1.128 ppb	514.253 ppb	71.253 %	79.412 %	0.060 ppb	0.595 ppb	64.789 %
Concentration RSD	1.9 %	1.1 %	1.6 %	2.5 %	19.3 %	1.6 %	6.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 24
Analysis label: LDR - Ba 500ppb
Analysis started at: 4/5/2024 9:53:57 AM
User name ALPHALAB\Metals-Instrument
Rack 4
Vial 3
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.849 %	97.161 %	0.004 ppb	168.210 ppb	6.723 ppb	3.210 ppb	5.918 ppb	20.779 ppb	101.482 %
Concentration per Run 1	104.766 %	91.484 %	0.005 ppb	208.641 ppb	7.668 ppb	2.935 ppb	7.943 ppb	22.063 ppb	104.104 %
Concentration per Run 2	103.455 %	96.778 %	0.001 ppb	155.994 ppb	6.859 ppb	3.515 ppb	3.302 ppb	14.115 ppb	100.330 %
Concentration per Run 3	100.326 %	103.222 %	0.007 ppb	139.994 ppb	5.642 ppb	3.178 ppb	6.509 ppb	26.160 ppb	100.012 %
Concentration RSD	2.2 %	6.1 %	63.4 %	21.4 %	15.2 %	9.1 %	40.2 %	29.5 %	2.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.318 %	0.019 ppb	0.013 ppb	0.174 ppb	15.328 ppb	0.003 ppb	0.016 ppb	0.268 ppb	0.393 ppb
Concentration per Run 1	94.643 %	0.006 ppb	0.007 ppb	0.166 ppb	20.277 ppb	0.001 ppb	0.036 ppb	0.275 ppb	0.302 ppb
Concentration per Run 2	93.865 %	0.030 ppb	0.007 ppb	0.173 ppb	15.709 ppb	0.003 ppb	0.001 ppb	0.308 ppb	0.403 ppb
Concentration per Run 3	100.444 %	0.020 ppb	0.023 ppb	0.182 ppb	9.999 ppb	0.004 ppb	0.011 ppb	0.220 ppb	0.475 ppb
Concentration RSD	3.7 %	65.3 %	71.6 %	4.6 %	33.6 %	71.5 %	113.2 %	16.6 %	22.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.627 %	0.040 ppb	0.014 ppb	0.034 ppb	0.333 ppb	97.677 %	0.015 ppb	0.001 ppb	99.399 %
Concentration per Run 1	102.240 %	0.011 ppb	-0.007 ppb	0.033 ppb	0.308 ppb	97.543 %	0.021 ppb	0.002 ppb	98.991 %
Concentration per Run 2	96.340 %	0.039 ppb	0.013 ppb	0.033 ppb	0.283 ppb	97.037 %	0.013 ppb	0.001 ppb	97.013 %
Concentration per Run 3	103.301 %	0.072 ppb	0.035 ppb	0.037 ppb	0.407 ppb	98.450 %	0.010 ppb	-0.001 ppb	102.195 %
Concentration RSD	3.7 %	75.6 %	151.9 %	6.3 %	19.8 %	0.7 %	41.9 %	204.5 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.328 ppb	523.120 ppb	77.013 %	86.635 %	0.025 ppb	0.087 ppb	82.380 %
Concentration per Run 1	0.319 ppb	537.184 ppb	76.203 %	86.544 %	0.014 ppb	0.092 ppb	84.992 %
Concentration per Run 2	0.333 ppb	515.155 ppb	76.372 %	84.533 %	0.031 ppb	0.091 ppb	80.622 %
Concentration per Run 3	0.332 ppb	517.019 ppb	78.463 %	88.829 %	0.030 ppb	0.079 ppb	81.528 %
Concentration RSD	2.3 %	2.3 %	1.6 %	2.5 %	38.6 %	7.9 %	2.8 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 25
Analysis label: LDR - Al 10ppm
Analysis started at: 4/5/2024 9:58:38 AM
User name ALPHALAB\Metals-Instrument
Rack 4
Vial 4
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	108.995 %	101.151 %	0.005 ppb	49.172 ppb	3.755 ppb	10,642.021 ppb	0.017 ppb	19.064 ppb	112.275 %
Concentration per Run 1	112.056 %	105.869 %	0.004 ppb	47.159 ppb	4.302 ppb	10,222.513 ppb	-1.219 ppb	20.056 ppb	114.652 %
Concentration per Run 2	108.793 %	94.131 %	0.004 ppb	59.718 ppb	3.897 ppb	10,633.713 ppb	3.627 ppb	19.115 ppb	111.158 %
Concentration per Run 3	106.137 %	103.452 %	0.006 ppb	40.639 ppb	3.068 ppb	11,069.837 ppb	-2.357 ppb	18.020 ppb	111.015 %
Concentration RSD	2.7 %	6.1 %	26.9 %	19.7 %	16.7 %	4.0 %	18,463.3 %	5.3 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.732 %	0.133 ppb	0.043 ppb	0.138 ppb	14.163 ppb	0.008 ppb	0.159 ppb	0.073 ppb	0.271 ppb
Concentration per Run 1	103.596 %	0.095 ppb	0.039 ppb	0.127 ppb	14.680 ppb	0.010 ppb	0.133 ppb	0.080 ppb	0.227 ppb
Concentration per Run 2	97.109 %	0.151 ppb	0.065 ppb	0.142 ppb	13.704 ppb	0.007 ppb	0.174 ppb	0.101 ppb	0.331 ppb
Concentration per Run 3	110.491 %	0.153 ppb	0.025 ppb	0.146 ppb	14.105 ppb	0.008 ppb	0.170 ppb	0.038 ppb	0.254 ppb
Concentration RSD	6.5 %	25.0 %	47.6 %	7.0 %	3.5 %	19.6 %	14.1 %	44.5 %	19.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.357 %	0.026 ppb	-0.023 ppb	0.018 ppb	0.152 ppb	101.476 %	0.006 ppb	0.000 ppb	103.963 %
Concentration per Run 1	103.503 %	0.012 ppb	-0.043 ppb	0.018 ppb	0.049 ppb	98.982 %	0.006 ppb	0.000 ppb	102.140 %
Concentration per Run 2	101.327 %	0.043 ppb	0.007 ppb	0.016 ppb	0.182 ppb	101.301 %	0.008 ppb	0.001 ppb	100.556 %
Concentration per Run 3	111.243 %	0.022 ppb	-0.032 ppb	0.019 ppb	0.224 ppb	104.145 %	0.005 ppb	0.000 ppb	109.192 %
Concentration RSD	4.9 %	61.2 %	116.0 %	10.3 %	60.0 %	2.5 %	26.4 %	1,287.5 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.199 ppb	0.040 ppb	97.758 %	101.014 %	0.011 ppb	0.061 ppb	99.645 %
Concentration per Run 1	0.177 ppb	0.036 ppb	103.367 %	89.646 %	0.008 ppb	0.075 ppb	93.127 %
Concentration per Run 2	0.205 ppb	0.039 ppb	79.910 %	87.990 %	0.016 ppb	0.070 ppb	85.862 %
Concentration per Run 3	0.214 ppb	0.045 ppb	109.999 %	125.406 %	0.009 ppb	0.038 ppb	119.946 %
Concentration RSD	9.6 %	11.3 %	16.2 %	20.9 %	39.8 %	33.1 %	18.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	26	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1903435-6d5 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:03:18 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.602 %	100.844 %	0.005 ppb	693.513 ppb	180.576 ppb	2.840 ppb	317.757 ppb	789.984 ppb	106.822 %
Concentration per Run 1	106.856 %	102.877 %	0.006 ppb	675.367 ppb	178.781 ppb	2.935 ppb	320.899 ppb	787.842 ppb	106.207 %
Concentration per Run 2	104.738 %	98.734 %	0.004 ppb	696.250 ppb	183.884 ppb	2.911 ppb	317.146 ppb	772.792 ppb	108.514 %
Concentration per Run 3	102.211 %	100.921 %	0.006 ppb	708.921 ppb	179.064 ppb	2.674 ppb	315.226 ppb	809.319 ppb	105.744 %
Concentration RSD	2.2 %	2.1 %	19.0 %	2.4 %	1.6 %	5.1 %	0.9 %	2.3 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.181 %	0.113 ppb	0.174 ppb	0.625 ppb	3.207 ppb	0.013 ppb	0.080 ppb	0.057 ppb	0.312 ppb
Concentration per Run 1	107.470 %	0.160 ppb	0.178 ppb	0.685 ppb	2.339 ppb	0.018 ppb	0.089 ppb	0.100 ppb	0.252 ppb
Concentration per Run 2	96.497 %	0.096 ppb	0.159 ppb	0.589 ppb	3.061 ppb	0.008 ppb	0.088 ppb	0.032 ppb	0.421 ppb
Concentration per Run 3	102.576 %	0.083 ppb	0.185 ppb	0.600 ppb	4.221 ppb	0.014 ppb	0.063 ppb	0.037 ppb	0.264 ppb
Concentration RSD	5.4 %	36.7 %	7.7 %	8.4 %	29.6 %	39.2 %	18.8 %	67.3 %	30.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	109.582 %	0.054 ppb	-0.061 ppb	3.050 ppb	0.136 ppb	104.550 %	0.003 ppb	0.004 ppb	105.632 %
Concentration per Run 1	112.175 %	0.060 ppb	-0.110 ppb	3.120 ppb	0.128 ppb	107.246 %	0.002 ppb	0.001 ppb	108.716 %
Concentration per Run 2	105.023 %	0.032 ppb	-0.021 ppb	2.982 ppb	0.133 ppb	102.850 %	0.006 ppb	0.005 ppb	101.892 %
Concentration per Run 3	111.548 %	0.069 ppb	-0.053 ppb	3.047 ppb	0.148 ppb	103.555 %	0.002 ppb	0.006 ppb	106.287 %
Concentration RSD	3.6 %	36.1 %	73.4 %	2.3 %	7.5 %	2.3 %	59.2 %	63.0 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.162 ppb	2.339 ppb	80.138 %	90.738 %	0.011 ppb	0.054 ppb	100.819 %
Concentration per Run 1	0.151 ppb	2.459 ppb	81.516 %	91.935 %	0.004 ppb	0.060 ppb	129.434 %
Concentration per Run 2	0.160 ppb	2.424 ppb	79.164 %	88.614 %	0.014 ppb	0.056 ppb	87.011 %
Concentration per Run 3	0.174 ppb	2.133 ppb	79.735 %	91.663 %	0.014 ppb	0.047 ppb	86.012 %
Concentration RSD	7.4 %	7.7 %	1.5 %	2.0 %	51.6 %	12.9 %	24.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	27	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 10:07:57 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.027 %	100.230 %	62.366 ppb	6,602.277 ppb	6,530.685 ppb	64.107 ppb	6,544.023 ppb	6,536.884 ppb	102.536 %
Concentration per Run 1	100.280 %	100.230 %	61.854 ppb	6,632.148 ppb	6,559.663 ppb	65.363 ppb	6,729.398 ppb	6,624.764 ppb	105.690 %
Concentration per Run 2	97.131 %	100.806 %	62.398 ppb	6,643.022 ppb	6,583.741 ppb	63.474 ppb	6,454.050 ppb	6,414.468 ppb	101.870 %
Concentration per Run 3	93.670 %	99.655 %	62.847 ppb	6,531.660 ppb	6,448.651 ppb	63.485 ppb	6,448.621 ppb	6,571.420 ppb	100.048 %
Recovery Percentage 1			103.944 %	110.038 %	108.845 %	106.846 %	109.067 %	108.948 %	
Concentration RSD	3.4 %	0.6 %	0.8 %	0.9 %	1.1 %	1.7 %	2.5 %	1.7 %	2.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.012 %	64.455 ppb	64.607 ppb	64.481 ppb	6,388.624 ppb	63.423 ppb	64.232 ppb	63.003 ppb	61.930 ppb
Concentration per Run 1	110.046 %	64.042 ppb	63.695 ppb	62.678 ppb	6,297.523 ppb	62.573 ppb	64.230 ppb	63.819 ppb	62.510 ppb
Concentration per Run 2	103.595 %	64.874 ppb	65.284 ppb	65.041 ppb	6,436.363 ppb	63.882 ppb	63.618 ppb	62.170 ppb	61.802 ppb
Concentration per Run 3	104.393 %	64.449 ppb	64.841 ppb	65.724 ppb	6,431.985 ppb	63.812 ppb	64.849 ppb	63.019 ppb	61.479 ppb
Recovery Percentage 1		107.425 %	107.678 %	107.468 %	106.477 %	105.704 %	107.054 %	105.004 %	103.217 %
Concentration RSD	3.3 %	0.6 %	1.3 %	2.5 %	1.2 %	1.2 %	1.0 %	1.3 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.445 %	61.578 ppb	63.537 ppb	62.044 ppb	59.940 ppb	97.494 %	61.828 ppb	61.813 ppb	100.504 %
Concentration per Run 1	102.416 %	62.721 ppb	63.676 ppb	63.159 ppb	59.833 ppb	98.759 %	62.897 ppb	63.359 ppb	101.588 %
Concentration per Run 2	103.141 %	61.095 ppb	63.435 ppb	61.647 ppb	59.841 ppb	97.892 %	61.136 ppb	60.706 ppb	102.224 %
Concentration per Run 3	101.780 %	60.919 ppb	63.500 ppb	61.327 ppb	60.145 ppb	95.832 %	61.450 ppb	61.374 ppb	97.701 %
Recovery Percentage 1		102.630 %	105.895 %	103.407 %	99.900 %		103.046 %	103.021 %	
Concentration RSD	0.7 %	1.6 %	0.2 %	1.6 %	0.3 %	1.5 %	1.5 %	2.2 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.503 ppb	60.261 ppb	86.426 %	89.626 %	61.730 ppb	61.782 ppb	86.689 %
Concentration per Run 1	59.489 ppb	55.587 ppb	103.663 %	89.931 %	60.952 ppb	62.341 ppb	93.243 %
Concentration per Run 2	60.810 ppb	62.719 ppb	79.273 %	90.495 %	61.656 ppb	61.875 ppb	85.281 %
Concentration per Run 3	61.211 ppb	62.478 ppb	76.341 %	88.453 %	62.582 ppb	61.129 ppb	81.543 %
Recovery Percentage 1	100.839 %	100.436 %			102.883 %	102.969 %	
Concentration RSD	1.5 %	6.7 %	17.4 %	1.2 %	1.3 %	1.0 %	6.9 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	28	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/5/2024 10:12:38 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.074 %	94.054 %	0.007 ppb	31.989 ppb	-0.169 ppb	-0.196 ppb	4.987 ppb	-1.127 ppb	91.861 %
Concentration per Run 1	97.500 %	94.937 %	0.004 ppb	31.504 ppb	-0.142 ppb	-0.194 ppb	5.218 ppb	-1.543 ppb	94.640 %
Concentration per Run 2	93.163 %	93.326 %	0.001 ppb	36.529 ppb	-0.242 ppb	-0.225 ppb	5.603 ppb	-2.138 ppb	91.248 %
Concentration per Run 3	91.558 %	93.901 %	0.016 ppb	27.933 ppb	-0.124 ppb	-0.168 ppb	4.141 ppb	0.300 ppb	89.695 %
Recovery Percentage 1			1.404 %	31.989 %	-0.242 %	-1.955 %	4.987 %	-1.127 %	
Concentration RSD	3.3 %	0.9 %	111.4 %	13.5 %	37.6 %	14.5 %	15.2 %	112.8 %	2.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.785 %	0.008 ppb	-0.013 ppb	0.008 ppb	10.709 ppb	0.001 ppb	0.017 ppb	0.008 ppb	-0.264 ppb
Concentration per Run 1	94.810 %	0.029 ppb	0.004 ppb	0.013 ppb	11.677 ppb	0.004 ppb	0.044 ppb	-0.016 ppb	-0.368 ppb
Concentration per Run 2	97.442 %	-0.006 ppb	-0.018 ppb	-0.002 ppb	11.049 ppb	-0.001 ppb	0.023 ppb	0.025 ppb	-0.251 ppb
Concentration per Run 3	89.102 %	0.002 ppb	-0.025 ppb	0.012 ppb	9.400 ppb	-0.001 ppb	-0.017 ppb	0.016 ppb	-0.173 ppb
Recovery Percentage 1		0.166 %	-1.307 %	0.777 %	21.418 %	0.203 %	0.841 %	0.836 %	-5.277 %
Concentration RSD	4.5 %	221.1 %	116.4 %	104.8 %	11.0 %	291.8 %	182.8 %	261.2 %	37.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.462 %	0.089 ppb	0.236 ppb	-0.002 ppb	0.913 ppb	93.205 %	0.004 ppb	0.004 ppb	95.661 %
Concentration per Run 1	96.925 %	0.106 ppb	0.171 ppb	-0.002 ppb	0.865 ppb	92.353 %	0.006 ppb	0.009 ppb	96.378 %
Concentration per Run 2	97.030 %	0.130 ppb	0.286 ppb	-0.002 ppb	0.958 ppb	94.368 %	0.003 ppb	0.003 ppb	97.684 %
Concentration per Run 3	95.431 %	0.032 ppb	0.249 ppb	-0.002 ppb	0.915 ppb	92.893 %	0.004 ppb	0.002 ppb	92.922 %
Recovery Percentage 1		17.787 %	4.712 %	-0.020 %	45.649 %		1.121 %	2.244 %	
Concentration RSD	0.9 %	57.5 %	24.9 %	21.4 %	5.1 %	1.1 %	36.2 %	82.2 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.146 ppb	0.008 ppb	73.952 %	84.537 %	0.209 ppb	0.052 ppb	81.571 %
Concentration per Run 1	0.120 ppb	0.010 ppb	73.778 %	83.780 %	0.179 ppb	0.060 ppb	85.234 %
Concentration per Run 2	0.153 ppb	0.011 ppb	74.757 %	85.683 %	0.238 ppb	0.052 ppb	80.547 %
Concentration per Run 3	0.165 ppb	0.004 ppb	73.321 %	84.149 %	0.212 ppb	0.043 ppb	78.932 %
Recovery Percentage 1	3.652 %	1.685 %			20.942 %	5.206 %	
Concentration RSD	15.7 %	43.5 %	1.0 %	1.2 %	14.2 %	16.5 %	4.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	29	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417074-02 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:20:41 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.460 %	98.312 %	0.008 ppb	12,286.635 ppb	6,270.614 ppb	2.785 ppb	3,033.304 ppb	28,347.994 ppb	96.375 %
Concentration per Run 1	96.592 %	94.476 %	0.007 ppb	12,135.908 ppb	6,105.927 ppb	2.410 ppb	2,818.779 ppb	26,712.414 ppb	97.204 %
Concentration per Run 2	93.247 %	98.504 %	0.005 ppb	12,447.059 ppb	6,354.802 ppb	2.735 ppb	3,110.229 ppb	29,097.624 ppb	95.390 %
Concentration per Run 3	93.543 %	101.956 %	0.011 ppb	12,276.938 ppb	6,351.113 ppb	3.211 ppb	3,170.903 ppb	29,233.944 ppb	96.532 %
Concentration RSD	2.0 %	3.8 %	42.9 %	1.3 %	2.3 %	14.5 %	6.2 %	5.0 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.574 %	0.211 ppb	0.397 ppb	7,057.981 ppb	58.355 ppb	0.718 ppb	0.518 ppb	0.214 ppb	0.056 ppb
Concentration per Run 1	119.168 %	0.180 ppb	0.401 ppb	6,696.086 ppb	58.209 ppb	0.689 ppb	0.505 ppb	0.256 ppb	0.063 ppb
Concentration per Run 2	106.654 %	0.225 ppb	0.409 ppb	7,269.131 ppb	53.832 ppb	0.701 ppb	0.501 ppb	0.168 ppb	0.074 ppb
Concentration per Run 3	108.899 %	0.227 ppb	0.379 ppb	7,208.727 ppb	63.023 ppb	0.765 ppb	0.549 ppb	0.219 ppb	0.031 ppb
Concentration RSD	6.0 %	12.6 %	4.0 %	4.5 %	7.9 %	5.6 %	5.2 %	20.7 %	39.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.066 %	0.206 ppb	0.077 ppb	85.671 ppb	1.620 ppb	92.912 %	0.002 ppb	0.016 ppb	98.629 %
Concentration per Run 1	96.670 %	0.257 ppb	0.130 ppb	85.740 ppb	1.738 ppb	94.539 %	0.001 ppb	0.013 ppb	101.461 %
Concentration per Run 2	100.565 %	0.192 ppb	0.036 ppb	84.937 ppb	1.549 ppb	92.977 %	0.001 ppb	0.018 ppb	97.422 %
Concentration per Run 3	99.963 %	0.168 ppb	0.064 ppb	86.335 ppb	1.574 ppb	91.220 %	0.004 ppb	0.017 ppb	97.004 %
Concentration RSD	2.1 %	22.6 %	62.6 %	0.8 %	6.3 %	1.8 %	97.6 %	15.5 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.155 ppb	16.248 ppb	85.741 %	100.004 %	0.110 ppb	0.033 ppb	136.883 %
Concentration per Run 1	0.140 ppb	16.493 ppb	81.235 %	95.245 %	0.120 ppb	0.042 ppb	184.016 %
Concentration per Run 2	0.151 ppb	14.935 ppb	100.781 %	88.323 %	0.128 ppb	0.039 ppb	136.739 %
Concentration per Run 3	0.174 ppb	17.316 ppb	75.207 %	116.442 %	0.082 ppb	0.018 ppb	89.893 %
Concentration RSD	11.4 %	7.4 %	15.6 %	14.7 %	22.5 %	38.9 %	34.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	30	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417074-03 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:25:20 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.824 %	99.885 %	0.010 ppb	11,348.275 ppb	6,483.123 ppb	2.327 ppb	2,071.932 ppb	20,705.859 ppb	101.190 %
Concentration per Run 1	102.895 %	96.318 %	0.007 ppb	11,606.021 ppb	6,631.662 ppb	2.449 ppb	2,053.694 ppb	20,698.336 ppb	102.649 %
Concentration per Run 2	100.668 %	99.079 %	0.008 ppb	11,231.126 ppb	6,307.268 ppb	2.231 ppb	2,033.520 ppb	20,449.081 ppb	101.492 %
Concentration per Run 3	98.909 %	104.258 %	0.015 ppb	11,207.679 ppb	6,510.437 ppb	2.301 ppb	2,128.582 ppb	20,970.159 ppb	99.428 %
Concentration RSD	2.0 %	4.0 %	46.0 %	2.0 %	2.5 %	4.8 %	2.4 %	1.3 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.546 %	0.236 ppb	0.581 ppb	23.522 ppb	5.821 ppb	0.045 ppb	0.411 ppb	0.297 ppb	0.074 ppb
Concentration per Run 1	100.000 %	0.230 ppb	0.600 ppb	23.140 ppb	6.095 ppb	0.040 ppb	0.433 ppb	0.316 ppb	0.058 ppb
Concentration per Run 2	100.982 %	0.211 ppb	0.573 ppb	23.402 ppb	6.189 ppb	0.047 ppb	0.358 ppb	0.294 ppb	0.156 ppb
Concentration per Run 3	106.656 %	0.267 ppb	0.569 ppb	24.022 ppb	5.179 ppb	0.048 ppb	0.442 ppb	0.281 ppb	0.008 ppb
Concentration RSD	3.5 %	12.1 %	3.0 %	1.9 %	9.6 %	10.0 %	11.3 %	5.9 %	102.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.882 %	0.120 ppb	0.011 ppb	68.300 ppb	0.198 ppb	95.485 %	0.001 ppb	0.006 ppb	102.373 %
Concentration per Run 1	99.933 %	0.116 ppb	0.031 ppb	68.292 ppb	0.231 ppb	94.007 %	0.001 ppb	0.007 ppb	97.177 %
Concentration per Run 2	104.267 %	0.141 ppb	-0.026 ppb	66.437 ppb	0.182 ppb	95.580 %	0.001 ppb	0.006 ppb	102.254 %
Concentration per Run 3	104.448 %	0.102 ppb	0.030 ppb	70.171 ppb	0.182 ppb	96.870 %	0.000 ppb	0.006 ppb	107.688 %
Concentration RSD	2.5 %	16.2 %	288.5 %	2.7 %	14.3 %	1.5 %	82.2 %	9.3 %	5.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.088 ppb	18.492 ppb	77.379 %	89.508 %	0.025 ppb	0.026 ppb	96.849 %
Concentration per Run 1	0.071 ppb	18.805 ppb	76.298 %	87.880 %	0.020 ppb	0.028 ppb	92.574 %
Concentration per Run 2	0.097 ppb	18.553 ppb	77.643 %	88.552 %	0.026 ppb	0.026 ppb	85.624 %
Concentration per Run 3	0.096 ppb	18.118 ppb	78.197 %	92.091 %	0.029 ppb	0.024 ppb	112.349 %
Concentration RSD	16.7 %	1.9 %	1.3 %	2.5 %	19.2 %	7.1 %	14.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	31	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417074-04 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:29:59 AM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.741 %	104.028 %	0.000 ppb	12,014.662 ppb	5,927.340 ppb	6.432 ppb	2,323.507 ppb	21,843.075 ppb	95.570 %
Concentration per Run 1	99.740 %	103.798 %	0.000 ppb	11,821.317 ppb	5,845.460 ppb	6.261 ppb	2,337.217 ppb	21,968.629 ppb	96.629 %
Concentration per Run 2	96.508 %	105.869 %	-0.001 ppb	11,782.741 ppb	5,764.190 ppb	6.511 ppb	2,226.005 ppb	21,328.883 ppb	94.984 %
Concentration per Run 3	96.976 %	102.417 %	0.002 ppb	12,439.927 ppb	6,172.370 ppb	6.525 ppb	2,407.299 ppb	22,231.713 ppb	95.095 %
Concentration RSD	1.8 %	1.7 %	720.1 %	3.1 %	3.6 %	2.3 %	3.9 %	2.1 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.137 %	0.364 ppb	0.221 ppb	3.398 ppb	4.744 ppb	0.054 ppb	0.162 ppb	0.413 ppb	1.326 ppb
Concentration per Run 1	100.222 %	0.404 ppb	0.238 ppb	3.418 ppb	5.874 ppb	0.061 ppb	0.167 ppb	0.462 ppb	1.373 ppb
Concentration per Run 2	99.759 %	0.301 ppb	0.225 ppb	3.389 ppb	4.223 ppb	0.046 ppb	0.162 ppb	0.398 ppb	1.300 ppb
Concentration per Run 3	103.430 %	0.387 ppb	0.200 ppb	3.386 ppb	4.135 ppb	0.054 ppb	0.157 ppb	0.379 ppb	1.306 ppb
Concentration RSD	2.0 %	15.1 %	8.7 %	0.5 %	20.7 %	13.8 %	3.1 %	10.6 %	3.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.511 %	0.186 ppb	0.006 ppb	79.924 ppb	0.143 ppb	94.105 %	0.005 ppb	0.007 ppb	101.474 %
Concentration per Run 1	100.354 %	0.191 ppb	0.080 ppb	79.732 ppb	0.123 ppb	94.043 %	0.005 ppb	0.005 ppb	100.903 %
Concentration per Run 2	100.787 %	0.211 ppb	-0.039 ppb	77.611 ppb	0.162 ppb	93.840 %	0.007 ppb	0.006 ppb	98.028 %
Concentration per Run 3	106.391 %	0.155 ppb	-0.021 ppb	82.430 ppb	0.145 ppb	94.432 %	0.003 ppb	0.010 ppb	105.490 %
Concentration RSD	3.3 %	15.2 %	1,000.7 %	3.0 %	13.7 %	0.3 %	38.1 %	37.2 %	3.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.078 ppb	17.626 ppb	76.629 %	89.045 %	0.017 ppb	0.028 ppb	96.519 %
Concentration per Run 1	0.072 ppb	17.601 ppb	77.176 %	88.376 %	0.011 ppb	0.031 ppb	124.521 %
Concentration per Run 2	0.081 ppb	17.455 ppb	76.529 %	88.929 %	0.020 ppb	0.026 ppb	83.187 %
Concentration per Run 3	0.081 ppb	17.821 ppb	76.181 %	89.830 %	0.019 ppb	0.028 ppb	81.850 %
Concentration RSD	6.9 %	1.0 %	0.7 %	0.8 %	29.5 %	7.9 %	25.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	32	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417074-05 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:34:39 AM	Vial	12		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.907 %	97.046 %	0.008 ppb	14,489.716 ppb	6,273.153 ppb	2.988 ppb	2,594.618 ppb	14,945.744 ppb	94.559 %
Concentration per Run 1	97.012 %	94.822 %	0.003 ppb	14,533.112 ppb	6,285.330 ppb	2.883 ppb	2,590.749 ppb	14,954.172 ppb	95.123 %
Concentration per Run 2	95.845 %	96.778 %	0.004 ppb	14,429.366 ppb	6,273.367 ppb	3.235 ppb	2,570.988 ppb	14,810.700 ppb	93.067 %
Concentration per Run 3	97.864 %	99.540 %	0.016 ppb	14,506.668 ppb	6,260.763 ppb	2.845 ppb	2,622.115 ppb	15,072.359 ppb	95.487 %
Concentration RSD	1.0 %	2.4 %	93.6 %	0.4 %	0.2 %	7.2 %	1.0 %	0.9 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.276 %	0.327 ppb	0.870 ppb	1.395 ppb	2.407 ppb	0.032 ppb	0.341 ppb	0.390 ppb	0.783 ppb
Concentration per Run 1	99.091 %	0.310 ppb	0.899 ppb	1.228 ppb	1.574 ppb	0.042 ppb	0.351 ppb	0.366 ppb	0.869 ppb
Concentration per Run 2	94.791 %	0.286 ppb	0.900 ppb	1.553 ppb	2.485 ppb	0.028 ppb	0.311 ppb	0.436 ppb	0.692 ppb
Concentration per Run 3	100.946 %	0.385 ppb	0.809 ppb	1.404 ppb	3.161 ppb	0.026 ppb	0.361 ppb	0.368 ppb	0.788 ppb
Concentration RSD	3.2 %	15.8 %	6.0 %	11.6 %	33.1 %	28.1 %	7.7 %	10.3 %	11.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.749 %	0.102 ppb	0.025 ppb	98.283 ppb	0.087 ppb	91.445 %	0.001 ppb	0.011 ppb	97.714 %
Concentration per Run 1	96.434 %	0.081 ppb	-0.016 ppb	98.243 ppb	0.050 ppb	91.029 %	0.000 ppb	0.008 ppb	96.737 %
Concentration per Run 2	96.841 %	0.090 ppb	0.052 ppb	95.457 ppb	0.085 ppb	91.018 %	0.002 ppb	0.011 ppb	95.070 %
Concentration per Run 3	102.971 %	0.133 ppb	0.039 ppb	101.149 ppb	0.124 ppb	92.289 %	0.002 ppb	0.014 ppb	101.335 %
Concentration RSD	3.7 %	27.2 %	144.2 %	2.9 %	42.9 %	0.8 %	102.2 %	30.2 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.058 ppb	24.424 ppb	90.765 %	86.445 %	0.008 ppb	0.033 ppb	85.678 %
Concentration per Run 1	0.059 ppb	26.279 ppb	74.573 %	85.117 %	0.003 ppb	0.035 ppb	93.189 %
Concentration per Run 2	0.048 ppb	23.334 ppb	96.977 %	85.030 %	0.011 ppb	0.034 ppb	81.457 %
Concentration per Run 3	0.067 ppb	23.658 ppb	100.744 %	89.188 %	0.010 ppb	0.030 ppb	82.388 %
Concentration RSD	16.2 %	6.6 %	15.6 %	2.7 %	57.5 %	7.6 %	7.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	33	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417074-06 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:39:18 AM	Vial	13		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.834 %	96.087 %	0.012 ppb	3,076.128 ppb	880.731 ppb	9.189 ppb	1,528.630 ppb	3,835.229 ppb	93.222 %
Concentration per Run 1	94.991 %	88.607 %	0.008 ppb	3,224.286 ppb	918.565 ppb	9.272 ppb	1,531.321 ppb	3,851.554 ppb	91.596 %
Concentration per Run 2	95.253 %	97.583 %	0.014 ppb	2,990.741 ppb	854.143 ppb	8.849 ppb	1,542.749 ppb	3,716.617 ppb	94.326 %
Concentration per Run 3	97.259 %	102.071 %	0.013 ppb	3,013.358 ppb	869.485 ppb	9.447 ppb	1,511.822 ppb	3,937.515 ppb	93.744 %
Concentration RSD	1.3 %	7.1 %	26.5 %	4.2 %	3.8 %	3.3 %	1.0 %	2.9 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.423 %	0.368 ppb	0.793 ppb	2.630 ppb	9.343 ppb	0.025 ppb	0.123 ppb	0.100 ppb	0.087 ppb
Concentration per Run 1	95.014 %	0.326 ppb	0.824 ppb	2.604 ppb	8.693 ppb	0.015 ppb	0.115 ppb	0.124 ppb	0.039 ppb
Concentration per Run 2	96.738 %	0.376 ppb	0.774 ppb	2.711 ppb	11.353 ppb	0.032 ppb	0.122 ppb	0.057 ppb	0.042 ppb
Concentration per Run 3	97.516 %	0.402 ppb	0.780 ppb	2.576 ppb	7.982 ppb	0.028 ppb	0.131 ppb	0.118 ppb	0.178 ppb
Concentration RSD	1.3 %	10.5 %	3.4 %	2.7 %	19.0 %	36.7 %	6.4 %	37.1 %	91.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.730 %	0.081 ppb	0.073 ppb	15.861 ppb	-0.008 ppb	91.817 %	0.001 ppb	0.014 ppb	97.640 %
Concentration per Run 1	97.097 %	0.054 ppb	0.075 ppb	15.534 ppb	-0.012 ppb	92.330 %	0.002 ppb	0.012 ppb	95.275 %
Concentration per Run 2	97.981 %	0.097 ppb	0.058 ppb	16.059 ppb	-0.047 ppb	91.962 %	-0.001 ppb	0.015 ppb	98.915 %
Concentration per Run 3	98.111 %	0.091 ppb	0.087 ppb	15.990 ppb	0.036 ppb	91.160 %	0.000 ppb	0.014 ppb	98.729 %
Concentration RSD	0.6 %	28.4 %	19.7 %	1.8 %	554.3 %	0.7 %	213.4 %	11.5 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.051 ppb	10.657 ppb	81.967 %	85.370 %	0.005 ppb	0.024 ppb	86.508 %
Concentration per Run 1	0.043 ppb	11.357 ppb	74.510 %	84.711 %	0.002 ppb	0.027 ppb	93.052 %
Concentration per Run 2	0.049 ppb	10.009 ppb	96.816 %	85.218 %	0.006 ppb	0.023 ppb	83.877 %
Concentration per Run 3	0.062 ppb	10.603 ppb	74.575 %	86.183 %	0.007 ppb	0.021 ppb	82.594 %
Concentration RSD	18.9 %	6.3 %	15.7 %	0.9 %	56.2 %	11.8 %	6.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	34	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-01 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:43:54 AM	Vial	14		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.865 %	94.438 %	0.007 ppb	11,873.836 ppb	30,627.320 ppb	3.427 ppb	27,178.871 ppb	217,004.934 ppb	99.826 %
Concentration per Run 1	96.754 %	90.103 %	0.011 ppb	12,175.475 ppb	31,331.953 ppb	3.297 ppb	26,569.039 ppb	214,185.485 ppb	101.915 %
Concentration per Run 2	91.993 %	95.742 %	0.001 ppb	11,854.386 ppb	30,873.740 ppb	3.378 ppb	28,348.234 ppb	223,524.175 ppb	100.673 %
Concentration per Run 3	89.847 %	97.468 %	0.007 ppb	11,591.646 ppb	29,676.267 ppb	3.606 ppb	26,619.342 ppb	213,305.143 ppb	96.890 %
Concentration RSD	3.8 %	4.1 %	75.8 %	2.5 %	2.8 %	4.7 %	3.7 %	2.6 %	2.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.314 %	0.316 ppb	0.460 ppb	1,200.087 ppb	16,158.313 ppb	1.094 ppb	1.340 ppb	1.513 ppb	3.003 ppb
Concentration per Run 1	96.904 %	0.343 ppb	0.445 ppb	1,200.255 ppb	16,535.141 ppb	1.112 ppb	1.438 ppb	1.576 ppb	2.953 ppb
Concentration per Run 2	100.408 %	0.316 ppb	0.484 ppb	1,215.402 ppb	16,156.872 ppb	1.095 ppb	1.242 ppb	1.596 ppb	3.021 ppb
Concentration per Run 3	100.630 %	0.289 ppb	0.451 ppb	1,184.606 ppb	15,782.925 ppb	1.075 ppb	1.339 ppb	1.367 ppb	3.035 ppb
Concentration RSD	2.1 %	8.4 %	4.6 %	1.3 %	2.3 %	1.7 %	7.3 %	8.4 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.032 %	1.399 ppb	0.062 ppb	984.420 ppb	0.474 ppb	86.007 %	0.002 ppb	0.006 ppb	93.479 %
Concentration per Run 1	92.681 %	1.355 ppb	-0.007 ppb	978.284 ppb	0.481 ppb	85.333 %	0.004 ppb	0.007 ppb	91.432 %
Concentration per Run 2	97.892 %	1.370 ppb	0.121 ppb	1,001.787 ppb	0.389 ppb	87.383 %	0.003 ppb	0.002 ppb	96.904 %
Concentration per Run 3	94.524 %	1.471 ppb	0.070 ppb	973.188 ppb	0.553 ppb	85.305 %	-0.001 ppb	0.007 ppb	92.102 %
Concentration RSD	2.8 %	4.5 %	104.5 %	1.5 %	17.3 %	1.4 %	144.0 %	49.2 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.161 ppb	176.944 ppb	73.044 %	85.322 %	0.006 ppb	0.034 ppb	82.856 %
Concentration per Run 1	0.159 ppb	176.181 ppb	71.905 %	84.083 %	0.002 ppb	0.036 ppb	90.769 %
Concentration per Run 2	0.152 ppb	179.290 ppb	75.094 %	87.939 %	0.009 ppb	0.032 ppb	81.243 %
Concentration per Run 3	0.171 ppb	175.362 ppb	72.133 %	83.944 %	0.008 ppb	0.035 ppb	76.554 %
Concentration RSD	6.0 %	1.2 %	2.4 %	2.7 %	60.5 %	5.6 %	8.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	35	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-02 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:48:30 AM	Vial	15		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.844 %	93.402 %	0.009 ppb	81,697.026 ppb	17,351.038 ppb	3.206 ppb	11,580.707 ppb	79,786.127 ppb	98.810 %
Concentration per Run 1	93.733 %	89.873 %	0.025 ppb	84,835.063 ppb	19,140.660 ppb	3.398 ppb	11,708.329 ppb	80,834.091 ppb	97.709 %
Concentration per Run 2	94.218 %	98.159 %	-0.005 ppb	78,967.093 ppb	14,468.525 ppb	3.068 ppb	11,319.662 ppb	77,936.737 ppb	99.452 %
Concentration per Run 3	93.582 %	92.175 %	0.007 ppb	81,288.923 ppb	18,443.929 ppb	3.152 ppb	11,714.130 ppb	80,587.553 ppb	99.268 %
Concentration RSD	0.4 %	4.6 %	170.5 %	3.6 %	14.5 %	5.3 %	2.0 %	2.0 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.441 %	0.502 ppb	0.179 ppb	2,815.751 ppb	2,149.413 ppb	3.135 ppb	1.383 ppb	5.107 ppb	0.973 ppb
Concentration per Run 1	95.218 %	0.562 ppb	0.184 ppb	2,828.072 ppb	2,151.952 ppb	3.263 ppb	1.399 ppb	5.067 ppb	0.977 ppb
Concentration per Run 2	97.646 %	0.496 ppb	0.166 ppb	2,817.854 ppb	2,164.728 ppb	3.075 ppb	1.326 ppb	5.062 ppb	0.967 ppb
Concentration per Run 3	96.460 %	0.448 ppb	0.188 ppb	2,801.327 ppb	2,131.559 ppb	3.067 ppb	1.422 ppb	5.192 ppb	0.975 ppb
Concentration RSD	1.3 %	11.4 %	6.5 %	0.5 %	0.8 %	3.5 %	3.6 %	1.4 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.033 %	0.934 ppb	0.104 ppb	280.841 ppb	0.201 ppb	87.028 %	0.001 ppb	0.109 ppb	94.465 %
Concentration per Run 1	94.859 %	0.928 ppb	0.099 ppb	280.753 ppb	0.168 ppb	88.492 %	0.001 ppb	0.107 ppb	93.802 %
Concentration per Run 2	95.851 %	0.950 ppb	0.051 ppb	281.182 ppb	0.228 ppb	86.388 %	0.001 ppb	0.108 ppb	94.584 %
Concentration per Run 3	97.388 %	0.923 ppb	0.163 ppb	280.587 ppb	0.208 ppb	86.203 %	0.000 ppb	0.112 ppb	95.009 %
Concentration RSD	1.3 %	1.6 %	54.0 %	0.1 %	15.0 %	1.5 %	113.8 %	2.2 %	0.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.098 ppb	100.038 ppb	82.366 %	85.335 %	0.085 ppb	0.052 ppb	79.724 %
Concentration per Run 1	0.090 ppb	105.877 ppb	75.336 %	85.590 %	0.083 ppb	0.055 ppb	85.868 %
Concentration per Run 2	0.099 ppb	91.932 ppb	97.610 %	85.944 %	0.088 ppb	0.048 ppb	77.510 %
Concentration per Run 3	0.104 ppb	102.303 ppb	74.154 %	84.470 %	0.085 ppb	0.054 ppb	75.795 %
Concentration RSD	6.9 %	7.2 %	16.0 %	0.9 %	3.0 %	7.5 %	6.8 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	36	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-03 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:53:07 AM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.476 %	90.065 %	0.007 ppb	48,294.601 ppb	12,684.671 ppb	9.379 ppb	8,267.416 ppb	58,499.658 ppb	98.585 %
Concentration per Run 1	91.955 %	90.679 %	0.004 ppb	48,980.785 ppb	12,848.825 ppb	9.489 ppb	8,341.018 ppb	59,012.101 ppb	99.046 %
Concentration per Run 2	89.891 %	95.857 %	0.006 ppb	46,761.263 ppb	12,276.117 ppb	9.050 ppb	8,191.655 ppb	58,773.097 ppb	96.933 %
Concentration per Run 3	89.582 %	83.659 %	0.010 ppb	49,141.753 ppb	12,929.069 ppb	9.599 ppb	8,269.576 ppb	57,713.776 ppb	99.775 %
Concentration RSD	1.4 %	6.8 %	45.8 %	2.8 %	2.8 %	3.1 %	0.9 %	1.2 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.159 %	1.369 ppb	1.114 ppb	452.158 ppb	61,320.975 ppb	0.948 ppb	0.384 ppb	0.309 ppb	0.553 ppb
Concentration per Run 1	99.036 %	1.362 ppb	1.192 ppb	456.171 ppb	62,420.251 ppb	0.986 ppb	0.350 ppb	0.335 ppb	0.534 ppb
Concentration per Run 2	97.905 %	1.394 ppb	1.089 ppb	449.398 ppb	61,109.557 ppb	0.944 ppb	0.400 ppb	0.247 ppb	0.542 ppb
Concentration per Run 3	97.535 %	1.350 ppb	1.061 ppb	450.906 ppb	60,433.116 ppb	0.914 ppb	0.404 ppb	0.344 ppb	0.584 ppb
Concentration RSD	0.8 %	1.6 %	6.2 %	0.8 %	1.6 %	3.8 %	7.8 %	17.3 %	4.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.499 %	9.672 ppb	0.024 ppb	195.347 ppb	0.104 ppb	85.714 %	-0.001 ppb	0.001 ppb	91.097 %
Concentration per Run 1	94.869 %	9.822 ppb	0.041 ppb	196.357 ppb	0.112 ppb	86.352 %	0.000 ppb	0.001 ppb	91.719 %
Concentration per Run 2	94.959 %	9.608 ppb	-0.006 ppb	195.246 ppb	0.092 ppb	85.562 %	-0.002 ppb	0.002 ppb	92.030 %
Concentration per Run 3	93.670 %	9.587 ppb	0.036 ppb	194.437 ppb	0.107 ppb	85.229 %	0.000 ppb	0.000 ppb	89.543 %
Concentration RSD	0.8 %	1.3 %	109.5 %	0.5 %	9.9 %	0.7 %	183.9 %	124.4 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.081 ppb	62.658 ppb	79.900 %	84.321 %	-0.001 ppb	0.014 ppb	82.185 %
Concentration per Run 1	0.077 ppb	66.540 ppb	73.246 %	84.830 %	-0.005 ppb	0.016 ppb	91.545 %
Concentration per Run 2	0.085 ppb	56.439 ppb	94.922 %	85.299 %	0.000 ppb	0.012 ppb	79.201 %
Concentration per Run 3	0.080 ppb	64.994 ppb	71.533 %	82.834 %	0.002 ppb	0.014 ppb	75.808 %
Concentration RSD	5.3 %	8.7 %	16.3 %	1.6 %	300.7 %	12.1 %	10.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	37	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-04 6020SL	Rack	1		
Analysis started at:	4/5/2024 10:57:43 AM	Vial	17		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.142 %	87.802 %	0.005 ppb	33,366.112 ppb	5,376.536 ppb	22.652 ppb	5,719.223 ppb	26,997.182 ppb	91.704 %
Concentration per Run 1	89.237 %	86.881 %	0.005 ppb	33,977.666 ppb	5,435.822 ppb	22.966 ppb	5,910.786 ppb	27,531.287 ppb	93.404 %
Concentration per Run 2	88.293 %	91.024 %	-0.004 ppb	32,937.984 ppb	5,269.989 ppb	22.684 ppb	5,671.855 ppb	26,769.565 ppb	92.350 %
Concentration per Run 3	86.895 %	85.500 %	0.014 ppb	33,182.688 ppb	5,423.797 ppb	22.305 ppb	5,575.029 ppb	26,690.695 ppb	89.356 %
Concentration RSD	1.3 %	3.3 %	190.7 %	1.6 %	1.7 %	1.5 %	3.0 %	1.7 %	2.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.746 %	0.143 ppb	0.285 ppb	2,255.629 ppb	10,696.611 ppb	4.310 ppb	2.470 ppb	1.328 ppb	5.899 ppb
Concentration per Run 1	101.132 %	0.132 ppb	0.275 ppb	2,266.973 ppb	10,653.161 ppb	4.261 ppb	2.292 ppb	1.400 ppb	5.807 ppb
Concentration per Run 2	98.943 %	0.129 ppb	0.281 ppb	2,236.464 ppb	10,656.682 ppb	4.354 ppb	2.659 ppb	1.319 ppb	5.773 ppb
Concentration per Run 3	96.163 %	0.168 ppb	0.298 ppb	2,263.449 ppb	10,779.990 ppb	4.316 ppb	2.459 ppb	1.265 ppb	6.116 ppb
Concentration RSD	2.5 %	15.3 %	4.3 %	0.7 %	0.7 %	1.1 %	7.4 %	5.1 %	3.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.612 %	1.778 ppb	0.047 ppb	95.994 ppb	0.236 ppb	86.905 %	0.001 ppb	0.023 ppb	93.853 %
Concentration per Run 1	96.428 %	1.742 ppb	0.078 ppb	97.840 ppb	0.175 ppb	87.335 %	0.002 ppb	0.020 ppb	95.935 %
Concentration per Run 2	95.171 %	1.798 ppb	0.086 ppb	95.053 ppb	0.294 ppb	87.430 %	0.001 ppb	0.021 ppb	92.655 %
Concentration per Run 3	92.235 %	1.795 ppb	-0.024 ppb	95.091 ppb	0.238 ppb	85.950 %	0.001 ppb	0.028 ppb	92.969 %
Concentration RSD	2.3 %	1.8 %	131.5 %	1.7 %	25.2 %	1.0 %	52.8 %	18.7 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.077 ppb	47.207 ppb	73.179 %	84.770 %	0.016 ppb	0.063 ppb	79.675 %
Concentration per Run 1	0.070 ppb	47.093 ppb	73.241 %	85.118 %	0.011 ppb	0.067 ppb	83.051 %
Concentration per Run 2	0.072 ppb	47.738 ppb	73.228 %	84.539 %	0.018 ppb	0.064 ppb	78.544 %
Concentration per Run 3	0.088 ppb	46.789 ppb	73.068 %	84.654 %	0.018 ppb	0.059 ppb	77.431 %
Concentration RSD	12.5 %	1.0 %	0.1 %	0.4 %	24.2 %	6.5 %	3.7 %

Analysis index:	38	User name	ALPHALAB\Metals-Instrument	Comment	WRONG SPOT
Analysis label:	xLDR - Mn 10ppm	Rack	1		
Analysis started at:	4/5/2024 11:02:20 AM	Vial	1		

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 39
Analysis label: CCV
Analysis started at: 4/5/2024 11:06:57 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.730 %	93.019 %	61.808 ppb	6,555.881 ppb	6,518.262 ppb	65.672 ppb	6,529.981 ppb	6,500.817 ppb	93.575 %
Concentration per Run 1	92.649 %	97.008 %	61.508 ppb	6,548.471 ppb	6,563.230 ppb	71.736 ppb	6,862.107 ppb	6,809.028 ppb	94.264 %
Concentration per Run 2	90.256 %	89.988 %	61.601 ppb	6,702.461 ppb	6,565.239 ppb	66.313 ppb	6,500.847 ppb	6,397.135 ppb	92.180 %
Concentration per Run 3	89.286 %	92.060 %	62.315 ppb	6,416.710 ppb	6,426.317 ppb	58.967 ppb	6,226.990 ppb	6,296.288 ppb	94.281 %
Recovery Percentage 1			103.014 %	109.265 %	108.638 %	109.453 %	108.833 %	108.347 %	
Concentration RSD	1.9 %	3.9 %	0.7 %	2.2 %	1.2 %	9.8 %	4.9 %	4.2 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.953 %	64.223 ppb	64.053 ppb	65.207 ppb	6,366.374 ppb	62.706 ppb	62.922 ppb	62.625 ppb	62.259 ppb
Concentration per Run 1	112.346 %	61.167 ppb	62.180 ppb	64.755 ppb	6,245.618 ppb	61.023 ppb	61.608 ppb	60.644 ppb	61.838 ppb
Concentration per Run 2	100.241 %	65.268 ppb	63.843 ppb	64.772 ppb	6,324.157 ppb	62.235 ppb	61.842 ppb	62.219 ppb	62.302 ppb
Concentration per Run 3	93.273 %	66.235 ppb	66.137 ppb	66.094 ppb	6,529.349 ppb	64.861 ppb	65.316 ppb	65.011 ppb	62.637 ppb
Recovery Percentage 1		107.039 %	106.756 %	108.679 %	106.106 %	104.510 %	104.870 %	104.374 %	103.765 %
Concentration RSD	9.5 %	4.2 %	3.1 %	1.2 %	2.3 %	3.1 %	3.3 %	3.5 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.451 %	61.892 ppb	63.363 ppb	62.662 ppb	60.244 ppb	91.244 %	61.677 ppb	61.559 ppb	94.828 %
Concentration per Run 1	101.581 %	63.101 ppb	66.079 ppb	65.864 ppb	59.551 ppb	93.664 %	61.494 ppb	62.037 ppb	99.872 %
Concentration per Run 2	95.402 %	61.994 ppb	64.714 ppb	62.237 ppb	59.936 ppb	90.907 %	61.138 ppb	61.534 ppb	94.059 %
Concentration per Run 3	92.372 %	60.582 ppb	59.295 ppb	59.884 ppb	61.246 ppb	89.160 %	62.398 ppb	61.105 ppb	90.554 %
Recovery Percentage 1		103.154 %	105.604 %	104.436 %	100.407 %		102.794 %	102.598 %	
Concentration RSD	4.9 %	2.0 %	5.7 %	4.8 %	1.5 %	2.5 %	1.1 %	0.8 %	5.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.578 ppb	61.090 ppb	82.467 %	85.704 %	59.884 ppb	62.043 ppb	95.929 %
Concentration per Run 1	60.228 ppb	57.672 ppb	99.892 %	89.012 %	55.131 ppb	61.180 ppb	128.182 %
Concentration per Run 2	60.581 ppb	62.886 ppb	74.154 %	86.263 %	59.999 ppb	60.990 ppb	80.924 %
Concentration per Run 3	60.924 ppb	62.712 ppb	73.354 %	81.838 %	64.524 ppb	63.958 ppb	78.681 %
Recovery Percentage 1	100.963 %	101.817 %			99.807 %	103.404 %	
Concentration RSD	0.6 %	4.8 %	18.3 %	4.2 %	7.8 %	2.7 %	29.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 40
Analysis label: CCB
Analysis started at: 4/5/2024 11:11:38 AM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.647 %	89.605 %	0.012 ppb	39.527 ppb	0.205 ppb	-0.195 ppb	6.104 ppb	-1.477 ppb	83.673 %
Concentration per Run 1	84.479 %	95.857 %	0.012 ppb	36.536 ppb	0.249 ppb	-0.181 ppb	8.079 ppb	-1.577 ppb	81.717 %
Concentration per Run 2	88.382 %	92.865 %	0.020 ppb	35.707 ppb	0.314 ppb	-0.220 ppb	10.041 ppb	-1.449 ppb	86.178 %
Concentration per Run 3	84.080 %	80.092 %	0.004 ppb	46.339 ppb	0.052 ppb	-0.185 ppb	0.193 ppb	-1.406 ppb	83.124 %
Recovery Percentage 1			2.384 %	39.527 %	0.293 %	-1.955 %	6.104 %	-1.477 %	
Concentration RSD	2.8 %	9.3 %	68.3 %	15.0 %	66.7 %	11.0 %	85.4 %	6.0 %	2.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.916 %	-0.016 ppb	-0.004 ppb	0.045 ppb	14.117 ppb	0.002 ppb	0.001 ppb	-0.003 ppb	-0.387 ppb
Concentration per Run 1	95.181 %	-0.005 ppb	-0.002 ppb	0.017 ppb	15.457 ppb	0.006 ppb	0.015 ppb	0.004 ppb	-0.469 ppb
Concentration per Run 2	84.488 %	-0.036 ppb	-0.007 ppb	0.060 ppb	13.832 ppb	0.001 ppb	-0.004 ppb	-0.019 ppb	-0.348 ppb
Concentration per Run 3	84.080 %	-0.006 ppb	-0.003 ppb	0.057 ppb	13.061 ppb	0.001 ppb	-0.008 ppb	0.005 ppb	-0.342 ppb
Recovery Percentage 1		-0.320 %	-0.380 %	4.485 %	28.234 %	0.493 %	0.043 %	-0.323 %	-7.732 %
Concentration RSD	7.2 %	110.9 %	69.9 %	52.9 %	8.7 %	114.7 %	1,468.5 %	413.9 %	18.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.258 %	0.094 ppb	0.262 ppb	-0.001 ppb	0.869 ppb	90.200 %	0.003 ppb	0.005 ppb	92.996 %
Concentration per Run 1	96.404 %	0.134 ppb	0.319 ppb	0.001 ppb	0.918 ppb	93.456 %	0.002 ppb	0.008 ppb	99.318 %
Concentration per Run 2	92.281 %	0.057 ppb	0.223 ppb	-0.003 ppb	0.921 ppb	88.376 %	0.004 ppb	0.005 ppb	91.795 %
Concentration per Run 3	88.088 %	0.092 ppb	0.243 ppb	-0.002 ppb	0.767 ppb	88.768 %	0.002 ppb	0.003 ppb	87.875 %
Recovery Percentage 1		18.880 %	5.231 %	-0.014 %	43.431 %		0.678 %	2.747 %	
Concentration RSD	4.5 %	40.8 %	19.3 %	128.9 %	10.1 %	3.1 %	40.0 %	52.0 %	6.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.064 ppb	0.014 ppb	71.797 %	82.776 %	0.195 ppb	0.034 ppb	80.791 %
Concentration per Run 1	0.067 ppb	0.017 ppb	74.095 %	86.799 %	0.158 ppb	0.034 ppb	88.640 %
Concentration per Run 2	0.057 ppb	0.005 ppb	71.390 %	82.435 %	0.211 ppb	0.033 ppb	76.619 %
Concentration per Run 3	0.069 ppb	0.022 ppb	69.905 %	79.095 %	0.216 ppb	0.034 ppb	77.112 %
Recovery Percentage 1	1.608 %	2.871 %			19.489 %	3.363 %	
Concentration RSD	9.4 %	61.3 %	3.0 %	4.7 %	16.6 %	2.7 %	8.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	41	User name	ALPHALAB\Metals-Instrument	Comment	WRONG DILUTION
Analysis label:	xLDR - Mn 10ppm	Rack	4		
Analysis started at:	4/5/2024 11:19:56 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.390 %	99.770 %	0.000 ppb	12.878 ppb	2.766 ppb	1.360 ppb	1.537 ppb	3.865 ppb	107.102 %
Concentration per Run 1	106.286 %	102.532 %	0.006 ppb	10.482 ppb	2.818 ppb	1.393 ppb	0.000 ppb	3.059 ppb	110.188 %
Concentration per Run 2	101.759 %	101.266 %	-0.010 ppb	10.997 ppb	3.081 ppb	1.264 ppb	4.249 ppb	7.090 ppb	104.913 %
Concentration per Run 3	99.126 %	95.512 %	0.003 ppb	17.154 ppb	2.400 ppb	1.424 ppb	0.360 ppb	1.445 ppb	106.205 %
Concentration RSD	3.5 %	3.7 %	3,726.6 %	28.8 %	12.4 %	6.2 %	153.3 %	75.2 %	2.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.962 %	-0.026 ppb	0.040 ppb	136,925.338 ppb	2.927 ppb	0.075 ppb	0.033 ppb	0.010 ppb	-0.207 ppb
Concentration per Run 1	104.690 %	-0.027 ppb	0.040 ppb	134,871.793 ppb	3.091 ppb	0.072 ppb	0.013 ppb	0.017 ppb	-0.302 ppb
Concentration per Run 2	106.747 %	-0.022 ppb	0.044 ppb	141,005.233 ppb	2.723 ppb	0.074 ppb	0.052 ppb	0.001 ppb	-0.157 ppb
Concentration per Run 3	103.447 %	-0.031 ppb	0.034 ppb	134,898.988 ppb	2.966 ppb	0.081 ppb	0.034 ppb	0.012 ppb	-0.161 ppb
Concentration RSD	1.6 %	17.3 %	12.4 %	2.6 %	6.4 %	6.1 %	59.6 %	80.2 %	40.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.635 %	0.073 ppb	0.078 ppb	0.011 ppb	0.084 ppb	100.679 %	0.003 ppb	0.011 ppb	106.771 %
Concentration per Run 1	105.400 %	0.057 ppb	0.089 ppb	0.011 ppb	0.055 ppb	99.736 %	0.003 ppb	0.007 ppb	106.131 %
Concentration per Run 2	111.818 %	0.079 ppb	0.069 ppb	0.012 ppb	0.078 ppb	100.764 %	0.004 ppb	0.011 ppb	107.321 %
Concentration per Run 3	108.687 %	0.083 ppb	0.076 ppb	0.011 ppb	0.119 ppb	101.536 %	0.003 ppb	0.015 ppb	106.861 %
Concentration RSD	3.0 %	19.2 %	12.7 %	7.8 %	38.9 %	0.9 %	19.5 %	36.3 %	0.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.037 ppb	0.046 ppb	79.827 %	102.492 %	0.016 ppb	0.102 ppb	107.177 %
Concentration per Run 1	0.033 ppb	0.061 ppb	78.187 %	91.904 %	0.012 ppb	0.115 ppb	143.087 %
Concentration per Run 2	0.039 ppb	0.042 ppb	80.257 %	92.525 %	0.023 ppb	0.115 ppb	91.759 %
Concentration per Run 3	0.039 ppb	0.034 ppb	81.036 %	123.045 %	0.013 ppb	0.075 ppb	86.684 %
Concentration RSD	9.0 %	30.6 %	1.8 %	17.4 %	38.9 %	23.0 %	29.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 42
Analysis label: LDR - Al 100ppm (3x ISCA)
Analysis started at: 4/5/2024 11:24:36 AM
User name ALPHALAB\Metals-Instrument
Rack 4
Vial 5
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	74.874 %	79.478 %	0.010 ppb	86,116.960 ppb	42,471.306 ppb	41,439.680 ppb	35,704.368 ppb	104,669.249 ppb	80.036 %
Concentration per Run 1	78.217 %	78.366 %	0.002 ppb	87,632.803 ppb	43,034.500 ppb	42,175.838 ppb	35,795.993 ppb	104,878.835 ppb	82.046 %
Concentration per Run 2	72.845 %	81.357 %	0.016 ppb	85,033.942 ppb	42,096.521 ppb	40,794.829 ppb	35,446.566 ppb	103,512.102 ppb	77.831 %
Concentration per Run 3	73.560 %	78.711 %	0.012 ppb	85,684.136 ppb	42,282.897 ppb	41,348.374 ppb	35,870.546 ppb	105,616.811 ppb	80.232 %
Concentration RSD	3.9 %	2.1 %	67.7 %	1.6 %	1.2 %	1.7 %	0.6 %	1.0 %	2.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.505 %	0.009 ppb	0.526 ppb	3.005 ppb	107,412.387 ppb	0.740 ppb	1.057 ppb	0.364 ppb	1.212 ppb
Concentration per Run 1	95.757 %	0.011 ppb	0.473 ppb	3.261 ppb	104,728.337 ppb	0.731 ppb	0.929 ppb	0.292 ppb	1.102 ppb
Concentration per Run 2	89.639 %	0.016 ppb	0.571 ppb	2.879 ppb	108,542.367 ppb	0.716 ppb	1.127 ppb	0.419 ppb	1.215 ppb
Concentration per Run 3	86.118 %	0.001 ppb	0.534 ppb	2.876 ppb	108,966.457 ppb	0.772 ppb	1.115 ppb	0.381 ppb	1.318 ppb
Concentration RSD	5.4 %	77.3 %	9.4 %	7.4 %	2.2 %	3.9 %	10.5 %	17.8 %	8.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.114 %	0.218 ppb	1.165 ppb	0.915 ppb	930.298 ppb	75.516 %	0.010 ppb	0.161 ppb	81.600 %
Concentration per Run 1	87.699 %	0.247 ppb	1.291 ppb	0.961 ppb	905.036 ppb	74.567 %	0.009 ppb	0.156 ppb	84.859 %
Concentration per Run 2	83.949 %	0.248 ppb	1.032 ppb	0.897 ppb	935.127 ppb	76.426 %	0.007 ppb	0.160 ppb	80.756 %
Concentration per Run 3	83.695 %	0.160 ppb	1.173 ppb	0.886 ppb	950.731 ppb	75.555 %	0.013 ppb	0.167 ppb	79.186 %
Concentration RSD	2.6 %	23.2 %	11.1 %	4.4 %	2.5 %	1.2 %	32.1 %	3.5 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.100 ppb	0.446 ppb	67.089 %	77.959 %	0.011 ppb	0.444 ppb	72.036 %
Concentration per Run 1	0.088 ppb	0.472 ppb	66.833 %	77.921 %	0.005 ppb	0.445 ppb	76.844 %
Concentration per Run 2	0.108 ppb	0.415 ppb	68.266 %	77.952 %	0.014 ppb	0.454 ppb	71.423 %
Concentration per Run 3	0.103 ppb	0.450 ppb	66.168 %	78.003 %	0.015 ppb	0.435 ppb	67.841 %
Concentration RSD	10.5 %	6.4 %	1.6 %	0.1 %	48.8 %	2.1 %	6.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	43	User name	ALPHALAB\Metals-Instrument	Comment	WRONG SPOT
Analysis label:	xLDR - Mn 5ppm	Rack	1		
Analysis started at:	4/5/2024 11:29:17 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	N/A	91.484 %	N/A	31.062 ppb	2.874 ppb	2.560 ppb	9.672 ppb	40.675 ppb	N/A
Concentration per Run	N/A	91.484 %	N/A	31.062 ppb	2.874 ppb	2.560 ppb	9.672 ppb	40.675 ppb	N/A
Concentration RSD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.733 %	-0.026 ppb	0.123 ppb	1.005 ppb	58.162 ppb	0.004 ppb	0.036 ppb	0.259 ppb	-0.054 ppb
Concentration per Run	90.733 %	-0.026 ppb	0.123 ppb	1.005 ppb	58.162 ppb	0.004 ppb	0.036 ppb	0.259 ppb	-0.054 ppb
Concentration RSD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.852 %	-0.005 ppb	-0.009 ppb	0.035 ppb	7.881 ppb	81.594 %	0.000 ppb	0.000 ppb	89.681 %
Concentration per Run	87.852 %	-0.005 ppb	-0.009 ppb	0.035 ppb	7.881 ppb	81.594 %	0.000 ppb	0.000 ppb	89.681 %
Concentration RSD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.270 ppb	0.048 ppb	68.790 %	81.379 %	0.003 ppb	0.033 ppb	79.371 %
Concentration per Run	0.270 ppb	0.048 ppb	68.790 %	81.379 %	0.003 ppb	0.033 ppb	79.371 %
Concentration RSD	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	44	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	LDR - Mn 5ppm	Rack	4		
Analysis started at:	4/5/2024 11:32:08 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.011 %	93.057 %	0.001 ppb	41.359 ppb	3.557 ppb	2.794 ppb	13.695 ppb	66.882 ppb	94.026 %
Concentration per Run 1	92.413 %	84.580 %	0.005 ppb	45.659 ppb	4.029 ppb	2.321 ppb	11.214 ppb	68.900 ppb	92.718 %
Concentration per Run 2	92.016 %	91.254 %	0.005 ppb	45.891 ppb	3.351 ppb	2.912 ppb	12.899 ppb	69.295 ppb	94.618 %
Concentration per Run 3	91.602 %	103.337 %	-0.006 ppb	32.528 ppb	3.293 ppb	3.149 ppb	16.971 ppb	62.453 ppb	94.741 %
Concentration RSD	0.4 %	10.2 %	460.5 %	18.5 %	11.5 %	15.3 %	21.6 %	5.7 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.417 %	-0.003 ppb	0.008 ppb	6,911.932 ppb	19.312 ppb	0.027 ppb	0.185 ppb	6,949.319 ppb	6,531.852 ppb
Concentration per Run 1	93.661 %	0.000 ppb	0.006 ppb	6,751.272 ppb	22.670 ppb	0.028 ppb	0.178 ppb	6,996.626 ppb	6,482.415 ppb
Concentration per Run 2	92.994 %	-0.031 ppb	0.014 ppb	6,963.085 ppb	18.358 ppb	0.020 ppb	0.168 ppb	7,089.712 ppb	6,680.175 ppb
Concentration per Run 3	102.596 %	0.022 ppb	0.004 ppb	7,021.440 ppb	16.907 ppb	0.032 ppb	0.210 ppb	6,761.619 ppb	6,432.966 ppb
Concentration RSD	5.6 %	952.7 %	67.0 %	2.1 %	15.5 %	21.5 %	12.0 %	2.4 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.204 %	465.030 ppb	-0.034 ppb	0.168 ppb	2.213 ppb	92.003 %	0.020 ppb	0.012 ppb	97.350 %
Concentration per Run 1	94.191 %	460.101 ppb	0.047 ppb	0.167 ppb	2.447 ppb	88.826 %	0.019 ppb	0.012 ppb	93.697 %
Concentration per Run 2	94.465 %	463.129 ppb	-0.086 ppb	0.163 ppb	2.144 ppb	91.554 %	0.023 ppb	0.011 ppb	94.605 %
Concentration per Run 3	102.958 %	471.859 ppb	-0.064 ppb	0.173 ppb	2.048 ppb	95.628 %	0.019 ppb	0.013 ppb	103.747 %
Concentration RSD	5.1 %	1.3 %	209.4 %	3.0 %	9.4 %	3.7 %	11.2 %	10.5 %	5.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.028 ppb	6,911.400 ppb	73.158 %	85.537 %	0.008 ppb	5,881.742 ppb	97.090 %
Concentration per Run 1	0.019 ppb	6,931.466 ppb	71.968 %	83.901 %	0.005 ppb	5,986.610 ppb	126.615 %
Concentration per Run 2	0.033 ppb	6,854.336 ppb	72.275 %	83.453 %	0.011 ppb	5,990.212 ppb	82.944 %
Concentration per Run 3	0.032 ppb	6,948.397 ppb	75.230 %	89.257 %	0.010 ppb	5,668.403 ppb	81.711 %
Concentration RSD	27.8 %	0.7 %	2.5 %	3.8 %	39.2 %	3.1 %	26.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	45	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-05 6020SL	Rack	1		
Analysis started at:	4/5/2024 11:36:48 AM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.877 %	89.029 %	0.002 ppb	44,835.387 ppb	14,574.767 ppb	6.411 ppb	22,384.217 ppb	117,162.599 ppb	86.563 %
Concentration per Run 1	86.756 %	88.147 %	-0.009 ppb	45,462.423 ppb	13,639.269 ppb	6.615 ppb	22,964.054 ppb	119,443.318 ppb	86.802 %
Concentration per Run 2	84.025 %	87.687 %	0.005 ppb	44,928.920 ppb	13,343.700 ppb	5.815 ppb	22,166.517 ppb	117,434.504 ppb	85.408 %
Concentration per Run 3	83.850 %	91.254 %	0.009 ppb	44,114.817 ppb	16,741.334 ppb	6.802 ppb	22,022.080 ppb	114,609.973 ppb	87.480 %
Concentration RSD	1.9 %	2.2 %	592.1 %	1.5 %	12.9 %	8.2 %	2.3 %	2.1 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.673 %	0.567 ppb	0.404 ppb	113.375 ppb	4,084.059 ppb	3.215 ppb	1.547 ppb	0.644 ppb	1.461 ppb
Concentration per Run 1	90.807 %	0.630 ppb	0.399 ppb	114.275 ppb	4,185.880 ppb	3.344 ppb	1.614 ppb	0.701 ppb	1.557 ppb
Concentration per Run 2	89.954 %	0.606 ppb	0.435 ppb	113.727 ppb	4,123.195 ppb	3.267 ppb	1.538 ppb	0.694 ppb	1.449 ppb
Concentration per Run 3	97.258 %	0.464 ppb	0.377 ppb	112.124 ppb	3,943.103 ppb	3.036 ppb	1.488 ppb	0.536 ppb	1.378 ppb
Concentration RSD	4.3 %	15.8 %	7.2 %	1.0 %	3.1 %	5.0 %	4.1 %	14.5 %	6.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.172 %	11.876 ppb	0.099 ppb	336.940 ppb	3.464 ppb	83.339 %	0.001 ppb	0.002 ppb	91.105 %
Concentration per Run 1	91.227 %	12.457 ppb	0.112 ppb	335.294 ppb	3.393 ppb	83.559 %	0.000 ppb	0.000 ppb	88.420 %
Concentration per Run 2	92.119 %	11.698 ppb	0.085 ppb	330.674 ppb	3.475 ppb	81.591 %	0.001 ppb	0.004 ppb	88.763 %
Concentration per Run 3	96.169 %	11.473 ppb	0.099 ppb	344.851 ppb	3.523 ppb	84.867 %	0.001 ppb	0.002 ppb	96.132 %
Concentration RSD	2.8 %	4.3 %	13.7 %	2.1 %	1.9 %	2.0 %	157.8 %	113.3 %	4.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.047 ppb	27.246 ppb	71.336 %	83.062 %	0.000 ppb	0.299 ppb	74.837 %
Concentration per Run 1	0.050 ppb	27.247 ppb	70.675 %	81.153 %	-0.004 ppb	0.358 ppb	78.692 %
Concentration per Run 2	0.043 ppb	26.980 ppb	70.838 %	83.079 %	0.001 ppb	0.283 ppb	72.858 %
Concentration per Run 3	0.050 ppb	27.510 ppb	72.495 %	84.953 %	0.002 ppb	0.255 ppb	72.962 %
Concentration RSD	8.5 %	1.0 %	1.4 %	2.3 %	1,023.0 %	17.8 %	4.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 46
Analysis label: I2417123-06 6020SL
Analysis started at: 4/5/2024 11:41:25 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 19
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.798 %	83.889 %	0.009 ppb	25,809.463 ppb	11,435.187 ppb	3.832 ppb	11,605.420 ppb	81,650.253 ppb	87.904 %
Concentration per Run 1	84.831 %	83.429 %	0.012 ppb	26,223.312 ppb	11,614.616 ppb	3.701 ppb	11,845.492 ppb	82,626.778 ppb	88.477 %
Concentration per Run 2	83.349 %	81.127 %	0.004 ppb	25,376.142 ppb	11,136.369 ppb	3.405 ppb	11,361.960 ppb	79,905.160 ppb	87.620 %
Concentration per Run 3	83.213 %	87.111 %	0.011 ppb	25,828.935 ppb	11,554.576 ppb	4.390 ppb	11,608.809 ppb	82,418.822 ppb	87.615 %
Concentration RSD	1.1 %	3.6 %	49.5 %	1.6 %	2.3 %	13.2 %	2.1 %	1.9 %	0.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.505 %	0.548 ppb	0.442 ppb	470.487 ppb	48,347.709 ppb	2.833 ppb	1.581 ppb	0.440 ppb	1.027 ppb
Concentration per Run 1	88.824 %	0.626 ppb	0.467 ppb	485.785 ppb	50,503.457 ppb	2.880 ppb	1.573 ppb	0.471 ppb	0.967 ppb
Concentration per Run 2	88.491 %	0.530 ppb	0.427 ppb	462.470 ppb	47,440.982 ppb	2.897 ppb	1.604 ppb	0.371 ppb	1.073 ppb
Concentration per Run 3	97.202 %	0.489 ppb	0.431 ppb	463.208 ppb	47,098.689 ppb	2.722 ppb	1.567 ppb	0.479 ppb	1.041 ppb
Concentration RSD	5.4 %	12.8 %	4.9 %	2.8 %	3.9 %	3.4 %	1.3 %	13.7 %	5.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.125 %	14.436 ppb	0.009 ppb	292.308 ppb	0.639 ppb	80.632 %	0.001 ppb	0.000 ppb	87.168 %
Concentration per Run 1	86.690 %	15.134 ppb	0.031 ppb	289.603 ppb	0.568 ppb	81.150 %	0.001 ppb	0.002 ppb	86.836 %
Concentration per Run 2	86.498 %	14.029 ppb	-0.025 ppb	286.453 ppb	0.692 ppb	78.580 %	0.002 ppb	-0.001 ppb	82.461 %
Concentration per Run 3	94.186 %	14.145 ppb	0.021 ppb	300.868 ppb	0.656 ppb	82.167 %	0.000 ppb	0.000 ppb	92.207 %
Concentration RSD	4.9 %	4.2 %	337.7 %	2.6 %	9.9 %	2.3 %	118.8 %	878.9 %	5.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.023 ppb	32.888 ppb	69.447 %	80.937 %	-0.002 ppb	0.153 ppb	77.663 %
Concentration per Run 1	0.018 ppb	33.328 ppb	69.264 %	80.153 %	-0.005 ppb	0.169 ppb	84.953 %
Concentration per Run 2	0.020 ppb	33.109 ppb	67.736 %	78.750 %	-0.001 ppb	0.149 ppb	73.896 %
Concentration per Run 3	0.032 ppb	32.226 ppb	71.342 %	83.909 %	0.000 ppb	0.142 ppb	74.141 %
Concentration RSD	33.5 %	1.8 %	2.6 %	3.3 %	134.9 %	9.1 %	8.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 47
Analysis label: I2417123-07 6020SL
Analysis started at: 4/5/2024 11:48:14 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 20
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.660 %	82.738 %	0.007 ppb	33,109.009 ppb	18,389.186 ppb	5.382 ppb	13,918.731 ppb	67,261.410 ppb	91.022 %
Concentration per Run 1	85.643 %	82.163 %	-0.001 ppb	31,909.999 ppb	18,868.130 ppb	5.133 ppb	13,154.059 ppb	62,253.278 ppb	91.227 %
Concentration per Run 2	84.199 %	83.659 %	0.016 ppb	32,903.767 ppb	15,867.948 ppb	5.053 ppb	14,040.338 ppb	68,633.414 ppb	90.681 %
Concentration per Run 3	84.137 %	82.393 %	0.005 ppb	34,513.261 ppb	20,431.481 ppb	5.960 ppb	14,561.796 ppb	70,897.538 ppb	91.158 %
Concentration RSD	1.0 %	1.0 %	130.8 %	4.0 %	12.6 %	9.3 %	5.1 %	6.7 %	0.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.259 %	0.696 ppb	0.550 ppb	553.958 ppb	76,334.931 ppb	5.278 ppb	2.524 ppb	0.438 ppb	3.213 ppb
Concentration per Run 1	107.489 %	0.723 ppb	0.488 ppb	524.716 ppb	72,590.063 ppb	5.050 ppb	2.471 ppb	0.407 ppb	2.919 ppb
Concentration per Run 2	96.719 %	0.690 ppb	0.560 ppb	573.044 ppb	78,719.913 ppb	5.394 ppb	2.562 ppb	0.432 ppb	3.340 ppb
Concentration per Run 3	93.568 %	0.674 ppb	0.601 ppb	564.112 ppb	77,694.817 ppb	5.390 ppb	2.538 ppb	0.475 ppb	3.378 ppb
Concentration RSD	7.4 %	3.6 %	10.5 %	4.6 %	4.3 %	3.7 %	1.9 %	7.8 %	7.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.106 %	17.755 ppb	0.013 ppb	277.158 ppb	0.573 ppb	81.611 %	0.001 ppb	0.000 ppb	87.158 %
Concentration per Run 1	88.145 %	17.581 ppb	-0.027 ppb	275.808 ppb	0.592 ppb	82.277 %	0.000 ppb	-0.001 ppb	87.309 %
Concentration per Run 2	88.986 %	17.921 ppb	0.060 ppb	279.273 ppb	0.562 ppb	81.432 %	0.002 ppb	0.002 ppb	87.039 %
Concentration per Run 3	90.187 %	17.764 ppb	0.005 ppb	276.394 ppb	0.566 ppb	81.123 %	0.001 ppb	-0.001 ppb	87.126 %
Concentration RSD	1.2 %	1.0 %	347.6 %	0.7 %	2.9 %	0.7 %	93.5 %	1,175.4 %	0.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.081 ppb	42.776 ppb	70.767 %	82.624 %	0.002 ppb	0.150 ppb	110.643 %
Concentration per Run 1	0.081 ppb	42.402 ppb	71.371 %	82.883 %	0.002 ppb	0.160 ppb	167.106 %
Concentration per Run 2	0.089 ppb	43.580 ppb	69.879 %	81.848 %	0.003 ppb	0.140 ppb	85.737 %
Concentration per Run 3	0.073 ppb	42.347 ppb	71.050 %	83.141 %	0.001 ppb	0.151 ppb	79.086 %
Concentration RSD	10.2 %	1.6 %	1.1 %	0.8 %	46.5 %	6.6 %	44.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 48
Analysis label: I2417128-01 6020SL
Analysis started at: 4/5/2024 11:52:51 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 21
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.821 %	84.656 %	0.002 ppb	34,790.792 ppb	14,607.311 ppb	6.157 ppb	17,013.510 ppb	90,767.750 ppb	87.609 %
Concentration per Run 1	84.670 %	87.457 %	0.005 ppb	34,717.035 ppb	14,705.033 ppb	6.110 ppb	17,538.627 ppb	92,412.181 ppb	87.523 %
Concentration per Run 2	83.472 %	82.738 %	-0.002 ppb	34,928.560 ppb	14,676.173 ppb	7.009 ppb	17,037.965 ppb	90,003.972 ppb	86.080 %
Concentration per Run 3	83.321 %	83.774 %	0.004 ppb	34,726.781 ppb	14,440.726 ppb	5.353 ppb	16,463.939 ppb	89,887.096 ppb	89.225 %
Concentration RSD	0.9 %	2.9 %	160.3 %	0.3 %	1.0 %	13.5 %	3.2 %	1.6 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.434 %	0.673 ppb	0.589 ppb	964.604 ppb	44,315.041 ppb	1.147 ppb	1.011 ppb	0.741 ppb	8.416 ppb
Concentration per Run 1	87.823 %	0.689 ppb	0.602 ppb	1,147.516 ppb	45,209.266 ppb	1.161 ppb	0.914 ppb	0.699 ppb	8.409 ppb
Concentration per Run 2	88.750 %	0.614 ppb	0.586 ppb	881.637 ppb	44,301.484 ppb	1.152 ppb	1.080 ppb	0.855 ppb	8.393 ppb
Concentration per Run 3	85.729 %	0.717 ppb	0.580 ppb	864.660 ppb	43,434.374 ppb	1.127 ppb	1.040 ppb	0.668 ppb	8.446 ppb
Concentration RSD	1.8 %	7.9 %	1.9 %	16.4 %	2.0 %	1.5 %	8.6 %	13.6 %	0.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.802 %	8.101 ppb	-0.005 ppb	344.643 ppb	0.239 ppb	81.421 %	0.000 ppb	0.004 ppb	85.414 %
Concentration per Run 1	86.982 %	8.079 ppb	-0.024 ppb	353.221 ppb	0.188 ppb	82.160 %	0.001 ppb	0.004 ppb	87.216 %
Concentration per Run 2	89.368 %	8.030 ppb	-0.044 ppb	341.862 ppb	0.198 ppb	81.771 %	-0.001 ppb	0.004 ppb	85.646 %
Concentration per Run 3	84.055 %	8.193 ppb	0.054 ppb	338.845 ppb	0.331 ppb	80.334 %	0.000 ppb	0.003 ppb	83.380 %
Concentration RSD	3.1 %	1.0 %	1,086.4 %	2.2 %	33.5 %	1.2 %	1,148.0 %	14.2 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.033 ppb	71.897 ppb	69.710 %	80.849 %	-0.003 ppb	0.126 ppb	77.191 %
Concentration per Run 1	0.028 ppb	72.527 ppb	70.413 %	81.730 %	-0.006 ppb	0.134 ppb	84.338 %
Concentration per Run 2	0.030 ppb	72.034 ppb	70.338 %	81.786 %	-0.002 ppb	0.125 ppb	74.813 %
Concentration per Run 3	0.040 ppb	71.129 ppb	68.381 %	79.029 %	-0.001 ppb	0.118 ppb	72.423 %
Concentration RSD	20.6 %	1.0 %	1.7 %	1.9 %	87.3 %	6.1 %	8.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 49
Analysis label: I2417128-02 6020SL
Analysis started at: 4/5/2024 11:57:29 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 22
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.925 %	85.500 %	0.006 ppb	37,448.603 ppb	16,081.228 ppb	4.962 ppb	18,969.785 ppb	116,711.740 ppb	86.163 %
Concentration per Run 1	84.584 %	84.004 %	0.015 ppb	39,320.536 ppb	18,912.042 ppb	5.039 ppb	19,368.901 ppb	120,820.794 ppb	87.409 %
Concentration per Run 2	82.091 %	92.405 %	0.007 ppb	35,213.267 ppb	14,245.670 ppb	4.496 ppb	18,316.734 ppb	111,888.806 ppb	85.074 %
Concentration per Run 3	82.100 %	80.092 %	-0.003 ppb	37,812.006 ppb	15,085.973 ppb	5.349 ppb	19,223.720 ppb	117,425.620 ppb	86.005 %
Concentration RSD	1.7 %	7.4 %	141.6 %	5.5 %	15.5 %	8.7 %	3.0 %	3.9 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.082 %	0.239 ppb	0.614 ppb	1,506.848 ppb	41,438.383 ppb	1.151 ppb	0.907 ppb	0.576 ppb	0.911 ppb
Concentration per Run 1	88.916 %	0.254 ppb	0.634 ppb	1,544.022 ppb	41,768.943 ppb	1.138 ppb	0.825 ppb	0.533 ppb	0.854 ppb
Concentration per Run 2	89.510 %	0.193 ppb	0.586 ppb	1,475.174 ppb	41,147.026 ppb	1.144 ppb	0.868 ppb	0.606 ppb	0.947 ppb
Concentration per Run 3	82.821 %	0.268 ppb	0.620 ppb	1,501.346 ppb	41,399.179 ppb	1.172 ppb	1.028 ppb	0.588 ppb	0.933 ppb
Concentration RSD	4.3 %	16.7 %	4.0 %	2.3 %	0.8 %	1.6 %	11.8 %	6.6 %	5.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.595 %	5.049 ppb	0.026 ppb	401.698 ppb	0.102 ppb	80.064 %	0.000 ppb	0.005 ppb	84.069 %
Concentration per Run 1	87.942 %	5.084 ppb	-0.010 ppb	406.566 ppb	0.062 ppb	81.444 %	0.000 ppb	0.003 ppb	85.803 %
Concentration per Run 2	86.012 %	5.035 ppb	0.039 ppb	398.090 ppb	0.130 ppb	79.245 %	0.000 ppb	0.005 ppb	84.642 %
Concentration per Run 3	82.830 %	5.027 ppb	0.048 ppb	400.438 ppb	0.115 ppb	79.502 %	0.000 ppb	0.008 ppb	81.764 %
Concentration RSD	3.0 %	0.6 %	121.0 %	1.1 %	34.9 %	1.5 %	33.5 %	50.5 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.035 ppb	86.989 ppb	69.435 %	79.504 %	-0.005 ppb	0.087 ppb	76.134 %
Concentration per Run 1	0.031 ppb	87.704 ppb	70.881 %	81.761 %	-0.008 ppb	0.082 ppb	83.363 %
Concentration per Run 2	0.030 ppb	85.967 ppb	69.375 %	79.178 %	-0.003 ppb	0.088 ppb	73.522 %
Concentration per Run 3	0.045 ppb	87.297 ppb	68.049 %	77.573 %	-0.004 ppb	0.091 ppb	71.516 %
Concentration RSD	23.9 %	1.0 %	2.0 %	2.7 %	51.9 %	5.0 %	8.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 50
Analysis label: I2417449-13 6020SL
Analysis started at: 4/5/2024 12:02:08 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 23
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.410 %	87.226 %	0.006 ppb	3,415.572 ppb	21,043.649 ppb	53.507 ppb	5,546.273 ppb	85,060.926 ppb	87.555 %
Concentration per Run 1	87.323 %	87.457 %	0.005 ppb	3,473.277 ppb	21,460.979 ppb	56.275 ppb	5,645.842 ppb	86,180.234 ppb	87.563 %
Concentration per Run 2	86.708 %	82.163 %	0.006 ppb	3,467.957 ppb	21,155.751 ppb	52.180 ppb	5,324.770 ppb	82,183.430 ppb	87.206 %
Concentration per Run 3	85.200 %	92.060 %	0.006 ppb	3,305.481 ppb	20,514.218 ppb	52.067 ppb	5,668.206 ppb	86,819.115 ppb	87.896 %
Concentration RSD	1.3 %	5.7 %	5.5 %	2.8 %	2.3 %	4.5 %	3.5 %	3.0 %	0.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.738 %	0.121 ppb	0.466 ppb	1,448.776 ppb	4,157.859 ppb	4.985 ppb	3.346 ppb	0.380 ppb	2.612 ppb
Concentration per Run 1	92.901 %	0.137 ppb	0.430 ppb	1,435.812 ppb	4,164.042 ppb	4.953 ppb	3.386 ppb	0.369 ppb	2.477 ppb
Concentration per Run 2	86.156 %	0.105 ppb	0.459 ppb	1,452.189 ppb	4,200.287 ppb	5.104 ppb	3.290 ppb	0.370 ppb	2.751 ppb
Concentration per Run 3	90.158 %	0.121 ppb	0.509 ppb	1,458.326 ppb	4,109.247 ppb	4.899 ppb	3.362 ppb	0.403 ppb	2.609 ppb
Concentration RSD	3.8 %	12.9 %	8.5 %	0.8 %	1.1 %	2.1 %	1.5 %	5.0 %	5.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.813 %	0.920 ppb	0.072 ppb	372.839 ppb	5.184 ppb	82.729 %	0.000 ppb	0.005 ppb	87.438 %
Concentration per Run 1	91.089 %	0.996 ppb	0.110 ppb	377.347 ppb	5.224 ppb	83.119 %	0.000 ppb	0.006 ppb	89.442 %
Concentration per Run 2	85.807 %	0.902 ppb	-0.011 ppb	365.519 ppb	5.133 ppb	81.867 %	-0.001 ppb	0.006 ppb	83.588 %
Concentration per Run 3	92.544 %	0.862 ppb	0.118 ppb	375.652 ppb	5.195 ppb	83.201 %	0.000 ppb	0.005 ppb	89.283 %
Concentration RSD	3.9 %	7.4 %	100.0 %	1.7 %	0.9 %	0.9 %	2,986.8 %	12.5 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.305 ppb	75.239 ppb	70.412 %	81.278 %	-0.001 ppb	0.325 ppb	78.258 %
Concentration per Run 1	0.302 ppb	74.735 ppb	70.591 %	80.627 %	-0.003 ppb	0.333 ppb	83.633 %
Concentration per Run 2	0.299 ppb	75.707 ppb	69.949 %	80.008 %	0.000 ppb	0.326 ppb	76.103 %
Concentration per Run 3	0.313 ppb	75.274 ppb	70.697 %	83.198 %	0.001 ppb	0.317 ppb	75.038 %
Concentration RSD	2.3 %	0.6 %	0.6 %	2.1 %	310.8 %	2.5 %	6.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	51	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 12:06:47 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.376 %	89.758 %	61.985 ppb	5,421.347 ppb	6,433.036 ppb	65.304 ppb	6,106.599 ppb	6,398.148 ppb	85.888 %
Concentration per Run 1	85.514 %	94.016 %	61.570 ppb	6,545.367 ppb	6,565.205 ppb	66.015 ppb	6,110.126 ppb	6,592.569 ppb	86.364 %
Concentration per Run 2	85.807 %	88.492 %	62.392 ppb	4,792.983 ppb	6,230.241 ppb	64.389 ppb	5,842.986 ppb	6,271.014 ppb	85.686 %
Concentration per Run 3	84.806 %	86.766 %	61.992 ppb	4,925.690 ppb	6,503.661 ppb	65.507 ppb	6,366.685 ppb	6,330.860 ppb	85.615 %
Recovery Percentage 1			103.308 %	90.356 %	107.217 %	108.839 %	101.777 %	106.636 %	
Concentration RSD	0.6 %	4.2 %	0.7 %	18.0 %	2.8 %	1.3 %	4.3 %	2.7 %	0.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.219 %	66.226 ppb	63.057 ppb	63.139 ppb	6,571.377 ppb	64.563 ppb	64.936 ppb	64.882 ppb	63.386 ppb
Concentration per Run 1	90.251 %	67.566 ppb	63.960 ppb	64.452 ppb	6,655.692 ppb	65.772 ppb	66.598 ppb	65.800 ppb	63.926 ppb
Concentration per Run 2	84.173 %	66.742 ppb	62.934 ppb	61.505 ppb	6,627.215 ppb	65.626 ppb	65.246 ppb	65.663 ppb	63.855 ppb
Concentration per Run 3	93.235 %	64.369 ppb	62.275 ppb	63.459 ppb	6,431.225 ppb	62.292 ppb	62.964 ppb	63.181 ppb	62.378 ppb
Recovery Percentage 1		110.376 %	105.094 %	105.231 %	109.523 %	107.606 %	108.226 %	108.136 %	105.644 %
Concentration RSD	5.2 %	2.5 %	1.3 %	2.4 %	1.9 %	3.0 %	2.8 %	2.3 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.762 %	62.384 ppb	63.429 ppb	62.398 ppb	60.840 ppb	84.028 %	62.517 ppb	62.356 ppb	86.274 %
Concentration per Run 1	89.280 %	63.502 ppb	64.384 ppb	63.637 ppb	60.365 ppb	84.539 %	62.989 ppb	62.774 ppb	88.472 %
Concentration per Run 2	84.583 %	61.132 ppb	61.985 ppb	60.376 ppb	61.315 ppb	82.843 %	62.427 ppb	62.563 ppb	82.171 %
Concentration per Run 3	89.424 %	62.519 ppb	63.919 ppb	63.182 ppb	60.840 ppb	84.701 %	62.136 ppb	61.732 ppb	88.179 %
Recovery Percentage 1		103.974 %	105.716 %	103.997 %	101.399 %		104.196 %	103.927 %	
Concentration RSD	3.1 %	1.9 %	2.0 %	2.8 %	0.8 %	1.2 %	0.7 %	0.9 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.119 ppb	63.617 ppb	70.043 %	79.861 %	61.520 ppb	64.327 ppb	79.422 %
Concentration per Run 1	62.321 ppb	64.227 ppb	70.225 %	81.139 %	58.263 ppb	64.047 ppb	85.983 %
Concentration per Run 2	62.176 ppb	62.999 ppb	69.033 %	77.636 %	62.855 ppb	65.492 ppb	76.013 %
Concentration per Run 3	61.859 ppb	63.626 ppb	70.872 %	80.807 %	63.443 ppb	63.443 ppb	76.271 %
Recovery Percentage 1	103.531 %	106.029 %			102.534 %	107.212 %	
Concentration RSD	0.4 %	1.0 %	1.3 %	2.4 %	4.6 %	1.6 %	7.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 52 User name ALPHALAB\Metals-Instrument Comment <Comment>
Analysis label: CCB Rack 0
Analysis started at: 4/5/2024 12:11:28 PM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.118 %	84.733 %	0.006 ppb	29.853 ppb	0.039 ppb	-0.158 ppb	3.390 ppb	-0.293 ppb	80.261 %
Concentration per Run 1	87.745 %	90.564 %	0.005 ppb	25.223 ppb	0.116 ppb	-0.152 ppb	6.596 ppb	0.213 ppb	82.089 %
Concentration per Run 2	81.817 %	80.667 %	0.007 ppb	25.323 ppb	0.638 ppb	-0.114 ppb	3.246 ppb	0.385 ppb	77.800 %
Concentration per Run 3	82.790 %	82.969 %	0.004 ppb	39.013 ppb	-0.638 ppb	-0.208 ppb	0.327 ppb	-1.476 ppb	80.892 %
Recovery Percentage 1			1.132 %	29.853 %	0.056 %	-1.579 %	3.390 %	-0.293 %	
Concentration RSD	3.8 %	6.1 %	29.1 %	26.6 %	1,648.6 %	30.0 %	92.5 %	351.7 %	2.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	83.499 %	-0.011 ppb	-0.008 ppb	0.123 ppb	14.476 ppb	0.002 ppb	0.006 ppb	0.010 ppb	-0.424 ppb
Concentration per Run 1	83.654 %	-0.001 ppb	-0.010 ppb	0.121 ppb	16.443 ppb	0.002 ppb	-0.007 ppb	-0.003 ppb	-0.474 ppb
Concentration per Run 2	81.745 %	-0.004 ppb	-0.004 ppb	0.089 ppb	14.002 ppb	0.004 ppb	0.017 ppb	0.037 ppb	-0.339 ppb
Concentration per Run 3	85.099 %	-0.028 ppb	-0.009 ppb	0.158 ppb	12.983 ppb	0.001 ppb	0.008 ppb	-0.005 ppb	-0.460 ppb
Recovery Percentage 1		-0.225 %	-0.781 %	12.258 %	28.951 %	0.488 %	0.305 %	0.990 %	-8.480 %
Concentration RSD	2.0 %	128.6 %	41.6 %	28.2 %	12.3 %	64.3 %	195.4 %	239.3 %	17.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	84.172 %	0.082 ppb	0.254 ppb	-0.001 ppb	0.895 ppb	83.068 %	0.004 ppb	0.004 ppb	84.180 %
Concentration per Run 1	84.061 %	0.104 ppb	0.152 ppb	-0.001 ppb	0.943 ppb	83.382 %	0.006 ppb	0.004 ppb	85.607 %
Concentration per Run 2	82.294 %	0.042 ppb	0.261 ppb	0.000 ppb	0.883 ppb	81.207 %	0.004 ppb	0.005 ppb	80.235 %
Concentration per Run 3	86.161 %	0.101 ppb	0.347 ppb	-0.001 ppb	0.859 ppb	84.615 %	0.003 ppb	0.003 ppb	86.699 %
Recovery Percentage 1		16.487 %	5.071 %	-0.006 %	44.746 %		1.044 %	1.964 %	
Concentration RSD	2.3 %	42.1 %	38.5 %	134.4 %	4.9 %	2.1 %	38.5 %	30.1 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.043 ppb	0.010 ppb	67.542 %	77.326 %	0.207 ppb	0.074 ppb	76.165 %
Concentration per Run 1	0.033 ppb	0.008 ppb	68.993 %	78.682 %	0.163 ppb	0.083 ppb	81.287 %
Concentration per Run 2	0.043 ppb	0.010 ppb	65.131 %	74.300 %	0.238 ppb	0.071 ppb	71.388 %
Concentration per Run 3	0.052 ppb	0.012 ppb	68.503 %	78.996 %	0.221 ppb	0.070 ppb	75.821 %
Recovery Percentage 1	1.072 %	1.982 %			20.724 %	7.434 %	
Concentration RSD	22.4 %	19.2 %	3.1 %	3.4 %	19.1 %	9.8 %	6.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	53	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2416485-02d10 6020SL	Rack	1		
Analysis started at:	4/5/2024 12:18:47 PM	Vial	24		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.561 %	90.065 %	0.005 ppb	117,842.486 ppb	8,510.336 ppb	1.280 ppb	152.170 ppb	27,787.961 ppb	88.957 %
Concentration per Run 1	91.402 %	91.830 %	0.003 ppb	115,405.286 ppb	8,297.276 ppb	1.102 ppb	149.562 ppb	27,755.646 ppb	90.875 %
Concentration per Run 2	88.064 %	92.060 %	0.008 ppb	118,321.285 ppb	8,654.344 ppb	1.607 ppb	157.176 ppb	28,210.670 ppb	88.498 %
Concentration per Run 3	86.216 %	86.306 %	0.004 ppb	119,800.889 ppb	8,579.388 ppb	1.131 ppb	149.773 ppb	27,397.567 ppb	87.499 %
Concentration RSD	3.0 %	3.6 %	50.1 %	1.9 %	2.2 %	22.2 %	2.8 %	1.5 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.025 %	0.005 ppb	0.027 ppb	32.985 ppb	1,040.253 ppb	0.264 ppb	0.727 ppb	0.018 ppb	-0.243 ppb
Concentration per Run 1	90.751 %	-0.014 ppb	0.034 ppb	33.322 ppb	1,049.119 ppb	0.267 ppb	0.681 ppb	0.021 ppb	-0.319 ppb
Concentration per Run 2	97.462 %	0.016 ppb	0.032 ppb	33.157 ppb	1,014.952 ppb	0.233 ppb	0.802 ppb	0.006 ppb	-0.274 ppb
Concentration per Run 3	90.862 %	0.014 ppb	0.015 ppb	32.475 ppb	1,056.687 ppb	0.293 ppb	0.698 ppb	0.027 ppb	-0.137 ppb
Concentration RSD	4.1 %	306.8 %	39.5 %	1.4 %	2.1 %	11.4 %	9.0 %	60.7 %	39.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.380 %	0.435 ppb	0.010 ppb	98.651 ppb	0.939 ppb	83.739 %	0.000 ppb	0.001 ppb	90.241 %
Concentration per Run 1	88.308 %	0.461 ppb	-0.035 ppb	98.864 ppb	0.932 ppb	82.636 %	0.001 ppb	0.003 ppb	87.394 %
Concentration per Run 2	96.831 %	0.402 ppb	0.000 ppb	99.747 ppb	0.953 ppb	85.065 %	0.000 ppb	0.002 ppb	94.281 %
Concentration per Run 3	89.001 %	0.440 ppb	0.065 ppb	97.344 ppb	0.930 ppb	83.516 %	0.000 ppb	0.000 ppb	89.047 %
Concentration RSD	5.2 %	6.9 %	497.5 %	1.2 %	1.3 %	1.5 %	189.6 %	105.1 %	4.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.066 ppb	53.859 ppb	71.527 %	82.399 %	0.025 ppb	0.092 ppb	93.001 %
Concentration per Run 1	0.067 ppb	54.272 ppb	70.488 %	80.419 %	0.017 ppb	0.105 ppb	124.475 %
Concentration per Run 2	0.062 ppb	54.326 ppb	72.972 %	85.142 %	0.029 ppb	0.089 ppb	80.409 %
Concentration per Run 3	0.068 ppb	52.979 ppb	71.121 %	81.635 %	0.028 ppb	0.082 ppb	74.119 %
Concentration RSD	4.8 %	1.4 %	1.8 %	3.0 %	28.2 %	12.7 %	29.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 54
Analysis label: I2417074-02d100 6020SL
Analysis started at: 4/5/2024 12:23:26 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 25
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.491 %	95.013 %	0.002 ppb	125.749 ppb	71.591 ppb	0.561 ppb	36.961 ppb	334.178 ppb	87.963 %
Concentration per Run 1	93.402 %	92.865 %	0.009 ppb	138.649 ppb	75.002 ppb	0.486 ppb	39.394 ppb	341.971 ppb	88.401 %
Concentration per Run 2	91.766 %	97.468 %	-0.010 ppb	112.598 ppb	69.162 ppb	0.471 ppb	32.262 ppb	302.861 ppb	89.423 %
Concentration per Run 3	89.305 %	94.706 %	0.006 ppb	126.001 ppb	70.609 ppb	0.725 ppb	39.226 ppb	357.703 ppb	86.066 %
Concentration RSD	2.3 %	2.4 %	604.6 %	10.4 %	4.2 %	25.4 %	11.0 %	8.5 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.853 %	0.073 ppb	0.005 ppb	64.101 ppb	6.624 ppb	0.014 ppb	-0.008 ppb	-0.011 ppb	-0.427 ppb
Concentration per Run 1	97.184 %	0.097 ppb	-0.001 ppb	64.181 ppb	6.914 ppb	0.012 ppb	-0.024 ppb	-0.024 ppb	-0.495 ppb
Concentration per Run 2	96.144 %	0.055 ppb	0.016 ppb	63.028 ppb	6.826 ppb	0.017 ppb	-0.008 ppb	-0.018 ppb	-0.442 ppb
Concentration per Run 3	88.231 %	0.067 ppb	0.001 ppb	65.093 ppb	6.132 ppb	0.013 ppb	0.009 ppb	0.008 ppb	-0.346 ppb
Concentration RSD	5.2 %	29.7 %	188.7 %	1.6 %	6.5 %	20.9 %	220.4 %	148.3 %	17.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.786 %	0.053 ppb	0.012 ppb	0.893 ppb	0.074 ppb	90.787 %	0.000 ppb	0.000 ppb	95.650 %
Concentration per Run 1	97.775 %	0.026 ppb	-0.019 ppb	0.908 ppb	0.056 ppb	91.731 %	0.000 ppb	0.000 ppb	99.315 %
Concentration per Run 2	93.688 %	0.048 ppb	0.044 ppb	0.889 ppb	0.072 ppb	90.560 %	0.001 ppb	0.001 ppb	93.504 %
Concentration per Run 3	92.895 %	0.084 ppb	0.011 ppb	0.882 ppb	0.094 ppb	90.071 %	0.000 ppb	-0.001 ppb	94.129 %
Concentration RSD	2.8 %	55.3 %	267.2 %	1.5 %	25.8 %	0.9 %	196.0 %	383.1 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.011 ppb	0.205 ppb	81.412 %	93.944 %	0.006 ppb	0.034 ppb	81.560 %
Concentration per Run 1	0.007 ppb	0.204 ppb	74.376 %	85.284 %	0.002 ppb	0.044 ppb	85.988 %
Concentration per Run 2	0.015 ppb	0.216 ppb	72.548 %	84.426 %	0.010 ppb	0.042 ppb	79.417 %
Concentration per Run 3	0.011 ppb	0.195 ppb	97.312 %	112.124 %	0.006 ppb	0.017 ppb	79.275 %
Concentration RSD	39.3 %	5.3 %	17.0 %	16.8 %	68.9 %	44.2 %	4.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	55	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-01d50 6020SL	Rack	1		
Analysis started at:	4/5/2024 12:28:02 PM	Vial	26		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.140 %	93.709 %	0.001 ppb	213.796 ppb	549.063 ppb	0.522 ppb	572.477 ppb	4,819.713 ppb	85.649 %
Concentration per Run 1	89.524 %	100.000 %	0.001 ppb	207.338 ppb	552.346 ppb	0.545 ppb	592.223 ppb	4,957.865 ppb	86.685 %
Concentration per Run 2	88.532 %	88.953 %	-0.003 ppb	228.000 ppb	556.593 ppb	0.514 ppb	573.150 ppb	4,864.313 ppb	83.575 %
Concentration per Run 3	89.365 %	92.175 %	0.006 ppb	206.051 ppb	538.249 ppb	0.508 ppb	552.059 ppb	4,636.962 ppb	86.687 %
Concentration RSD	0.6 %	6.1 %	325.3 %	5.8 %	1.7 %	3.8 %	3.5 %	3.4 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.740 %	0.046 ppb	0.000 ppb	20.662 ppb	349.029 ppb	0.029 ppb	0.008 ppb	0.009 ppb	-0.286 ppb
Concentration per Run 1	96.052 %	0.046 ppb	-0.011 ppb	20.524 ppb	353.813 ppb	0.025 ppb	0.028 ppb	0.018 ppb	-0.383 ppb
Concentration per Run 2	87.860 %	0.060 ppb	-0.004 ppb	21.001 ppb	349.393 ppb	0.037 ppb	-0.016 ppb	-0.020 ppb	-0.195 ppb
Concentration per Run 3	91.307 %	0.032 ppb	0.013 ppb	20.463 ppb	343.882 ppb	0.025 ppb	0.013 ppb	0.030 ppb	-0.280 ppb
Concentration RSD	4.5 %	29.5 %	3,229.9 %	1.4 %	1.4 %	25.7 %	269.3 %	278.0 %	32.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.384 %	0.031 ppb	-0.022 ppb	15.462 ppb	0.030 ppb	89.335 %	0.001 ppb	-0.001 ppb	93.758 %
Concentration per Run 1	98.570 %	0.074 ppb	0.028 ppb	16.209 ppb	0.007 ppb	90.271 %	0.001 ppb	-0.001 ppb	98.573 %
Concentration per Run 2	93.472 %	0.002 ppb	-0.025 ppb	15.145 ppb	0.056 ppb	89.127 %	0.001 ppb	0.000 ppb	90.548 %
Concentration per Run 3	94.110 %	0.016 ppb	-0.069 ppb	15.031 ppb	0.026 ppb	88.608 %	0.000 ppb	0.000 ppb	92.152 %
Concentration RSD	2.9 %	123.5 %	222.4 %	4.2 %	84.5 %	1.0 %	50.0 %	104.5 %	4.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.008 ppb	3.542 ppb	72.656 %	83.879 %	0.004 ppb	0.035 ppb	91.246 %
Concentration per Run 1	0.004 ppb	3.445 ppb	73.428 %	85.543 %	-0.002 ppb	0.038 ppb	117.243 %
Concentration per Run 2	0.008 ppb	3.526 ppb	72.245 %	82.932 %	0.005 ppb	0.034 ppb	78.404 %
Concentration per Run 3	0.012 ppb	3.655 ppb	72.295 %	83.162 %	0.008 ppb	0.032 ppb	78.092 %
Concentration RSD	47.6 %	3.0 %	0.9 %	1.7 %	129.7 %	8.0 %	24.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	56	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-02d50 6020SL	Rack	1		
Analysis started at:	4/5/2024 12:32:39 PM	Vial	27		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.017 %	90.602 %	0.003 ppb	1,311.487 ppb	321.736 ppb	0.628 ppb	251.207 ppb	1,711.883 ppb	85.230 %
Concentration per Run 1	90.857 %	84.465 %	0.001 ppb	1,420.382 ppb	346.139 ppb	0.790 ppb	261.012 ppb	1,791.050 ppb	86.500 %
Concentration per Run 2	89.297 %	94.937 %	0.001 ppb	1,253.316 ppb	315.992 ppb	0.635 ppb	243.819 ppb	1,641.845 ppb	85.201 %
Concentration per Run 3	86.897 %	92.405 %	0.008 ppb	1,260.765 ppb	303.077 ppb	0.459 ppb	248.789 ppb	1,702.754 ppb	83.991 %
Concentration RSD	2.2 %	6.0 %	133.7 %	7.2 %	6.9 %	26.3 %	3.5 %	4.4 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.503 %	0.052 ppb	0.032 ppb	48.888 ppb	47.122 ppb	0.083 ppb	0.026 ppb	0.133 ppb	-0.363 ppb
Concentration per Run 1	86.248 %	0.033 ppb	0.030 ppb	51.168 ppb	45.769 ppb	0.074 ppb	0.020 ppb	0.157 ppb	-0.460 ppb
Concentration per Run 2	90.269 %	0.053 ppb	0.036 ppb	47.696 ppb	47.691 ppb	0.093 ppb	0.009 ppb	0.152 ppb	-0.301 ppb
Concentration per Run 3	88.991 %	0.071 ppb	0.029 ppb	47.799 ppb	47.905 ppb	0.082 ppb	0.050 ppb	0.091 ppb	-0.328 ppb
Concentration RSD	2.3 %	36.5 %	13.1 %	4.0 %	2.5 %	11.5 %	80.5 %	27.5 %	23.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.631 %	0.053 ppb	0.023 ppb	5.546 ppb	0.009 ppb	88.640 %	-0.001 ppb	0.004 ppb	91.581 %
Concentration per Run 1	93.470 %	0.038 ppb	0.031 ppb	5.601 ppb	0.004 ppb	89.581 %	0.000 ppb	0.004 ppb	91.132 %
Concentration per Run 2	92.247 %	0.024 ppb	-0.008 ppb	5.529 ppb	-0.018 ppb	88.443 %	0.000 ppb	0.003 ppb	91.280 %
Concentration per Run 3	92.177 %	0.096 ppb	0.047 ppb	5.509 ppb	0.040 ppb	87.894 %	-0.002 ppb	0.004 ppb	92.332 %
Concentration RSD	0.8 %	72.2 %	120.5 %	0.9 %	333.6 %	1.0 %	202.7 %	26.1 %	0.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.005 ppb	2.081 ppb	71.899 %	82.811 %	0.001 ppb	0.032 ppb	89.465 %
Concentration per Run 1	0.001 ppb	2.220 ppb	71.711 %	82.592 %	-0.002 ppb	0.035 ppb	114.628 %
Concentration per Run 2	0.007 ppb	2.027 ppb	71.810 %	83.282 %	0.001 ppb	0.031 ppb	76.580 %
Concentration per Run 3	0.007 ppb	1.997 ppb	72.175 %	82.557 %	0.004 ppb	0.029 ppb	77.186 %
Concentration RSD	73.9 %	5.8 %	0.3 %	0.5 %	393.2 %	8.8 %	24.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 57
Analysis label: I2417123-03d10 6020SL
Analysis started at: 4/5/2024 12:37:16 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 28
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.076 %	90.142 %	0.003 ppb	3,624.213 ppb	1,260.923 ppb	1.277 ppb	859.442 ppb	6,244.569 ppb	81.667 %
Concentration per Run 1	87.955 %	92.405 %	0.003 ppb	3,682.956 ppb	1,295.932 ppb	1.378 ppb	892.844 ppb	6,443.608 ppb	85.844 %
Concentration per Run 2	82.457 %	90.679 %	0.003 ppb	3,560.453 ppb	1,249.765 ppb	1.097 ppb	821.149 ppb	6,184.706 ppb	80.284 %
Concentration per Run 3	81.814 %	87.342 %	0.003 ppb	3,629.230 ppb	1,237.072 ppb	1.355 ppb	864.331 ppb	6,105.394 ppb	78.872 %
Concentration RSD	4.0 %	2.9 %	7.1 %	1.7 %	2.5 %	12.2 %	4.2 %	2.8 %	4.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.662 %	0.161 ppb	0.131 ppb	48.148 ppb	4,934.599 ppb	0.112 ppb	0.029 ppb	0.011 ppb	-0.250 ppb
Concentration per Run 1	88.564 %	0.137 ppb	0.144 ppb	48.519 ppb	5,012.572 ppb	0.089 ppb	0.052 ppb	0.007 ppb	-0.356 ppb
Concentration per Run 2	89.046 %	0.177 ppb	0.131 ppb	47.388 ppb	4,822.966 ppb	0.123 ppb	0.021 ppb	0.007 ppb	-0.260 ppb
Concentration per Run 3	82.375 %	0.168 ppb	0.117 ppb	48.537 ppb	4,968.260 ppb	0.125 ppb	0.015 ppb	0.019 ppb	-0.134 ppb
Concentration RSD	4.3 %	13.1 %	10.1 %	1.4 %	2.0 %	17.7 %	66.7 %	65.3 %	44.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.731 %	0.973 ppb	0.006 ppb	18.884 ppb	-0.012 ppb	85.094 %	0.000 ppb	0.000 ppb	87.214 %
Concentration per Run 1	89.601 %	0.946 ppb	0.045 ppb	19.225 ppb	-0.022 ppb	87.487 %	-0.002 ppb	0.000 ppb	89.408 %
Concentration per Run 2	88.437 %	1.034 ppb	0.000 ppb	19.177 ppb	-0.017 ppb	84.769 %	-0.001 ppb	0.000 ppb	88.601 %
Concentration per Run 3	85.153 %	0.940 ppb	-0.027 ppb	18.251 ppb	0.002 ppb	83.027 %	0.002 ppb	0.000 ppb	83.633 %
Concentration RSD	2.6 %	5.4 %	614.3 %	2.9 %	106.6 %	2.6 %	457.6 %	19.6 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.008 ppb	6.383 ppb	69.663 %	79.385 %	-0.001 ppb	0.029 ppb	80.318 %
Concentration per Run 1	0.004 ppb	6.428 ppb	70.115 %	80.059 %	-0.005 ppb	0.033 ppb	86.344 %
Concentration per Run 2	0.005 ppb	6.270 ppb	70.161 %	80.512 %	0.001 ppb	0.028 ppb	77.615 %
Concentration per Run 3	0.014 ppb	6.451 ppb	68.714 %	77.584 %	0.001 ppb	0.025 ppb	76.994 %
Concentration RSD	70.7 %	1.5 %	1.2 %	2.0 %	285.4 %	14.1 %	6.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	58	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-04d50 6020SL	Rack	1		
Analysis started at:	4/5/2024 12:41:53 PM	Vial	29		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.179 %	88.185 %	0.001 ppb	536.744 ppb	112.178 ppb	1.092 ppb	121.816 ppb	562.717 ppb	82.148 %
Concentration per Run 1	85.640 %	87.341 %	0.007 ppb	540.474 ppb	112.800 ppb	0.865 ppb	128.296 ppb	543.667 ppb	82.173 %
Concentration per Run 2	84.435 %	89.528 %	-0.008 ppb	528.653 ppb	113.287 ppb	1.237 ppb	119.562 ppb	558.163 ppb	81.575 %
Concentration per Run 3	85.462 %	87.687 %	0.003 ppb	541.106 ppb	110.447 ppb	1.174 ppb	117.589 ppb	586.321 ppb	82.698 %
Concentration RSD	0.8 %	1.3 %	738.3 %	1.3 %	1.4 %	18.3 %	4.7 %	3.9 %	0.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.965 %	0.005 ppb	-0.002 ppb	39.398 ppb	247.765 ppb	0.102 ppb	0.034 ppb	0.022 ppb	-0.229 ppb
Concentration per Run 1	90.195 %	-0.001 ppb	-0.013 ppb	39.077 ppb	245.661 ppb	0.094 ppb	0.042 ppb	0.015 ppb	-0.320 ppb
Concentration per Run 2	86.822 %	0.017 ppb	0.007 ppb	39.566 ppb	248.294 ppb	0.115 ppb	0.038 ppb	0.034 ppb	-0.243 ppb
Concentration per Run 3	86.878 %	0.000 ppb	0.000 ppb	39.552 ppb	249.339 ppb	0.095 ppb	0.022 ppb	0.019 ppb	-0.123 ppb
Concentration RSD	2.2 %	190.1 %	508.7 %	0.7 %	0.8 %	11.9 %	30.4 %	44.7 %	43.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.643 %	0.043 ppb	-0.076 ppb	1.956 ppb	-0.034 ppb	86.761 %	-0.001 ppb	0.000 ppb	89.586 %
Concentration per Run 1	87.354 %	0.053 ppb	-0.082 ppb	1.965 ppb	-0.059 ppb	87.315 %	0.000 ppb	0.000 ppb	90.353 %
Concentration per Run 2	87.512 %	0.033 ppb	-0.052 ppb	1.933 ppb	-0.031 ppb	86.141 %	-0.002 ppb	0.001 ppb	88.229 %
Concentration per Run 3	88.063 %	0.042 ppb	-0.095 ppb	1.970 ppb	-0.013 ppb	86.827 %	-0.001 ppb	-0.001 ppb	90.175 %
Concentration RSD	0.4 %	23.3 %	29.3 %	1.0 %	67.4 %	0.7 %	110.1 %	537.9 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.004 ppb	0.993 ppb	69.961 %	80.527 %	-0.003 ppb	0.027 ppb	79.208 %
Concentration per Run 1	0.003 ppb	1.030 ppb	70.160 %	80.754 %	-0.007 ppb	0.029 ppb	83.899 %
Concentration per Run 2	0.007 ppb	0.964 ppb	69.412 %	79.321 %	-0.003 ppb	0.028 ppb	78.070 %
Concentration per Run 3	0.001 ppb	0.984 ppb	70.311 %	81.506 %	0.000 ppb	0.024 ppb	75.654 %
Concentration RSD	89.6 %	3.4 %	0.7 %	1.4 %	116.4 %	9.4 %	5.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 59
Analysis label: I2417123-06d10 6020SL
Analysis started at: 4/5/2024 12:46:30 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 30
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.673 %	87.572 %	-0.001 ppb	1,980.269 ppb	1,172.198 ppb	0.811 ppb	1,217.470 ppb	8,587.905 ppb	82.682 %
Concentration per Run 1	87.338 %	86.306 %	-0.005 ppb	2,001.886 ppb	1,172.791 ppb	0.707 ppb	1,248.529 ppb	8,697.559 ppb	83.967 %
Concentration per Run 2	84.732 %	85.961 %	-0.001 ppb	2,017.074 ppb	1,201.193 ppb	0.733 ppb	1,210.779 ppb	8,550.850 ppb	82.763 %
Concentration per Run 3	81.948 %	90.449 %	0.003 ppb	1,921.847 ppb	1,142.609 ppb	0.994 ppb	1,193.102 ppb	8,515.307 ppb	81.316 %
Concentration RSD	3.2 %	2.9 %	397.1 %	2.6 %	2.5 %	19.6 %	2.3 %	1.1 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.285 %	0.072 ppb	0.059 ppb	49.702 ppb	3,909.749 ppb	0.299 ppb	0.213 ppb	0.019 ppb	-0.278 ppb
Concentration per Run 1	82.783 %	0.029 ppb	0.070 ppb	49.624 ppb	3,986.695 ppb	0.316 ppb	0.179 ppb	0.034 ppb	-0.403 ppb
Concentration per Run 2	86.100 %	0.091 ppb	0.042 ppb	50.577 ppb	3,877.781 ppb	0.313 ppb	0.243 ppb	0.045 ppb	-0.201 ppb
Concentration per Run 3	86.971 %	0.094 ppb	0.064 ppb	48.903 ppb	3,864.772 ppb	0.269 ppb	0.218 ppb	-0.022 ppb	-0.231 ppb
Concentration RSD	2.6 %	51.4 %	25.8 %	1.7 %	1.7 %	8.8 %	15.2 %	185.9 %	39.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	88.681 %	1.497 ppb	-0.035 ppb	27.791 ppb	-0.017 ppb	85.757 %	0.000 ppb	0.000 ppb	87.103 %
Concentration per Run 1	84.972 %	1.610 ppb	-0.003 ppb	27.724 ppb	-0.005 ppb	85.679 %	0.000 ppb	0.000 ppb	84.442 %
Concentration per Run 2	91.255 %	1.472 ppb	-0.073 ppb	27.767 ppb	-0.034 ppb	85.484 %	0.000 ppb	-0.001 ppb	90.519 %
Concentration per Run 3	89.815 %	1.409 ppb	-0.028 ppb	27.883 ppb	-0.010 ppb	86.109 %	-0.001 ppb	0.001 ppb	86.348 %
Concentration RSD	3.7 %	6.9 %	102.3 %	0.3 %	93.1 %	0.4 %	516.2 %	638.6 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	3.322 ppb	69.682 %	80.034 %	-0.004 ppb	0.030 ppb	79.246 %
Concentration per Run 1	-0.002 ppb	3.430 ppb	69.565 %	78.325 %	-0.006 ppb	0.033 ppb	82.936 %
Concentration per Run 2	-0.002 ppb	3.300 ppb	70.112 %	81.903 %	-0.002 ppb	0.028 ppb	77.416 %
Concentration per Run 3	0.002 ppb	3.237 ppb	69.368 %	79.873 %	-0.002 ppb	0.028 ppb	77.386 %
Concentration RSD	638.3 %	3.0 %	0.6 %	2.2 %	57.3 %	10.4 %	4.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	60	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417123-07d10 6020SL	Rack	1		
Analysis started at:	4/5/2024 12:51:08 PM	Vial	31		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.647 %	87.495 %	0.001 ppb	2,675.299 ppb	1,691.272 ppb	1.300 ppb	1,611.188 ppb	7,877.233 ppb	81.587 %
Concentration per Run 1	81.541 %	81.012 %	0.000 ppb	2,795.660 ppb	1,778.782 ppb	1.362 ppb	1,630.777 ppb	7,926.716 ppb	80.488 %
Concentration per Run 2	81.294 %	92.290 %	0.006 ppb	2,532.990 ppb	1,622.175 ppb	1.106 ppb	1,575.063 ppb	7,864.165 ppb	82.051 %
Concentration per Run 3	82.106 %	89.183 %	-0.003 ppb	2,697.248 ppb	1,672.861 ppb	1.431 ppb	1,627.725 ppb	7,840.817 ppb	82.221 %
Concentration RSD	0.5 %	6.7 %	427.1 %	5.0 %	4.7 %	13.2 %	1.9 %	0.6 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	84.543 %	0.071 ppb	0.050 ppb	62.173 ppb	6,467.926 ppb	0.609 ppb	0.281 ppb	0.065 ppb	0.008 ppb
Concentration per Run 1	81.598 %	0.047 ppb	0.055 ppb	62.425 ppb	6,560.022 ppb	0.630 ppb	0.307 ppb	0.076 ppb	0.013 ppb
Concentration per Run 2	86.730 %	0.071 ppb	0.048 ppb	61.883 ppb	6,371.156 ppb	0.606 ppb	0.242 ppb	0.073 ppb	-0.035 ppb
Concentration per Run 3	85.303 %	0.097 ppb	0.047 ppb	62.210 ppb	6,472.600 ppb	0.591 ppb	0.293 ppb	0.046 ppb	0.044 ppb
Concentration RSD	3.1 %	34.8 %	8.3 %	0.4 %	1.5 %	3.2 %	12.1 %	25.4 %	528.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	88.727 %	1.843 ppb	-0.056 ppb	27.175 ppb	-0.019 ppb	83.811 %	0.000 ppb	0.000 ppb	87.307 %
Concentration per Run 1	87.527 %	1.810 ppb	-0.041 ppb	26.789 ppb	0.004 ppb	83.861 %	-0.001 ppb	0.000 ppb	86.124 %
Concentration per Run 2	88.313 %	1.849 ppb	-0.043 ppb	27.512 ppb	-0.044 ppb	84.598 %	0.002 ppb	-0.001 ppb	88.722 %
Concentration per Run 3	90.341 %	1.870 ppb	-0.086 ppb	27.225 ppb	-0.016 ppb	82.975 %	0.001 ppb	0.001 ppb	87.075 %
Concentration RSD	1.6 %	1.7 %	44.9 %	1.3 %	127.4 %	1.0 %	322.1 %	652.4 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.009 ppb	4.343 ppb	69.599 %	80.168 %	-0.005 ppb	0.027 ppb	88.127 %
Concentration per Run 1	0.006 ppb	4.531 ppb	68.528 %	78.374 %	-0.007 ppb	0.031 ppb	84.138 %
Concentration per Run 2	0.011 ppb	4.212 ppb	70.792 %	82.227 %	-0.004 ppb	0.024 ppb	103.991 %
Concentration per Run 3	0.009 ppb	4.286 ppb	69.477 %	79.902 %	-0.003 ppb	0.028 ppb	76.253 %
Concentration RSD	26.3 %	3.8 %	1.6 %	2.4 %	46.2 %	12.8 %	16.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	61	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417128-01d20 6020SL	Rack	1		
Analysis started at:	4/5/2024 12:55:46 PM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.342 %	87.879 %	-0.003 ppb	1,343.798 ppb	732.687 ppb	0.723 ppb	886.762 ppb	4,725.159 ppb	81.520 %
Concentration per Run 1	84.209 %	89.068 %	-0.003 ppb	1,374.981 ppb	743.459 ppb	0.695 ppb	916.192 ppb	4,948.188 ppb	81.748 %
Concentration per Run 2	83.678 %	92.980 %	0.002 ppb	1,294.338 ppb	708.933 ppb	0.684 ppb	904.008 ppb	4,681.303 ppb	81.609 %
Concentration per Run 3	82.140 %	81.588 %	-0.009 ppb	1,362.074 ppb	745.669 ppb	0.791 ppb	840.085 ppb	4,545.987 ppb	81.203 %
Concentration RSD	1.3 %	6.6 %	173.4 %	3.2 %	2.8 %	8.2 %	4.6 %	4.3 %	0.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.896 %	0.036 ppb	0.015 ppb	45.964 ppb	1,730.692 ppb	0.060 ppb	0.043 ppb	0.013 ppb	0.084 ppb
Concentration per Run 1	86.433 %	0.055 ppb	0.022 ppb	46.560 ppb	1,732.327 ppb	0.060 ppb	0.049 ppb	0.034 ppb	0.001 ppb
Concentration per Run 2	86.804 %	0.016 ppb	0.008 ppb	46.109 ppb	1,736.444 ppb	0.064 ppb	0.021 ppb	-0.011 ppb	0.127 ppb
Concentration per Run 3	84.451 %	0.036 ppb	0.015 ppb	45.224 ppb	1,723.305 ppb	0.056 ppb	0.058 ppb	0.015 ppb	0.123 ppb
Concentration RSD	1.5 %	53.3 %	48.8 %	1.5 %	0.4 %	6.0 %	44.4 %	179.7 %	85.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.587 %	0.461 ppb	-0.048 ppb	16.726 ppb	-0.034 ppb	85.125 %	-0.001 ppb	0.001 ppb	85.995 %
Concentration per Run 1	87.553 %	0.484 ppb	-0.037 ppb	17.313 ppb	-0.047 ppb	85.384 %	-0.001 ppb	-0.001 ppb	88.564 %
Concentration per Run 2	90.314 %	0.439 ppb	-0.053 ppb	16.609 ppb	-0.008 ppb	86.306 %	0.000 ppb	0.003 ppb	86.337 %
Concentration per Run 3	84.893 %	0.460 ppb	-0.053 ppb	16.255 ppb	-0.048 ppb	83.684 %	-0.001 ppb	0.000 ppb	83.085 %
Concentration RSD	3.1 %	4.9 %	18.9 %	3.2 %	67.1 %	1.6 %	65.6 %	402.4 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	3.616 ppb	69.086 %	79.810 %	-0.006 ppb	0.024 ppb	78.566 %
Concentration per Run 1	-0.003 ppb	3.580 ppb	69.729 %	80.497 %	-0.008 ppb	0.023 ppb	83.383 %
Concentration per Run 2	-0.001 ppb	3.761 ppb	68.929 %	79.566 %	-0.005 ppb	0.025 ppb	76.696 %
Concentration per Run 3	0.003 ppb	3.506 ppb	68.599 %	79.369 %	-0.005 ppb	0.024 ppb	75.620 %
Concentration RSD	743.9 %	3.6 %	0.8 %	0.8 %	28.8 %	3.5 %	5.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 62
Analysis label: I2417128-02d50 6020SL
Analysis started at: 4/5/2024 1:00:24 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 33
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.355 %	91.216 %	0.004 ppb	605.249 ppb	309.009 ppb	0.597 ppb	397.960 ppb	2,456.611 ppb	82.594 %
Concentration per Run 1	85.605 %	92.750 %	0.005 ppb	613.817 ppb	302.976 ppb	0.777 ppb	416.289 ppb	2,452.553 ppb	82.691 %
Concentration per Run 2	82.847 %	88.147 %	0.000 ppb	619.902 ppb	319.848 ppb	0.502 ppb	389.832 ppb	2,528.741 ppb	81.287 %
Concentration per Run 3	84.613 %	92.750 %	0.008 ppb	582.027 ppb	304.204 ppb	0.513 ppb	387.757 ppb	2,388.541 ppb	83.805 %
Concentration RSD	1.7 %	2.9 %	98.4 %	3.4 %	3.0 %	26.0 %	4.0 %	2.9 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.103 %	-0.001 ppb	0.045 ppb	24.291 ppb	645.156 ppb	0.020 ppb	-0.012 ppb	-0.017 ppb	-0.346 ppb
Concentration per Run 1	95.182 %	-0.009 ppb	0.055 ppb	23.991 ppb	646.595 ppb	0.023 ppb	-0.013 ppb	-0.015 ppb	-0.423 ppb
Concentration per Run 2	90.418 %	-0.006 ppb	0.028 ppb	23.912 ppb	648.945 ppb	0.017 ppb	-0.005 ppb	-0.022 ppb	-0.323 ppb
Concentration per Run 3	84.710 %	0.011 ppb	0.053 ppb	24.970 ppb	639.928 ppb	0.021 ppb	-0.018 ppb	-0.014 ppb	-0.292 ppb
Concentration RSD	5.8 %	838.5 %	32.9 %	2.4 %	0.7 %	14.2 %	51.5 %	24.7 %	19.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.667 %	0.123 ppb	-0.052 ppb	7.811 ppb	-0.046 ppb	88.064 %	-0.001 ppb	-0.001 ppb	89.937 %
Concentration per Run 1	94.784 %	0.120 ppb	-0.038 ppb	8.034 ppb	-0.050 ppb	89.085 %	0.001 ppb	0.000 ppb	94.029 %
Concentration per Run 2	90.040 %	0.148 ppb	-0.080 ppb	7.864 ppb	-0.052 ppb	88.241 %	-0.002 ppb	-0.001 ppb	90.777 %
Concentration per Run 3	84.178 %	0.101 ppb	-0.039 ppb	7.534 ppb	-0.036 ppb	86.866 %	-0.002 ppb	0.000 ppb	85.006 %
Concentration RSD	5.9 %	19.3 %	45.4 %	3.3 %	18.5 %	1.3 %	251.2 %	109.0 %	5.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.003 ppb	1.723 ppb	78.023 %	80.985 %	-0.006 ppb	0.021 ppb	80.754 %
Concentration per Run 1	-0.002 ppb	1.768 ppb	71.533 %	82.454 %	-0.007 ppb	0.023 ppb	86.097 %
Concentration per Run 2	-0.006 ppb	1.917 ppb	71.763 %	82.200 %	-0.007 ppb	0.022 ppb	79.078 %
Concentration per Run 3	-0.001 ppb	1.485 ppb	90.774 %	78.300 %	-0.005 ppb	0.018 ppb	77.087 %
Concentration RSD	91.7 %	12.7 %	14.2 %	2.9 %	15.8 %	13.8 %	5.9 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	63	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 1:05:03 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.559 %	89.681 %	62.569 ppb	6,556.307 ppb	6,468.830 ppb	62.999 ppb	6,202.307 ppb	6,178.416 ppb	87.461 %
Concentration per Run 1	87.336 %	90.103 %	61.182 ppb	6,599.218 ppb	6,520.661 ppb	61.826 ppb	6,539.828 ppb	6,592.197 ppb	89.522 %
Concentration per Run 2	84.697 %	88.377 %	63.073 ppb	6,625.629 ppb	6,556.333 ppb	65.832 ppb	6,377.547 ppb	6,248.558 ppb	87.064 %
Concentration per Run 3	81.645 %	90.564 %	63.453 ppb	6,444.073 ppb	6,329.497 ppb	61.338 ppb	5,689.545 ppb	5,694.493 ppb	85.796 %
Recovery Percentage 1			104.282 %	109.272 %	107.814 %	104.998 %	103.372 %	102.974 %	
Concentration RSD	3.4 %	1.3 %	1.9 %	1.5 %	1.9 %	3.9 %	7.3 %	7.3 %	2.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.265 %	65.288 ppb	65.455 ppb	64.864 ppb	6,440.629 ppb	63.900 ppb	64.273 ppb	63.715 ppb	63.465 ppb
Concentration per Run 1	97.646 %	64.186 ppb	63.498 ppb	64.181 ppb	6,268.972 ppb	62.212 ppb	62.224 ppb	62.273 ppb	62.595 ppb
Concentration per Run 2	91.882 %	65.403 ppb	66.755 ppb	66.030 ppb	6,590.233 ppb	64.658 ppb	65.345 ppb	64.132 ppb	64.130 ppb
Concentration per Run 3	87.269 %	66.274 ppb	66.111 ppb	64.383 ppb	6,462.683 ppb	64.829 ppb	65.250 ppb	64.740 ppb	63.669 ppb
Recovery Percentage 1		108.813 %	109.091 %	108.107 %	107.344 %	106.499 %	107.122 %	106.192 %	105.774 %
Concentration RSD	5.6 %	1.6 %	2.6 %	1.6 %	2.5 %	2.3 %	2.8 %	2.0 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.708 %	61.378 ppb	61.764 ppb	62.185 ppb	59.848 ppb	86.837 %	62.275 ppb	62.255 ppb	88.380 %
Concentration per Run 1	92.640 %	61.132 ppb	61.337 ppb	63.212 ppb	59.201 ppb	88.244 %	62.575 ppb	62.859 ppb	90.789 %
Concentration per Run 2	90.260 %	62.217 ppb	63.311 ppb	63.136 ppb	59.729 ppb	87.847 %	61.344 ppb	61.845 ppb	90.100 %
Concentration per Run 3	86.224 %	60.786 ppb	60.643 ppb	60.209 ppb	60.615 ppb	84.419 %	62.904 ppb	62.060 ppb	84.250 %
Recovery Percentage 1		102.297 %	102.939 %	103.642 %	99.747 %		103.791 %	103.758 %	
Concentration RSD	3.6 %	1.2 %	2.2 %	2.8 %	1.2 %	2.4 %	1.3 %	0.9 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.480 ppb	61.511 ppb	70.677 %	81.555 %	61.146 ppb	63.634 ppb	80.322 %
Concentration per Run 1	61.707 ppb	61.410 ppb	71.634 %	82.841 %	57.537 ppb	64.067 ppb	86.867 %
Concentration per Run 2	61.010 ppb	61.628 ppb	71.605 %	81.568 %	61.442 ppb	64.231 ppb	79.159 %
Concentration per Run 3	61.724 ppb	61.494 ppb	68.791 %	80.257 %	64.459 ppb	62.604 ppb	74.939 %
Recovery Percentage 1	102.467 %	102.518 %			101.910 %	106.056 %	
Concentration RSD	0.7 %	0.2 %	2.3 %	1.6 %	5.7 %	1.4 %	7.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 64 User name ALPHALAB\Metals-Instrument Comment <Comment>
Analysis label: CCB Rack 0
Analysis started at: 4/5/2024 1:09:44 PM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.682 %	84.810 %	0.014 ppb	24.018 ppb	-0.047 ppb	-0.212 ppb	2.868 ppb	-0.503 ppb	78.728 %
Concentration per Run 1	84.092 %	86.881 %	0.011 ppb	21.334 ppb	0.010 ppb	-0.122 ppb	8.173 ppb	-1.896 ppb	80.930 %
Concentration per Run 2	80.519 %	85.040 %	0.017 ppb	21.767 ppb	-0.414 ppb	-0.256 ppb	-5.744 ppb	-0.376 ppb	77.266 %
Concentration per Run 3	80.435 %	82.508 %	0.014 ppb	28.952 ppb	0.264 ppb	-0.256 ppb	6.176 ppb	0.763 ppb	77.988 %
Recovery Percentage 1			2.754 %	24.018 %	-0.067 %	-2.116 %	2.868 %	-0.503 %	
Concentration RSD	2.6 %	2.6 %	21.4 %	17.8 %	730.4 %	36.5 %	262.3 %	265.3 %	2.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.130 %	0.006 ppb	-0.004 ppb	0.098 ppb	11.686 ppb	0.002 ppb	-0.001 ppb	-0.030 ppb	-0.473 ppb
Concentration per Run 1	87.638 %	-0.013 ppb	-0.005 ppb	0.092 ppb	14.235 ppb	0.006 ppb	0.006 ppb	-0.039 ppb	-0.564 ppb
Concentration per Run 2	82.969 %	0.029 ppb	-0.008 ppb	0.065 ppb	10.743 ppb	0.001 ppb	-0.007 ppb	-0.026 ppb	-0.455 ppb
Concentration per Run 3	84.784 %	0.002 ppb	0.002 ppb	0.135 ppb	10.080 ppb	-0.001 ppb	-0.001 ppb	-0.025 ppb	-0.400 ppb
Recovery Percentage 1		0.125 %	-0.360 %	9.751 %	23.372 %	0.450 %	-0.041 %	-3.014 %	-9.461 %
Concentration RSD	2.8 %	337.6 %	147.9 %	36.3 %	19.1 %	160.8 %	764.1 %	26.5 %	17.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.047 %	0.097 ppb	0.253 ppb	0.002 ppb	0.861 ppb	84.861 %	0.002 ppb	0.009 ppb	86.769 %
Concentration per Run 1	89.809 %	0.080 ppb	0.175 ppb	0.002 ppb	0.916 ppb	87.347 %	0.001 ppb	0.009 ppb	89.303 %
Concentration per Run 2	84.800 %	0.115 ppb	0.267 ppb	0.000 ppb	0.862 ppb	84.693 %	0.003 ppb	0.010 ppb	85.643 %
Concentration per Run 3	83.531 %	0.096 ppb	0.317 ppb	0.002 ppb	0.805 ppb	82.543 %	0.002 ppb	0.008 ppb	85.362 %
Recovery Percentage 1		19.383 %	5.052 %	0.015 %	43.062 %		0.464 %	4.494 %	
Concentration RSD	3.9 %	18.1 %	28.5 %	63.6 %	6.5 %	2.8 %	56.4 %	11.0 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.040 ppb	0.016 ppb	68.434 %	78.381 %	0.220 ppb	0.039 ppb	77.028 %
Concentration per Run 1	0.027 ppb	0.029 ppb	70.224 %	81.319 %	0.172 ppb	0.042 ppb	84.100 %
Concentration per Run 2	0.043 ppb	0.006 ppb	67.969 %	76.879 %	0.257 ppb	0.039 ppb	75.402 %
Concentration per Run 3	0.049 ppb	0.012 ppb	67.109 %	76.945 %	0.232 ppb	0.037 ppb	71.582 %
Recovery Percentage 1	1.002 %	3.155 %			22.010 %	3.914 %	
Concentration RSD	28.3 %	74.3 %	2.4 %	3.2 %	19.9 %	7.3 %	8.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 65
Analysis label: I2417449-13d50 6020SL
Analysis started at: 4/5/2024 1:24:11 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 34
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.494 %	90.602 %	-0.004 ppb	84.464 ppb	354.509 ppb	1.639 ppb	118.705 ppb	1,837.314 ppb	84.477 %
Concentration per Run 1	89.528 %	86.536 %	-0.006 ppb	85.134 ppb	360.635 ppb	1.741 ppb	112.245 ppb	1,790.462 ppb	84.967 %
Concentration per Run 2	88.617 %	93.095 %	0.000 ppb	83.569 ppb	348.976 ppb	1.451 ppb	120.946 ppb	1,854.771 ppb	84.860 %
Concentration per Run 3	87.335 %	92.175 %	-0.007 ppb	84.688 ppb	353.914 ppb	1.725 ppb	122.923 ppb	1,866.709 ppb	83.604 %
Concentration RSD	1.2 %	3.9 %	82.8 %	1.0 %	1.7 %	10.0 %	4.8 %	2.2 %	0.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.489 %	0.009 ppb	0.008 ppb	24.003 ppb	88.654 ppb	0.103 ppb	0.071 ppb	-0.007 ppb	-0.297 ppb
Concentration per Run 1	84.562 %	0.023 ppb	0.014 ppb	24.255 ppb	85.603 ppb	0.084 ppb	0.110 ppb	0.002 ppb	-0.390 ppb
Concentration per Run 2	86.952 %	0.004 ppb	0.011 ppb	23.951 ppb	91.738 ppb	0.120 ppb	0.026 ppb	-0.001 ppb	-0.210 ppb
Concentration per Run 3	87.953 %	-0.001 ppb	-0.001 ppb	23.804 ppb	88.619 ppb	0.105 ppb	0.076 ppb	-0.023 ppb	-0.293 ppb
Concentration RSD	2.0 %	143.9 %	96.8 %	1.0 %	3.5 %	17.4 %	59.4 %	193.5 %	30.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.833 %	0.059 ppb	0.026 ppb	7.491 ppb	0.091 ppb	86.895 %	0.001 ppb	0.001 ppb	87.964 %
Concentration per Run 1	86.839 %	0.092 ppb	0.047 ppb	7.307 ppb	0.073 ppb	85.858 %	0.000 ppb	0.002 ppb	85.256 %
Concentration per Run 2	90.836 %	0.016 ppb	0.089 ppb	7.599 ppb	0.076 ppb	87.198 %	0.000 ppb	0.001 ppb	88.622 %
Concentration per Run 3	91.824 %	0.068 ppb	-0.058 ppb	7.568 ppb	0.123 ppb	87.628 %	0.001 ppb	0.000 ppb	90.015 %
Concentration RSD	2.9 %	66.3 %	293.0 %	2.1 %	30.8 %	1.1 %	62.1 %	125.4 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.008 ppb	1.501 ppb	70.436 %	80.376 %	0.013 ppb	0.033 ppb	104.019 %
Concentration per Run 1	0.007 ppb	1.485 ppb	69.365 %	78.235 %	0.011 ppb	0.042 ppb	145.888 %
Concentration per Run 2	0.011 ppb	1.479 ppb	71.003 %	81.076 %	0.013 ppb	0.029 ppb	85.709 %
Concentration per Run 3	0.006 ppb	1.540 ppb	70.941 %	81.818 %	0.013 ppb	0.028 ppb	80.459 %
Concentration RSD	30.3 %	2.2 %	1.3 %	2.4 %	8.5 %	23.7 %	35.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	66	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417079-03 6020TL	Rack	1		
Analysis started at:	4/5/2024 1:28:50 PM	Vial	35		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	87.194 %	93.210 %	0.178 ppb	7,527.536 ppb	6,728.921 ppb	984.175 ppb	1,971.926 ppb	24,337.849 ppb	98.913 %
Concentration per Run 1	87.936 %	88.492 %	0.183 ppb	7,704.279 ppb	6,909.282 ppb	997.565 ppb	1,963.886 ppb	24,250.468 ppb	98.944 %
Concentration per Run 2	87.201 %	97.468 %	0.172 ppb	7,241.110 ppb	6,438.194 ppb	958.373 ppb	1,913.043 ppb	24,021.736 ppb	99.289 %
Concentration per Run 3	86.444 %	93.671 %	0.178 ppb	7,637.219 ppb	6,839.287 ppb	996.586 ppb	2,038.849 ppb	24,741.344 ppb	98.507 %
Concentration RSD	0.9 %	4.8 %	3.0 %	3.3 %	3.8 %	2.3 %	3.2 %	1.5 %	0.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.278 %	19.832 ppb	17.519 ppb	300.116 ppb	124,984.405 ppb	0.723 ppb	2.335 ppb	1.049 ppb	26.341 ppb
Concentration per Run 1	97.535 %	20.205 ppb	17.909 ppb	301.678 ppb	126,201.351 ppb	0.775 ppb	2.409 ppb	1.159 ppb	26.470 ppb
Concentration per Run 2	103.707 %	19.227 ppb	17.368 ppb	300.666 ppb	124,147.703 ppb	0.699 ppb	2.243 ppb	1.005 ppb	26.582 ppb
Concentration per Run 3	99.592 %	20.065 ppb	17.280 ppb	298.003 ppb	124,604.160 ppb	0.695 ppb	2.352 ppb	0.982 ppb	25.971 ppb
Concentration RSD	3.1 %	2.7 %	1.9 %	0.6 %	0.9 %	6.2 %	3.6 %	9.2 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.623 %	3.834 ppb	0.038 ppb	100.648 ppb	0.076 ppb	88.746 %	0.002 ppb	0.006 ppb	92.642 %
Concentration per Run 1	92.479 %	3.890 ppb	0.075 ppb	98.735 ppb	0.072 ppb	89.632 %	0.007 ppb	0.006 ppb	91.660 %
Concentration per Run 2	93.456 %	3.768 ppb	0.052 ppb	102.092 ppb	0.068 ppb	88.469 %	0.001 ppb	0.006 ppb	94.242 %
Concentration per Run 3	94.935 %	3.843 ppb	-0.013 ppb	101.116 ppb	0.088 ppb	88.139 %	-0.001 ppb	0.006 ppb	92.024 %
Concentration RSD	1.3 %	1.6 %	120.5 %	1.7 %	14.3 %	0.9 %	171.7 %	1.1 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.231 ppb	144.091 ppb	73.714 %	84.695 %	0.005 ppb	1.432 ppb	85.580 %
Concentration per Run 1	0.224 ppb	144.292 ppb	74.265 %	84.539 %	-0.001 ppb	1.448 ppb	93.005 %
Concentration per Run 2	0.231 ppb	143.717 ppb	73.011 %	84.773 %	0.007 ppb	1.398 ppb	81.875 %
Concentration per Run 3	0.237 ppb	144.265 ppb	73.866 %	84.773 %	0.008 ppb	1.449 ppb	81.860 %
Concentration RSD	2.7 %	0.2 %	0.9 %	0.2 %	107.0 %	2.0 %	7.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	67	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417079-04 6020TL	Rack	1		
Analysis started at:	4/5/2024 1:33:29 PM	Vial	36		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.859 %	91.484 %	0.005 ppb	13,008.309 ppb	2,533.103 ppb	134.320 ppb	966.154 ppb	9,760.028 ppb	91.423 %
Concentration per Run 1	88.386 %	95.512 %	0.002 ppb	12,750.143 ppb	2,513.602 ppb	132.774 ppb	969.062 ppb	9,954.301 ppb	92.225 %
Concentration per Run 2	87.398 %	89.413 %	0.013 ppb	13,095.654 ppb	2,525.321 ppb	132.632 ppb	957.539 ppb	9,695.971 ppb	92.175 %
Concentration per Run 3	84.794 %	89.528 %	-0.001 ppb	13,179.130 ppb	2,560.386 ppb	137.553 ppb	971.860 ppb	9,629.812 ppb	89.869 %
Concentration RSD	2.1 %	3.8 %	150.0 %	1.7 %	1.0 %	2.1 %	0.8 %	1.8 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.873 %	1.500 ppb	1.453 ppb	109.138 ppb	28,294.122 ppb	0.469 ppb	0.645 ppb	1.460 ppb	9.633 ppb
Concentration per Run 1	95.737 %	1.399 ppb	1.394 ppb	109.647 ppb	31,053.003 ppb	0.476 ppb	0.617 ppb	1.393 ppb	9.756 ppb
Concentration per Run 2	97.072 %	1.658 ppb	1.454 ppb	107.896 ppb	30,423.910 ppb	0.458 ppb	0.650 ppb	1.494 ppb	9.522 ppb
Concentration per Run 3	94.810 %	1.442 ppb	1.510 ppb	109.871 ppb	23,405.452 ppb	0.473 ppb	0.667 ppb	1.492 ppb	9.620 ppb
Concentration RSD	1.2 %	9.2 %	4.0 %	1.0 %	15.0 %	2.0 %	3.9 %	4.0 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.803 %	3.794 ppb	0.045 ppb	37.110 ppb	0.114 ppb	88.296 %	0.001 ppb	0.016 ppb	91.867 %
Concentration per Run 1	92.096 %	3.775 ppb	-0.021 ppb	37.653 ppb	0.100 ppb	88.762 %	0.002 ppb	0.015 ppb	92.919 %
Concentration per Run 2	93.600 %	3.765 ppb	0.033 ppb	36.651 ppb	0.101 ppb	88.809 %	0.000 ppb	0.015 ppb	91.854 %
Concentration per Run 3	92.713 %	3.841 ppb	0.123 ppb	37.027 ppb	0.141 ppb	87.317 %	0.001 ppb	0.018 ppb	90.827 %
Concentration RSD	0.8 %	1.1 %	160.8 %	1.4 %	20.7 %	1.0 %	128.2 %	9.9 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.094 ppb	19.830 ppb	73.050 %	83.721 %	0.002 ppb	0.271 ppb	91.900 %
Concentration per Run 1	0.089 ppb	19.900 ppb	73.049 %	84.109 %	-0.003 ppb	0.274 ppb	117.893 %
Concentration per Run 2	0.107 ppb	19.598 ppb	74.389 %	83.933 %	0.004 ppb	0.267 ppb	80.461 %
Concentration per Run 3	0.087 ppb	19.993 ppb	71.714 %	83.121 %	0.005 ppb	0.271 ppb	77.347 %
Concentration RSD	11.8 %	1.0 %	1.8 %	0.6 %	189.4 %	1.3 %	24.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	68	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417079-05 6020TL	Rack	1		
Analysis started at:	4/5/2024 1:38:09 PM	Vial	37		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.927 %	85.155 %	0.210 ppb	19,721.259 ppb	8,295.257 ppb	1,408.751 ppb	3,136.592 ppb	36,959.904 ppb	86.163 %
Concentration per Run 1	80.823 %	86.421 %	0.202 ppb	19,599.852 ppb	8,200.140 ppb	1,403.111 ppb	3,132.880 ppb	36,331.937 ppb	86.488 %
Concentration per Run 2	78.432 %	82.738 %	0.211 ppb	20,121.934 ppb	8,527.326 ppb	1,441.492 ppb	3,085.964 ppb	36,922.696 ppb	85.922 %
Concentration per Run 3	77.526 %	86.306 %	0.218 ppb	19,441.990 ppb	8,158.305 ppb	1,381.649 ppb	3,190.932 ppb	37,625.079 ppb	86.078 %
Concentration RSD	2.2 %	2.5 %	3.9 %	1.8 %	2.4 %	2.2 %	1.7 %	1.8 %	0.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.638 %	23.690 ppb	18.818 ppb	757.672 ppb	87,093.978 ppb	2.105 ppb	2.309 ppb	1.264 ppb	15.704 ppb
Concentration per Run 1	99.425 %	23.411 ppb	18.496 ppb	748.386 ppb	86,026.969 ppb	2.083 ppb	2.326 ppb	1.302 ppb	15.544 ppb
Concentration per Run 2	94.235 %	23.977 ppb	19.222 ppb	766.422 ppb	87,223.527 ppb	2.069 ppb	2.167 ppb	1.206 ppb	15.654 ppb
Concentration per Run 3	93.253 %	23.682 ppb	18.736 ppb	758.209 ppb	88,031.438 ppb	2.162 ppb	2.433 ppb	1.285 ppb	15.912 ppb
Concentration RSD	3.5 %	1.2 %	2.0 %	1.2 %	1.2 %	2.4 %	5.8 %	4.1 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.662 %	16.212 ppb	0.550 ppb	130.827 ppb	0.084 ppb	83.682 %	0.004 ppb	0.022 ppb	88.354 %
Concentration per Run 1	92.693 %	16.036 ppb	0.572 ppb	130.580 ppb	0.091 ppb	85.576 %	0.003 ppb	0.025 ppb	89.829 %
Concentration per Run 2	90.067 %	16.231 ppb	0.570 ppb	129.986 ppb	0.080 ppb	83.238 %	0.004 ppb	0.020 ppb	88.815 %
Concentration per Run 3	86.226 %	16.368 ppb	0.507 ppb	131.916 ppb	0.082 ppb	82.230 %	0.006 ppb	0.022 ppb	86.418 %
Concentration RSD	3.6 %	1.0 %	6.7 %	0.8 %	7.0 %	2.1 %	29.7 %	10.1 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.251 ppb	47.056 ppb	70.969 %	82.135 %	0.002 ppb	2.226 ppb	80.302 %
Concentration per Run 1	0.253 ppb	47.356 ppb	72.151 %	82.799 %	-0.002 ppb	2.247 ppb	88.712 %
Concentration per Run 2	0.244 ppb	46.605 ppb	70.828 %	81.993 %	0.002 ppb	2.209 ppb	78.108 %
Concentration per Run 3	0.257 ppb	47.207 ppb	69.928 %	81.612 %	0.006 ppb	2.224 ppb	74.085 %
Concentration RSD	2.8 %	0.8 %	1.6 %	0.7 %	200.2 %	0.9 %	9.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	69	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417079-06 6020TL	Rack	1		
Analysis started at:	4/5/2024 1:42:46 PM	Vial	38		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.352 %	83.544 %	0.047 ppb	42,235.049 ppb	2,477.688 ppb	2,380.488 ppb	6,803.733 ppb	64,292.712 ppb	82.997 %
Concentration per Run 1	79.188 %	81.242 %	0.045 ppb	43,182.876 ppb	2,524.324 ppb	2,424.586 ppb	6,849.791 ppb	65,181.596 ppb	84.457 %
Concentration per Run 2	78.767 %	87.457 %	0.043 ppb	41,553.626 ppb	2,443.156 ppb	2,344.712 ppb	6,713.250 ppb	63,666.990 ppb	82.372 %
Concentration per Run 3	77.103 %	81.933 %	0.052 ppb	41,968.644 ppb	2,465.584 ppb	2,372.167 ppb	6,848.158 ppb	64,029.551 ppb	82.164 %
Concentration RSD	1.4 %	4.1 %	9.9 %	2.0 %	1.7 %	1.7 %	1.2 %	1.2 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.366 %	25.837 ppb	18.335 ppb	106.305 ppb	76,749.791 ppb	1.210 ppb	2.094 ppb	5.984 ppb	30.420 ppb
Concentration per Run 1	88.397 %	26.065 ppb	18.557 ppb	108.831 ppb	77,679.011 ppb	1.193 ppb	2.084 ppb	6.059 ppb	30.801 ppb
Concentration per Run 2	87.823 %	25.674 ppb	18.246 ppb	106.113 ppb	76,660.238 ppb	1.210 ppb	2.193 ppb	5.857 ppb	30.539 ppb
Concentration per Run 3	85.877 %	25.773 ppb	18.202 ppb	103.970 ppb	75,910.125 ppb	1.229 ppb	2.006 ppb	6.038 ppb	29.919 ppb
Concentration RSD	1.5 %	0.8 %	1.1 %	2.3 %	1.2 %	1.5 %	4.5 %	1.9 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	83.947 %	10.281 ppb	0.455 ppb	717.031 ppb	1.381 ppb	79.672 %	0.000 ppb	0.010 ppb	85.298 %
Concentration per Run 1	83.445 %	10.628 ppb	0.456 ppb	728.819 ppb	1.348 ppb	80.634 %	-0.001 ppb	0.009 ppb	86.050 %
Concentration per Run 2	85.354 %	10.184 ppb	0.452 ppb	711.371 ppb	1.307 ppb	80.001 %	0.001 ppb	0.007 ppb	86.532 %
Concentration per Run 3	83.041 %	10.031 ppb	0.456 ppb	710.902 ppb	1.486 ppb	78.383 %	-0.001 ppb	0.014 ppb	83.312 %
Concentration RSD	1.5 %	3.0 %	0.5 %	1.4 %	6.8 %	1.5 %	273.2 %	38.7 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.234 ppb	33.558 ppb	68.750 %	79.052 %	0.003 ppb	0.424 ppb	76.498 %
Concentration per Run 1	0.234 ppb	33.612 ppb	69.439 %	79.098 %	-0.001 ppb	0.428 ppb	82.870 %
Concentration per Run 2	0.231 ppb	33.495 ppb	69.630 %	80.344 %	0.004 ppb	0.421 ppb	74.497 %
Concentration per Run 3	0.236 ppb	33.568 ppb	67.180 %	77.714 %	0.005 ppb	0.422 ppb	72.128 %
Concentration RSD	1.0 %	0.2 %	2.0 %	1.7 %	132.5 %	0.9 %	7.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	70	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417079-07 6020TL	Rack	1		
Analysis started at:	4/5/2024 1:47:23 PM	Vial	39		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.636 %	91.024 %	0.017 ppb	6,578.578 ppb	5,313.643 ppb	36.779 ppb	1,397.958 ppb	20,361.165 ppb	90.116 %
Concentration per Run 1	86.752 %	89.298 %	0.022 ppb	7,289.320 ppb	5,390.537 ppb	38.423 ppb	1,402.642 ppb	20,410.116 ppb	91.791 %
Concentration per Run 2	85.572 %	94.246 %	0.021 ppb	7,006.756 ppb	5,306.617 ppb	36.209 ppb	1,393.300 ppb	20,335.314 ppb	91.995 %
Concentration per Run 3	81.584 %	89.528 %	0.009 ppb	5,439.659 ppb	5,243.775 ppb	35.704 ppb	1,397.932 ppb	20,338.065 ppb	86.562 %
Concentration RSD	3.2 %	3.1 %	42.9 %	15.1 %	1.4 %	3.9 %	0.3 %	0.2 %	3.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.431 %	0.609 ppb	1.436 ppb	201.315 ppb	74,447.143 ppb	0.822 ppb	0.742 ppb	0.253 ppb	9.540 ppb
Concentration per Run 1	91.474 %	0.610 ppb	1.476 ppb	202.047 ppb	74,871.511 ppb	0.813 ppb	0.804 ppb	0.315 ppb	9.497 ppb
Concentration per Run 2	90.177 %	0.591 ppb	1.423 ppb	200.364 ppb	73,892.473 ppb	0.798 ppb	0.730 ppb	0.202 ppb	9.603 ppb
Concentration per Run 3	92.642 %	0.627 ppb	1.407 ppb	201.535 ppb	74,577.444 ppb	0.855 ppb	0.691 ppb	0.240 ppb	9.518 ppb
Concentration RSD	1.3 %	2.9 %	2.5 %	0.4 %	0.7 %	3.6 %	7.7 %	22.8 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.883 %	8.169 ppb	0.033 ppb	79.469 ppb	0.017 ppb	86.140 %	0.001 ppb	0.060 ppb	89.897 %
Concentration per Run 1	86.618 %	8.273 ppb	0.100 ppb	80.482 ppb	0.014 ppb	85.166 %	0.002 ppb	0.064 ppb	89.819 %
Concentration per Run 2	88.112 %	8.313 ppb	0.017 ppb	79.131 ppb	0.012 ppb	86.064 %	-0.001 ppb	0.060 ppb	89.000 %
Concentration per Run 3	88.921 %	7.921 ppb	-0.017 ppb	78.794 ppb	0.027 ppb	87.191 %	0.000 ppb	0.054 ppb	90.870 %
Concentration RSD	1.3 %	2.6 %	181.1 %	1.1 %	45.9 %	1.2 %	247.0 %	8.0 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.096 ppb	49.969 ppb	80.000 %	82.595 %	0.002 ppb	0.079 ppb	80.710 %
Concentration per Run 1	0.102 ppb	45.519 ppb	95.327 %	81.786 %	-0.002 ppb	0.081 ppb	85.823 %
Concentration per Run 2	0.089 ppb	52.306 ppb	72.239 %	82.997 %	0.004 ppb	0.076 ppb	78.722 %
Concentration per Run 3	0.097 ppb	52.082 ppb	72.433 %	83.002 %	0.005 ppb	0.081 ppb	77.584 %
Concentration RSD	6.9 %	7.7 %	16.6 %	0.8 %	164.9 %	3.3 %	5.5 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 71
Analysis label: L2417079-08d10 6020TL
Analysis started at: 4/5/2024 1:52:00 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 40
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.185 %	86.728 %	0.005 ppb	36,633.238 ppb	2,651.219 ppb	7.830 ppb	439.169 ppb	6,290.499 ppb	82.442 %
Concentration per Run 1	80.933 %	89.068 %	0.005 ppb	36,821.258 ppb	2,680.589 ppb	6.977 ppb	453.289 ppb	6,331.742 ppb	84.452 %
Concentration per Run 2	79.519 %	85.385 %	0.007 ppb	36,054.530 ppb	2,565.076 ppb	8.505 ppb	426.217 ppb	6,141.499 ppb	82.101 %
Concentration per Run 3	77.103 %	85.730 %	0.004 ppb	37,023.926 ppb	2,707.991 ppb	8.008 ppb	438.001 ppb	6,398.257 ppb	80.774 %
Concentration RSD	2.4 %	2.3 %	23.6 %	1.4 %	2.9 %	10.0 %	3.1 %	2.1 %	2.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.159 %	0.158 ppb	0.168 ppb	27.093 ppb	44,677.490 ppb	0.053 ppb	0.058 ppb	0.031 ppb	1.351 ppb
Concentration per Run 1	92.604 %	0.153 ppb	0.154 ppb	27.828 ppb	45,724.129 ppb	0.066 ppb	0.039 ppb	0.036 ppb	1.360 ppb
Concentration per Run 2	87.843 %	0.172 ppb	0.154 ppb	25.829 ppb	43,617.911 ppb	0.035 ppb	0.069 ppb	0.026 ppb	1.314 ppb
Concentration per Run 3	90.028 %	0.149 ppb	0.196 ppb	27.621 ppb	44,690.428 ppb	0.059 ppb	0.065 ppb	0.029 ppb	1.377 ppb
Concentration RSD	2.6 %	7.6 %	14.5 %	4.1 %	2.4 %	30.8 %	28.3 %	17.0 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.553 %	0.259 ppb	-0.044 ppb	28.872 ppb	-0.003 ppb	85.147 %	-0.001 ppb	0.015 ppb	88.120 %
Concentration per Run 1	89.868 %	0.280 ppb	-0.068 ppb	29.528 ppb	-0.019 ppb	86.509 %	-0.001 ppb	0.014 ppb	91.570 %
Concentration per Run 2	87.323 %	0.246 ppb	0.003 ppb	28.248 ppb	-0.015 ppb	83.497 %	-0.001 ppb	0.013 ppb	85.147 %
Concentration per Run 3	91.466 %	0.252 ppb	-0.066 ppb	28.840 ppb	0.025 ppb	85.435 %	-0.001 ppb	0.018 ppb	87.642 %
Concentration RSD	2.3 %	7.0 %	93.6 %	2.2 %	807.6 %	1.8 %	17.5 %	19.3 %	3.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.025 ppb	8.302 ppb	71.310 %	81.227 %	-0.005 ppb	0.029 ppb	79.888 %
Concentration per Run 1	0.017 ppb	8.217 ppb	73.348 %	84.391 %	-0.008 ppb	0.029 ppb	84.892 %
Concentration per Run 2	0.029 ppb	8.172 ppb	69.189 %	78.884 %	-0.004 ppb	0.031 ppb	77.473 %
Concentration per Run 3	0.028 ppb	8.517 ppb	71.393 %	80.406 %	-0.003 ppb	0.026 ppb	77.297 %
Concentration RSD	26.0 %	2.3 %	2.9 %	3.5 %	59.3 %	8.4 %	5.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	72	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417079-09 6020TL	Rack	1		
Analysis started at:	4/5/2024 1:56:38 PM	Vial	41		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.068 %	89.720 %	0.031 ppb	3,227.140 ppb	5,907.208 ppb	80.776 ppb	1,467.799 ppb	21,214.947 ppb	90.341 %
Concentration per Run 1	84.599 %	96.433 %	0.033 ppb	3,127.139 ppb	5,760.661 ppb	78.769 ppb	1,459.829 ppb	21,301.282 ppb	90.398 %
Concentration per Run 2	81.991 %	85.385 %	0.029 ppb	3,259.386 ppb	5,875.616 ppb	78.817 ppb	1,448.959 ppb	21,144.718 ppb	90.214 %
Concentration per Run 3	82.614 %	87.342 %	0.032 ppb	3,294.896 ppb	6,085.348 ppb	84.741 ppb	1,494.607 ppb	21,198.840 ppb	90.410 %
Concentration RSD	1.6 %	6.6 %	7.5 %	2.7 %	2.8 %	4.3 %	1.6 %	0.4 %	0.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.074 %	1.295 ppb	1.853 ppb	220.159 ppb	87,501.415 ppb	0.615 ppb	0.679 ppb	0.325 ppb	11.988 ppb
Concentration per Run 1	95.811 %	1.193 ppb	1.798 ppb	217.850 ppb	85,600.100 ppb	0.618 ppb	0.658 ppb	0.314 ppb	11.683 ppb
Concentration per Run 2	86.841 %	1.441 ppb	1.964 ppb	225.041 ppb	90,661.372 ppb	0.624 ppb	0.709 ppb	0.361 ppb	12.394 ppb
Concentration per Run 3	96.571 %	1.252 ppb	1.796 ppb	217.588 ppb	86,242.774 ppb	0.602 ppb	0.669 ppb	0.300 ppb	11.888 ppb
Concentration RSD	5.8 %	10.0 %	5.2 %	1.9 %	3.1 %	1.8 %	4.0 %	9.8 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.647 %	5.891 ppb	0.003 ppb	81.898 ppb	-0.017 ppb	88.593 %	0.001 ppb	0.008 ppb	91.509 %
Concentration per Run 1	97.763 %	5.836 ppb	-0.059 ppb	82.493 ppb	-0.018 ppb	89.882 %	0.003 ppb	0.007 ppb	93.717 %
Concentration per Run 2	87.855 %	5.937 ppb	0.003 ppb	80.100 ppb	0.002 ppb	85.901 %	0.000 ppb	0.009 ppb	85.672 %
Concentration per Run 3	95.322 %	5.900 ppb	0.066 ppb	83.100 ppb	-0.035 ppb	89.995 %	0.002 ppb	0.007 ppb	95.138 %
Concentration RSD	5.5 %	0.9 %	1,791.8 %	1.9 %	106.8 %	2.6 %	117.2 %	12.7 %	5.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.230 ppb	59.575 ppb	73.019 %	83.160 %	-0.001 ppb	0.236 ppb	82.311 %
Concentration per Run 1	0.238 ppb	60.259 ppb	74.512 %	84.917 %	-0.004 ppb	0.233 ppb	89.539 %
Concentration per Run 2	0.234 ppb	59.873 ppb	70.600 %	79.460 %	0.001 ppb	0.237 ppb	78.202 %
Concentration per Run 3	0.217 ppb	58.592 ppb	73.946 %	85.103 %	0.000 ppb	0.237 ppb	79.192 %
Concentration RSD	4.9 %	1.5 %	2.9 %	3.9 %	215.5 %	0.9 %	7.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	73	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417079-03d20 6020TL	Rack	1		
Analysis started at:	4/5/2024 2:01:15 PM	Vial	42		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.768 %	93.134 %	0.016 ppb	348.551 ppb	379.900 ppb	62.263 ppb	119.635 ppb	1,454.213 ppb	85.645 %
Concentration per Run 1	85.316 %	97.123 %	0.019 ppb	343.885 ppb	395.972 ppb	62.960 ppb	125.148 ppb	1,539.540 ppb	87.762 %
Concentration per Run 2	82.979 %	88.492 %	0.018 ppb	348.035 ppb	373.389 ppb	61.405 ppb	107.341 ppb	1,404.309 ppb	84.483 %
Concentration per Run 3	83.011 %	93.786 %	0.011 ppb	353.734 ppb	370.339 ppb	62.424 ppb	126.415 ppb	1,418.790 ppb	84.691 %
Concentration RSD	1.6 %	4.7 %	26.4 %	1.4 %	3.7 %	1.3 %	8.9 %	5.1 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.671 %	1.357 ppb	1.063 ppb	17.526 ppb	5,474.833 ppb	0.090 ppb	0.190 ppb	0.116 ppb	1.315 ppb
Concentration per Run 1	92.419 %	1.390 ppb	1.068 ppb	18.082 ppb	5,527.902 ppb	0.090 ppb	0.254 ppb	0.139 ppb	1.132 ppb
Concentration per Run 2	86.008 %	1.339 ppb	1.127 ppb	17.561 ppb	5,548.840 ppb	0.091 ppb	0.147 ppb	0.068 ppb	1.491 ppb
Concentration per Run 3	90.585 %	1.342 ppb	0.994 ppb	16.935 ppb	5,347.757 ppb	0.089 ppb	0.168 ppb	0.140 ppb	1.320 ppb
Concentration RSD	3.7 %	2.1 %	6.3 %	3.3 %	2.0 %	1.0 %	29.9 %	35.5 %	13.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.967 %	0.270 ppb	-0.028 ppb	5.310 ppb	0.009 ppb	89.477 %	0.006 ppb	0.005 ppb	90.942 %
Concentration per Run 1	93.227 %	0.256 ppb	-0.075 ppb	5.465 ppb	0.008 ppb	90.843 %	0.006 ppb	0.006 ppb	92.624 %
Concentration per Run 2	89.340 %	0.320 ppb	-0.016 ppb	5.171 ppb	0.017 ppb	88.725 %	0.005 ppb	0.005 ppb	88.842 %
Concentration per Run 3	93.333 %	0.235 ppb	0.007 ppb	5.294 ppb	0.002 ppb	88.863 %	0.007 ppb	0.004 ppb	91.361 %
Concentration RSD	2.5 %	16.4 %	152.3 %	2.8 %	81.2 %	1.3 %	18.3 %	19.2 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.039 ppb	7.741 ppb	72.211 %	82.171 %	0.000 ppb	0.199 ppb	82.891 %
Concentration per Run 1	0.042 ppb	7.957 ppb	73.244 %	84.336 %	-0.003 ppb	0.196 ppb	88.565 %
Concentration per Run 2	0.047 ppb	7.703 ppb	71.204 %	80.790 %	0.000 ppb	0.197 ppb	79.656 %
Concentration per Run 3	0.030 ppb	7.562 ppb	72.186 %	81.386 %	0.003 ppb	0.203 ppb	80.452 %
Concentration RSD	22.3 %	2.6 %	1.4 %	2.3 %	1,271.9 %	1.9 %	5.9 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	74	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 2:06:24 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.600 %	86.728 %	63.458 ppb	5,627.318 ppb	6,576.204 ppb	64.867 ppb	6,329.762 ppb	6,476.286 ppb	82.273 %
Concentration per Run 1	79.880 %	86.881 %	62.536 ppb	5,081.296 ppb	6,546.721 ppb	62.906 ppb	6,140.714 ppb	6,320.779 ppb	83.317 %
Concentration per Run 2	79.169 %	88.377 %	63.813 ppb	6,626.614 ppb	6,480.805 ppb	65.615 ppb	6,340.163 ppb	6,479.610 ppb	83.027 %
Concentration per Run 3	76.751 %	84.925 %	64.026 ppb	5,174.045 ppb	6,701.085 ppb	66.081 ppb	6,508.408 ppb	6,628.470 ppb	80.476 %
Recovery Percentage 1			105.764 %	93.789 %	109.603 %	108.112 %	105.496 %	107.938 %	
Concentration RSD	2.1 %	2.0 %	1.3 %	15.4 %	1.7 %	2.6 %	2.9 %	2.4 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.486 %	62.225 ppb	62.972 ppb	63.311 ppb	6,279.916 ppb	65.172 ppb	65.551 ppb	64.793 ppb	63.463 ppb
Concentration per Run 1	90.270 %	63.226 ppb	64.252 ppb	62.820 ppb	6,364.546 ppb	65.966 ppb	66.959 ppb	66.761 ppb	64.319 ppb
Concentration per Run 2	93.364 %	60.672 ppb	60.945 ppb	63.067 ppb	6,128.815 ppb	63.571 ppb	63.610 ppb	62.977 ppb	62.292 ppb
Concentration per Run 3	87.823 %	62.777 ppb	63.718 ppb	64.046 ppb	6,346.387 ppb	65.980 ppb	66.083 ppb	64.640 ppb	63.780 ppb
Recovery Percentage 1		103.709 %	104.953 %	105.519 %	104.665 %	108.620 %	109.251 %	107.988 %	105.772 %
Concentration RSD	3.1 %	2.2 %	2.8 %	1.0 %	2.1 %	2.1 %	2.6 %	2.9 %	1.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.121 %	62.519 ppb	62.901 ppb	62.216 ppb	60.582 ppb	85.537 %	62.779 ppb	62.235 ppb	87.548 %
Concentration per Run 1	87.821 %	63.958 ppb	62.064 ppb	61.367 ppb	60.135 ppb	86.236 %	63.597 ppb	62.502 ppb	85.813 %
Concentration per Run 2	92.119 %	61.082 ppb	62.192 ppb	61.944 ppb	60.433 ppb	86.807 %	62.529 ppb	62.135 ppb	89.514 %
Concentration per Run 3	87.423 %	62.516 ppb	64.446 ppb	63.338 ppb	61.178 ppb	83.566 %	62.211 ppb	62.069 ppb	87.318 %
Recovery Percentage 1		104.198 %	104.834 %	103.694 %	100.970 %		104.632 %	103.725 %	
Concentration RSD	2.9 %	2.3 %	2.1 %	1.6 %	0.9 %	2.0 %	1.2 %	0.4 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	61.689 ppb	61.621 ppb	70.787 %	80.114 %	62.232 ppb	64.916 ppb	79.465 %
Concentration per Run 1	62.374 ppb	62.750 ppb	70.891 %	78.780 %	61.717 ppb	67.185 ppb	85.008 %
Concentration per Run 2	60.459 ppb	60.146 ppb	71.404 %	82.390 %	60.882 ppb	62.794 ppb	78.006 %
Concentration per Run 3	62.235 ppb	61.967 ppb	70.065 %	79.173 %	64.095 ppb	64.768 ppb	75.379 %
Recovery Percentage 1	102.815 %	102.702 %			103.719 %	108.193 %	
Concentration RSD	1.7 %	2.2 %	1.0 %	2.5 %	2.7 %	3.4 %	6.3 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 75
Analysis label: CCB
Analysis started at: 4/5/2024 2:11:06 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.070 %	86.191 %	0.006 ppb	38.065 ppb	0.103 ppb	-0.109 ppb	5.627 ppb	1.124 ppb	78.516 %
Concentration per Run 1	79.928 %	89.988 %	0.002 ppb	27.326 ppb	0.114 ppb	-0.170 ppb	0.252 ppb	1.539 ppb	79.077 %
Concentration per Run 2	77.758 %	85.730 %	0.006 ppb	40.090 ppb	0.267 ppb	-0.054 ppb	7.270 ppb	-1.829 ppb	78.854 %
Concentration per Run 3	76.526 %	82.854 %	0.011 ppb	46.779 ppb	-0.070 ppb	-0.104 ppb	9.360 ppb	3.661 ppb	77.617 %
Recovery Percentage 1			1.238 %	38.065 %	0.148 %	-1.093 %	5.627 %	1.124 %	
Concentration RSD	2.2 %	4.2 %	71.0 %	26.0 %	163.3 %	53.3 %	84.8 %	246.4 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	82.813 %	-0.008 ppb	-0.010 ppb	0.068 ppb	17.876 ppb	0.000 ppb	0.009 ppb	-0.019 ppb	-0.560 ppb
Concentration per Run 1	85.006 %	-0.015 ppb	-0.005 ppb	0.084 ppb	21.579 ppb	-0.001 ppb	0.040 ppb	-0.020 ppb	-0.605 ppb
Concentration per Run 2	80.355 %	0.001 ppb	-0.011 ppb	0.047 ppb	17.382 ppb	0.002 ppb	-0.012 ppb	-0.015 ppb	-0.503 ppb
Concentration per Run 3	83.079 %	-0.010 ppb	-0.015 ppb	0.072 ppb	14.668 ppb	-0.001 ppb	-0.002 ppb	-0.022 ppb	-0.573 ppb
Recovery Percentage 1		-0.162 %	-1.034 %	6.771 %	35.753 %	0.089 %	0.431 %	-1.906 %	-11.203 %
Concentration RSD	2.8 %	96.9 %	45.3 %	27.7 %	19.5 %	388.8 %	317.8 %	19.7 %	9.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.637 %	0.082 ppb	0.223 ppb	0.001 ppb	0.823 ppb	84.633 %	0.001 ppb	0.008 ppb	86.307 %
Concentration per Run 1	87.163 %	0.059 ppb	0.274 ppb	0.002 ppb	0.844 ppb	87.067 %	0.000 ppb	0.008 ppb	89.105 %
Concentration per Run 2	87.026 %	0.091 ppb	0.160 ppb	0.000 ppb	0.843 ppb	84.482 %	0.005 ppb	0.007 ppb	85.459 %
Concentration per Run 3	85.723 %	0.097 ppb	0.236 ppb	-0.001 ppb	0.783 ppb	82.350 %	-0.001 ppb	0.008 ppb	84.358 %
Recovery Percentage 1		16.493 %	4.470 %	0.005 %	41.170 %		0.337 %	3.860 %	
Concentration RSD	0.9 %	24.7 %	26.0 %	293.2 %	4.2 %	2.8 %	221.0 %	10.8 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.036 ppb	0.015 ppb	68.869 %	78.001 %	0.230 ppb	0.034 ppb	76.230 %
Concentration per Run 1	0.038 ppb	0.015 ppb	69.635 %	79.146 %	0.183 ppb	0.038 ppb	81.323 %
Concentration per Run 2	0.037 ppb	0.004 ppb	69.392 %	77.971 %	0.262 ppb	0.031 ppb	73.617 %
Concentration per Run 3	0.035 ppb	0.025 ppb	67.581 %	76.887 %	0.246 ppb	0.032 ppb	73.749 %
Recovery Percentage 1	0.910 %	2.961 %			23.047 %	3.361 %	
Concentration RSD	3.5 %	70.6 %	1.6 %	1.4 %	18.0 %	11.7 %	5.8 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	76	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1903823-1 6020TL	Rack	1		
Analysis started at:	4/5/2024 2:26:42 PM	Vial	43		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.319 %	91.484 %	-0.003 ppb	27.826 ppb	2.001 ppb	2.116 ppb	3.229 ppb	12.117 ppb	85.931 %
Concentration per Run 1	87.510 %	87.572 %	0.000 ppb	20.992 ppb	2.154 ppb	2.030 ppb	3.667 ppb	9.390 ppb	87.314 %
Concentration per Run 2	83.898 %	96.317 %	-0.005 ppb	32.123 ppb	1.698 ppb	2.310 ppb	5.728 ppb	17.174 ppb	84.222 %
Concentration per Run 3	84.548 %	90.564 %	-0.004 ppb	30.361 ppb	2.150 ppb	2.009 ppb	0.291 ppb	9.786 ppb	86.257 %
Concentration RSD	2.3 %	4.9 %	88.8 %	21.5 %	13.1 %	7.9 %	85.0 %	36.2 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.730 %	0.023 ppb	0.913 ppb	0.062 ppb	4.346 ppb	0.013 ppb	0.108 ppb	0.209 ppb	-0.102 ppb
Concentration per Run 1	95.107 %	0.019 ppb	0.891 ppb	0.070 ppb	4.382 ppb	0.019 ppb	0.096 ppb	0.144 ppb	-0.121 ppb
Concentration per Run 2	97.183 %	0.054 ppb	0.916 ppb	0.048 ppb	4.486 ppb	0.011 ppb	0.134 ppb	0.156 ppb	-0.039 ppb
Concentration per Run 3	91.900 %	-0.003 ppb	0.933 ppb	0.068 ppb	4.170 ppb	0.010 ppb	0.093 ppb	0.327 ppb	-0.145 ppb
Concentration RSD	2.8 %	123.3 %	2.3 %	19.4 %	3.7 %	37.9 %	21.1 %	49.0 %	54.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.501 %	0.052 ppb	-0.011 ppb	0.029 ppb	0.047 ppb	90.624 %	-0.001 ppb	0.005 ppb	94.302 %
Concentration per Run 1	90.817 %	0.055 ppb	0.028 ppb	0.031 ppb	0.070 ppb	89.935 %	0.000 ppb	0.003 ppb	94.882 %
Concentration per Run 2	94.936 %	0.037 ppb	-0.037 ppb	0.030 ppb	0.070 ppb	91.871 %	0.000 ppb	0.006 ppb	97.220 %
Concentration per Run 3	91.750 %	0.064 ppb	-0.024 ppb	0.027 ppb	0.002 ppb	90.066 %	-0.002 ppb	0.006 ppb	90.804 %
Concentration RSD	2.3 %	26.9 %	320.2 %	5.6 %	83.5 %	1.2 %	214.8 %	30.5 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.013 ppb	0.027 ppb	84.011 %	85.040 %	0.024 ppb	0.027 ppb	142.790 %
Concentration per Run 1	0.010 ppb	0.020 ppb	104.759 %	88.302 %	0.026 ppb	0.029 ppb	166.219 %
Concentration per Run 2	0.012 ppb	0.038 ppb	74.343 %	85.200 %	0.024 ppb	0.027 ppb	139.499 %
Concentration per Run 3	0.017 ppb	0.022 ppb	72.931 %	81.618 %	0.023 ppb	0.026 ppb	122.653 %
Concentration RSD	26.0 %	37.1 %	21.4 %	3.9 %	6.5 %	6.8 %	15.4 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	77	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417299-06 6020TL	Rack	1		
Analysis started at:	4/5/2024 2:31:19 PM	Vial	50		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.916 %	93.364 %	0.003 ppb	49.355 ppb	2.026 ppb	2.334 ppb	2.370 ppb	16.774 ppb	88.072 %
Concentration per Run 1	88.583 %	93.556 %	0.006 ppb	51.195 ppb	2.411 ppb	2.767 ppb	2.113 ppb	19.987 ppb	89.574 %
Concentration per Run 2	86.594 %	94.706 %	0.000 ppb	49.356 ppb	2.082 ppb	2.430 ppb	4.325 ppb	12.473 ppb	87.969 %
Concentration per Run 3	85.572 %	91.829 %	0.003 ppb	47.514 ppb	1.584 ppb	1.803 ppb	0.672 ppb	17.863 ppb	86.673 %
Concentration RSD	1.8 %	1.6 %	95.3 %	3.7 %	20.6 %	21.0 %	77.7 %	23.1 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.808 %	0.009 ppb	1.200 ppb	0.066 ppb	7.677 ppb	0.001 ppb	0.119 ppb	0.130 ppb	0.426 ppb
Concentration per Run 1	91.585 %	0.008 ppb	1.243 ppb	0.038 ppb	8.349 ppb	0.001 ppb	0.085 ppb	0.155 ppb	0.357 ppb
Concentration per Run 2	91.975 %	0.031 ppb	1.201 ppb	0.060 ppb	6.863 ppb	-0.001 ppb	0.140 ppb	0.137 ppb	0.429 ppb
Concentration per Run 3	94.866 %	-0.012 ppb	1.155 ppb	0.100 ppb	7.819 ppb	0.003 ppb	0.133 ppb	0.099 ppb	0.491 ppb
Concentration RSD	1.9 %	238.2 %	3.7 %	47.8 %	9.8 %	189.9 %	25.1 %	21.9 %	15.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.228 %	0.038 ppb	-0.020 ppb	0.031 ppb	-0.029 ppb	93.148 %	-0.001 ppb	-0.001 ppb	94.215 %
Concentration per Run 1	96.082 %	0.075 ppb	-0.069 ppb	0.032 ppb	-0.028 ppb	94.114 %	-0.001 ppb	0.000 ppb	95.342 %
Concentration per Run 2	98.670 %	0.054 ppb	0.004 ppb	0.029 ppb	-0.030 ppb	92.025 %	-0.002 ppb	-0.001 ppb	95.291 %
Concentration per Run 3	93.933 %	-0.016 ppb	0.004 ppb	0.030 ppb	-0.029 ppb	93.306 %	-0.001 ppb	-0.001 ppb	92.010 %
Concentration RSD	2.5 %	126.3 %	209.3 %	5.5 %	3.3 %	1.1 %	27.8 %	61.1 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.002 ppb	0.170 ppb	74.396 %	83.821 %	0.002 ppb	0.020 ppb	101.237 %
Concentration per Run 1	-0.008 ppb	0.180 ppb	74.771 %	83.952 %	-0.004 ppb	0.020 ppb	129.846 %
Concentration per Run 2	0.000 ppb	0.169 ppb	74.482 %	83.931 %	0.005 ppb	0.021 ppb	89.751 %
Concentration per Run 3	0.002 ppb	0.159 ppb	73.934 %	83.581 %	0.006 ppb	0.019 ppb	84.113 %
Concentration RSD	263.2 %	6.1 %	0.6 %	0.2 %	222.0 %	5.8 %	24.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	78	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417314-21 6020TL	Rack	1		
Analysis started at:	4/5/2024 2:35:56 PM	Vial	51		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.748 %	95.934 %	0.004 ppb	25.021 ppb	1.733 ppb	2.353 ppb	0.996 ppb	25.208 ppb	88.724 %
Concentration per Run 1	87.133 %	97.353 %	-0.001 ppb	23.235 ppb	1.229 ppb	2.476 ppb	0.667 ppb	22.826 ppb	88.218 %
Concentration per Run 2	86.669 %	94.591 %	0.007 ppb	24.927 ppb	1.141 ppb	2.438 ppb	-6.062 ppb	30.439 ppb	88.552 %
Concentration per Run 3	86.441 %	95.857 %	0.006 ppb	26.901 ppb	2.829 ppb	2.146 ppb	8.383 ppb	22.360 ppb	89.402 %
Concentration RSD	0.4 %	1.4 %	118.0 %	7.3 %	54.8 %	7.7 %	725.7 %	18.0 %	0.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.711 %	0.032 ppb	0.982 ppb	0.043 ppb	3.545 ppb	0.001 ppb	0.028 ppb	0.065 ppb	0.324 ppb
Concentration per Run 1	94.013 %	0.044 ppb	0.985 ppb	0.049 ppb	2.982 ppb	0.001 ppb	0.010 ppb	0.074 ppb	0.213 ppb
Concentration per Run 2	95.996 %	0.032 ppb	1.001 ppb	0.027 ppb	3.736 ppb	0.001 ppb	0.011 ppb	0.065 ppb	0.503 ppb
Concentration per Run 3	94.125 %	0.018 ppb	0.961 ppb	0.054 ppb	3.917 ppb	0.001 ppb	0.063 ppb	0.055 ppb	0.256 ppb
Concentration RSD	1.2 %	41.8 %	2.1 %	33.5 %	14.0 %	2.6 %	108.3 %	14.5 %	48.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.822 %	0.033 ppb	-0.054 ppb	0.250 ppb	-0.051 ppb	94.471 %	0.000 ppb	0.001 ppb	96.397 %
Concentration per Run 1	98.555 %	0.029 ppb	-0.081 ppb	0.242 ppb	-0.051 ppb	93.750 %	0.000 ppb	0.000 ppb	94.602 %
Concentration per Run 2	94.166 %	0.062 ppb	-0.082 ppb	0.252 ppb	-0.053 ppb	94.604 %	0.000 ppb	0.000 ppb	94.947 %
Concentration per Run 3	97.744 %	0.008 ppb	0.000 ppb	0.256 ppb	-0.049 ppb	95.061 %	-0.001 ppb	0.002 ppb	99.643 %
Concentration RSD	2.4 %	82.1 %	86.0 %	2.9 %	4.1 %	0.7 %	60.5 %	243.2 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.004 ppb	0.315 ppb	74.929 %	84.305 %	0.000 ppb	0.010 ppb	98.821 %
Concentration per Run 1	-0.006 ppb	0.267 ppb	75.239 %	83.396 %	-0.004 ppb	0.010 ppb	126.873 %
Concentration per Run 2	-0.004 ppb	0.354 ppb	74.715 %	83.729 %	0.001 ppb	0.011 ppb	86.482 %
Concentration per Run 3	-0.001 ppb	0.325 ppb	74.832 %	85.790 %	0.004 ppb	0.008 ppb	83.106 %
Concentration RSD	79.7 %	14.0 %	0.4 %	1.5 %	1,079.3 %	14.2 %	24.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	79	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1903823-2d10 6020TL	Rack	1		
Analysis started at:	4/5/2024 2:40:34 PM	Vial	44		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.884 %	91.331 %	5.440 ppb	906.673 ppb	1,133.023 ppb	217.734 ppb	1,102.742 ppb	1,006.578 ppb	83.430 %
Concentration per Run 1	82.098 %	88.838 %	5.321 ppb	930.331 ppb	1,144.550 ppb	215.937 ppb	1,100.777 ppb	1,037.034 ppb	82.596 %
Concentration per Run 2	82.838 %	92.175 %	5.462 ppb	909.619 ppb	1,136.878 ppb	220.034 ppb	1,080.127 ppb	1,012.200 ppb	84.139 %
Concentration per Run 3	80.716 %	92.980 %	5.537 ppb	880.069 ppb	1,117.642 ppb	217.231 ppb	1,127.324 ppb	970.499 ppb	83.556 %
Concentration RSD	1.3 %	2.4 %	2.0 %	2.8 %	1.2 %	1.0 %	2.1 %	3.3 %	0.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.962 %	56.426 ppb	22.999 ppb	56.481 ppb	115.681 ppb	55.345 ppb	55.673 ppb	26.941 ppb	53.372 ppb
Concentration per Run 1	87.472 %	57.940 ppb	23.786 ppb	57.562 ppb	116.191 ppb	56.984 ppb	57.248 ppb	27.587 ppb	53.904 ppb
Concentration per Run 2	94.421 %	56.692 ppb	22.568 ppb	56.402 ppb	115.147 ppb	54.478 ppb	55.487 ppb	26.683 ppb	53.199 ppb
Concentration per Run 3	90.992 %	54.646 ppb	22.644 ppb	55.480 ppb	115.703 ppb	54.572 ppb	54.284 ppb	26.552 ppb	53.013 ppb
Concentration RSD	3.8 %	2.9 %	3.0 %	1.8 %	0.5 %	2.6 %	2.7 %	2.1 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.699 %	12.467 ppb	12.668 ppb	103.325 ppb	99.570 ppb	91.186 %	5.137 ppb	5.536 ppb	92.008 %
Concentration per Run 1	93.811 %	12.094 ppb	12.360 ppb	101.737 ppb	99.030 ppb	91.797 %	5.268 ppb	5.651 ppb	89.780 %
Concentration per Run 2	93.554 %	12.836 ppb	13.170 ppb	104.102 ppb	99.111 ppb	92.140 %	5.047 ppb	5.416 ppb	94.602 %
Concentration per Run 3	93.732 %	12.471 ppb	12.473 ppb	104.137 ppb	100.569 ppb	89.620 %	5.096 ppb	5.541 ppb	91.641 %
Concentration RSD	0.1 %	3.0 %	3.5 %	1.3 %	0.9 %	1.5 %	2.3 %	2.1 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	42.146 ppb	212.183 ppb	72.723 %	82.554 %	10.655 ppb	57.350 ppb	96.748 %
Concentration per Run 1	41.529 ppb	215.185 ppb	71.888 %	80.817 %	10.744 ppb	59.313 ppb	126.866 %
Concentration per Run 2	41.203 ppb	206.526 ppb	74.075 %	84.246 %	10.435 ppb	55.596 ppb	82.955 %
Concentration per Run 3	43.707 ppb	214.839 ppb	72.206 %	82.598 %	10.785 ppb	57.141 ppb	80.423 %
Concentration RSD	3.2 %	2.3 %	1.6 %	2.1 %	1.8 %	3.3 %	27.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 80
Analysis label: WG1903823-3d10 6020TL
Analysis started at: 4/5/2024 2:45:13 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 46
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	79.230 %	89.643 %	5.275 ppb	2,621.046 ppb	1,426.451 ppb	211.238 ppb	1,181.293 ppb	3,626.455 ppb	79.946 %
Concentration per Run 1	80.907 %	90.909 %	5.356 ppb	2,604.289 ppb	1,425.395 ppb	202.460 ppb	1,124.237 ppb	3,496.747 ppb	81.632 %
Concentration per Run 2	77.220 %	86.766 %	5.227 ppb	2,715.090 ppb	1,471.110 ppb	217.637 ppb	1,230.683 ppb	3,783.676 ppb	77.078 %
Concentration per Run 3	79.563 %	91.254 %	5.241 ppb	2,543.759 ppb	1,382.849 ppb	213.616 ppb	1,188.958 ppb	3,598.941 ppb	81.129 %
Concentration RSD	2.4 %	2.8 %	1.3 %	3.3 %	3.1 %	3.7 %	4.5 %	4.0 %	3.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.144 %	54.639 ppb	22.167 ppb	75.284 ppb	313.111 ppb	53.814 ppb	54.687 ppb	26.837 ppb	52.234 ppb
Concentration per Run 1	85.859 %	56.219 ppb	23.198 ppb	76.982 ppb	315.814 ppb	55.954 ppb	57.267 ppb	27.969 ppb	52.469 ppb
Concentration per Run 2	88.323 %	54.643 ppb	21.509 ppb	74.222 ppb	320.528 ppb	52.799 ppb	53.278 ppb	26.524 ppb	52.051 ppb
Concentration per Run 3	90.251 %	53.056 ppb	21.794 ppb	74.647 ppb	302.992 ppb	52.688 ppb	53.514 ppb	26.018 ppb	52.181 ppb
Concentration RSD	2.5 %	2.9 %	4.1 %	2.0 %	2.9 %	3.4 %	4.1 %	3.8 %	0.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.343 %	12.400 ppb	12.625 ppb	112.281 ppb	100.564 ppb	86.823 %	5.075 ppb	5.420 ppb	89.093 %
Concentration per Run 1	86.878 %	12.722 ppb	12.772 ppb	111.405 ppb	99.333 ppb	86.913 %	5.127 ppb	5.427 ppb	86.817 %
Concentration per Run 2	91.192 %	11.993 ppb	12.440 ppb	112.877 ppb	100.610 ppb	86.470 %	5.052 ppb	5.402 ppb	90.055 %
Concentration per Run 3	89.958 %	12.485 ppb	12.662 ppb	112.562 ppb	101.749 ppb	87.087 %	5.045 ppb	5.432 ppb	90.406 %
Concentration RSD	2.5 %	3.0 %	1.3 %	0.7 %	1.2 %	0.4 %	0.9 %	0.3 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	45.189 ppb	206.670 ppb	71.420 %	80.737 %	10.509 ppb	56.977 ppb	79.226 %
Concentration per Run 1	44.433 ppb	204.053 ppb	70.563 %	78.641 %	10.574 ppb	57.775 ppb	81.958 %
Concentration per Run 2	45.809 ppb	211.701 ppb	71.457 %	81.077 %	10.551 ppb	56.924 ppb	77.857 %
Concentration per Run 3	45.325 ppb	204.257 ppb	72.239 %	82.493 %	10.403 ppb	56.233 ppb	77.862 %
Concentration RSD	1.5 %	2.1 %	1.2 %	2.4 %	0.9 %	1.4 %	3.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 81
Analysis label: WG1903823-5d10 6020TL
Analysis started at: 4/5/2024 2:49:52 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 48
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	77.811 %	90.640 %	53.460 ppb	7,806.526 ppb	5,715.993 ppb	58.369 ppb	5,149.880 ppb	7,532.598 ppb	79.935 %
Concentration per Run 1	80.288 %	82.163 %	52.281 ppb	8,229.207 ppb	5,953.376 ppb	58.569 ppb	5,342.787 ppb	7,957.314 ppb	81.346 %
Concentration per Run 2	77.121 %	91.369 %	54.130 ppb	7,699.526 ppb	5,673.647 ppb	59.250 ppb	5,308.137 ppb	7,600.425 ppb	78.543 %
Concentration per Run 3	76.022 %	98.389 %	53.970 ppb	7,490.847 ppb	5,520.955 ppb	57.287 ppb	4,798.715 ppb	7,040.055 ppb	79.918 %
Concentration RSD	2.8 %	9.0 %	1.9 %	4.9 %	3.8 %	1.7 %	5.9 %	6.1 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.322 %	56.857 ppb	56.959 ppb	75.198 ppb	5,752.255 ppb	55.363 ppb	55.334 ppb	54.174 ppb	54.182 ppb
Concentration per Run 1	82.191 %	58.354 ppb	57.907 ppb	74.387 ppb	5,802.330 ppb	56.807 ppb	57.162 ppb	56.126 ppb	54.639 ppb
Concentration per Run 2	87.063 %	56.083 ppb	56.695 ppb	75.435 ppb	5,732.536 ppb	54.126 ppb	55.228 ppb	51.635 ppb	53.806 ppb
Concentration per Run 3	86.711 %	56.133 ppb	56.276 ppb	75.771 ppb	5,721.899 ppb	55.155 ppb	53.611 ppb	54.762 ppb	54.100 ppb
Concentration RSD	3.2 %	2.3 %	1.5 %	1.0 %	0.8 %	2.4 %	3.2 %	4.2 %	0.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.446 %	51.112 ppb	51.171 ppb	64.484 ppb	53.020 ppb	83.973 %	36.776 ppb	52.485 ppb	84.766 %
Concentration per Run 1	84.977 %	51.287 ppb	49.969 ppb	64.476 ppb	52.193 ppb	81.983 %	36.860 ppb	52.721 ppb	81.759 %
Concentration per Run 2	89.674 %	50.432 ppb	51.301 ppb	64.424 ppb	52.274 ppb	84.668 %	36.779 ppb	52.055 ppb	86.876 %
Concentration per Run 3	87.688 %	51.615 ppb	52.245 ppb	64.552 ppb	54.593 ppb	85.270 %	36.688 ppb	52.680 ppb	85.664 %
Concentration RSD	2.7 %	1.2 %	2.2 %	0.1 %	2.6 %	2.1 %	0.2 %	0.7 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	53.794 ppb	49.194 ppb	85.814 %	78.952 %	52.165 ppb	48.833 ppb	77.198 %
Concentration per Run 1	53.934 ppb	47.693 ppb	92.110 %	77.174 %	50.583 ppb	56.298 ppb	79.603 %
Concentration per Run 2	52.735 ppb	46.749 ppb	94.228 %	79.056 %	52.725 ppb	45.290 ppb	76.142 %
Concentration per Run 3	54.714 ppb	53.141 ppb	71.104 %	80.626 %	53.188 ppb	44.911 ppb	75.848 %
Concentration RSD	1.9 %	7.0 %	14.9 %	2.2 %	2.7 %	13.2 %	2.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 82
Analysis label: WG1903823-4 6020TL
Analysis started at: 4/5/2024 2:54:31 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 47
Comment <Commnt>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	76.227 %	82.163 %	0.007 ppb	22,735.079 ppb	3,264.318 ppb	49.773 ppb	1,539.992 ppb	27,541.698 ppb	76.024 %
Concentration per Run 1	76.948 %	82.854 %	0.001 ppb	23,174.536 ppb	3,305.968 ppb	51.134 ppb	1,574.310 ppb	27,888.556 ppb	76.271 %
Concentration per Run 2	76.947 %	81.127 %	0.015 ppb	22,617.838 ppb	3,269.840 ppb	47.564 ppb	1,538.020 ppb	27,401.623 ppb	76.778 %
Concentration per Run 3	74.786 %	82.508 %	0.005 ppb	22,412.862 ppb	3,217.147 ppb	50.621 ppb	1,507.646 ppb	27,334.917 ppb	75.022 %
Concentration RSD	1.6 %	1.1 %	97.8 %	1.7 %	1.4 %	3.9 %	2.2 %	1.1 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.136 %	1.210 ppb	1.274 ppb	194.063 ppb	1,957.744 ppb	0.766 ppb	1.561 ppb	0.815 ppb	0.374 ppb
Concentration per Run 1	86.007 %	1.347 ppb	1.330 ppb	195.467 ppb	1,995.730 ppb	0.764 ppb	1.463 ppb	0.755 ppb	0.300 ppb
Concentration per Run 2	84.432 %	1.074 ppb	1.139 ppb	195.302 ppb	1,965.387 ppb	0.769 ppb	1.524 ppb	0.845 ppb	0.412 ppb
Concentration per Run 3	84.969 %	1.208 ppb	1.354 ppb	191.418 ppb	1,912.115 ppb	0.763 ppb	1.695 ppb	0.845 ppb	0.411 ppb
Concentration RSD	0.9 %	11.3 %	9.3 %	1.2 %	2.2 %	0.4 %	7.7 %	6.4 %	17.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.106 %	1.335 ppb	0.677 ppb	104.508 ppb	2.836 ppb	81.489 %	0.017 ppb	0.012 ppb	84.600 %
Concentration per Run 1	85.924 %	1.305 ppb	0.662 ppb	105.521 ppb	2.836 ppb	83.637 %	0.016 ppb	0.015 ppb	85.558 %
Concentration per Run 2	84.829 %	1.372 ppb	0.669 ppb	103.437 ppb	2.782 ppb	81.312 %	0.017 ppb	0.014 ppb	83.302 %
Concentration per Run 3	84.565 %	1.330 ppb	0.701 ppb	104.567 ppb	2.889 ppb	79.520 %	0.019 ppb	0.008 ppb	84.941 %
Concentration RSD	0.8 %	2.5 %	3.0 %	1.0 %	1.9 %	2.5 %	8.9 %	30.4 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.997 ppb	7.054 ppb	69.130 %	78.876 %	0.224 ppb	0.083 ppb	71.652 %
Concentration per Run 1	0.961 ppb	7.115 ppb	70.120 %	79.895 %	0.187 ppb	0.088 ppb	73.412 %
Concentration per Run 2	1.014 ppb	7.095 ppb	68.321 %	77.945 %	0.263 ppb	0.084 ppb	70.660 %
Concentration per Run 3	1.015 ppb	6.954 ppb	68.949 %	78.788 %	0.222 ppb	0.076 ppb	70.884 %
Concentration RSD	3.1 %	1.2 %	1.3 %	1.2 %	16.9 %	6.8 %	2.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	83	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417079-11 6020TL	Rack	1		
Analysis started at:	4/5/2024 2:59:11 PM	Vial	45		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	74.621 %	83.391 %	0.005 ppb	22,401.112 ppb	3,183.726 ppb	49.017 ppb	1,464.189 ppb	25,948.559 ppb	75.013 %
Concentration per Run 1	76.995 %	84.925 %	0.006 ppb	22,833.606 ppb	3,205.463 ppb	50.150 ppb	1,437.241 ppb	25,753.025 ppb	76.653 %
Concentration per Run 2	74.575 %	80.207 %	0.007 ppb	22,490.913 ppb	3,204.870 ppb	49.096 ppb	1,502.094 ppb	26,525.812 ppb	74.737 %
Concentration per Run 3	72.293 %	85.040 %	0.001 ppb	21,878.817 ppb	3,140.846 ppb	47.805 ppb	1,453.231 ppb	25,566.839 ppb	73.650 %
Concentration RSD	3.2 %	3.3 %	64.8 %	2.2 %	1.2 %	2.4 %	2.3 %	2.0 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	83.351 %	1.231 ppb	1.263 ppb	193.689 ppb	1,933.729 ppb	0.781 ppb	1.519 ppb	0.725 ppb	0.243 ppb
Concentration per Run 1	81.763 %	1.326 ppb	1.358 ppb	199.913 ppb	1,991.868 ppb	0.815 ppb	1.454 ppb	0.722 ppb	0.202 ppb
Concentration per Run 2	85.062 %	1.189 ppb	1.234 ppb	187.528 ppb	1,900.589 ppb	0.733 ppb	1.562 ppb	0.739 ppb	0.284 ppb
Concentration per Run 3	83.227 %	1.177 ppb	1.197 ppb	193.626 ppb	1,908.729 ppb	0.795 ppb	1.542 ppb	0.715 ppb	0.243 ppb
Concentration RSD	2.0 %	6.7 %	6.7 %	3.2 %	2.6 %	5.5 %	3.8 %	1.7 %	16.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	82.978 %	1.251 ppb	0.455 ppb	103.877 ppb	1.897 ppb	79.734 %	0.019 ppb	0.009 ppb	83.987 %
Concentration per Run 1	83.242 %	1.287 ppb	0.477 ppb	104.890 ppb	1.801 ppb	79.704 %	0.016 ppb	0.010 ppb	85.054 %
Concentration per Run 2	83.734 %	1.174 ppb	0.386 ppb	102.766 ppb	1.957 ppb	80.800 %	0.019 ppb	0.010 ppb	84.251 %
Concentration per Run 3	81.958 %	1.291 ppb	0.502 ppb	103.975 ppb	1.933 ppb	78.699 %	0.021 ppb	0.008 ppb	82.657 %
Concentration RSD	1.1 %	5.3 %	13.4 %	1.0 %	4.4 %	1.3 %	13.9 %	11.2 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.579 ppb	6.485 ppb	74.868 %	76.384 %	0.055 ppb	0.077 ppb	73.491 %
Concentration per Run 1	0.539 ppb	5.809 ppb	89.936 %	75.772 %	0.040 ppb	0.083 ppb	76.755 %
Concentration per Run 2	0.580 ppb	6.632 ppb	68.446 %	78.388 %	0.060 ppb	0.071 ppb	72.884 %
Concentration per Run 3	0.618 ppb	7.015 ppb	66.220 %	74.992 %	0.067 ppb	0.077 ppb	70.835 %
Concentration RSD	6.8 %	9.5 %	17.5 %	2.3 %	25.0 %	7.6 %	4.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 84
Analysis label: I2417359-01 6020TL
Analysis started at: 4/5/2024 3:03:49 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 52
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.321 %	87.226 %	-0.002 ppb	149,441.843 ppb	6,799.449 ppb	89.096 ppb	21,039.852 ppb	39,903.125 ppb	79.422 %
Concentration per Run 1	83.551 %	89.068 %	0.002 ppb	147,388.490 ppb	6,678.116 ppb	88.702 ppb	20,751.995 ppb	39,254.884 ppb	81.817 %
Concentration per Run 2	80.708 %	84.350 %	-0.007 ppb	149,186.257 ppb	6,780.262 ppb	87.330 ppb	21,161.359 ppb	40,586.947 ppb	78.283 %
Concentration per Run 3	79.706 %	88.262 %	-0.001 ppb	151,750.783 ppb	6,939.971 ppb	91.257 ppb	21,206.204 ppb	39,867.545 ppb	78.165 %
Concentration RSD	2.5 %	2.9 %	267.7 %	1.5 %	1.9 %	2.2 %	1.2 %	1.7 %	2.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	81.177 %	9.869 ppb	1.285 ppb	95.502 ppb	678.503 ppb	0.220 ppb	2.649 ppb	44.242 ppb	231.627 ppb
Concentration per Run 1	80.893 %	9.612 ppb	1.291 ppb	95.366 ppb	696.063 ppb	0.230 ppb	2.702 ppb	45.706 ppb	237.672 ppb
Concentration per Run 2	81.467 %	9.794 ppb	1.266 ppb	94.318 ppb	655.717 ppb	0.198 ppb	2.695 ppb	43.421 ppb	227.805 ppb
Concentration per Run 3	81.171 %	10.200 ppb	1.297 ppb	96.823 ppb	683.729 ppb	0.231 ppb	2.551 ppb	43.601 ppb	229.404 ppb
Concentration RSD	0.4 %	3.1 %	1.3 %	1.3 %	3.0 %	8.7 %	3.2 %	2.9 %	2.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	83.197 %	0.534 ppb	0.820 ppb	90.538 ppb	1.476 ppb	76.477 %	0.138 ppb	0.063 ppb	80.385 %
Concentration per Run 1	80.567 %	0.596 ppb	0.885 ppb	92.376 ppb	1.454 ppb	75.808 %	0.142 ppb	0.052 ppb	78.769 %
Concentration per Run 2	81.746 %	0.517 ppb	0.694 ppb	89.934 ppb	1.431 ppb	75.284 %	0.133 ppb	0.071 ppb	80.151 %
Concentration per Run 3	87.279 %	0.489 ppb	0.881 ppb	89.304 ppb	1.542 ppb	78.338 %	0.139 ppb	0.065 ppb	82.235 %
Concentration RSD	4.3 %	10.4 %	13.3 %	1.8 %	4.0 %	2.1 %	3.3 %	15.3 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.483 ppb	48.501 ppb	67.579 %	77.125 %	0.029 ppb	0.682 ppb	76.896 %
Concentration per Run 1	0.473 ppb	49.825 ppb	66.325 %	76.412 %	0.015 ppb	0.685 ppb	84.952 %
Concentration per Run 2	0.490 ppb	47.920 ppb	66.722 %	76.153 %	0.032 ppb	0.686 ppb	73.963 %
Concentration per Run 3	0.486 ppb	47.757 ppb	69.691 %	78.810 %	0.039 ppb	0.677 ppb	71.773 %
Concentration RSD	1.8 %	2.4 %	2.7 %	1.9 %	42.9 %	0.7 %	9.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	85	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1903823-6d5 6020TL	Rack	1		
Analysis started at:	4/5/2024 3:08:27 PM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.026 %	90.295 %	0.005 ppb	3,535.754 ppb	666.130 ppb	10.442 ppb	307.957 ppb	5,297.546 ppb	81.183 %
Concentration per Run 1	85.657 %	90.218 %	-0.002 ppb	3,622.310 ppb	678.247 ppb	10.592 ppb	317.889 ppb	5,440.068 ppb	83.438 %
Concentration per Run 2	83.640 %	89.643 %	0.011 ppb	3,500.228 ppb	655.832 ppb	10.114 ppb	312.014 ppb	5,320.747 ppb	81.025 %
Concentration per Run 3	79.782 %	91.024 %	0.005 ppb	3,484.723 ppb	664.312 ppb	10.620 ppb	293.970 ppb	5,131.823 ppb	79.086 %
Concentration RSD	3.6 %	0.8 %	144.9 %	2.1 %	1.7 %	2.7 %	4.0 %	2.9 %	2.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.162 %	0.466 ppb	0.263 ppb	39.302 ppb	403.467 ppb	0.168 ppb	0.321 ppb	0.139 ppb	-0.296 ppb
Concentration per Run 1	85.284 %	0.484 ppb	0.265 ppb	41.133 ppb	410.920 ppb	0.175 ppb	0.322 ppb	0.123 ppb	-0.393 ppb
Concentration per Run 2	89.250 %	0.474 ppb	0.247 ppb	37.866 ppb	399.705 ppb	0.156 ppb	0.365 ppb	0.159 ppb	-0.253 ppb
Concentration per Run 3	86.952 %	0.439 ppb	0.277 ppb	38.908 ppb	399.776 ppb	0.173 ppb	0.276 ppb	0.135 ppb	-0.242 ppb
Concentration RSD	2.3 %	5.0 %	5.7 %	4.2 %	1.6 %	6.3 %	13.9 %	13.2 %	28.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.808 %	0.259 ppb	0.077 ppb	20.557 ppb	0.432 ppb	87.728 %	0.026 ppb	0.001 ppb	89.915 %
Concentration per Run 1	93.597 %	0.261 ppb	0.057 ppb	20.533 ppb	0.345 ppb	88.324 %	0.020 ppb	0.002 ppb	91.667 %
Concentration per Run 2	89.128 %	0.263 ppb	0.069 ppb	20.722 ppb	0.497 ppb	87.322 %	0.027 ppb	0.003 ppb	89.093 %
Concentration per Run 3	89.697 %	0.252 ppb	0.104 ppb	20.416 ppb	0.455 ppb	87.538 %	0.032 ppb	0.000 ppb	88.984 %
Concentration RSD	2.7 %	2.3 %	31.8 %	0.8 %	18.1 %	0.6 %	23.5 %	104.7 %	1.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.263 ppb	1.430 ppb	71.311 %	80.628 %	0.017 ppb	0.026 ppb	78.422 %
Concentration per Run 1	0.262 ppb	1.528 ppb	71.119 %	81.230 %	0.008 ppb	0.028 ppb	81.843 %
Concentration per Run 2	0.256 ppb	1.428 ppb	71.654 %	80.820 %	0.020 ppb	0.026 ppb	77.450 %
Concentration per Run 3	0.269 ppb	1.334 ppb	71.161 %	79.833 %	0.024 ppb	0.024 ppb	75.974 %
Concentration RSD	2.5 %	6.8 %	0.4 %	0.9 %	46.9 %	6.9 %	3.9 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 86
Analysis label: CCV
Analysis started at: 4/5/2024 3:13:05 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.783 %	91.177 %	62.578 ppb	6,120.909 ppb	6,504.336 ppb	64.846 ppb	6,216.855 ppb	6,299.620 ppb	82.562 %
Concentration per Run 1	80.442 %	91.139 %	61.881 ppb	5,053.930 ppb	6,589.587 ppb	65.666 ppb	6,118.731 ppb	6,151.545 ppb	84.644 %
Concentration per Run 2	78.563 %	84.925 %	62.556 ppb	6,822.203 ppb	6,568.921 ppb	65.705 ppb	6,480.704 ppb	6,579.718 ppb	81.592 %
Concentration per Run 3	77.344 %	97.468 %	63.298 ppb	6,486.595 ppb	6,354.500 ppb	63.167 ppb	6,051.131 ppb	6,167.597 ppb	81.450 %
Recovery Percentage 1			104.297 %	102.015 %	108.406 %	108.077 %	103.614 %	104.994 %	
Concentration RSD	2.0 %	6.9 %	1.1 %	15.3 %	2.0 %	2.2 %	3.7 %	3.9 %	2.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.691 %	65.435 ppb	65.592 ppb	65.618 ppb	6,457.986 ppb	63.792 ppb	63.843 ppb	62.982 ppb	63.286 ppb
Concentration per Run 1	91.215 %	66.458 ppb	67.175 ppb	65.294 ppb	6,527.120 ppb	65.471 ppb	65.442 ppb	65.062 ppb	64.490 ppb
Concentration per Run 2	91.641 %	65.113 ppb	65.636 ppb	65.666 ppb	6,521.784 ppb	64.134 ppb	65.049 ppb	63.923 ppb	64.272 ppb
Concentration per Run 3	95.219 %	64.735 ppb	63.965 ppb	65.896 ppb	6,325.054 ppb	61.770 ppb	61.038 ppb	59.962 ppb	61.095 ppb
Recovery Percentage 1		109.059 %	109.320 %	109.364 %	107.633 %	106.319 %	106.405 %	104.971 %	105.477 %
Concentration RSD	2.4 %	1.4 %	2.4 %	0.5 %	1.8 %	2.9 %	3.8 %	4.3 %	3.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	88.611 %	61.682 ppb	63.775 ppb	63.550 ppb	60.756 ppb	83.958 %	62.071 ppb	62.486 ppb	86.862 %
Concentration per Run 1	87.383 %	63.258 ppb	63.725 ppb	63.493 ppb	60.832 ppb	83.832 %	62.733 ppb	63.068 ppb	85.947 %
Concentration per Run 2	86.643 %	61.912 ppb	64.138 ppb	62.887 ppb	60.847 ppb	84.628 %	62.009 ppb	62.188 ppb	86.365 %
Concentration per Run 3	91.808 %	59.877 ppb	63.461 ppb	64.269 ppb	60.588 ppb	83.414 %	61.471 ppb	62.202 ppb	88.274 %
Recovery Percentage 1		102.804 %	106.291 %	105.916 %	101.260 %		103.452 %	104.143 %	
Concentration RSD	3.2 %	2.8 %	0.5 %	1.1 %	0.2 %	0.7 %	1.0 %	0.8 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.231 ppb	63.129 ppb	70.517 %	80.267 %	**60.739 ppb**	63.705 ppb	77.596 %
Concentration per Run 1	63.038 ppb	63.126 ppb	70.911 %	79.627 %	60.773 ppb	65.391 ppb	81.818 %
Concentration per Run 2	62.022 ppb	62.441 ppb	71.401 %	80.259 %	61.082 ppb	64.228 ppb	77.097 %
Concentration per Run 3	61.633 ppb	63.821 ppb	69.237 %	80.915 %	60.362 ppb	61.498 ppb	73.871 %
Recovery Percentage 1	103.718 %	105.216 %			101.231 %	106.176 %	
Concentration RSD	1.2 %	1.1 %	1.6 %	0.8 %	0.6 %	3.1 %	5.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	87	User name	ALPHALAB\Metals-Instrument	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/5/2024 3:17:47 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	75.735 %	88.032 %	0.012 ppb	46.378 ppb	-0.060 ppb	-0.074 ppb	7.301 ppb	-0.616 ppb	74.766 %
Concentration per Run 1	77.009 %	86.076 %	0.014 ppb	43.051 ppb	-0.078 ppb	-0.157 ppb	8.877 ppb	-1.846 ppb	75.426 %
Concentration per Run 2	75.887 %	84.119 %	0.006 ppb	55.166 ppb	-0.298 ppb	-0.054 ppb	8.693 ppb	-0.802 ppb	75.668 %
Concentration per Run 3	74.309 %	93.901 %	0.017 ppb	40.919 ppb	0.195 ppb	-0.010 ppb	4.333 ppb	0.800 ppb	73.203 %
Recovery Percentage 1			2.457 %	46.378 %	-0.086 %	-0.736 %	7.301 %	-0.616 %	
Concentration RSD	1.8 %	5.9 %	42.9 %	16.6 %	408.5 %	102.9 %	35.2 %	216.4 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	83.320 %	0.030 ppb	0.004 ppb	0.077 ppb	12.374 ppb	0.002 ppb	0.022 ppb	-0.022 ppb	-0.557 ppb
Concentration per Run 1	81.763 %	0.000 ppb	0.010 ppb	0.061 ppb	13.566 ppb	0.001 ppb	0.054 ppb	-0.018 ppb	-0.576 ppb
Concentration per Run 2	81.689 %	0.044 ppb	0.004 ppb	0.104 ppb	13.457 ppb	0.001 ppb	-0.006 ppb	-0.006 ppb	-0.526 ppb
Concentration per Run 3	86.508 %	0.046 ppb	-0.003 ppb	0.065 ppb	10.098 ppb	0.004 ppb	0.017 ppb	-0.042 ppb	-0.568 ppb
Recovery Percentage 1		0.595 %	0.383 %	7.657 %	24.747 %	0.374 %	1.091 %	-2.191 %	-11.134 %
Concentration RSD	3.3 %	88.0 %	164.8 %	30.9 %	15.9 %	82.3 %	138.5 %	85.4 %	4.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.478 %	0.113 ppb	0.262 ppb	0.002 ppb	0.933 ppb	81.993 %	0.028 ppb	0.008 ppb	85.249 %
Concentration per Run 1	84.746 %	0.123 ppb	0.285 ppb	0.001 ppb	0.961 ppb	83.245 %	0.024 ppb	0.015 ppb	83.823 %
Concentration per Run 2	83.227 %	0.078 ppb	0.191 ppb	0.003 ppb	0.971 ppb	80.362 %	0.026 ppb	0.007 ppb	82.245 %
Concentration per Run 3	88.461 %	0.138 ppb	0.311 ppb	0.002 ppb	0.867 ppb	82.372 %	0.033 ppb	0.002 ppb	89.679 %
Recovery Percentage 1		22.562 %	5.247 %	0.019 %	46.667 %		6.905 %	3.988 %	
Concentration RSD	3.1 %	27.6 %	24.1 %	50.4 %	6.2 %	1.8 %	17.7 %	83.6 %	4.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.171 ppb	0.013 ppb	67.557 %	76.937 %	0.376 ppb	0.033 ppb	74.692 %
Concentration per Run 1	0.151 ppb	0.019 ppb	66.771 %	76.257 %	0.304 ppb	0.036 ppb	77.839 %
Concentration per Run 2	0.175 ppb	0.015 ppb	66.554 %	75.690 %	0.435 ppb	0.033 ppb	73.402 %
Concentration per Run 3	0.187 ppb	0.005 ppb	69.346 %	78.863 %	0.389 ppb	0.029 ppb	72.837 %
Recovery Percentage 1	4.279 %	2.650 %			37.588 %	3.301 %	
Concentration RSD	10.8 %	53.6 %	2.3 %	2.2 %	17.6 %	11.0 %	3.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	88	User name	ALPHALAB\Metals-Instrument	Comment	IS high
Analysis label:	xl2417363-01 6020TL	Rack	1		
Analysis started at:	4/5/2024 4:21:47 PM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.892 %	89.912 %	-0.003 ppb	63,825.909 ppb	2,298.773 ppb	42.936 ppb	6,862.661 ppb	6,016.827 ppb	136.311 %
Concentration per Run 1	92.460 %	87.457 %	-0.001 ppb	42,854.067 ppb	1,544.598 ppb	26.612 ppb	3,798.457 ppb	3,254.510 ppb	137.168 %
Concentration per Run 2	92.718 %	88.262 %	-0.004 ppb	67,835.083 ppb	2,473.706 ppb	45.652 ppb	7,340.034 ppb	6,302.493 ppb	137.541 %
Concentration per Run 3	90.498 %	94.016 %	-0.003 ppb	80,788.576 ppb	2,878.014 ppb	56.543 ppb	9,449.491 ppb	8,493.478 ppb	134.223 %
Concentration RSD	1.3 %	4.0 %	71.6 %	30.2 %	29.7 %	35.3 %	41.6 %	43.7 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	235.498 %	0.018 ppb	0.553 ppb	11.898 ppb	334.584 ppb	0.183 ppb	1.302 ppb	32.149 ppb	52.982 ppb
Concentration per Run 1	361.107 %	-0.006 ppb	0.302 ppb	7.211 ppb	207.169 ppb	0.132 ppb	0.907 ppb	23.750 ppb	39.292 ppb
Concentration per Run 2	197.845 %	0.014 ppb	0.596 ppb	12.423 ppb	343.541 ppb	0.176 ppb	1.390 ppb	34.151 ppb	56.119 ppb
Concentration per Run 3	147.542 %	0.045 ppb	0.762 ppb	16.058 ppb	453.041 ppb	0.240 ppb	1.608 ppb	38.546 ppb	63.534 ppb
Concentration RSD	47.4 %	143.8 %	42.1 %	37.4 %	36.8 %	29.8 %	27.6 %	23.6 %	23.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.395 %	0.412 ppb	11.832 ppb	37.804 ppb	2.098 ppb	90.220 %	0.044 ppb	0.049 ppb	146.000 %
Concentration per Run 1	81.661 %	0.433 ppb	11.916 ppb	36.008 ppb	2.104 ppb	95.958 %	0.026 ppb	0.026 ppb	215.354 %
Concentration per Run 2	89.828 %	0.410 ppb	11.423 ppb	37.695 ppb	2.123 ppb	88.858 %	0.052 ppb	0.056 ppb	120.449 %
Concentration per Run 3	87.696 %	0.394 ppb	12.157 ppb	39.707 ppb	2.067 ppb	85.844 %	0.053 ppb	0.065 ppb	102.196 %
Concentration RSD	4.9 %	4.8 %	3.2 %	4.9 %	1.4 %	5.8 %	34.9 %	41.4 %	41.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.250 ppb	9.437 ppb	101.940 %	109.074 %	0.009 ppb	0.468 ppb	440.283 %
Concentration per Run 1	0.138 ppb	5.583 ppb	148.570 %	155.090 %	-0.003 ppb	0.283 ppb	796.018 %
Concentration per Run 2	0.284 ppb	10.690 ppb	81.330 %	88.648 %	0.011 ppb	0.557 ppb	318.637 %
Concentration per Run 3	0.329 ppb	12.037 ppb	75.921 %	83.484 %	0.019 ppb	0.566 ppb	206.193 %
Concentration RSD	40.0 %	36.1 %	39.7 %	36.6 %	120.8 %	34.3 %	71.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 89
Analysis label: I2417363-01 6020TL
Analysis started at: 4/5/2024 4:36:58 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 53
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.961 %	92.251 %	-0.002 ppb	80,601.136 ppb	2,947.381 ppb	57.493 ppb	9,805.209 ppb	8,939.901 ppb	113.656 %
Concentration per Run 1	94.016 %	93.901 %	-0.003 ppb	65,235.364 ppb	2,365.471 ppb	44.284 ppb	7,083.108 ppb	6,410.309 ppb	112.591 %
Concentration per Run 2	92.951 %	92.060 %	0.002 ppb	84,689.279 ppb	3,075.582 ppb	61.792 ppb	10,389.952 ppb	9,445.374 ppb	114.916 %
Concentration per Run 3	91.915 %	90.794 %	-0.004 ppb	91,878.766 ppb	3,401.089 ppb	66.402 ppb	11,942.567 ppb	10,964.019 ppb	113.463 %
Concentration RSD	1.1 %	1.7 %	199.0 %	17.1 %	18.0 %	20.3 %	25.3 %	25.9 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	152.003 %	0.051 ppb	0.777 ppb	16.022 ppb	440.947 ppb	0.229 ppb	1.709 ppb	39.582 ppb	64.292 ppb
Concentration per Run 1	200.167 %	0.014 ppb	0.552 ppb	12.147 ppb	343.481 ppb	0.189 ppb	1.385 ppb	33.916 ppb	55.361 ppb
Concentration per Run 2	136.451 %	0.061 ppb	0.816 ppb	16.676 ppb	465.740 ppb	0.254 ppb	1.838 ppb	41.203 ppb	66.666 ppb
Concentration per Run 3	119.391 %	0.079 ppb	0.962 ppb	19.242 ppb	513.621 ppb	0.243 ppb	1.902 ppb	43.626 ppb	70.847 ppb
Concentration RSD	28.0 %	65.5 %	26.7 %	22.4 %	19.9 %	15.2 %	16.5 %	12.8 %	12.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.328 %	0.370 ppb	11.631 ppb	38.830 ppb	1.800 ppb	88.753 %	0.048 ppb	0.053 ppb	102.305 %
Concentration per Run 1	84.884 %	0.381 ppb	11.609 ppb	37.176 ppb	1.739 ppb	95.240 %	0.045 ppb	0.043 ppb	122.451 %
Concentration per Run 2	87.055 %	0.354 ppb	11.620 ppb	39.513 ppb	1.839 ppb	86.359 %	0.048 ppb	0.047 ppb	95.269 %
Concentration per Run 3	87.044 %	0.376 ppb	11.662 ppb	39.801 ppb	1.821 ppb	84.660 %	0.050 ppb	0.068 ppb	89.194 %
Concentration RSD	1.4 %	3.9 %	0.2 %	3.7 %	3.0 %	6.4 %	5.2 %	25.7 %	17.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.283 ppb	11.069 ppb	98.181 %	100.971 %	0.028 ppb	0.494 ppb	233.976 %
Concentration per Run 1	0.221 ppb	8.583 ppb	122.614 %	137.967 %	0.020 ppb	0.370 ppb	349.519 %
Concentration per Run 2	0.289 ppb	12.997 ppb	74.048 %	83.010 %	0.042 ppb	0.641 ppb	198.324 %
Concentration per Run 3	0.339 ppb	11.628 ppb	97.881 %	81.936 %	0.023 ppb	0.472 ppb	154.085 %
Concentration RSD	21.0 %	20.4 %	24.7 %	31.7 %	41.8 %	27.7 %	43.8 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	90	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417373-01 6020TL	Rack	1		
Analysis started at:	4/5/2024 4:41:35 PM	Vial	54		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.550 %	96.394 %	-0.003 ppb	71,215.970 ppb	4,007.811 ppb	101.780 ppb	17,305.706 ppb	15,472.764 ppb	93.364 %
Concentration per Run 1	91.678 %	99.079 %	0.005 ppb	70,375.154 ppb	3,975.198 ppb	101.685 ppb	17,850.854 ppb	16,040.059 ppb	94.654 %
Concentration per Run 2	90.717 %	92.750 %	-0.003 ppb	71,934.253 ppb	4,027.711 ppb	100.627 ppb	16,704.653 ppb	14,909.126 ppb	93.241 %
Concentration per Run 3	89.256 %	97.353 %	-0.010 ppb	71,338.503 ppb	4,020.525 ppb	103.028 ppb	17,361.612 ppb	15,469.107 ppb	92.196 %
Concentration RSD	1.3 %	3.4 %	291.6 %	1.1 %	0.7 %	1.2 %	3.3 %	3.7 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.869 %	0.253 ppb	1.578 ppb	41.655 ppb	535.284 ppb	0.164 ppb	2.833 ppb	78.372 ppb	283.751 ppb
Concentration per Run 1	92.549 %	0.247 ppb	1.753 ppb	41.646 ppb	529.882 ppb	0.164 ppb	2.929 ppb	77.424 ppb	282.278 ppb
Concentration per Run 2	93.290 %	0.266 ppb	1.448 ppb	41.223 ppb	528.331 ppb	0.172 ppb	2.690 ppb	77.335 ppb	281.588 ppb
Concentration per Run 3	89.769 %	0.246 ppb	1.533 ppb	42.095 ppb	547.639 ppb	0.158 ppb	2.880 ppb	80.357 ppb	287.386 ppb
Concentration RSD	2.0 %	4.4 %	10.0 %	1.0 %	2.0 %	4.3 %	4.5 %	2.2 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.672 %	2.419 ppb	0.435 ppb	41.009 ppb	0.912 ppb	84.168 %	0.047 ppb	0.073 ppb	88.405 %
Concentration per Run 1	90.454 %	2.460 ppb	0.325 ppb	40.823 ppb	0.856 ppb	86.026 %	0.052 ppb	0.077 ppb	90.741 %
Concentration per Run 2	88.041 %	2.351 ppb	0.587 ppb	40.526 ppb	0.911 ppb	84.249 %	0.046 ppb	0.067 ppb	87.604 %
Concentration per Run 3	84.523 %	2.447 ppb	0.394 ppb	41.677 ppb	0.969 ppb	82.227 %	0.043 ppb	0.074 ppb	86.869 %
Concentration RSD	3.4 %	2.5 %	31.3 %	1.5 %	6.2 %	2.3 %	10.1 %	7.2 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.685 ppb	9.470 ppb	71.078 %	80.481 %	0.021 ppb	1.613 ppb	85.770 %
Concentration per Run 1	0.665 ppb	9.269 ppb	71.758 %	81.077 %	0.012 ppb	1.622 ppb	91.080 %
Concentration per Run 2	0.719 ppb	9.378 ppb	71.445 %	80.991 %	0.022 ppb	1.581 ppb	84.392 %
Concentration per Run 3	0.671 ppb	9.764 ppb	70.032 %	79.376 %	0.028 ppb	1.636 ppb	81.836 %
Concentration RSD	4.3 %	2.7 %	1.3 %	1.2 %	38.8 %	1.8 %	5.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	91	User name	ALPHALAB\Metals-Instrument	Comment	Zinc
Analysis label:	I2417359-01d4 6020TL	Rack	1		
Analysis started at:	4/5/2024 4:46:13 PM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.127 %	98.274 %	-0.003 ppb	37,464.936 ppb	1,708.075 ppb	22.783 ppb	6,133.972 ppb	12,045.822 ppb	89.750 %
Concentration per Run 1	93.616 %	103.107 %	-0.001 ppb	36,722.639 ppb	1,679.387 ppb	22.811 ppb	6,166.087 ppb	12,312.015 ppb	91.347 %
Concentration per Run 2	90.229 %	95.972 %	-0.006 ppb	37,505.758 ppb	1,743.519 ppb	22.914 ppb	6,115.768 ppb	12,032.255 ppb	88.559 %
Concentration per Run 3	89.534 %	95.742 %	-0.003 ppb	38,166.412 ppb	1,701.318 ppb	22.624 ppb	6,120.062 ppb	11,793.195 ppb	89.343 %
Concentration RSD	2.4 %	4.3 %	65.1 %	1.9 %	1.9 %	0.6 %	0.5 %	2.2 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.593 %	2.517 ppb	0.343 ppb	24.115 ppb	173.562 ppb	0.065 ppb	0.796 ppb	11.392 ppb	61.312 ppb
Concentration per Run 1	93.235 %	2.584 ppb	0.387 ppb	24.489 ppb	173.644 ppb	0.062 ppb	0.784 ppb	11.381 ppb	62.059 ppb
Concentration per Run 2	93.401 %	2.588 ppb	0.333 ppb	24.285 ppb	167.373 ppb	0.066 ppb	0.819 ppb	11.480 ppb	61.417 ppb
Concentration per Run 3	94.143 %	2.379 ppb	0.309 ppb	23.571 ppb	179.669 ppb	0.066 ppb	0.786 ppb	11.314 ppb	60.459 ppb
Concentration RSD	0.5 %	4.8 %	11.7 %	2.0 %	3.5 %	3.3 %	2.4 %	0.7 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.249 %	0.136 ppb	0.160 ppb	22.220 ppb	0.328 ppb	87.232 %	0.041 ppb	0.022 ppb	90.080 %
Concentration per Run 1	91.003 %	0.192 ppb	0.103 ppb	22.344 ppb	0.340 ppb	87.909 %	0.035 ppb	0.024 ppb	89.581 %
Concentration per Run 2	90.929 %	0.133 ppb	0.278 ppb	22.048 ppb	0.285 ppb	86.670 %	0.041 ppb	0.019 ppb	90.340 %
Concentration per Run 3	91.816 %	0.083 ppb	0.100 ppb	22.269 ppb	0.360 ppb	87.116 %	0.047 ppb	0.023 ppb	90.319 %
Concentration RSD	0.5 %	40.2 %	63.4 %	0.7 %	11.7 %	0.7 %	14.8 %	12.5 %	0.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.104 ppb	11.837 ppb	72.072 %	81.015 %	0.006 ppb	0.196 ppb	99.868 %
Concentration per Run 1	0.091 ppb	12.056 ppb	72.598 %	81.690 %	-0.004 ppb	0.197 ppb	134.653 %
Concentration per Run 2	0.108 ppb	11.729 ppb	71.430 %	80.735 %	0.010 ppb	0.197 ppb	84.265 %
Concentration per Run 3	0.112 ppb	11.726 ppb	72.187 %	80.619 %	0.013 ppb	0.195 ppb	80.686 %
Concentration RSD	10.4 %	1.6 %	0.8 %	0.7 %	143.7 %	0.6 %	30.2 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	92	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 4:50:52 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.872 %	94.284 %	62.033 ppb	6,178.197 ppb	6,020.094 ppb	59.787 ppb	6,093.090 ppb	6,174.991 ppb	95.138 %
Concentration per Run 1	85.716 %	96.548 %	61.319 ppb	6,029.454 ppb	5,877.003 ppb	59.497 ppb	5,976.147 ppb	6,023.212 ppb	97.139 %
Concentration per Run 2	82.099 %	93.210 %	62.092 ppb	6,175.426 ppb	6,050.049 ppb	59.848 ppb	5,963.762 ppb	6,045.769 ppb	95.759 %
Concentration per Run 3	80.799 %	93.095 %	62.689 ppb	6,329.710 ppb	6,133.230 ppb	60.015 ppb	6,339.360 ppb	6,455.992 ppb	92.515 %
Recovery Percentage 1			103.389 %	102.970 %	100.335 %	99.644 %	101.551 %	102.917 %	
Concentration RSD	3.1 %	2.1 %	1.1 %	2.4 %	2.2 %	0.4 %	3.5 %	3.9 %	2.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.665 %	59.134 ppb	59.735 ppb	60.860 ppb	6,004.456 ppb	60.056 ppb	60.030 ppb	61.484 ppb	61.675 ppb
Concentration per Run 1	109.898 %	57.631 ppb	58.556 ppb	58.930 ppb	5,905.880 ppb	59.878 ppb	59.105 ppb	61.577 ppb	61.621 ppb
Concentration per Run 2	104.838 %	57.915 ppb	58.484 ppb	59.848 ppb	5,941.454 ppb	59.813 ppb	59.898 ppb	61.017 ppb	61.291 ppb
Concentration per Run 3	99.258 %	61.856 ppb	62.165 ppb	63.802 ppb	6,166.035 ppb	60.477 ppb	61.086 ppb	61.859 ppb	62.114 ppb
Recovery Percentage 1		98.557 %	99.558 %	101.433 %	100.074 %	100.094 %	100.050 %	102.474 %	102.792 %
Concentration RSD	5.1 %	4.0 %	3.5 %	4.3 %	2.3 %	0.6 %	1.7 %	0.7 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.500 %	61.850 ppb	64.255 ppb	62.556 ppb	60.402 ppb	85.063 %	63.604 ppb	62.762 ppb	86.485 %
Concentration per Run 1	89.168 %	62.976 ppb	65.372 ppb	63.688 ppb	60.423 ppb	85.070 %	64.752 ppb	63.658 ppb	86.356 %
Concentration per Run 2	90.509 %	60.624 ppb	62.911 ppb	61.709 ppb	59.996 ppb	86.184 %	63.282 ppb	62.678 ppb	87.564 %
Concentration per Run 3	88.823 %	61.951 ppb	64.482 ppb	62.270 ppb	60.786 ppb	83.935 %	62.778 ppb	61.951 ppb	85.534 %
Recovery Percentage 1		103.084 %	107.091 %	104.260 %	100.670 %		106.006 %	104.604 %	
Concentration RSD	1.0 %	1.9 %	1.9 %	1.6 %	0.7 %	1.3 %	1.6 %	1.4 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.551 ppb	63.342 ppb	70.160 %	79.325 %	54.147 ppb	65.148 ppb	90.868 %
Concentration per Run 1	63.690 ppb	64.625 ppb	70.378 %	79.266 %	53.728 ppb	66.183 ppb	87.820 %
Concentration per Run 2	61.820 ppb	62.439 ppb	71.123 %	80.859 %	60.611 ppb	64.367 ppb	80.291 %
Concentration per Run 3	62.142 ppb	62.962 ppb	68.979 %	77.850 %	48.100 ppb	64.895 ppb	104.494 %
Recovery Percentage 1	104.252 %	105.570 %			90.244 %	108.581 %	
Concentration RSD	1.6 %	1.8 %	1.6 %	1.9 %	11.6 %	1.4 %	13.6 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 93
Analysis label: CCB
Analysis started at: 4/5/2024 4:55:34 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	77.418 %	86.996 %	0.003 ppb	47.327 ppb	0.392 ppb	-0.148 ppb	5.326 ppb	1.938 ppb	75.535 %
Concentration per Run 1	77.765 %	88.492 %	0.009 ppb	46.819 ppb	0.558 ppb	-0.198 ppb	7.382 ppb	0.678 ppb	75.559 %
Concentration per Run 2	77.325 %	91.945 %	0.003 ppb	31.906 ppb	0.429 ppb	-0.140 ppb	2.121 ppb	3.915 ppb	74.611 %
Concentration per Run 3	77.163 %	80.552 %	-0.003 ppb	63.257 ppb	0.190 ppb	-0.106 ppb	6.475 ppb	1.222 ppb	76.436 %
Recovery Percentage 1			0.567 %	47.327 %	0.560 %	-1.479 %	5.326 %	1.938 %	
Concentration RSD	0.4 %	6.7 %	213.6 %	33.1 %	47.6 %	31.7 %	52.8 %	89.4 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	82.307 %	0.036 ppb	0.000 ppb	0.108 ppb	12.207 ppb	0.003 ppb	0.005 ppb	-0.002 ppb	-0.579 ppb
Concentration per Run 1	84.413 %	-0.002 ppb	-0.006 ppb	0.120 ppb	14.628 ppb	0.004 ppb	0.020 ppb	0.012 ppb	-0.602 ppb
Concentration per Run 2	83.932 %	0.067 ppb	0.000 ppb	0.096 ppb	12.085 ppb	-0.002 ppb	-0.017 ppb	-0.002 ppb	-0.613 ppb
Concentration per Run 3	78.576 %	0.042 ppb	0.006 ppb	0.108 ppb	9.906 ppb	0.007 ppb	0.012 ppb	-0.016 ppb	-0.522 ppb
Recovery Percentage 1		0.719 %	-0.009 %	10.813 %	24.413 %	0.601 %	0.252 %	-0.212 %	-11.585 %
Concentration RSD	3.9 %	97.4 %	6,244.0 %	11.2 %	19.4 %	154.2 %	393.6 %	672.2 %	8.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	83.311 %	0.095 ppb	0.311 ppb	0.002 ppb	0.881 ppb	82.293 %	0.017 ppb	0.006 ppb	84.134 %
Concentration per Run 1	83.769 %	0.134 ppb	0.299 ppb	0.001 ppb	0.927 ppb	83.989 %	0.015 ppb	0.009 ppb	85.816 %
Concentration per Run 2	82.615 %	0.103 ppb	0.385 ppb	0.003 ppb	0.878 ppb	82.066 %	0.013 ppb	0.004 ppb	83.596 %
Concentration per Run 3	83.549 %	0.050 ppb	0.248 ppb	0.003 ppb	0.839 ppb	80.823 %	0.023 ppb	0.004 ppb	82.989 %
Recovery Percentage 1		19.088 %	6.216 %	0.020 %	44.068 %		4.234 %	2.786 %	
Concentration RSD	0.7 %	44.3 %	22.1 %	48.3 %	5.0 %	1.9 %	33.2 %	49.8 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.076 ppb	0.023 ppb	66.292 %	74.655 %	0.833 ppb	0.033 ppb	75.246 %
Concentration per Run 1	0.069 ppb	0.012 ppb	67.762 %	74.914 %	0.635 ppb	0.036 ppb	79.494 %
Concentration per Run 2	0.068 ppb	0.038 ppb	65.535 %	74.620 %	0.964 ppb	0.033 ppb	73.890 %
Concentration per Run 3	0.090 ppb	0.019 ppb	65.580 %	74.431 %	0.902 ppb	0.029 ppb	72.353 %
Recovery Percentage 1	1.893 %	4.630 %			83.340 %	3.258 %	
Concentration RSD	16.8 %	57.3 %	1.9 %	0.3 %	21.0 %	10.5 %	5.0 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	94	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 5:00:16 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.882 %	90.027 %	63.202 ppb	5,386.108 ppb	6,330.565 ppb	62.519 ppb	6,446.143 ppb	6,490.672 ppb	86.434 %
Concentration per Run 1	79.768 %	90.909 %	61.752 ppb	6,511.851 ppb	6,486.354 ppb	62.737 ppb	6,507.251 ppb	6,630.405 ppb	85.872 %
Concentration per Run 2	80.218 %	87.342 %	63.658 ppb	4,935.516 ppb	6,431.206 ppb	63.935 ppb	6,415.742 ppb	6,270.823 ppb	88.818 %
Concentration per Run 3	76.659 %	91.829 %	64.196 ppb	4,710.956 ppb	6,074.134 ppb	60.886 ppb	6,415.438 ppb	6,570.788 ppb	84.613 %
Recovery Percentage 1			105.336 %	89.768 %	105.509 %	104.199 %	107.436 %	108.178 %	
Concentration RSD	2.5 %	2.6 %	2.0 %	18.2 %	3.5 %	2.5 %	0.8 %	3.0 %	2.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.682 %	62.528 ppb	62.619 ppb	62.678 ppb	6,189.830 ppb	61.265 ppb	61.292 ppb	62.366 ppb	61.463 ppb
Concentration per Run 1	99.017 %	62.979 ppb	63.125 ppb	62.888 ppb	6,235.688 ppb	61.542 ppb	62.353 ppb	62.847 ppb	61.636 ppb
Concentration per Run 2	97.071 %	61.707 ppb	61.220 ppb	61.557 ppb	6,067.980 ppb	61.295 ppb	60.352 ppb	61.850 ppb	61.578 ppb
Concentration per Run 3	93.958 %	62.898 ppb	63.512 ppb	63.590 ppb	6,265.821 ppb	60.958 ppb	61.170 ppb	62.401 ppb	61.176 ppb
Recovery Percentage 1		104.214 %	104.365 %	104.464 %	103.164 %	102.108 %	102.153 %	103.943 %	102.439 %
Concentration RSD	2.6 %	1.1 %	2.0 %	1.6 %	1.7 %	0.5 %	1.6 %	0.8 %	0.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.367 %	62.046 ppb	63.331 ppb	62.842 ppb	60.678 ppb	83.510 %	63.083 ppb	63.390 ppb	85.318 %
Concentration per Run 1	89.837 %	60.930 ppb	62.146 ppb	63.195 ppb	59.757 ppb	83.889 %	64.093 ppb	64.109 ppb	87.208 %
Concentration per Run 2	88.188 %	62.223 ppb	63.150 ppb	61.624 ppb	61.124 ppb	85.461 %	62.518 ppb	63.037 ppb	84.262 %
Concentration per Run 3	84.076 %	62.986 ppb	64.697 ppb	63.707 ppb	61.152 ppb	81.180 %	62.637 ppb	63.025 ppb	84.485 %
Recovery Percentage 1		103.411 %	105.552 %	104.737 %	101.129 %		105.138 %	105.651 %	
Concentration RSD	3.4 %	1.7 %	2.0 %	1.7 %	1.3 %	2.6 %	1.4 %	1.0 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	62.138 ppb	61.716 ppb	68.820 %	78.500 %	65.575 ppb	65.252 ppb	76.940 %
Concentration per Run 1	62.106 ppb	61.574 ppb	69.419 %	79.617 %	60.835 ppb	65.690 ppb	81.941 %
Concentration per Run 2	63.150 ppb	62.911 ppb	68.994 %	77.704 %	65.737 ppb	66.169 ppb	76.225 %
Concentration per Run 3	61.158 ppb	60.665 ppb	68.048 %	78.179 %	70.153 ppb	63.896 ppb	72.655 %
Recovery Percentage 1	103.563 %	102.861 %			109.291 %	108.753 %	
Concentration RSD	1.6 %	1.8 %	1.0 %	1.3 %	7.1 %	1.8 %	6.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	95	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/5/2024 5:04:59 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	77.466 %	82.623 %	0.007 ppb	53.466 ppb	0.292 ppb	-0.141 ppb	10.938 ppb	0.699 ppb	74.793 %
Concentration per Run 1	78.231 %	83.429 %	-0.003 ppb	48.314 ppb	-0.066 ppb	-0.134 ppb	13.216 ppb	5.408 ppb	74.247 %
Concentration per Run 2	80.125 %	82.393 %	0.009 ppb	51.944 ppb	0.407 ppb	-0.146 ppb	7.259 ppb	-2.282 ppb	77.829 %
Concentration per Run 3	74.044 %	82.048 %	0.014 ppb	60.141 ppb	0.537 ppb	-0.142 ppb	12.338 ppb	-1.028 ppb	72.303 %
Recovery Percentage 1			1.306 %	53.466 %	0.418 %	-1.408 %	10.938 %	0.699 %	
Concentration RSD	4.0 %	0.9 %	136.1 %	11.3 %	108.5 %	4.2 %	29.4 %	589.9 %	3.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	79.546 %	0.007 ppb	-0.010 ppb	0.089 ppb	11.254 ppb	0.002 ppb	-0.004 ppb	-0.005 ppb	-0.583 ppb
Concentration per Run 1	81.096 %	0.014 ppb	-0.004 ppb	0.059 ppb	13.835 ppb	0.000 ppb	-0.010 ppb	-0.019 ppb	-0.642 ppb
Concentration per Run 2	79.614 %	0.015 ppb	-0.013 ppb	0.097 ppb	11.374 ppb	0.003 ppb	0.007 ppb	0.000 ppb	-0.549 ppb
Concentration per Run 3	77.928 %	-0.007 ppb	-0.012 ppb	0.111 ppb	8.552 ppb	0.003 ppb	-0.009 ppb	0.005 ppb	-0.559 ppb
Recovery Percentage 1		0.147 %	-0.952 %	8.887 %	22.507 %	0.319 %	-0.217 %	-0.480 %	-11.667 %
Concentration RSD	2.0 %	163.7 %	54.6 %	30.6 %	23.5 %	112.4 %	220.2 %	270.4 %	8.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	81.071 %	0.110 ppb	0.266 ppb	0.004 ppb	1.020 ppb	79.910 %	0.013 ppb	0.008 ppb	81.574 %
Concentration per Run 1	80.854 %	0.080 ppb	0.212 ppb	0.004 ppb	1.051 ppb	79.983 %	0.013 ppb	0.007 ppb	82.535 %
Concentration per Run 2	81.892 %	0.098 ppb	0.339 ppb	0.004 ppb	1.013 ppb	79.611 %	0.012 ppb	0.005 ppb	82.311 %
Concentration per Run 3	80.466 %	0.153 ppb	0.248 ppb	0.003 ppb	0.996 ppb	80.137 %	0.012 ppb	0.010 ppb	79.877 %
Recovery Percentage 1		22.050 %	5.328 %	0.038 %	50.996 %		3.131 %	3.784 %	
Concentration RSD	0.9 %	34.6 %	24.5 %	15.2 %	2.8 %	0.3 %	4.6 %	36.0 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.075 ppb	0.015 ppb	64.778 %	73.733 %	0.767 ppb	0.032 ppb	72.583 %
Concentration per Run 1	0.064 ppb	0.017 ppb	65.434 %	74.268 %	0.560 ppb	0.036 ppb	77.320 %
Concentration per Run 2	0.072 ppb	0.017 ppb	64.691 %	72.788 %	0.903 ppb	0.034 ppb	69.931 %
Concentration per Run 3	0.089 ppb	0.010 ppb	64.208 %	74.144 %	0.838 ppb	0.025 ppb	70.499 %
Recovery Percentage 1	1.869 %	2.970 %			76.696 %	3.150 %	
Concentration RSD	17.1 %	30.3 %	1.0 %	1.1 %	23.8 %	18.3 %	5.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	96	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417373-01d4 6020TL	Rack	1		
Analysis started at:	4/5/2024 6:08:13 PM	Vial	56		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.663 %	93.709 %	-0.001 ppb	11,938.359 ppb	664.028 ppb	16.203 ppb	2,235.934 ppb	1,906.364 ppb	122.423 %
Concentration per Run 1	87.104 %	93.556 %	-0.004 ppb	8,708.342 ppb	480.274 ppb	11.104 ppb	1,395.471 ppb	1,167.705 ppb	118.242 %
Concentration per Run 2	88.725 %	91.714 %	0.007 ppb	12,674.498 ppb	718.531 ppb	17.633 ppb	2,360.640 ppb	1,992.876 ppb	122.364 %
Concentration per Run 3	90.160 %	95.857 %	-0.005 ppb	14,432.238 ppb	793.279 ppb	19.872 ppb	2,951.691 ppb	2,558.510 ppb	126.664 %
Concentration RSD	1.7 %	2.2 %	737.1 %	24.6 %	24.6 %	28.1 %	35.1 %	36.7 %	3.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	197.305 %	0.007 ppb	0.188 ppb	6.131 ppb	84.850 ppb	0.030 ppb	0.415 ppb	14.545 ppb	72.450 ppb
Concentration per Run 1	286.699 %	-0.020 ppb	0.106 ppb	4.088 ppb	56.764 ppb	0.018 ppb	0.252 ppb	11.479 ppb	72.104 ppb
Concentration per Run 2	170.953 %	0.002 ppb	0.203 ppb	6.483 ppb	85.781 ppb	0.032 ppb	0.505 ppb	15.483 ppb	73.247 ppb
Concentration per Run 3	134.262 %	0.039 ppb	0.254 ppb	7.821 ppb	112.006 ppb	0.039 ppb	0.489 ppb	16.673 ppb	71.998 ppb
Concentration RSD	40.3 %	434.9 %	40.3 %	30.9 %	32.6 %	35.2 %	34.1 %	18.7 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.227 %	0.674 ppb	0.146 ppb	9.513 ppb	0.374 ppb	91.494 %	0.008 ppb	0.017 ppb	122.072 %
Concentration per Run 1	82.539 %	0.768 ppb	0.181 ppb	8.941 ppb	0.362 ppb	98.315 %	0.004 ppb	0.011 ppb	168.157 %
Concentration per Run 2	85.928 %	0.613 ppb	0.143 ppb	9.743 ppb	0.453 ppb	89.248 %	0.011 ppb	0.017 ppb	102.950 %
Concentration per Run 3	87.215 %	0.642 ppb	0.114 ppb	9.855 ppb	0.305 ppb	86.920 %	0.010 ppb	0.024 ppb	95.109 %
Concentration RSD	2.8 %	12.2 %	22.8 %	5.2 %	20.0 %	6.6 %	41.4 %	36.2 %	32.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.141 ppb	1.743 ppb	110.650 %	109.530 %	0.045 ppb	0.321 ppb	292.516 %
Concentration per Run 1	0.090 ppb	1.083 ppb	151.999 %	159.521 %	0.022 ppb	0.199 ppb	519.663 %
Concentration per Run 2	0.154 ppb	1.800 ppb	105.355 %	86.634 %	0.052 ppb	0.310 ppb	210.800 %
Concentration per Run 3	0.179 ppb	2.345 ppb	74.595 %	82.435 %	0.062 ppb	0.453 ppb	147.085 %
Concentration RSD	32.6 %	36.3 %	35.2 %	39.6 %	45.7 %	39.7 %	68.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	97	User name	ALPHALAB\Metals-Instrument	Comment	IS issues
Analysis label:	zl2417363-01d2 6020TL	Rack	1		
Analysis started at:	4/5/2024 6:12:51 PM	Vial	57		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.214 %	89.720 %	0.003 ppb	49,141.509 ppb	1,864.201 ppb	40.110 ppb	6,925.969 ppb	6,858.829 ppb	89.300 %
Concentration per Run 1	86.097 %	92.635 %	0.000 ppb	48,603.954 ppb	1,862.415 ppb	40.369 ppb	6,904.142 ppb	6,890.175 ppb	89.411 %
Concentration per Run 2	86.042 %	89.183 %	0.007 ppb	48,246.311 ppb	1,814.596 ppb	39.957 ppb	6,803.229 ppb	6,671.258 ppb	90.476 %
Concentration per Run 3	83.504 %	87.342 %	0.001 ppb	50,574.262 ppb	1,915.592 ppb	40.003 ppb	7,070.538 ppb	7,015.055 ppb	88.014 %
Concentration RSD	1.7 %	3.0 %	136.6 %	2.6 %	2.7 %	0.6 %	1.9 %	2.5 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.401 %	0.078 ppb	0.577 ppb	11.924 ppb	304.268 ppb	0.166 ppb	1.947 ppb	23.876 ppb	43.471 ppb
Concentration per Run 1	94.791 %	0.100 ppb	0.569 ppb	12.010 ppb	301.893 ppb	0.170 ppb	1.836 ppb	23.450 ppb	42.791 ppb
Concentration per Run 2	94.643 %	0.063 ppb	0.601 ppb	11.785 ppb	300.427 ppb	0.166 ppb	1.987 ppb	23.661 ppb	43.524 ppb
Concentration per Run 3	90.770 %	0.071 ppb	0.562 ppb	11.977 ppb	310.486 ppb	0.162 ppb	2.019 ppb	24.518 ppb	44.099 ppb
Concentration RSD	2.4 %	25.0 %	3.6 %	1.0 %	1.8 %	2.4 %	5.0 %	2.4 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.604 %	0.159 ppb	5.906 ppb	20.052 ppb	0.890 ppb	80.278 %	0.033 ppb	0.036 ppb	84.306 %
Concentration per Run 1	88.433 %	0.113 ppb	5.673 ppb	19.739 ppb	0.866 ppb	82.825 %	0.030 ppb	0.034 ppb	85.936 %
Concentration per Run 2	83.700 %	0.171 ppb	6.015 ppb	20.061 ppb	0.851 ppb	78.998 %	0.034 ppb	0.038 ppb	83.339 %
Concentration per Run 3	84.680 %	0.192 ppb	6.031 ppb	20.355 ppb	0.953 ppb	79.009 %	0.036 ppb	0.035 ppb	83.642 %
Concentration RSD	2.9 %	26.0 %	3.4 %	1.5 %	6.2 %	2.7 %	8.8 %	6.4 %	1.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.139 ppb	8.200 ppb	69.562 %	76.732 %	0.035 ppb	0.479 ppb	93.245 %
Concentration per Run 1	0.142 ppb	8.157 ppb	70.328 %	77.704 %	0.013 ppb	0.473 ppb	122.969 %
Concentration per Run 2	0.134 ppb	8.313 ppb	69.493 %	76.292 %	0.040 ppb	0.485 ppb	80.209 %
Concentration per Run 3	0.142 ppb	8.131 ppb	68.865 %	76.200 %	0.052 ppb	0.479 ppb	76.559 %
Concentration RSD	3.2 %	1.2 %	1.1 %	1.1 %	56.4 %	1.3 %	27.7 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index:	98	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/5/2024 6:17:30 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.496 %	89.988 %	63.899 ppb	5,558.696 ppb	5,953.486 ppb	59.531 ppb	5,853.740 ppb	5,837.494 ppb	96.743 %
Concentration per Run 1	82.487 %	94.822 %	64.168 ppb	5,810.603 ppb	5,738.501 ppb	56.850 ppb	5,503.472 ppb	5,506.156 ppb	97.626 %
Concentration per Run 2	82.572 %	87.342 %	63.509 ppb	4,656.938 ppb	6,031.403 ppb	60.333 ppb	5,860.882 ppb	5,786.630 ppb	97.906 %
Concentration per Run 3	79.428 %	87.802 %	64.021 ppb	6,208.545 ppb	6,090.555 ppb	61.409 ppb	6,196.866 ppb	6,219.697 ppb	94.698 %
Recovery Percentage 1			106.498 %	92.645 %	99.225 %	99.218 %	97.562 %	97.292 %	
Concentration RSD	2.2 %	4.7 %	0.5 %	14.5 %	3.2 %	4.0 %	5.9 %	6.2 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.908 %	57.925 ppb	59.059 ppb	60.195 ppb	5,987.284 ppb	60.126 ppb	60.224 ppb	62.264 ppb	62.958 ppb
Concentration per Run 1	115.089 %	56.436 ppb	56.728 ppb	58.139 ppb	5,775.664 ppb	58.628 ppb	59.384 ppb	62.420 ppb	62.246 ppb
Concentration per Run 2	106.246 %	57.623 ppb	58.843 ppb	59.678 ppb	6,001.132 ppb	59.826 ppb	60.570 ppb	61.922 ppb	62.966 ppb
Concentration per Run 3	99.388 %	59.715 ppb	61.605 ppb	62.768 ppb	6,185.055 ppb	61.923 ppb	60.718 ppb	62.451 ppb	63.663 ppb
Recovery Percentage 1		96.541 %	98.431 %	100.325 %	99.788 %	100.210 %	100.374 %	103.774 %	104.930 %
Concentration RSD	7.4 %	2.9 %	4.1 %	3.9 %	3.4 %	2.8 %	1.2 %	0.5 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	84.132 %	64.594 ppb	66.203 ppb	65.204 ppb	61.709 ppb	80.481 %	64.360 ppb	64.700 ppb	82.754 %
Concentration per Run 1	84.124 %	66.129 ppb	66.236 ppb	66.583 ppb	61.344 ppb	81.699 %	64.847 ppb	64.422 ppb	84.613 %
Concentration per Run 2	83.649 %	65.163 ppb	67.408 ppb	64.734 ppb	60.998 ppb	80.995 %	64.406 ppb	64.541 ppb	82.810 %
Concentration per Run 3	84.622 %	62.490 ppb	64.964 ppb	64.295 ppb	62.786 ppb	78.749 %	63.828 ppb	65.137 ppb	80.841 %
Recovery Percentage 1		107.657 %	110.338 %	108.673 %	102.849 %		107.267 %	107.833 %	
Concentration RSD	0.6 %	2.9 %	1.8 %	1.9 %	1.5 %	1.9 %	0.8 %	0.6 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	63.364 ppb	61.906 ppb	77.253 %	76.324 %	59.461 ppb	67.124 ppb	79.883 %
Concentration per Run 1	64.521 ppb	65.221 ppb	71.190 %	77.763 %	52.139 ppb	67.905 ppb	88.927 %
Concentration per Run 2	61.405 ppb	55.196 ppb	92.703 %	76.288 %	60.665 ppb	66.414 ppb	77.224 %
Concentration per Run 3	64.164 ppb	65.300 ppb	67.867 %	74.922 %	65.581 ppb	67.053 ppb	73.498 %
Recovery Percentage 1	105.606 %	103.176 %			99.102 %	111.874 %	
Concentration RSD	2.7 %	9.4 %	17.5 %	1.9 %	11.4 %	1.1 %	10.1 %

Alpha ICPMSQ Data with SRD

4/7/2024 11:56:16 AM

Analysis index: 99
Analysis label: CCB
Analysis started at: 4/5/2024 6:22:12 PM
User name ALPHALAB\Metals-Instrument
Rack 0
Vial 10
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	78.013 %	81.511 %	0.006 ppb	46.285 ppb	0.397 ppb	-0.107 ppb	7.533 ppb	-1.006 ppb	76.602 %
Concentration per Run 1	79.517 %	79.401 %	0.013 ppb	49.156 ppb	0.284 ppb	-0.201 ppb	6.531 ppb	1.767 ppb	77.683 %
Concentration per Run 2	76.968 %	87.917 %	0.000 ppb	30.333 ppb	0.348 ppb	-0.035 ppb	6.464 ppb	-2.485 ppb	76.314 %
Concentration per Run 3	77.554 %	77.215 %	0.004 ppb	59.365 ppb	0.559 ppb	-0.085 ppb	9.602 ppb	-2.300 ppb	75.809 %
Recovery Percentage 1			1.125 %	46.285 %	0.567 %	-1.073 %	7.533 %	-1.006 %	
Concentration RSD	1.7 %	6.9 %	115.4 %	31.8 %	36.3 %	79.4 %	23.8 %	238.9 %	1.3 %

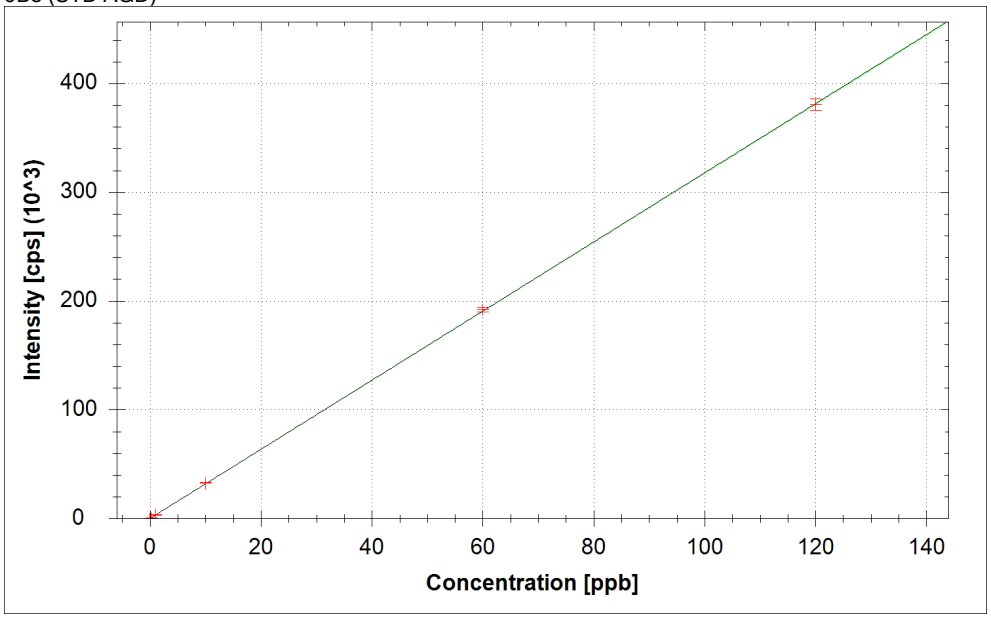
Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	82.807 %	-0.001 ppb	0.005 ppb	0.081 ppb	12.019 ppb	0.000 ppb	0.000 ppb	-0.010 ppb	-0.579 ppb
Concentration per Run 1	84.413 %	-0.010 ppb	0.027 ppb	0.097 ppb	13.578 ppb	-0.002 ppb	-0.011 ppb	-0.001 ppb	-0.649 ppb
Concentration per Run 2	83.654 %	0.016 ppb	-0.006 ppb	0.051 ppb	12.676 ppb	0.001 ppb	0.000 ppb	-0.016 ppb	-0.583 ppb
Concentration per Run 3	80.355 %	-0.008 ppb	-0.005 ppb	0.097 ppb	9.804 ppb	0.000 ppb	0.013 ppb	-0.011 ppb	-0.507 ppb
Recovery Percentage 1		-0.011 %	0.519 %	8.139 %	24.038 %	-0.098 %	0.016 %	-0.961 %	-11.587 %
Concentration RSD	2.6 %	2,697.1 %	361.6 %	32.7 %	16.4 %	303.8 %	3,853.6 %	82.1 %	12.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	80.974 %	0.103 ppb	0.271 ppb	0.002 ppb	0.905 ppb	78.648 %	0.005 ppb	0.006 ppb	79.996 %
Concentration per Run 1	80.836 %	0.107 ppb	0.208 ppb	0.002 ppb	0.923 ppb	79.951 %	0.006 ppb	0.011 ppb	80.397 %
Concentration per Run 2	81.358 %	0.086 ppb	0.219 ppb	0.002 ppb	0.889 ppb	79.577 %	0.003 ppb	0.006 ppb	81.809 %
Concentration per Run 3	80.727 %	0.117 ppb	0.386 ppb	0.002 ppb	0.903 ppb	76.417 %	0.006 ppb	0.001 ppb	77.782 %
Recovery Percentage 1		20.634 %	5.420 %	0.019 %	45.253 %		1.288 %	3.116 %	
Concentration RSD	0.4 %	15.2 %	36.8 %	14.4 %	1.9 %	2.5 %	34.4 %	83.8 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.057 ppb	0.018 ppb	65.809 %	72.618 %	0.940 ppb	0.027 ppb	74.308 %
Concentration per Run 1	0.050 ppb	0.027 ppb	67.224 %	72.970 %	0.674 ppb	0.031 ppb	80.594 %
Concentration per Run 2	0.064 ppb	0.013 ppb	66.296 %	73.604 %	1.091 ppb	0.028 ppb	73.485 %
Concentration per Run 3	0.055 ppb	0.015 ppb	63.907 %	71.280 %	1.055 ppb	0.023 ppb	68.844 %
Recovery Percentage 1	1.416 %	3.667 %			93.994 %	2.747 %	
Concentration RSD	12.5 %	40.5 %	2.6 %	1.7 %	24.6 %	15.7 %	8.0 %

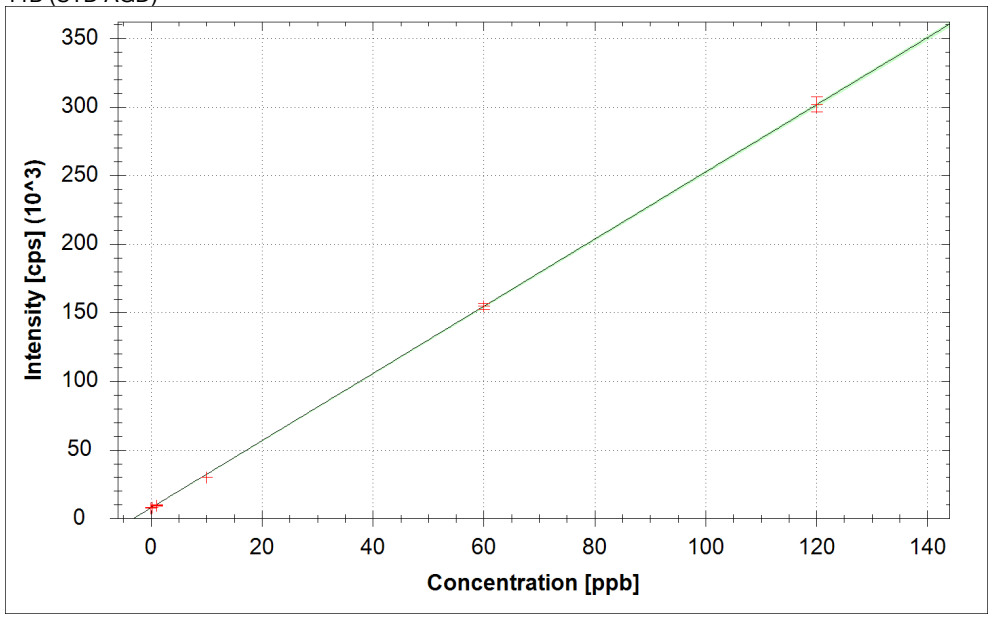
Calibration Curves:

9Be (STD AGD)



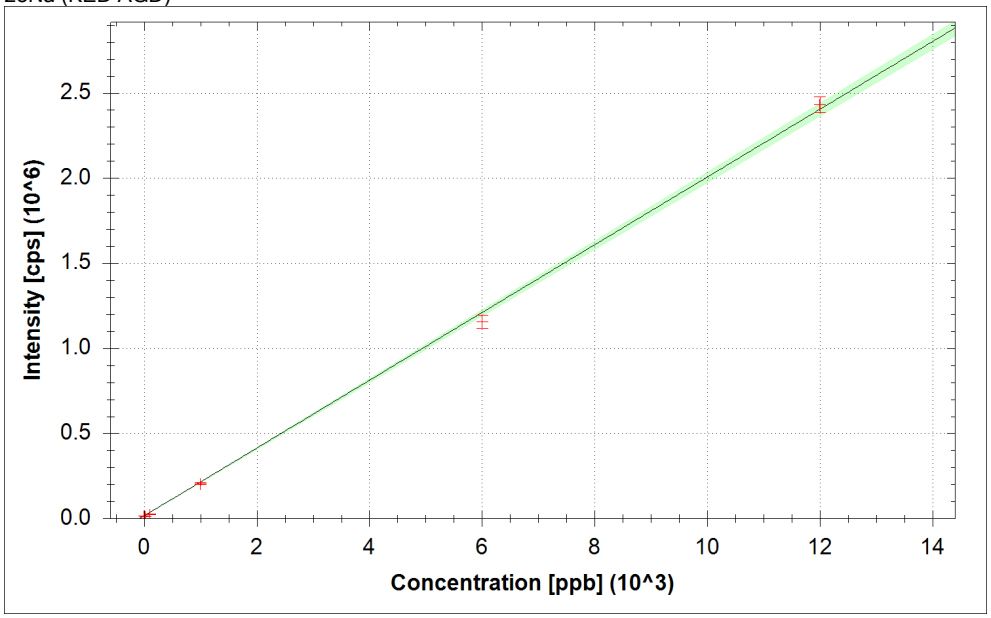
f(x) = 3176.7651*x + 39.5593
R² = 1.0000
BEC = 0.012 ppb
LoD = 0.0051 ppb

11B (STD AGD)



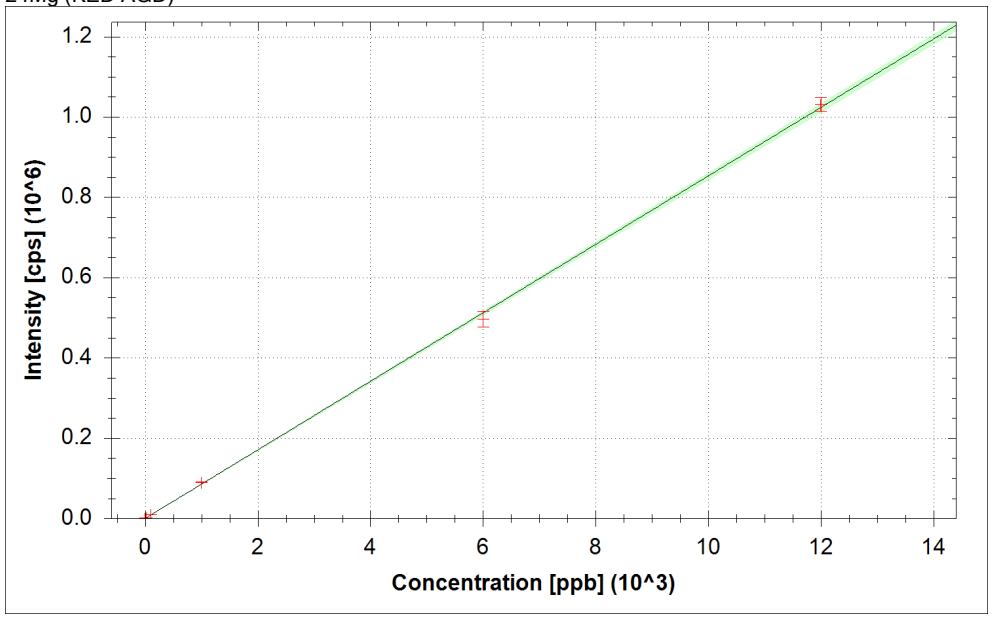
f(x) = 2447.5983*x + 7727.6814
R² = 0.9999
BEC = 3.157 ppb
LoD = 0.0766 ppb

23Na (KED AGD)



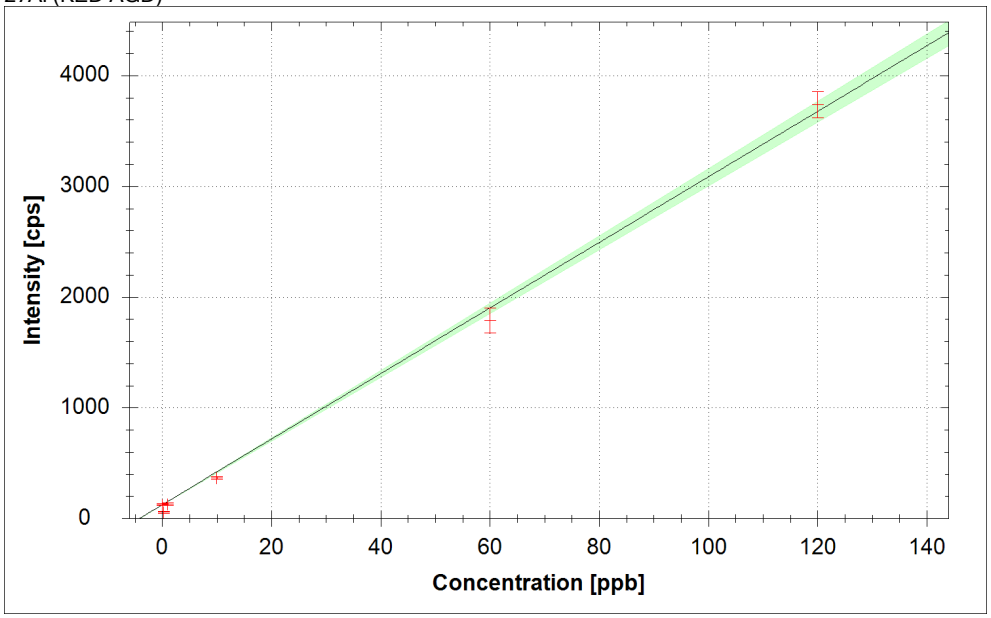
f(x) = 199.0051*x + 15504.4044
R² = 0.9992
BEC = 77.910 ppb
LoD = 7.2613 ppb

24Mg (KED AGD)



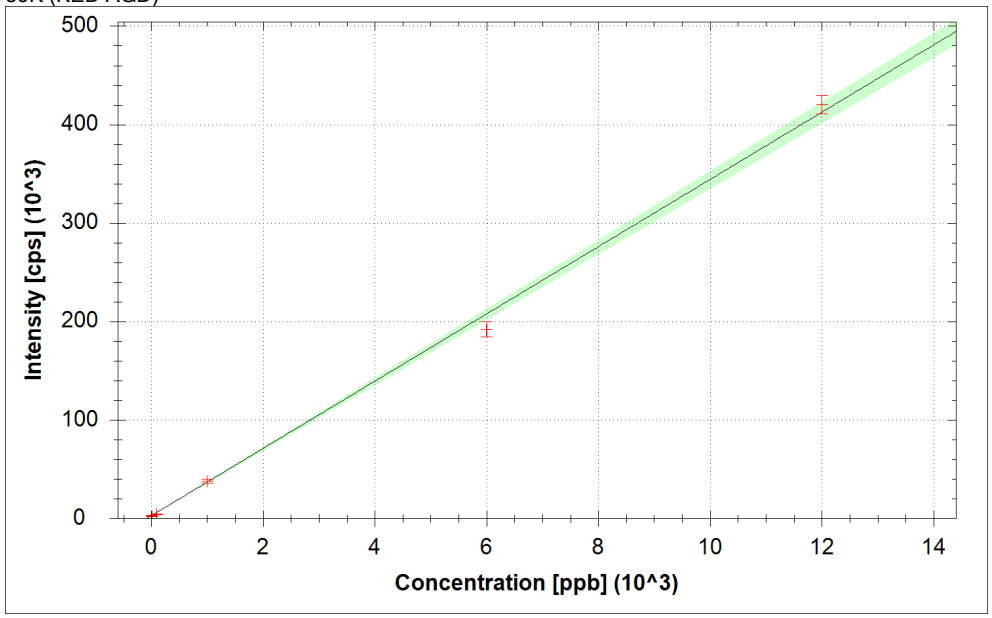
f(x) = 85.2456*x + 306.0720
R² = 0.9997
BEC = 3.590 ppb
LoD = 2.8789 ppb

27Al (KED AGD)



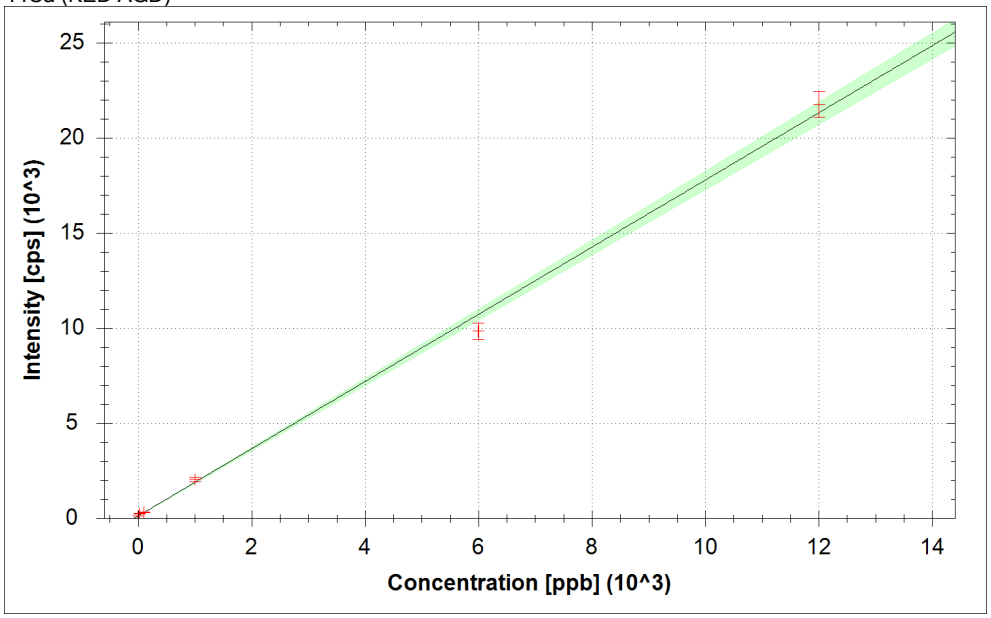
f(x) = 29.5919*x + 124.5394
R² = 0.9976
BEC = 4.209 ppb
LoD = 1.0557 ppb

39K (KED AGD)



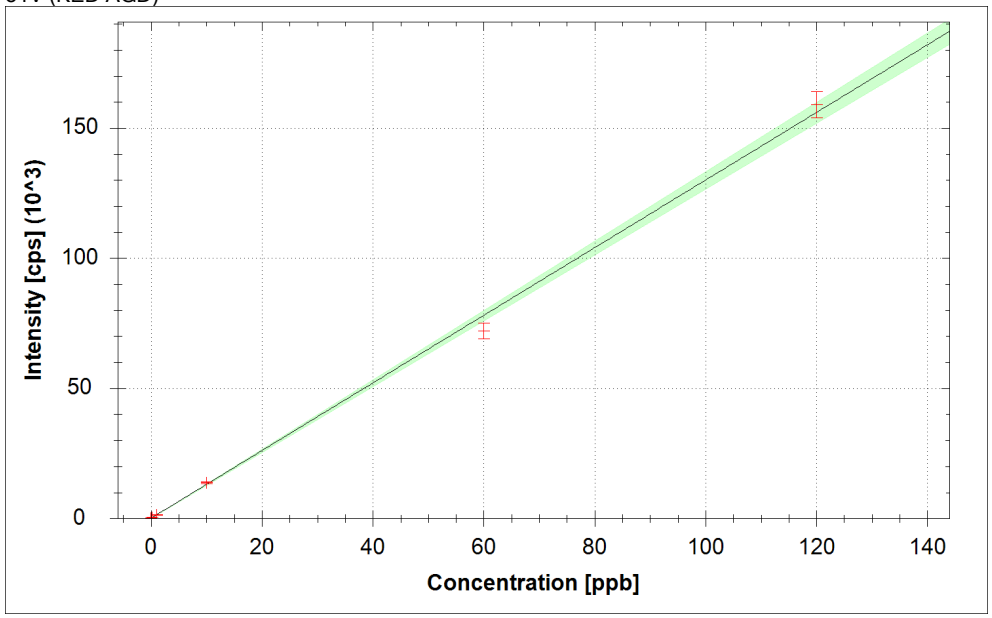
f(x) = 34.1367*x + 2760.0887
R² = 0.9978
BEC = 80.854 ppb
LoD = 12.6133 ppb

44Ca (KED AGD)



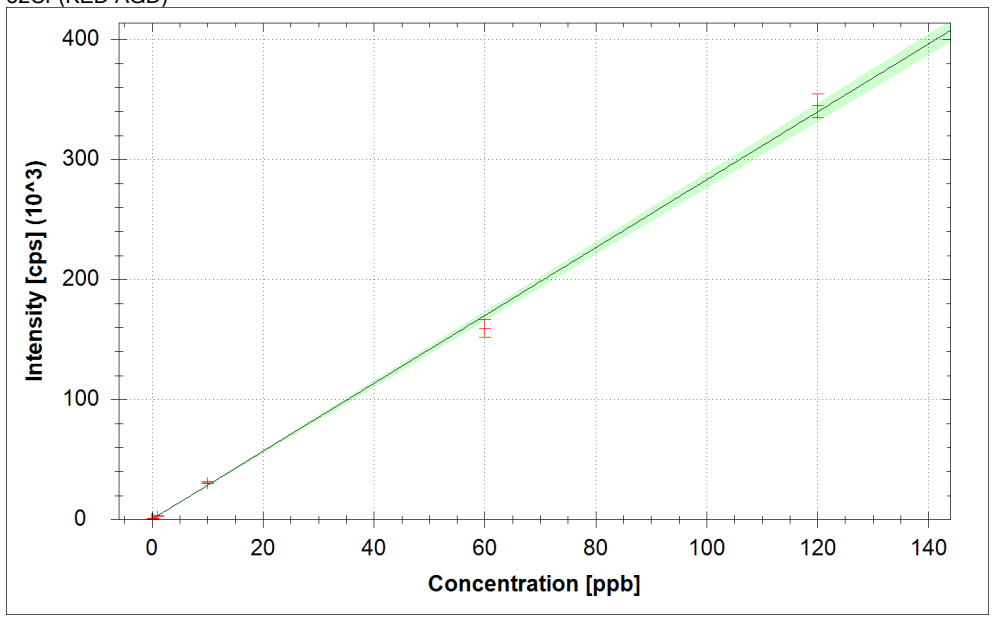
f(x) = 1.7657*x + 129.5263
R² = 0.9973
BEC = 73.355 ppb
LoD = 14.7445 ppb

51V (KED AGD)



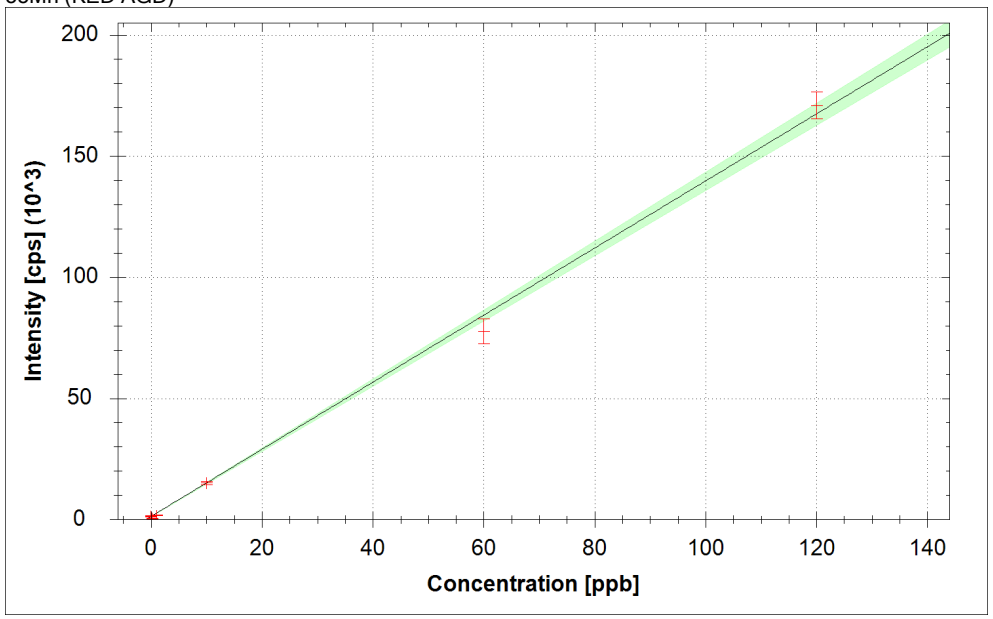
f(x) = 1298.9622*x + 99.7673
R² = 0.9977
BEC = 0.077 ppb
LoD = 0.1033 ppb

52Cr (KED AGD)



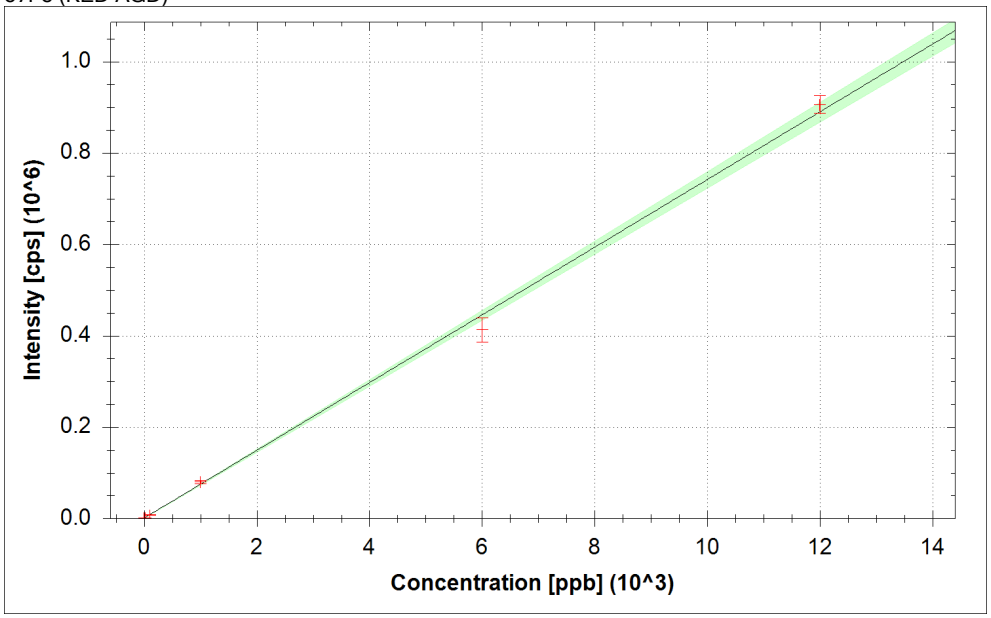
f(x) = 2827.2291*x + 194.4224
R² = 0.9984
BEC = 0.069 ppb
LoD = 0.0089 ppb

55Mn (KED AGD)



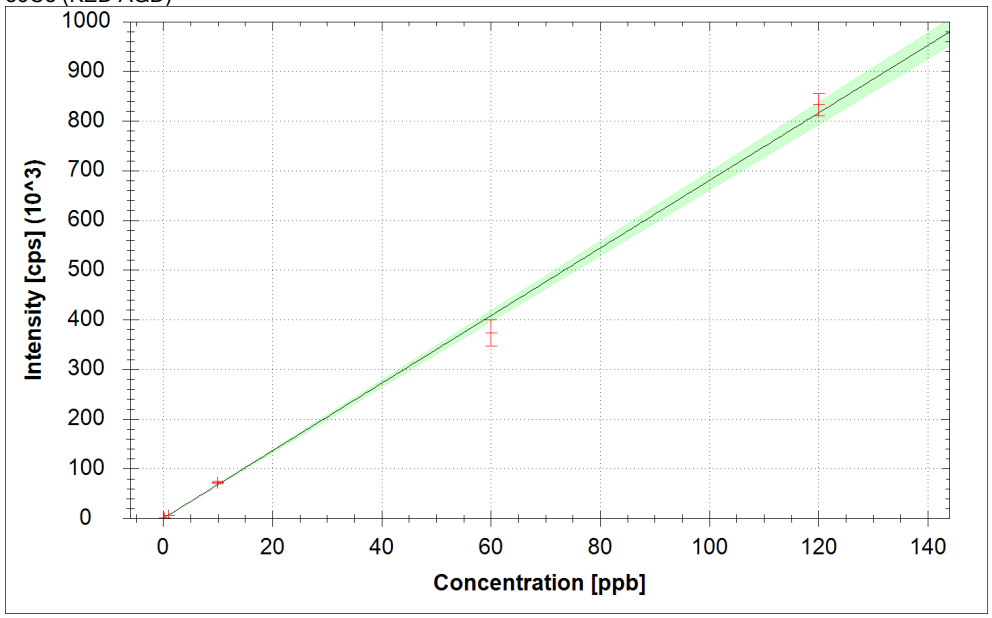
f(x) = 1384.5433*x + 1252.5619
R² = 0.9974
BEC = 0.905 ppb
LoD = 0.3518 ppb

57Fe (KED AGD)



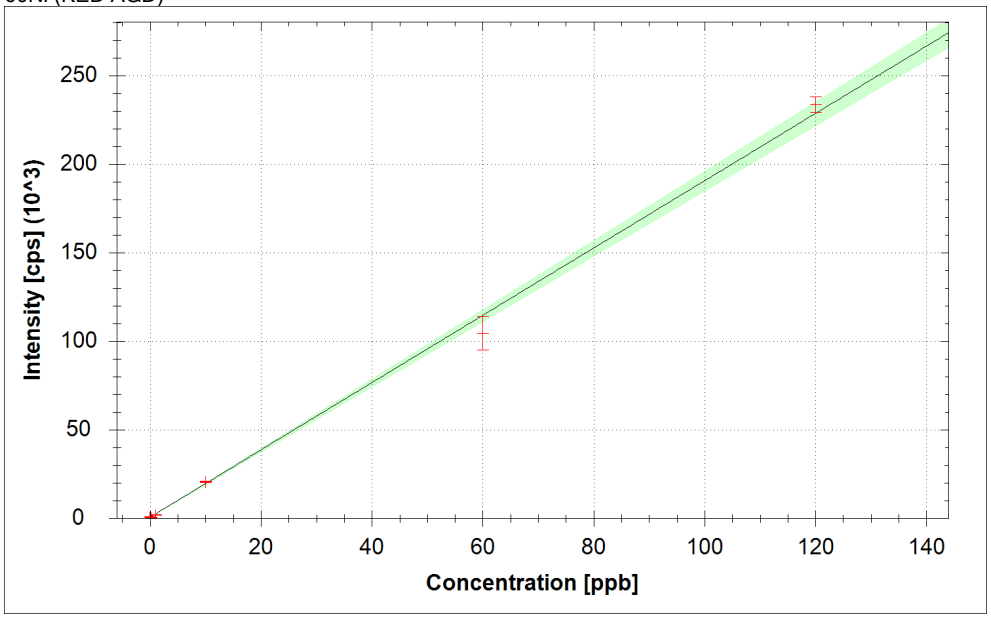
f(x) = 74.0570*x + 857.7708
R² = 0.9980
BEC = 11.583 ppb
LoD = 6.1592 ppb

59Co (KED AGD)



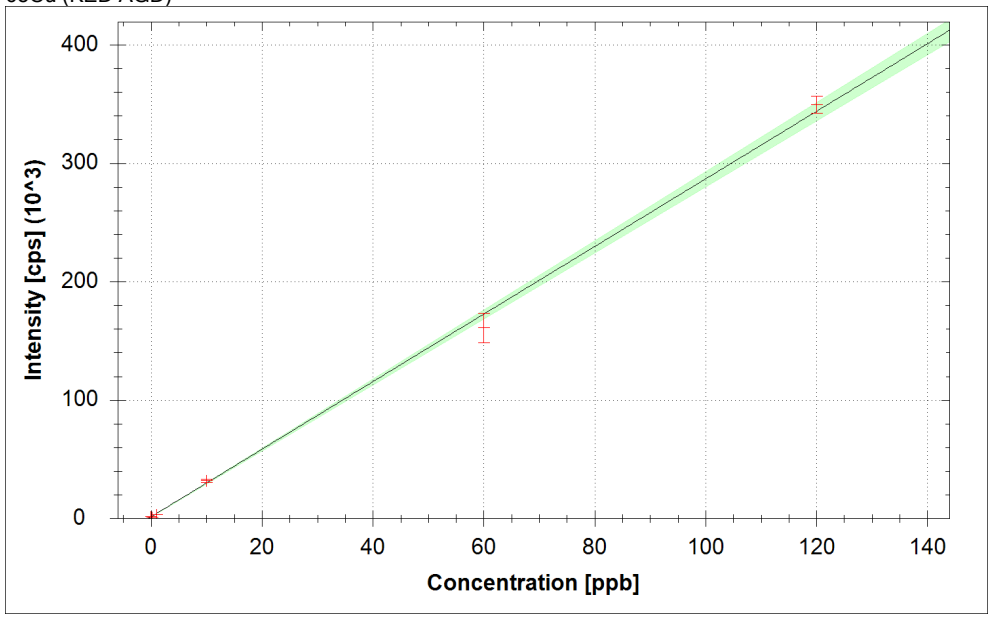
f(x) = 6798.1887*x + 35.3259
R² = 0.9973
BEC = 0.005 ppb
LoD = 0.0026 ppb

60Ni (KED AGD)



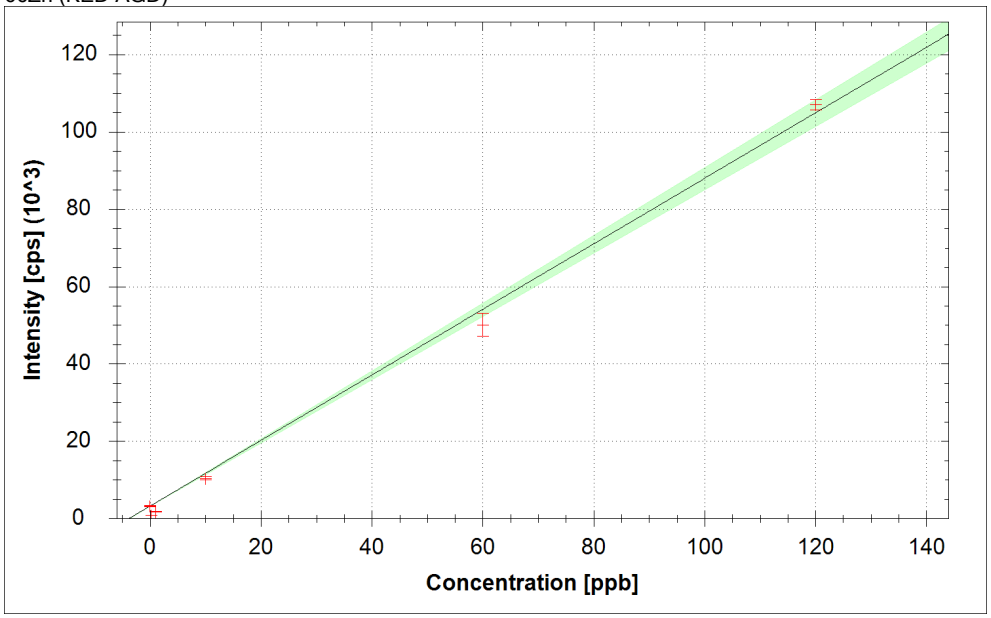
f(x) = 1900.2039*x + 712.4203
R² = 0.9970
BEC = 0.375 ppb
LoD = 0.2232 ppb

65Cu (KED AGD)



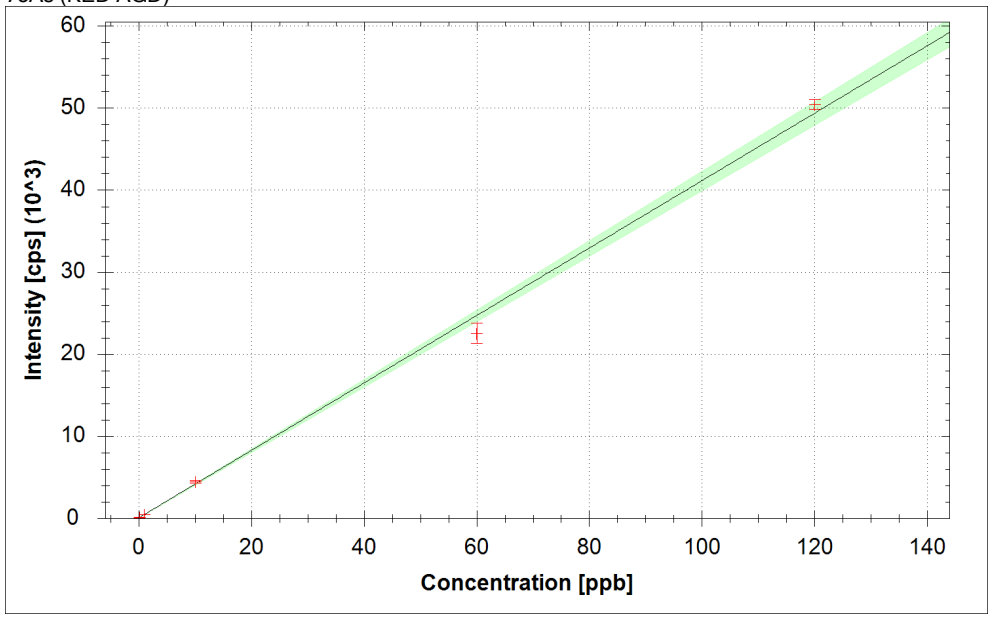
f(x) = 2853.1501*x + 1369.5768
R² = 0.9982
BEC = 0.480 ppb
LoD = 0.0739 ppb

66Zn (KED AGD)



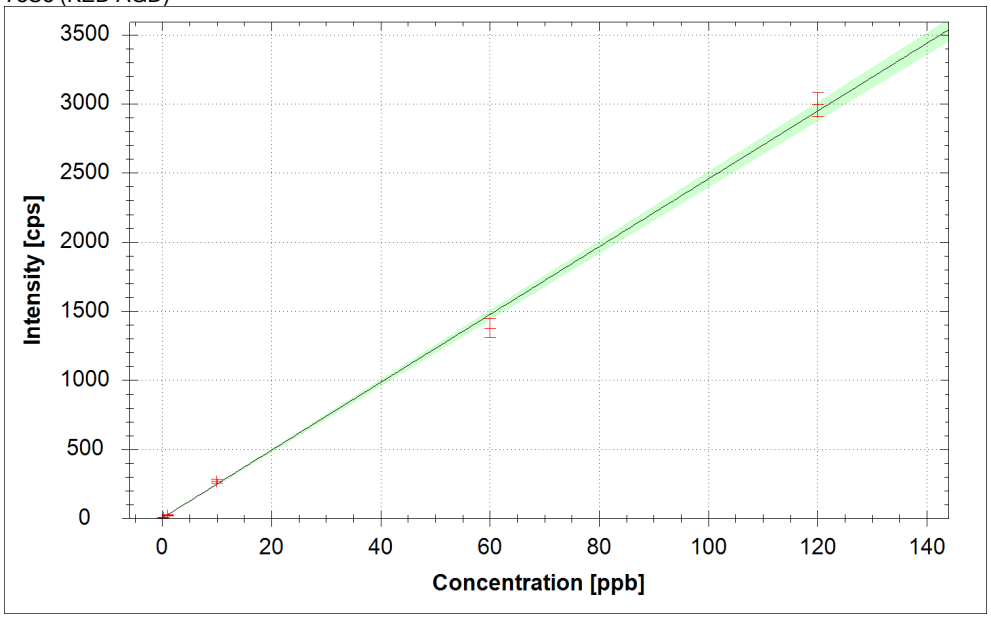
f(x) = 847.3070*x + 3218.1259
R² = 0.9962
BEC = 3.798 ppb
LoD = 0.5450 ppb

75As (KED AGD)



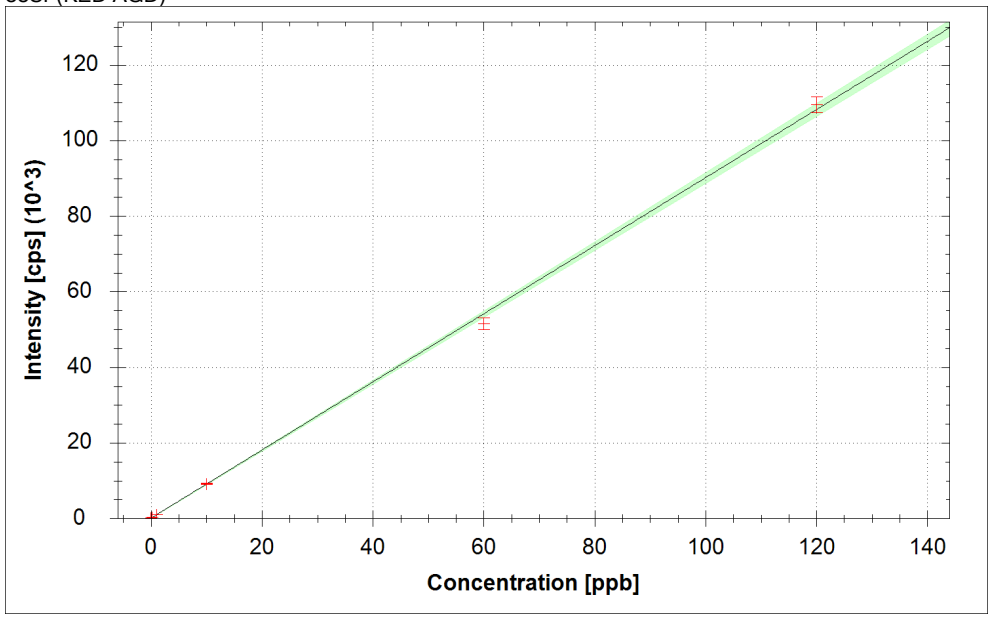
f(x) = 410.4751*x + 81.8625
R² = 0.9971
BEC = 0.199 ppb
LoD = 0.0700 ppb

78Se (KED AGD)



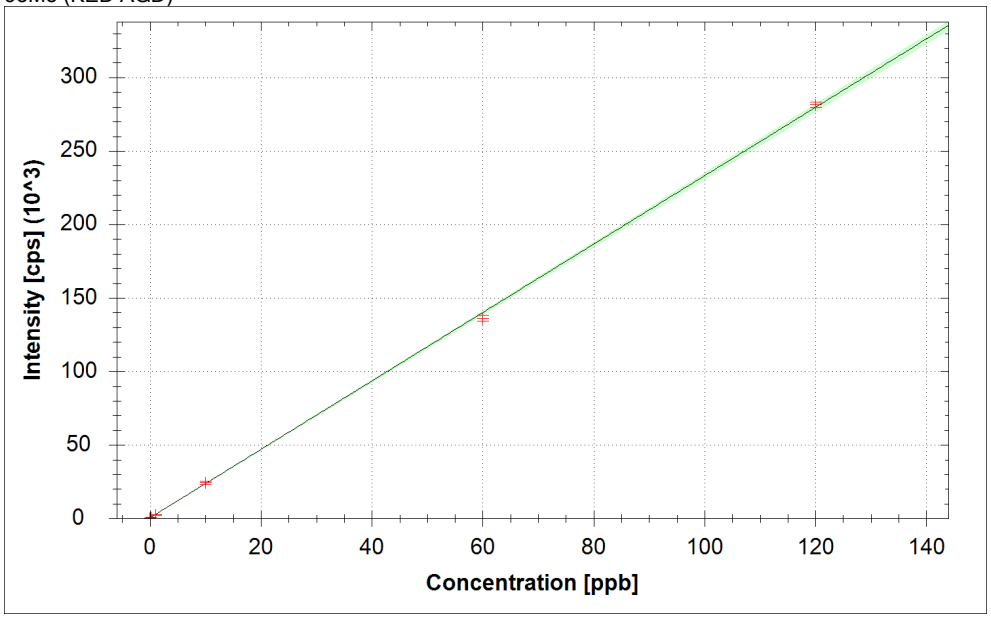
f(x) = 24.5256*x + 2.6502
R² = 0.9983
BEC = 0.108 ppb
LoD = 0.1589 ppb

88Sr (KED AGD)



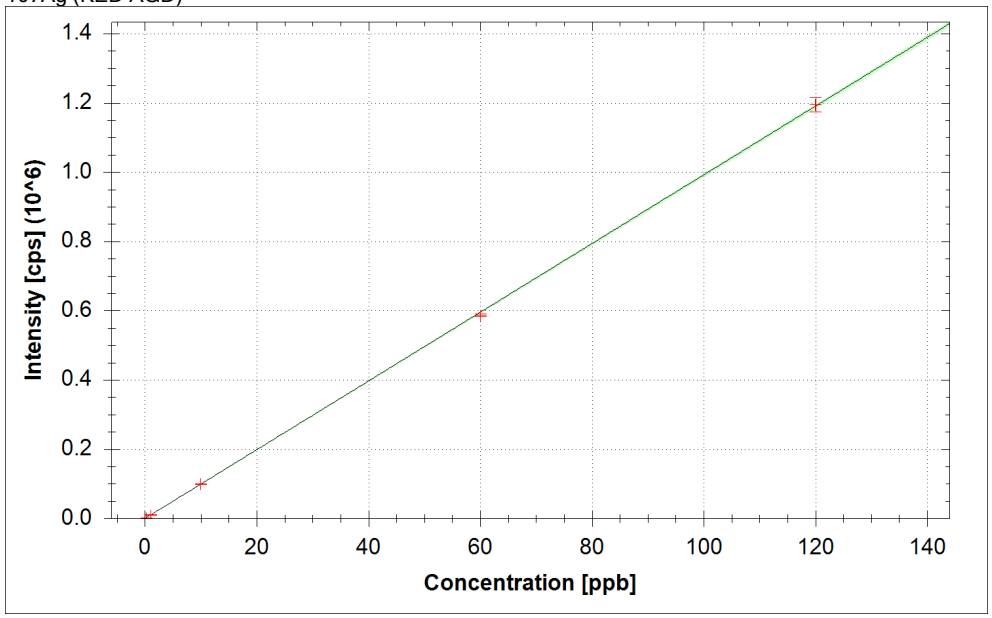
f(x) = 900.7666*x + 86.1811
R² = 0.9991
BEC = 0.096 ppb
LoD = 0.0174 ppb

95Mo (KED AGD)



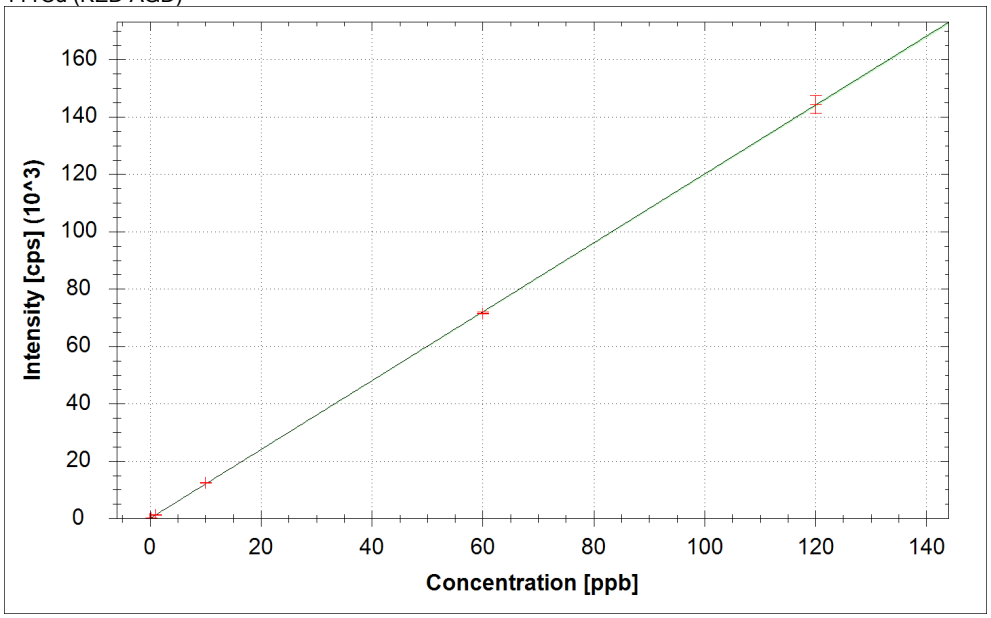
f(x) = 2326.3368*x + 464.6194
R² = 0.9997
BEC = 0.200 ppb
LoD = 0.0859 ppb

107Ag (KED AGD)



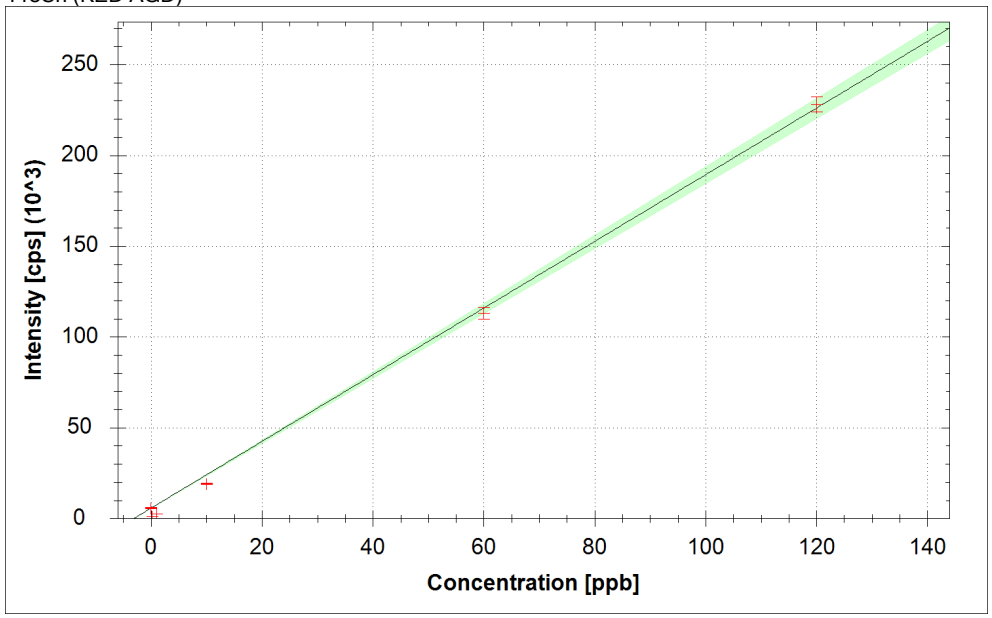
f(x) = 9918.0946*x + 54.3377
R² = 0.9999
BEC = 0.005 ppb
LoD = 0.0018 ppb

111Cd (KED AGD)



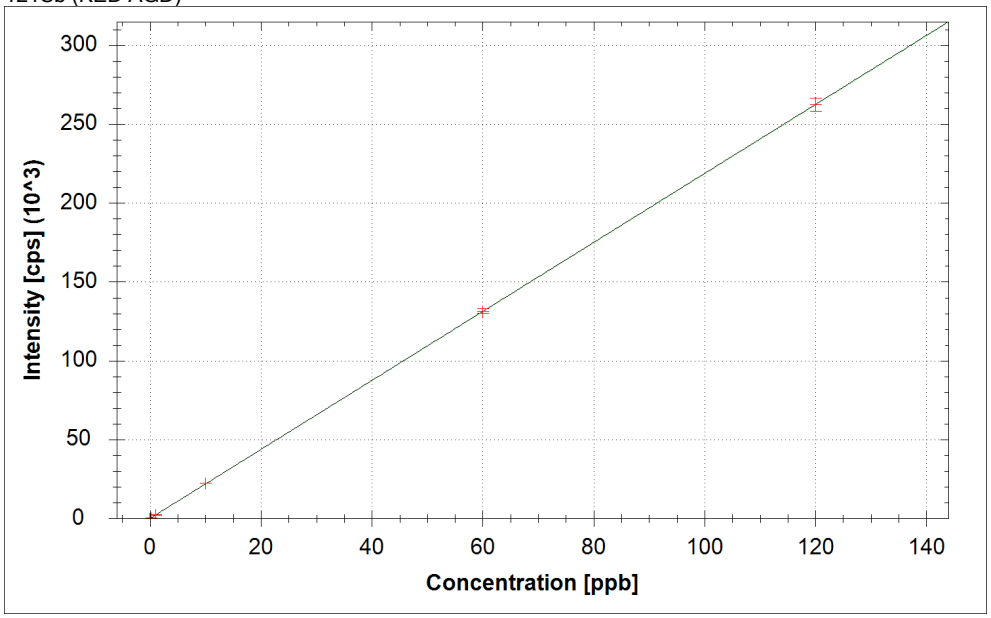
f(x) = 1200.6163*x + 2.2384
R² = 1.0000
BEC = 0.002 ppb
LoD = 0.0052 ppb

118Sn (KED AGD)



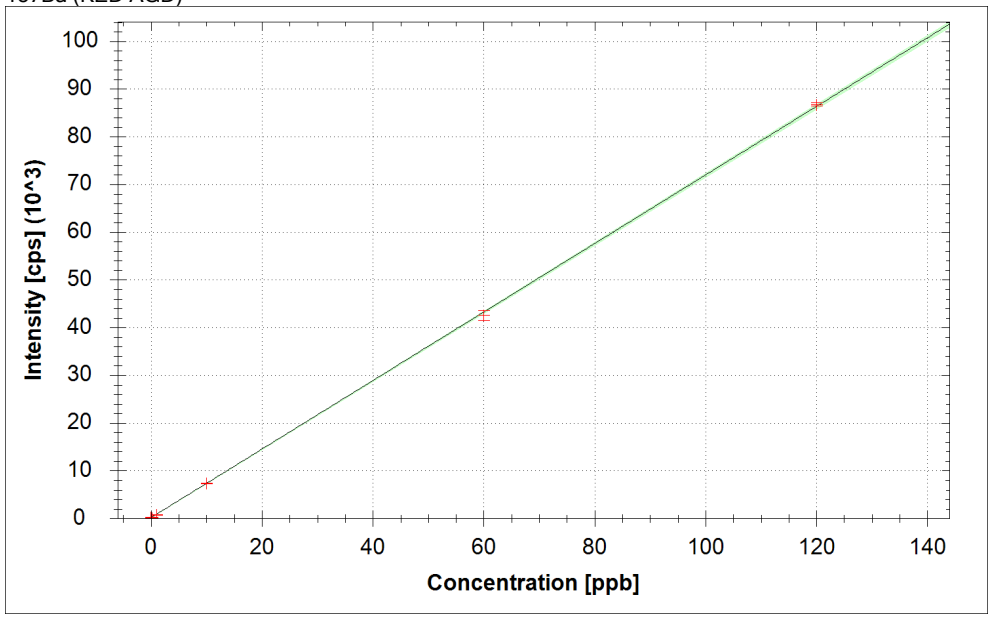
f(x) = 1835.7210*x + 5686.3527
R² = 0.9979
BEC = 3.098 ppb
LoD = 0.5633 ppb

121Sb (KED AGD)



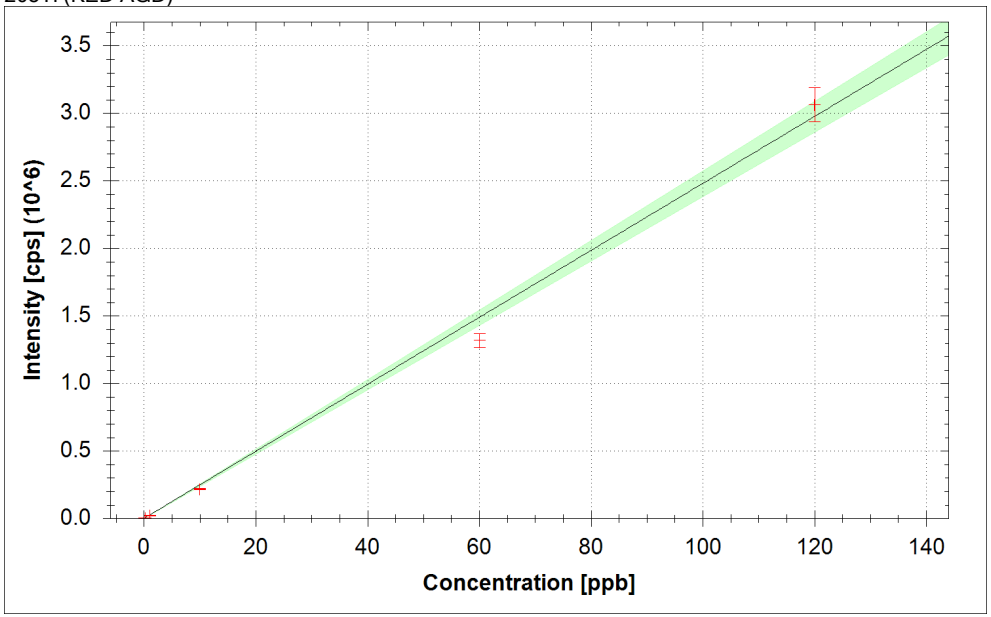
f(x) = 2186.7861*x + 26.3525
R² = 1.0000
BEC = 0.012 ppb
LoD = 0.0141 ppb

137Ba (KED AGD)



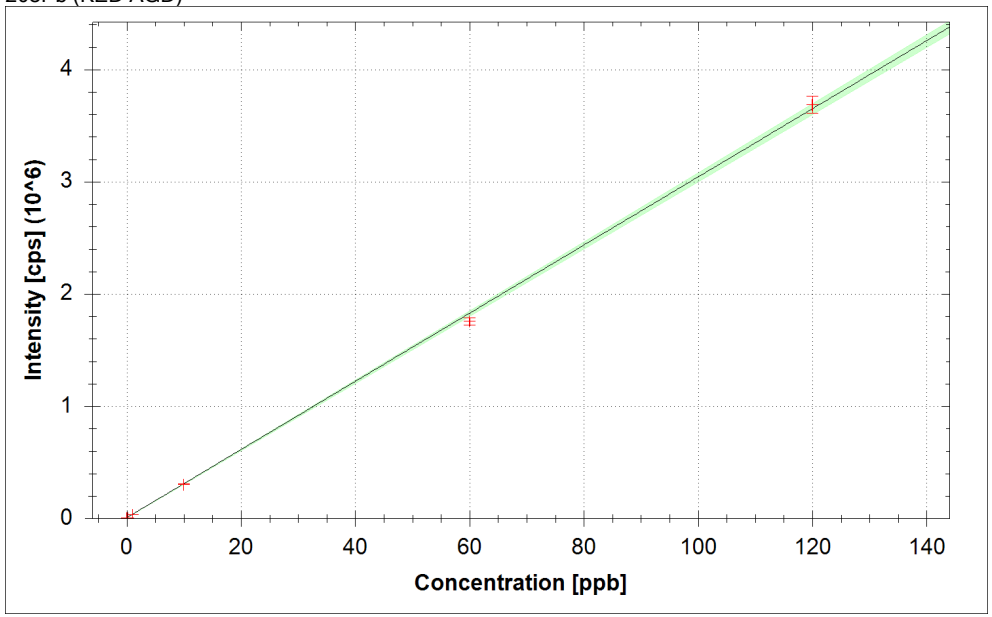
f(x) = 717.9937*x + 179.8086
R² = 0.9999
BEC = 0.250 ppb
LoD = 0.1947 ppb

205Tl (KED AGD)



f(x) = 24791.5082*x + 765.1553
R² = 0.9950
BEC = 0.031 ppb
LoD = 0.0423 ppb

208Pb (KED AGD)



f(x) = 30363.0277*x + 6614.3621
R² = 0.9994
BEC = 0.218 ppb
LoD = 0.0035 ppb

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/7/2024 1:23:11 PM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	102.586 %	1.7 %		0.000 %
6Li (KED AGD)	105.031 %	2.9 %		0.000 %
9Be (STD AGD)	0.185 ppb	4.1 %	0.200 ppb	7.310 %
11B (STD AGD)	0.142 ppb	29.5 %	0.200 ppb	28.807 %
23Na (KED AGD)	-33.695 ppb	0.9 %	20.000 ppb	268.475 %
24Mg (KED AGD)	17.052 ppb	7.0 %	20.000 ppb	14.741 %
27Al (KED AGD)	-2.296 ppb	12.6 %	0.200 ppb	1,247.987 %
39K (KED AGD)	-26.107 ppb	4.1 %	20.000 ppb	230.535 %
44Ca (KED AGD)	70.891 ppb	17.5 %	20.000 ppb	254.455 %
45Sc (STD AGD)	105.577 %	1.1 %		0.000 %
51V (KED AGD)	0.216 ppb	26.1 %	0.200 ppb	7.850 %
52Cr (KED AGD)	0.156 ppb	11.2 %	0.200 ppb	22.194 %
55Mn (KED AGD)	-0.644 ppb	4.5 %	0.200 ppb	421.967 %
57Fe (KED AGD)	8.407 ppb	16.1 %	20.000 ppb	57.966 %
59Co (KED AGD)	0.168 ppb	1.1 %	0.200 ppb	15.789 %
60Ni (KED AGD)	-0.137 ppb	29.8 %	0.200 ppb	168.328 %
65Cu (KED AGD)	-0.168 ppb	21.3 %	0.200 ppb	183.751 %
66Zn (KED AGD)	-2.891 ppb	0.8 %	0.200 ppb	1,545.428 %
74Ge (KED AGD)	93.691 %	4.1 %		0.000 %
75As (KED AGD)	0.147 ppb	4.4 %	0.200 ppb	26.704 %
78Se (KED AGD)	0.177 ppb	3.4 %	0.200 ppb	11.579 %
88Sr (KED AGD)	0.206 ppb	7.2 %	0.200 ppb	3.074 %
95Mo (KED AGD)	0.112 ppb	38.1 %	0.200 ppb	44.236 %
103Rh (KED AGD)	103.520 %	3.7 %		0.000 %
107Ag (KED AGD)	0.175 ppb	5.3 %	0.200 ppb	12.707 %
111Cd (KED AGD)	0.201 ppb	2.7 %	0.200 ppb	0.360 %
115In (KED AGD)	101.405 %	1.2 %		0.000 %
118Sn (KED AGD)	-2.562 ppb	1.1 %	0.200 ppb	1,380.895 %
121Sb (KED AGD)	0.181 ppb	4.0 %	0.200 ppb	9.671 %
137Ba (KED AGD)	-0.021 ppb	191.3 %	0.200 ppb	110.291 %
159Tb (KED AGD)	102.403 %	3.2 %		0.000 %
175Lu (KED AGD)	101.545 %	2.1 %		0.000 %
205Tl (KED AGD)	0.151 ppb	12.5 %	0.200 ppb	24.406 %
208Pb (KED AGD)	-0.003 ppb	393.9 %	0.200 ppb	101.620 %
209Bi (KED AGD)	102.619 %	0.7 %		0.000 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/7/2024 1:27:38 PM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	104.275 %	2.5 %		0.000 %
6Li (KED AGD)	103.870 %	3.4 %		0.000 %
9Be (STD AGD)	1.014 ppb	3.9 %	1.000 ppb	1.353 %
11B (STD AGD)	0.731 ppb	21.0 %	1.000 ppb	26.906 %
23Na (KED AGD)	38.291 ppb	11.2 %	100.000 ppb	61.709 %
24Mg (KED AGD)	97.076 ppb	0.7 %	100.000 ppb	2.924 %
27Al (KED AGD)	0.159 ppb	227.1 %	1.000 ppb	84.077 %
39K (KED AGD)	47.282 ppb	25.8 %	100.000 ppb	52.718 %
44Ca (KED AGD)	107.240 ppb	0.7 %	100.000 ppb	7.240 %
45Sc (STD AGD)	110.033 %	4.0 %		0.000 %
51V (KED AGD)	0.947 ppb	7.2 %	1.000 ppb	5.318 %
52Cr (KED AGD)	0.920 ppb	7.3 %	1.000 ppb	8.009 %
55Mn (KED AGD)	0.240 ppb	34.9 %	1.000 ppb	75.971 %
57Fe (KED AGD)	86.186 ppb	6.3 %	100.000 ppb	13.814 %
59Co (KED AGD)	0.915 ppb	3.8 %	1.000 ppb	8.471 %
60Ni (KED AGD)	0.627 ppb	10.0 %	1.000 ppb	37.345 %
65Cu (KED AGD)	0.651 ppb	5.6 %	1.000 ppb	34.851 %
66Zn (KED AGD)	-1.773 ppb	2.7 %	1.000 ppb	277.305 %
74Ge (KED AGD)	94.970 %	3.7 %		0.000 %
75As (KED AGD)	0.875 ppb	5.4 %	1.000 ppb	12.473 %
78Se (KED AGD)	0.784 ppb	16.7 %	1.000 ppb	21.601 %
88Sr (KED AGD)	0.957 ppb	1.7 %	1.000 ppb	4.333 %
95Mo (KED AGD)	0.885 ppb	9.6 %	1.000 ppb	11.494 %
103Rh (KED AGD)	101.565 %	2.4 %		0.000 %
107Ag (KED AGD)	0.977 ppb	1.7 %	1.000 ppb	2.279 %
111Cd (KED AGD)	1.011 ppb	4.7 %	1.000 ppb	1.144 %
115In (KED AGD)	101.735 %	3.2 %		0.000 %
118Sn (KED AGD)	-1.803 ppb	2.9 %	1.000 ppb	280.330 %
121Sb (KED AGD)	0.996 ppb	1.8 %	1.000 ppb	0.432 %
137Ba (KED AGD)	0.770 ppb	6.1 %	1.000 ppb	23.045 %
159Tb (KED AGD)	101.711 %	3.1 %		0.000 %
175Lu (KED AGD)	102.336 %	2.7 %		0.000 %
205Tl (KED AGD)	0.833 ppb	5.6 %	1.000 ppb	16.732 %
208Pb (KED AGD)	0.830 ppb	2.8 %	1.000 ppb	16.984 %
209Bi (KED AGD)	102.560 %	3.6 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 10/1000 Cal
Analysis Type: STD
Analysis Started at: 4/7/2024 1:32:06 PM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	104.502 %	2.7 %		0.000 %
6Li (KED AGD)	98.839 %	0.7 %		0.000 %
9Be (STD AGD)	10.273 ppb	0.7 %	10.000 ppb	2.730 %
11B (STD AGD)	9.106 ppb	0.5 %	10.000 ppb	8.944 %
23Na (KED AGD)	947.024 ppb	3.3 %	1,000.000 ppb	5.298 %
24Mg (KED AGD)	1,051.613 ppb	1.2 %	1,000.000 ppb	5.161 %
27Al (KED AGD)	8.119 ppb	5.2 %	10.000 ppb	18.808 %
39K (KED AGD)	1,022.916 ppb	5.7 %	1,000.000 ppb	2.292 %
44Ca (KED AGD)	1,086.591 ppb	6.4 %	1,000.000 ppb	8.659 %
45Sc (STD AGD)	106.707 %	2.2 %		0.000 %
51V (KED AGD)	10.475 ppb	2.8 %	10.000 ppb	4.750 %
52Cr (KED AGD)	10.785 ppb	2.6 %	10.000 ppb	7.852 %
55Mn (KED AGD)	9.905 ppb	5.6 %	10.000 ppb	0.952 %
57Fe (KED AGD)	1,060.465 ppb	4.5 %	1,000.000 ppb	6.046 %
59Co (KED AGD)	10.684 ppb	3.4 %	10.000 ppb	6.836 %
60Ni (KED AGD)	10.523 ppb	2.4 %	10.000 ppb	5.228 %
65Cu (KED AGD)	10.670 ppb	4.2 %	10.000 ppb	6.703 %
66Zn (KED AGD)	8.416 ppb	5.4 %	10.000 ppb	15.843 %
74Ge (KED AGD)	83.574 %	1.4 %		0.000 %
75As (KED AGD)	10.688 ppb	3.8 %	10.000 ppb	6.881 %
78Se (KED AGD)	10.896 ppb	4.9 %	10.000 ppb	8.955 %
88Sr (KED AGD)	10.112 ppb	1.6 %	10.000 ppb	1.120 %
95Mo (KED AGD)	10.221 ppb	4.4 %	10.000 ppb	2.212 %
103Rh (KED AGD)	102.880 %	2.6 %		0.000 %
107Ag (KED AGD)	9.993 ppb	0.8 %	10.000 ppb	0.065 %
111Cd (KED AGD)	10.372 ppb	1.0 %	10.000 ppb	3.725 %
115In (KED AGD)	101.134 %	1.4 %		0.000 %
118Sn (KED AGD)	7.307 ppb	3.0 %	10.000 ppb	26.930 %
121Sb (KED AGD)	10.246 ppb	0.4 %	10.000 ppb	2.461 %
137Ba (KED AGD)	9.974 ppb	1.6 %	10.000 ppb	0.264 %
159Tb (KED AGD)	101.180 %	1.9 %		0.000 %
175Lu (KED AGD)	101.733 %	3.6 %		0.000 %
205Tl (KED AGD)	8.745 ppb	1.6 %	10.000 ppb	12.548 %
208Pb (KED AGD)	9.812 ppb	0.7 %	10.000 ppb	1.877 %
209Bi (KED AGD)	101.791 %	3.2 %		0.000 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/7/2024 1:36:34 PM
Total Dilution Factor 166.6666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	96.845 %	1.4 %		0.000 %
6Li (KED AGD)	95.085 %	2.0 %		0.000 %
9Be (STD AGD)	60.435 ppb	1.1 %	60.000 ppb	0.724 %
11B (STD AGD)	60.021 ppb	1.5 %	60.000 ppb	0.035 %
23Na (KED AGD)	5,729.367 ppb	3.4 %	6,000.000 ppb	4.511 %
24Mg (KED AGD)	5,821.376 ppb	3.9 %	6,000.000 ppb	2.977 %
27Al (KED AGD)	56.176 ppb	6.8 %	60.000 ppb	6.373 %
39K (KED AGD)	5,541.978 ppb	4.0 %	6,000.000 ppb	7.634 %
44Ca (KED AGD)	5,495.512 ppb	4.6 %	6,000.000 ppb	8.408 %
45Sc (STD AGD)	104.492 %	2.1 %		0.000 %
51V (KED AGD)	55.278 ppb	4.2 %	60.000 ppb	7.870 %
52Cr (KED AGD)	56.132 ppb	4.6 %	60.000 ppb	6.446 %
55Mn (KED AGD)	55.095 ppb	6.7 %	60.000 ppb	8.176 %
57Fe (KED AGD)	5,556.123 ppb	6.5 %	6,000.000 ppb	7.398 %
59Co (KED AGD)	54.909 ppb	7.0 %	60.000 ppb	8.485 %
60Ni (KED AGD)	54.645 ppb	9.1 %	60.000 ppb	8.924 %
65Cu (KED AGD)	55.901 ppb	7.7 %	60.000 ppb	6.832 %
66Zn (KED AGD)	55.298 ppb	6.4 %	60.000 ppb	7.837 %
74Ge (KED AGD)	89.242 %	4.1 %		0.000 %
75As (KED AGD)	54.721 ppb	5.5 %	60.000 ppb	8.799 %
78Se (KED AGD)	55.980 ppb	5.0 %	60.000 ppb	6.699 %
88Sr (KED AGD)	57.072 ppb	3.1 %	60.000 ppb	4.881 %
95Mo (KED AGD)	58.335 ppb	1.4 %	60.000 ppb	2.776 %
103Rh (KED AGD)	94.441 %	2.2 %		0.000 %
107Ag (KED AGD)	59.105 ppb	0.5 %	60.000 ppb	1.492 %
111Cd (KED AGD)	59.632 ppb	0.4 %	60.000 ppb	0.613 %
115In (KED AGD)	93.190 %	3.6 %		0.000 %
118Sn (KED AGD)	58.409 ppb	2.9 %	60.000 ppb	2.651 %
121Sb (KED AGD)	60.056 ppb	1.1 %	60.000 ppb	0.094 %
137Ba (KED AGD)	58.949 ppb	2.3 %	60.000 ppb	1.752 %
159Tb (KED AGD)	95.067 %	4.2 %		0.000 %
175Lu (KED AGD)	95.917 %	2.9 %		0.000 %
205Tl (KED AGD)	53.114 ppb	4.0 %	60.000 ppb	11.477 %
208Pb (KED AGD)	57.582 ppb	1.8 %	60.000 ppb	4.031 %
209Bi (KED AGD)	95.009 %	4.7 %		0.000 %

Standards:

Analysis Index: 8
Analysis Name: 120/12000 Cal
Analysis Type: STD
Analysis Started at: 4/7/2024 1:41:03 PM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	107.067 %	0.2 %		0.000 %
6Li (KED AGD)	100.464 %	3.2 %		0.000 %
9Be (STD AGD)	119.760 ppb	1.4 %	120.000 ppb	0.200 %
11B (STD AGD)	120.066 ppb	1.9 %	120.000 ppb	0.055 %
23Na (KED AGD)	12,140.335 ppb	1.9 %	12,000.000 ppb	1.169 %
24Mg (KED AGD)	12,085.040 ppb	1.7 %	12,000.000 ppb	0.709 %
27Al (KED AGD)	122.080 ppb	3.2 %	120.000 ppb	1.733 %
39K (KED AGD)	12,227.618 ppb	2.2 %	12,000.000 ppb	1.897 %
44Ca (KED AGD)	12,244.883 ppb	3.1 %	12,000.000 ppb	2.041 %
45Sc (STD AGD)	117.353 %	0.8 %		0.000 %
51V (KED AGD)	122.322 ppb	3.2 %	120.000 ppb	1.935 %
52Cr (KED AGD)	121.869 ppb	2.8 %	120.000 ppb	1.558 %
55Mn (KED AGD)	122.468 ppb	3.2 %	120.000 ppb	2.057 %
57Fe (KED AGD)	12,217.034 ppb	2.2 %	12,000.000 ppb	1.809 %
59Co (KED AGD)	122.489 ppb	2.7 %	120.000 ppb	2.074 %
60Ni (KED AGD)	122.637 ppb	1.9 %	120.000 ppb	2.198 %
65Cu (KED AGD)	121.997 ppb	2.1 %	120.000 ppb	1.664 %
66Zn (KED AGD)	122.511 ppb	1.3 %	120.000 ppb	2.093 %
74Ge (KED AGD)	82.596 %	5.0 %		0.000 %
75As (KED AGD)	122.583 ppb	1.2 %	120.000 ppb	2.153 %
78Se (KED AGD)	121.937 ppb	2.9 %	120.000 ppb	1.614 %
88Sr (KED AGD)	121.455 ppb	1.9 %	120.000 ppb	1.213 %
95Mo (KED AGD)	120.815 ppb	0.6 %	120.000 ppb	0.679 %
103Rh (KED AGD)	97.193 %	4.8 %		0.000 %
107Ag (KED AGD)	120.448 ppb	1.7 %	120.000 ppb	0.374 %
111Cd (KED AGD)	120.153 ppb	2.2 %	120.000 ppb	0.127 %
115In (KED AGD)	97.661 %	3.7 %		0.000 %
118Sn (KED AGD)	121.048 ppb	1.9 %	120.000 ppb	0.873 %
121Sb (KED AGD)	119.951 ppb	1.6 %	120.000 ppb	0.040 %
137Ba (KED AGD)	120.530 ppb	0.4 %	120.000 ppb	0.442 %
159Tb (KED AGD)	98.942 %	3.6 %		0.000 %
175Lu (KED AGD)	100.556 %	6.2 %		0.000 %
205Tl (KED AGD)	123.549 ppb	4.1 %	120.000 ppb	2.958 %
208Pb (KED AGD)	121.227 ppb	2.1 %	120.000 ppb	1.022 %
209Bi (KED AGD)	98.108 %	4.9 %		0.000 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	1	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/7/2024 1:09:48 PM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	106.919 %	103.483 %	0.001 ppb	0.704 ppb	-17.126 ppb	7.138 ppb	5.869 ppb	-16.941 ppb	-25.682 ppb
Concentration per Run 1	104.804 %	108.669 %	0.006 ppb	0.732 ppb	-36.723 ppb	-1.361 ppb	-2.170 ppb	-16.344 ppb	-50.123 ppb
Concentration per Run 2	108.518 %	97.291 %	0.004 ppb	0.694 ppb	-5.977 ppb	10.947 ppb	9.745 ppb	-17.010 ppb	-20.553 ppb
Concentration per Run 3	107.434 %	104.489 %	-0.005 ppb	0.687 ppb	-8.676 ppb	11.829 ppb	10.031 ppb	-17.469 ppb	-6.370 ppb
Concentration RSD	1.8 %	5.6 %	450.5 %	3.4 %	99.4 %	103.3 %	118.7 %	3.3 %	86.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.389 %	0.017 ppb	0.017 ppb	-0.694 ppb	21.781 ppb	0.007 ppb	0.001 ppb	0.087 ppb	-2.204 ppb
Concentration per Run 1	106.076 %	0.052 ppb	0.008 ppb	-0.744 ppb	2.470 ppb	0.006 ppb	0.052 ppb	0.066 ppb	-2.364 ppb
Concentration per Run 2	107.691 %	-0.019 ppb	0.028 ppb	-0.739 ppb	30.598 ppb	0.006 ppb	-0.013 ppb	0.112 ppb	-2.081 ppb
Concentration per Run 3	108.398 %	0.019 ppb	0.014 ppb	-0.599 ppb	32.275 ppb	0.008 ppb	-0.036 ppb	0.084 ppb	-2.167 ppb
Concentration RSD	1.1 %	203.2 %	62.1 %	11.8 %	76.9 %	18.3 %	4,887.9 %	26.5 %	6.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.300 %	0.122 ppb	-0.004 ppb	-0.024 ppb	0.631 ppb	99.268 %	0.000 ppb	0.000 ppb	99.447 %
Concentration per Run 1	82.506 %	0.116 ppb	-0.038 ppb	-0.028 ppb	0.306 ppb	97.611 %	0.000 ppb	-0.002 ppb	97.654 %
Concentration per Run 2	83.400 %	0.144 ppb	0.027 ppb	-0.008 ppb	0.779 ppb	97.625 %	0.000 ppb	0.002 ppb	99.142 %
Concentration per Run 3	92.995 %	0.105 ppb	-0.002 ppb	-0.037 ppb	0.807 ppb	102.568 %	0.001 ppb	-0.001 ppb	101.543 %
Concentration RSD	6.7 %	16.6 %	845.1 %	62.1 %	44.6 %	2.9 %	111.9 %	459.5 %	2.0 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.348 ppb	0.003 ppb	-0.106 ppb	100.273 %	100.540 %	0.018 ppb	-0.047 ppb	99.305 %
Concentration per Run 1	-2.325 ppb	0.003 ppb	-0.180 ppb	99.229 %	97.562 %	-0.007 ppb	-0.108 ppb	97.001 %
Concentration per Run 2	-2.337 ppb	-0.002 ppb	-0.090 ppb	98.037 %	99.659 %	0.027 ppb	-0.057 ppb	99.319 %
Concentration per Run 3	-2.383 ppb	0.009 ppb	-0.047 ppb	103.554 %	104.398 %	0.034 ppb	0.025 ppb	101.596 %
Concentration RSD	1.3 %	173.4 %	64.2 %	2.9 %	3.5 %	123.6 %	144.0 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	2	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CAL LOT #M24-1045	Rack	0		
Analysis started at:	4/7/2024 1:14:14 PM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.121 %	96.091 %	0.001 ppb	0.559 ppb	-34.056 ppb	0.090 ppb	-1.336 ppb	-25.196 ppb	-50.413 ppb
Concentration per Run 1	99.742 %	97.059 %	0.001 ppb	0.568 ppb	-35.380 ppb	1.304 ppb	-0.983 ppb	-22.193 ppb	-51.076 ppb
Concentration per Run 2	102.257 %	97.407 %	0.002 ppb	0.564 ppb	-34.175 ppb	-0.107 ppb	-1.263 ppb	-31.312 ppb	-46.499 ppb
Concentration per Run 3	101.365 %	93.808 %	0.000 ppb	0.546 ppb	-32.614 ppb	-0.926 ppb	-1.763 ppb	-22.081 ppb	-53.664 ppb
Concentration RSD	1.3 %	2.1 %	185.8 %	2.1 %	4.1 %	1,249.6 %	29.6 %	21.0 %	7.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.732 %	0.006 ppb	0.020 ppb	-0.763 ppb	0.771 ppb	0.003 ppb	-0.001 ppb	-0.072 ppb	-2.379 ppb
Concentration per Run 1	101.513 %	-0.006 ppb	0.018 ppb	-0.766 ppb	2.540 ppb	0.000 ppb	0.030 ppb	-0.074 ppb	-2.328 ppb
Concentration per Run 2	101.637 %	0.036 ppb	0.018 ppb	-0.758 ppb	1.032 ppb	0.005 ppb	0.010 ppb	-0.085 ppb	-2.339 ppb
Concentration per Run 3	105.046 %	-0.011 ppb	0.025 ppb	-0.767 ppb	-1.258 ppb	0.004 ppb	-0.043 ppb	-0.058 ppb	-2.470 ppb
Concentration RSD	2.0 %	410.3 %	20.8 %	0.7 %	248.0 %	86.8 %	3,787.6 %	18.1 %	3.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.657 %	0.037 ppb	0.100 ppb	-0.025 ppb	0.128 ppb	100.020 %	0.000 ppb	-0.002 ppb	98.980 %
Concentration per Run 1	92.588 %	0.041 ppb	0.054 ppb	-0.031 ppb	0.022 ppb	101.980 %	-0.002 ppb	-0.002 ppb	99.494 %
Concentration per Run 2	94.087 %	0.040 ppb	0.118 ppb	-0.036 ppb	0.146 ppb	99.050 %	0.002 ppb	-0.002 ppb	97.148 %
Concentration per Run 3	94.296 %	0.031 ppb	0.128 ppb	-0.009 ppb	0.214 ppb	99.030 %	-0.001 ppb	-0.002 ppb	100.297 %
Concentration RSD	1.0 %	15.3 %	40.1 %	55.8 %	76.2 %	1.7 %	524.7 %	0.0 %	1.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.387 ppb	0.004 ppb	-0.173 ppb	101.643 %	101.382 %	0.007 ppb	-0.140 ppb	101.331 %
Concentration per Run 1	-2.415 ppb	0.000 ppb	-0.182 ppb	102.743 %	103.233 %	-0.011 ppb	-0.133 ppb	101.548 %
Concentration per Run 2	-2.390 ppb	0.003 ppb	-0.190 ppb	101.792 %	101.390 %	0.011 ppb	-0.143 ppb	100.949 %
Concentration per Run 3	-2.357 ppb	0.010 ppb	-0.149 ppb	100.394 %	99.524 %	0.020 ppb	-0.143 ppb	101.495 %
Concentration RSD	1.2 %	129.8 %	12.6 %	1.2 %	1.8 %	238.3 %	4.0 %	0.3 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	3	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Blank WKP ICPMSQ2	Rack	4		
Analysis started at:	4/7/2024 1:18:40 PM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.0 %	0.1 %	0.0 %	0.0 %	0.3 %	0.1 %	0.1 %	0.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.4 %	0.0 %	0.1 %	0.2 %	0.2 %	0.2 %	0.1 %	0.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.1 %	0.1 %	0.5 %	0.1 %	0.1 %	0.0 %	0.1 %	0.9 %	0.0 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.1 %	0.4 %	0.3 %	0.0 %	0.0 %	0.5 %	0.0 %	0.0 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	4	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	0.2/20 Cal	Rack	0		
Analysis started at:	4/7/2024 1:23:11 PM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.586 %	105.031 %	0.185 ppb	0.142 ppb	-33.695 ppb	17.052 ppb	-2.296 ppb	-26.107 ppb	70.891 ppb
Concentration per Run 1	100.866 %	103.328 %	0.188 ppb	0.106 ppb	-34.000 ppb	16.024 ppb	-2.617 ppb	-25.889 ppb	60.241 ppb
Concentration per Run 2	104.271 %	103.212 %	0.192 ppb	0.133 ppb	-33.404 ppb	18.350 ppb	-2.052 ppb	-27.275 ppb	67.915 ppb
Concentration per Run 3	102.621 %	108.553 %	0.177 ppb	0.188 ppb	-33.681 ppb	16.781 ppb	-2.219 ppb	-25.156 ppb	84.517 ppb
Concentration RSD	1.7 %	2.9 %	4.1 %	29.5 %	0.9 %	7.0 %	12.6 %	4.1 %	17.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.577 %	0.216 ppb	0.156 ppb	-0.644 ppb	8.407 ppb	0.168 ppb	-0.137 ppb	-0.168 ppb	-2.891 ppb
Concentration per Run 1	104.813 %	0.190 ppb	0.176 ppb	-0.611 ppb	8.550 ppb	0.166 ppb	-0.166 ppb	-0.135 ppb	-2.899 ppb
Concentration per Run 2	106.887 %	0.177 ppb	0.147 ppb	-0.656 ppb	9.686 ppb	0.169 ppb	-0.154 ppb	-0.206 ppb	-2.865 ppb
Concentration per Run 3	105.030 %	0.280 ppb	0.144 ppb	-0.665 ppb	6.984 ppb	0.170 ppb	-0.090 ppb	-0.162 ppb	-2.909 ppb
Concentration RSD	1.1 %	26.1 %	11.2 %	4.5 %	16.1 %	1.1 %	29.8 %	21.3 %	0.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.691 %	0.147 ppb	0.177 ppb	0.206 ppb	0.112 ppb	103.520 %	0.175 ppb	0.201 ppb	101.405 %
Concentration per Run 1	89.566 %	0.139 ppb	0.172 ppb	0.194 ppb	0.097 ppb	99.192 %	0.164 ppb	0.195 ppb	100.272 %
Concentration per Run 2	97.096 %	0.149 ppb	0.175 ppb	0.202 ppb	0.159 ppb	106.277 %	0.181 ppb	0.206 ppb	102.669 %
Concentration per Run 3	94.411 %	0.152 ppb	0.184 ppb	0.223 ppb	0.078 ppb	105.092 %	0.179 ppb	0.202 ppb	101.274 %
Concentration RSD	4.1 %	4.4 %	3.4 %	7.2 %	38.1 %	3.7 %	5.3 %	2.7 %	1.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.562 ppb	0.181 ppb	-0.021 ppb	102.403 %	101.545 %	0.151 ppb	-0.003 ppb	102.619 %
Concentration per Run 1	-2.556 ppb	0.177 ppb	0.025 ppb	98.713 %	99.401 %	0.130 ppb	-0.003 ppb	102.726 %
Concentration per Run 2	-2.594 ppb	0.189 ppb	-0.043 ppb	103.630 %	103.685 %	0.160 ppb	0.010 ppb	101.889 %
Concentration per Run 3	-2.536 ppb	0.175 ppb	-0.043 ppb	104.865 %	101.548 %	0.164 ppb	-0.016 ppb	103.242 %
Concentration RSD	1.1 %	4.0 %	191.3 %	3.2 %	2.1 %	12.5 %	393.9 %	0.7 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	5	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	1/100 Cal	Rack	0		
Analysis started at:	4/7/2024 1:27:38 PM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	104.275 %	103.870 %	1.014 ppb	0.731 ppb	38.291 ppb	97.076 ppb	0.159 ppb	47.282 ppb	107.240 ppb
Concentration per Run 1	103.197 %	106.231 %	0.980 ppb	0.781 ppb	33.437 ppb	96.558 ppb	0.538 ppb	38.900 ppb	106.443 ppb
Concentration per Run 2	102.361 %	99.845 %	1.056 ppb	0.853 ppb	41.520 ppb	96.820 ppb	0.122 ppb	41.642 ppb	107.389 ppb
Concentration per Run 3	107.266 %	105.534 %	1.005 ppb	0.559 ppb	39.915 ppb	97.851 ppb	-0.182 ppb	61.305 ppb	107.886 ppb
Concentration RSD	2.5 %	3.4 %	3.9 %	21.0 %	11.2 %	0.7 %	227.1 %	25.8 %	0.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.033 %	0.947 ppb	0.920 ppb	0.240 ppb	86.186 ppb	0.915 ppb	0.627 ppb	0.651 ppb	-1.773 ppb
Concentration per Run 1	105.451 %	0.878 ppb	0.929 ppb	0.154 ppb	80.175 ppb	0.910 ppb	0.687 ppb	0.680 ppb	-1.782 ppb
Concentration per Run 2	110.366 %	1.015 ppb	0.982 ppb	0.321 ppb	90.826 ppb	0.952 ppb	0.630 ppb	0.610 ppb	-1.722 ppb
Concentration per Run 3	114.281 %	0.948 ppb	0.849 ppb	0.246 ppb	87.557 ppb	0.883 ppb	0.562 ppb	0.664 ppb	-1.815 ppb
Concentration RSD	4.0 %	7.2 %	7.3 %	34.9 %	6.3 %	3.8 %	10.0 %	5.6 %	2.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.970 %	0.875 ppb	0.784 ppb	0.957 ppb	0.885 ppb	101.565 %	0.977 ppb	1.011 ppb	101.735 %
Concentration per Run 1	92.684 %	0.884 ppb	0.633 ppb	0.970 ppb	0.807 ppb	100.732 %	0.964 ppb	1.062 ppb	101.865 %
Concentration per Run 2	93.218 %	0.824 ppb	0.864 ppb	0.961 ppb	0.872 ppb	99.618 %	0.995 ppb	1.005 ppb	98.448 %
Concentration per Run 3	99.007 %	0.918 ppb	0.854 ppb	0.939 ppb	0.976 ppb	104.343 %	0.973 ppb	0.968 ppb	104.892 %
Concentration RSD	3.7 %	5.4 %	16.7 %	1.7 %	9.6 %	2.4 %	1.7 %	4.7 %	3.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-1.803 ppb	0.996 ppb	0.770 ppb	101.711 %	102.336 %	0.833 ppb	0.830 ppb	102.560 %
Concentration per Run 1	-1.848 ppb	1.016 ppb	0.735 ppb	99.768 %	103.674 %	0.780 ppb	0.804 ppb	105.732 %
Concentration per Run 2	-1.745 ppb	0.982 ppb	0.751 ppb	100.019 %	99.127 %	0.851 ppb	0.837 ppb	98.554 %
Concentration per Run 3	-1.817 ppb	0.989 ppb	0.823 ppb	105.348 %	104.205 %	0.867 ppb	0.849 ppb	103.395 %
Concentration RSD	2.9 %	1.8 %	6.1 %	3.1 %	2.7 %	5.6 %	2.8 %	3.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	6	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	10/1000 Cal	Rack	0		
Analysis started at:	4/7/2024 1:32:06 PM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	104.502 %	98.839 %	10.273 ppb	9.106 ppb	947.024 ppb	1,051.613 ppb	8.119 ppb	1,022.916 ppb	1,086.591 ppb
Concentration per Run 1	102.086 %	99.265 %	10.310 ppb	9.104 ppb	982.329 ppb	1,065.384 ppb	8.445 ppb	1,079.320 ppb	1,138.321 ppb
Concentration per Run 2	103.881 %	99.265 %	10.191 ppb	9.057 ppb	922.574 ppb	1,042.472 ppb	7.643 ppb	963.376 ppb	1,007.336 ppb
Concentration per Run 3	107.539 %	97.988 %	10.319 ppb	9.156 ppb	936.170 ppb	1,046.983 ppb	8.270 ppb	1,026.051 ppb	1,114.117 ppb
Concentration RSD	2.7 %	0.7 %	0.7 %	0.5 %	3.3 %	1.2 %	5.2 %	5.7 %	6.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.707 %	10.475 ppb	10.785 ppb	9.905 ppb	1,060.465 ppb	10.684 ppb	10.523 ppb	10.670 ppb	8.416 ppb
Concentration per Run 1	103.981 %	10.620 ppb	11.070 ppb	10.471 ppb	1,115.481 ppb	11.079 ppb	10.743 ppb	11.185 ppb	8.865 ppb
Concentration per Run 2	107.701 %	10.139 ppb	10.515 ppb	9.368 ppb	1,033.983 ppb	10.367 ppb	10.252 ppb	10.493 ppb	7.955 ppb
Concentration per Run 3	108.440 %	10.666 ppb	10.771 ppb	9.876 ppb	1,031.931 ppb	10.605 ppb	10.573 ppb	10.332 ppb	8.427 ppb
Concentration RSD	2.2 %	2.8 %	2.6 %	5.6 %	4.5 %	3.4 %	2.4 %	4.2 %	5.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	83.574 %	10.688 ppb	10.896 ppb	10.112 ppb	10.221 ppb	102.880 %	9.993 ppb	10.372 ppb	101.134 %
Concentration per Run 1	82.228 %	11.160 ppb	10.699 ppb	10.179 ppb	10.192 ppb	105.944 %	10.036 ppb	10.286 ppb	102.762 %
Concentration per Run 2	84.382 %	10.475 ppb	11.501 ppb	9.929 ppb	10.686 ppb	101.921 %	9.898 ppb	10.489 ppb	100.047 %
Concentration per Run 3	84.114 %	10.429 ppb	10.486 ppb	10.228 ppb	9.785 ppb	100.775 %	10.046 ppb	10.343 ppb	100.592 %
Concentration RSD	1.4 %	3.8 %	4.9 %	1.6 %	4.4 %	2.6 %	0.8 %	1.0 %	1.4 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	7.307 ppb	10.246 ppb	9.974 ppb	101.180 %	101.733 %	8.745 ppb	9.812 ppb	101.791 %
Concentration per Run 1	7.424 ppb	10.237 ppb	9.801 ppb	103.402 %	104.571 %	8.590 ppb	9.744 ppb	105.490 %
Concentration per Run 2	7.057 ppb	10.292 ppb	10.098 ppb	99.825 %	103.094 %	8.777 ppb	9.812 ppb	99.553 %
Concentration per Run 3	7.440 ppb	10.209 ppb	10.022 ppb	100.313 %	97.534 %	8.869 ppb	9.881 ppb	100.329 %
Concentration RSD	3.0 %	0.4 %	1.6 %	1.9 %	3.6 %	1.6 %	0.7 %	3.2 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	7	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/7/2024 1:36:34 PM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	96.845 %	95.085 %	60.435 ppb	60.021 ppb	5,729.367 ppb	5,821.376 ppb	56.176 ppb	5,541.978 ppb	5,495.512 ppb
Concentration per Run 1	95.269 %	93.692 %	61.041 ppb	59.584 ppb	5,922.536 ppb	6,085.567 ppb	60.120 ppb	5,774.012 ppb	5,782.699 ppb
Concentration per Run 2	97.540 %	97.291 %	60.586 ppb	59.415 ppb	5,729.453 ppb	5,670.988 ppb	52.544 ppb	5,520.449 ppb	5,402.235 ppb
Concentration per Run 3	97.727 %	94.272 %	59.677 ppb	61.063 ppb	5,536.112 ppb	5,707.574 ppb	55.865 ppb	5,331.474 ppb	5,301.602 ppb
Concentration RSD	1.4 %	2.0 %	1.1 %	1.5 %	3.4 %	3.9 %	6.8 %	4.0 %	4.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.492 %	55.278 ppb	56.132 ppb	55.095 ppb	5,556.123 ppb	54.909 ppb	54.645 ppb	55.901 ppb	55.298 ppb
Concentration per Run 1	102.255 %	57.761 ppb	58.936 ppb	59.071 ppb	5,961.084 ppb	58.933 ppb	59.775 ppb	60.344 ppb	58.937 ppb
Concentration per Run 2	106.718 %	54.916 ppb	55.681 ppb	54.435 ppb	5,446.899 ppb	54.514 ppb	54.280 ppb	55.641 ppb	55.038 ppb
Concentration per Run 3	104.502 %	53.157 ppb	53.780 ppb	51.778 ppb	5,260.386 ppb	51.281 ppb	49.881 ppb	51.717 ppb	51.918 ppb
Concentration RSD	2.1 %	4.2 %	4.6 %	6.7 %	6.5 %	7.0 %	9.1 %	7.7 %	6.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.242 %	54.721 ppb	55.980 ppb	57.072 ppb	58.335 ppb	94.441 %	59.105 ppb	59.632 ppb	93.190 %
Concentration per Run 1	85.514 %	57.797 ppb	59.118 ppb	58.912 ppb	59.165 ppb	96.581 %	59.439 ppb	59.766 ppb	95.920 %
Concentration per Run 2	89.356 %	54.566 ppb	53.815 ppb	56.889 ppb	57.507 ppb	94.393 %	59.051 ppb	59.792 ppb	94.243 %
Concentration per Run 3	92.857 %	51.799 ppb	55.008 ppb	55.414 ppb	58.332 ppb	92.350 %	58.826 ppb	59.338 ppb	89.406 %
Concentration RSD	4.1 %	5.5 %	5.0 %	3.1 %	1.4 %	2.2 %	0.5 %	0.4 %	3.6 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	58.409 ppb	60.056 ppb	58.949 ppb	95.067 %	95.917 %	53.114 ppb	57.582 ppb	95.009 %
Concentration per Run 1	57.535 ppb	60.803 ppb	60.482 ppb	99.684 %	98.811 %	50.671 ppb	56.459 ppb	100.090 %
Concentration per Run 2	57.304 ppb	59.447 ppb	58.454 ppb	92.629 %	95.729 %	54.362 ppb	58.515 ppb	93.219 %
Concentration per Run 3	60.388 ppb	59.919 ppb	57.910 ppb	92.889 %	93.211 %	54.308 ppb	57.770 ppb	91.720 %
Concentration RSD	2.9 %	1.1 %	2.3 %	4.2 %	2.9 %	4.0 %	1.8 %	4.7 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	8	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	120/12000 Cal	Rack	0		
Analysis started at:	4/7/2024 1:41:03 PM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	107.067 %	100.464 %	119.760 ppb	120.066 ppb	12,140.335 ppb	12,085.040 ppb	122.080 ppb	12,227.618 ppb	12,244.883 ppb
Concentration per Run 1	107.251 %	97.871 %	121.664 ppb	122.626 ppb	12,207.519 ppb	12,169.112 ppb	121.249 ppb	12,095.572 ppb	12,217.455 ppb
Concentration per Run 2	107.034 %	99.497 %	119.339 ppb	118.587 ppb	11,888.024 ppb	11,856.672 ppb	118.606 ppb	12,047.654 ppb	11,879.423 ppb
Concentration per Run 3	106.916 %	104.025 %	118.276 ppb	118.987 ppb	12,325.461 ppb	12,229.336 ppb	126.384 ppb	12,539.626 ppb	12,637.771 ppb
Concentration RSD	0.2 %	3.2 %	1.4 %	1.9 %	1.9 %	1.7 %	3.2 %	2.2 %	3.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	117.353 %	122.322 ppb	121.869 ppb	122.468 ppb	12,217.034 ppb	122.489 ppb	122.637 ppb	121.997 ppb	122.511 ppb
Concentration per Run 1	117.906 %	117.849 ppb	118.133 ppb	118.060 ppb	11,922.200 ppb	118.816 ppb	123.456 ppb	120.474 ppb	122.782 ppb
Concentration per Run 2	117.848 %	124.743 ppb	122.502 ppb	123.549 ppb	12,296.270 ppb	125.122 ppb	124.431 ppb	124.940 ppb	123.909 ppb
Concentration per Run 3	116.304 %	124.374 ppb	124.972 ppb	125.796 ppb	12,432.633 ppb	123.529 ppb	120.025 ppb	120.578 ppb	120.844 ppb
Concentration RSD	0.8 %	3.2 %	2.8 %	3.2 %	2.2 %	2.7 %	1.9 %	2.1 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	82.596 %	122.583 ppb	121.937 ppb	121.455 ppb	120.815 ppb	97.193 %	120.448 ppb	120.153 ppb	97.661 %
Concentration per Run 1	84.755 %	121.917 ppb	117.833 ppb	118.884 ppb	120.553 ppb	97.657 %	122.612 ppb	120.438 ppb	94.265 %
Concentration per Run 2	77.790 %	124.235 ppb	123.907 ppb	122.166 ppb	121.647 ppb	92.267 %	118.552 ppb	117.417 ppb	97.221 %
Concentration per Run 3	85.243 %	121.599 ppb	124.071 ppb	123.315 ppb	120.246 ppb	101.657 %	120.181 ppb	122.603 ppb	101.496 %
Concentration RSD	5.0 %	1.2 %	2.9 %	1.9 %	0.6 %	4.8 %	1.7 %	2.2 %	3.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	121.048 ppb	119.951 ppb	120.530 ppb	98.942 %	100.556 %	123.549 ppb	121.227 ppb	98.108 %
Concentration per Run 1	122.409 ppb	121.895 ppb	120.933 ppb	100.920 %	103.516 %	117.647 ppb	123.990 ppb	99.972 %
Concentration per Run 2	118.416 ppb	118.040 ppb	119.970 ppb	94.837 %	93.443 %	126.181 ppb	120.649 ppb	92.611 %
Concentration per Run 3	122.318 ppb	119.920 ppb	120.688 ppb	101.068 %	104.710 %	126.820 ppb	119.041 ppb	101.740 %
Concentration RSD	1.9 %	1.6 %	0.4 %	3.6 %	6.2 %	4.1 %	2.1 %	4.9 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	9	User name	ALPHALAB\a2-icpmsq2	Comment	Sr Inteference Check
Analysis label:	Sr 200ppb	Rack	4		
Analysis started at:	4/7/2024 1:45:32 PM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	110.082 %	96.401 %	0.033 ppb	4.965 ppb	-51.576 ppb	2.268 ppb	-3.021 ppb	-47.270 ppb	2.698 ppb
Concentration per Run 1	109.332 %	90.325 %	0.032 ppb	5.184 ppb	-45.738 ppb	3.838 ppb	-2.791 ppb	-33.494 ppb	-124.014 ppb
Concentration per Run 2	109.961 %	101.238 %	0.034 ppb	4.972 ppb	-53.691 ppb	1.944 ppb	-3.207 ppb	-53.660 ppb	9.137 ppb
Concentration per Run 3	110.951 %	97.639 %	0.032 ppb	4.739 ppb	-55.300 ppb	1.021 ppb	-3.066 ppb	-54.656 ppb	122.971 ppb
Concentration RSD	0.7 %	5.8 %	3.1 %	4.5 %	9.9 %	63.3 %	7.0 %	25.3 %	4,581.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	113.261 %	0.014 ppb	-0.002 ppb	-0.817 ppb	-0.393 ppb	0.028 ppb	-0.291 ppb	-0.412 ppb	-3.339 ppb
Concentration per Run 1	110.943 %	0.053 ppb	0.031 ppb	-0.762 ppb	5.246 ppb	0.050 ppb	-0.252 ppb	-0.377 ppb	-3.114 ppb
Concentration per Run 2	114.387 %	0.010 ppb	-0.015 ppb	-0.840 ppb	-1.487 ppb	0.021 ppb	-0.311 ppb	-0.418 ppb	-3.406 ppb
Concentration per Run 3	114.452 %	-0.023 ppb	-0.023 ppb	-0.848 ppb	-4.936 ppb	0.013 ppb	-0.309 ppb	-0.440 ppb	-3.498 ppb
Concentration RSD	1.8 %	279.3 %	1,200.1 %	5.9 %	1,318.7 %	69.6 %	11.6 %	7.7 %	6.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	167.299 %	-0.015 ppb	0.118 ppb	192.605 ppb	0.169 ppb	97.806 %	0.058 ppb	0.046 ppb	98.981 %
Concentration per Run 1	91.150 %	0.099 ppb	0.194 ppb	193.465 ppb	0.186 ppb	92.399 %	0.072 ppb	0.064 ppb	93.571 %
Concentration per Run 2	188.618 %	-0.059 ppb	0.088 ppb	195.496 ppb	0.196 ppb	101.943 %	0.056 ppb	0.043 ppb	104.508 %
Concentration per Run 3	222.130 %	-0.083 ppb	0.073 ppb	188.855 ppb	0.126 ppb	99.075 %	0.046 ppb	0.032 ppb	98.865 %
Concentration RSD	40.7 %	681.8 %	55.9 %	1.8 %	22.6 %	5.0 %	22.5 %	35.0 %	5.5 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.035 ppb	0.088 ppb	-0.136 ppb	97.867 %	99.595 %	0.699 ppb	-0.131 ppb	100.144 %
Concentration per Run 1	-1.999 ppb	0.113 ppb	-0.126 ppb	93.182 %	92.853 %	0.554 ppb	-0.112 ppb	95.050 %
Concentration per Run 2	-2.020 ppb	0.082 ppb	-0.174 ppb	102.225 %	105.642 %	0.826 ppb	-0.135 ppb	103.503 %
Concentration per Run 3	-2.085 ppb	0.068 ppb	-0.109 ppb	98.193 %	100.289 %	0.717 ppb	-0.145 ppb	101.879 %
Concentration RSD	2.2 %	26.2 %	24.7 %	4.6 %	6.4 %	19.6 %	12.7 %	4.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	10	User name	ALPHALAB\a2-icpmsq2	Comment	ICV
Analysis label:	ICV	Rack	0		
Analysis started at:	4/7/2024 1:50:03 PM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	111.486 %	110.140 %	52.508 ppb	54.312 ppb	4,522.649 ppb	4,594.063 ppb	49.534 ppb	4,903.621 ppb	5,138.278 ppb
Concentration per Run 1	111.226 %	114.010 %	52.158 ppb	53.587 ppb	4,394.631 ppb	4,490.543 ppb	46.218 ppb	4,772.396 ppb	5,092.015 ppb
Concentration per Run 2	111.972 %	111.223 %	52.358 ppb	54.195 ppb	4,407.931 ppb	4,476.526 ppb	49.257 ppb	4,801.817 ppb	5,044.919 ppb
Concentration per Run 3	111.259 %	105.186 %	53.007 ppb	55.154 ppb	4,765.384 ppb	4,815.120 ppb	53.128 ppb	5,136.651 ppb	5,277.901 ppb
Recovery Percentage 1			105.016 %	108.624 %	90.453 %	91.881 %	99.069 %	98.072 %	102.766 %
Concentration RSD	0.4 %	4.1 %	0.8 %	1.5 %	4.7 %	4.2 %	7.0 %	4.1 %	2.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.139 %	50.635 ppb	50.339 ppb	49.941 ppb	5,189.532 ppb	51.966 ppb	52.432 ppb	52.618 ppb	50.185 ppb
Concentration per Run 1	110.630 %	48.696 ppb	48.755 ppb	48.484 ppb	5,050.461 ppb	51.836 ppb	50.523 ppb	51.403 ppb	48.917 ppb
Concentration per Run 2	113.351 %	49.308 ppb	49.787 ppb	49.725 ppb	5,073.514 ppb	50.200 ppb	52.207 ppb	52.223 ppb	49.391 ppb
Concentration per Run 3	109.436 %	53.900 ppb	52.474 ppb	51.613 ppb	5,444.622 ppb	53.862 ppb	54.567 ppb	54.227 ppb	52.246 ppb
Recovery Percentage 1		101.269 %	100.677 %	99.882 %	103.791 %	103.932 %	104.864 %	105.235 %	100.370 %
Concentration RSD	1.8 %	5.6 %	3.8 %	3.2 %	4.3 %	3.5 %	3.9 %	2.8 %	3.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	131.975 %	52.611 ppb	52.485 ppb	51.937 ppb	52.789 ppb	102.511 %	51.206 ppb	51.670 ppb	102.503 %
Concentration per Run 1	138.201 %	52.066 ppb	52.096 ppb	52.175 ppb	52.156 ppb	105.570 %	50.786 ppb	51.487 ppb	107.740 %
Concentration per Run 2	131.372 %	51.628 ppb	51.256 ppb	51.098 ppb	53.754 ppb	104.107 %	52.116 ppb	51.999 ppb	103.679 %
Concentration per Run 3	126.352 %	54.139 ppb	54.102 ppb	52.538 ppb	52.456 ppb	97.856 %	50.715 ppb	51.526 ppb	96.088 %
Recovery Percentage 1		105.222 %	104.970 %	103.874 %	105.577 %		102.411 %	103.341 %	
Concentration RSD	4.5 %	2.5 %	2.8 %	1.4 %	1.6 %	4.0 %	1.5 %	0.6 %	5.8 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	49.070 ppb	51.494 ppb	52.185 ppb	104.016 %	105.528 %	45.812 ppb	51.400 ppb	104.779 %
Concentration per Run 1	49.705 ppb	50.935 ppb	51.114 ppb	108.758 %	108.849 %	45.498 ppb	50.707 ppb	107.021 %
Concentration per Run 2	48.745 ppb	50.365 ppb	51.181 ppb	105.236 %	110.770 %	45.616 ppb	51.833 ppb	105.698 %
Concentration per Run 3	48.760 ppb	53.180 ppb	54.260 ppb	98.056 %	96.966 %	46.324 ppb	51.658 ppb	101.618 %
Recovery Percentage 1	98.141 %	102.987 %	104.369 %			91.625 %	102.799 %	
Concentration RSD	1.1 %	2.9 %	3.4 %	5.2 %	7.1 %	1.0 %	1.2 %	2.7 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index: 11 User name ALPHALAB\a2-icpmsq2 Comment ICB
Analysis label: ICB Rack 0
Analysis started at: 4/7/2024 1:54:33 PM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	111.244 %	105.650 %	0.018 ppb	2.191 ppb	-46.944 ppb	-0.024 ppb	-2.754 ppb	-44.743 ppb	-61.512 ppb
Concentration per Run 1	110.027 %	108.553 %	0.019 ppb	2.255 ppb	-48.112 ppb	0.313 ppb	-2.514 ppb	-45.403 ppb	-56.779 ppb
Concentration per Run 2	111.484 %	102.283 %	0.015 ppb	2.251 ppb	-45.694 ppb	-0.629 ppb	-2.720 ppb	-47.579 ppb	-64.747 ppb
Concentration per Run 3	112.222 %	106.115 %	0.019 ppb	2.068 ppb	-47.027 ppb	0.243 ppb	-3.028 ppb	-41.248 ppb	-63.009 ppb
Recovery Percentage 1			3.528 %	21.914 %	-46.944 %	-0.035 %	-27.540 %	-44.743 %	-61.512 %
Concentration RSD	1.0 %	3.0 %	12.9 %	4.9 %	2.6 %	2,146.3 %	9.4 %	7.2 %	6.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.890 %	0.008 ppb	0.002 ppb	-0.804 ppb	-2.496 ppb	0.024 ppb	-0.289 ppb	-0.407 ppb	-3.440 ppb
Concentration per Run 1	108.577 %	0.014 ppb	0.006 ppb	-0.796 ppb	-2.899 ppb	0.032 ppb	-0.287 ppb	-0.379 ppb	-3.471 ppb
Concentration per Run 2	111.002 %	0.004 ppb	0.003 ppb	-0.804 ppb	-1.941 ppb	0.018 ppb	-0.294 ppb	-0.423 ppb	-3.445 ppb
Concentration per Run 3	110.093 %	0.006 ppb	-0.002 ppb	-0.811 ppb	-2.649 ppb	0.020 ppb	-0.286 ppb	-0.418 ppb	-3.404 ppb
Recovery Percentage 1		0.159 %	0.209 %	-80.362 %	-4.993 %	4.727 %	-14.452 %	-40.666 %	-68.803 %
Concentration RSD	1.1 %	71.0 %	195.6 %	1.0 %	19.9 %	31.2 %	1.6 %	5.9 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	117.000 %	0.016 ppb	0.489 ppb	-0.011 ppb	0.028 ppb	103.049 %	0.025 ppb	0.021 ppb	103.864 %
Concentration per Run 1	122.357 %	0.035 ppb	0.633 ppb	-0.001 ppb	-0.017 ppb	106.250 %	0.025 ppb	0.015 ppb	107.627 %
Concentration per Run 2	114.871 %	-0.001 ppb	0.467 ppb	-0.019 ppb	0.047 ppb	103.244 %	0.025 ppb	0.025 ppb	105.160 %
Concentration per Run 3	113.771 %	0.012 ppb	0.367 ppb	-0.013 ppb	0.053 ppb	99.654 %	0.024 ppb	0.024 ppb	98.806 %
Recovery Percentage 1		3.108 %	9.780 %	-0.109 %	1.376 %		6.192 %	10.555 %	
Concentration RSD	4.0 %	114.7 %	27.5 %	83.5 %	139.4 %	3.2 %	2.0 %	26.3 %	4.4 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.162 ppb	0.067 ppb	-0.182 ppb	104.538 %	106.011 %	0.467 ppb	-0.144 ppb	105.690 %
Concentration per Run 1	-2.209 ppb	0.056 ppb	-0.178 ppb	109.213 %	112.262 %	0.305 ppb	-0.141 ppb	109.866 %
Concentration per Run 2	-2.135 ppb	0.069 ppb	-0.206 ppb	103.418 %	104.745 %	0.558 ppb	-0.153 ppb	106.233 %
Concentration per Run 3	-2.143 ppb	0.075 ppb	-0.162 ppb	100.982 %	101.026 %	0.538 ppb	-0.139 ppb	100.972 %
Recovery Percentage 1	-72.081 %	1.665 %	-36.379 %			46.695 %	-14.412 %	
Concentration RSD	1.9 %	14.9 %	12.2 %	4.0 %	5.4 %	30.2 %	5.3 %	4.2 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	12	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/7/2024 2:03:00 PM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	87.052 %	91.795 %	0.034 ppb	3.697 ppb	**263,974.136 ppb**	**102,340.399 ppb**	99,493.791 ppb	**101,673.696 ppb**	295,325.559 ppb
Concentration per Run 1	87.534 %	94.969 %	0.034 ppb	3.622 ppb	249,246.979 ppb	97,596.618 ppb	93,397.298 ppb	99,966.897 ppb	278,084.642 ppb
Concentration per Run 2	85.485 %	91.254 %	0.029 ppb	3.804 ppb	276,193.922 ppb	104,661.341 ppb	106,039.228 ppb	104,500.693 ppb	309,483.353 ppb
Concentration per Run 3	88.137 %	89.164 %	0.039 ppb	3.664 ppb	266,481.506 ppb	104,763.239 ppb	99,044.848 ppb	100,553.498 ppb	298,408.682 ppb
Recovery Percentage 1			3.389 %	18.484 %	105.590 %	102.340 %	99.494 %	101.674 %	98.442 %
Concentration RSD	1.6 %	3.2 %	13.7 %	2.6 %	5.2 %	4.0 %	6.4 %	2.4 %	5.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.450 %	0.081 ppb	1.428 ppb	3.516 ppb	239,965.690 ppb	1.904 ppb	3.040 ppb	0.701 ppb	-1.013 ppb
Concentration per Run 1	89.375 %	0.048 ppb	1.429 ppb	3.294 ppb	244,826.617 ppb	2.034 ppb	3.065 ppb	0.765 ppb	-0.903 ppb
Concentration per Run 2	87.947 %	0.071 ppb	1.502 ppb	3.898 ppb	245,446.965 ppb	1.875 ppb	3.260 ppb	0.709 ppb	-0.996 ppb
Concentration per Run 3	88.028 %	0.124 ppb	1.353 ppb	3.356 ppb	229,623.488 ppb	1.804 ppb	2.794 ppb	0.630 ppb	-1.140 ppb
Recovery Percentage 1		1.618 %	43.268 %	61.687 %	95.986 %	66.358 %	49.830 %	85.539 %	-8.885 %
Concentration RSD	0.9 %	48.1 %	5.2 %	9.5 %	3.7 %	6.2 %	7.7 %	9.6 %	11.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.602 %	0.394 ppb	2.925 ppb	2.648 ppb	**2,389.787 ppb**	85.561 %	0.028 ppb	0.621 ppb	96.337 %
Concentration per Run 1	88.303 %	0.408 ppb	3.068 ppb	2.683 ppb	2,403.918 ppb	85.231 %	0.027 ppb	0.623 ppb	93.324 %
Concentration per Run 2	95.008 %	0.424 ppb	2.807 ppb	2.742 ppb	2,384.229 ppb	87.114 %	0.026 ppb	0.657 ppb	99.552 %
Concentration per Run 3	97.496 %	0.351 ppb	2.899 ppb	2.520 ppb	2,381.213 ppb	84.337 %	0.030 ppb	0.584 ppb	96.135 %
Recovery Percentage 1		24.197 %	22.674 %	529.617 %	119.489 %		3.480 %	155.302 %	
Concentration RSD	5.1 %	9.8 %	4.5 %	4.3 %	0.5 %	1.7 %	8.2 %	5.9 %	3.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-0.346 ppb	0.161 ppb	1.133 ppb	81.352 %	79.270 %	0.124 ppb	1.452 ppb	82.034 %
Concentration per Run 1	-0.392 ppb	0.150 ppb	1.104 ppb	82.225 %	80.737 %	0.069 ppb	1.376 ppb	83.981 %
Concentration per Run 2	-0.435 ppb	0.168 ppb	1.096 ppb	81.806 %	80.881 %	0.139 ppb	1.481 ppb	82.656 %
Concentration per Run 3	-0.210 ppb	0.164 ppb	1.199 ppb	80.025 %	76.193 %	0.163 ppb	1.498 ppb	79.466 %
Recovery Percentage 1	-5.759 %	2.011 %	60.261 %			6.177 %	46.828 %	
Concentration RSD	34.5 %	6.0 %	5.1 %	1.4 %	3.4 %	39.8 %	4.6 %	2.8 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	13	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	LDR Check (5/0.5)	Rack	4		
Analysis started at:	4/7/2024 2:07:31 PM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	106.290 %	105.689 %	0.005 ppb	0.497 ppb	24.158 ppb	20.280 ppb	16.146 ppb	-8.981 ppb	-6.681 ppb
Concentration per Run 1	104.962 %	102.748 %	0.006 ppb	0.469 ppb	39.560 ppb	24.866 ppb	20.172 ppb	-2.334 ppb	13.763 ppb
Concentration per Run 2	107.840 %	107.160 %	0.007 ppb	0.527 ppb	24.272 ppb	21.582 ppb	16.987 ppb	-9.466 ppb	-2.533 ppb
Concentration per Run 3	106.069 %	107.160 %	0.003 ppb	0.495 ppb	8.643 ppb	14.391 ppb	11.280 ppb	-15.144 ppb	-31.272 ppb
Concentration RSD	1.4 %	2.4 %	43.4 %	5.9 %	64.0 %	26.4 %	27.9 %	71.5 %	341.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.555 %	0.011 ppb	0.056 ppb	5,691.774 ppb	68.319 ppb	0.020 ppb	-0.182 ppb	6,100.600 ppb	5,683.202 ppb
Concentration per Run 1	106.046 %	-0.004 ppb	0.056 ppb	5,569.684 ppb	84.615 ppb	0.024 ppb	-0.132 ppb	6,139.481 ppb	5,740.910 ppb
Concentration per Run 2	105.491 %	0.017 ppb	0.072 ppb	5,934.156 ppb	70.734 ppb	0.019 ppb	-0.241 ppb	5,794.288 ppb	5,543.979 ppb
Concentration per Run 3	105.128 %	0.021 ppb	0.039 ppb	5,571.482 ppb	49.609 ppb	0.017 ppb	-0.173 ppb	6,368.030 ppb	5,764.718 ppb
Concentration RSD	0.4 %	120.5 %	30.5 %	3.7 %	25.8 %	18.5 %	30.1 %	4.7 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.715 %	489.679 ppb	0.317 ppb	0.088 ppb	2.476 ppb	104.538 %	0.015 ppb	0.008 ppb	104.103 %
Concentration per Run 1	86.310 %	499.528 ppb	0.265 ppb	0.087 ppb	2.320 ppb	105.068 %	0.016 ppb	0.010 ppb	100.869 %
Concentration per Run 2	94.375 %	481.504 ppb	0.292 ppb	0.087 ppb	2.645 ppb	105.021 %	0.015 ppb	0.013 ppb	108.844 %
Concentration per Run 3	88.461 %	488.004 ppb	0.393 ppb	0.089 ppb	2.463 ppb	103.526 %	0.013 ppb	0.002 ppb	102.597 %
Concentration RSD	4.7 %	1.9 %	21.4 %	1.3 %	6.6 %	0.8 %	9.6 %	63.0 %	4.0 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.261 ppb	0.009 ppb	5,866.052 ppb	100.495 %	102.350 %	0.055 ppb	6,069.124 ppb	102.980 %
Concentration per Run 1	-2.314 ppb	0.010 ppb	5,868.125 ppb	99.920 %	101.578 %	0.017 ppb	6,131.013 ppb	105.023 %
Concentration per Run 2	-2.207 ppb	0.008 ppb	6,028.052 ppb	103.248 %	103.547 %	0.072 ppb	5,826.297 ppb	103.923 %
Concentration per Run 3	-2.262 ppb	0.008 ppb	5,701.979 ppb	98.316 %	101.926 %	0.077 ppb	6,250.061 ppb	99.994 %
Concentration RSD	2.4 %	12.3 %	2.8 %	2.5 %	1.0 %	59.9 %	3.6 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	14	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	LDR Check (10/1)	Rack	4		
Analysis started at:	4/7/2024 2:12:24 PM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	103.818 %	106.115 %	0.003 ppb	0.329 ppb	1.006 ppb	3.887 ppb	0.983 ppb	-27.838 ppb	-40.775 ppb
Concentration per Run 1	103.572 %	102.516 %	0.005 ppb	0.344 ppb	4.147 ppb	3.974 ppb	0.783 ppb	-28.637 ppb	-35.214 ppb
Concentration per Run 2	104.115 %	110.410 %	0.004 ppb	0.368 ppb	-1.432 ppb	3.759 ppb	0.706 ppb	-23.888 ppb	-40.053 ppb
Concentration per Run 3	103.768 %	105.418 %	0.001 ppb	0.275 ppb	0.302 ppb	3.928 ppb	1.460 ppb	-30.987 ppb	-47.059 ppb
Concentration RSD	0.3 %	3.8 %	63.9 %	14.6 %	284.0 %	2.9 %	42.2 %	13.0 %	14.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.876 %	-0.026 ppb	0.047 ppb	11,300.075 ppb	7.111 ppb	0.058 ppb	-0.080 ppb	11,898.271 ppb	11,243.534 ppb
Concentration per Run 1	100.609 %	-0.010 ppb	0.056 ppb	11,174.503 ppb	4.065 ppb	0.050 ppb	-0.054 ppb	12,157.262 ppb	11,405.860 ppb
Concentration per Run 2	104.905 %	-0.030 ppb	0.055 ppb	11,486.954 ppb	9.311 ppb	0.078 ppb	-0.106 ppb	11,678.366 ppb	10,981.872 ppb
Concentration per Run 3	106.114 %	-0.039 ppb	0.032 ppb	11,238.768 ppb	7.956 ppb	0.046 ppb	-0.081 ppb	11,859.186 ppb	11,342.869 ppb
Concentration RSD	2.8 %	57.0 %	28.8 %	1.5 %	38.3 %	29.8 %	32.5 %	2.0 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	88.638 %	972.073 ppb	0.087 ppb	0.190 ppb	0.352 ppb	103.563 %	0.033 ppb	0.014 ppb	103.939 %
Concentration per Run 1	86.264 %	986.919 ppb	0.095 ppb	0.195 ppb	0.251 ppb	102.340 %	0.029 ppb	0.017 ppb	101.317 %
Concentration per Run 2	91.310 %	986.953 ppb	0.077 ppb	0.193 ppb	0.390 ppb	106.881 %	0.031 ppb	0.010 ppb	108.990 %
Concentration per Run 3	88.340 %	942.346 ppb	0.088 ppb	0.182 ppb	0.415 ppb	101.469 %	0.039 ppb	0.015 ppb	101.509 %
Concentration RSD	2.9 %	2.6 %	10.7 %	3.8 %	25.1 %	2.8 %	15.0 %	22.9 %	4.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-1.474 ppb	0.014 ppb	11,952.284 ppb	98.992 %	101.139 %	0.034 ppb	11,926.006 ppb	101.524 %
Concentration per Run 1	-1.372 ppb	0.009 ppb	11,841.591 ppb	97.230 %	100.162 %	0.011 ppb	12,181.820 ppb	101.166 %
Concentration per Run 2	-1.521 ppb	0.012 ppb	11,803.611 ppb	103.460 %	106.806 %	0.043 ppb	11,508.495 ppb	100.169 %
Concentration per Run 3	-1.528 ppb	0.020 ppb	12,211.650 ppb	96.287 %	96.448 %	0.049 ppb	12,087.703 ppb	103.237 %
Concentration RSD	6.0 %	42.0 %	1.9 %	3.9 %	5.2 %	58.7 %	3.1 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	15	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/7/2024 2:16:54 PM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	104.891 %	103.290 %	0.009 ppb	0.236 ppb	-42.041 ppb	0.557 ppb	-0.680 ppb	-28.069 ppb	-46.583 ppb
Concentration per Run 1	106.489 %	104.025 %	0.012 ppb	0.116 ppb	-41.782 ppb	1.276 ppb	-0.721 ppb	-28.930 ppb	-46.473 ppb
Concentration per Run 2	99.994 %	101.471 %	0.006 ppb	0.411 ppb	-41.147 ppb	0.935 ppb	-0.830 ppb	-27.502 ppb	-40.523 ppb
Concentration per Run 3	108.191 %	104.373 %	0.009 ppb	0.183 ppb	-43.193 ppb	-0.541 ppb	-0.488 ppb	-27.776 ppb	-52.752 ppb
Concentration RSD	4.1 %	1.5 %	34.3 %	65.5 %	2.5 %	173.6 %	25.7 %	2.7 %	13.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.136 %	-0.008 ppb	0.015 ppb	3.518 ppb	-0.291 ppb	0.010 ppb	-0.009 ppb	4.493 ppb	2.224 ppb
Concentration per Run 1	102.613 %	-0.029 ppb	0.029 ppb	4.314 ppb	-0.065 ppb	0.005 ppb	0.010 ppb	5.458 ppb	3.041 ppb
Concentration per Run 2	94.404 %	0.007 ppb	0.014 ppb	3.194 ppb	-0.372 ppb	0.008 ppb	-0.073 ppb	4.269 ppb	2.147 ppb
Concentration per Run 3	109.392 %	0.000 ppb	0.002 ppb	3.045 ppb	-0.435 ppb	0.018 ppb	0.036 ppb	3.753 ppb	1.484 ppb
Concentration RSD	7.3 %	254.3 %	89.5 %	19.7 %	68.0 %	67.5 %	630.0 %	19.5 %	35.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.758 %	1.410 ppb	0.077 ppb	-0.035 ppb	0.087 ppb	101.877 %	-0.001 ppb	0.000 ppb	101.338 %
Concentration per Run 1	93.514 %	1.587 ppb	0.112 ppb	-0.034 ppb	0.049 ppb	101.342 %	0.000 ppb	0.003 ppb	98.368 %
Concentration per Run 2	96.805 %	1.439 ppb	0.055 ppb	-0.038 ppb	0.093 ppb	103.879 %	-0.003 ppb	-0.002 ppb	105.964 %
Concentration per Run 3	87.955 %	1.204 ppb	0.065 ppb	-0.034 ppb	0.119 ppb	100.410 %	0.000 ppb	-0.002 ppb	99.681 %
Concentration RSD	4.8 %	13.7 %	39.4 %	7.2 %	41.0 %	1.8 %	106.1 %	689.9 %	4.0 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.376 ppb	0.001 ppb	4.308 ppb	100.737 %	99.963 %	0.017 ppb	5.057 ppb	103.763 %
Concentration per Run 1	-2.312 ppb	0.001 ppb	5.418 ppb	97.254 %	98.007 %	-0.008 ppb	6.522 ppb	103.790 %
Concentration per Run 2	-2.392 ppb	0.001 ppb	4.118 ppb	104.080 %	105.727 %	0.026 ppb	4.721 ppb	104.603 %
Concentration per Run 3	-2.424 ppb	0.001 ppb	3.389 ppb	100.876 %	96.155 %	0.032 ppb	3.929 ppb	102.897 %
Concentration RSD	2.4 %	37.2 %	23.9 %	3.4 %	5.1 %	128.7 %	26.3 %	0.8 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	16	User name	ALPHALAB\a2-icpmsq2	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/7/2024 2:21:20 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	105.745 %	106.618 %	61.547 ppb	61.930 ppb	5,992.356 ppb	6,153.079 ppb	64.028 ppb	6,076.930 ppb	5,978.568 ppb
Concentration per Run 1	103.689 %	108.088 %	62.341 ppb	62.804 ppb	5,881.223 ppb	5,930.910 ppb	62.656 ppb	5,896.750 ppb	5,944.773 ppb
Concentration per Run 2	102.375 %	107.276 %	61.867 ppb	61.773 ppb	6,195.439 ppb	6,388.685 ppb	69.053 ppb	6,170.230 ppb	5,908.993 ppb
Concentration per Run 3	111.170 %	104.489 %	60.433 ppb	61.214 ppb	5,900.404 ppb	6,139.644 ppb	60.373 ppb	6,163.810 ppb	6,081.940 ppb
Recovery Percentage 1			102.579 %	103.217 %	99.873 %	102.551 %	106.713 %	101.282 %	99.643 %
Concentration RSD	4.5 %	1.8 %	1.6 %	1.3 %	2.9 %	3.7 %	7.0 %	2.6 %	1.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.474 %	58.857 ppb	61.027 ppb	63.558 ppb	6,177.861 ppb	61.612 ppb	61.498 ppb	64.736 ppb	61.429 ppb
Concentration per Run 1	105.735 %	58.918 ppb	60.887 ppb	63.819 ppb	6,284.199 ppb	64.629 ppb	62.845 ppb	66.177 ppb	62.223 ppb
Concentration per Run 2	107.994 %	58.356 ppb	60.247 ppb	62.283 ppb	6,015.773 ppb	59.132 ppb	59.701 ppb	62.291 ppb	60.127 ppb
Concentration per Run 3	111.694 %	59.296 ppb	61.947 ppb	64.573 ppb	6,233.610 ppb	61.074 ppb	61.947 ppb	65.740 ppb	61.938 ppb
Recovery Percentage 1		98.094 %	101.712 %	105.931 %	102.964 %	102.686 %	102.496 %	107.893 %	102.382 %
Concentration RSD	2.8 %	0.8 %	1.4 %	1.8 %	2.3 %	4.5 %	2.6 %	3.3 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.075 %	62.903 ppb	60.267 ppb	61.115 ppb	63.012 ppb	99.914 %	62.300 ppb	62.548 ppb	99.332 %
Concentration per Run 1	84.867 %	63.427 ppb	60.625 ppb	60.460 ppb	63.679 ppb	98.858 %	61.781 ppb	61.957 ppb	99.059 %
Concentration per Run 2	91.317 %	60.326 ppb	60.982 ppb	61.339 ppb	63.021 ppb	101.571 %	61.872 ppb	61.973 ppb	103.627 %
Concentration per Run 3	85.041 %	64.955 ppb	59.194 ppb	61.545 ppb	62.334 ppb	99.315 %	63.248 ppb	63.712 ppb	95.310 %
Recovery Percentage 1		104.838 %	100.444 %	101.858 %	105.019 %		103.834 %	104.246 %	
Concentration RSD	4.2 %	3.7 %	1.6 %	0.9 %	1.1 %	1.5 %	1.3 %	1.6 %	4.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.720 ppb	61.872 ppb	64.523 ppb	99.535 %	100.601 %	56.568 ppb	64.301 ppb	98.846 %
Concentration per Run 1	58.717 ppb	60.784 ppb	62.941 ppb	99.403 %	100.021 %	54.280 ppb	63.309 ppb	101.831 %
Concentration per Run 2	61.466 ppb	61.895 ppb	65.030 ppb	99.106 %	101.030 %	57.165 ppb	64.452 ppb	98.701 %
Concentration per Run 3	61.976 ppb	62.936 ppb	65.599 ppb	100.096 %	100.751 %	58.261 ppb	65.140 ppb	96.007 %
Recovery Percentage 1	101.200 %	103.119 %	107.539 %			94.281 %	107.168 %	
Concentration RSD	2.9 %	1.7 %	2.2 %	0.5 %	0.5 %	3.6 %	1.4 %	2.9 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index: 17 User name ALPHALAB\a2-icpmsq2 Comment CCB
Analysis label: CCB Rack 0
Analysis started at: 4/7/2024 2:25:51 PM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	107.198 %	107.160 %	0.025 ppb	1.453 ppb	-44.440 ppb	0.335 ppb	-2.480 ppb	-31.125 ppb	-57.626 ppb
Concentration per Run 1	106.627 %	107.276 %	0.010 ppb	1.397 ppb	-44.058 ppb	3.070 ppb	-2.969 ppb	-28.827 ppb	-59.258 ppb
Concentration per Run 2	108.754 %	107.160 %	0.008 ppb	1.384 ppb	-44.221 ppb	-0.232 ppb	-2.303 ppb	-29.926 ppb	-57.249 ppb
Concentration per Run 3	106.213 %	107.044 %	0.058 ppb	1.578 ppb	-45.042 ppb	-1.833 ppb	-2.168 ppb	-34.621 ppb	-56.371 ppb
Recovery Percentage 1			5.049 %	14.529 %	-44.440 %	0.479 %	-24.799 %	-31.125 %	-57.626 %
Concentration RSD	1.3 %	0.1 %	111.2 %	7.5 %	1.2 %	746.2 %	17.3 %	9.9 %	2.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.829 %	0.012 ppb	-0.010 ppb	-0.654 ppb	0.624 ppb	0.011 ppb	-0.274 ppb	-0.161 ppb	-2.805 ppb
Concentration per Run 1	102.365 %	-0.010 ppb	-0.004 ppb	-0.616 ppb	-0.106 ppb	0.014 ppb	-0.268 ppb	-0.121 ppb	-2.815 ppb
Concentration per Run 2	105.531 %	0.004 ppb	-0.015 ppb	-0.639 ppb	1.460 ppb	0.012 ppb	-0.288 ppb	-0.203 ppb	-2.784 ppb
Concentration per Run 3	103.590 %	0.042 ppb	-0.012 ppb	-0.705 ppb	0.519 ppb	0.007 ppb	-0.265 ppb	-0.159 ppb	-2.816 ppb
Recovery Percentage 1		0.240 %	-1.044 %	-65.367 %	1.249 %	2.176 %	-13.690 %	-16.084 %	-56.100 %
Concentration RSD	1.5 %	221.1 %	55.5 %	7.1 %	126.3 %	28.9 %	4.6 %	25.3 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.399 %	0.314 ppb	0.103 ppb	-0.018 ppb	0.115 ppb	103.306 %	0.022 ppb	0.014 ppb	103.744 %
Concentration per Run 1	83.471 %	0.300 ppb	0.121 ppb	-0.006 ppb	0.097 ppb	102.858 %	0.025 ppb	0.025 ppb	102.811 %
Concentration per Run 2	89.435 %	0.306 ppb	0.114 ppb	-0.022 ppb	0.106 ppb	104.357 %	0.023 ppb	0.011 ppb	104.250 %
Concentration per Run 3	89.290 %	0.337 ppb	0.074 ppb	-0.027 ppb	0.142 ppb	102.702 %	0.019 ppb	0.005 ppb	104.172 %
Recovery Percentage 1		62.855 %	2.061 %	-0.184 %	5.753 %		5.588 %	6.769 %	
Concentration RSD	3.9 %	6.2 %	24.6 %	58.4 %	20.6 %	0.9 %	12.8 %	77.8 %	0.8 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.283 ppb	0.033 ppb	-0.113 ppb	103.596 %	104.828 %	0.446 ppb	0.088 ppb	103.196 %
Concentration per Run 1	-2.350 ppb	0.034 ppb	-0.092 ppb	102.689 %	104.954 %	0.323 ppb	0.145 ppb	103.206 %
Concentration per Run 2	-2.200 ppb	0.035 ppb	-0.094 ppb	103.991 %	107.624 %	0.554 ppb	0.078 ppb	101.754 %
Concentration per Run 3	-2.297 ppb	0.031 ppb	-0.152 ppb	104.109 %	101.907 %	0.462 ppb	0.041 ppb	104.626 %
Recovery Percentage 1	-76.092 %	0.835 %	-22.601 %			44.630 %	8.789 %	
Concentration RSD	3.3 %	7.3 %	30.2 %	0.8 %	2.7 %	26.0 %	59.7 %	1.4 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	18	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	LDR Check (1/0.1)	Rack	4		
Analysis started at:	4/7/2024 2:35:24 PM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	108.779 %	107.701 %	0.003 ppb	0.209 ppb	-50.280 ppb	-1.568 ppb	-3.195 ppb	-45.426 ppb	-62.846 ppb
Concentration per Run 1	108.443 %	108.901 %	0.001 ppb	0.242 ppb	-51.798 ppb	0.201 ppb	-3.148 ppb	-49.883 ppb	-61.224 ppb
Concentration per Run 2	108.904 %	109.714 %	0.003 ppb	0.204 ppb	-51.181 ppb	-2.282 ppb	-3.265 ppb	-46.252 ppb	-65.703 ppb
Concentration per Run 3	108.991 %	104.489 %	0.004 ppb	0.181 ppb	-47.860 ppb	-2.623 ppb	-3.173 ppb	-40.144 ppb	-61.612 ppb
Concentration RSD	0.3 %	2.6 %	54.2 %	14.7 %	4.2 %	98.3 %	1.9 %	10.8 %	3.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.108 %	-0.007 ppb	-0.010 ppb	1,024.303 ppb	-7.252 ppb	0.003 ppb	-0.313 ppb	1,061.636 ppb	1,024.397 ppb
Concentration per Run 1	104.235 %	-0.014 ppb	-0.008 ppb	1,012.179 ppb	-8.263 ppb	0.002 ppb	-0.301 ppb	1,054.261 ppb	1,000.964 ppb
Concentration per Run 2	107.615 %	-0.014 ppb	-0.009 ppb	1,021.317 ppb	-7.326 ppb	-0.001 ppb	-0.297 ppb	1,063.352 ppb	1,028.149 ppb
Concentration per Run 3	106.474 %	0.007 ppb	-0.012 ppb	1,039.413 ppb	-6.168 ppb	0.007 ppb	-0.341 ppb	1,067.295 ppb	1,044.078 ppb
Concentration RSD	1.6 %	177.7 %	22.5 %	1.4 %	14.5 %	145.6 %	7.7 %	0.6 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	78.147 %	93.915 ppb	-0.020 ppb	-0.010 ppb	-0.102 ppb	100.224 %	0.002 ppb	0.004 ppb	101.347 %
Concentration per Run 1	79.406 %	93.522 ppb	-0.035 ppb	-0.023 ppb	-0.133 ppb	101.094 %	0.004 ppb	0.006 ppb	102.387 %
Concentration per Run 2	79.025 %	94.164 ppb	-0.011 ppb	0.008 ppb	-0.099 ppb	99.517 %	0.002 ppb	0.004 ppb	99.693 %
Concentration per Run 3	76.010 %	94.060 ppb	-0.014 ppb	-0.016 ppb	-0.074 ppb	100.061 %	0.001 ppb	0.003 ppb	101.960 %
Concentration RSD	2.4 %	0.4 %	64.3 %	157.8 %	29.2 %	0.8 %	77.7 %	41.0 %	1.4 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.665 ppb	0.006 ppb	974.978 ppb	98.357 %	100.674 %	0.052 ppb	1,084.371 ppb	101.929 %
Concentration per Run 1	-2.669 ppb	0.006 ppb	966.896 ppb	98.618 %	99.761 %	0.021 ppb	1,044.897 ppb	106.435 %
Concentration per Run 2	-2.640 ppb	0.009 ppb	988.436 ppb	98.560 %	99.821 %	0.067 ppb	1,085.384 ppb	101.515 %
Concentration per Run 3	-2.687 ppb	0.002 ppb	969.602 ppb	97.894 %	102.441 %	0.068 ppb	1,122.833 ppb	97.837 %
Concentration RSD	0.9 %	56.3 %	1.2 %	0.4 %	1.5 %	51.6 %	3.6 %	4.2 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	19	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 074-01G TOT	Rack	1		
Analysis started at:	4/7/2024 2:44:19 PM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	108.280 %	102.245 %	0.012 ppb	6.495 ppb	3,557.485 ppb	847.738 ppb	8.447 ppb	1,353.046 ppb	3,921.754 ppb
Concentration per Run 1	105.312 %	104.605 %	0.010 ppb	6.644 ppb	3,540.899 ppb	856.403 ppb	8.422 ppb	1,399.422 ppb	4,055.633 ppb
Concentration per Run 2	111.676 %	102.632 %	0.014 ppb	6.266 ppb	3,461.211 ppb	820.545 ppb	8.253 ppb	1,274.209 ppb	3,714.480 ppb
Concentration per Run 3	107.854 %	99.497 %	0.013 ppb	6.577 ppb	3,670.343 ppb	866.265 ppb	8.667 ppb	1,385.508 ppb	3,995.151 ppb
Concentration RSD	3.0 %	2.5 %	14.6 %	3.1 %	3.0 %	2.8 %	2.5 %	5.1 %	4.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.463 %	0.057 ppb	0.509 ppb	2.836 ppb	-3.671 ppb	0.030 ppb	-0.256 ppb	-0.045 ppb	-3.029 ppb
Concentration per Run 1	105.383 %	0.013 ppb	0.509 ppb	2.552 ppb	-3.553 ppb	0.032 ppb	-0.288 ppb	-0.116 ppb	-2.945 ppb
Concentration per Run 2	107.937 %	0.066 ppb	0.519 ppb	2.875 ppb	-3.896 ppb	0.031 ppb	-0.230 ppb	-0.100 ppb	-3.124 ppb
Concentration per Run 3	109.070 %	0.092 ppb	0.498 ppb	3.082 ppb	-3.564 ppb	0.028 ppb	-0.251 ppb	0.080 ppb	-3.017 ppb
Concentration RSD	1.8 %	70.6 %	2.1 %	9.4 %	5.3 %	6.9 %	11.5 %	240.3 %	3.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	81.740 %	0.092 ppb	0.059 ppb	15.486 ppb	-0.134 ppb	100.022 %	-0.004 ppb	0.010 ppb	96.624 %
Concentration per Run 1	84.712 %	0.074 ppb	0.129 ppb	15.889 ppb	-0.145 ppb	105.103 %	-0.004 ppb	0.008 ppb	102.192 %
Concentration per Run 2	82.907 %	0.085 ppb	0.016 ppb	15.231 ppb	-0.140 ppb	101.869 %	-0.004 ppb	0.006 ppb	98.960 %
Concentration per Run 3	77.601 %	0.118 ppb	0.033 ppb	15.337 ppb	-0.116 ppb	93.093 %	-0.004 ppb	0.017 ppb	88.719 %
Concentration RSD	4.5 %	24.7 %	103.2 %	2.3 %	11.7 %	6.2 %	6.2 %	56.4 %	7.3 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-3.026 ppb	0.014 ppb	11.342 ppb	99.344 %	101.009 %	0.046 ppb	0.086 ppb	88.182 %
Concentration per Run 1	-3.037 ppb	0.012 ppb	11.169 ppb	103.589 %	106.099 %	0.011 ppb	-0.021 ppb	91.792 %
Concentration per Run 2	-3.026 ppb	0.017 ppb	11.150 ppb	101.132 %	102.554 %	0.063 ppb	-0.041 ppb	88.767 %
Concentration per Run 3	-3.014 ppb	0.013 ppb	11.705 ppb	93.309 %	94.373 %	0.064 ppb	0.319 ppb	83.989 %
Concentration RSD	0.4 %	16.8 %	2.8 %	5.4 %	6.0 %	65.9 %	235.6 %	4.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	20	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 074-01G1 TOT	Rack	1		
Analysis started at:	4/7/2024 2:48:45 PM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	109.292 %	110.140 %	0.004 ppb	22.586 ppb	12,094.076 ppb	6,229.660 ppb	69.980 ppb	2,950.997 ppb	28,809.474 ppb
Concentration per Run 1	108.181 %	111.455 %	0.005 ppb	22.104 ppb	12,181.670 ppb	6,129.303 ppb	72.350 ppb	3,087.262 ppb	29,096.043 ppb
Concentration per Run 2	109.701 %	108.437 %	0.001 ppb	22.914 ppb	11,974.564 ppb	6,187.207 ppb	68.268 ppb	2,888.554 ppb	28,817.590 ppb
Concentration per Run 3	109.994 %	110.527 %	0.005 ppb	22.740 ppb	12,125.994 ppb	6,372.471 ppb	69.321 ppb	2,877.174 ppb	28,514.790 ppb
Concentration RSD	0.9 %	1.4 %	64.5 %	1.9 %	0.9 %	2.0 %	3.0 %	4.0 %	1.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.489 %	0.434 ppb	0.863 ppb	6,326.655 ppb	138.557 ppb	0.800 ppb	0.447 ppb	0.260 ppb	-3.014 ppb
Concentration per Run 1	104.944 %	0.358 ppb	0.856 ppb	6,318.827 ppb	127.410 ppb	0.758 ppb	0.428 ppb	0.295 ppb	-3.048 ppb
Concentration per Run 2	105.641 %	0.441 ppb	0.876 ppb	6,333.638 ppb	143.863 ppb	0.819 ppb	0.493 ppb	0.231 ppb	-2.971 ppb
Concentration per Run 3	108.881 %	0.504 ppb	0.857 ppb	6,327.500 ppb	144.399 ppb	0.822 ppb	0.420 ppb	0.255 ppb	-3.024 ppb
Concentration RSD	2.0 %	16.9 %	1.3 %	0.1 %	7.0 %	4.5 %	9.0 %	12.3 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.634 %	0.187 ppb	0.030 ppb	84.784 ppb	0.983 ppb	102.858 %	-0.005 ppb	0.025 ppb	103.423 %
Concentration per Run 1	91.134 %	0.158 ppb	0.012 ppb	86.845 ppb	0.888 ppb	103.552 %	-0.005 ppb	0.030 ppb	105.430 %
Concentration per Run 2	85.363 %	0.237 ppb	0.057 ppb	83.365 ppb	1.010 ppb	103.959 %	-0.005 ppb	0.025 ppb	103.560 %
Concentration per Run 3	86.404 %	0.167 ppb	0.020 ppb	84.142 ppb	1.053 ppb	101.063 %	-0.005 ppb	0.021 ppb	101.280 %
Concentration RSD	3.5 %	23.2 %	81.0 %	2.2 %	8.7 %	1.5 %	6.6 %	17.3 %	2.0 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-3.021 ppb	0.050 ppb	18.357 ppb	104.232 %	106.927 %	0.117 ppb	0.010 ppb	89.717 %
Concentration per Run 1	-3.023 ppb	0.045 ppb	18.448 ppb	103.746 %	108.753 %	0.088 ppb	0.010 ppb	90.335 %
Concentration per Run 2	-3.029 ppb	0.058 ppb	18.280 ppb	104.855 %	107.767 %	0.138 ppb	0.011 ppb	88.073 %
Concentration per Run 3	-3.010 ppb	0.048 ppb	18.342 ppb	104.095 %	104.260 %	0.125 ppb	0.009 ppb	90.742 %
Concentration RSD	0.3 %	13.7 %	0.5 %	0.5 %	2.2 %	21.8 %	9.1 %	1.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	21	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 074-01G2 TOT	Rack	1		
Analysis started at:	4/7/2024 2:53:12 PM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	109.700 %	107.818 %	0.002 ppb	23.087 ppb	12,599.063 ppb	6,446.747 ppb	82.324 ppb	3,043.285 ppb	29,151.842 ppb
Concentration per Run 1	107.907 %	110.759 %	0.004 ppb	22.825 ppb	12,406.007 ppb	6,208.692 ppb	76.787 ppb	2,939.474 ppb	28,591.813 ppb
Concentration per Run 2	111.209 %	106.579 %	-0.001 ppb	22.725 ppb	12,775.749 ppb	6,581.165 ppb	88.787 ppb	3,141.526 ppb	30,398.283 ppb
Concentration per Run 3	109.985 %	106.115 %	0.003 ppb	23.710 ppb	12,615.435 ppb	6,550.383 ppb	81.400 ppb	3,048.856 ppb	28,465.429 ppb
Concentration RSD	1.5 %	2.4 %	142.7 %	2.3 %	1.5 %	3.2 %	7.4 %	3.3 %	3.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.684 %	0.531 ppb	0.879 ppb	6,280.031 ppb	149.992 ppb	0.827 ppb	0.433 ppb	0.284 ppb	-3.039 ppb
Concentration per Run 1	103.581 %	0.544 ppb	0.924 ppb	6,420.501 ppb	153.533 ppb	0.861 ppb	0.396 ppb	0.288 ppb	-2.954 ppb
Concentration per Run 2	108.390 %	0.553 ppb	0.827 ppb	6,286.324 ppb	150.310 ppb	0.772 ppb	0.454 ppb	0.302 ppb	-3.099 ppb
Concentration per Run 3	108.082 %	0.496 ppb	0.885 ppb	6,133.269 ppb	146.133 ppb	0.848 ppb	0.448 ppb	0.262 ppb	-3.065 ppb
Concentration RSD	2.5 %	5.8 %	5.6 %	2.3 %	2.5 %	5.8 %	7.3 %	7.2 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.329 %	0.174 ppb	0.046 ppb	83.018 ppb	0.975 ppb	102.620 %	-0.004 ppb	0.031 ppb	101.010 %
Concentration per Run 1	85.838 %	0.209 ppb	0.056 ppb	85.440 ppb	0.958 ppb	102.734 %	-0.005 ppb	0.029 ppb	104.672 %
Concentration per Run 2	82.180 %	0.134 ppb	0.126 ppb	81.492 ppb	0.970 ppb	102.301 %	-0.003 ppb	0.040 ppb	97.468 %
Concentration per Run 3	87.967 %	0.179 ppb	-0.043 ppb	82.122 ppb	0.996 ppb	102.824 %	-0.004 ppb	0.024 ppb	100.889 %
Concentration RSD	3.4 %	21.9 %	182.6 %	2.6 %	2.0 %	0.3 %	16.5 %	25.1 %	3.6 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-3.008 ppb	0.057 ppb	18.581 ppb	105.077 %	106.184 %	0.107 ppb	0.012 ppb	90.698 %
Concentration per Run 1	-2.999 ppb	0.048 ppb	19.527 ppb	104.612 %	105.297 %	0.075 ppb	0.008 ppb	93.554 %
Concentration per Run 2	-3.010 ppb	0.056 ppb	18.258 ppb	104.012 %	106.901 %	0.121 ppb	0.007 ppb	90.682 %
Concentration per Run 3	-3.013 ppb	0.067 ppb	17.959 ppb	106.608 %	106.356 %	0.124 ppb	0.020 ppb	87.859 %
Concentration RSD	0.3 %	16.4 %	4.5 %	1.3 %	0.8 %	25.5 %	61.3 %	3.1 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	22	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 074-01F DIS	Rack	1		
Analysis started at:	4/7/2024 2:57:40 PM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	111.981 %	104.489 %	0.012 ppb	7.273 ppb	3,516.614 ppb	821.809 ppb	4.540 ppb	1,335.488 ppb	3,422.187 ppb
Concentration per Run 1	109.532 %	99.149 %	0.013 ppb	7.376 ppb	3,612.000 ppb	838.999 ppb	4.793 ppb	1,359.515 ppb	3,423.937 ppb
Concentration per Run 2	113.679 %	103.677 %	0.010 ppb	7.229 ppb	3,484.151 ppb	811.841 ppb	4.054 ppb	1,315.607 ppb	3,371.173 ppb
Concentration per Run 3	112.733 %	110.643 %	0.014 ppb	7.214 ppb	3,453.690 ppb	814.587 ppb	4.775 ppb	1,331.341 ppb	3,471.452 ppb
Concentration RSD	1.9 %	5.5 %	13.4 %	1.2 %	2.4 %	1.8 %	9.3 %	1.7 %	1.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.671 %	0.029 ppb	0.755 ppb	1.918 ppb	-7.589 ppb	0.020 ppb	-0.236 ppb	-0.276 ppb	-1.759 ppb
Concentration per Run 1	110.785 %	0.008 ppb	0.728 ppb	2.031 ppb	-8.358 ppb	0.015 ppb	-0.256 ppb	-0.280 ppb	-1.822 ppb
Concentration per Run 2	112.886 %	0.031 ppb	0.791 ppb	1.731 ppb	-6.826 ppb	0.024 ppb	-0.196 ppb	-0.275 ppb	-1.673 ppb
Concentration per Run 3	111.343 %	0.048 ppb	0.746 ppb	1.990 ppb	-7.582 ppb	0.021 ppb	-0.256 ppb	-0.273 ppb	-1.781 ppb
Concentration RSD	1.0 %	68.9 %	4.3 %	8.5 %	10.1 %	23.3 %	14.8 %	1.3 %	4.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.414 %	0.054 ppb	0.110 ppb	15.401 ppb	-0.151 ppb	102.720 %	-0.005 ppb	0.013 ppb	100.941 %
Concentration per Run 1	86.068 %	0.011 ppb	0.215 ppb	15.209 ppb	-0.177 ppb	104.685 %	-0.005 ppb	0.017 ppb	100.375 %
Concentration per Run 2	84.039 %	0.084 ppb	0.084 ppb	15.279 ppb	-0.145 ppb	97.313 %	-0.005 ppb	0.009 ppb	95.289 %
Concentration per Run 3	86.133 %	0.067 ppb	0.032 ppb	15.717 ppb	-0.131 ppb	106.162 %	-0.005 ppb	0.013 ppb	107.159 %
Concentration RSD	1.4 %	70.3 %	85.6 %	1.8 %	15.4 %	4.6 %	6.8 %	32.2 %	5.9 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-3.027 ppb	0.009 ppb	10.911 ppb	103.105 %	100.879 %	0.023 ppb	-0.181 ppb	90.287 %
Concentration per Run 1	-3.027 ppb	0.007 ppb	11.040 ppb	103.967 %	101.620 %	-0.001 ppb	-0.183 ppb	91.650 %
Concentration per Run 2	-3.027 ppb	0.013 ppb	10.686 ppb	98.776 %	94.898 %	0.034 ppb	-0.180 ppb	86.169 %
Concentration per Run 3	-3.026 ppb	0.007 ppb	11.005 ppb	106.572 %	106.119 %	0.038 ppb	-0.179 ppb	93.041 %
Concentration RSD	0.0 %	34.7 %	1.8 %	3.8 %	5.6 %	91.7 %	1.3 %	4.0 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	23	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 074-01F1 DIS	Rack	1		
Analysis started at:	4/7/2024 3:02:07 PM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	112.899 %	111.533 %	0.000 ppb	22.602 ppb	12,059.494 ppb	6,170.965 ppb	-2.002 ppb	2,935.651 ppb	29,025.061 ppb
Concentration per Run 1	112.600 %	111.455 %	-0.002 ppb	22.554 ppb	12,061.358 ppb	6,136.431 ppb	-1.999 ppb	2,997.522 ppb	29,459.569 ppb
Concentration per Run 2	113.297 %	108.553 %	0.001 ppb	22.608 ppb	12,233.007 ppb	6,327.887 ppb	-1.526 ppb	2,916.734 ppb	28,947.446 ppb
Concentration per Run 3	112.801 %	114.590 %	0.002 ppb	22.644 ppb	11,884.118 ppb	6,048.576 ppb	-2.481 ppb	2,892.696 ppb	28,668.167 ppb
Concentration RSD	0.3 %	2.7 %	722.5 %	0.2 %	1.4 %	2.3 %	23.9 %	1.9 %	1.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.573 %	0.171 ppb	0.396 ppb	6,313.418 ppb	41.113 ppb	0.754 ppb	0.235 ppb	-0.143 ppb	-3.379 ppb
Concentration per Run 1	110.179 %	0.181 ppb	0.329 ppb	6,310.136 ppb	41.957 ppb	0.769 ppb	0.249 ppb	-0.183 ppb	-3.363 ppb
Concentration per Run 2	108.758 %	0.176 ppb	0.392 ppb	6,279.887 ppb	38.756 ppb	0.734 ppb	0.184 ppb	-0.104 ppb	-3.365 ppb
Concentration per Run 3	112.782 %	0.155 ppb	0.468 ppb	6,350.229 ppb	42.626 ppb	0.760 ppb	0.273 ppb	-0.143 ppb	-3.409 ppb
Concentration RSD	1.8 %	8.3 %	17.5 %	0.6 %	5.0 %	2.4 %	19.4 %	27.5 %	0.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.216 %	0.189 ppb	-0.037 ppb	85.667 ppb	1.076 ppb	103.963 %	-0.005 ppb	0.016 ppb	102.472 %
Concentration per Run 1	87.285 %	0.161 ppb	-0.076 ppb	84.611 ppb	1.082 ppb	106.928 %	-0.005 ppb	0.015 ppb	103.473 %
Concentration per Run 2	88.774 %	0.194 ppb	-0.040 ppb	83.550 ppb	1.059 ppb	105.179 %	-0.005 ppb	0.015 ppb	103.386 %
Concentration per Run 3	85.590 %	0.213 ppb	0.006 ppb	88.838 ppb	1.086 ppb	99.780 %	-0.005 ppb	0.017 ppb	100.559 %
Concentration RSD	1.8 %	14.1 %	111.6 %	3.3 %	1.4 %	3.6 %	11.4 %	6.6 %	1.6 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-3.033 ppb	0.035 ppb	16.563 ppb	104.320 %	105.228 %	0.103 ppb	-0.182 ppb	90.183 %
Concentration per Run 1	-3.035 ppb	0.039 ppb	16.624 ppb	107.220 %	107.080 %	0.083 ppb	-0.185 ppb	93.933 %
Concentration per Run 2	-3.020 ppb	0.037 ppb	16.953 ppb	105.493 %	104.319 %	0.111 ppb	-0.181 ppb	90.597 %
Concentration per Run 3	-3.045 ppb	0.029 ppb	16.113 ppb	100.247 %	104.286 %	0.115 ppb	-0.180 ppb	86.020 %
Concentration RSD	0.4 %	16.0 %	2.6 %	3.5 %	1.5 %	17.0 %	1.3 %	4.4 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	24	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	OB SCAN 074-01F2 DIS	Rack	1		
Analysis started at:	4/7/2024 3:06:35 PM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	110.639 %	107.740 %	-0.003 ppb	23.733 ppb	12,504.446 ppb	6,419.144 ppb	-2.021 ppb	3,151.240 ppb	29,959.489 ppb
Concentration per Run 1	110.698 %	105.999 %	0.000 ppb	23.921 ppb	12,538.491 ppb	6,602.999 ppb	-2.135 ppb	3,149.522 ppb	29,914.664 ppb
Concentration per Run 2	110.721 %	111.571 %	-0.004 ppb	24.092 ppb	12,134.151 ppb	6,160.042 ppb	-1.883 ppb	2,995.074 ppb	28,864.175 ppb
Concentration per Run 3	110.497 %	105.650 %	-0.004 ppb	23.187 ppb	12,840.695 ppb	6,494.392 ppb	-2.045 ppb	3,309.124 ppb	31,099.629 ppb
Concentration RSD	0.1 %	3.1 %	77.1 %	2.0 %	2.8 %	3.6 %	6.3 %	5.0 %	3.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.129 %	0.168 ppb	0.277 ppb	6,216.649 ppb	37.340 ppb	0.714 ppb	0.214 ppb	-0.022 ppb	-3.297 ppb
Concentration per Run 1	109.845 %	0.144 ppb	0.244 ppb	6,140.710 ppb	36.933 ppb	0.717 ppb	0.224 ppb	0.003 ppb	-3.301 ppb
Concentration per Run 2	110.016 %	0.162 ppb	0.288 ppb	6,258.194 ppb	37.043 ppb	0.686 ppb	0.206 ppb	-0.041 ppb	-3.296 ppb
Concentration per Run 3	110.525 %	0.198 ppb	0.300 ppb	6,251.042 ppb	38.045 ppb	0.740 ppb	0.211 ppb	-0.029 ppb	-3.294 ppb
Concentration RSD	0.3 %	16.4 %	10.6 %	1.1 %	1.6 %	3.8 %	4.3 %	100.0 %	0.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.680 %	0.122 ppb	-0.056 ppb	83.715 ppb	1.072 ppb	103.615 %	-0.005 ppb	0.017 ppb	102.040 %
Concentration per Run 1	89.868 %	0.101 ppb	-0.060 ppb	84.161 ppb	1.072 ppb	106.417 %	-0.005 ppb	0.016 ppb	103.491 %
Concentration per Run 2	85.994 %	0.159 ppb	-0.025 ppb	85.469 ppb	1.136 ppb	103.837 %	-0.005 ppb	0.017 ppb	103.500 %
Concentration per Run 3	87.177 %	0.104 ppb	-0.084 ppb	81.516 ppb	1.007 ppb	100.590 %	-0.005 ppb	0.017 ppb	99.128 %
Concentration RSD	2.3 %	26.9 %	52.4 %	2.4 %	6.0 %	2.8 %	4.0 %	3.7 %	2.5 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-3.024 ppb	0.046 ppb	17.264 ppb	104.820 %	105.795 %	0.092 ppb	-0.180 ppb	91.091 %
Concentration per Run 1	-3.042 ppb	0.039 ppb	17.037 ppb	104.854 %	105.861 %	0.067 ppb	-0.181 ppb	91.205 %
Concentration per Run 2	-3.012 ppb	0.047 ppb	16.935 ppb	106.568 %	104.654 %	0.105 ppb	-0.180 ppb	91.374 %
Concentration per Run 3	-3.019 ppb	0.053 ppb	17.819 ppb	103.036 %	106.871 %	0.104 ppb	-0.179 ppb	90.695 %
Concentration RSD	0.5 %	14.8 %	2.8 %	1.7 %	1.0 %	23.3 %	0.7 %	0.4 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	25	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417281-02d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 3:17:06 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	118.281 %	115.596 %	-0.001 ppb	6.062 ppb	16,534.209 ppb	45.655 ppb	136.661 ppb	4,817.352 ppb	12,436.982 ppb
Concentration per Run 1	118.811 %	117.377 %	-0.001 ppb	6.133 ppb	15,812.607 ppb	45.527 ppb	128.466 ppb	4,793.240 ppb	12,526.483 ppb
Concentration per Run 2	118.556 %	112.965 %	-0.003 ppb	5.985 ppb	16,607.790 ppb	45.797 ppb	139.274 ppb	4,881.600 ppb	12,384.500 ppb
Concentration per Run 3	117.476 %	116.448 %	0.001 ppb	6.067 ppb	17,182.231 ppb	45.639 ppb	142.242 ppb	4,777.216 ppb	12,399.964 ppb
Concentration RSD	0.6 %	2.0 %	219.3 %	1.2 %	4.2 %	0.3 %	5.3 %	1.2 %	0.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	117.294 %	1.978 ppb	20.285 ppb	0.371 ppb	52.639 ppb	0.044 ppb	0.082 ppb	1.107 ppb	-2.095 ppb
Concentration per Run 1	118.410 %	2.018 ppb	19.761 ppb	0.290 ppb	51.095 ppb	0.045 ppb	0.094 ppb	1.072 ppb	-2.122 ppb
Concentration per Run 2	115.110 %	1.968 ppb	20.542 ppb	0.395 ppb	50.522 ppb	0.051 ppb	0.053 ppb	1.089 ppb	-2.117 ppb
Concentration per Run 3	118.363 %	1.949 ppb	20.553 ppb	0.429 ppb	56.302 ppb	0.036 ppb	0.101 ppb	1.160 ppb	-2.047 ppb
Concentration RSD	1.6 %	1.8 %	2.2 %	19.5 %	6.1 %	17.3 %	31.1 %	4.2 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	84.336 %	0.702 ppb	0.142 ppb	541.742 ppb	4.965 ppb	104.629 %	-0.003 ppb	0.002 ppb	106.563 %
Concentration per Run 1	83.641 %	0.703 ppb	0.085 ppb	540.700 ppb	4.661 ppb	105.810 %	-0.005 ppb	0.003 ppb	105.661 %
Concentration per Run 2	85.280 %	0.559 ppb	0.162 ppb	533.909 ppb	4.826 ppb	104.048 %	-0.003 ppb	-0.001 ppb	106.762 %
Concentration per Run 3	84.086 %	0.845 ppb	0.179 ppb	550.617 ppb	5.408 ppb	104.030 %	-0.002 ppb	0.003 ppb	107.265 %
Concentration RSD	1.0 %	20.3 %	35.1 %	1.6 %	7.9 %	1.0 %	43.1 %	122.3 %	0.8 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.799 ppb	0.130 ppb	27.158 ppb	105.271 %	106.315 %	-0.006 ppb	-0.052 ppb	104.294 %
Concentration per Run 1	-2.840 ppb	0.140 ppb	26.525 ppb	107.541 %	106.810 %	-0.017 ppb	-0.034 ppb	105.973 %
Concentration per Run 2	-2.777 ppb	0.116 ppb	27.242 ppb	104.094 %	105.284 %	-0.001 ppb	-0.060 ppb	104.508 %
Concentration per Run 3	-2.780 ppb	0.134 ppb	27.707 ppb	104.176 %	106.850 %	0.001 ppb	-0.062 ppb	102.400 %
Concentration RSD	1.3 %	9.7 %	2.2 %	1.9 %	0.8 %	175.9 %	29.8 %	1.7 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	26	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417302-01d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 3:21:35 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	120.859 %	119.196 %	-0.002 ppb	27.005 ppb	30,434.845 ppb	30,417.601 ppb	-1.825 ppb	1,734.287 ppb	54,302.558 ppb
Concentration per Run 1	118.642 %	119.118 %	-0.001 ppb	26.966 ppb	29,556.853 ppb	30,278.523 ppb	-1.753 ppb	1,724.344 ppb	53,806.615 ppb
Concentration per Run 2	120.856 %	123.646 %	-0.003 ppb	26.813 ppb	29,352.052 ppb	29,102.924 ppb	-1.906 ppb	1,704.317 ppb	53,807.205 ppb
Concentration per Run 3	123.077 %	114.822 %	-0.001 ppb	27.238 ppb	32,395.630 ppb	31,871.355 ppb	-1.817 ppb	1,774.201 ppb	55,293.855 ppb
Concentration RSD	1.8 %	3.7 %	47.6 %	0.8 %	5.6 %	4.6 %	4.2 %	2.1 %	1.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.630 %	0.078 ppb	0.119 ppb	0.010 ppb	59.037 ppb	0.022 ppb	2.164 ppb	-0.238 ppb	8.623 ppb
Concentration per Run 1	107.483 %	0.030 ppb	0.130 ppb	0.209 ppb	58.198 ppb	0.025 ppb	2.302 ppb	-0.259 ppb	8.517 ppb
Concentration per Run 2	108.390 %	0.090 ppb	0.115 ppb	-0.030 ppb	56.180 ppb	0.016 ppb	2.017 ppb	-0.232 ppb	8.736 ppb
Concentration per Run 3	110.017 %	0.113 ppb	0.112 ppb	-0.149 ppb	62.734 ppb	0.026 ppb	2.174 ppb	-0.224 ppb	8.614 ppb
Concentration RSD	1.2 %	54.8 %	8.1 %	1,850.4 %	5.7 %	23.1 %	6.6 %	7.5 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	83.279 %	0.046 ppb	0.005 ppb	468.624 ppb	0.028 ppb	100.609 %	-0.005 ppb	0.029 ppb	101.267 %
Concentration per Run 1	83.986 %	0.024 ppb	0.054 ppb	465.427 ppb	0.000 ppb	100.642 %	-0.005 ppb	0.023 ppb	102.841 %
Concentration per Run 2	81.197 %	0.086 ppb	-0.005 ppb	473.411 ppb	0.009 ppb	101.995 %	-0.004 ppb	0.036 ppb	101.573 %
Concentration per Run 3	84.654 %	0.029 ppb	-0.034 ppb	467.034 ppb	0.074 ppb	99.191 %	-0.005 ppb	0.028 ppb	99.388 %
Concentration RSD	2.2 %	73.8 %	923.0 %	0.9 %	146.3 %	1.4 %	10.6 %	22.7 %	1.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.793 ppb	0.006 ppb	2.174 ppb	102.257 %	102.007 %	0.033 ppb	-0.093 ppb	96.501 %
Concentration per Run 1	-2.794 ppb	0.005 ppb	2.018 ppb	101.015 %	100.819 %	0.019 ppb	-0.085 ppb	98.464 %
Concentration per Run 2	-2.774 ppb	0.008 ppb	2.216 ppb	103.611 %	103.178 %	0.039 ppb	-0.096 ppb	95.456 %
Concentration per Run 3	-2.809 ppb	0.004 ppb	2.288 ppb	102.144 %	102.024 %	0.042 ppb	-0.098 ppb	95.581 %
Concentration RSD	0.6 %	37.8 %	6.4 %	1.3 %	1.2 %	38.3 %	7.4 %	1.8 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	27	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903862-2d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 3:26:05 PM	Vial	8		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	114.813 %	116.022 %	5.199 ppb	101.050 ppb	961.825 ppb	1,065.181 ppb	205.461 ppb	983.786 ppb	884.896 ppb
Concentration per Run 1	109.810 %	119.699 %	5.146 ppb	100.275 ppb	903.074 ppb	1,013.888 ppb	191.883 ppb	938.062 ppb	799.107 ppb
Concentration per Run 2	117.190 %	106.463 %	5.166 ppb	101.259 ppb	1,031.018 ppb	1,121.656 ppb	215.807 ppb	977.426 ppb	1,001.865 ppb
Concentration per Run 3	117.438 %	121.905 %	5.284 ppb	101.616 ppb	951.384 ppb	1,060.000 ppb	208.691 ppb	1,035.872 ppb	853.716 ppb
Concentration RSD	3.8 %	7.2 %	1.4 %	0.7 %	6.7 %	5.1 %	6.0 %	5.0 %	11.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.548 %	50.704 ppb	20.974 ppb	54.045 ppb	98.710 ppb	52.386 ppb	53.115 ppb	27.081 ppb	52.116 ppb
Concentration per Run 1	106.418 %	48.653 ppb	20.175 ppb	51.372 ppb	93.500 ppb	50.970 ppb	51.255 ppb	26.457 ppb	49.701 ppb
Concentration per Run 2	113.033 %	52.390 ppb	21.619 ppb	56.249 ppb	99.152 ppb	54.192 ppb	55.535 ppb	27.761 ppb	53.808 ppb
Concentration per Run 3	112.192 %	51.069 ppb	21.127 ppb	54.514 ppb	103.477 ppb	51.998 ppb	52.554 ppb	27.025 ppb	52.840 ppb
Concentration RSD	3.3 %	3.7 %	3.5 %	4.6 %	5.1 %	3.1 %	4.1 %	2.4 %	4.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	89.232 %	13.128 ppb	13.121 ppb	103.947 ppb	103.226 ppb	106.675 %	5.044 ppb	5.457 ppb	108.160 %
Concentration per Run 1	91.263 %	12.952 ppb	11.775 ppb	100.301 ppb	103.729 ppb	107.440 %	5.161 ppb	5.561 ppb	105.372 %
Concentration per Run 2	87.572 %	12.639 ppb	14.064 ppb	103.386 ppb	103.146 ppb	106.401 %	4.967 ppb	5.376 ppb	108.448 %
Concentration per Run 3	88.861 %	13.792 ppb	13.525 ppb	108.155 ppb	102.802 ppb	106.184 %	5.004 ppb	5.434 ppb	110.660 %
Concentration RSD	2.1 %	4.5 %	9.1 %	3.8 %	0.5 %	0.6 %	2.0 %	1.7 %	2.5 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	98.986 ppb	47.997 ppb	201.948 ppb	108.176 %	107.829 %	11.238 ppb	55.650 ppb	102.550 %
Concentration per Run 1	101.278 ppb	48.369 ppb	201.152 ppb	107.656 %	107.301 %	10.932 ppb	54.256 ppb	105.311 %
Concentration per Run 2	95.742 ppb	47.371 ppb	199.639 ppb	109.892 %	104.839 %	11.466 ppb	56.726 ppb	100.467 %
Concentration per Run 3	99.937 ppb	48.252 ppb	205.052 ppb	106.980 %	111.347 %	11.317 ppb	55.969 ppb	101.872 %
Concentration RSD	2.9 %	1.1 %	1.4 %	1.4 %	3.0 %	2.4 %	2.3 %	2.4 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	28	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/7/2024 3:30:34 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	111.445 %	113.661 %	61.561 ppb	63.177 ppb	6,063.515 ppb	6,135.061 ppb	59.885 ppb	6,156.727 ppb	6,271.694 ppb
Concentration per Run 1	111.535 %	115.287 %	61.848 ppb	63.712 ppb	5,899.795 ppb	5,985.088 ppb	58.339 ppb	6,196.913 ppb	6,249.305 ppb
Concentration per Run 2	111.648 %	111.572 %	60.951 ppb	61.972 ppb	5,987.260 ppb	6,152.468 ppb	60.047 ppb	6,258.662 ppb	6,365.438 ppb
Concentration per Run 3	111.153 %	114.126 %	61.883 ppb	63.848 ppb	6,303.491 ppb	6,267.628 ppb	61.270 ppb	6,014.605 ppb	6,200.338 ppb
Recovery Percentage 1			102.601 %	105.295 %	101.059 %	102.251 %	99.809 %	102.612 %	104.528 %
Concentration RSD	0.2 %	1.7 %	0.9 %	1.7 %	3.5 %	2.3 %	2.5 %	2.1 %	1.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	115.830 %	62.969 ppb	63.133 ppb	64.283 ppb	6,393.805 ppb	63.267 ppb	63.632 ppb	65.356 ppb	63.625 ppb
Concentration per Run 1	115.402 %	61.557 ppb	64.226 ppb	65.422 ppb	6,569.645 ppb	64.644 ppb	64.399 ppb	65.480 ppb	62.475 ppb
Concentration per Run 2	116.975 %	64.191 ppb	62.473 ppb	62.056 ppb	6,316.682 ppb	61.982 ppb	63.244 ppb	64.862 ppb	64.322 ppb
Concentration per Run 3	115.112 %	63.159 ppb	62.700 ppb	65.371 ppb	6,295.089 ppb	63.176 ppb	63.252 ppb	65.724 ppb	64.079 ppb
Recovery Percentage 1		104.948 %	105.222 %	107.139 %	106.563 %	105.446 %	106.053 %	108.926 %	106.042 %
Concentration RSD	0.9 %	2.1 %	1.5 %	3.0 %	2.4 %	2.1 %	1.0 %	0.7 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.265 %	61.864 ppb	64.894 ppb	64.454 ppb	63.993 ppb	105.787 %	62.757 ppb	62.358 ppb	105.860 %
Concentration per Run 1	83.959 %	61.386 ppb	64.086 ppb	63.987 ppb	63.168 ppb	106.060 %	63.036 ppb	62.297 ppb	107.705 %
Concentration per Run 2	84.095 %	60.858 ppb	65.049 ppb	63.171 ppb	65.415 ppb	105.257 %	62.988 ppb	62.713 ppb	104.809 %
Concentration per Run 3	87.743 %	63.349 ppb	65.548 ppb	66.203 ppb	63.396 ppb	106.044 %	62.247 ppb	62.062 ppb	105.067 %
Recovery Percentage 1		103.107 %	108.157 %	107.423 %	106.655 %		104.595 %	103.929 %	
Concentration RSD	2.5 %	2.1 %	1.1 %	2.4 %	1.9 %	0.4 %	0.7 %	0.5 %	1.5 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.787 ppb	62.514 ppb	62.047 ppb	108.274 %	108.925 %	57.389 ppb	62.998 ppb	105.949 %
Concentration per Run 1	60.198 ppb	62.690 ppb	61.252 ppb	108.025 %	108.960 %	56.200 ppb	61.697 ppb	108.853 %
Concentration per Run 2	61.423 ppb	61.989 ppb	61.413 ppb	107.213 %	107.629 %	57.379 ppb	64.002 ppb	104.263 %
Concentration per Run 3	60.742 ppb	62.863 ppb	63.478 ppb	109.585 %	110.188 %	58.587 ppb	63.296 ppb	104.731 %
Recovery Percentage 1	101.312 %	104.190 %	103.412 %			95.648 %	104.997 %	
Concentration RSD	1.0 %	0.7 %	2.0 %	1.1 %	1.2 %	2.1 %	1.9 %	2.4 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	29	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/7/2024 3:35:05 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	108.097 %	104.102 %	0.017 ppb	2.831 ppb	-47.345 ppb	0.663 ppb	-2.421 ppb	-34.136 ppb	-52.843 ppb
Concentration per Run 1	108.649 %	102.167 %	0.018 ppb	2.947 ppb	-47.012 ppb	1.358 ppb	-2.611 ppb	-30.212 ppb	-56.813 ppb
Concentration per Run 2	107.873 %	99.845 %	0.015 ppb	2.791 ppb	-46.830 ppb	0.626 ppb	-2.165 ppb	-37.468 ppb	-55.870 ppb
Concentration per Run 3	107.771 %	110.294 %	0.017 ppb	2.754 ppb	-48.194 ppb	0.005 ppb	-2.488 ppb	-34.728 ppb	-45.847 ppb
Recovery Percentage 1			3.336 %	28.308 %	-47.345 %	0.947 %	-24.210 %	-34.136 %	-52.843 %
Concentration RSD	0.4 %	5.3 %	11.0 %	3.6 %	1.6 %	102.2 %	9.5 %	10.7 %	11.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.308 %	0.067 ppb	0.013 ppb	-0.658 ppb	-0.598 ppb	0.023 ppb	-0.223 ppb	-0.319 ppb	-2.942 ppb
Concentration per Run 1	107.525 %	0.069 ppb	0.023 ppb	-0.639 ppb	-0.317 ppb	0.024 ppb	-0.238 ppb	-0.314 ppb	-2.870 ppb
Concentration per Run 2	106.919 %	0.086 ppb	0.026 ppb	-0.634 ppb	0.488 ppb	0.032 ppb	-0.238 ppb	-0.296 ppb	-2.940 ppb
Concentration per Run 3	107.481 %	0.047 ppb	-0.011 ppb	-0.700 ppb	-1.966 ppb	0.012 ppb	-0.193 ppb	-0.347 ppb	-3.017 ppb
Recovery Percentage 1		1.343 %	1.259 %	-65.782 %	-1.197 %	4.524 %	-11.150 %	-31.859 %	-58.847 %
Concentration RSD	0.3 %	29.4 %	159.8 %	5.6 %	209.1 %	45.1 %	11.6 %	8.1 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.145 %	0.030 ppb	0.077 ppb	-0.008 ppb	0.084 ppb	106.630 %	0.028 ppb	0.021 ppb	106.679 %
Concentration per Run 1	86.342 %	-0.005 ppb	0.078 ppb	-0.004 ppb	0.030 ppb	108.448 %	0.033 ppb	0.031 ppb	105.286 %
Concentration per Run 2	87.039 %	0.057 ppb	0.060 ppb	-0.004 ppb	0.106 ppb	105.416 %	0.026 ppb	0.015 ppb	107.378 %
Concentration per Run 3	88.054 %	0.040 ppb	0.092 ppb	-0.016 ppb	0.115 ppb	106.026 %	0.025 ppb	0.017 ppb	107.374 %
Recovery Percentage 1		6.093 %	1.532 %	-0.084 %	4.180 %		7.004 %	10.354 %	
Concentration RSD	1.0 %	104.6 %	20.8 %	81.9 %	55.9 %	1.5 %	16.7 %	41.3 %	1.1 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.123 ppb	0.163 ppb	-0.137 ppb	106.273 %	108.556 %	0.455 ppb	-0.124 ppb	107.084 %
Concentration per Run 1	-2.152 ppb	0.130 ppb	-0.133 ppb	107.822 %	108.873 %	0.311 ppb	-0.113 ppb	109.856 %
Concentration per Run 2	-2.126 ppb	0.175 ppb	-0.118 ppb	103.418 %	106.914 %	0.561 ppb	-0.126 ppb	106.205 %
Concentration per Run 3	-2.091 ppb	0.184 ppb	-0.160 ppb	107.580 %	109.882 %	0.494 ppb	-0.132 ppb	105.190 %
Recovery Percentage 1	-70.776 %	4.069 %	-27.387 %			45.527 %	-12.381 %	
Concentration RSD	1.4 %	17.7 %	15.4 %	2.3 %	1.4 %	28.4 %	8.1 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	30	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	wg1903862-1 6020TL	Rack	1		
Analysis started at:	4/7/2024 3:46:06 PM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	106.280 %	107.895 %	0.001 ppb	0.648 ppb	-52.664 ppb	-0.658 ppb	-2.154 ppb	-44.115 ppb	-45.221 ppb
Concentration per Run 1	105.121 %	111.920 %	0.002 ppb	0.717 ppb	-52.889 ppb	-1.214 ppb	-2.241 ppb	-45.245 ppb	-42.894 ppb
Concentration per Run 2	106.730 %	102.051 %	0.001 ppb	0.611 ppb	-51.283 ppb	-0.211 ppb	-2.315 ppb	-41.007 ppb	-48.678 ppb
Concentration per Run 3	106.989 %	109.714 %	0.002 ppb	0.616 ppb	-53.821 ppb	-0.550 ppb	-1.906 ppb	-46.093 ppb	-44.091 ppb
Concentration RSD	1.0 %	4.8 %	49.3 %	9.2 %	2.4 %	77.6 %	10.1 %	6.2 %	6.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.655 %	-0.020 ppb	0.884 ppb	-0.623 ppb	-8.931 ppb	0.001 ppb	-0.251 ppb	-0.341 ppb	-3.084 ppb
Concentration per Run 1	105.405 %	-0.007 ppb	0.886 ppb	-0.623 ppb	-8.975 ppb	0.001 ppb	-0.249 ppb	-0.361 ppb	-3.109 ppb
Concentration per Run 2	104.828 %	-0.048 ppb	0.935 ppb	-0.634 ppb	-8.727 ppb	0.002 ppb	-0.259 ppb	-0.309 ppb	-3.092 ppb
Concentration per Run 3	106.732 %	-0.005 ppb	0.831 ppb	-0.614 ppb	-9.092 ppb	-0.001 ppb	-0.245 ppb	-0.354 ppb	-3.051 ppb
Concentration RSD	0.9 %	122.7 %	5.9 %	1.6 %	2.1 %	203.1 %	2.7 %	8.3 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	84.854 %	0.016 ppb	-0.043 ppb	-0.023 ppb	-0.148 ppb	102.182 %	0.004 ppb	0.011 ppb	104.416 %
Concentration per Run 1	86.988 %	-0.016 ppb	-0.071 ppb	-0.006 ppb	-0.152 ppb	99.691 %	0.018 ppb	0.032 ppb	104.752 %
Concentration per Run 2	83.654 %	0.065 ppb	0.008 ppb	-0.034 ppb	-0.147 ppb	103.585 %	-0.004 ppb	0.001 ppb	105.189 %
Concentration per Run 3	83.921 %	0.000 ppb	-0.067 ppb	-0.031 ppb	-0.144 ppb	103.271 %	-0.003 ppb	-0.001 ppb	103.307 %
Concentration RSD	2.2 %	263.4 %	103.2 %	66.0 %	2.7 %	2.1 %	316.7 %	169.2 %	0.9 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.832 ppb	0.040 ppb	-0.210 ppb	102.610 %	104.194 %	0.044 ppb	-0.174 ppb	102.456 %
Concentration per Run 1	-2.830 ppb	0.044 ppb	-0.192 ppb	100.080 %	102.346 %	0.031 ppb	-0.160 ppb	104.554 %
Concentration per Run 2	-2.863 ppb	0.039 ppb	-0.215 ppb	104.185 %	104.737 %	0.048 ppb	-0.178 ppb	100.631 %
Concentration per Run 3	-2.802 ppb	0.037 ppb	-0.224 ppb	103.565 %	105.497 %	0.054 ppb	-0.183 ppb	102.182 %
Concentration RSD	1.1 %	9.3 %	7.9 %	2.2 %	1.6 %	27.2 %	6.9 %	1.9 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	31	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904271-1 6020TL	Rack	1		
Analysis started at:	4/7/2024 3:50:35 PM	Vial	13		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	104.549 %	102.670 %	0.001 ppb	0.481 ppb	-55.557 ppb	-1.831 ppb	-1.994 ppb	-46.043 ppb	-56.729 ppb
Concentration per Run 1	101.957 %	107.044 %	-0.003 ppb	0.548 ppb	-55.521 ppb	-1.771 ppb	-2.268 ppb	-42.445 ppb	-58.994 ppb
Concentration per Run 2	104.765 %	96.710 %	0.001 ppb	0.475 ppb	-54.946 ppb	-1.636 ppb	-1.739 ppb	-47.157 ppb	-52.543 ppb
Concentration per Run 3	106.926 %	104.257 %	0.005 ppb	0.422 ppb	-56.203 ppb	-2.086 ppb	-1.976 ppb	-48.527 ppb	-58.652 ppb
Concentration RSD	2.4 %	5.2 %	322.0 %	13.2 %	1.1 %	12.6 %	13.3 %	6.9 %	6.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.373 %	-0.013 ppb	0.875 ppb	-0.742 ppb	-6.005 ppb	-0.003 ppb	-0.237 ppb	-0.013 ppb	-3.165 ppb
Concentration per Run 1	101.945 %	-0.023 ppb	0.872 ppb	-0.734 ppb	-6.644 ppb	-0.004 ppb	-0.243 ppb	-0.020 ppb	-3.121 ppb
Concentration per Run 2	103.201 %	-0.047 ppb	0.878 ppb	-0.733 ppb	-4.350 ppb	-0.002 ppb	-0.218 ppb	0.037 ppb	-3.216 ppb
Concentration per Run 3	104.974 %	0.031 ppb	0.875 ppb	-0.759 ppb	-7.020 ppb	-0.002 ppb	-0.251 ppb	-0.058 ppb	-3.158 ppb
Concentration RSD	1.5 %	303.9 %	0.3 %	2.0 %	24.1 %	52.2 %	7.3 %	356.2 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	79.564 %	-0.001 ppb	-0.052 ppb	-0.033 ppb	-0.154 ppb	99.060 %	-0.005 ppb	-0.002 ppb	100.479 %
Concentration per Run 1	76.113 %	-0.015 ppb	-0.085 ppb	-0.035 ppb	-0.169 ppb	98.570 %	-0.004 ppb	-0.002 ppb	100.781 %
Concentration per Run 2	78.956 %	0.004 ppb	-0.015 ppb	-0.026 ppb	-0.148 ppb	99.161 %	-0.005 ppb	-0.002 ppb	100.858 %
Concentration per Run 3	83.624 %	0.008 ppb	-0.056 ppb	-0.037 ppb	-0.145 ppb	99.450 %	-0.004 ppb	-0.002 ppb	99.798 %
Concentration RSD	4.8 %	1,704.9 %	67.1 %	16.9 %	8.3 %	0.5 %	11.3 %	0.0 %	0.6 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.893 ppb	0.023 ppb	-0.224 ppb	100.215 %	102.614 %	0.021 ppb	-0.191 ppb	100.478 %
Concentration per Run 1	-2.926 ppb	0.019 ppb	-0.227 ppb	99.776 %	101.869 %	-0.009 ppb	-0.191 ppb	104.187 %
Concentration per Run 2	-2.867 ppb	0.021 ppb	-0.209 ppb	100.833 %	102.296 %	0.033 ppb	-0.192 ppb	97.092 %
Concentration per Run 3	-2.887 ppb	0.028 ppb	-0.236 ppb	100.037 %	103.678 %	0.038 ppb	-0.192 ppb	100.155 %
Concentration RSD	1.0 %	21.5 %	6.2 %	0.5 %	0.9 %	124.2 %	0.2 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	32	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904271-2d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 3:55:01 PM	Vial	14		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	106.752 %	98.375 %	5.090 ppb	98.944 ppb	967.131 ppb	1,054.689 ppb	210.823 ppb	1,041.055 ppb	989.876 ppb
Concentration per Run 1	106.316 %	93.460 %	5.054 ppb	98.895 ppb	969.849 ppb	1,060.391 ppb	206.088 ppb	1,044.941 ppb	831.801 ppb
Concentration per Run 2	107.934 %	103.328 %	5.090 ppb	98.955 ppb	939.450 ppb	1,044.379 ppb	205.153 ppb	988.594 ppb	986.414 ppb
Concentration per Run 3	106.008 %	98.336 %	5.127 ppb	98.982 ppb	992.095 ppb	1,059.298 ppb	221.227 ppb	1,089.629 ppb	1,151.413 ppb
Concentration RSD	1.0 %	5.0 %	0.7 %	0.0 %	2.7 %	0.8 %	4.3 %	4.9 %	16.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.181 %	52.977 ppb	21.452 ppb	54.590 ppb	99.800 ppb	52.943 ppb	53.890 ppb	27.080 ppb	53.069 ppb
Concentration per Run 1	106.236 %	49.728 ppb	20.511 ppb	51.978 ppb	93.157 ppb	51.628 ppb	52.360 ppb	26.387 ppb	51.190 ppb
Concentration per Run 2	111.647 %	52.593 ppb	21.715 ppb	54.684 ppb	98.008 ppb	52.212 ppb	54.632 ppb	27.007 ppb	53.538 ppb
Concentration per Run 3	109.660 %	56.609 ppb	22.130 ppb	57.106 ppb	108.235 ppb	54.989 ppb	54.679 ppb	27.846 ppb	54.480 ppb
Concentration RSD	2.5 %	6.5 %	3.9 %	4.7 %	7.7 %	3.4 %	2.5 %	2.7 %	3.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	82.238 %	12.931 ppb	12.704 ppb	104.111 ppb	101.034 ppb	101.163 %	4.999 ppb	5.374 ppb	101.654 %
Concentration per Run 1	83.358 %	12.687 ppb	12.851 ppb	103.914 ppb	97.656 ppb	98.318 %	5.022 ppb	5.336 ppb	96.066 %
Concentration per Run 2	83.107 %	12.976 ppb	12.505 ppb	103.574 ppb	103.226 ppb	102.974 %	5.014 ppb	5.473 ppb	105.473 %
Concentration per Run 3	80.250 %	13.131 ppb	12.757 ppb	104.847 ppb	102.219 ppb	102.196 %	4.959 ppb	5.312 ppb	103.424 %
Concentration RSD	2.1 %	1.7 %	1.4 %	0.6 %	2.9 %	2.5 %	0.7 %	1.6 %	4.9 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	98.864 ppb	46.382 ppb	203.749 ppb	101.982 %	103.961 %	11.319 ppb	54.211 ppb	102.094 %
Concentration per Run 1	97.294 ppb	45.028 ppb	200.978 ppb	101.681 %	99.091 %	11.035 ppb	51.658 ppb	99.952 %
Concentration per Run 2	98.477 ppb	45.515 ppb	200.402 ppb	104.176 %	107.245 %	11.336 ppb	55.679 ppb	104.627 %
Concentration per Run 3	100.822 ppb	48.603 ppb	209.866 ppb	100.088 %	105.546 %	11.587 ppb	55.295 ppb	101.702 %
Concentration RSD	1.8 %	4.2 %	2.6 %	2.0 %	4.1 %	2.4 %	4.1 %	2.3 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	33	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904271-3d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 3:59:27 PM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	109.962 %	102.516 %	5.166 ppb	106.139 ppb	5,343.787 ppb	1,638.683 ppb	207.500 ppb	1,157.370 ppb	6,468.950 ppb
Concentration per Run 1	109.062 %	96.130 %	5.168 ppb	106.895 ppb	5,513.401 ppb	1,679.229 ppb	209.952 ppb	1,186.550 ppb	6,547.152 ppb
Concentration per Run 2	111.265 %	110.294 %	5.082 ppb	105.905 ppb	5,029.526 ppb	1,563.280 ppb	198.295 ppb	1,087.886 ppb	6,013.881 ppb
Concentration per Run 3	109.557 %	101.122 %	5.248 ppb	105.616 ppb	5,488.436 ppb	1,673.540 ppb	214.252 ppb	1,197.674 ppb	6,845.818 ppb
Concentration RSD	1.1 %	7.0 %	1.6 %	0.6 %	5.1 %	4.0 %	4.0 %	5.2 %	6.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.841 %	51.560 ppb	20.926 ppb	77.558 ppb	320.514 ppb	51.173 ppb	52.483 ppb	28.327 ppb	55.267 ppb
Concentration per Run 1	111.223 %	51.958 ppb	21.137 ppb	77.596 ppb	318.354 ppb	51.102 ppb	52.409 ppb	28.847 ppb	55.954 ppb
Concentration per Run 2	112.356 %	48.582 ppb	19.816 ppb	72.325 ppb	304.547 ppb	48.785 ppb	49.492 ppb	27.052 ppb	53.373 ppb
Concentration per Run 3	108.946 %	54.141 ppb	21.824 ppb	82.753 ppb	338.641 ppb	53.631 ppb	55.550 ppb	29.083 ppb	56.475 ppb
Concentration RSD	1.6 %	5.4 %	4.9 %	6.7 %	5.4 %	4.7 %	5.8 %	3.9 %	3.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	81.504 %	12.687 ppb	12.476 ppb	117.734 ppb	101.389 ppb	97.788 %	5.077 ppb	5.599 ppb	99.423 %
Concentration per Run 1	81.917 %	12.933 ppb	11.777 ppb	112.508 ppb	99.419 ppb	97.595 %	5.051 ppb	5.562 ppb	97.821 %
Concentration per Run 2	84.072 %	11.814 ppb	12.117 ppb	117.674 ppb	101.018 ppb	97.765 %	5.102 ppb	5.614 ppb	100.007 %
Concentration per Run 3	78.525 %	13.315 ppb	13.534 ppb	123.020 ppb	103.728 ppb	98.003 %	5.079 ppb	5.621 ppb	100.441 %
Concentration RSD	3.4 %	6.1 %	7.5 %	4.5 %	2.1 %	0.2 %	0.5 %	0.6 %	1.4 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	99.939 ppb	48.883 ppb	226.515 ppb	100.505 %	99.754 %	11.463 ppb	55.493 ppb	99.596 %
Concentration per Run 1	99.021 ppb	48.307 ppb	224.483 ppb	100.648 %	99.011 %	11.257 ppb	53.932 ppb	100.281 %
Concentration per Run 2	99.519 ppb	48.932 ppb	225.874 ppb	99.759 %	99.068 %	11.672 ppb	55.674 ppb	98.595 %
Concentration per Run 3	101.277 ppb	49.408 ppb	229.187 ppb	101.108 %	101.184 %	11.459 ppb	56.872 ppb	99.913 %
Concentration RSD	1.2 %	1.1 %	1.1 %	0.7 %	1.2 %	1.8 %	2.7 %	0.9 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	34	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904271-5d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:03:54 PM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	102.359 %	100.658 %	47.671 ppb	56.430 ppb	8,608.713 ppb	5,136.226 ppb	46.943 ppb	4,229.909 ppb	8,515.282 ppb
Concentration per Run 1	102.096 %	94.621 %	47.515 ppb	56.114 ppb	8,838.516 ppb	5,274.318 ppb	47.013 ppb	4,490.983 ppb	9,153.947 ppb
Concentration per Run 2	103.596 %	101.355 %	47.606 ppb	56.052 ppb	8,726.278 ppb	5,264.131 ppb	50.280 ppb	4,282.634 ppb	8,447.981 ppb
Concentration per Run 3	101.384 %	105.999 %	47.892 ppb	57.124 ppb	8,261.345 ppb	4,870.229 ppb	43.538 ppb	3,916.112 ppb	7,943.920 ppb
Concentration RSD	1.1 %	5.7 %	0.4 %	1.1 %	3.6 %	4.5 %	7.2 %	6.9 %	7.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.624 %	39.537 ppb	39.733 ppb	60.441 ppb	4,119.318 ppb	38.765 ppb	38.714 ppb	39.769 ppb	38.703 ppb
Concentration per Run 1	103.279 %	42.275 ppb	42.848 ppb	65.127 ppb	4,472.980 ppb	42.467 ppb	42.967 ppb	44.388 ppb	42.578 ppb
Concentration per Run 2	107.028 %	38.684 ppb	39.464 ppb	59.978 ppb	4,068.091 ppb	38.316 ppb	37.695 ppb	39.110 ppb	38.075 ppb
Concentration per Run 3	103.567 %	37.652 ppb	36.886 ppb	56.217 ppb	3,816.884 ppb	35.511 ppb	35.482 ppb	35.807 ppb	35.456 ppb
Concentration RSD	2.0 %	6.1 %	7.5 %	7.4 %	8.0 %	9.0 %	9.9 %	10.9 %	9.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.007 %	37.617 ppb	38.828 ppb	59.259 ppb	43.998 ppb	97.028 %	9.495 ppb	47.850 ppb	99.949 %
Concentration per Run 1	92.034 %	41.957 ppb	42.779 ppb	64.313 ppb	45.156 ppb	97.796 %	9.484 ppb	47.912 ppb	101.813 %
Concentration per Run 2	111.367 %	37.374 ppb	38.732 ppb	58.014 ppb	43.934 ppb	96.662 %	9.538 ppb	46.931 ppb	100.356 %
Concentration per Run 3	120.619 %	33.520 ppb	34.972 ppb	55.449 ppb	42.904 ppb	96.625 %	9.464 ppb	48.708 ppb	97.676 %
Concentration RSD	13.5 %	11.2 %	10.1 %	7.7 %	2.6 %	0.7 %	0.4 %	1.9 %	2.1 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	49.276 ppb	48.409 ppb	66.294 ppb	99.384 %	100.367 %	44.263 ppb	49.071 ppb	96.419 %
Concentration per Run 1	48.861 ppb	46.162 ppb	62.996 ppb	95.366 %	97.413 %	43.288 ppb	47.924 ppb	94.492 %
Concentration per Run 2	48.573 ppb	49.836 ppb	67.743 ppb	102.429 %	100.224 %	44.388 ppb	49.275 ppb	98.664 %
Concentration per Run 3	50.395 ppb	49.228 ppb	68.141 ppb	100.357 %	103.463 %	45.112 ppb	50.016 ppb	96.100 %
Concentration RSD	2.0 %	4.1 %	4.3 %	3.7 %	3.0 %	2.1 %	2.2 %	2.2 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	35	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904271-4 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:08:21 PM	Vial	17		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.865 %	94.621 %	0.027 ppb	29.541 ppb	46,568.849 ppb	6,283.702 ppb	52.530 ppb	1,314.754 ppb	53,703.417 ppb
Concentration per Run 1	101.255 %	98.916 %	0.024 ppb	29.347 ppb	45,493.745 ppb	6,134.247 ppb	49.929 ppb	1,258.537 ppb	53,347.317 ppb
Concentration per Run 2	100.356 %	93.576 %	0.026 ppb	29.694 ppb	47,372.605 ppb	6,431.052 ppb	57.346 ppb	1,403.063 ppb	57,268.131 ppb
Concentration per Run 3	100.985 %	91.370 %	0.031 ppb	29.583 ppb	46,840.198 ppb	6,285.808 ppb	50.314 ppb	1,282.664 ppb	50,494.803 ppb
Concentration RSD	0.5 %	4.1 %	13.3 %	0.6 %	2.1 %	2.4 %	7.9 %	5.9 %	6.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.552 %	0.339 ppb	1.930 ppb	253.999 ppb	2,272.574 ppb	0.290 ppb	0.690 ppb	15.598 ppb	24.020 ppb
Concentration per Run 1	100.617 %	0.273 ppb	1.983 ppb	254.235 ppb	2,290.249 ppb	0.280 ppb	0.577 ppb	15.659 ppb	24.412 ppb
Concentration per Run 2	99.376 %	0.320 ppb	1.917 ppb	268.892 ppb	2,358.652 ppb	0.256 ppb	0.740 ppb	16.641 ppb	25.214 ppb
Concentration per Run 3	101.662 %	0.424 ppb	1.890 ppb	238.870 ppb	2,168.822 ppb	0.335 ppb	0.752 ppb	14.494 ppb	22.433 ppb
Concentration RSD	1.1 %	22.7 %	2.5 %	5.9 %	4.2 %	14.0 %	14.2 %	6.9 %	6.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	81.292 %	0.837 ppb	0.288 ppb	156.942 ppb	0.205 ppb	94.072 %	0.015 ppb	0.031 ppb	94.946 %
Concentration per Run 1	80.201 %	0.842 ppb	0.290 ppb	161.499 ppb	0.140 ppb	95.352 %	0.011 ppb	0.004 ppb	95.319 %
Concentration per Run 2	77.146 %	0.856 ppb	0.339 ppb	156.279 ppb	0.181 ppb	94.195 %	0.016 ppb	0.010 ppb	93.513 %
Concentration per Run 3	86.531 %	0.814 ppb	0.235 ppb	153.049 ppb	0.295 ppb	92.669 %	0.020 ppb	0.079 ppb	96.006 %
Concentration RSD	5.9 %	2.5 %	18.0 %	2.7 %	39.1 %	1.4 %	27.6 %	134.5 %	1.4 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.125 ppb	0.310 ppb	177.725 ppb	98.418 %	97.610 %	0.449 ppb	0.042 ppb	91.461 %
Concentration per Run 1	-2.207 ppb	0.254 ppb	179.654 ppb	99.447 %	100.281 %	0.279 ppb	0.010 ppb	94.902 %
Concentration per Run 2	-2.115 ppb	0.311 ppb	171.346 ppb	101.085 %	98.501 %	0.538 ppb	0.013 ppb	91.060 %
Concentration per Run 3	-2.054 ppb	0.365 ppb	182.174 ppb	94.723 %	94.047 %	0.530 ppb	0.104 ppb	88.419 %
Concentration RSD	3.6 %	17.9 %	3.2 %	3.4 %	3.3 %	32.8 %	126.3 %	3.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	36	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417419-01 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:12:48 PM	Vial	15		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.792 %	95.317 %	0.015 ppb	28.748 ppb	46,200.861 ppb	6,300.119 ppb	47.132 ppb	1,223.746 ppb	50,013.895 ppb
Concentration per Run 1	97.158 %	101.122 %	0.016 ppb	28.829 ppb	44,579.558 ppb	6,051.232 ppb	44.595 ppb	1,181.023 ppb	48,755.456 ppb
Concentration per Run 2	99.321 %	90.905 %	0.018 ppb	28.215 ppb	46,164.339 ppb	6,231.460 ppb	46.931 ppb	1,242.256 ppb	50,504.917 ppb
Concentration per Run 3	99.896 %	93.924 %	0.010 ppb	29.199 ppb	47,858.687 ppb	6,617.664 ppb	49.871 ppb	1,247.958 ppb	50,781.312 ppb
Concentration RSD	1.5 %	5.5 %	30.2 %	1.7 %	3.5 %	4.6 %	5.6 %	3.0 %	2.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.492 %	0.264 ppb	2.022 ppb	255.813 ppb	2,239.547 ppb	0.267 ppb	0.674 ppb	15.713 ppb	23.747 ppb
Concentration per Run 1	96.461 %	0.218 ppb	2.078 ppb	257.877 ppb	2,271.990 ppb	0.282 ppb	0.712 ppb	16.036 ppb	23.967 ppb
Concentration per Run 2	100.095 %	0.264 ppb	1.910 ppb	253.821 ppb	2,257.951 ppb	0.273 ppb	0.744 ppb	15.978 ppb	23.780 ppb
Concentration per Run 3	101.919 %	0.309 ppb	2.079 ppb	255.741 ppb	2,188.700 ppb	0.246 ppb	0.565 ppb	15.126 ppb	23.495 ppb
Concentration RSD	2.8 %	17.4 %	4.8 %	0.8 %	2.0 %	6.9 %	14.2 %	3.2 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	76.647 %	0.904 ppb	0.151 ppb	159.556 ppb	0.035 ppb	90.976 %	0.009 ppb	0.005 ppb	91.970 %
Concentration per Run 1	77.428 %	0.926 ppb	0.154 ppb	158.731 ppb	0.011 ppb	92.820 %	0.005 ppb	0.005 ppb	94.284 %
Concentration per Run 2	72.014 %	0.927 ppb	0.066 ppb	161.988 ppb	0.025 ppb	90.407 %	0.011 ppb	0.004 ppb	91.312 %
Concentration per Run 3	80.499 %	0.861 ppb	0.233 ppb	157.950 ppb	0.070 ppb	89.699 %	0.012 ppb	0.004 ppb	90.314 %
Concentration RSD	5.6 %	4.2 %	55.1 %	1.3 %	87.6 %	1.8 %	37.3 %	12.2 %	2.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.611 ppb	0.158 ppb	180.502 ppb	92.973 %	93.840 %	0.114 ppb	0.002 ppb	87.445 %
Concentration per Run 1	-2.649 ppb	0.135 ppb	181.911 ppb	94.223 %	97.064 %	0.042 ppb	0.004 ppb	91.023 %
Concentration per Run 2	-2.559 ppb	0.165 ppb	178.515 ppb	93.168 %	91.675 %	0.146 ppb	0.001 ppb	85.763 %
Concentration per Run 3	-2.626 ppb	0.175 ppb	181.081 ppb	91.528 %	92.780 %	0.155 ppb	0.002 ppb	85.550 %
Concentration RSD	1.8 %	12.9 %	1.0 %	1.5 %	3.0 %	54.9 %	68.1 %	3.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	37	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417609-01d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:17:15 PM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.057 %	93.460 %	0.042 ppb	7.024 ppb	32,627.808 ppb	8,732.669 ppb	1,219.507 ppb	3,541.685 ppb	26,001.397 ppb
Concentration per Run 1	98.880 %	95.085 %	0.038 ppb	7.360 ppb	31,474.352 ppb	8,566.102 ppb	1,185.952 ppb	3,579.545 ppb	24,949.332 ppb
Concentration per Run 2	102.172 %	90.673 %	0.043 ppb	6.903 ppb	32,636.562 ppb	8,754.636 ppb	1,227.344 ppb	3,525.097 ppb	25,743.333 ppb
Concentration per Run 3	102.120 %	94.621 %	0.046 ppb	6.808 ppb	33,772.509 ppb	8,877.268 ppb	1,245.225 ppb	3,520.413 ppb	27,311.526 ppb
Concentration RSD	1.9 %	2.6 %	9.8 %	4.2 %	3.5 %	1.8 %	2.5 %	0.9 %	4.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.095 %	3.470 ppb	2.936 ppb	109.796 ppb	1,937.878 ppb	1.184 ppb	2.636 ppb	2.935 ppb	2.639 ppb
Concentration per Run 1	101.104 %	3.328 ppb	2.838 ppb	107.773 ppb	1,905.220 ppb	1.144 ppb	2.545 ppb	2.873 ppb	2.458 ppb
Concentration per Run 2	100.384 %	3.382 ppb	2.976 ppb	112.887 ppb	1,984.084 ppb	1.204 ppb	2.731 ppb	3.001 ppb	2.699 ppb
Concentration per Run 3	101.798 %	3.701 ppb	2.995 ppb	108.728 ppb	1,924.331 ppb	1.202 ppb	2.632 ppb	2.932 ppb	2.759 ppb
Concentration RSD	0.7 %	5.8 %	2.9 %	2.5 %	2.1 %	2.9 %	3.5 %	2.2 %	6.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	80.160 %	0.193 ppb	0.424 ppb	67.844 ppb	1.831 ppb	92.134 %	0.000 ppb	0.017 ppb	92.384 %
Concentration per Run 1	84.001 %	0.166 ppb	0.446 ppb	65.438 ppb	1.776 ppb	94.633 %	-0.002 ppb	0.022 ppb	91.654 %
Concentration per Run 2	76.092 %	0.185 ppb	0.364 ppb	69.872 ppb	1.991 ppb	90.829 %	0.001 ppb	0.014 ppb	93.420 %
Concentration per Run 3	80.387 %	0.228 ppb	0.462 ppb	68.224 ppb	1.728 ppb	90.939 %	0.002 ppb	0.016 ppb	92.078 %
Concentration RSD	4.9 %	16.4 %	12.4 %	3.3 %	7.6 %	2.3 %	528.8 %	24.7 %	1.0 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.536 ppb	0.135 ppb	36.776 ppb	94.191 %	94.356 %	0.075 ppb	1.294 ppb	88.496 %
Concentration per Run 1	-2.612 ppb	0.112 ppb	36.162 ppb	96.163 %	98.204 %	0.030 ppb	1.255 ppb	89.617 %
Concentration per Run 2	-2.505 ppb	0.143 ppb	36.846 ppb	94.015 %	93.114 %	0.091 ppb	1.281 ppb	88.268 %
Concentration per Run 3	-2.492 ppb	0.151 ppb	37.321 ppb	92.395 %	91.751 %	0.103 ppb	1.345 ppb	87.604 %
Concentration RSD	2.6 %	15.2 %	1.6 %	2.0 %	3.6 %	52.3 %	3.6 %	1.2 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	38	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	L2417609-03d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:21:45 PM	Vial	12		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	99.781 %	96.246 %	-0.001 ppb	4.218 ppb	11,591.928 ppb	2,570.772 ppb	14.370 ppb	6,147.795 ppb	4,539.664 ppb
Concentration per Run 1	98.518 %	95.317 %	-0.002 ppb	4.403 ppb	11,617.836 ppb	2,595.551 ppb	15.379 ppb	6,014.226 ppb	4,457.292 ppb
Concentration per Run 2	100.458 %	94.156 %	-0.002 ppb	4.146 ppb	11,749.552 ppb	2,582.853 ppb	14.951 ppb	6,323.933 ppb	4,768.255 ppb
Concentration per Run 3	100.368 %	99.265 %	-0.001 ppb	4.105 ppb	11,408.396 ppb	2,533.913 ppb	12.780 ppb	6,105.228 ppb	4,393.445 ppb
Concentration RSD	1.1 %	2.8 %	40.0 %	3.8 %	1.5 %	1.3 %	9.7 %	2.6 %	4.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.195 %	0.537 ppb	1.002 ppb	0.215 ppb	18.047 ppb	0.236 ppb	0.365 ppb	0.659 ppb	-2.578 ppb
Concentration per Run 1	99.256 %	0.379 ppb	1.044 ppb	0.092 ppb	15.756 ppb	0.211 ppb	0.260 ppb	0.579 ppb	-2.665 ppb
Concentration per Run 2	102.248 %	0.685 ppb	1.029 ppb	0.407 ppb	20.278 ppb	0.263 ppb	0.443 ppb	0.748 ppb	-2.499 ppb
Concentration per Run 3	102.082 %	0.547 ppb	0.934 ppb	0.147 ppb	18.107 ppb	0.235 ppb	0.392 ppb	0.650 ppb	-2.570 ppb
Concentration RSD	1.7 %	28.6 %	5.9 %	78.1 %	12.5 %	10.9 %	25.8 %	12.9 %	3.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	79.738 %	0.111 ppb	-0.020 ppb	20.241 ppb	0.831 ppb	93.821 %	-0.002 ppb	0.004 ppb	91.454 %
Concentration per Run 1	82.385 %	0.117 ppb	-0.008 ppb	20.104 ppb	0.847 ppb	93.453 %	-0.001 ppb	0.005 ppb	91.806 %
Concentration per Run 2	77.120 %	0.140 ppb	-0.048 ppb	20.429 ppb	0.862 ppb	94.349 %	-0.001 ppb	0.003 ppb	91.514 %
Concentration per Run 3	79.710 %	0.077 ppb	-0.003 ppb	20.190 ppb	0.783 ppb	93.662 %	-0.002 ppb	0.003 ppb	91.041 %
Concentration RSD	3.3 %	29.0 %	125.1 %	0.8 %	5.0 %	0.5 %	47.1 %	36.9 %	0.4 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.183 ppb	0.122 ppb	6.311 ppb	92.139 %	92.813 %	0.031 ppb	-0.135 ppb	88.546 %
Concentration per Run 1	-2.253 ppb	0.105 ppb	6.214 ppb	91.787 %	89.962 %	0.000 ppb	-0.137 ppb	91.128 %
Concentration per Run 2	-2.148 ppb	0.130 ppb	6.403 ppb	90.644 %	91.907 %	0.043 ppb	-0.134 ppb	87.524 %
Concentration per Run 3	-2.146 ppb	0.131 ppb	6.315 ppb	93.985 %	96.571 %	0.049 ppb	-0.134 ppb	86.986 %
Concentration RSD	2.8 %	12.1 %	1.5 %	1.8 %	3.7 %	88.0 %	1.3 %	2.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	39	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	WG1904271-6d5 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:26:15 PM	Vial	19		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.551 %	100.155 %	0.002 ppb	6.529 ppb	9,003.870 ppb	1,267.918 ppb	7.403 ppb	214.969 ppb	9,889.135 ppb
Concentration per Run 1	99.671 %	100.077 %	-0.001 ppb	6.460 ppb	8,818.175 ppb	1,245.577 ppb	7.040 ppb	193.131 ppb	9,596.504 ppb
Concentration per Run 2	100.517 %	101.935 %	0.003 ppb	6.607 ppb	9,076.782 ppb	1,272.458 ppb	8.505 ppb	224.373 ppb	10,343.833 ppb
Concentration per Run 3	101.466 %	98.452 %	0.004 ppb	6.519 ppb	9,116.653 ppb	1,285.718 ppb	6.663 ppb	227.404 ppb	9,727.068 ppb
Concentration RSD	0.9 %	1.7 %	134.1 %	1.1 %	1.8 %	1.6 %	13.1 %	8.8 %	4.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.850 %	0.177 ppb	0.398 ppb	51.284 ppb	445.491 ppb	0.048 ppb	-0.140 ppb	3.015 ppb	2.352 ppb
Concentration per Run 1	99.410 %	0.268 ppb	0.406 ppb	53.461 ppb	468.309 ppb	0.034 ppb	-0.161 ppb	2.939 ppb	2.276 ppb
Concentration per Run 2	103.433 %	0.139 ppb	0.385 ppb	51.001 ppb	446.239 ppb	0.049 ppb	-0.148 ppb	3.109 ppb	2.486 ppb
Concentration per Run 3	105.706 %	0.125 ppb	0.404 ppb	49.389 ppb	421.924 ppb	0.060 ppb	-0.109 ppb	2.998 ppb	2.294 ppb
Concentration RSD	3.1 %	44.6 %	2.9 %	4.0 %	5.2 %	27.6 %	19.3 %	2.9 %	5.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	83.453 %	0.212 ppb	0.012 ppb	31.874 ppb	-0.131 ppb	96.687 %	-0.001 ppb	0.000 ppb	96.871 %
Concentration per Run 1	81.482 %	0.167 ppb	-0.034 ppb	31.674 ppb	-0.144 ppb	95.884 %	0.000 ppb	-0.001 ppb	96.679 %
Concentration per Run 2	84.585 %	0.223 ppb	0.040 ppb	32.970 ppb	-0.139 ppb	98.568 %	-0.002 ppb	-0.001 ppb	101.328 %
Concentration per Run 3	84.293 %	0.246 ppb	0.031 ppb	30.979 ppb	-0.110 ppb	95.610 %	-0.002 ppb	0.002 ppb	92.606 %
Concentration RSD	2.1 %	19.2 %	322.2 %	3.2 %	14.0 %	1.7 %	115.0 %	1,880.6 %	4.5 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.671 ppb	0.053 ppb	36.445 ppb	96.404 %	96.758 %	0.016 ppb	-0.153 ppb	92.914 %
Concentration per Run 1	-2.705 ppb	0.031 ppb	36.078 ppb	98.103 %	97.015 %	-0.007 ppb	-0.155 ppb	95.273 %
Concentration per Run 2	-2.636 ppb	0.060 ppb	36.077 ppb	98.224 %	98.784 %	0.028 ppb	-0.156 ppb	93.643 %
Concentration per Run 3	-2.670 ppb	0.068 ppb	37.180 ppb	92.885 %	94.475 %	0.029 ppb	-0.147 ppb	89.825 %
Concentration RSD	1.3 %	36.3 %	1.7 %	3.2 %	2.2 %	126.3 %	3.0 %	3.0 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index: 40 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: CCV Rack 0
Analysis started at: 4/7/2024 4:30:42 PM Vial 9

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	99.619 %	95.627 %	62.685 ppb	62.516 ppb	6,303.229 ppb	6,512.845 ppb	64.898 ppb	6,182.119 ppb	6,154.690 ppb
Concentration per Run 1	98.923 %	91.021 %	63.017 ppb	63.517 ppb	6,388.935 ppb	6,598.173 ppb	66.135 ppb	6,112.500 ppb	5,988.914 ppb
Concentration per Run 2	100.614 %	100.774 %	62.616 ppb	62.832 ppb	6,490.701 ppb	6,456.834 ppb	63.953 ppb	6,320.233 ppb	6,174.760 ppb
Concentration per Run 3	99.321 %	95.085 %	62.423 ppb	61.199 ppb	6,030.053 ppb	6,483.528 ppb	64.607 ppb	6,113.623 ppb	6,300.397 ppb
Recovery Percentage 1			104.476 %	104.193 %	105.054 %	108.547 %	108.164 %	103.035 %	102.578 %
Concentration RSD	0.9 %	5.1 %	0.5 %	1.9 %	3.8 %	1.2 %	1.7 %	1.9 %	2.5 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.067 %	63.176 ppb	63.939 ppb	64.890 ppb	6,511.861 ppb	63.945 ppb	64.082 ppb	64.982 ppb	63.746 ppb
Concentration per Run 1	107.983 %	61.712 ppb	63.891 ppb	63.406 ppb	6,529.566 ppb	65.605 ppb	65.789 ppb	66.557 ppb	63.826 ppb
Concentration per Run 2	105.795 %	63.307 ppb	63.294 ppb	66.669 ppb	6,560.198 ppb	63.096 ppb	63.013 ppb	63.196 ppb	62.327 ppb
Concentration per Run 3	107.425 %	64.510 ppb	64.631 ppb	64.596 ppb	6,445.819 ppb	63.134 ppb	63.443 ppb	65.194 ppb	65.084 ppb
Recovery Percentage 1		105.294 %	106.564 %	108.150 %	108.531 %	106.575 %	106.803 %	108.304 %	106.243 %
Concentration RSD	1.1 %	2.2 %	1.0 %	2.5 %	0.9 %	2.2 %	2.3 %	2.6 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	79.649 %	64.874 ppb	65.751 ppb	63.170 ppb	62.962 ppb	95.390 %	62.804 ppb	63.334 ppb	95.262 %
Concentration per Run 1	79.317 %	63.733 ppb	63.688 ppb	60.912 ppb	61.565 ppb	97.655 %	61.437 ppb	63.181 ppb	94.520 %
Concentration per Run 2	81.748 %	65.880 ppb	66.079 ppb	65.451 ppb	61.913 ppb	95.581 %	63.421 ppb	62.306 ppb	98.049 %
Concentration per Run 3	77.884 %	65.010 ppb	67.487 ppb	63.147 ppb	65.409 ppb	92.936 %	63.556 ppb	64.515 ppb	93.216 %
Recovery Percentage 1		108.124 %	109.586 %	105.283 %	104.937 %		104.674 %	105.557 %	
Concentration RSD	2.5 %	1.7 %	2.9 %	3.6 %	3.4 %	2.5 %	1.9 %	1.8 %	2.6 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.209 ppb	62.541 ppb	63.247 ppb	96.119 %	97.129 %	58.218 ppb	65.244 ppb	91.298 %
Concentration per Run 1	61.302 ppb	62.940 ppb	62.527 ppb	95.379 %	96.780 %	55.316 ppb	62.808 ppb	95.331 %
Concentration per Run 2	59.431 ppb	62.181 ppb	64.405 ppb	98.166 %	99.147 %	59.599 ppb	67.299 ppb	89.268 %
Concentration per Run 3	59.895 ppb	62.504 ppb	62.810 ppb	94.811 %	95.459 %	59.740 ppb	65.627 ppb	89.295 %
Recovery Percentage 1	100.349 %	104.236 %	105.412 %			97.030 %	108.741 %	
Concentration RSD	1.6 %	0.6 %	1.6 %	1.9 %	1.9 %	4.3 %	3.5 %	3.8 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	41	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/7/2024 4:35:13 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.011 %	98.375 %	0.006 ppb	2.703 ppb	-48.427 ppb	-1.337 ppb	-2.431 ppb	-33.921 ppb	-53.069 ppb
Concentration per Run 1	98.821 %	97.407 %	0.007 ppb	2.778 ppb	-48.999 ppb	-1.728 ppb	-2.339 ppb	-34.142 ppb	-49.796 ppb
Concentration per Run 2	100.532 %	102.399 %	0.004 ppb	2.777 ppb	-47.868 ppb	-1.172 ppb	-2.333 ppb	-35.043 ppb	-56.922 ppb
Concentration per Run 3	100.680 %	95.317 %	0.005 ppb	2.554 ppb	-48.412 ppb	-1.110 ppb	-2.620 ppb	-32.579 ppb	-52.488 ppb
Recovery Percentage 1			1.121 %	27.027 %	-48.427 %	-1.910 %	-24.307 %	-33.921 %	-53.069 %
Concentration RSD	1.0 %	3.7 %	30.1 %	4.8 %	1.2 %	25.5 %	6.8 %	3.7 %	6.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.830 %	0.028 ppb	-0.010 ppb	-0.760 ppb	-1.690 ppb	-0.001 ppb	-0.266 ppb	-0.360 ppb	-3.013 ppb
Concentration per Run 1	99.593 %	0.014 ppb	-0.019 ppb	-0.749 ppb	-2.495 ppb	0.000 ppb	-0.281 ppb	-0.347 ppb	-2.948 ppb
Concentration per Run 2	100.782 %	0.056 ppb	-0.006 ppb	-0.773 ppb	-1.456 ppb	0.002 ppb	-0.228 ppb	-0.383 ppb	-2.995 ppb
Concentration per Run 3	99.113 %	0.013 ppb	-0.005 ppb	-0.757 ppb	-1.119 ppb	-0.004 ppb	-0.287 ppb	-0.350 ppb	-3.095 ppb
Recovery Percentage 1		0.553 %	-1.003 %	-75.978 %	-3.380 %	-0.192 %	-13.275 %	-36.022 %	-60.250 %
Concentration RSD	0.9 %	88.6 %	74.2 %	1.6 %	42.5 %	297.5 %	12.1 %	5.6 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	80.379 %	0.064 ppb	0.058 ppb	-0.030 ppb	0.021 ppb	96.246 %	0.009 ppb	0.003 ppb	97.987 %
Concentration per Run 1	78.475 %	0.029 ppb	0.050 ppb	-0.035 ppb	-0.030 ppb	93.846 %	0.011 ppb	0.003 ppb	97.649 %
Concentration per Run 2	82.023 %	0.071 ppb	0.090 ppb	-0.020 ppb	0.052 ppb	97.604 %	0.007 ppb	0.004 ppb	100.889 %
Concentration per Run 3	80.639 %	0.091 ppb	0.033 ppb	-0.036 ppb	0.041 ppb	97.288 %	0.008 ppb	0.004 ppb	95.424 %
Recovery Percentage 1		12.724 %	1.159 %	-0.305 %	1.056 %		2.223 %	1.727 %	
Concentration RSD	2.2 %	49.2 %	50.2 %	30.4 %	212.0 %	2.2 %	22.1 %	18.1 %	2.8 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.234 ppb	0.055 ppb	-0.194 ppb	98.505 %	97.490 %	0.493 ppb	-0.160 ppb	94.359 %
Concentration per Run 1	-2.264 ppb	0.046 ppb	-0.212 ppb	95.990 %	95.925 %	0.310 ppb	-0.162 ppb	97.774 %
Concentration per Run 2	-2.207 ppb	0.054 ppb	-0.182 ppb	101.256 %	99.752 %	0.615 ppb	-0.161 ppb	92.703 %
Concentration per Run 3	-2.232 ppb	0.064 ppb	-0.188 ppb	98.269 %	96.793 %	0.554 ppb	-0.158 ppb	92.601 %
Recovery Percentage 1	-74.466 %	1.364 %	-38.781 %			49.311 %	-16.035 %	
Concentration RSD	1.3 %	16.1 %	8.3 %	2.7 %	2.1 %	32.8 %	1.5 %	3.1 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	42	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-25 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:40:35 PM	Vial	20		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.984 %	96.594 %	0.006 ppb	358.486 ppb	115,577.588 ppb	10,378.242 ppb	45.892 ppb	10,898.865 ppb	88,978.505 ppb
Concentration per Run 1	95.071 %	102.748 %	0.006 ppb	344.812 ppb	112,429.178 ppb	10,275.733 ppb	44.936 ppb	11,010.301 ppb	91,527.094 ppb
Concentration per Run 2	96.052 %	100.774 %	0.011 ppb	349.468 ppb	113,330.371 ppb	10,139.183 ppb	44.299 ppb	10,396.056 ppb	86,812.643 ppb
Concentration per Run 3	96.828 %	86.261 %	0.003 ppb	381.179 ppb	120,973.216 ppb	10,719.811 ppb	48.442 ppb	11,290.239 ppb	88,595.779 ppb
Concentration RSD	0.9 %	9.3 %	59.2 %	5.5 %	4.1 %	2.9 %	4.9 %	4.2 %	2.7 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.304 %	3.854 ppb	1.869 ppb	3,155.920 ppb	102.007 ppb	1.047 ppb	1.377 ppb	4.521 ppb	-1.414 ppb
Concentration per Run 1	96.549 %	3.742 ppb	1.830 ppb	3,156.976 ppb	98.993 ppb	1.005 ppb	1.263 ppb	4.318 ppb	-1.400 ppb
Concentration per Run 2	99.418 %	3.600 ppb	1.859 ppb	3,050.971 ppb	101.124 ppb	0.978 ppb	1.322 ppb	4.552 ppb	-1.483 ppb
Concentration per Run 3	98.944 %	4.221 ppb	1.918 ppb	3,259.815 ppb	105.903 ppb	1.159 ppb	1.547 ppb	4.692 ppb	-1.360 ppb
Concentration RSD	1.6 %	8.4 %	2.4 %	3.3 %	3.5 %	9.4 %	10.9 %	4.2 %	4.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	76.250 %	0.423 ppb	1.378 ppb	338.686 ppb	0.526 ppb	89.055 %	0.003 ppb	0.036 ppb	92.274 %
Concentration per Run 1	79.103 %	0.329 ppb	1.372 ppb	347.196 ppb	0.536 ppb	91.917 %	0.004 ppb	0.037 ppb	98.902 %
Concentration per Run 2	75.699 %	0.448 ppb	1.390 ppb	329.546 ppb	0.505 ppb	88.585 %	0.003 ppb	0.023 ppb	91.245 %
Concentration per Run 3	73.947 %	0.491 ppb	1.371 ppb	339.317 ppb	0.538 ppb	86.663 %	0.002 ppb	0.047 ppb	86.676 %
Concentration RSD	3.4 %	19.9 %	0.8 %	2.6 %	3.6 %	3.0 %	45.6 %	34.1 %	6.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.775 ppb	0.191 ppb	106.772 ppb	89.941 %	91.608 %	0.158 ppb	-0.081 ppb	85.386 %
Concentration per Run 1	-2.844 ppb	0.189 ppb	107.642 ppb	95.829 %	97.769 %	0.089 ppb	-0.097 ppb	97.058 %
Concentration per Run 2	-2.731 ppb	0.182 ppb	108.285 ppb	89.957 %	90.810 %	0.194 ppb	-0.081 ppb	84.334 %
Concentration per Run 3	-2.749 ppb	0.203 ppb	104.388 ppb	84.038 %	86.245 %	0.191 ppb	-0.066 ppb	74.766 %
Concentration RSD	2.2 %	5.5 %	2.0 %	6.6 %	6.3 %	37.6 %	19.6 %	13.1 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	43	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-27 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:45:02 PM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	98.801 %	99.110 %	0.039 ppb	86.274 ppb	55,516.817 ppb	17,618.291 ppb	74.646 ppb	1,475.451 ppb	106,568.917 ppb
Concentration per Run 1	99.425 %	97.988 %	0.035 ppb	86.667 ppb	55,898.652 ppb	18,022.974 ppb	77.228 ppb	1,548.448 ppb	111,541.760 ppb
Concentration per Run 2	98.642 %	96.014 %	0.043 ppb	86.758 ppb	56,539.553 ppb	18,046.554 ppb	73.473 ppb	1,458.095 ppb	103,324.113 ppb
Concentration per Run 3	98.334 %	103.328 %	0.039 ppb	85.397 ppb	54,112.247 ppb	16,785.345 ppb	73.238 ppb	1,419.809 ppb	104,840.877 ppb
Concentration RSD	0.6 %	3.8 %	10.3 %	0.9 %	2.3 %	4.1 %	3.0 %	4.5 %	4.1 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.315 %	3.639 ppb	1.628 ppb	5,708.698 ppb	12,362.386 ppb	4.732 ppb	5.849 ppb	7.746 ppb	0.254 ppb
Concentration per Run 1	104.939 %	3.728 ppb	1.627 ppb	5,867.412 ppb	12,327.305 ppb	4.626 ppb	5.888 ppb	7.826 ppb	0.153 ppb
Concentration per Run 2	103.137 %	3.462 ppb	1.642 ppb	5,630.066 ppb	12,221.492 ppb	4.804 ppb	5.982 ppb	7.706 ppb	0.335 ppb
Concentration per Run 3	104.868 %	3.726 ppb	1.615 ppb	5,628.615 ppb	12,538.360 ppb	4.767 ppb	5.677 ppb	7.708 ppb	0.274 ppb
Concentration RSD	1.0 %	4.2 %	0.8 %	2.4 %	1.3 %	2.0 %	2.7 %	0.9 %	36.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	77.849 %	6.536 ppb	0.407 ppb	365.309 ppb	0.311 ppb	89.730 %	0.008 ppb	0.052 ppb	95.420 %
Concentration per Run 1	77.134 %	6.797 ppb	0.508 ppb	378.683 ppb	0.311 ppb	91.396 %	0.007 ppb	0.040 ppb	97.923 %
Concentration per Run 2	78.694 %	6.212 ppb	0.418 ppb	358.900 ppb	0.371 ppb	88.623 %	0.009 ppb	0.060 ppb	94.769 %
Concentration per Run 3	77.719 %	6.597 ppb	0.295 ppb	358.345 ppb	0.250 ppb	89.169 %	0.007 ppb	0.055 ppb	93.567 %
Concentration RSD	1.0 %	4.5 %	26.2 %	3.2 %	19.4 %	1.6 %	17.1 %	20.5 %	2.4 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.756 ppb	0.344 ppb	15.918 ppb	93.692 %	92.823 %	0.120 ppb	0.360 ppb	86.629 %
Concentration per Run 1	-2.815 ppb	0.349 ppb	15.481 ppb	94.876 %	95.133 %	0.064 ppb	0.337 ppb	88.510 %
Concentration per Run 2	-2.689 ppb	0.343 ppb	16.112 ppb	93.598 %	93.406 %	0.138 ppb	0.361 ppb	87.214 %
Concentration per Run 3	-2.764 ppb	0.340 ppb	16.161 ppb	92.602 %	89.930 %	0.157 ppb	0.381 ppb	84.165 %
Concentration RSD	2.3 %	1.2 %	2.4 %	1.2 %	2.9 %	41.3 %	6.2 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	44	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-28 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:49:30 PM	Vial	22		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.819 %	95.782 %	0.007 ppb	21.097 ppb	14,997.312 ppb	9,363.422 ppb	68.805 ppb	502.734 ppb	63,693.598 ppb
Concentration per Run 1	100.927 %	95.782 %	0.005 ppb	20.727 ppb	15,003.922 ppb	9,471.110 ppb	68.013 ppb	495.721 ppb	63,306.424 ppb
Concentration per Run 2	100.602 %	97.871 %	0.008 ppb	21.541 ppb	14,949.139 ppb	9,112.245 ppb	69.544 ppb	502.768 ppb	62,381.443 ppb
Concentration per Run 3	100.927 %	93.692 %	0.008 ppb	21.023 ppb	15,038.874 ppb	9,506.912 ppb	68.858 ppb	509.712 ppb	65,392.927 ppb
Concentration RSD	0.2 %	2.2 %	28.7 %	2.0 %	0.3 %	2.3 %	1.1 %	1.4 %	2.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.795 %	0.140 ppb	1.345 ppb	89.357 ppb	323.798 ppb	0.098 ppb	0.011 ppb	2.295 ppb	7.838 ppb
Concentration per Run 1	101.273 %	0.142 ppb	1.380 ppb	91.029 ppb	325.100 ppb	0.102 ppb	-0.008 ppb	2.272 ppb	7.807 ppb
Concentration per Run 2	102.052 %	0.156 ppb	1.302 ppb	86.900 ppb	322.439 ppb	0.087 ppb	-0.073 ppb	2.176 ppb	7.635 ppb
Concentration per Run 3	105.061 %	0.122 ppb	1.352 ppb	90.141 ppb	323.854 ppb	0.104 ppb	0.113 ppb	2.436 ppb	8.072 ppb
Concentration RSD	1.9 %	12.2 %	2.9 %	2.4 %	0.4 %	9.5 %	895.3 %	5.7 %	2.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	78.644 %	20.248 ppb	-0.015 ppb	296.925 ppb	0.411 ppb	94.116 %	-0.003 ppb	0.009 ppb	96.043 %
Concentration per Run 1	78.678 %	20.176 ppb	-0.014 ppb	301.099 ppb	0.382 ppb	95.911 %	-0.004 ppb	0.009 ppb	96.371 %
Concentration per Run 2	80.086 %	20.204 ppb	-0.008 ppb	295.690 ppb	0.447 ppb	93.196 %	-0.003 ppb	0.011 ppb	96.963 %
Concentration per Run 3	77.169 %	20.363 ppb	-0.022 ppb	293.985 ppb	0.404 ppb	93.241 %	-0.002 ppb	0.006 ppb	94.794 %
Concentration RSD	1.9 %	0.5 %	48.3 %	1.3 %	8.0 %	1.7 %	36.6 %	26.3 %	1.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.786 ppb	0.067 ppb	154.251 ppb	96.756 %	94.871 %	0.040 ppb	0.126 ppb	90.357 %
Concentration per Run 1	-2.840 ppb	0.067 ppb	158.128 ppb	98.236 %	95.963 %	0.006 ppb	0.127 ppb	91.448 %
Concentration per Run 2	-2.759 ppb	0.065 ppb	152.243 ppb	98.606 %	97.010 %	0.053 ppb	0.130 ppb	89.914 %
Concentration per Run 3	-2.760 ppb	0.070 ppb	152.381 ppb	93.426 %	91.639 %	0.060 ppb	0.120 ppb	89.708 %
Concentration RSD	1.7 %	4.0 %	2.2 %	3.0 %	3.0 %	74.8 %	4.0 %	1.1 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	45	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-29 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:53:58 PM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	99.880 %	97.059 %	1.758 ppb	32.259 ppb	17,556.291 ppb	123,901.761 ppb	22,151.982 ppb	4,170.203 ppb	553,474.868 ppb
Concentration per Run 1	98.297 %	89.860 %	1.712 ppb	37.108 ppb	18,319.023 ppb	127,650.789 ppb	22,298.517 ppb	4,370.679 ppb	564,514.491 ppb
Concentration per Run 2	99.987 %	100.310 %	1.724 ppb	23.199 ppb	17,598.522 ppb	124,677.002 ppb	22,774.246 ppb	4,249.911 ppb	556,974.426 ppb
Concentration per Run 3	101.356 %	101.006 %	1.838 ppb	36.470 ppb	16,751.328 ppb	119,377.492 ppb	21,383.182 ppb	3,890.021 ppb	538,935.687 ppb
Concentration RSD	1.5 %	6.4 %	3.9 %	24.3 %	4.5 %	3.4 %	3.2 %	6.0 %	2.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	129.886 %	50.662 ppb	31.422 ppb	5,614.474 ppb	71,188.793 ppb	37.591 ppb	58.830 ppb	189.606 ppb	224.351 ppb
Concentration per Run 1	129.809 %	49.772 ppb	32.026 ppb	5,576.219 ppb	71,366.821 ppb	38.069 ppb	59.226 ppb	193.262 ppb	224.516 ppb
Concentration per Run 2	128.853 %	50.840 ppb	31.032 ppb	5,654.859 ppb	71,396.097 ppb	37.311 ppb	59.275 ppb	187.398 ppb	227.807 ppb
Concentration per Run 3	130.995 %	51.373 ppb	31.208 ppb	5,612.345 ppb	70,803.462 ppb	37.394 ppb	57.990 ppb	188.160 ppb	220.730 ppb
Concentration RSD	0.8 %	1.6 %	1.7 %	0.7 %	0.5 %	1.1 %	1.2 %	1.7 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	76.853 %	27.001 ppb	29.594 ppb	1,756.983 ppb	0.522 ppb	81.568 %	0.121 ppb	1.035 ppb	89.138 %
Concentration per Run 1	75.723 %	26.412 ppb	30.535 ppb	1,681.267 ppb	0.499 ppb	80.487 %	0.132 ppb	1.067 ppb	86.480 %
Concentration per Run 2	77.955 %	27.540 ppb	28.925 ppb	1,866.512 ppb	0.542 ppb	83.350 %	0.118 ppb	1.005 ppb	91.285 %
Concentration per Run 3	76.881 %	27.050 ppb	29.322 ppb	1,723.170 ppb	0.526 ppb	80.866 %	0.114 ppb	1.032 ppb	89.648 %
Concentration RSD	1.5 %	2.1 %	2.8 %	5.5 %	4.2 %	1.9 %	8.1 %	3.0 %	2.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.725 ppb	0.227 ppb	548.337 ppb	88.830 %	78.330 %	0.356 ppb	43.932 ppb	77.628 %
Concentration per Run 1	-2.730 ppb	0.224 ppb	538.252 ppb	86.134 %	76.077 %	0.325 ppb	42.294 ppb	79.636 %
Concentration per Run 2	-2.765 ppb	0.224 ppb	559.281 ppb	90.760 %	80.683 %	0.357 ppb	44.567 ppb	77.623 %
Concentration per Run 3	-2.678 ppb	0.233 ppb	547.476 ppb	89.596 %	78.229 %	0.386 ppb	44.935 ppb	75.625 %
Concentration RSD	1.6 %	2.3 %	1.9 %	2.7 %	2.9 %	8.5 %	3.3 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	46	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-30 6020TL	Rack	1		
Analysis started at:	4/7/2024 4:58:27 PM	Vial	24		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	103.143 %	102.012 %	0.031 ppb	62.977 ppb	31,333.632 ppb	2,867.975 ppb	640.191 ppb	1,845.266 ppb	21,564.728 ppb
Concentration per Run 1	102.390 %	100.774 %	0.039 ppb	62.523 ppb	30,462.179 ppb	2,786.331 ppb	623.679 ppb	1,838.663 ppb	21,701.118 ppb
Concentration per Run 2	103.068 %	102.283 %	0.030 ppb	62.686 ppb	32,140.816 ppb	2,944.052 ppb	675.515 ppb	1,892.916 ppb	22,096.082 ppb
Concentration per Run 3	103.970 %	102.980 %	0.025 ppb	63.722 ppb	31,397.901 ppb	2,873.540 ppb	621.378 ppb	1,804.218 ppb	20,896.984 ppb
Concentration RSD	0.8 %	1.1 %	21.4 %	1.0 %	2.7 %	2.8 %	4.8 %	2.4 %	2.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.015 %	0.822 ppb	3.556 ppb	164.696 ppb	985.233 ppb	0.635 ppb	2.722 ppb	16.581 ppb	65.629 ppb
Concentration per Run 1	103.686 %	0.782 ppb	3.610 ppb	169.255 ppb	996.397 ppb	0.600 ppb	2.773 ppb	16.330 ppb	65.429 ppb
Concentration per Run 2	104.141 %	0.863 ppb	3.491 ppb	161.820 ppb	976.352 ppb	0.658 ppb	2.626 ppb	16.519 ppb	65.377 ppb
Concentration per Run 3	107.218 %	0.822 ppb	3.567 ppb	163.014 ppb	982.950 ppb	0.646 ppb	2.766 ppb	16.893 ppb	66.080 ppb
Concentration RSD	1.8 %	4.9 %	1.7 %	2.4 %	1.0 %	4.8 %	3.1 %	1.7 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	82.074 %	13.709 ppb	0.099 ppb	221.652 ppb	5.838 ppb	100.121 %	0.215 ppb	0.163 ppb	100.306 %
Concentration per Run 1	81.244 %	13.554 ppb	0.112 ppb	215.566 ppb	5.838 ppb	101.922 %	0.209 ppb	0.151 ppb	101.482 %
Concentration per Run 2	83.924 %	13.828 ppb	0.093 ppb	231.327 ppb	5.815 ppb	101.204 %	0.225 ppb	0.170 ppb	103.146 %
Concentration per Run 3	81.054 %	13.746 ppb	0.091 ppb	218.062 ppb	5.861 ppb	97.237 %	0.212 ppb	0.168 ppb	96.290 %
Concentration RSD	2.0 %	1.0 %	11.5 %	3.8 %	0.4 %	2.5 %	4.0 %	6.5 %	3.6 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-1.598 ppb	1.490 ppb	25.961 ppb	101.322 %	100.974 %	0.030 ppb	3.821 ppb	95.680 %
Concentration per Run 1	-1.532 ppb	1.451 ppb	24.971 ppb	101.774 %	99.330 %	0.002 ppb	3.751 ppb	98.077 %
Concentration per Run 2	-1.658 ppb	1.550 ppb	26.380 ppb	103.292 %	105.346 %	0.040 ppb	3.838 ppb	96.503 %
Concentration per Run 3	-1.605 ppb	1.469 ppb	26.532 ppb	98.901 %	98.246 %	0.048 ppb	3.874 ppb	92.460 %
Concentration RSD	3.9 %	3.5 %	3.3 %	2.2 %	3.8 %	80.7 %	1.7 %	3.0 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	47	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-31 6020TL	Rack	1		
Analysis started at:	4/7/2024 5:02:57 PM	Vial	25		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	101.044 %	101.625 %	0.004 ppb	92.292 ppb	18,838.179 ppb	11,524.610 ppb	30.226 ppb	4,810.486 ppb	51,671.897 ppb
Concentration per Run 1	100.187 %	101.935 %	0.006 ppb	93.620 ppb	18,349.868 ppb	11,177.825 ppb	27.900 ppb	4,657.170 ppb	50,360.799 ppb
Concentration per Run 2	101.552 %	100.077 %	0.002 ppb	92.159 ppb	19,690.696 ppb	12,039.703 ppb	32.453 ppb	5,053.698 ppb	52,722.673 ppb
Concentration per Run 3	101.393 %	102.864 %	0.004 ppb	91.096 ppb	18,473.973 ppb	11,356.303 ppb	30.326 ppb	4,720.590 ppb	51,932.218 ppb
Concentration RSD	0.7 %	1.4 %	41.5 %	1.4 %	3.9 %	3.9 %	7.5 %	4.4 %	2.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.412 %	0.506 ppb	1.219 ppb	253.216 ppb	909.365 ppb	0.417 ppb	1.202 ppb	0.065 ppb	-1.820 ppb
Concentration per Run 1	103.422 %	0.451 ppb	1.198 ppb	247.082 ppb	907.222 ppb	0.439 ppb	1.054 ppb	0.034 ppb	-1.911 ppb
Concentration per Run 2	103.042 %	0.512 ppb	1.246 ppb	260.922 ppb	910.467 ppb	0.413 ppb	1.294 ppb	0.102 ppb	-1.739 ppb
Concentration per Run 3	106.771 %	0.555 ppb	1.213 ppb	251.645 ppb	910.406 ppb	0.398 ppb	1.257 ppb	0.060 ppb	-1.811 ppb
Concentration RSD	2.0 %	10.3 %	2.0 %	2.8 %	0.2 %	5.0 %	10.8 %	52.8 %	4.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	77.886 %	1.353 ppb	-0.005 ppb	188.280 ppb	0.188 ppb	93.228 %	-0.003 ppb	0.003 ppb	92.517 %
Concentration per Run 1	75.631 %	1.324 ppb	0.041 ppb	186.379 ppb	0.195 ppb	92.469 %	-0.004 ppb	0.002 ppb	89.974 %
Concentration per Run 2	80.468 %	1.309 ppb	-0.026 ppb	193.463 ppb	0.158 ppb	93.409 %	-0.002 ppb	0.003 ppb	95.283 %
Concentration per Run 3	77.560 %	1.425 ppb	-0.029 ppb	184.998 ppb	0.211 ppb	93.807 %	-0.002 ppb	0.003 ppb	92.295 %
Concentration RSD	3.1 %	4.7 %	872.9 %	2.4 %	14.6 %	0.7 %	35.9 %	24.6 %	2.9 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.746 ppb	0.172 ppb	22.747 ppb	94.364 %	95.462 %	0.018 ppb	-0.094 ppb	87.424 %
Concentration per Run 1	-2.770 ppb	0.166 ppb	22.875 ppb	93.994 %	92.948 %	-0.001 ppb	-0.099 ppb	90.763 %
Concentration per Run 2	-2.734 ppb	0.170 ppb	22.466 ppb	96.208 %	99.900 %	0.028 ppb	-0.091 ppb	85.122 %
Concentration per Run 3	-2.734 ppb	0.180 ppb	22.898 ppb	92.890 %	93.538 %	0.026 ppb	-0.090 ppb	86.388 %
Concentration RSD	0.8 %	4.3 %	1.1 %	1.8 %	4.0 %	91.0 %	5.1 %	3.4 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	48	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2415819-01d5 6020TL	Rack	1		
Analysis started at:	4/7/2024 5:07:23 PM	Vial	26		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	100.903 %	100.387 %	0.020 ppb	27.803 ppb	44,157.920 ppb	16,138.754 ppb	42.107 ppb	3,280.550 ppb	72,564.245 ppb
Concentration per Run 1	98.637 %	97.871 %	0.017 ppb	28.119 ppb	43,600.472 ppb	15,765.815 ppb	35.823 ppb	3,133.681 ppb	69,281.686 ppb
Concentration per Run 2	100.051 %	100.658 %	0.019 ppb	28.397 ppb	44,859.994 ppb	16,396.624 ppb	46.847 ppb	3,452.958 ppb	74,259.664 ppb
Concentration per Run 3	104.022 %	102.632 %	0.024 ppb	26.893 ppb	44,013.294 ppb	16,253.821 ppb	43.652 ppb	3,255.010 ppb	74,151.386 ppb
Concentration RSD	2.8 %	2.4 %	17.8 %	2.9 %	1.5 %	2.0 %	13.5 %	4.9 %	3.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.360 %	1.109 ppb	0.983 ppb	2,405.970 ppb	39,476.351 ppb	0.490 ppb	0.483 ppb	0.687 ppb	-1.466 ppb
Concentration per Run 1	104.715 %	1.122 ppb	0.970 ppb	2,403.324 ppb	39,917.190 ppb	0.501 ppb	0.447 ppb	0.616 ppb	-1.595 ppb
Concentration per Run 2	104.675 %	1.153 ppb	0.963 ppb	2,378.574 ppb	39,031.472 ppb	0.459 ppb	0.533 ppb	0.806 ppb	-1.379 ppb
Concentration per Run 3	106.691 %	1.053 ppb	1.016 ppb	2,436.013 ppb	39,480.389 ppb	0.510 ppb	0.470 ppb	0.640 ppb	-1.426 ppb
Concentration RSD	1.1 %	4.6 %	2.9 %	1.2 %	1.1 %	5.5 %	9.2 %	15.0 %	7.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	77.051 %	1.625 ppb	0.015 ppb	577.886 ppb	-0.104 ppb	92.826 %	0.002 ppb	0.004 ppb	95.653 %
Concentration per Run 1	76.726 %	1.484 ppb	0.108 ppb	573.603 ppb	-0.116 ppb	93.400 %	0.002 ppb	0.003 ppb	93.251 %
Concentration per Run 2	78.504 %	1.647 ppb	-0.072 ppb	574.809 ppb	-0.082 ppb	94.341 %	0.003 ppb	0.006 ppb	99.809 %
Concentration per Run 3	75.923 %	1.745 ppb	0.009 ppb	585.246 ppb	-0.114 ppb	90.738 %	0.002 ppb	0.004 ppb	93.899 %
Concentration RSD	1.7 %	8.1 %	601.6 %	1.1 %	18.3 %	2.0 %	22.3 %	36.7 %	3.8 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.613 ppb	0.115 ppb	728.881 ppb	95.273 %	94.545 %	0.008 ppb	1.256 ppb	87.660 %
Concentration per Run 1	-2.676 ppb	0.110 ppb	741.218 ppb	96.156 %	93.097 %	-0.015 ppb	1.206 ppb	90.271 %
Concentration per Run 2	-2.590 ppb	0.107 ppb	711.852 ppb	95.659 %	96.552 %	0.016 ppb	1.260 ppb	87.104 %
Concentration per Run 3	-2.574 ppb	0.129 ppb	733.573 ppb	94.004 %	93.986 %	0.022 ppb	1.301 ppb	85.606 %
Concentration RSD	2.1 %	10.8 %	2.1 %	1.2 %	1.9 %	257.7 %	3.8 %	2.7 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	49	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2415819-02 6020TL	Rack	1		
Analysis started at:	4/7/2024 5:11:49 PM	Vial	27		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.952 %	80.998 %	0.037 ppb	33.678 ppb	989,611.090 ppb	45,772.569 ppb	60.263 ppb	9,391.649 ppb	224,464.020 ppb
Concentration per Run 1	80.952 %	77.205 %	0.039 ppb	33.377 ppb	997,890.882 ppb	45,888.884 ppb	58.353 ppb	8,844.812 ppb	220,156.325 ppb
Concentration per Run 2	80.844 %	83.010 %	0.037 ppb	33.847 ppb	944,548.450 ppb	43,655.193 ppb	56.105 ppb	9,027.400 ppb	213,238.754 ppb
Concentration per Run 3	81.060 %	82.778 %	0.037 ppb	33.810 ppb	1,026,393.937 ppb	47,773.629 ppb	66.332 ppb	10,302.735 ppb	239,996.979 ppb
Concentration RSD	0.1 %	4.1 %	2.8 %	0.8 %	4.2 %	4.5 %	8.9 %	8.5 %	6.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.399 %	0.907 ppb	1.242 ppb	10,282.219 ppb	25,959.895 ppb	1.310 ppb	1.621 ppb	4.040 ppb	4.136 ppb
Concentration per Run 1	87.556 %	0.916 ppb	1.262 ppb	10,413.265 ppb	26,853.132 ppb	1.397 ppb	1.776 ppb	4.107 ppb	4.185 ppb
Concentration per Run 2	86.808 %	0.942 ppb	1.202 ppb	10,281.763 ppb	25,796.967 ppb	1.259 ppb	1.591 ppb	4.172 ppb	4.176 ppb
Concentration per Run 3	87.832 %	0.862 ppb	1.263 ppb	10,151.631 ppb	25,229.587 ppb	1.273 ppb	1.498 ppb	3.839 ppb	4.047 ppb
Concentration RSD	0.6 %	4.5 %	2.8 %	1.3 %	3.2 %	5.8 %	8.7 %	4.4 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	63.872 %	3.264 ppb	0.317 ppb	2,439.798 ppb	0.414 ppb	73.854 %	0.010 ppb	0.009 ppb	79.257 %
Concentration per Run 1	61.337 %	3.171 ppb	0.338 ppb	2,390.068 ppb	0.335 ppb	70.559 %	0.013 ppb	0.004 ppb	77.396 %
Concentration per Run 2	62.326 %	3.285 ppb	0.278 ppb	2,406.499 ppb	0.477 ppb	74.504 %	0.010 ppb	0.013 ppb	77.753 %
Concentration per Run 3	67.953 %	3.337 ppb	0.334 ppb	2,522.826 ppb	0.430 ppb	76.499 %	0.007 ppb	0.011 ppb	82.624 %
Concentration RSD	5.6 %	2.6 %	10.6 %	3.0 %	17.4 %	4.1 %	31.2 %	49.3 %	3.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.028 ppb	1.497 ppb	917.267 ppb	78.793 %	80.047 %	0.000 ppb	1.933 ppb	68.245 %
Concentration per Run 1	-2.139 ppb	1.475 ppb	905.156 ppb	78.173 %	77.783 %	-0.014 ppb	1.946 ppb	69.372 %
Concentration per Run 2	-1.965 ppb	1.521 ppb	908.906 ppb	77.386 %	79.724 %	0.009 ppb	1.942 ppb	67.485 %
Concentration per Run 3	-1.982 ppb	1.494 ppb	937.740 ppb	80.819 %	82.633 %	0.005 ppb	1.912 ppb	67.879 %
Concentration RSD	4.7 %	1.6 %	1.9 %	2.3 %	3.0 %	8,161.9 %	1.0 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	50	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2415819-03d5 6020TL	Rack	1		
Analysis started at:	4/7/2024 5:16:16 PM	Vial	28		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	103.278 %	101.084 %	0.219 ppb	113.850 ppb	64,683.312 ppb	42,749.988 ppb	56.395 ppb	5,929.328 ppb	171,086.081 ppb
Concentration per Run 1	100.509 %	97.291 %	0.213 ppb	117.002 ppb	63,979.601 ppb	41,857.587 ppb	56.093 ppb	5,988.816 ppb	167,125.630 ppb
Concentration per Run 2	103.441 %	98.336 %	0.219 ppb	111.978 ppb	66,234.714 ppb	44,354.513 ppb	56.039 ppb	5,879.033 ppb	174,605.417 ppb
Concentration per Run 3	105.885 %	107.624 %	0.225 ppb	112.569 ppb	63,835.622 ppb	42,037.862 ppb	57.052 ppb	5,920.135 ppb	171,527.196 ppb
Concentration RSD	2.6 %	5.6 %	2.8 %	2.4 %	2.1 %	3.3 %	1.0 %	0.9 %	2.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.205 %	0.850 ppb	3.941 ppb	3,911.201 ppb	66,333.091 ppb	7.822 ppb	13.053 ppb	2.969 ppb	2.522 ppb
Concentration per Run 1	106.402 %	0.732 ppb	3.807 ppb	3,776.356 ppb	64,436.663 ppb	7.829 ppb	12.514 ppb	2.878 ppb	2.333 ppb
Concentration per Run 2	107.469 %	0.906 ppb	3.966 ppb	3,975.407 ppb	68,613.957 ppb	8.013 ppb	13.511 ppb	3.147 ppb	2.732 ppb
Concentration per Run 3	110.744 %	0.912 ppb	4.049 ppb	3,981.840 ppb	65,948.653 ppb	7.625 ppb	13.132 ppb	2.882 ppb	2.501 ppb
Concentration RSD	2.1 %	12.0 %	3.1 %	3.0 %	3.2 %	2.5 %	3.9 %	5.2 %	7.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	77.523 %	7.858 ppb	1.262 ppb	1,841.135 ppb	0.393 ppb	90.278 %	-0.001 ppb	0.000 ppb	97.557 %
Concentration per Run 1	79.748 %	5.534 ppb	1.285 ppb	1,750.019 ppb	0.345 ppb	91.003 %	-0.002 ppb	0.000 ppb	95.537 %
Concentration per Run 2	75.251 %	7.939 ppb	1.226 ppb	1,818.957 ppb	0.347 ppb	88.677 %	0.000 ppb	-0.001 ppb	96.209 %
Concentration per Run 3	77.570 %	10.101 ppb	1.275 ppb	1,954.428 ppb	0.489 ppb	91.155 %	0.000 ppb	0.000 ppb	100.924 %
Concentration RSD	2.9 %	29.1 %	2.5 %	5.6 %	21.0 %	1.5 %	215.2 %	861.1 %	3.0 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.464 ppb	0.804 ppb	780.838 ppb	95.945 %	99.635 %	0.004 ppb	0.016 ppb	85.146 %
Concentration per Run 1	-2.602 ppb	0.771 ppb	765.299 ppb	96.626 %	99.018 %	-0.011 ppb	0.012 ppb	87.572 %
Concentration per Run 2	-2.412 ppb	0.831 ppb	776.620 ppb	94.507 %	97.003 %	0.010 ppb	0.017 ppb	83.163 %
Concentration per Run 3	-2.378 ppb	0.810 ppb	800.595 ppb	96.703 %	102.882 %	0.012 ppb	0.017 ppb	84.701 %
Concentration RSD	4.9 %	3.8 %	2.3 %	1.3 %	3.0 %	349.2 %	19.8 %	2.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	51	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417429-01 6020TL	Rack	1		
Analysis started at:	4/7/2024 5:20:43 PM	Vial	29		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.467 %	86.571 %	-0.001 ppb	158.882 ppb	424,542.750 ppb	53,809.272 ppb	22.030 ppb	18,710.394 ppb	58,632.209 ppb
Concentration per Run 1	87.864 %	86.261 %	0.000 ppb	159.854 ppb	427,773.615 ppb	53,997.463 ppb	20.967 ppb	18,847.620 ppb	59,488.848 ppb
Concentration per Run 2	89.466 %	88.583 %	-0.002 ppb	159.097 ppb	417,766.797 ppb	52,420.591 ppb	22.256 ppb	18,295.760 ppb	57,638.268 ppb
Concentration per Run 3	91.070 %	84.868 %	0.000 ppb	157.695 ppb	428,087.838 ppb	55,009.764 ppb	22.866 ppb	18,987.802 ppb	58,769.509 ppb
Concentration RSD	1.8 %	2.2 %	161.6 %	0.7 %	1.4 %	2.4 %	4.4 %	2.0 %	1.6 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.302 %	0.181 ppb	0.872 ppb	292.441 ppb	122.577 ppb	0.262 ppb	0.149 ppb	-0.235 ppb	-0.481 ppb
Concentration per Run 1	91.238 %	0.140 ppb	0.946 ppb	299.108 ppb	123.724 ppb	0.263 ppb	0.219 ppb	-0.191 ppb	-0.543 ppb
Concentration per Run 2	92.414 %	0.211 ppb	0.821 ppb	293.234 ppb	120.991 ppb	0.260 ppb	0.116 ppb	-0.271 ppb	-0.386 ppb
Concentration per Run 3	93.254 %	0.191 ppb	0.849 ppb	284.979 ppb	123.015 ppb	0.264 ppb	0.111 ppb	-0.242 ppb	-0.514 ppb
Concentration RSD	1.1 %	20.4 %	7.5 %	2.4 %	1.2 %	0.8 %	41.2 %	17.2 %	17.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	67.452 %	16.886 ppb	0.188 ppb	531.532 ppb	3.357 ppb	79.071 %	-0.004 ppb	0.024 ppb	82.034 %
Concentration per Run 1	68.185 %	17.193 ppb	0.182 ppb	538.062 ppb	3.339 ppb	79.302 %	-0.004 ppb	0.020 ppb	83.649 %
Concentration per Run 2	68.660 %	16.915 ppb	0.160 ppb	527.442 ppb	3.432 ppb	79.364 %	-0.005 ppb	0.029 ppb	85.306 %
Concentration per Run 3	65.512 %	16.550 ppb	0.223 ppb	529.092 ppb	3.300 ppb	78.546 %	-0.003 ppb	0.022 ppb	77.147 %
Concentration RSD	2.5 %	1.9 %	16.9 %	1.1 %	2.0 %	0.6 %	20.7 %	19.6 %	5.3 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.893 ppb	0.190 ppb	38.298 ppb	83.415 %	82.771 %	-0.001 ppb	-0.125 ppb	70.103 %
Concentration per Run 1	-2.916 ppb	0.179 ppb	38.913 ppb	85.485 %	85.252 %	-0.017 ppb	-0.127 ppb	75.695 %
Concentration per Run 2	-2.876 ppb	0.188 ppb	37.031 ppb	84.705 %	81.740 %	0.008 ppb	-0.128 ppb	69.445 %
Concentration per Run 3	-2.886 ppb	0.203 ppb	38.951 ppb	80.055 %	81.321 %	0.007 ppb	-0.119 ppb	65.168 %
Concentration RSD	0.7 %	6.5 %	2.9 %	3.5 %	2.6 %	1,899.8 %	4.1 %	7.6 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	52	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/7/2024 5:25:10 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.477 %	82.817 %	63.325 ppb	71.835 ppb	6,503.493 ppb	6,548.600 ppb	64.243 ppb	5,977.837 ppb	5,869.796 ppb
Concentration per Run 1	80.466 %	77.438 %	63.405 ppb	71.566 ppb	6,546.372 ppb	6,502.112 ppb	62.828 ppb	5,965.490 ppb	5,962.707 ppb
Concentration per Run 2	81.135 %	89.628 %	62.940 ppb	72.553 ppb	6,436.203 ppb	6,461.583 ppb	65.525 ppb	6,016.516 ppb	5,724.576 ppb
Concentration per Run 3	79.832 %	81.385 %	63.631 ppb	71.384 ppb	6,527.905 ppb	6,682.104 ppb	64.375 ppb	5,951.504 ppb	5,922.106 ppb
Recovery Percentage 1			105.542 %	119.724 %	108.392 %	109.143 %	107.071 %	99.631 %	97.830 %
Concentration RSD	0.8 %	7.5 %	0.6 %	0.9 %	0.9 %	1.8 %	2.1 %	0.6 %	2.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	81.974 %	60.202 ppb	61.287 ppb	63.311 ppb	6,210.736 ppb	62.582 ppb	62.690 ppb	64.949 ppb	63.178 ppb
Concentration per Run 1	81.889 %	58.978 ppb	60.354 ppb	62.063 ppb	6,244.357 ppb	63.548 ppb	63.943 ppb	66.783 ppb	63.712 ppb
Concentration per Run 2	82.028 %	60.078 ppb	61.870 ppb	63.856 ppb	6,237.295 ppb	61.052 ppb	62.195 ppb	63.611 ppb	62.940 ppb
Concentration per Run 3	82.005 %	61.549 ppb	61.637 ppb	64.015 ppb	6,150.557 ppb	63.144 ppb	61.932 ppb	64.455 ppb	62.881 ppb
Recovery Percentage 1		100.336 %	102.145 %	105.519 %	103.512 %	104.303 %	104.483 %	108.249 %	105.296 %
Concentration RSD	0.1 %	2.1 %	1.3 %	1.7 %	0.8 %	2.1 %	1.7 %	2.5 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	69.491 %	64.492 ppb	64.648 ppb	61.729 ppb	62.568 ppb	80.139 %	62.983 ppb	63.341 ppb	79.080 %
Concentration per Run 1	65.128 %	66.279 ppb	65.227 ppb	62.186 ppb	61.792 ppb	76.408 %	63.885 ppb	63.514 ppb	72.219 %
Concentration per Run 2	73.922 %	64.022 ppb	64.077 ppb	61.634 ppb	62.835 ppb	85.406 %	61.067 ppb	62.097 ppb	86.315 %
Concentration per Run 3	69.422 %	63.174 ppb	64.641 ppb	61.367 ppb	63.077 ppb	78.604 %	63.996 ppb	64.412 ppb	78.706 %
Recovery Percentage 1		107.486 %	107.747 %	102.882 %	104.280 %		104.971 %	105.568 %	
Concentration RSD	6.3 %	2.5 %	0.9 %	0.7 %	1.1 %	5.9 %	2.6 %	1.8 %	8.9 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	60.785 ppb	64.069 ppb	65.390 ppb	79.804 %	80.050 %	58.941 ppb	64.970 ppb	74.394 %
Concentration per Run 1	61.473 ppb	67.853 ppb	69.128 ppb	74.884 %	77.131 %	56.683 ppb	62.694 ppb	73.088 %
Concentration per Run 2	59.904 ppb	61.757 ppb	63.494 ppb	85.781 %	84.874 %	58.071 ppb	65.974 ppb	78.407 %
Concentration per Run 3	60.977 ppb	62.597 ppb	63.549 ppb	78.747 %	78.145 %	62.068 ppb	66.242 ppb	71.687 %
Recovery Percentage 1	101.308 %	106.782 %	108.984 %			98.235 %	108.283 %	
Concentration RSD	1.3 %	5.2 %	5.0 %	6.9 %	5.3 %	4.7 %	3.0 %	4.8 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	53	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/7/2024 5:29:41 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	89.749 %	89.280 %	0.006 ppb	7.895 ppb	-30.531 ppb	-0.420 ppb	-2.243 ppb	-32.074 ppb	-59.252 ppb
Concentration per Run 1	86.988 %	92.879 %	0.004 ppb	8.028 ppb	-32.022 ppb	-1.479 ppb	-2.166 ppb	-36.357 ppb	-57.231 ppb
Concentration per Run 2	90.800 %	85.332 %	0.006 ppb	8.018 ppb	-28.261 ppb	-0.842 ppb	-2.286 ppb	-29.203 ppb	-62.015 ppb
Concentration per Run 3	91.461 %	89.628 %	0.008 ppb	7.639 ppb	-31.312 ppb	1.062 ppb	-2.276 ppb	-30.662 ppb	-58.511 ppb
Recovery Percentage 1			1.150 %	78.950 %	-30.531 %	-0.600 %	-22.427 %	-32.074 %	-59.252 %
Concentration RSD	2.7 %	4.2 %	33.1 %	2.8 %	6.5 %	314.9 %	3.0 %	11.8 %	4.2 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.238 %	0.100 ppb	0.004 ppb	-0.711 ppb	-0.148 ppb	0.001 ppb	-0.269 ppb	-0.359 ppb	-3.056 ppb
Concentration per Run 1	88.071 %	0.121 ppb	-0.003 ppb	-0.723 ppb	-1.435 ppb	0.002 ppb	-0.288 ppb	-0.322 ppb	-3.039 ppb
Concentration per Run 2	90.387 %	0.100 ppb	0.016 ppb	-0.688 ppb	2.152 ppb	0.004 ppb	-0.288 ppb	-0.366 ppb	-3.069 ppb
Concentration per Run 3	92.256 %	0.077 ppb	0.001 ppb	-0.722 ppb	-1.160 ppb	-0.001 ppb	-0.231 ppb	-0.389 ppb	-3.061 ppb
Recovery Percentage 1		1.992 %	0.444 %	-71.077 %	-0.295 %	0.289 %	-13.456 %	-35.907 %	-61.125 %
Concentration RSD	2.3 %	22.0 %	225.1 %	2.8 %	1,352.7 %	181.8 %	12.3 %	9.5 %	0.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	75.819 %	0.340 ppb	0.049 ppb	-0.024 ppb	-0.016 ppb	86.452 %	0.012 ppb	0.001 ppb	86.034 %
Concentration per Run 1	77.855 %	0.298 ppb	0.050 ppb	-0.031 ppb	-0.035 ppb	90.299 %	0.011 ppb	0.001 ppb	90.541 %
Concentration per Run 2	74.679 %	0.346 ppb	0.090 ppb	-0.020 ppb	0.022 ppb	87.754 %	0.014 ppb	0.001 ppb	85.897 %
Concentration per Run 3	74.923 %	0.376 ppb	0.005 ppb	-0.023 ppb	-0.034 ppb	81.302 %	0.011 ppb	0.002 ppb	81.663 %
Recovery Percentage 1		68.063 %	0.972 %	-0.245 %	-0.785 %		2.973 %	0.586 %	
Concentration RSD	2.3 %	11.5 %	87.1 %	22.5 %	206.1 %	5.4 %	14.2 %	77.7 %	5.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.301 ppb	0.047 ppb	-0.200 ppb	84.328 %	85.012 %	0.492 ppb	-0.175 ppb	80.814 %
Concentration per Run 1	-2.286 ppb	0.041 ppb	-0.193 ppb	87.826 %	88.991 %	0.307 ppb	-0.177 ppb	88.458 %
Concentration per Run 2	-2.293 ppb	0.040 ppb	-0.196 ppb	84.062 %	83.342 %	0.610 ppb	-0.176 ppb	79.659 %
Concentration per Run 3	-2.323 ppb	0.060 ppb	-0.210 ppb	81.096 %	82.702 %	0.559 ppb	-0.173 ppb	74.324 %
Recovery Percentage 1	-76.691 %	1.181 %	-39.965 %			49.198 %	-17.544 %	
Concentration RSD	0.9 %	24.2 %	4.7 %	4.0 %	4.1 %	33.0 %	1.0 %	8.8 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	54	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/7/2024 5:35:57 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	88.498 %	87.655 %	63.836 ppb	63.342 ppb	6,160.119 ppb	6,382.016 ppb	63.596 ppb	5,777.451 ppb	5,545.247 ppb
Concentration per Run 1	88.096 %	83.359 %	64.037 ppb	62.783 ppb	6,130.599 ppb	6,200.930 ppb	62.051 ppb	5,681.887 ppb	5,669.343 ppb
Concentration per Run 2	88.324 %	90.441 %	63.618 ppb	63.994 ppb	6,109.855 ppb	6,425.093 ppb	64.656 ppb	5,720.336 ppb	5,358.776 ppb
Concentration per Run 3	89.075 %	89.164 %	63.853 ppb	63.247 ppb	6,239.902 ppb	6,520.024 ppb	64.081 ppb	5,930.130 ppb	5,607.622 ppb
Recovery Percentage 1			106.393 %	105.570 %	102.669 %	106.367 %	105.994 %	96.291 %	92.421 %
Concentration RSD	0.6 %	4.3 %	0.3 %	1.0 %	1.1 %	2.6 %	2.2 %	2.3 %	3.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.742 %	58.580 ppb	59.861 ppb	60.834 ppb	6,134.038 ppb	60.870 ppb	60.740 ppb	61.237 ppb	59.113 ppb
Concentration per Run 1	90.663 %	57.521 ppb	59.646 ppb	60.573 ppb	6,104.971 ppb	62.026 ppb	62.635 ppb	63.380 ppb	59.101 ppb
Concentration per Run 2	92.422 %	56.710 ppb	56.816 ppb	59.784 ppb	5,837.387 ppb	56.593 ppb	57.334 ppb	57.153 ppb	56.318 ppb
Concentration per Run 3	92.143 %	61.509 ppb	63.120 ppb	62.146 ppb	6,459.758 ppb	63.990 ppb	62.252 ppb	63.180 ppb	61.919 ppb
Recovery Percentage 1		97.633 %	99.768 %	101.391 %	102.234 %	101.449 %	101.234 %	102.062 %	98.522 %
Concentration RSD	1.0 %	4.4 %	5.3 %	2.0 %	5.1 %	6.3 %	4.9 %	5.8 %	4.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	76.123 %	61.861 ppb	61.890 ppb	60.126 ppb	61.119 ppb	83.802 %	61.572 ppb	62.673 ppb	84.705 %
Concentration per Run 1	72.837 %	61.412 ppb	59.145 ppb	59.163 ppb	61.059 ppb	82.364 %	63.114 ppb	62.246 ppb	83.084 %
Concentration per Run 2	82.245 %	59.997 ppb	61.290 ppb	60.559 ppb	59.382 ppb	84.536 %	60.761 ppb	62.676 ppb	85.489 %
Concentration per Run 3	73.287 %	64.172 ppb	65.233 ppb	60.657 ppb	62.916 ppb	84.505 %	60.843 ppb	63.095 ppb	85.541 %
Recovery Percentage 1		103.101 %	103.149 %	100.211 %	101.866 %		102.621 %	104.454 %	
Concentration RSD	7.0 %	3.4 %	5.0 %	1.4 %	2.9 %	1.5 %	2.2 %	0.7 %	1.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.037 ppb	61.713 ppb	63.462 ppb	82.843 %	83.903 %	57.709 ppb	64.736 ppb	78.346 %
Concentration per Run 1	57.652 ppb	60.730 ppb	62.279 ppb	82.197 %	81.700 %	55.333 ppb	62.487 ppb	79.841 %
Concentration per Run 2	60.823 ppb	62.845 ppb	65.383 ppb	83.798 %	87.669 %	58.253 ppb	65.176 ppb	77.648 %
Concentration per Run 3	58.637 ppb	61.565 ppb	62.724 ppb	82.534 %	82.341 %	59.541 ppb	66.545 ppb	77.549 %
Recovery Percentage 1	98.396 %	102.855 %	105.770 %			96.182 %	107.893 %	
Concentration RSD	2.7 %	1.7 %	2.6 %	1.0 %	3.9 %	3.7 %	3.2 %	1.7 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index: 55 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: CCB Rack 0
Analysis started at: 4/7/2024 5:40:28 PM Vial 10

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	85.997 %	86.997 %	0.025 ppb	5.463 ppb	-32.971 ppb	0.641 ppb	-2.228 ppb	-31.585 ppb	-55.182 ppb
Concentration per Run 1	86.281 %	88.700 %	0.019 ppb	5.549 ppb	-35.902 ppb	-1.855 ppb	-2.487 ppb	-33.565 ppb	-60.447 ppb
Concentration per Run 2	86.481 %	89.164 %	0.025 ppb	5.425 ppb	-32.269 ppb	1.582 ppb	-2.079 ppb	-29.514 ppb	-58.265 ppb
Concentration per Run 3	85.229 %	83.127 %	0.032 ppb	5.416 ppb	-30.743 ppb	2.195 ppb	-2.117 ppb	-31.675 ppb	-46.833 ppb
Recovery Percentage 1			5.082 %	54.635 %	-32.971 %	0.915 %	-22.276 %	-31.585 %	-55.182 %
Concentration RSD	0.8 %	3.9 %	26.8 %	1.4 %	8.0 %	340.6 %	10.1 %	6.4 %	13.3 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.044 %	0.062 ppb	0.010 ppb	-0.679 ppb	0.156 ppb	0.019 ppb	-0.252 ppb	-0.325 ppb	-3.016 ppb
Concentration per Run 1	87.894 %	-0.001 ppb	-0.007 ppb	-0.719 ppb	-1.556 ppb	0.000 ppb	-0.304 ppb	-0.343 ppb	-3.037 ppb
Concentration per Run 2	88.424 %	0.105 ppb	0.024 ppb	-0.679 ppb	0.464 ppb	0.034 ppb	-0.239 ppb	-0.286 ppb	-3.011 ppb
Concentration per Run 3	87.815 %	0.081 ppb	0.014 ppb	-0.638 ppb	1.559 ppb	0.023 ppb	-0.211 ppb	-0.346 ppb	-3.001 ppb
Recovery Percentage 1		1.237 %	1.024 %	-67.851 %	0.311 %	3.756 %	-12.576 %	-32.485 %	-60.328 %
Concentration RSD	0.4 %	89.8 %	156.6 %	5.9 %	1,015.9 %	92.7 %	19.0 %	10.4 %	0.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	76.789 %	0.290 ppb	0.072 ppb	-0.009 ppb	-0.010 ppb	84.883 %	0.027 ppb	0.020 ppb	83.720 %
Concentration per Run 1	76.980 %	0.237 ppb	0.074 ppb	-0.028 ppb	-0.030 ppb	84.621 %	0.014 ppb	0.011 ppb	83.356 %
Concentration per Run 2	77.887 %	0.281 ppb	0.125 ppb	0.004 ppb	-0.016 ppb	86.708 %	0.039 ppb	0.027 ppb	84.779 %
Concentration per Run 3	75.500 %	0.353 ppb	0.018 ppb	-0.002 ppb	0.016 ppb	83.320 %	0.029 ppb	0.021 ppb	83.024 %
Recovery Percentage 1		58.019 %	1.446 %	-0.088 %	-0.499 %		6.864 %	9.829 %	
Concentration RSD	1.6 %	20.1 %	74.3 %	194.9 %	232.4 %	2.0 %	47.2 %	39.4 %	1.1 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.219 ppb	0.065 ppb	-0.194 ppb	82.413 %	83.639 %	0.549 ppb	-0.156 ppb	79.756 %
Concentration per Run 1	-2.199 ppb	0.036 ppb	-0.223 ppb	85.381 %	83.719 %	0.331 ppb	-0.177 ppb	84.105 %
Concentration per Run 2	-2.261 ppb	0.085 ppb	-0.167 ppb	82.887 %	86.167 %	0.678 ppb	-0.146 ppb	79.779 %
Concentration per Run 3	-2.198 ppb	0.075 ppb	-0.193 ppb	78.970 %	81.032 %	0.639 ppb	-0.144 ppb	75.385 %
Recovery Percentage 1	-73.980 %	1.632 %	-38.893 %			54.924 %	-15.574 %	
Concentration RSD	1.6 %	39.4 %	14.3 %	3.9 %	3.1 %	34.6 %	11.7 %	5.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	56	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-25d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 5:54:38 PM	Vial	30		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	86.509 %	90.480 %	-0.001 ppb	36.095 ppb	11,182.321 ppb	1,047.863 ppb	1.399 ppb	1,049.036 ppb	8,577.805 ppb
Concentration per Run 1	85.061 %	93.576 %	-0.004 ppb	36.603 ppb	10,457.205 ppb	968.129 ppb	1.351 ppb	1,011.272 ppb	8,193.545 ppb
Concentration per Run 2	87.910 %	92.182 %	0.000 ppb	35.641 ppb	11,530.328 ppb	1,086.723 ppb	1.281 ppb	1,054.448 ppb	8,855.936 ppb
Concentration per Run 3	86.556 %	85.681 %	0.000 ppb	36.042 ppb	11,559.429 ppb	1,088.739 ppb	1.565 ppb	1,081.387 ppb	8,683.934 ppb
Concentration RSD	1.6 %	4.7 %	226.3 %	1.3 %	5.6 %	6.6 %	10.6 %	3.4 %	4.0 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.892 %	0.400 ppb	0.165 ppb	294.068 ppb	1.911 ppb	0.113 ppb	-0.136 ppb	0.138 ppb	-3.008 ppb
Concentration per Run 1	87.276 %	0.366 ppb	0.146 ppb	272.969 ppb	0.357 ppb	0.091 ppb	-0.098 ppb	0.168 ppb	-3.013 ppb
Concentration per Run 2	87.767 %	0.394 ppb	0.176 ppb	303.212 ppb	2.988 ppb	0.138 ppb	-0.129 ppb	0.125 ppb	-3.038 ppb
Concentration per Run 3	85.631 %	0.441 ppb	0.175 ppb	306.023 ppb	2.387 ppb	0.110 ppb	-0.180 ppb	0.121 ppb	-2.975 ppb
Concentration RSD	1.3 %	9.5 %	10.2 %	6.2 %	72.1 %	20.8 %	30.7 %	19.0 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	70.432 %	0.190 ppb	0.064 ppb	32.218 ppb	-0.091 ppb	82.744 %	-0.002 ppb	0.004 ppb	83.333 %
Concentration per Run 1	71.346 %	0.202 ppb	0.032 ppb	31.101 ppb	-0.110 ppb	82.634 %	-0.001 ppb	0.004 ppb	80.944 %
Concentration per Run 2	71.422 %	0.216 ppb	0.104 ppb	33.511 ppb	-0.085 ppb	83.637 %	-0.002 ppb	0.001 ppb	85.402 %
Concentration per Run 3	68.527 %	0.151 ppb	0.056 ppb	32.042 ppb	-0.079 ppb	81.962 %	-0.004 ppb	0.007 ppb	83.654 %
Concentration RSD	2.3 %	18.1 %	57.0 %	3.8 %	17.7 %	1.0 %	60.7 %	85.8 %	2.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.589 ppb	0.029 ppb	10.509 ppb	80.821 %	80.583 %	0.050 ppb	-0.187 ppb	76.652 %
Concentration per Run 1	-2.629 ppb	0.037 ppb	10.370 ppb	82.245 %	80.474 %	0.019 ppb	-0.187 ppb	80.957 %
Concentration per Run 2	-2.558 ppb	0.022 ppb	10.488 ppb	82.044 %	82.295 %	0.060 ppb	-0.187 ppb	75.301 %
Concentration per Run 3	-2.579 ppb	0.028 ppb	10.671 ppb	78.174 %	78.979 %	0.070 ppb	-0.189 ppb	73.698 %
Concentration RSD	1.4 %	25.2 %	1.4 %	2.8 %	2.1 %	53.6 %	0.6 %	5.0 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	57	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-27d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 5:59:06 PM	Vial	31		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	76.104 %	81.114 %	0.005 ppb	10.921 ppb	5,296.200 ppb	1,864.610 ppb	5.352 ppb	107.320 ppb	10,322.006 ppb
Concentration per Run 1	77.439 %	82.662 %	0.009 ppb	10.765 ppb	5,352.567 ppb	1,792.473 ppb	3.780 ppb	102.644 ppb	9,918.614 ppb
Concentration per Run 2	76.899 %	78.134 %	0.004 ppb	11.109 ppb	5,361.074 ppb	1,932.614 ppb	6.898 ppb	113.170 ppb	10,706.108 ppb
Concentration per Run 3	73.974 %	82.546 %	0.001 ppb	10.890 ppb	5,174.958 ppb	1,868.743 ppb	5.379 ppb	106.145 ppb	10,341.295 ppb
Concentration RSD	2.4 %	3.2 %	79.7 %	1.6 %	2.0 %	3.8 %	29.1 %	5.0 %	3.8 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	78.710 %	0.373 ppb	0.140 ppb	528.905 ppb	1,239.405 ppb	0.487 ppb	0.348 ppb	0.560 ppb	-2.744 ppb
Concentration per Run 1	79.820 %	0.378 ppb	0.141 ppb	524.770 ppb	1,259.615 ppb	0.510 ppb	0.349 ppb	0.596 ppb	-2.654 ppb
Concentration per Run 2	78.618 %	0.404 ppb	0.133 ppb	555.125 ppb	1,206.763 ppb	0.483 ppb	0.335 ppb	0.610 ppb	-2.756 ppb
Concentration per Run 3	77.693 %	0.338 ppb	0.145 ppb	506.820 ppb	1,251.837 ppb	0.469 ppb	0.360 ppb	0.475 ppb	-2.823 ppb
Concentration RSD	1.4 %	9.0 %	4.6 %	4.6 %	2.3 %	4.3 %	3.7 %	13.2 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	66.570 %	0.808 ppb	0.033 ppb	35.242 ppb	-0.131 ppb	77.686 %	-0.002 ppb	0.002 ppb	80.199 %
Concentration per Run 1	65.211 %	0.858 ppb	0.042 ppb	34.927 ppb	-0.157 ppb	78.135 %	-0.003 ppb	0.007 ppb	79.114 %
Concentration per Run 2	68.152 %	0.809 ppb	0.073 ppb	35.660 ppb	-0.127 ppb	77.586 %	-0.002 ppb	0.000 ppb	81.042 %
Concentration per Run 3	66.346 %	0.756 ppb	-0.015 ppb	35.140 ppb	-0.107 ppb	77.337 %	-0.001 ppb	0.001 ppb	80.441 %
Concentration RSD	2.2 %	6.3 %	134.7 %	1.1 %	19.4 %	0.5 %	40.8 %	159.2 %	1.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.681 ppb	0.041 ppb	1.546 ppb	78.289 %	77.009 %	0.033 ppb	-0.145 ppb	72.932 %
Concentration per Run 1	-2.702 ppb	0.047 ppb	1.547 ppb	77.915 %	78.028 %	0.004 ppb	-0.147 ppb	78.029 %
Concentration per Run 2	-2.682 ppb	0.032 ppb	1.573 ppb	78.841 %	77.798 %	0.041 ppb	-0.146 ppb	70.514 %
Concentration per Run 3	-2.659 ppb	0.044 ppb	1.518 ppb	78.111 %	75.200 %	0.053 ppb	-0.141 ppb	70.254 %
Concentration RSD	0.8 %	19.9 %	1.8 %	0.6 %	2.0 %	77.4 %	2.1 %	6.1 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	58	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2414638-29d10 6020TL	Rack	1		
Analysis started at:	4/7/2024 6:03:33 PM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	80.918 %	79.411 %	0.223 ppb	6.553 ppb	1,561.902 ppb	12,249.226 ppb	2,233.750 ppb	301.374 ppb	46,763.655 ppb
Concentration per Run 1	81.069 %	81.269 %	0.219 ppb	6.387 ppb	1,542.005 ppb	12,452.947 ppb	2,230.033 ppb	307.458 ppb	47,942.517 ppb
Concentration per Run 2	81.241 %	79.063 %	0.231 ppb	6.641 ppb	1,572.332 ppb	12,101.297 ppb	2,249.430 ppb	313.407 ppb	47,978.816 ppb
Concentration per Run 3	80.445 %	77.902 %	0.219 ppb	6.630 ppb	1,571.369 ppb	12,193.434 ppb	2,221.788 ppb	283.258 ppb	44,369.633 ppb
Concentration RSD	0.5 %	2.2 %	3.0 %	2.2 %	1.1 %	1.5 %	0.6 %	5.3 %	4.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.557 %	4.799 ppb	2.851 ppb	475.489 ppb	5,941.523 ppb	3.537 ppb	5.503 ppb	18.446 ppb	22.207 ppb
Concentration per Run 1	83.291 %	5.110 ppb	2.909 ppb	499.432 ppb	6,235.745 ppb	3.772 ppb	5.881 ppb	19.925 ppb	23.518 ppb
Concentration per Run 2	86.642 %	4.787 ppb	2.984 ppb	485.165 ppb	6,022.930 ppb	3.518 ppb	5.533 ppb	18.407 ppb	22.394 ppb
Concentration per Run 3	86.738 %	4.500 ppb	2.660 ppb	441.870 ppb	5,565.893 ppb	3.321 ppb	5.094 ppb	17.006 ppb	20.711 ppb
Concentration RSD	2.3 %	6.4 %	6.0 %	6.3 %	5.8 %	6.4 %	7.2 %	7.9 %	6.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	77.618 %	2.707 ppb	3.069 ppb	151.177 ppb	-0.118 ppb	74.147 %	0.011 ppb	0.108 ppb	76.351 %
Concentration per Run 1	70.770 %	2.870 ppb	3.505 ppb	153.528 ppb	-0.115 ppb	76.323 %	0.011 ppb	0.104 ppb	74.674 %
Concentration per Run 2	76.975 %	2.839 ppb	2.533 ppb	156.167 ppb	-0.107 ppb	73.434 %	0.009 ppb	0.094 ppb	78.440 %
Concentration per Run 3	85.108 %	2.412 ppb	3.169 ppb	143.835 ppb	-0.132 ppb	72.684 %	0.012 ppb	0.127 ppb	75.939 %
Concentration RSD	9.3 %	9.5 %	16.1 %	4.3 %	10.6 %	2.6 %	12.1 %	15.8 %	2.5 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.656 ppb	0.025 ppb	54.314 ppb	77.255 %	74.513 %	0.052 ppb	4.238 ppb	70.109 %
Concentration per Run 1	-2.691 ppb	0.029 ppb	52.286 ppb	79.020 %	75.457 %	0.026 ppb	3.998 ppb	75.201 %
Concentration per Run 2	-2.662 ppb	0.022 ppb	56.077 ppb	76.443 %	75.351 %	0.063 ppb	4.324 ppb	67.492 %
Concentration per Run 3	-2.617 ppb	0.025 ppb	54.578 ppb	76.302 %	72.730 %	0.068 ppb	4.391 ppb	67.635 %
Concentration RSD	1.4 %	13.9 %	3.5 %	2.0 %	2.1 %	44.2 %	5.0 %	6.3 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	59	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	I2417429-01d5 6020TL	Rack	1		
Analysis started at:	4/7/2024 6:08:01 PM	Vial	33		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	94.984 %	94.698 %	0.000 ppb	33.965 ppb	82,438.467 ppb	10,508.558 ppb	3.309 ppb	3,840.304 ppb	12,362.600 ppb
Concentration per Run 1	93.539 %	89.860 %	-0.002 ppb	33.908 ppb	80,818.278 ppb	10,364.184 ppb	2.823 ppb	3,720.768 ppb	11,841.361 ppb
Concentration per Run 2	96.819 %	96.594 %	0.002 ppb	34.145 ppb	79,993.987 ppb	10,247.986 ppb	3.320 ppb	3,668.523 ppb	12,469.592 ppb
Concentration per Run 3	94.593 %	97.639 %	0.002 ppb	33.843 ppb	86,503.136 ppb	10,913.503 ppb	3.785 ppb	4,131.621 ppb	12,776.846 ppb
Concentration RSD	1.8 %	4.5 %	488.2 %	0.5 %	4.3 %	3.4 %	14.5 %	6.6 %	3.9 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.185 %	0.128 ppb	0.179 ppb	54.861 ppb	22.346 ppb	0.045 ppb	-0.206 ppb	-0.341 ppb	-2.558 ppb
Concentration per Run 1	98.163 %	0.140 ppb	0.168 ppb	53.287 ppb	22.896 ppb	0.047 ppb	-0.241 ppb	-0.306 ppb	-2.589 ppb
Concentration per Run 2	99.261 %	0.103 ppb	0.185 ppb	55.210 ppb	24.268 ppb	0.043 ppb	-0.157 ppb	-0.367 ppb	-2.497 ppb
Concentration per Run 3	94.130 %	0.141 ppb	0.183 ppb	56.085 ppb	19.873 ppb	0.045 ppb	-0.219 ppb	-0.351 ppb	-2.589 ppb
Concentration RSD	2.8 %	17.2 %	5.1 %	2.6 %	10.1 %	4.3 %	21.2 %	9.3 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	81.562 %	3.192 ppb	-0.022 ppb	99.838 ppb	0.528 ppb	87.438 %	-0.005 ppb	0.002 ppb	89.977 %
Concentration per Run 1	79.016 %	3.051 ppb	-0.020 ppb	96.863 ppb	0.516 ppb	85.957 %	-0.005 ppb	0.001 ppb	85.625 %
Concentration per Run 2	80.303 %	3.376 ppb	0.003 ppb	100.678 ppb	0.518 ppb	86.783 %	-0.004 ppb	0.004 ppb	89.447 %
Concentration per Run 3	85.368 %	3.148 ppb	-0.051 ppb	101.972 ppb	0.549 ppb	89.572 %	-0.005 ppb	0.002 ppb	94.860 %
Concentration RSD	4.1 %	5.2 %	120.3 %	2.7 %	3.5 %	2.2 %	8.0 %	83.4 %	5.2 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.742 ppb	0.041 ppb	7.192 ppb	88.851 %	90.163 %	0.014 ppb	-0.184 ppb	78.471 %
Concentration per Run 1	-2.791 ppb	0.036 ppb	7.053 ppb	88.459 %	87.143 %	-0.010 ppb	-0.183 ppb	79.004 %
Concentration per Run 2	-2.726 ppb	0.044 ppb	7.335 ppb	89.804 %	90.583 %	0.020 ppb	-0.187 ppb	77.090 %
Concentration per Run 3	-2.709 ppb	0.042 ppb	7.188 ppb	88.290 %	92.762 %	0.031 ppb	-0.182 ppb	79.319 %
Concentration RSD	1.6 %	10.4 %	2.0 %	0.9 %	3.1 %	154.3 %	1.5 %	1.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index: 60 User name ALPHALAB\a2-icpmsq2 Comment <Comment>
Analysis label: CCV Rack 0
Analysis started at: 4/7/2024 6:13:50 PM Vial 9

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.385 %	98.065 %	63.557 ppb	64.861 ppb	5,723.945 ppb	6,039.144 ppb	59.078 ppb	5,608.155 ppb	5,443.981 ppb
Concentration per Run 1	94.714 %	97.639 %	63.295 ppb	63.828 ppb	5,941.881 ppb	6,245.436 ppb	61.406 ppb	5,794.334 ppb	5,536.469 ppb
Concentration per Run 2	95.918 %	92.879 %	63.072 ppb	64.378 ppb	5,898.292 ppb	6,225.741 ppb	60.481 ppb	5,794.356 ppb	5,623.211 ppb
Concentration per Run 3	95.522 %	103.677 %	64.305 ppb	66.378 ppb	5,331.661 ppb	5,646.254 ppb	55.348 ppb	5,235.775 ppb	5,172.265 ppb
Recovery Percentage 1			105.929 %	108.102 %	95.399 %	100.652 %	98.464 %	93.469 %	90.733 %
Concentration RSD	0.6 %	5.5 %	1.0 %	2.1 %	5.9 %	5.6 %	5.5 %	5.8 %	4.4 %

Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.157 %	55.365 ppb	57.298 ppb	58.317 ppb	5,778.273 ppb	57.343 ppb	58.274 ppb	58.532 ppb	56.112 ppb
Concentration per Run 1	97.247 %	54.242 ppb	57.266 ppb	60.654 ppb	5,858.002 ppb	57.325 ppb	58.063 ppb	57.963 ppb	55.196 ppb
Concentration per Run 2	101.455 %	58.317 ppb	59.260 ppb	58.181 ppb	5,888.164 ppb	58.362 ppb	58.979 ppb	59.941 ppb	58.255 ppb
Concentration per Run 3	101.769 %	53.535 ppb	55.367 ppb	56.115 ppb	5,588.652 ppb	56.342 ppb	57.780 ppb	57.691 ppb	54.884 ppb
Recovery Percentage 1		92.274 %	95.496 %	97.195 %	96.305 %	95.572 %	97.123 %	97.553 %	93.520 %
Concentration RSD	2.5 %	4.7 %	3.4 %	3.9 %	2.9 %	1.8 %	1.1 %	2.1 %	3.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	85.219 %	58.860 ppb	57.384 ppb	59.809 ppb	60.976 ppb	88.987 %	62.616 ppb	63.262 ppb	89.932 %
Concentration per Run 1	87.686 %	56.860 ppb	57.754 ppb	61.104 ppb	59.740 ppb	88.482 %	62.194 ppb	62.638 ppb	92.605 %
Concentration per Run 2	81.398 %	61.366 ppb	59.332 ppb	60.148 ppb	62.147 ppb	89.184 %	61.850 ppb	63.616 ppb	90.969 %
Concentration per Run 3	86.575 %	58.354 ppb	55.066 ppb	58.174 ppb	61.042 ppb	89.295 %	63.803 ppb	63.533 ppb	86.222 %
Recovery Percentage 1		98.100 %	95.640 %	99.681 %	101.627 %		104.360 %	105.437 %	
Concentration RSD	3.9 %	3.9 %	3.8 %	2.5 %	2.0 %	0.5 %	1.7 %	0.9 %	3.7 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	59.587 ppb	62.044 ppb	63.020 ppb	89.391 %	88.964 %	58.354 ppb	64.881 ppb	83.134 %
Concentration per Run 1	59.623 ppb	61.935 ppb	63.209 ppb	89.850 %	90.464 %	54.495 ppb	61.206 ppb	87.953 %
Concentration per Run 2	59.290 ppb	59.940 ppb	60.992 ppb	89.069 %	89.736 %	59.069 ppb	67.038 ppb	82.495 %
Concentration per Run 3	59.850 ppb	64.257 ppb	64.857 ppb	89.255 %	86.691 %	61.497 ppb	66.398 ppb	78.953 %
Recovery Percentage 1	99.312 %	103.407 %	105.033 %			97.256 %	108.135 %	
Concentration RSD	0.5 %	3.5 %	3.1 %	0.5 %	2.3 %	6.1 %	4.9 %	5.5 %

Alpha ICPMSQ2 Data with SRD

4/7/2024 6:24:42 PM

Analysis index:	61	User name	ALPHALAB\a2-icpmsq2	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/7/2024 6:18:21 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	11B (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)
Concentration average	95.054 %	98.994 %	0.024 ppb	4.444 ppb	-30.826 ppb	2.790 ppb	-2.199 ppb	-37.083 ppb	-56.217 ppb
Concentration per Run 1	93.570 %	100.077 %	0.020 ppb	4.474 ppb	-30.928 ppb	2.258 ppb	-2.419 ppb	-39.119 ppb	-55.145 ppb
Concentration per Run 2	95.999 %	93.924 %	0.025 ppb	4.373 ppb	-28.398 ppb	3.461 ppb	-1.802 ppb	-36.615 ppb	-53.186 ppb
Concentration per Run 3	95.592 %	102.980 %	0.027 ppb	4.486 ppb	-33.152 ppb	2.652 ppb	-2.375 ppb	-35.515 ppb	-60.319 ppb
Recovery Percentage 1			4.773 %	44.442 %	-30.826 %	3.986 %	-21.986 %	-37.083 %	-56.217 %
Concentration RSD	1.4 %	4.7 %	15.0 %	1.4 %	7.7 %	22.0 %	15.6 %	5.0 %	6.6 %

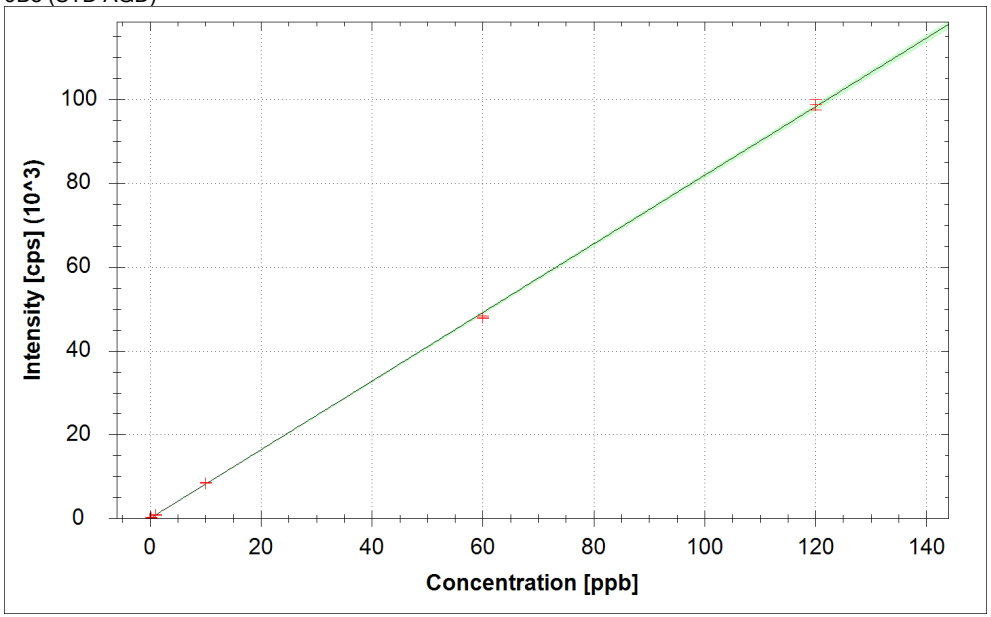
Category	45Sc (STD AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.206 %	0.053 ppb	0.027 ppb	-0.688 ppb	2.483 ppb	0.041 ppb	-0.260 ppb	-0.311 ppb	-3.074 ppb
Concentration per Run 1	94.242 %	0.048 ppb	0.038 ppb	-0.706 ppb	0.913 ppb	0.039 ppb	-0.288 ppb	-0.323 ppb	-3.040 ppb
Concentration per Run 2	94.438 %	0.055 ppb	0.026 ppb	-0.699 ppb	4.363 ppb	0.054 ppb	-0.228 ppb	-0.262 ppb	-3.080 ppb
Concentration per Run 3	96.937 %	0.056 ppb	0.018 ppb	-0.659 ppb	2.173 ppb	0.031 ppb	-0.263 ppb	-0.347 ppb	-3.103 ppb
Recovery Percentage 1		1.060 %	2.744 %	-68.792 %	4.967 %	8.258 %	-12.982 %	-31.064 %	-61.489 %
Concentration RSD	1.6 %	8.4 %	37.5 %	3.7 %	70.3 %	27.3 %	11.6 %	14.2 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.818 %	0.119 ppb	0.145 ppb	0.020 ppb	0.037 ppb	91.772 %	0.055 ppb	0.049 ppb	91.368 %
Concentration per Run 1	85.749 %	0.081 ppb	0.148 ppb	0.019 ppb	0.023 ppb	93.414 %	0.066 ppb	0.056 ppb	90.877 %
Concentration per Run 2	86.872 %	0.141 ppb	0.205 ppb	0.030 ppb	0.043 ppb	90.739 %	0.061 ppb	0.053 ppb	91.291 %
Concentration per Run 3	87.833 %	0.133 ppb	0.082 ppb	0.011 ppb	0.045 ppb	91.162 %	0.038 ppb	0.038 ppb	91.936 %
Recovery Percentage 1		23.710 %	2.897 %	0.202 %	1.852 %		13.720 %	24.558 %	
Concentration RSD	1.2 %	27.3 %	42.7 %	47.6 %	32.6 %	1.6 %	27.7 %	19.7 %	0.6 %

Category	118Sn (KED AGD)	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)	209Bi (KED AGD)
Concentration average	-2.174 ppb	0.078 ppb	-0.119 ppb	89.973 %	88.693 %	0.559 ppb	-0.126 ppb	84.552 %
Concentration per Run 1	-2.193 ppb	0.079 ppb	-0.096 ppb	89.447 %	89.432 %	0.390 ppb	-0.121 ppb	84.949 %
Concentration per Run 2	-2.166 ppb	0.080 ppb	-0.102 ppb	89.875 %	87.996 %	0.669 ppb	-0.119 ppb	84.519 %
Concentration per Run 3	-2.162 ppb	0.075 ppb	-0.159 ppb	90.597 %	88.651 %	0.619 ppb	-0.139 ppb	84.187 %
Recovery Percentage 1	-72.462 %	1.956 %	-23.775 %			55.935 %	-12.628 %	
Concentration RSD	0.8 %	3.6 %	29.2 %	0.6 %	0.8 %	26.6 %	8.7 %	0.5 %

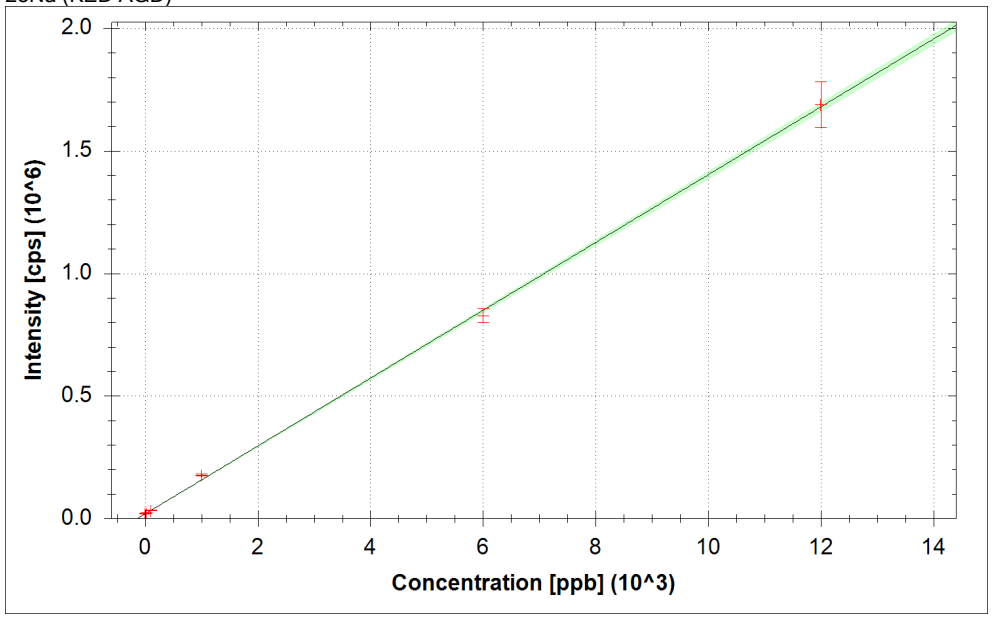
Calibration Curves:

9Be (STD AGD)



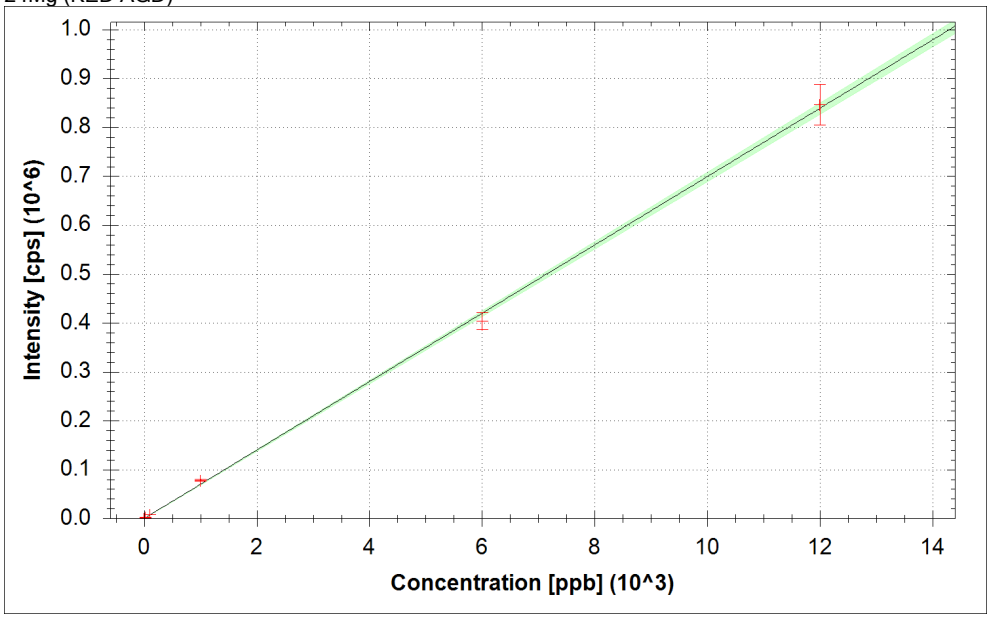
f(x) = 818.3617*x + 15.9192
R² = 0.9998
BEC = 0.019 ppb
LoD = 0.0280 ppb

23Na (KED AGD)



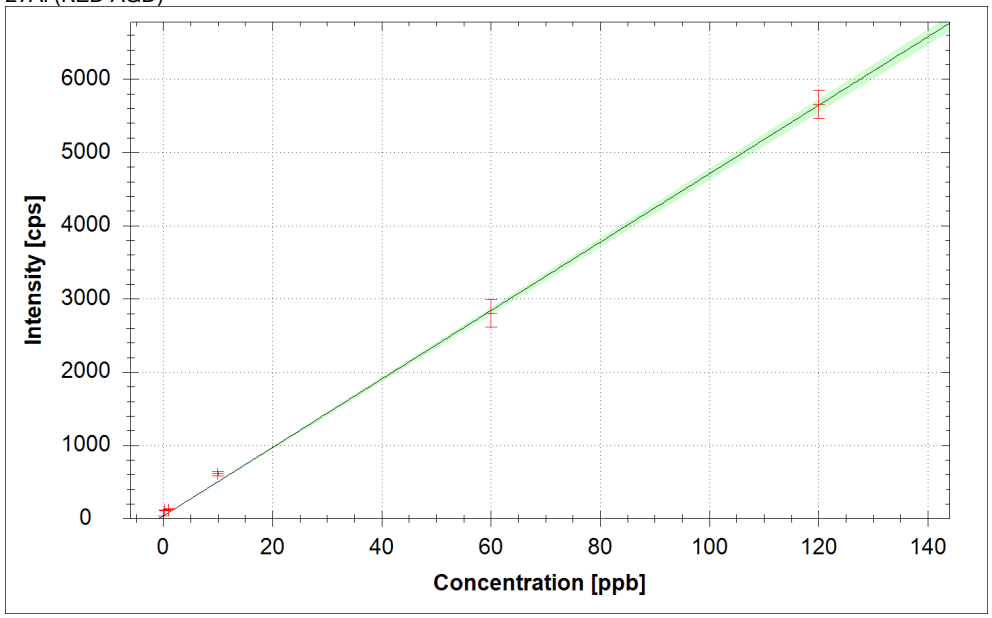
f(x) = 138.3441*x + 18748.3884
R² = 0.9996
BEC = 135.520 ppb
LoD = 25.3910 ppb

24Mg (KED AGD)



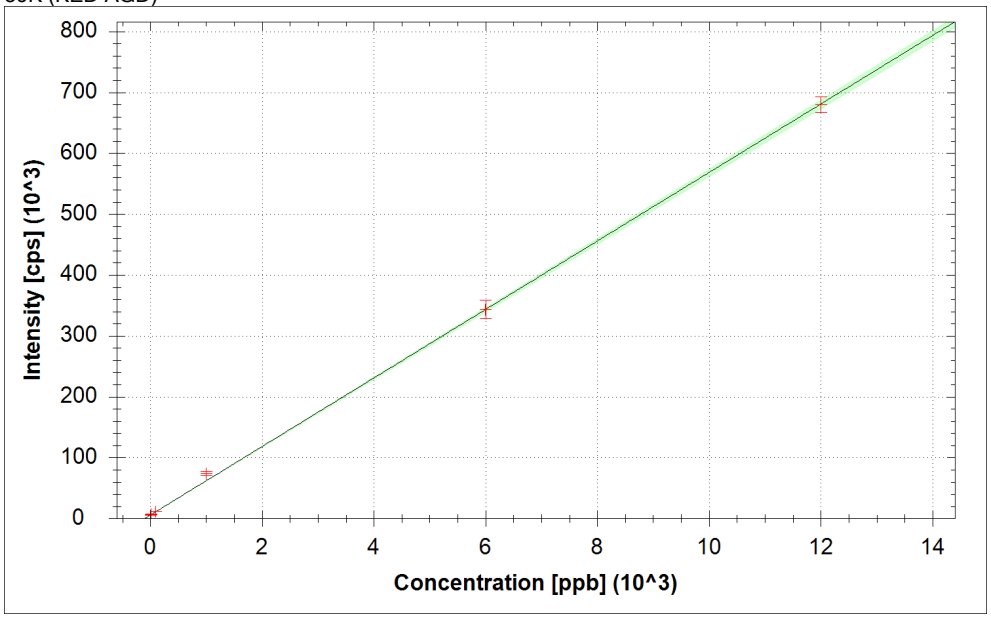
f(x) = 69.9021*x + 55.8894
R² = 0.9993
BEC = 0.800 ppb
LoD = 1.0257 ppb

27Al (KED AGD)



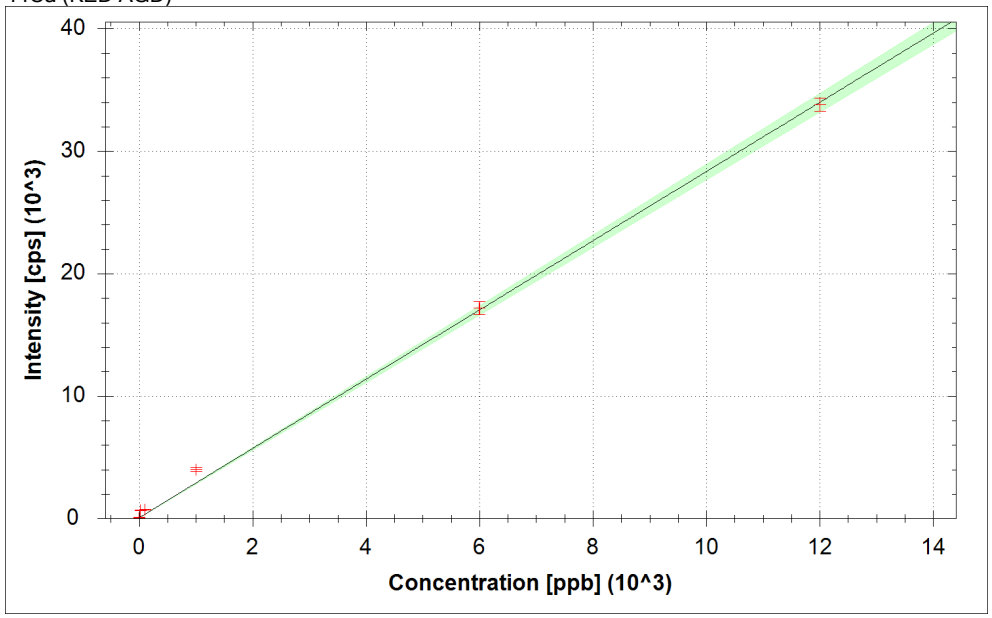
f(x) = 46.7329*x + 33.7446
R² = 0.9992
BEC = 0.722 ppb
LoD = 0.1835 ppb

39K (KED AGD)



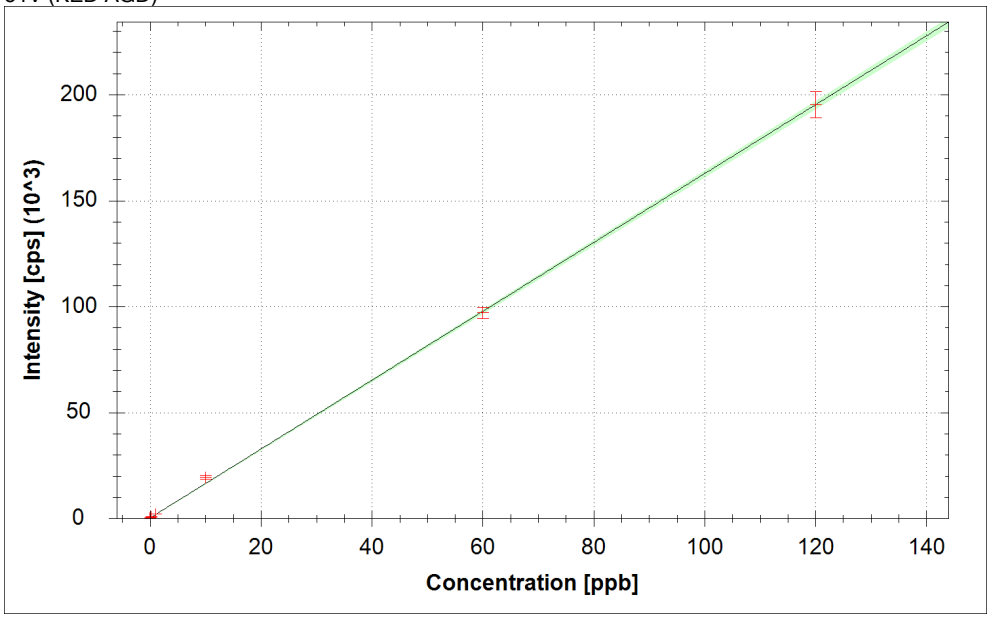
f(x) = 56.2631*x + 5602.2697
R² = 0.9996
BEC = 99.573 ppb
LoD = 7.7101 ppb

44Ca (KED AGD)



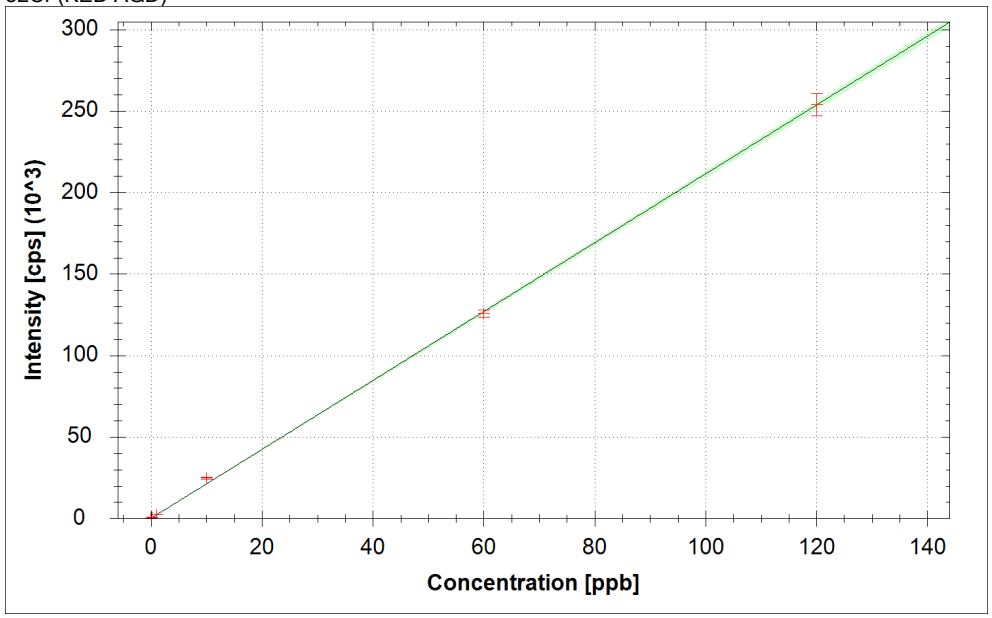
f(x) = 2.8264*x + 60.7858
R² = 0.9981
BEC = 21.506 ppb
LoD = 8.1591 ppb

51V (KED AGD)



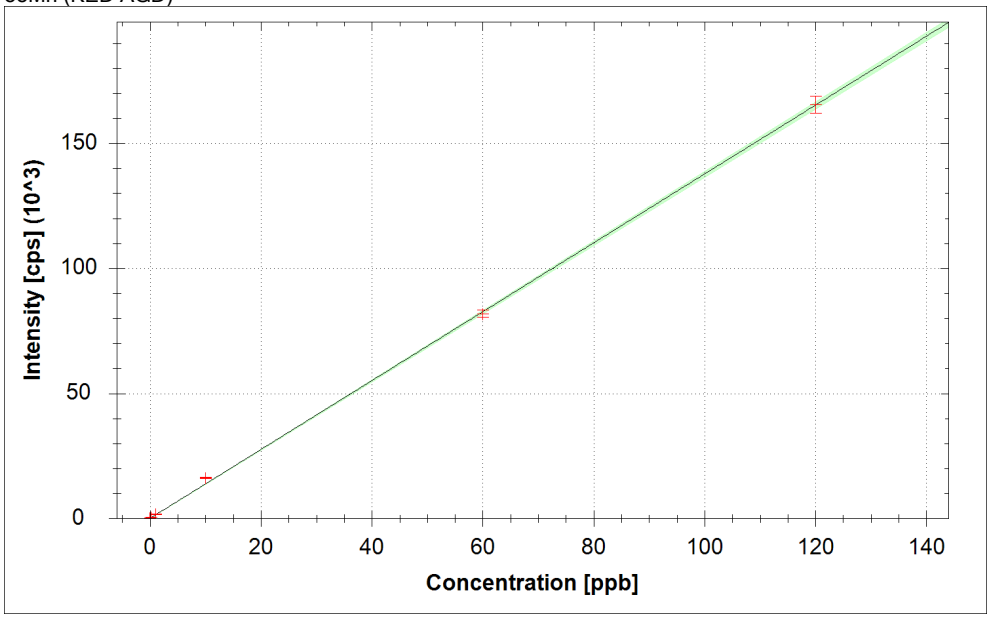
f(x) = 1624.5791*x + 252.5882
R² = 0.9997
BEC = 0.155 ppb
LoD = 0.0567 ppb

52Cr (KED AGD)



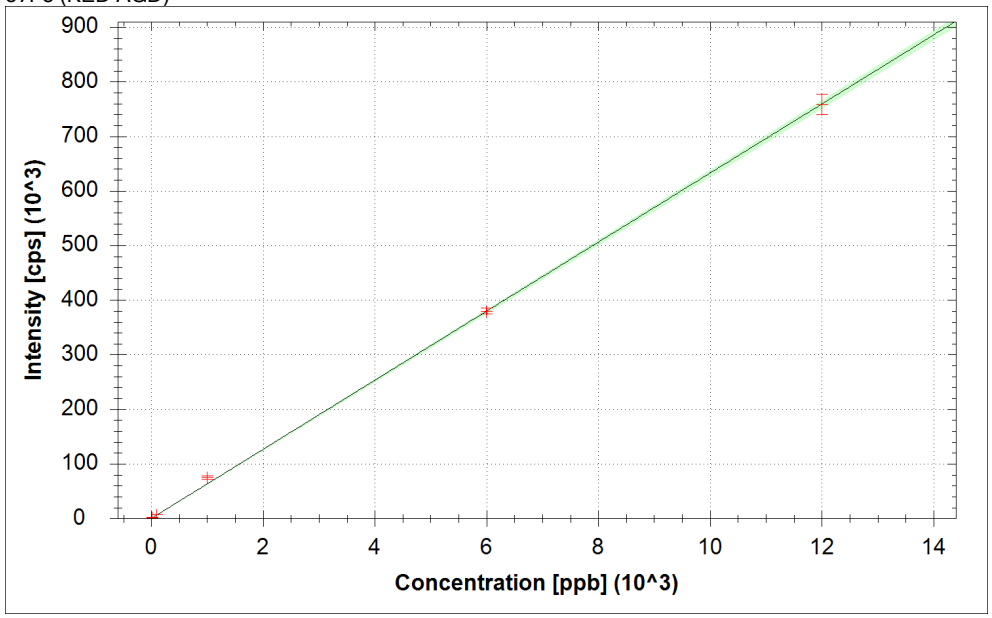
f(x) = 2112.3903*x + 119.2960
R² = 0.9997
BEC = 0.056 ppb
LoD = 0.0250 ppb

55Mn (KED AGD)



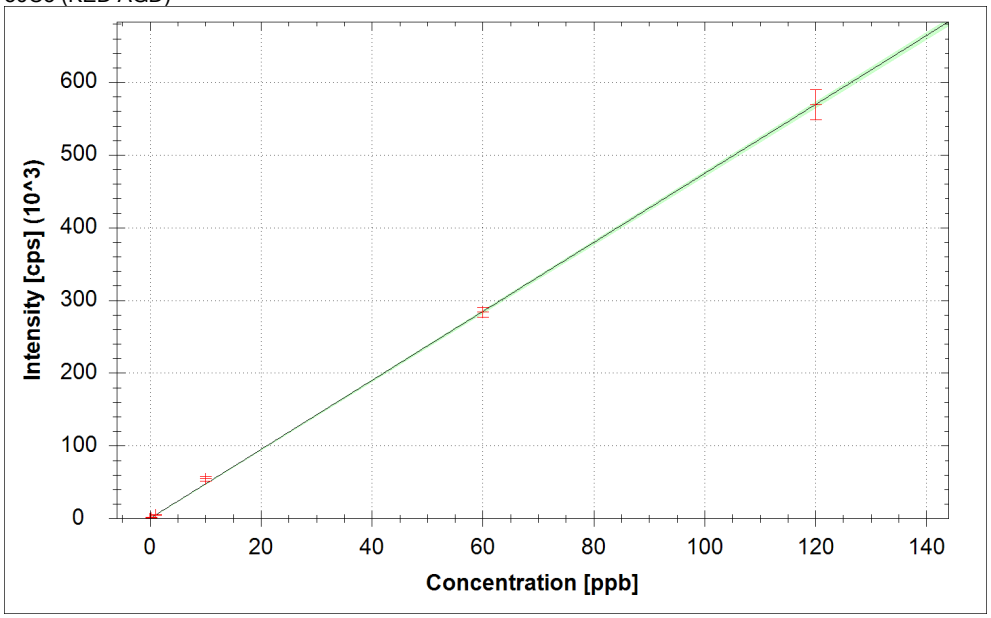
f(x) = 1376.4313*x + 59.9752
R² = 0.9997
BEC = 0.044 ppb
LoD = 0.0246 ppb

57Fe (KED AGD)



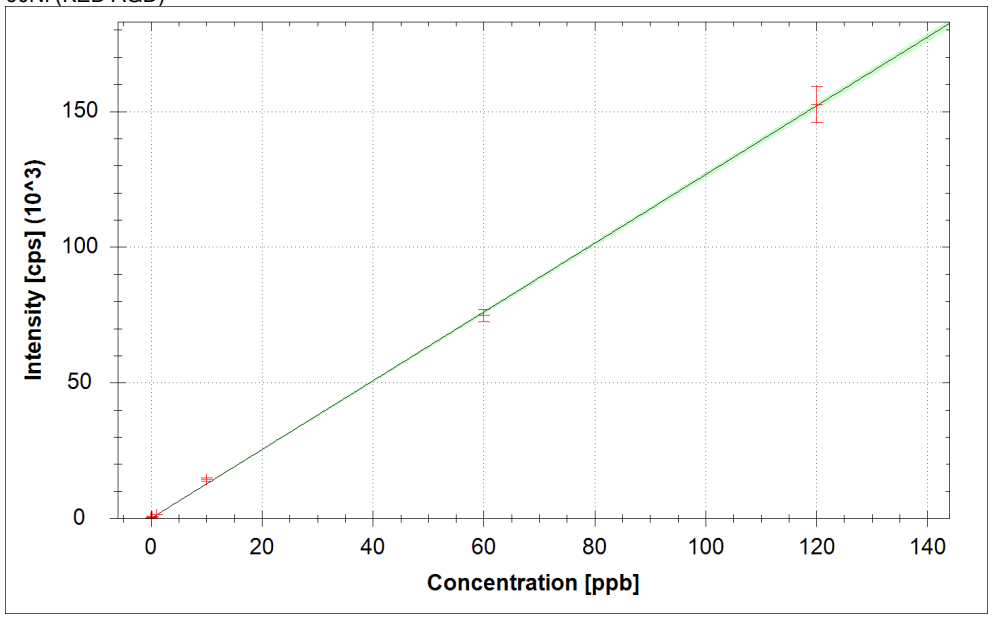
f(x) = 63.2375*x + 103.8726
R² = 0.9997
BEC = 1.643 ppb
LoD = 1.2786 ppb

59Co (KED AGD)



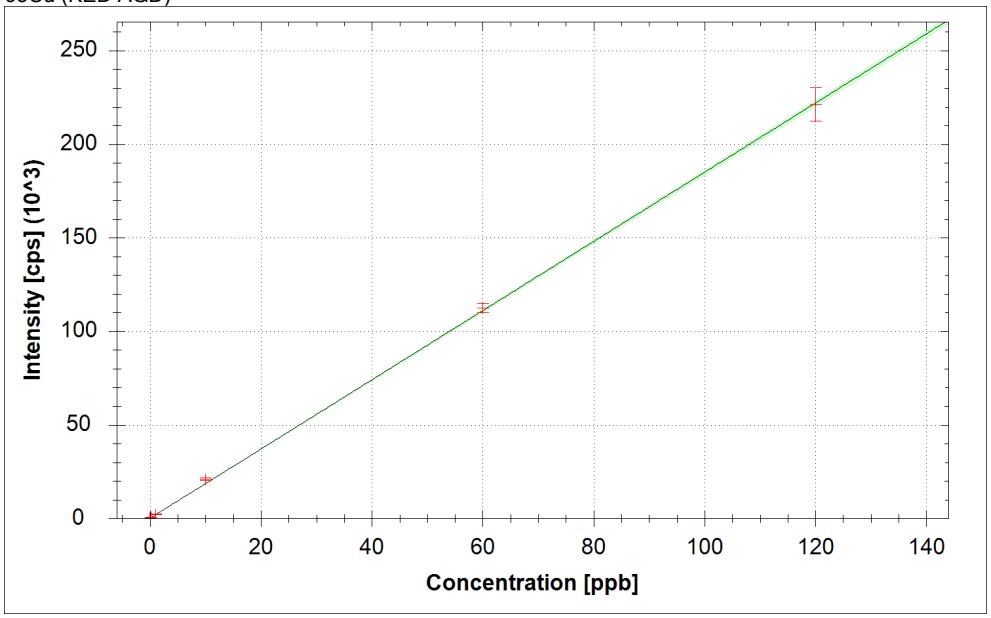
f(x) = 4742.3564*x + 42.0879
R² = 0.9998
BEC = 0.009 ppb
LoD = 0.0057 ppb

60Ni (KED AGD)



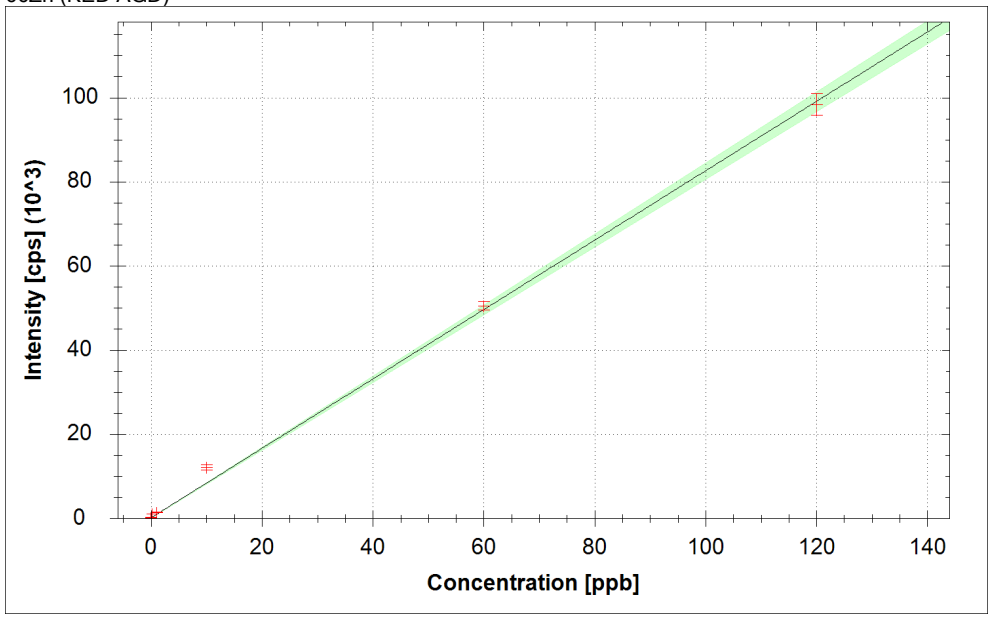
f(x) = 1266.3016*x + 52.8680
R² = 0.9998
BEC = 0.042 ppb
LoD = 0.0535 ppb

65Cu (KED AGD)



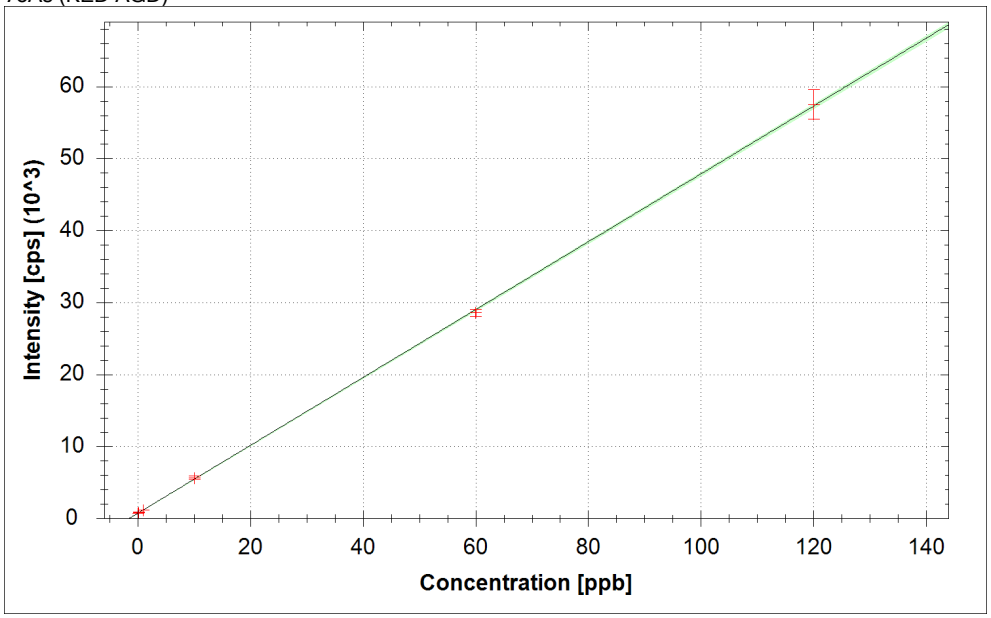
f(x) = 1848.5231*x + 135.9220
R² = 0.9998
BEC = 0.074 ppb
LoD = 0.0334 ppb

66Zn (KED AGD)



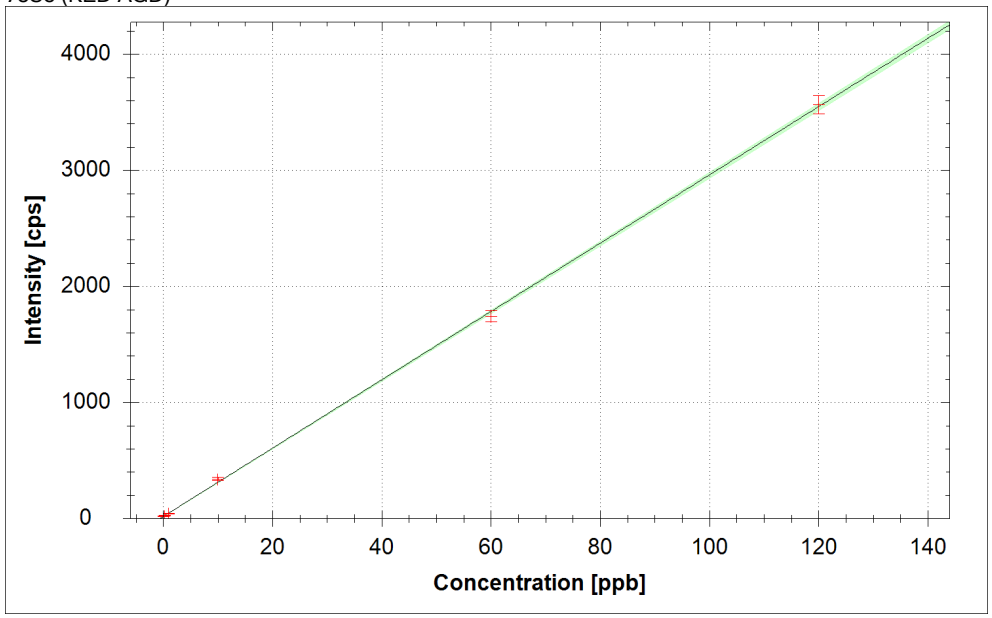
f(x) = 824.3464*x + 158.7513
R² = 0.9980
BEC = 0.193 ppb
LoD = 0.1163 ppb

75As (KED AGD)



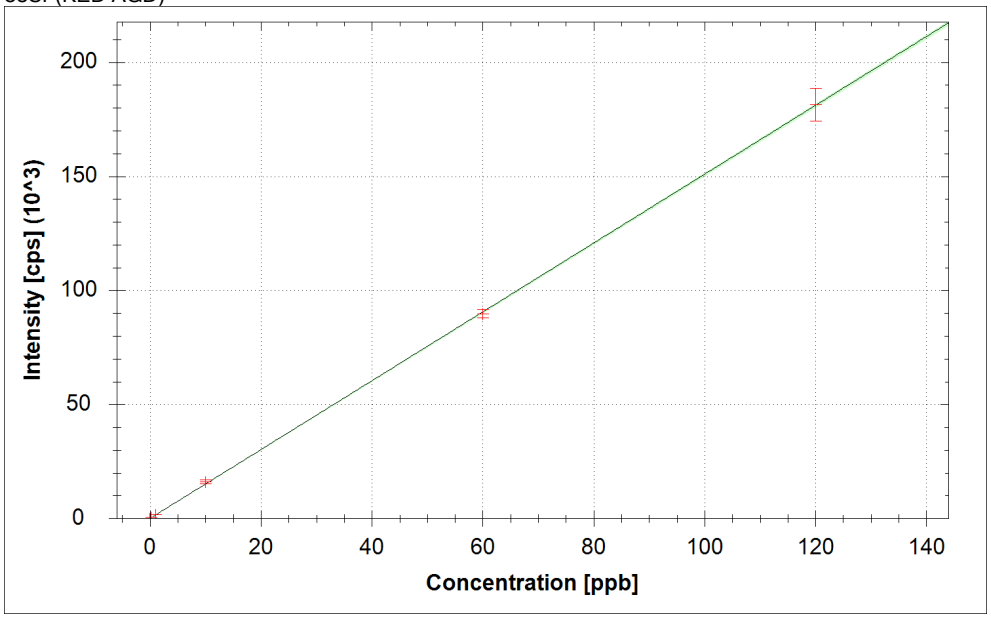
f(x) = 471.0659*x + 738.0183
R² = 0.9999
BEC = 1.567 ppb
LoD = 0.0156 ppb

78Se (KED AGD)



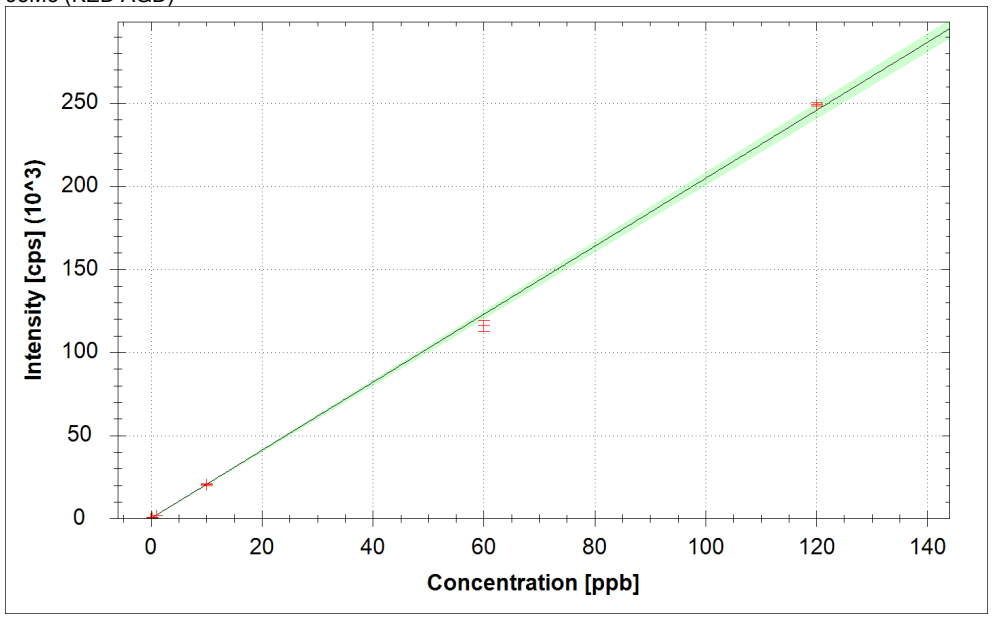
f(x) = 29.4121*x + 17.0929
R² = 0.9997
BEC = 0.581 ppb
LoD = 0.3167 ppb

88Sr (KED AGD)



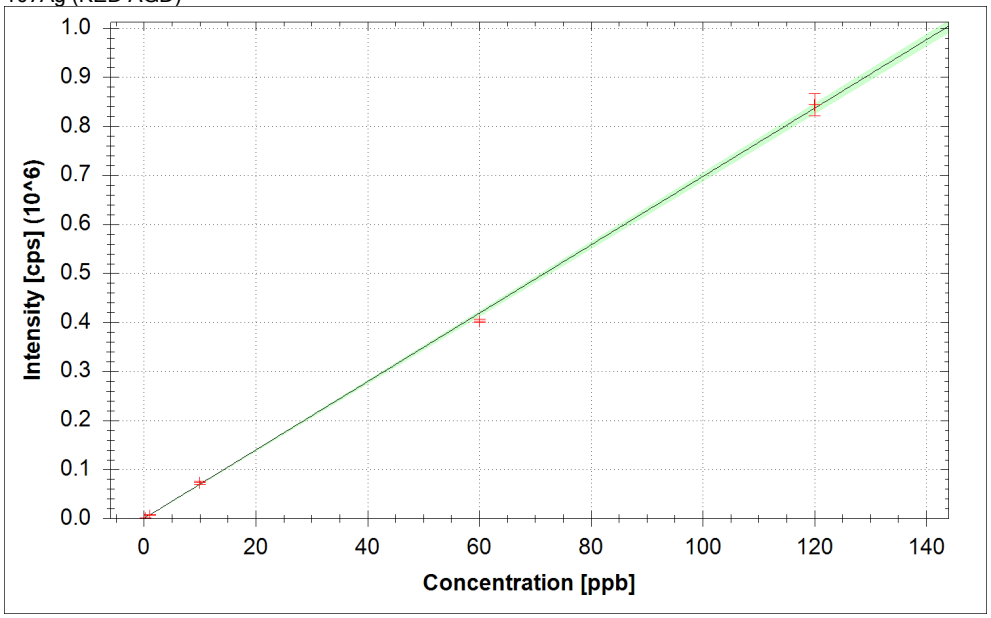
f(x) = 1508.5923*x + 17.6176
R² = 0.9999
BEC = 0.012 ppb
LoD = 0.0028 ppb

95Mo (KED AGD)



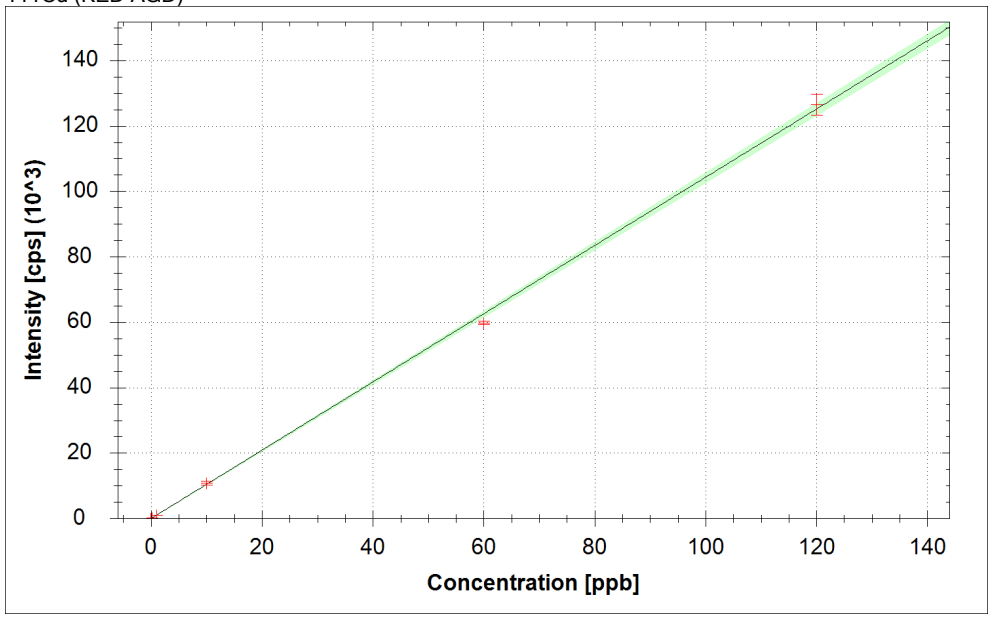
f(x) = 2046.3106*x + 46.9244
R² = 0.9988
BEC = 0.023 ppb
LoD = 0.0347 ppb

107Ag (KED AGD)



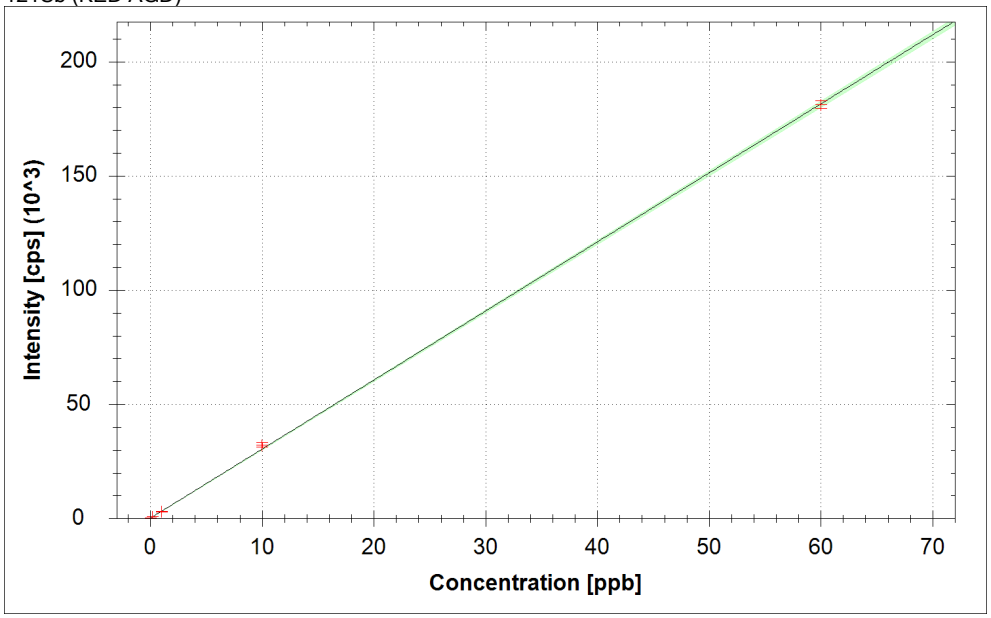
f(x) = 6970.7712*x + 49.1875
R² = 0.9995
BEC = 0.007 ppb
LoD = 0.0085 ppb

111Cd (KED AGD)



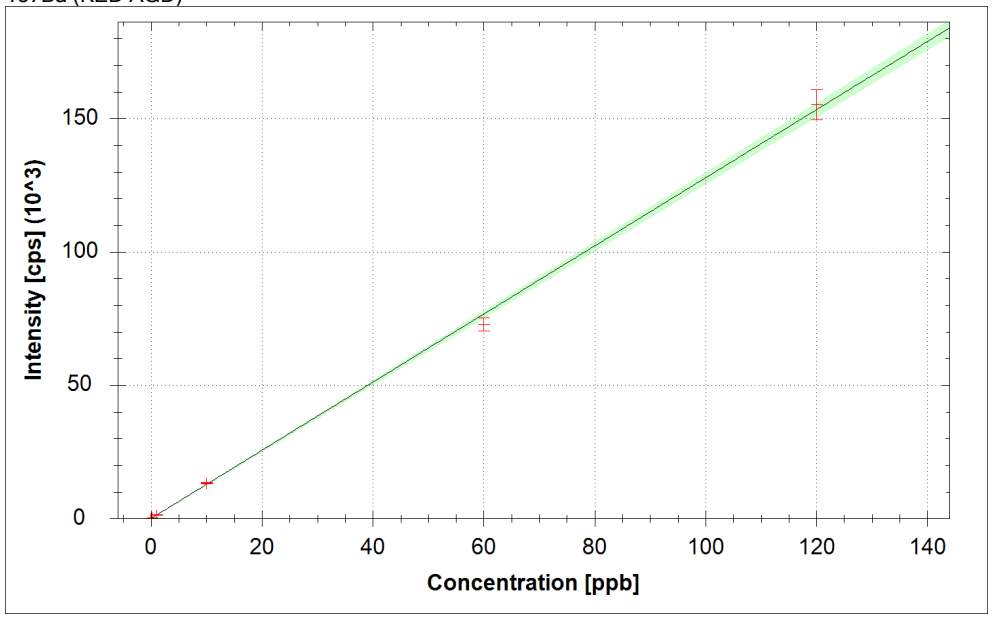
f(x) = 1042.5741*x + 0.8982
R² = 0.9993
BEC = 0.001 ppb
LoD = 0.0022 ppb

121Sb (KED AGD)



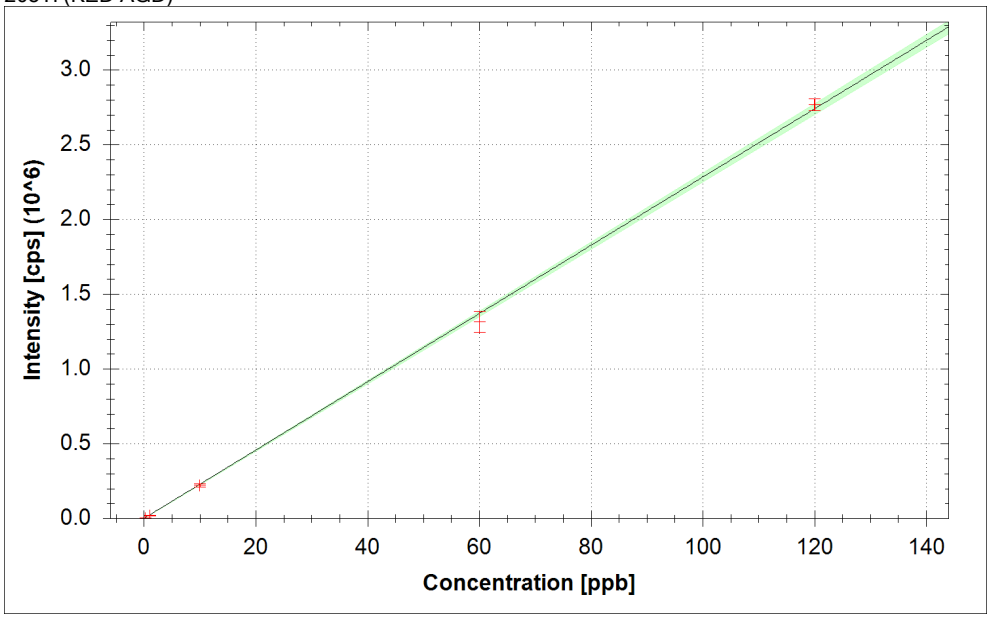
f(x) = 3022.6213*x + 109.8357
R² = 0.9999
BEC = 0.036 ppb
LoD = 0.0091 ppb

137Ba (KED AGD)



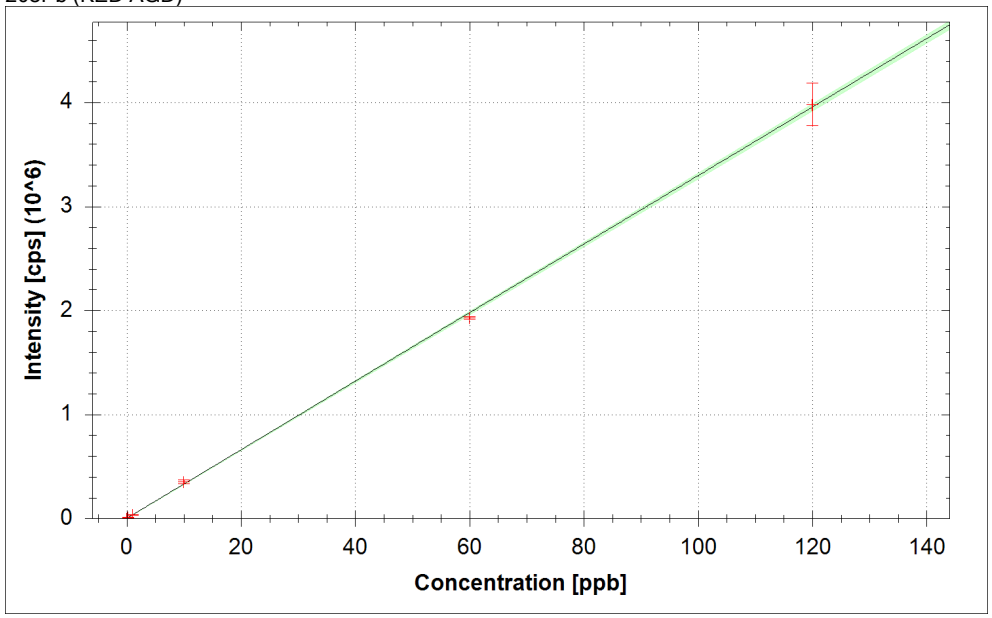
f(x) = 1276.9242*x + 13.3822
R² = 0.9991
BEC = 0.010 ppb
LoD = 0.0356 ppb

205Tl (KED AGD)



f(x) = 22823.9092*x + 385.5265
R² = 0.9994
BEC = 0.017 ppb
LoD = 0.0125 ppb

208Pb (KED AGD)



f(x) = 32953.8143*x + 1175.1994
R² = 0.9997
BEC = 0.036 ppb
LoD = 0.0075 ppb

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/10/2024 5:11:20 AM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	100.831 %	4.2 %		0.000 %
6Li (KED AGD)	100.839 %	5.0 %		0.000 %
9Be (STD AGD)	0.232 ppb	13.0 %	0.200 ppb	15.792 %
23Na (KED AGD)	21.314 ppb	27.8 %	20.000 ppb	6.571 %
24Mg (KED AGD)	25.003 ppb	12.2 %	20.000 ppb	25.014 %
27Al (KED AGD)	1.685 ppb	4.5 %	0.200 ppb	742.251 %
39K (KED AGD)	24.314 ppb	29.5 %	20.000 ppb	21.572 %
44Ca (KED AGD)	211.686 ppb	6.1 %	20.000 ppb	958.430 %
45Sc (STD AGD)	101.865 %	2.4 %		0.000 %
45Sc (KED AGD)	99.200 %	2.4 %		0.000 %
51V (KED AGD)	0.304 ppb	20.8 %	0.200 ppb	51.843 %
52Cr (KED AGD)	0.242 ppb	7.3 %	0.200 ppb	21.138 %
55Mn (KED AGD)	0.253 ppb	16.7 %	0.200 ppb	26.454 %
57Fe (KED AGD)	22.521 ppb	7.5 %	20.000 ppb	12.604 %
59Co (KED AGD)	0.219 ppb	2.0 %	0.200 ppb	9.572 %
60Ni (KED AGD)	0.385 ppb	11.9 %	0.200 ppb	92.406 %
65Cu (KED AGD)	0.205 ppb	19.9 %	0.200 ppb	2.508 %
66Zn (KED AGD)	1.043 ppb	5.7 %	0.200 ppb	421.440 %
74Ge (KED AGD)	102.807 %	2.8 %		0.000 %
75As (KED AGD)	0.173 ppb	73.0 %	0.200 ppb	13.706 %
78Se (KED AGD)	0.208 ppb	80.2 %	0.200 ppb	4.096 %
88Sr (KED AGD)	0.287 ppb	5.7 %	0.200 ppb	43.306 %
95Mo (KED AGD)	0.219 ppb	29.2 %	0.200 ppb	9.712 %
103Rh (KED AGD)	103.048 %	2.4 %		0.000 %
107Ag (KED AGD)	0.195 ppb	4.7 %	0.200 ppb	2.628 %
111Cd (KED AGD)	0.211 ppb	5.6 %	0.200 ppb	5.532 %
115In (KED AGD)	100.946 %	3.0 %		0.000 %
121Sb (KED AGD)	0.209 ppb	5.1 %	0.200 ppb	4.315 %
137Ba (KED AGD)	0.197 ppb	3.4 %	0.200 ppb	1.327 %
159Tb (KED AGD)	100.786 %	1.2 %		0.000 %
175Lu (KED AGD)	101.851 %	1.7 %		0.000 %
205Tl (KED AGD)	0.175 ppb	8.9 %	0.200 ppb	12.567 %
208Pb (KED AGD)	0.200 ppb	1.8 %	0.200 ppb	0.133 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/10/2024 5:15:57 AM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	100.151 %	3.7 %		0.000 %
6Li (KED AGD)	101.679 %	2.4 %		0.000 %
9Be (STD AGD)	1.007 ppb	2.9 %	1.000 ppb	0.652 %
23Na (KED AGD)	100.729 ppb	6.3 %	100.000 ppb	0.729 %
24Mg (KED AGD)	107.799 ppb	3.4 %	100.000 ppb	7.799 %
27Al (KED AGD)	1.922 ppb	5.6 %	1.000 ppb	92.242 %
39K (KED AGD)	105.160 ppb	3.1 %	100.000 ppb	5.160 %
44Ca (KED AGD)	231.359 ppb	4.4 %	100.000 ppb	131.359 %
45Sc (STD AGD)	102.923 %	1.4 %		0.000 %
45Sc (KED AGD)	99.555 %	0.7 %		0.000 %
51V (KED AGD)	1.172 ppb	4.0 %	1.000 ppb	17.153 %
52Cr (KED AGD)	1.032 ppb	3.8 %	1.000 ppb	3.224 %
55Mn (KED AGD)	1.178 ppb	9.3 %	1.000 ppb	17.848 %
57Fe (KED AGD)	110.175 ppb	2.5 %	100.000 ppb	10.175 %
59Co (KED AGD)	1.030 ppb	5.7 %	1.000 ppb	2.976 %
60Ni (KED AGD)	1.058 ppb	7.3 %	1.000 ppb	5.844 %
65Cu (KED AGD)	1.076 ppb	3.0 %	1.000 ppb	7.612 %
66Zn (KED AGD)	1.548 ppb	3.1 %	1.000 ppb	54.770 %
74Ge (KED AGD)	101.685 %	0.6 %		0.000 %
75As (KED AGD)	0.927 ppb	6.4 %	1.000 ppb	7.270 %
78Se (KED AGD)	0.807 ppb	8.7 %	1.000 ppb	19.302 %
88Sr (KED AGD)	1.040 ppb	2.2 %	1.000 ppb	3.995 %
95Mo (KED AGD)	0.929 ppb	2.5 %	1.000 ppb	7.080 %
103Rh (KED AGD)	102.270 %	1.8 %		0.000 %
107Ag (KED AGD)	0.976 ppb	3.5 %	1.000 ppb	2.357 %
111Cd (KED AGD)	0.948 ppb	1.8 %	1.000 ppb	5.161 %
115In (KED AGD)	100.513 %	0.2 %		0.000 %
121Sb (KED AGD)	0.947 ppb	2.0 %	1.000 ppb	5.277 %
137Ba (KED AGD)	0.930 ppb	9.2 %	1.000 ppb	7.026 %
159Tb (KED AGD)	101.179 %	1.4 %		0.000 %
175Lu (KED AGD)	101.288 %	1.3 %		0.000 %
205Tl (KED AGD)	0.831 ppb	9.3 %	1.000 ppb	16.871 %
208Pb (KED AGD)	0.964 ppb	1.2 %	1.000 ppb	3.649 %

Standards:

Analysis Index: 6
Analysis Name: 10/1000 Cal
Analysis Type: STD
Analysis Started at: 4/10/2024 5:20:34 AM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	97.699 %	3.0 %		0.000 %
6Li (KED AGD)	99.580 %	1.8 %		0.000 %
9Be (STD AGD)	10.312 ppb	1.3 %	10.000 ppb	3.124 %
23Na (KED AGD)	1,140.585 ppb	2.6 %	1,000.000 ppb	14.058 %
24Mg (KED AGD)	1,112.821 ppb	2.2 %	1,000.000 ppb	11.282 %
27Al (KED AGD)	12.387 ppb	5.3 %	10.000 ppb	23.870 %
39K (KED AGD)	1,222.105 ppb	4.9 %	1,000.000 ppb	22.211 %
44Ca (KED AGD)	1,392.333 ppb	3.8 %	1,000.000 ppb	39.233 %
45Sc (STD AGD)	97.808 %	2.1 %		0.000 %
45Sc (KED AGD)	94.193 %	1.0 %		0.000 %
51V (KED AGD)	11.814 ppb	4.8 %	10.000 ppb	18.140 %
52Cr (KED AGD)	11.678 ppb	2.4 %	10.000 ppb	16.778 %
55Mn (KED AGD)	11.705 ppb	1.5 %	10.000 ppb	17.051 %
57Fe (KED AGD)	1,187.384 ppb	4.0 %	1,000.000 ppb	18.738 %
59Co (KED AGD)	11.467 ppb	5.3 %	10.000 ppb	14.671 %
60Ni (KED AGD)	11.278 ppb	3.6 %	10.000 ppb	12.783 %
65Cu (KED AGD)	11.230 ppb	3.7 %	10.000 ppb	12.297 %
66Zn (KED AGD)	14.529 ppb	4.8 %	10.000 ppb	45.290 %
74Ge (KED AGD)	100.920 %	3.9 %		0.000 %
75As (KED AGD)	10.425 ppb	5.0 %	10.000 ppb	4.254 %
78Se (KED AGD)	10.956 ppb	4.2 %	10.000 ppb	9.557 %
88Sr (KED AGD)	10.586 ppb	5.2 %	10.000 ppb	5.860 %
95Mo (KED AGD)	9.871 ppb	2.2 %	10.000 ppb	1.287 %
103Rh (KED AGD)	100.025 %	2.5 %		0.000 %
107Ag (KED AGD)	10.405 ppb	4.3 %	10.000 ppb	4.052 %
111Cd (KED AGD)	10.334 ppb	5.1 %	10.000 ppb	3.342 %
115In (KED AGD)	97.205 %	2.5 %		0.000 %
121Sb (KED AGD)	10.608 ppb	3.2 %	10.000 ppb	6.081 %
137Ba (KED AGD)	10.312 ppb	1.8 %	10.000 ppb	3.115 %
159Tb (KED AGD)	99.284 %	2.6 %		0.000 %
175Lu (KED AGD)	98.731 %	3.6 %		0.000 %
205Tl (KED AGD)	9.656 ppb	4.8 %	10.000 ppb	3.443 %
208Pb (KED AGD)	10.578 ppb	5.1 %	10.000 ppb	5.781 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/10/2024 5:25:13 AM
Total Dilution Factor 166.6666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	97.859 %	2.9 %		0.000 %
6Li (KED AGD)	101.626 %	1.7 %		0.000 %
9Be (STD AGD)	58.685 ppb	0.7 %	60.000 ppb	2.192 %
23Na (KED AGD)	5,838.696 ppb	3.5 %	6,000.000 ppb	2.688 %
24Mg (KED AGD)	5,763.829 ppb	4.3 %	6,000.000 ppb	3.936 %
27Al (KED AGD)	59.147 ppb	6.8 %	60.000 ppb	1.422 %
39K (KED AGD)	5,998.071 ppb	4.5 %	6,000.000 ppb	0.032 %
44Ca (KED AGD)	6,060.704 ppb	3.1 %	6,000.000 ppb	1.012 %
45Sc (STD AGD)	114.906 %	0.9 %		0.000 %
45Sc (KED AGD)	107.852 %	3.4 %		0.000 %
51V (KED AGD)	59.589 ppb	2.8 %	60.000 ppb	0.684 %
52Cr (KED AGD)	59.474 ppb	1.8 %	60.000 ppb	0.877 %
55Mn (KED AGD)	59.395 ppb	1.7 %	60.000 ppb	1.008 %
57Fe (KED AGD)	6,001.700 ppb	1.5 %	6,000.000 ppb	0.028 %
59Co (KED AGD)	59.778 ppb	2.5 %	60.000 ppb	0.371 %
60Ni (KED AGD)	59.048 ppb	3.1 %	60.000 ppb	1.586 %
65Cu (KED AGD)	60.694 ppb	2.2 %	60.000 ppb	1.157 %
66Zn (KED AGD)	61.074 ppb	2.0 %	60.000 ppb	1.790 %
74Ge (KED AGD)	99.413 %	3.3 %		0.000 %
75As (KED AGD)	59.022 ppb	1.9 %	60.000 ppb	1.630 %
78Se (KED AGD)	58.620 ppb	2.7 %	60.000 ppb	2.300 %
88Sr (KED AGD)	59.445 ppb	2.1 %	60.000 ppb	0.925 %
95Mo (KED AGD)	56.615 ppb	2.9 %	60.000 ppb	5.642 %
103Rh (KED AGD)	102.699 %	1.2 %		0.000 %
107Ag (KED AGD)	57.798 ppb	0.8 %	60.000 ppb	3.671 %
111Cd (KED AGD)	57.337 ppb	0.8 %	60.000 ppb	4.438 %
115In (KED AGD)	99.019 %	3.3 %		0.000 %
121Sb (KED AGD)	59.900 ppb	1.0 %	60.000 ppb	0.167 %
137Ba (KED AGD)	56.973 ppb	3.4 %	60.000 ppb	5.046 %
159Tb (KED AGD)	102.513 %	1.3 %		0.000 %
175Lu (KED AGD)	102.276 %	1.1 %		0.000 %
205Tl (KED AGD)	57.585 ppb	5.5 %	60.000 ppb	4.024 %
208Pb (KED AGD)	58.473 ppb	0.6 %	60.000 ppb	2.545 %

Standards:

Analysis Index: 8
Analysis Name: 120/12000 Cal
Analysis Type: STD
Analysis Started at: 4/10/2024 5:29:52 AM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD AGD)	93.852 %	3.8 %		0.000 %
6Li (KED AGD)	92.602 %	7.6 %		0.000 %
9Be (STD AGD)	120.631 ppb	1.3 %	120.000 ppb	0.526 %
23Na (KED AGD)	12,068.928 ppb	5.6 %	12,000.000 ppb	0.574 %
24Mg (KED AGD)	12,108.611 ppb	4.9 %	12,000.000 ppb	0.905 %
27Al (KED AGD)	120.217 ppb	3.4 %	120.000 ppb	0.181 %
39K (KED AGD)	11,982.405 ppb	1.9 %	12,000.000 ppb	0.147 %
44Ca (KED AGD)	11,935.540 ppb	1.5 %	12,000.000 ppb	0.537 %
45Sc (STD AGD)	108.315 %	0.7 %		0.000 %
45Sc (KED AGD)	106.600 %	4.4 %		0.000 %
51V (KED AGD)	120.053 ppb	3.2 %	120.000 ppb	0.044 %
52Cr (KED AGD)	120.123 ppb	2.7 %	120.000 ppb	0.102 %
55Mn (KED AGD)	120.159 ppb	2.1 %	120.000 ppb	0.132 %
57Fe (KED AGD)	11,983.445 ppb	2.5 %	12,000.000 ppb	0.138 %
59Co (KED AGD)	119.989 ppb	3.7 %	120.000 ppb	0.009 %
60Ni (KED AGD)	120.368 ppb	4.4 %	120.000 ppb	0.307 %
65Cu (KED AGD)	119.550 ppb	4.1 %	120.000 ppb	0.375 %
66Zn (KED AGD)	119.080 ppb	2.6 %	120.000 ppb	0.767 %
74Ge (KED AGD)	97.175 %	2.9 %		0.000 %
75As (KED AGD)	120.454 ppb	3.6 %	120.000 ppb	0.378 %
78Se (KED AGD)	120.612 ppb	2.2 %	120.000 ppb	0.510 %
88Sr (KED AGD)	120.228 ppb	4.0 %	120.000 ppb	0.190 %
95Mo (KED AGD)	121.704 ppb	0.4 %	120.000 ppb	1.420 %
103Rh (KED AGD)	96.855 %	2.5 %		0.000 %
107Ag (KED AGD)	121.068 ppb	2.7 %	120.000 ppb	0.890 %
111Cd (KED AGD)	121.304 ppb	2.5 %	120.000 ppb	1.087 %
115In (KED AGD)	92.314 %	2.8 %		0.000 %
121Sb (KED AGD)	127.578 ppb	4.0 %	120.000 ppb	6.315 %
137Ba (KED AGD)	121.488 ppb	3.6 %	120.000 ppb	1.240 %
159Tb (KED AGD)	98.187 %	3.3 %		0.000 %
175Lu (KED AGD)	98.883 %	3.9 %		0.000 %
205Tl (KED AGD)	121.237 ppb	1.4 %	120.000 ppb	1.031 %
208Pb (KED AGD)	120.716 ppb	5.1 %	120.000 ppb	0.596 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	1	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/10/2024 4:57:25 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	106.090 %	97.796 %	0.018 ppb	48.138 ppb	2.004 ppb	0.717 ppb	106.834 ppb	15.278 ppb	93.167 %
Concentration per Run 1	111.468 %	95.855 %	0.013 ppb	46.164 ppb	1.741 ppb	0.911 ppb	117.721 ppb	15.009 ppb	95.964 %
Concentration per Run 2	106.438 %	100.892 %	0.018 ppb	48.957 ppb	2.213 ppb	0.811 ppb	105.583 ppb	16.252 ppb	92.864 %
Concentration per Run 3	100.364 %	96.642 %	0.025 ppb	49.291 ppb	2.058 ppb	0.429 ppb	97.197 ppb	14.573 ppb	90.672 %
Concentration RSD	5.2 %	2.8 %	31.8 %	3.6 %	12.0 %	35.4 %	9.7 %	5.7 %	2.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.036 %	0.039 ppb	0.022 ppb	0.172 ppb	1.272 ppb	0.013 ppb	0.174 ppb	0.327 ppb	1.259 ppb
Concentration per Run 1	83.341 %	0.033 ppb	0.047 ppb	0.125 ppb	1.273 ppb	0.017 ppb	0.175 ppb	0.429 ppb	1.270 ppb
Concentration per Run 2	88.047 %	0.070 ppb	0.019 ppb	0.238 ppb	1.497 ppb	0.015 ppb	0.146 ppb	0.328 ppb	1.302 ppb
Concentration per Run 3	89.721 %	0.014 ppb	-0.002 ppb	0.154 ppb	1.046 ppb	0.007 ppb	0.202 ppb	0.224 ppb	1.206 ppb
Concentration RSD	3.8 %	72.9 %	113.5 %	34.0 %	17.7 %	38.1 %	16.1 %	31.3 %	3.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.143 %	0.059 ppb	0.070 ppb	0.024 ppb	0.028 ppb	98.409 %	0.006 ppb	0.007 ppb	93.910 %
Concentration per Run 1	91.658 %	0.178 ppb	0.113 ppb	0.025 ppb	0.030 ppb	92.410 %	0.004 ppb	0.003 ppb	90.202 %
Concentration per Run 2	102.467 %	0.102 ppb	0.100 ppb	0.024 ppb	0.035 ppb	101.365 %	0.007 ppb	0.011 ppb	96.832 %
Concentration per Run 3	100.304 %	-0.103 ppb	-0.004 ppb	0.022 ppb	0.019 ppb	101.453 %	0.007 ppb	0.006 ppb	94.698 %
Concentration RSD	5.8 %	247.9 %	91.4 %	5.8 %	29.1 %	5.3 %	26.6 %	57.6 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.015 ppb	0.173 ppb	97.267 %	97.780 %	0.008 ppb	0.062 ppb
Concentration per Run 1	0.015 ppb	0.176 ppb	91.794 %	91.468 %	0.008 ppb	0.072 ppb
Concentration per Run 2	0.015 ppb	0.146 ppb	100.651 %	101.106 %	0.008 ppb	0.061 ppb
Concentration per Run 3	0.016 ppb	0.197 ppb	99.356 %	100.767 %	0.008 ppb	0.053 ppb
Concentration RSD	3.5 %	14.9 %	4.9 %	5.6 %	3.7 %	15.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	2	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CAL LOT #M24-1045	Rack	0		
Analysis started at:	4/10/2024 5:02:02 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.589 %	100.944 %	0.005 ppb	48.457 ppb	2.389 ppb	0.746 ppb	89.205 ppb	12.666 ppb	95.809 %
Concentration per Run 1	105.231 %	106.086 %	0.005 ppb	37.472 ppb	1.937 ppb	0.701 ppb	80.672 ppb	10.990 ppb	98.523 %
Concentration per Run 2	100.820 %	95.540 %	0.006 ppb	57.182 ppb	3.179 ppb	0.896 ppb	111.741 ppb	17.007 ppb	96.034 %
Concentration per Run 3	95.715 %	101.207 %	0.004 ppb	50.717 ppb	2.050 ppb	0.640 ppb	75.202 ppb	10.002 ppb	92.870 %
Concentration RSD	4.7 %	5.2 %	18.9 %	20.7 %	28.7 %	17.9 %	22.1 %	29.9 %	3.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.305 %	0.069 ppb	0.016 ppb	0.179 ppb	0.982 ppb	0.007 ppb	0.184 ppb	0.292 ppb	1.152 ppb
Concentration per Run 1	95.196 %	0.034 ppb	0.031 ppb	0.129 ppb	0.782 ppb	0.006 ppb	0.189 ppb	0.268 ppb	1.138 ppb
Concentration per Run 2	101.509 %	0.086 ppb	-0.005 ppb	0.255 ppb	1.238 ppb	0.009 ppb	0.179 ppb	0.290 ppb	1.187 ppb
Concentration per Run 3	92.209 %	0.086 ppb	0.023 ppb	0.152 ppb	0.926 ppb	0.007 ppb	0.186 ppb	0.318 ppb	1.132 ppb
Concentration RSD	4.9 %	44.1 %	118.6 %	37.5 %	23.8 %	21.1 %	2.9 %	8.5 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.223 %	0.040 ppb	0.068 ppb	0.023 ppb	0.012 ppb	99.982 %	0.005 ppb	0.003 ppb	98.638 %
Concentration per Run 1	96.360 %	0.092 ppb	-0.033 ppb	0.021 ppb	0.004 ppb	98.060 %	0.006 ppb	0.006 ppb	96.118 %
Concentration per Run 2	103.838 %	0.041 ppb	0.094 ppb	0.023 ppb	0.022 ppb	101.328 %	0.005 ppb	0.000 ppb	100.604 %
Concentration per Run 3	97.471 %	-0.013 ppb	0.145 ppb	0.024 ppb	0.010 ppb	100.557 %	0.005 ppb	0.002 ppb	99.192 %
Concentration RSD	4.1 %	130.9 %	133.8 %	6.8 %	77.9 %	1.7 %	15.0 %	106.3 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.009 ppb	0.137 ppb	98.712 %	100.616 %	0.007 ppb	0.052 ppb
Concentration per Run 1	0.009 ppb	0.155 ppb	96.522 %	98.849 %	0.000 ppb	0.052 ppb
Concentration per Run 2	0.013 ppb	0.120 ppb	99.603 %	101.348 %	0.011 ppb	0.054 ppb
Concentration per Run 3	0.006 ppb	0.136 ppb	100.010 %	101.651 %	0.009 ppb	0.051 ppb
Concentration RSD	35.8 %	12.8 %	1.9 %	1.5 %	89.4 %	2.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	3	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Blank EJF ICPMSQ	Rack	4		
Analysis started at:	4/10/2024 5:06:38 AM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.1 %	0.5 %	0.1 %	0.4 %	0.1 %	0.0 %	0.1 %	0.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.1 %	0.1 %	0.2 %	0.3 %	0.2 %	0.4 %	0.2 %	0.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	0.000 ppb	0.000 ppb	100.000 %
Concentration RSD	0.0 %	0.0 %	0.2 %	0.1 %	0.5 %	0.0 %	0.4 %	0.9 %	0.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb
Concentration per Run	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb
Concentration RSD	0.1 %	1.1 %	0.0 %	0.0 %	0.2 %	0.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	4	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	0.2/20 Cal	Rack	0		
Analysis started at:	4/10/2024 5:11:20 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.831 %	100.839 %	0.232 ppb	21.314 ppb	25.003 ppb	1.685 ppb	24.314 ppb	211.686 ppb	101.865 %
Concentration per Run 1	105.067 %	95.540 %	0.198 ppb	23.074 ppb	28.517 ppb	1.639 ppb	28.622 ppb	225.894 ppb	104.256 %
Concentration per Run 2	100.892 %	101.364 %	0.242 ppb	26.162 ppb	23.129 ppb	1.772 ppb	28.280 ppb	200.867 ppb	101.879 %
Concentration per Run 3	96.534 %	105.614 %	0.255 ppb	14.706 ppb	23.362 ppb	1.642 ppb	16.041 ppb	208.297 ppb	99.462 %
Concentration RSD	4.2 %	5.0 %	13.0 %	27.8 %	12.2 %	4.5 %	29.5 %	6.1 %	2.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.200 %	0.304 ppb	0.242 ppb	0.253 ppb	22.521 ppb	0.219 ppb	0.385 ppb	0.205 ppb	1.043 ppb
Concentration per Run 1	96.485 %	0.335 ppb	0.258 ppb	0.299 ppb	23.701 ppb	0.224 ppb	0.355 ppb	0.252 ppb	1.112 ppb
Concentration per Run 2	101.101 %	0.231 ppb	0.245 ppb	0.216 ppb	23.277 ppb	0.215 ppb	0.438 ppb	0.180 ppb	1.015 ppb
Concentration per Run 3	100.015 %	0.345 ppb	0.224 ppb	0.243 ppb	20.584 ppb	0.219 ppb	0.361 ppb	0.183 ppb	1.002 ppb
Concentration RSD	2.4 %	20.8 %	7.3 %	16.7 %	7.5 %	2.0 %	11.9 %	19.9 %	5.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.807 %	0.173 ppb	0.208 ppb	0.287 ppb	0.219 ppb	103.048 %	0.195 ppb	0.211 ppb	100.946 %
Concentration per Run 1	99.568 %	0.262 ppb	0.063 ppb	0.284 ppb	0.255 ppb	101.161 %	0.199 ppb	0.224 ppb	97.879 %
Concentration per Run 2	105.227 %	0.227 ppb	0.391 ppb	0.304 ppb	0.257 ppb	105.912 %	0.201 ppb	0.208 ppb	104.009 %
Concentration per Run 3	103.626 %	0.029 ppb	0.171 ppb	0.272 ppb	0.146 ppb	102.071 %	0.184 ppb	0.201 ppb	100.949 %
Concentration RSD	2.8 %	73.0 %	80.2 %	5.7 %	29.2 %	2.4 %	4.7 %	5.6 %	3.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.209 ppb	0.197 ppb	100.786 %	101.851 %	0.175 ppb	0.200 ppb
Concentration per Run 1	0.220 ppb	0.193 ppb	99.477 %	100.440 %	0.160 ppb	0.204 ppb
Concentration per Run 2	0.199 ppb	0.205 ppb	101.819 %	103.811 %	0.174 ppb	0.198 ppb
Concentration per Run 3	0.207 ppb	0.194 ppb	101.063 %	101.304 %	0.191 ppb	0.197 ppb
Concentration RSD	5.1 %	3.4 %	1.2 %	1.7 %	8.9 %	1.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	5	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	1/100 Cal	Rack	0		
Analysis started at:	4/10/2024 5:15:57 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.151 %	101.679 %	1.007 ppb	100.729 ppb	107.799 ppb	1.922 ppb	105.160 ppb	231.359 ppb	102.923 %
Concentration per Run 1	103.978 %	98.846 %	0.992 ppb	104.471 ppb	111.760 ppb	2.021 ppb	108.270 ppb	221.331 ppb	103.442 %
Concentration per Run 2	99.912 %	102.781 %	1.040 ppb	93.346 ppb	107.114 ppb	1.938 ppb	105.403 ppb	241.775 ppb	104.025 %
Concentration per Run 3	96.564 %	103.410 %	0.987 ppb	104.370 ppb	104.521 ppb	1.808 ppb	101.806 ppb	230.972 ppb	101.300 %
Concentration RSD	3.7 %	2.4 %	2.9 %	6.3 %	3.4 %	5.6 %	3.1 %	4.4 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.555 %	1.172 ppb	1.032 ppb	1.178 ppb	110.175 ppb	1.030 ppb	1.058 ppb	1.076 ppb	1.548 ppb
Concentration per Run 1	99.721 %	1.120 ppb	1.075 ppb	1.274 ppb	111.943 ppb	1.079 ppb	1.146 ppb	1.113 ppb	1.503 ppb
Concentration per Run 2	100.173 %	1.210 ppb	0.998 ppb	1.060 ppb	111.575 ppb	1.046 ppb	1.030 ppb	1.063 ppb	1.600 ppb
Concentration per Run 3	98.770 %	1.185 ppb	1.024 ppb	1.201 ppb	107.007 ppb	0.965 ppb	0.999 ppb	1.052 ppb	1.540 ppb
Concentration RSD	0.7 %	4.0 %	3.8 %	9.3 %	2.5 %	5.7 %	7.3 %	3.0 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.685 %	0.927 ppb	0.807 ppb	1.040 ppb	0.929 ppb	102.270 %	0.976 ppb	0.948 ppb	100.513 %
Concentration per Run 1	101.491 %	0.978 ppb	0.887 ppb	1.057 ppb	0.943 ppb	101.553 %	0.978 ppb	0.964 ppb	100.681 %
Concentration per Run 2	101.190 %	0.941 ppb	0.780 ppb	1.014 ppb	0.902 ppb	104.394 %	1.010 ppb	0.930 ppb	100.533 %
Concentration per Run 3	102.373 %	0.863 ppb	0.754 ppb	1.049 ppb	0.942 ppb	100.864 %	0.942 ppb	0.951 ppb	100.326 %
Concentration RSD	0.6 %	6.4 %	8.7 %	2.2 %	2.5 %	1.8 %	3.5 %	1.8 %	0.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.947 ppb	0.930 ppb	101.179 %	101.288 %	0.831 ppb	0.964 ppb
Concentration per Run 1	0.959 ppb	0.881 ppb	101.353 %	100.043 %	0.761 ppb	0.973 ppb
Concentration per Run 2	0.958 ppb	1.029 ppb	102.486 %	102.577 %	0.818 ppb	0.950 ppb
Concentration per Run 3	0.925 ppb	0.880 ppb	99.699 %	101.245 %	0.914 ppb	0.968 ppb
Concentration RSD	2.0 %	9.2 %	1.4 %	1.3 %	9.3 %	1.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	6	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	10/1000 Cal	Rack	0		
Analysis started at:	4/10/2024 5:20:34 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.699 %	99.580 %	10.312 ppb	1,140.585 ppb	1,112.821 ppb	12.387 ppb	1,222.105 ppb	1,392.333 ppb	97.808 %
Concentration per Run 1	100.892 %	99.318 %	10.184 ppb	1,172.545 ppb	1,138.922 ppb	13.066 ppb	1,290.908 ppb	1,428.643 ppb	100.194 %
Concentration per Run 2	96.965 %	97.901 %	10.459 ppb	1,134.213 ppb	1,109.293 ppb	11.765 ppb	1,184.509 ppb	1,331.171 ppb	96.375 %
Concentration per Run 3	95.241 %	101.522 %	10.294 ppb	1,114.997 ppb	1,090.249 ppb	12.330 ppb	1,190.900 ppb	1,417.187 ppb	96.855 %
Concentration RSD	3.0 %	1.8 %	1.3 %	2.6 %	2.2 %	5.3 %	4.9 %	3.8 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.193 %	11.814 ppb	11.678 ppb	11.705 ppb	1,187.384 ppb	11.467 ppb	11.278 ppb	11.230 ppb	14.529 ppb
Concentration per Run 1	93.182 %	12.395 ppb	11.997 ppb	11.520 ppb	1,231.827 ppb	12.166 ppb	11.739 ppb	11.695 ppb	15.316 ppb
Concentration per Run 2	94.947 %	11.775 ppb	11.547 ppb	11.730 ppb	1,193.116 ppb	11.105 ppb	11.128 ppb	11.098 ppb	14.287 ppb
Concentration per Run 3	94.449 %	11.271 ppb	11.489 ppb	11.865 ppb	1,137.210 ppb	11.130 ppb	10.968 ppb	10.896 ppb	13.985 ppb
Concentration RSD	1.0 %	4.8 %	2.4 %	1.5 %	4.0 %	5.3 %	3.6 %	3.7 %	4.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.920 %	10.425 ppb	10.956 ppb	10.586 ppb	9.871 ppb	100.025 %	10.405 ppb	10.334 ppb	97.205 %
Concentration per Run 1	96.553 %	11.006 ppb	11.464 ppb	11.195 ppb	10.006 ppb	97.586 %	10.921 ppb	10.871 ppb	94.462 %
Concentration per Run 2	102.041 %	10.272 ppb	10.847 ppb	10.424 ppb	9.989 ppb	99.828 %	10.217 ppb	10.311 ppb	97.879 %
Concentration per Run 3	104.166 %	9.999 ppb	10.556 ppb	10.140 ppb	9.619 ppb	102.661 %	10.077 ppb	9.821 ppb	99.273 %
Concentration RSD	3.9 %	5.0 %	4.2 %	5.2 %	2.2 %	2.5 %	4.3 %	5.1 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	10.608 ppb	10.312 ppb	99.284 %	98.731 %	9.656 ppb	10.578 ppb
Concentration per Run 1	10.991 ppb	10.528 ppb	97.266 %	94.673 %	9.211 ppb	11.192 ppb
Concentration per Run 2	10.499 ppb	10.212 ppb	98.331 %	100.631 %	9.612 ppb	10.154 ppb
Concentration per Run 3	10.334 ppb	10.194 ppb	102.257 %	100.888 %	10.144 ppb	10.389 ppb
Concentration RSD	3.2 %	1.8 %	2.6 %	3.6 %	4.8 %	5.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	7	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/10/2024 5:25:13 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.859 %	101.626 %	58.685 ppb	5,838.696 ppb	5,763.829 ppb	59.147 ppb	5,998.071 ppb	6,060.704 ppb	114.906 %
Concentration per Run 1	100.807 %	100.892 %	58.193 ppb	6,043.097 ppb	6,016.232 ppb	62.784 ppb	6,306.267 ppb	6,255.019 ppb	114.053 %
Concentration per Run 2	97.592 %	103.568 %	58.913 ppb	5,638.964 ppb	5,517.412 ppb	54.837 ppb	5,815.628 ppb	5,880.877 ppb	116.097 %
Concentration per Run 3	95.179 %	100.420 %	58.949 ppb	5,834.029 ppb	5,757.843 ppb	59.820 ppb	5,872.319 ppb	6,046.215 ppb	114.568 %
Concentration RSD	2.9 %	1.7 %	0.7 %	3.5 %	4.3 %	6.8 %	4.5 %	3.1 %	0.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.852 %	59.589 ppb	59.474 ppb	59.395 ppb	6,001.700 ppb	59.778 ppb	59.048 ppb	60.694 ppb	61.074 ppb
Concentration per Run 1	109.201 %	59.020 ppb	59.479 ppb	58.603 ppb	5,956.709 ppb	59.697 ppb	60.009 ppb	60.938 ppb	62.067 ppb
Concentration per Run 2	103.704 %	61.445 ppb	60.526 ppb	60.522 ppb	6,103.599 ppb	61.289 ppb	60.177 ppb	61.877 ppb	61.478 ppb
Concentration per Run 3	110.650 %	58.303 ppb	58.417 ppb	59.060 ppb	5,944.793 ppb	58.347 ppb	56.959 ppb	59.268 ppb	59.678 ppb
Concentration RSD	3.4 %	2.8 %	1.8 %	1.7 %	1.5 %	2.5 %	3.1 %	2.2 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.413 %	59.022 ppb	58.620 ppb	59.445 ppb	56.615 ppb	102.699 %	57.798 ppb	57.337 ppb	99.019 %
Concentration per Run 1	100.537 %	60.054 ppb	59.608 ppb	60.142 ppb	55.028 ppb	104.119 %	58.076 ppb	57.280 ppb	102.123 %
Concentration per Run 2	95.767 %	59.186 ppb	56.794 ppb	58.037 ppb	56.539 ppb	101.908 %	58.034 ppb	57.814 ppb	95.537 %
Concentration per Run 3	101.935 %	57.827 ppb	59.458 ppb	60.157 ppb	58.278 ppb	102.069 %	57.283 ppb	56.917 ppb	99.397 %
Concentration RSD	3.3 %	1.9 %	2.7 %	2.1 %	2.9 %	1.2 %	0.8 %	0.8 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	59.900 ppb	56.973 ppb	102.513 %	102.276 %	57.585 ppb	58.473 ppb
Concentration per Run 1	59.875 ppb	57.012 ppb	103.960 %	103.079 %	54.013 ppb	58.397 ppb
Concentration per Run 2	59.337 ppb	55.006 ppb	101.335 %	101.054 %	58.686 ppb	58.147 ppb
Concentration per Run 3	60.487 ppb	58.899 ppb	102.243 %	102.696 %	60.057 ppb	58.875 ppb
Concentration RSD	1.0 %	3.4 %	1.3 %	1.1 %	5.5 %	0.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	8	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	120/12000 Cal	Rack	0		
Analysis started at:	4/10/2024 5:29:52 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.852 %	92.602 %	120.631 ppb	12,068.928 ppb	12,108.611 ppb	120.217 ppb	11,982.405 ppb	11,935.540 ppb	108.315 %
Concentration per Run 1	97.664 %	87.356 %	118.840 ppb	12,670.620 ppb	12,646.494 ppb	124.000 ppb	12,104.822 ppb	12,006.294 ppb	109.105 %
Concentration per Run 2	93.280 %	89.874 %	121.515 ppb	12,203.105 ppb	12,216.687 ppb	120.775 ppb	12,123.373 ppb	12,074.458 ppb	107.603 %
Concentration per Run 3	90.613 %	100.577 %	121.539 ppb	11,333.059 ppb	11,462.651 ppb	115.877 ppb	11,719.021 ppb	11,725.866 ppb	108.238 %
Concentration RSD	3.8 %	7.6 %	1.3 %	5.6 %	4.9 %	3.4 %	1.9 %	1.5 %	0.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.600 %	120.053 ppb	120.123 ppb	120.159 ppb	11,983.445 ppb	119.989 ppb	120.368 ppb	119.550 ppb	119.080 ppb
Concentration per Run 1	107.867 %	121.388 ppb	120.973 ppb	121.355 ppb	12,102.487 ppb	123.458 ppb	125.376 ppb	124.252 ppb	121.268 ppb
Concentration per Run 2	101.418 %	123.079 ppb	122.813 ppb	121.848 ppb	12,202.002 ppb	121.493 ppb	120.810 ppb	119.846 ppb	120.448 ppb
Concentration per Run 3	110.514 %	115.691 ppb	116.583 ppb	117.273 ppb	11,645.847 ppb	115.015 ppb	114.919 ppb	114.551 ppb	115.522 ppb
Concentration RSD	4.4 %	3.2 %	2.7 %	2.1 %	2.5 %	3.7 %	4.4 %	4.1 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.175 %	120.454 ppb	120.612 ppb	120.228 ppb	121.704 ppb	96.855 %	121.068 ppb	121.304 ppb	92.314 %
Concentration per Run 1	94.231 %	125.502 ppb	122.329 ppb	125.574 ppb	121.607 ppb	94.112 %	124.565 ppb	124.645 ppb	90.461 %
Concentration per Run 2	97.343 %	117.995 ppb	117.494 ppb	116.265 ppb	122.253 ppb	97.916 %	120.507 ppb	120.565 ppb	91.159 %
Concentration per Run 3	99.951 %	117.865 ppb	122.013 ppb	118.845 ppb	121.251 ppb	98.538 %	118.132 ppb	118.703 ppb	95.321 %
Concentration RSD	2.9 %	3.6 %	2.2 %	4.0 %	0.4 %	2.5 %	2.7 %	2.5 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	127.578 ppb	121.488 ppb	98.187 %	98.883 %	121.237 ppb	120.716 ppb
Concentration per Run 1	131.726 ppb	125.826 ppb	94.448 %	94.657 %	123.021 ppb	127.332 ppb
Concentration per Run 2	129.134 ppb	121.618 ppb	100.113 %	99.732 %	121.053 ppb	119.817 ppb
Concentration per Run 3	121.873 ppb	117.020 ppb	99.999 %	102.260 %	119.638 ppb	114.997 ppb
Concentration RSD	4.0 %	3.6 %	3.3 %	3.9 %	1.4 %	5.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	9	User name	ALPHALAB\Metals-Instrument	Comment	Sr Inteference Check
Analysis label:	Sr 200ppb	Rack	4		
Analysis started at:	4/10/2024 5:36:35 AM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.030 %	98.741 %	0.038 ppb	-8.216 ppb	5.858 ppb	0.708 ppb	-2.949 ppb	1.210 ppb	94.851 %
Concentration per Run 1	93.490 %	101.679 %	0.026 ppb	-12.772 ppb	4.198 ppb	0.837 ppb	4.793 ppb	50.302 ppb	93.854 %
Concentration per Run 2	91.869 %	96.642 %	0.035 ppb	-4.888 ppb	7.757 ppb	0.743 ppb	-4.912 ppb	-45.035 ppb	95.208 %
Concentration per Run 3	90.730 %	97.901 %	0.054 ppb	-6.989 ppb	5.618 ppb	0.543 ppb	-8.727 ppb	-1.638 ppb	95.491 %
Concentration RSD	1.5 %	2.7 %	37.2 %	49.7 %	30.6 %	21.2 %	236.4 %	3,946.0 %	0.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.152 %	-0.063 ppb	0.052 ppb	0.128 ppb	16.648 ppb	0.037 ppb	0.085 ppb	0.030 ppb	0.619 ppb
Concentration per Run 1	96.395 %	-0.057 ppb	0.068 ppb	0.123 ppb	21.248 ppb	0.045 ppb	0.090 ppb	0.025 ppb	0.628 ppb
Concentration per Run 2	99.767 %	-0.069 ppb	0.030 ppb	0.111 ppb	14.971 ppb	0.033 ppb	0.110 ppb	0.023 ppb	0.648 ppb
Concentration per Run 3	98.296 %	-0.064 ppb	0.056 ppb	0.149 ppb	13.725 ppb	0.033 ppb	0.055 ppb	0.041 ppb	0.580 ppb
Concentration RSD	1.7 %	9.5 %	37.7 %	15.1 %	24.2 %	19.5 %	33.0 %	32.5 %	5.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.924 %	0.026 ppb	0.288 ppb	198.491 ppb	0.996 ppb	98.300 %	0.031 ppb	0.026 ppb	98.483 %
Concentration per Run 1	94.959 %	0.117 ppb	0.370 ppb	194.868 ppb	0.920 ppb	98.455 %	0.041 ppb	0.036 ppb	99.887 %
Concentration per Run 2	100.978 %	-0.087 ppb	0.244 ppb	203.750 ppb	1.084 ppb	99.357 %	0.020 ppb	0.016 ppb	99.833 %
Concentration per Run 3	97.835 %	0.047 ppb	0.248 ppb	196.856 ppb	0.985 ppb	97.089 %	0.032 ppb	0.024 ppb	95.728 %
Concentration RSD	3.1 %	406.5 %	25.0 %	2.3 %	8.3 %	1.2 %	33.2 %	40.5 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.054 ppb	0.070 ppb	99.421 %	100.676 %	0.434 ppb	0.048 ppb
Concentration per Run 1	0.049 ppb	0.068 ppb	100.160 %	99.332 %	0.379 ppb	0.057 ppb
Concentration per Run 2	0.052 ppb	0.073 ppb	101.054 %	103.777 %	0.452 ppb	0.044 ppb
Concentration per Run 3	0.060 ppb	0.068 ppb	97.048 %	98.919 %	0.471 ppb	0.042 ppb
Concentration RSD	10.6 %	3.9 %	2.1 %	2.7 %	11.2 %	17.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	10	User name	ALPHALAB\Metals-Instrument	Comment	ICV
Analysis label:	ICV	Rack	0		
Analysis started at:	4/10/2024 5:41:17 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.984 %	104.355 %	52.636 ppb	5,405.691 ppb	5,339.557 ppb	53.667 ppb	4,964.825 ppb	5,039.387 ppb	104.440 %
Concentration per Run 1	98.073 %	102.781 %	52.874 ppb	5,472.776 ppb	5,410.336 ppb	54.714 ppb	5,068.895 ppb	5,208.165 ppb	104.307 %
Concentration per Run 2	95.906 %	107.818 %	52.680 ppb	5,292.587 ppb	5,170.549 ppb	51.992 ppb	4,749.698 ppb	4,770.146 ppb	105.808 %
Concentration per Run 3	93.972 %	102.466 %	52.355 ppb	5,451.708 ppb	5,437.786 ppb	54.295 ppb	5,075.883 ppb	5,139.850 ppb	103.205 %
Recovery Percentage 1			105.273 %	108.114 %	106.791 %	107.334 %	99.297 %	100.788 %	
Concentration RSD	2.1 %	2.9 %	0.5 %	1.8 %	2.8 %	2.7 %	3.8 %	4.7 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.586 %	49.324 ppb	55.181 ppb	54.916 ppb	5,250.770 ppb	54.552 ppb	53.368 ppb	52.720 ppb	53.644 ppb
Concentration per Run 1	101.123 %	49.353 ppb	55.162 ppb	54.477 ppb	5,149.602 ppb	55.071 ppb	54.064 ppb	52.675 ppb	53.358 ppb
Concentration per Run 2	104.766 %	48.533 ppb	54.480 ppb	54.168 ppb	5,303.283 ppb	53.308 ppb	52.137 ppb	52.522 ppb	53.754 ppb
Concentration per Run 3	101.870 %	50.087 ppb	55.899 ppb	56.104 ppb	5,299.426 ppb	55.276 ppb	53.903 ppb	52.963 ppb	53.819 ppb
Recovery Percentage 1		98.649 %	110.361 %	109.832 %	105.015 %	109.104 %	106.736 %	105.440 %	107.287 %
Concentration RSD	1.9 %	1.6 %	1.3 %	1.9 %	1.7 %	2.0 %	2.0 %	0.4 %	0.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.280 %	51.744 ppb	53.607 ppb	54.235 ppb	52.018 ppb	100.216 %	51.292 ppb	51.541 ppb	99.477 %
Concentration per Run 1	103.342 %	51.637 ppb	54.104 ppb	54.263 ppb	50.520 ppb	101.449 %	51.656 ppb	52.180 ppb	99.721 %
Concentration per Run 2	101.023 %	52.704 ppb	53.176 ppb	54.333 ppb	51.822 ppb	100.090 %	51.532 ppb	51.469 ppb	99.194 %
Concentration per Run 3	102.476 %	50.891 ppb	53.542 ppb	54.108 ppb	53.712 ppb	99.111 %	50.687 ppb	50.972 ppb	99.515 %
Recovery Percentage 1		103.487 %	107.215 %	108.469 %	104.036 %		102.583 %	103.081 %	
Concentration RSD	1.1 %	1.8 %	0.9 %	0.2 %	3.1 %	1.2 %	1.0 %	1.2 %	0.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	52.683 ppb	51.162 ppb	103.806 %	103.786 %	51.124 ppb	52.405 ppb
Concentration per Run 1	52.644 ppb	51.746 ppb	105.257 %	104.996 %	46.881 ppb	52.303 ppb
Concentration per Run 2	52.452 ppb	50.456 ppb	103.442 %	103.798 %	51.974 ppb	52.280 ppb
Concentration per Run 3	52.953 ppb	51.283 ppb	102.720 %	102.564 %	54.518 ppb	52.632 ppb
Recovery Percentage 1	105.366 %	102.323 %			102.248 %	104.810 %
Concentration RSD	0.5 %	1.3 %	1.3 %	1.2 %	7.6 %	0.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	11	User name	ALPHALAB\Metals-Instrument	Comment	ICB
Analysis label:	ICB	Rack	0		
Analysis started at:	4/10/2024 5:45:57 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.620 %	94.701 %	0.015 ppb	2.991 ppb	1.715 ppb	-0.147 ppb	10.671 ppb	2.479 ppb	90.680 %
Concentration per Run 1	93.272 %	91.920 %	0.023 ppb	3.604 ppb	2.235 ppb	-0.095 ppb	22.485 ppb	4.418 ppb	90.781 %
Concentration per Run 2	90.481 %	99.948 %	0.000 ppb	-1.897 ppb	1.502 ppb	-0.224 ppb	2.272 ppb	0.819 ppb	92.843 %
Concentration per Run 3	88.106 %	92.235 %	0.021 ppb	7.264 ppb	1.409 ppb	-0.123 ppb	7.256 ppb	2.202 ppb	88.417 %
Recovery Percentage 1			2.939 %	2.991 %	2.450 %	-1.473 %	10.671 %	2.479 %	
Concentration RSD	2.9 %	4.8 %	84.9 %	154.2 %	26.4 %	46.1 %	98.7 %	73.2 %	2.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.690 %	-0.083 ppb	0.022 ppb	0.080 ppb	10.073 ppb	0.016 ppb	0.078 ppb	0.017 ppb	0.115 ppb
Concentration per Run 1	90.241 %	-0.096 ppb	0.013 ppb	0.058 ppb	12.132 ppb	0.021 ppb	0.110 ppb	0.010 ppb	0.115 ppb
Concentration per Run 2	89.924 %	-0.102 ppb	0.021 ppb	0.087 ppb	9.447 ppb	0.009 ppb	0.037 ppb	0.006 ppb	0.105 ppb
Concentration per Run 3	88.906 %	-0.051 ppb	0.030 ppb	0.094 ppb	8.641 ppb	0.017 ppb	0.088 ppb	0.033 ppb	0.123 ppb
Recovery Percentage 1		-1.662 %	2.155 %	7.974 %	20.146 %	3.113 %	3.913 %	1.650 %	2.290 %
Concentration RSD	0.8 %	33.3 %	39.3 %	23.6 %	18.1 %	37.9 %	48.0 %	89.2 %	7.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.075 %	0.007 ppb	0.385 ppb	0.036 ppb	1.066 ppb	95.537 %	0.013 ppb	0.018 ppb	92.879 %
Concentration per Run 1	90.418 %	0.086 ppb	0.385 ppb	0.046 ppb	1.094 ppb	94.466 %	0.019 ppb	0.022 ppb	92.484 %
Concentration per Run 2	97.770 %	-0.015 ppb	0.349 ppb	0.035 ppb	1.053 ppb	95.794 %	0.012 ppb	0.011 ppb	93.251 %
Concentration per Run 3	97.037 %	-0.050 ppb	0.420 ppb	0.028 ppb	1.050 ppb	96.350 %	0.008 ppb	0.020 ppb	92.902 %
Recovery Percentage 1		1.438 %	7.692 %	0.363 %	53.281 %		3.211 %	8.898 %	
Concentration RSD	4.3 %	979.6 %	9.3 %	25.7 %	2.3 %	1.0 %	44.8 %	32.3 %	0.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.082 ppb	0.018 ppb	95.507 %	97.446 %	0.546 ppb	0.021 ppb
Concentration per Run 1	0.069 ppb	0.009 ppb	93.720 %	96.124 %	0.474 ppb	0.029 ppb
Concentration per Run 2	0.079 ppb	0.031 ppb	95.831 %	97.304 %	0.623 ppb	0.020 ppb
Concentration per Run 3	0.098 ppb	0.014 ppb	96.971 %	98.910 %	0.540 ppb	0.014 ppb
Recovery Percentage 1	2.052 %	3.623 %			54.567 %	2.098 %
Concentration RSD	18.1 %	62.9 %	1.7 %	1.4 %	13.7 %	34.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	12	User name	ALPHALAB\Metals-Instrument	Comment	ICB
Analysis label:	ICB	Rack	0		
Analysis started at:	4/10/2024 5:53:21 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.880 %	94.963 %	0.007 ppb	-11.983 ppb	0.039 ppb	-0.247 ppb	-6.322 ppb	-1.107 ppb	94.195 %
Concentration per Run 1	95.877 %	89.717 %	0.004 ppb	-11.714 ppb	-0.165 ppb	-0.263 ppb	3.026 ppb	0.818 ppb	97.172 %
Concentration per Run 2	91.155 %	97.744 %	0.006 ppb	-10.784 ppb	-0.099 ppb	-0.241 ppb	-9.866 ppb	0.323 ppb	93.672 %
Concentration per Run 3	88.608 %	97.429 %	0.010 ppb	-13.449 ppb	0.380 ppb	-0.236 ppb	-12.126 ppb	-4.461 ppb	91.741 %
Recovery Percentage 1			1.315 %	-11.983 %	0.056 %	-2.469 %	-6.322 %	-1.107 %	
Concentration RSD	4.0 %	4.8 %	44.6 %	11.3 %	764.1 %	5.8 %	129.3 %	263.4 %	2.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.175 %	-0.102 ppb	0.011 ppb	0.021 ppb	2.667 ppb	0.000 ppb	0.030 ppb	-0.012 ppb	0.086 ppb
Concentration per Run 1	90.581 %	-0.097 ppb	-0.003 ppb	0.014 ppb	2.788 ppb	0.000 ppb	0.032 ppb	-0.020 ppb	0.104 ppb
Concentration per Run 2	92.458 %	-0.098 ppb	0.031 ppb	0.028 ppb	3.697 ppb	0.001 ppb	0.008 ppb	-0.010 ppb	0.066 ppb
Concentration per Run 3	96.485 %	-0.109 ppb	0.006 ppb	0.022 ppb	1.516 ppb	-0.002 ppb	0.051 ppb	-0.007 ppb	0.089 ppb
Recovery Percentage 1		-2.030 %	1.111 %	2.128 %	5.334 %	0.002 %	1.502 %	-1.215 %	1.722 %
Concentration RSD	3.2 %	6.2 %	160.0 %	33.4 %	41.1 %	16,811.7 %	71.2 %	57.4 %	22.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.077 %	-0.051 ppb	-0.034 ppb	0.009 ppb	0.232 ppb	97.874 %	0.001 ppb	0.005 ppb	95.472 %
Concentration per Run 1	95.948 %	0.065 ppb	-0.134 ppb	0.009 ppb	0.210 ppb	98.917 %	0.003 ppb	0.005 ppb	92.889 %
Concentration per Run 2	98.035 %	-0.126 ppb	0.054 ppb	0.010 ppb	0.248 ppb	97.293 %	-0.001 ppb	0.003 ppb	97.868 %
Concentration per Run 3	97.247 %	-0.093 ppb	-0.023 ppb	0.007 ppb	0.238 ppb	97.412 %	0.000 ppb	0.008 ppb	95.659 %
Recovery Percentage 1		-10.293 %	-0.689 %	0.086 %	11.589 %		0.166 %	2.673 %	
Concentration RSD	1.1 %	198.9 %	275.0 %	20.9 %	8.6 %	0.9 %	283.3 %	52.0 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.009 ppb	0.006 ppb	97.948 %	98.443 %	0.120 ppb	0.002 ppb
Concentration per Run 1	0.003 ppb	0.000 ppb	97.506 %	96.991 %	0.092 ppb	0.005 ppb
Concentration per Run 2	0.015 ppb	0.016 ppb	99.079 %	100.193 %	0.133 ppb	-0.001 ppb
Concentration per Run 3	0.010 ppb	0.000 ppb	97.259 %	98.144 %	0.135 ppb	0.001 ppb
Recovery Percentage 1	0.225 %	1.124 %			12.006 %	0.167 %
Concentration RSD	65.3 %	160.4 %	1.0 %	1.6 %	20.2 %	168.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	13	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/10/2024 6:00:45 AM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	81.102 %	85.991 %	0.021 ppb	228,719.947 ppb	94,786.189 ppb	89,780.460 ppb	96,685.927 ppb	272,178.516 ppb	105.883 %
Concentration per Run 1	82.285 %	89.559 %	0.031 ppb	225,523.817 ppb	97,411.374 ppb	92,072.256 ppb	103,467.832 ppb	272,823.845 ppb	105.373 %
Concentration per Run 2	79.814 %	88.300 %	0.012 ppb	228,829.318 ppb	90,887.908 ppb	87,936.596 ppb	90,902.379 ppb	274,844.628 ppb	104.316 %
Concentration per Run 3	81.208 %	80.115 %	0.020 ppb	231,806.707 ppb	96,059.284 ppb	89,332.528 ppb	95,687.571 ppb	268,867.075 ppb	107.961 %
Recovery Percentage 1			2.103 %	91.488 %	94.786 %	89.780 %	96.686 %	90.726 %	
Concentration RSD	1.5 %	6.0 %	44.3 %	1.4 %	3.6 %	2.3 %	6.6 %	1.1 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.394 %	-0.002 ppb	1.451 ppb	4.534 ppb	**256,770.329 ppb**	1.950 ppb	2.646 ppb	1.041 ppb	2.690 ppb
Concentration per Run 1	121.717 %	0.004 ppb	1.377 ppb	4.528 ppb	273,212.146 ppb	1.896 ppb	2.607 ppb	1.020 ppb	2.678 ppb
Concentration per Run 2	106.124 %	0.016 ppb	1.451 ppb	4.520 ppb	248,774.932 ppb	1.991 ppb	2.714 ppb	0.982 ppb	2.695 ppb
Concentration per Run 3	103.341 %	-0.027 ppb	1.526 ppb	4.553 ppb	248,323.910 ppb	1.964 ppb	2.617 ppb	1.121 ppb	2.697 ppb
Recovery Percentage 1		-0.047 %	43.978 %	79.540 %	102.708 %	67.960 %	43.380 %	36.915 %	23.596 %
Concentration RSD	9.0 %	944.9 %	5.1 %	0.4 %	5.5 %	2.5 %	2.2 %	6.9 %	0.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.921 %	0.313 ppb	3.455 ppb	2.406 ppb	**2,128.009 ppb**	86.092 %	0.033 ppb	0.481 ppb	88.716 %
Concentration per Run 1	105.862 %	0.408 ppb	3.918 ppb	2.585 ppb	2,121.218 ppb	86.077 %	0.039 ppb	0.438 ppb	92.482 %
Concentration per Run 2	101.889 %	0.260 ppb	3.468 ppb	2.362 ppb	2,122.674 ppb	87.216 %	0.033 ppb	0.507 ppb	89.736 %
Concentration per Run 3	98.012 %	0.270 ppb	2.980 ppb	2.271 ppb	2,140.134 ppb	84.983 %	0.026 ppb	0.498 ppb	83.928 %
Recovery Percentage 1		19.191 %	26.786 %	89.115 %	106.400 %		4.101 %	120.277 %	
Concentration RSD	3.9 %	26.4 %	13.6 %	6.7 %	0.5 %	1.3 %	19.4 %	7.8 %	4.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.226 ppb	1.292 ppb	97.401 %	99.052 %	0.086 ppb	1.490 ppb
Concentration per Run 1	0.239 ppb	1.305 ppb	97.686 %	100.821 %	0.066 ppb	1.472 ppb
Concentration per Run 2	0.207 ppb	1.257 ppb	98.530 %	100.011 %	0.090 ppb	1.481 ppb
Concentration per Run 3	0.231 ppb	1.316 ppb	95.986 %	96.325 %	0.103 ppb	1.516 ppb
Recovery Percentage 1	2.821 %	68.748 %			4.307 %	48.053 %
Concentration RSD	7.3 %	2.4 %	1.3 %	2.4 %	21.9 %	1.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	14	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	LDR Check 10/1ppm	Rack	4		
Analysis started at:	4/10/2024 6:05:27 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.612 %	99.685 %	0.012 ppb	110.852 ppb	18.238 ppb	13.651 ppb	30.726 ppb	55.019 ppb	103.134 %
Concentration per Run 1	94.896 %	99.318 %	0.015 ppb	129.033 ppb	21.841 ppb	15.385 ppb	41.794 ppb	60.815 ppb	107.976 %
Concentration per Run 2	90.122 %	99.318 %	0.018 ppb	113.031 ppb	17.172 ppb	14.201 ppb	29.733 ppb	62.291 ppb	100.723 %
Concentration per Run 3	86.818 %	100.420 %	0.003 ppb	90.492 ppb	15.701 ppb	11.366 ppb	20.653 ppb	41.951 ppb	100.702 %
Concentration RSD	4.5 %	0.6 %	67.9 %	17.5 %	17.6 %	15.1 %	34.5 %	20.6 %	4.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.807 %	-0.107 ppb	0.050 ppb	10,302.627 ppb	115.500 ppb	0.053 ppb	0.297 ppb	10,062.507 ppb	9,590.787 ppb
Concentration per Run 1	105.015 %	-0.105 ppb	0.049 ppb	10,315.585 ppb	131.171 ppb	0.053 ppb	0.249 ppb	9,605.779 ppb	9,389.516 ppb
Concentration per Run 2	99.155 %	-0.102 ppb	0.069 ppb	10,354.282 ppb	114.419 ppb	0.052 ppb	0.308 ppb	10,134.886 ppb	9,696.246 ppb
Concentration per Run 3	98.251 %	-0.114 ppb	0.033 ppb	10,238.014 ppb	100.908 ppb	0.055 ppb	0.333 ppb	10,446.855 ppb	9,686.599 ppb
Concentration RSD	3.6 %	5.7 %	35.9 %	0.6 %	13.1 %	2.7 %	14.4 %	4.2 %	1.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.065 %	806.900 ppb	-0.036 ppb	0.237 ppb	12.354 ppb	104.374 %	0.039 ppb	0.020 ppb	103.393 %
Concentration per Run 1	108.371 %	844.240 ppb	-0.086 ppb	0.250 ppb	12.924 ppb	103.920 %	0.031 ppb	0.016 ppb	107.706 %
Concentration per Run 2	105.465 %	811.045 ppb	0.092 ppb	0.234 ppb	12.439 ppb	105.144 %	0.045 ppb	0.016 ppb	102.841 %
Concentration per Run 3	101.361 %	765.415 ppb	-0.114 ppb	0.227 ppb	11.697 ppb	104.058 %	0.041 ppb	0.028 ppb	99.632 %
Concentration RSD	3.4 %	4.9 %	308.8 %	5.0 %	5.0 %	0.6 %	18.7 %	34.4 %	3.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.005 ppb	9,255.028 ppb	105.041 %	104.245 %	0.059 ppb	9,543.112 ppb
Concentration per Run 1	0.003 ppb	9,124.998 ppb	106.168 %	106.495 %	0.041 ppb	9,490.728 ppb
Concentration per Run 2	0.007 ppb	9,523.495 ppb	105.416 %	105.718 %	0.062 ppb	9,456.425 ppb
Concentration per Run 3	0.007 ppb	9,116.590 ppb	103.540 %	100.521 %	0.075 ppb	9,682.184 ppb
Concentration RSD	44.4 %	2.5 %	1.3 %	3.1 %	28.9 %	1.3 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	15	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/10/2024 6:10:07 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.917 %	95.435 %	0.015 ppb	57.090 ppb	8.860 ppb	6.363 ppb	95.053 ppb	27.751 ppb	101.694 %
Concentration per Run 1	93.889 %	95.068 %	0.015 ppb	74.393 ppb	13.605 ppb	10.595 ppb	107.015 ppb	34.367 ppb	99.310 %
Concentration per Run 2	91.122 %	96.485 %	0.018 ppb	52.174 ppb	7.107 ppb	5.253 ppb	94.545 ppb	23.855 ppb	101.524 %
Concentration per Run 3	90.739 %	94.753 %	0.013 ppb	44.702 ppb	5.869 ppb	3.240 ppb	83.600 ppb	25.031 ppb	104.248 %
Concentration RSD	1.9 %	1.0 %	17.4 %	27.1 %	46.9 %	59.7 %	12.3 %	20.8 %	2.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.092 %	-0.121 ppb	0.007 ppb	1.312 ppb	41.065 ppb	0.008 ppb	0.159 ppb	1.624 ppb	3.856 ppb
Concentration per Run 1	98.544 %	-0.122 ppb	0.023 ppb	1.975 ppb	51.649 ppb	0.008 ppb	0.157 ppb	2.430 ppb	4.885 ppb
Concentration per Run 2	101.757 %	-0.127 ppb	-0.002 ppb	1.060 ppb	37.382 ppb	0.004 ppb	0.182 ppb	1.301 ppb	3.537 ppb
Concentration per Run 3	93.974 %	-0.112 ppb	0.000 ppb	0.901 ppb	34.163 ppb	0.012 ppb	0.139 ppb	1.141 ppb	3.146 ppb
Concentration RSD	4.0 %	6.3 %	199.3 %	44.2 %	22.7 %	51.9 %	13.5 %	43.3 %	23.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.391 %	1.593 ppb	-0.007 ppb	0.031 ppb	2.854 ppb	104.061 %	0.004 ppb	0.008 ppb	100.359 %
Concentration per Run 1	102.340 %	2.026 ppb	0.020 ppb	0.041 ppb	2.829 ppb	105.236 %	0.010 ppb	0.012 ppb	102.513 %
Concentration per Run 2	100.689 %	1.503 ppb	0.021 ppb	0.027 ppb	2.835 ppb	103.691 %	0.002 ppb	0.008 ppb	102.537 %
Concentration per Run 3	98.144 %	1.249 ppb	-0.062 ppb	0.026 ppb	2.898 ppb	103.257 %	0.000 ppb	0.006 ppb	96.027 %
Concentration RSD	2.1 %	24.9 %	663.0 %	25.5 %	1.3 %	1.0 %	137.7 %	35.6 %	3.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.002 ppb	1.184 ppb	102.501 %	99.792 %	0.043 ppb	1.632 ppb
Concentration per Run 1	0.006 ppb	1.958 ppb	104.398 %	100.407 %	0.032 ppb	2.530 ppb
Concentration per Run 2	-0.006 ppb	0.898 ppb	102.642 %	101.602 %	0.044 ppb	1.257 ppb
Concentration per Run 3	0.005 ppb	0.696 ppb	100.462 %	97.368 %	0.053 ppb	1.109 ppb
Concentration RSD	383.9 %	57.2 %	1.9 %	2.2 %	24.9 %	47.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	16	User name	ALPHALAB\Metals-Instrument	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 6:14:43 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.577 %	101.836 %	60.679 ppb	6,220.626 ppb	6,140.955 ppb	63.926 ppb	6,184.590 ppb	6,176.350 ppb	112.665 %
Concentration per Run 1	96.587 %	107.503 %	60.202 ppb	6,215.190 ppb	6,099.636 ppb	64.726 ppb	6,203.295 ppb	6,093.328 ppb	113.988 %
Concentration per Run 2	93.278 %	92.235 %	60.642 ppb	6,320.948 ppb	6,253.351 ppb	63.217 ppb	6,050.712 ppb	6,045.983 ppb	112.116 %
Concentration per Run 3	90.867 %	105.771 %	61.192 ppb	6,125.741 ppb	6,069.877 ppb	63.834 ppb	6,299.762 ppb	6,389.740 ppb	111.890 %
Recovery Percentage 1			101.131 %	103.677 %	102.349 %	106.543 %	103.076 %	102.939 %	
Concentration RSD	3.1 %	8.2 %	0.8 %	1.6 %	1.6 %	1.2 %	2.0 %	3.0 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.713 %	61.296 ppb	60.499 ppb	60.151 ppb	6,300.581 ppb	62.361 ppb	62.101 ppb	61.466 ppb	61.883 ppb
Concentration per Run 1	114.813 %	59.511 ppb	59.206 ppb	58.864 ppb	6,124.427 ppb	61.276 ppb	61.081 ppb	61.076 ppb	60.670 ppb
Concentration per Run 2	110.447 %	62.053 ppb	60.262 ppb	59.302 ppb	6,255.703 ppb	62.915 ppb	62.299 ppb	62.140 ppb	62.409 ppb
Concentration per Run 3	109.880 %	62.325 ppb	62.027 ppb	62.286 ppb	6,521.614 ppb	62.892 ppb	62.922 ppb	61.183 ppb	62.569 ppb
Recovery Percentage 1		102.161 %	100.831 %	100.251 %	105.010 %	103.935 %	103.501 %	102.444 %	103.138 %
Concentration RSD	2.4 %	2.5 %	2.4 %	3.1 %	3.2 %	1.5 %	1.5 %	1.0 %	1.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.411 %	60.952 ppb	60.012 ppb	59.940 ppb	60.964 ppb	105.039 %	59.806 ppb	59.408 ppb	100.012 %
Concentration per Run 1	106.568 %	61.603 ppb	60.114 ppb	60.708 ppb	58.019 ppb	106.774 %	58.559 ppb	57.357 ppb	104.465 %
Concentration per Run 2	104.349 %	60.041 ppb	57.568 ppb	57.855 ppb	61.758 ppb	104.960 %	60.307 ppb	59.753 ppb	95.174 %
Concentration per Run 3	105.315 %	61.211 ppb	62.355 ppb	61.257 ppb	63.115 ppb	103.383 %	60.552 ppb	61.115 ppb	100.396 %
Recovery Percentage 1		101.586 %	100.021 %	99.900 %	101.606 %		99.677 %	99.014 %	
Concentration RSD	1.1 %	1.3 %	4.0 %	3.0 %	4.3 %	1.6 %	1.8 %	3.2 %	4.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	61.163 ppb	59.379 ppb	103.717 %	103.165 %	58.295 ppb	59.331 ppb
Concentration per Run 1	59.367 ppb	57.362 ppb	105.318 %	105.743 %	53.099 ppb	57.717 ppb
Concentration per Run 2	62.331 ppb	60.214 ppb	102.626 %	100.689 %	59.959 ppb	60.985 ppb
Concentration per Run 3	61.791 ppb	60.561 ppb	103.208 %	103.064 %	61.828 ppb	59.290 ppb
Recovery Percentage 1	101.938 %	98.965 %			97.159 %	98.885 %
Concentration RSD	2.6 %	3.0 %	1.4 %	2.5 %	7.9 %	2.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	17	User name	ALPHALAB\Metals-Instrument	Comment	CCB
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 6:19:24 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.730 %	102.518 %	0.022 ppb	-13.262 ppb	1.402 ppb	1.218 ppb	1.509 ppb	1.119 ppb	91.995 %
Concentration per Run 1	86.319 %	102.938 %	0.011 ppb	-9.089 ppb	2.359 ppb	2.086 ppb	1.318 ppb	2.374 ppb	92.436 %
Concentration per Run 2	82.163 %	101.994 %	0.038 ppb	-15.554 ppb	1.339 ppb	0.697 ppb	4.811 ppb	-2.981 ppb	90.346 %
Concentration per Run 3	79.709 %	102.623 %	0.019 ppb	-15.143 ppb	0.508 ppb	0.871 ppb	-1.601 ppb	3.963 ppb	93.202 %
Recovery Percentage 1			4.472 %	-13.262 %	2.002 %	12.182 %	1.509 %	1.119 %	
Concentration RSD	4.0 %	0.5 %	61.9 %	27.3 %	66.2 %	62.1 %	212.7 %	325.2 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.185 %	-0.101 ppb	0.018 ppb	0.216 ppb	21.134 ppb	0.015 ppb	0.033 ppb	0.262 ppb	0.711 ppb
Concentration per Run 1	102.345 %	-0.099 ppb	0.030 ppb	0.263 ppb	23.435 ppb	0.010 ppb	0.030 ppb	0.404 ppb	0.802 ppb
Concentration per Run 2	93.635 %	-0.108 ppb	0.024 ppb	0.197 ppb	20.120 ppb	0.016 ppb	0.008 ppb	0.220 ppb	0.733 ppb
Concentration per Run 3	101.576 %	-0.095 ppb	-0.001 ppb	0.189 ppb	19.847 ppb	0.019 ppb	0.061 ppb	0.163 ppb	0.597 ppb
Recovery Percentage 1		-2.014 %	1.760 %	21.645 %	42.268 %	3.013 %	1.656 %	26.215 %	14.216 %
Concentration RSD	4.9 %	6.3 %	91.6 %	18.9 %	9.5 %	28.5 %	80.9 %	48.1 %	14.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.818 %	0.200 ppb	0.289 ppb	0.010 ppb	1.574 ppb	103.124 %	0.007 ppb	0.012 ppb	99.088 %
Concentration per Run 1	102.917 %	0.271 ppb	0.228 ppb	0.013 ppb	1.542 ppb	105.996 %	0.012 ppb	0.017 ppb	104.548 %
Concentration per Run 2	96.824 %	0.248 ppb	0.354 ppb	0.009 ppb	1.618 ppb	102.102 %	0.006 ppb	0.008 ppb	92.960 %
Concentration per Run 3	102.715 %	0.082 ppb	0.285 ppb	0.008 ppb	1.560 ppb	101.274 %	0.002 ppb	0.011 ppb	99.756 %
Recovery Percentage 1		40.064 %	5.780 %	0.099 %	78.678 %		1.702 %	6.081 %	
Concentration RSD	3.4 %	51.3 %	21.9 %	26.0 %	2.5 %	2.4 %	66.9 %	38.4 %	5.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.065 ppb	0.204 ppb	100.617 %	99.052 %	0.451 ppb	0.349 ppb
Concentration per Run 1	0.059 ppb	0.278 ppb	103.221 %	102.322 %	0.383 ppb	0.418 ppb
Concentration per Run 2	0.061 ppb	0.182 ppb	99.158 %	96.443 %	0.517 ppb	0.330 ppb
Concentration per Run 3	0.074 ppb	0.152 ppb	99.472 %	98.390 %	0.452 ppb	0.298 ppb
Recovery Percentage 1	1.617 %	40.864 %			45.071 %	34.868 %
Concentration RSD	12.4 %	32.3 %	2.2 %	3.0 %	14.8 %	17.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	18	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1905290-1 6020TL	Rack	1		
Analysis started at:	4/10/2024 6:34:17 AM	Vial	1		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.873 %	95.435 %	0.002 ppb	-15.980 ppb	1.931 ppb	1.957 ppb	-6.515 ppb	9.770 ppb	102.766 %
Concentration per Run 1	98.037 %	93.022 %	0.002 ppb	-11.202 ppb	1.706 ppb	2.144 ppb	-1.294 ppb	19.525 ppb	104.053 %
Concentration per Run 2	94.694 %	96.327 %	-0.002 ppb	-20.864 ppb	1.750 ppb	2.001 ppb	-7.347 ppb	4.801 ppb	103.781 %
Concentration per Run 3	91.888 %	96.957 %	0.005 ppb	-15.875 ppb	2.337 ppb	1.725 ppb	-10.904 ppb	4.984 ppb	100.465 %
Concentration RSD	3.2 %	2.2 %	234.1 %	30.2 %	18.3 %	10.9 %	74.6 %	86.5 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.151 %	-0.123 ppb	0.098 ppb	0.154 ppb	5.351 ppb	0.003 ppb	0.042 ppb	0.210 ppb	0.686 ppb
Concentration per Run 1	89.404 %	-0.133 ppb	0.089 ppb	0.180 ppb	6.545 ppb	0.012 ppb	0.025 ppb	0.250 ppb	0.739 ppb
Concentration per Run 2	98.363 %	-0.106 ppb	0.088 ppb	0.164 ppb	4.544 ppb	-0.003 ppb	0.057 ppb	0.216 ppb	0.700 ppb
Concentration per Run 3	97.684 %	-0.130 ppb	0.117 ppb	0.118 ppb	4.964 ppb	0.000 ppb	0.043 ppb	0.165 ppb	0.619 ppb
Concentration RSD	5.2 %	12.1 %	16.7 %	20.8 %	19.7 %	294.0 %	39.2 %	20.3 %	8.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.612 %	0.069 ppb	-0.082 ppb	0.011 ppb	0.297 ppb	102.625 %	-0.002 ppb	0.002 ppb	98.904 %
Concentration per Run 1	100.500 %	0.134 ppb	-0.162 ppb	0.010 ppb	0.236 ppb	102.256 %	0.001 ppb	0.003 ppb	99.064 %
Concentration per Run 2	103.618 %	0.066 ppb	-0.076 ppb	0.012 ppb	0.313 ppb	102.374 %	-0.004 ppb	-0.001 ppb	99.086 %
Concentration per Run 3	100.718 %	0.006 ppb	-0.009 ppb	0.010 ppb	0.342 ppb	103.246 %	-0.003 ppb	0.004 ppb	98.563 %
Concentration RSD	1.7 %	93.6 %	93.2 %	11.8 %	18.4 %	0.5 %	110.6 %	125.5 %	0.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.006 ppb	0.074 ppb	101.535 %	99.961 %	0.052 ppb	0.151 ppb
Concentration per Run 1	-0.002 ppb	0.070 ppb	102.326 %	99.455 %	0.043 ppb	0.164 ppb
Concentration per Run 2	0.009 ppb	0.073 ppb	101.453 %	101.934 %	0.058 ppb	0.146 ppb
Concentration per Run 3	0.011 ppb	0.079 ppb	100.828 %	98.495 %	0.055 ppb	0.144 ppb
Concentration RSD	118.9 %	6.0 %	0.7 %	1.8 %	15.8 %	7.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	19	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1905290-2d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 6:38:54 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.650 %	98.951 %	5.397 ppb	1,137.728 ppb	1,098.923 ppb	218.885 ppb	1,150.085 ppb	1,120.004 ppb	102.636 %
Concentration per Run 1	97.226 %	104.984 %	5.294 ppb	1,102.399 ppb	1,056.129 ppb	210.542 ppb	1,124.204 ppb	1,147.635 ppb	104.700 %
Concentration per Run 2	91.187 %	96.170 %	5.491 ppb	1,158.651 ppb	1,123.659 ppb	223.378 ppb	1,143.636 ppb	1,101.025 ppb	101.408 %
Concentration per Run 3	89.538 %	95.698 %	5.405 ppb	1,152.135 ppb	1,116.981 ppb	222.734 ppb	1,182.414 ppb	1,111.351 ppb	101.800 %
Concentration RSD	4.4 %	5.3 %	1.8 %	2.7 %	3.4 %	3.3 %	2.6 %	2.2 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.603 %	52.882 ppb	21.216 ppb	54.269 ppb	115.891 ppb	54.290 ppb	52.979 ppb	25.826 ppb	51.711 ppb
Concentration per Run 1	109.676 %	51.880 ppb	20.777 ppb	53.862 ppb	125.965 ppb	53.038 ppb	51.585 ppb	25.040 ppb	51.622 ppb
Concentration per Run 2	103.725 %	53.703 ppb	21.614 ppb	54.812 ppb	112.066 ppb	55.068 ppb	53.740 ppb	26.278 ppb	51.546 ppb
Concentration per Run 3	103.409 %	53.063 ppb	21.259 ppb	54.135 ppb	109.641 ppb	54.765 ppb	53.611 ppb	26.158 ppb	51.964 ppb
Concentration RSD	3.3 %	1.7 %	2.0 %	0.9 %	7.6 %	2.0 %	2.3 %	2.6 %	0.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	108.354 %	11.902 ppb	11.900 ppb	98.462 ppb	95.299 ppb	107.048 %	4.912 ppb	5.209 ppb	103.576 %
Concentration per Run 1	108.262 %	12.014 ppb	11.528 ppb	98.161 ppb	91.759 ppb	109.388 %	4.918 ppb	5.301 ppb	104.868 %
Concentration per Run 2	108.655 %	11.954 ppb	11.977 ppb	98.560 ppb	96.040 ppb	105.569 %	4.913 ppb	5.141 ppb	102.963 %
Concentration per Run 3	108.146 %	11.738 ppb	12.196 ppb	98.664 ppb	98.097 ppb	106.185 %	4.906 ppb	5.185 ppb	102.897 %
Concentration RSD	0.2 %	1.2 %	2.9 %	0.3 %	3.4 %	1.9 %	0.1 %	1.6 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	39.810 ppb	194.878 ppb	106.914 %	104.923 %	12.204 ppb	52.813 ppb
Concentration per Run 1	38.473 ppb	188.828 ppb	109.314 %	105.393 %	11.866 ppb	52.249 ppb
Concentration per Run 2	40.355 ppb	199.095 ppb	104.248 %	104.806 %	12.461 ppb	53.354 ppb
Concentration per Run 3	40.601 ppb	196.710 ppb	107.182 %	104.570 %	12.286 ppb	52.835 ppb
Concentration RSD	2.9 %	2.8 %	2.4 %	0.4 %	2.5 %	1.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	20	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1905290-3d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 6:43:31 AM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.870 %	102.466 %	5.096 ppb	9,218.387 ppb	5,061.345 ppb	212.889 ppb	1,848.467 ppb	10,704.606 ppb	100.143 %
Concentration per Run 1	94.801 %	108.290 %	5.122 ppb	9,000.001 ppb	4,922.598 ppb	205.299 ppb	1,863.073 ppb	10,798.005 ppb	99.302 %
Concentration per Run 2	94.421 %	98.216 %	5.086 ppb	9,438.963 ppb	5,155.256 ppb	218.161 ppb	1,863.107 ppb	10,452.496 ppb	101.875 %
Concentration per Run 3	89.388 %	100.892 %	5.080 ppb	9,216.197 ppb	5,106.182 ppb	215.207 ppb	1,819.222 ppb	10,863.315 ppb	99.252 %
Concentration RSD	3.3 %	5.1 %	0.4 %	2.4 %	2.4 %	3.2 %	1.4 %	2.1 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.745 %	54.143 ppb	21.576 ppb	54.244 ppb	118.467 ppb	52.509 ppb	51.682 ppb	25.724 ppb	52.733 ppb
Concentration per Run 1	103.816 %	53.829 ppb	21.429 ppb	54.138 ppb	120.601 ppb	52.285 ppb	51.228 ppb	25.515 ppb	52.289 ppb
Concentration per Run 2	103.997 %	53.268 ppb	21.403 ppb	52.684 ppb	117.106 ppb	51.433 ppb	51.736 ppb	25.142 ppb	52.460 ppb
Concentration per Run 3	100.422 %	55.331 ppb	21.895 ppb	55.911 ppb	117.693 ppb	53.810 ppb	52.082 ppb	26.515 ppb	53.451 ppb
Concentration RSD	2.0 %	2.0 %	1.3 %	3.0 %	1.6 %	2.3 %	0.8 %	2.8 %	1.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.722 %	12.362 ppb	12.236 ppb	129.000 ppb	98.959 ppb	103.764 %	4.976 ppb	5.270 ppb	101.503 %
Concentration per Run 1	107.276 %	12.531 ppb	12.244 ppb	127.042 ppb	93.987 ppb	106.713 %	4.916 ppb	5.284 ppb	105.732 %
Concentration per Run 2	106.348 %	12.428 ppb	11.637 ppb	128.968 ppb	98.648 ppb	102.486 %	4.952 ppb	5.173 ppb	103.027 %
Concentration per Run 3	103.542 %	12.129 ppb	12.825 ppb	130.991 ppb	104.242 ppb	102.093 %	5.060 ppb	5.353 ppb	95.749 %
Concentration RSD	1.8 %	1.7 %	4.9 %	1.5 %	5.2 %	2.5 %	1.5 %	1.7 %	5.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	45.000 ppb	195.980 ppb	105.769 %	103.684 %	12.521 ppb	53.439 ppb
Concentration per Run 1	42.808 ppb	188.447 ppb	108.058 %	105.911 %	11.883 ppb	51.523 ppb
Concentration per Run 2	44.507 ppb	192.555 ppb	105.447 %	103.621 %	12.553 ppb	53.455 ppb
Concentration per Run 3	47.685 ppb	206.936 ppb	103.801 %	101.520 %	13.127 ppb	55.339 ppb
Concentration RSD	5.5 %	5.0 %	2.0 %	2.1 %	5.0 %	3.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	21	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1905290-4d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 6:48:08 AM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.085 %	103.830 %	5.437 ppb	9,061.895 ppb	4,970.966 ppb	206.486 ppb	1,813.831 ppb	10,600.644 ppb	95.763 %
Concentration per Run 1	94.181 %	107.818 %	5.240 ppb	9,060.083 ppb	4,952.472 ppb	205.711 ppb	1,849.437 ppb	10,817.297 ppb	101.572 %
Concentration per Run 2	87.847 %	105.457 %	5.346 ppb	8,981.521 ppb	4,864.611 ppb	204.478 ppb	1,828.790 ppb	10,642.001 ppb	94.019 %
Concentration per Run 3	82.228 %	98.216 %	5.724 ppb	9,144.081 ppb	5,095.815 ppb	209.269 ppb	1,763.266 ppb	10,342.634 ppb	91.698 %
Concentration RSD	6.8 %	4.8 %	4.7 %	0.9 %	2.3 %	1.2 %	2.5 %	2.3 %	5.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.134 %	53.578 ppb	21.371 ppb	53.369 ppb	118.926 ppb	52.514 ppb	51.800 ppb	25.323 ppb	51.666 ppb
Concentration per Run 1	103.635 %	53.023 ppb	20.951 ppb	52.348 ppb	120.035 ppb	51.996 ppb	51.558 ppb	24.970 ppb	51.139 ppb
Concentration per Run 2	100.196 %	54.845 ppb	21.826 ppb	53.850 ppb	119.748 ppb	54.326 ppb	53.021 ppb	25.962 ppb	52.625 ppb
Concentration per Run 3	102.572 %	52.868 ppb	21.336 ppb	53.911 ppb	116.994 ppb	51.221 ppb	50.821 ppb	25.038 ppb	51.236 ppb
Concentration RSD	1.7 %	2.1 %	2.1 %	1.7 %	1.4 %	3.1 %	2.2 %	2.2 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.136 %	12.146 ppb	12.160 ppb	125.559 ppb	95.038 ppb	105.378 %	4.843 ppb	5.086 ppb	103.788 %
Concentration per Run 1	108.718 %	12.217 ppb	11.903 ppb	124.985 ppb	91.320 ppb	106.013 %	4.924 ppb	5.240 ppb	103.462 %
Concentration per Run 2	104.952 %	12.207 ppb	12.087 ppb	125.691 ppb	94.581 ppb	105.269 %	4.763 ppb	5.037 ppb	104.738 %
Concentration per Run 3	104.739 %	12.016 ppb	12.489 ppb	126.001 ppb	99.213 ppb	104.850 %	4.843 ppb	4.981 ppb	103.163 %
Concentration RSD	2.1 %	0.9 %	2.5 %	0.4 %	4.2 %	0.6 %	1.7 %	2.7 %	0.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	43.972 ppb	191.173 ppb	107.495 %	106.920 %	12.108 ppb	51.336 ppb
Concentration per Run 1	44.157 ppb	193.081 ppb	106.556 %	106.263 %	12.029 ppb	51.511 ppb
Concentration per Run 2	43.427 ppb	188.009 ppb	107.688 %	107.243 %	12.213 ppb	51.384 ppb
Concentration per Run 3	44.333 ppb	192.430 ppb	108.241 %	107.253 %	12.082 ppb	51.115 ppb
Concentration RSD	1.1 %	1.4 %	0.8 %	0.5 %	0.8 %	0.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	22	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1905290-5d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 6:52:45 AM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.231 %	100.577 %	49.245 ppb	12,889.266 ppb	8,908.699 ppb	51.860 ppb	5,810.793 ppb	14,251.192 ppb	100.469 %
Concentration per Run 1	91.388 %	103.253 %	48.326 ppb	12,745.156 ppb	8,760.434 ppb	48.597 ppb	5,772.141 ppb	13,990.809 ppb	101.212 %
Concentration per Run 2	87.385 %	97.587 %	49.690 ppb	12,887.101 ppb	8,870.449 ppb	52.330 ppb	5,736.140 ppb	14,117.861 ppb	99.878 %
Concentration per Run 3	85.920 %	100.892 %	49.719 ppb	13,035.540 ppb	9,095.214 ppb	54.652 ppb	5,924.098 ppb	14,644.907 ppb	100.316 %
Concentration RSD	3.2 %	2.8 %	1.6 %	1.1 %	1.9 %	5.9 %	1.7 %	2.4 %	0.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.055 %	49.774 ppb	48.920 ppb	49.990 ppb	5,009.901 ppb	49.123 ppb	48.485 ppb	47.443 ppb	49.196 ppb
Concentration per Run 1	107.640 %	49.459 ppb	48.811 ppb	49.408 ppb	4,964.741 ppb	49.535 ppb	48.767 ppb	47.521 ppb	49.383 ppb
Concentration per Run 2	107.685 %	49.758 ppb	49.371 ppb	50.258 ppb	5,059.677 ppb	49.393 ppb	49.834 ppb	49.226 ppb	49.704 ppb
Concentration per Run 3	108.840 %	50.104 ppb	48.579 ppb	50.305 ppb	5,005.285 ppb	48.443 ppb	46.853 ppb	45.580 ppb	48.499 ppb
Concentration RSD	0.6 %	0.6 %	0.8 %	1.0 %	1.0 %	1.2 %	3.1 %	3.8 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.805 %	47.924 ppb	47.616 ppb	78.341 ppb	49.217 ppb	104.243 %	15.394 ppb	46.121 ppb	103.864 %
Concentration per Run 1	106.471 %	48.442 ppb	46.450 ppb	76.595 ppb	46.470 ppb	105.272 %	15.283 ppb	45.771 ppb	104.563 %
Concentration per Run 2	103.745 %	47.560 ppb	45.951 ppb	77.797 ppb	50.601 ppb	102.843 %	15.532 ppb	46.474 ppb	101.442 %
Concentration per Run 3	110.198 %	47.770 ppb	50.447 ppb	80.630 ppb	50.580 ppb	104.614 %	15.366 ppb	46.119 ppb	105.586 %
Concentration RSD	3.0 %	1.0 %	5.2 %	2.6 %	4.8 %	1.2 %	0.8 %	0.8 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	49.883 ppb	49.707 ppb	107.410 %	107.778 %	45.313 ppb	46.162 ppb
Concentration per Run 1	49.503 ppb	48.712 ppb	108.546 %	107.567 %	43.196 ppb	46.339 ppb
Concentration per Run 2	49.999 ppb	49.909 ppb	106.706 %	103.995 %	47.545 ppb	47.924 ppb
Concentration per Run 3	50.146 ppb	50.499 ppb	106.980 %	111.771 %	45.198 ppb	44.223 ppb
Concentration RSD	0.7 %	1.8 %	0.9 %	3.6 %	4.8 %	4.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	23	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418559-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 6:57:23 AM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.698 %	100.787 %	0.003 ppb	80,045.463 ppb	38,598.042 ppb	19.591 ppb	6,972.369 ppb	94,280.070 ppb	99.395 %
Concentration per Run 1	93.224 %	108.132 %	0.005 ppb	77,307.988 ppb	37,253.787 ppb	19.444 ppb	6,822.258 ppb	93,074.683 ppb	99.793 %
Concentration per Run 2	89.432 %	93.337 %	0.008 ppb	83,727.713 ppb	40,122.801 ppb	20.772 ppb	7,250.376 ppb	95,940.253 ppb	100.542 %
Concentration per Run 3	86.439 %	100.892 %	-0.003 ppb	79,100.687 ppb	38,417.537 ppb	18.557 ppb	6,844.473 ppb	93,825.274 ppb	97.851 %
Concentration RSD	3.8 %	7.3 %	162.3 %	4.1 %	3.7 %	5.7 %	3.5 %	1.6 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.796 %	1.996 ppb	1.182 ppb	7.888 ppb	38.625 ppb	0.205 ppb	2.329 ppb	2.291 ppb	11.030 ppb
Concentration per Run 1	101.757 %	1.970 ppb	1.191 ppb	7.966 ppb	40.065 ppb	0.218 ppb	2.219 ppb	2.174 ppb	10.706 ppb
Concentration per Run 2	98.725 %	2.094 ppb	1.238 ppb	7.947 ppb	39.026 ppb	0.201 ppb	2.415 ppb	2.269 ppb	11.227 ppb
Concentration per Run 3	98.906 %	1.923 ppb	1.118 ppb	7.753 ppb	36.783 ppb	0.195 ppb	2.352 ppb	2.429 ppb	11.155 ppb
Concentration RSD	1.7 %	4.4 %	5.1 %	1.5 %	4.3 %	5.9 %	4.3 %	5.6 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.310 %	1.379 ppb	1.354 ppb	308.639 ppb	3.422 ppb	97.023 %	0.018 ppb	0.055 ppb	99.143 %
Concentration per Run 1	102.656 %	1.389 ppb	1.424 ppb	306.836 ppb	3.234 ppb	97.273 %	0.016 ppb	0.061 ppb	101.318 %
Concentration per Run 2	101.354 %	1.330 ppb	1.104 ppb	306.053 ppb	3.562 ppb	98.349 %	0.022 ppb	0.061 ppb	96.894 %
Concentration per Run 3	99.920 %	1.418 ppb	1.533 ppb	313.029 ppb	3.469 ppb	95.446 %	0.017 ppb	0.045 ppb	99.216 %
Concentration RSD	1.4 %	3.2 %	16.5 %	1.2 %	4.9 %	1.5 %	19.4 %	16.5 %	2.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	1.121 ppb	37.157 ppb	105.625 %	104.633 %	0.429 ppb	0.467 ppb
Concentration per Run 1	1.068 ppb	36.745 ppb	105.632 %	106.171 %	0.379 ppb	0.453 ppb
Concentration per Run 2	1.141 ppb	38.076 ppb	105.481 %	102.384 %	0.492 ppb	0.488 ppb
Concentration per Run 3	1.155 ppb	36.651 ppb	105.761 %	105.343 %	0.417 ppb	0.460 ppb
Concentration RSD	4.2 %	2.1 %	0.1 %	1.9 %	13.4 %	3.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	24	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2417975-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:02:00 AM	Vial	8		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.575 %	116.947 %	0.013 ppb	33,885.329 ppb	2,231.923 ppb	375.071 ppb	5,474.408 ppb	20,414.593 ppb	98.887 %
Concentration per Run 1	109.106 %	112.225 %	0.011 ppb	35,131.674 ppb	2,318.989 ppb	390.832 ppb	5,568.307 ppb	20,682.491 ppb	100.486 %
Concentration per Run 2	106.301 %	121.826 %	0.013 ppb	32,872.409 ppb	2,122.969 ppb	360.049 ppb	5,273.080 ppb	19,923.872 ppb	99.214 %
Concentration per Run 3	101.319 %	116.789 %	0.014 ppb	33,651.903 ppb	2,253.813 ppb	374.333 ppb	5,581.838 ppb	20,637.417 ppb	96.961 %
Concentration RSD	3.7 %	4.1 %	15.3 %	3.4 %	4.5 %	4.1 %	3.2 %	2.1 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.944 %	3.829 ppb	7.508 ppb	39.494 ppb	974.954 ppb	0.860 ppb	8.803 ppb	209.340 ppb	184.494 ppb
Concentration per Run 1	100.603 %	3.791 ppb	7.532 ppb	39.251 ppb	992.009 ppb	0.877 ppb	9.011 ppb	214.138 ppb	188.473 ppb
Concentration per Run 2	100.015 %	3.803 ppb	7.412 ppb	39.233 ppb	965.341 ppb	0.893 ppb	8.391 ppb	207.669 ppb	181.802 ppb
Concentration per Run 3	96.214 %	3.895 ppb	7.580 ppb	39.998 ppb	967.511 ppb	0.808 ppb	9.005 ppb	206.214 ppb	183.208 ppb
Concentration RSD	2.4 %	1.5 %	1.1 %	1.1 %	1.5 %	5.2 %	4.0 %	2.0 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.396 %	1.107 ppb	0.251 ppb	73.225 ppb	4.369 ppb	101.958 %	0.116 ppb	0.528 ppb	99.349 %
Concentration per Run 1	102.507 %	1.225 ppb	0.248 ppb	73.636 ppb	4.318 ppb	102.977 %	0.119 ppb	0.520 ppb	98.300 %
Concentration per Run 2	101.782 %	1.175 ppb	0.246 ppb	72.779 ppb	4.438 ppb	103.278 %	0.118 ppb	0.547 ppb	99.304 %
Concentration per Run 3	102.900 %	0.920 ppb	0.260 ppb	73.258 ppb	4.351 ppb	99.618 %	0.112 ppb	0.518 ppb	100.441 %
Concentration RSD	0.6 %	14.8 %	3.1 %	0.6 %	1.4 %	2.0 %	3.2 %	3.1 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	2.600 ppb	25.929 ppb	105.791 %	105.841 %	0.141 ppb	41.642 ppb
Concentration per Run 1	2.653 ppb	26.771 ppb	103.668 %	102.400 %	0.112 ppb	43.389 ppb
Concentration per Run 2	2.615 ppb	25.418 ppb	107.398 %	108.870 %	0.157 ppb	39.770 ppb
Concentration per Run 3	2.531 ppb	25.598 ppb	106.307 %	106.253 %	0.155 ppb	41.768 ppb
Concentration RSD	2.4 %	2.8 %	1.8 %	3.1 %	17.9 %	4.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index: 25
Analysis label: I2418062-01 6020TL
Analysis started at: 4/10/2024 7:06:39 AM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.537 %	99.423 %	0.007 ppb	74,813.410 ppb	14,073.485 ppb	41.679 ppb	1,658.712 ppb	85,594.454 ppb	97.437 %
Concentration per Run 1	95.697 %	93.179 %	0.016 ppb	78,133.557 ppb	14,700.136 ppb	41.709 ppb	1,726.505 ppb	86,907.131 ppb	98.151 %
Concentration per Run 2	93.353 %	102.309 %	-0.002 ppb	71,727.094 ppb	13,613.286 ppb	40.598 ppb	1,598.698 ppb	82,916.872 ppb	97.278 %
Concentration per Run 3	91.560 %	102.781 %	0.007 ppb	74,579.580 ppb	13,907.033 ppb	42.731 ppb	1,650.933 ppb	86,959.357 ppb	96.882 %
Concentration RSD	2.2 %	5.4 %	128.8 %	4.3 %	4.0 %	2.6 %	3.9 %	2.7 %	0.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.723 %	0.118 ppb	0.354 ppb	310.817 ppb	1,100.722 ppb	0.457 ppb	0.896 ppb	1.487 ppb	3.905 ppb
Concentration per Run 1	95.784 %	0.135 ppb	0.352 ppb	313.536 ppb	1,100.519 ppb	0.491 ppb	0.996 ppb	1.629 ppb	3.991 ppb
Concentration per Run 2	98.453 %	0.088 ppb	0.347 ppb	302.891 ppb	1,079.585 ppb	0.403 ppb	0.848 ppb	1.369 ppb	3.836 ppb
Concentration per Run 3	92.933 %	0.131 ppb	0.365 ppb	316.024 ppb	1,122.061 ppb	0.478 ppb	0.843 ppb	1.464 ppb	3.890 ppb
Concentration RSD	2.9 %	21.8 %	2.6 %	2.2 %	1.9 %	10.4 %	9.7 %	8.9 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.381 %	0.616 ppb	0.013 ppb	360.160 ppb	0.892 ppb	97.691 %	0.006 ppb	0.009 ppb	95.765 %
Concentration per Run 1	97.873 %	0.703 ppb	-0.142 ppb	365.855 ppb	0.800 ppb	96.646 %	0.004 ppb	0.009 ppb	94.672 %
Concentration per Run 2	102.571 %	0.549 ppb	0.116 ppb	353.868 ppb	0.947 ppb	98.182 %	0.006 ppb	0.012 ppb	95.856 %
Concentration per Run 3	100.697 %	0.596 ppb	0.065 ppb	360.758 ppb	0.929 ppb	98.245 %	0.007 ppb	0.007 ppb	96.767 %
Concentration RSD	2.4 %	12.8 %	1,029.0 %	1.7 %	9.0 %	0.9 %	28.9 %	29.6 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.395 ppb	98.137 ppb	103.208 %	101.667 %	0.079 ppb	1.781 ppb
Concentration per Run 1	0.384 ppb	101.230 ppb	101.241 %	100.210 %	0.057 ppb	1.876 ppb
Concentration per Run 2	0.403 ppb	95.188 ppb	104.509 %	103.378 %	0.085 ppb	1.700 ppb
Concentration per Run 3	0.398 ppb	97.993 ppb	103.873 %	101.413 %	0.095 ppb	1.767 ppb
Concentration RSD	2.4 %	3.1 %	1.7 %	1.6 %	24.5 %	5.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	26	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418235-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:11:18 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.671 %	102.204 %	0.872 ppb	476.009 ppb	3,777.504 ppb	13,957.241 ppb	998.749 ppb	4,825.462 ppb	117.618 %
Concentration per Run 1	95.916 %	108.919 %	0.860 ppb	477.804 ppb	3,793.020 ppb	13,670.045 ppb	1,001.086 ppb	4,860.668 ppb	123.149 %
Concentration per Run 2	89.829 %	98.688 %	0.855 ppb	472.699 ppb	3,744.835 ppb	14,279.618 ppb	999.641 ppb	4,778.193 ppb	116.518 %
Concentration per Run 3	83.267 %	99.003 %	0.900 ppb	477.524 ppb	3,794.657 ppb	13,922.061 ppb	995.521 ppb	4,837.523 ppb	113.187 %
Concentration RSD	7.1 %	5.7 %	2.9 %	0.6 %	0.7 %	2.2 %	0.3 %	0.9 %	4.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	118.631 %	22.487 ppb	26.630 ppb	516.828 ppb	22,097.206 ppb	8.912 ppb	20.801 ppb	11.471 ppb	79.057 ppb
Concentration per Run 1	120.471 %	22.395 ppb	26.208 ppb	514.589 ppb	21,989.263 ppb	8.785 ppb	20.667 ppb	11.585 ppb	78.656 ppb
Concentration per Run 2	120.992 %	22.749 ppb	26.826 ppb	520.814 ppb	22,002.025 ppb	8.936 ppb	20.945 ppb	11.572 ppb	79.661 ppb
Concentration per Run 3	114.430 %	22.316 ppb	26.857 ppb	515.080 ppb	22,300.328 ppb	9.015 ppb	20.791 ppb	11.255 ppb	78.854 ppb
Concentration RSD	3.1 %	1.0 %	1.4 %	0.7 %	0.8 %	1.3 %	0.7 %	1.6 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.926 %	0.791 ppb	1.538 ppb	42.104 ppb	0.963 ppb	102.906 %	0.044 ppb	0.152 ppb	100.726 %
Concentration per Run 1	105.847 %	0.820 ppb	1.567 ppb	42.003 ppb	0.841 ppb	106.475 %	0.038 ppb	0.143 ppb	104.487 %
Concentration per Run 2	102.460 %	0.695 ppb	1.763 ppb	43.188 ppb	1.058 ppb	102.064 %	0.041 ppb	0.158 ppb	100.198 %
Concentration per Run 3	103.472 %	0.857 ppb	1.286 ppb	41.121 ppb	0.989 ppb	100.180 %	0.053 ppb	0.156 ppb	97.492 %
Concentration RSD	1.7 %	10.7 %	15.6 %	2.5 %	11.5 %	3.1 %	17.8 %	5.5 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.267 ppb	164.086 ppb	111.055 %	108.482 %	0.144 ppb	9.013 ppb
Concentration per Run 1	0.244 ppb	162.082 ppb	112.136 %	110.044 %	0.126 ppb	8.932 ppb
Concentration per Run 2	0.266 ppb	167.590 ppb	112.394 %	108.442 %	0.149 ppb	9.054 ppb
Concentration per Run 3	0.290 ppb	162.586 ppb	108.634 %	106.960 %	0.155 ppb	9.053 ppb
Concentration RSD	8.7 %	1.9 %	1.9 %	1.4 %	10.5 %	0.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	27	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1905290-6d5 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:15:58 AM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.076 %	95.330 %	0.010 ppb	16,383.512 ppb	8,091.761 ppb	12.395 ppb	1,465.168 ppb	19,910.025 ppb	94.381 %
Concentration per Run 1	91.860 %	91.605 %	0.004 ppb	17,186.709 ppb	8,536.164 ppb	10.761 ppb	1,520.127 ppb	20,423.354 ppb	95.946 %
Concentration per Run 2	87.797 %	101.994 %	0.008 ppb	15,729.298 ppb	7,844.352 ppb	12.798 ppb	1,461.086 ppb	20,254.498 ppb	93.739 %
Concentration per Run 3	84.572 %	92.392 %	0.017 ppb	16,234.528 ppb	7,894.769 ppb	13.625 ppb	1,414.292 ppb	19,052.223 ppb	93.458 %
Concentration RSD	4.1 %	6.1 %	70.9 %	4.5 %	4.8 %	11.9 %	3.6 %	3.8 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.587 %	0.460 ppb	0.290 ppb	2.171 ppb	38.788 ppb	0.051 ppb	0.713 ppb	0.512 ppb	7.788 ppb
Concentration per Run 1	93.590 %	0.541 ppb	0.275 ppb	2.043 ppb	40.323 ppb	0.058 ppb	0.732 ppb	0.543 ppb	7.772 ppb
Concentration per Run 2	93.838 %	0.457 ppb	0.297 ppb	2.050 ppb	36.053 ppb	0.037 ppb	0.720 ppb	0.520 ppb	7.833 ppb
Concentration per Run 3	90.332 %	0.381 ppb	0.297 ppb	2.422 ppb	39.989 ppb	0.059 ppb	0.687 ppb	0.473 ppb	7.760 ppb
Concentration RSD	2.1 %	17.4 %	4.5 %	10.0 %	6.1 %	24.1 %	3.2 %	7.1 %	0.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.021 %	0.096 ppb	0.174 ppb	61.957 ppb	0.494 ppb	97.148 %	0.001 ppb	0.011 ppb	95.987 %
Concentration per Run 1	96.923 %	0.184 ppb	0.337 ppb	64.548 ppb	0.455 ppb	96.833 %	0.002 ppb	0.011 ppb	99.163 %
Concentration per Run 2	96.877 %	0.140 ppb	0.126 ppb	62.712 ppb	0.491 ppb	97.968 %	0.002 ppb	0.012 ppb	95.468 %
Concentration per Run 3	97.262 %	-0.035 ppb	0.060 ppb	58.610 ppb	0.536 ppb	96.642 %	0.000 ppb	0.010 ppb	93.330 %
Concentration RSD	0.2 %	120.1 %	82.9 %	4.9 %	8.2 %	0.7 %	90.2 %	11.2 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.210 ppb	7.645 ppb	102.716 %	101.969 %	0.040 ppb	0.151 ppb
Concentration per Run 1	0.205 ppb	7.893 ppb	102.194 %	102.040 %	0.030 ppb	0.148 ppb
Concentration per Run 2	0.204 ppb	7.707 ppb	103.902 %	103.151 %	0.045 ppb	0.151 ppb
Concentration per Run 3	0.220 ppb	7.335 ppb	102.052 %	100.715 %	0.046 ppb	0.153 ppb
Concentration RSD	4.2 %	3.7 %	1.0 %	1.2 %	22.0 %	1.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	28	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 7:20:36 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.841 %	97.796 %	58.314 ppb	6,021.540 ppb	5,843.876 ppb	60.206 ppb	5,950.279 ppb	6,100.533 ppb	107.097 %
Concentration per Run 1	92.960 %	97.272 %	59.228 ppb	5,910.768 ppb	5,790.105 ppb	58.161 ppb	5,792.130 ppb	5,890.819 ppb	105.209 %
Concentration per Run 2	90.851 %	97.272 %	58.434 ppb	6,092.971 ppb	5,835.118 ppb	62.831 ppb	5,943.215 ppb	6,182.476 ppb	107.975 %
Concentration per Run 3	88.712 %	98.846 %	57.281 ppb	6,060.882 ppb	5,906.405 ppb	59.625 ppb	6,115.492 ppb	6,228.305 ppb	108.108 %
Recovery Percentage 1			97.191 %	100.359 %	97.398 %	100.343 %	99.171 %	101.676 %	
Concentration RSD	2.3 %	0.9 %	1.7 %	1.6 %	1.0 %	4.0 %	2.7 %	3.0 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.918 %	60.457 ppb	60.185 ppb	59.958 ppb	6,016.951 ppb	59.466 ppb	59.197 ppb	58.707 ppb	59.080 ppb
Concentration per Run 1	115.651 %	58.347 ppb	58.836 ppb	57.723 ppb	5,820.650 ppb	57.510 ppb	59.180 ppb	57.732 ppb	58.002 ppb
Concentration per Run 2	106.780 %	62.029 ppb	60.855 ppb	60.675 ppb	6,147.708 ppb	60.871 ppb	59.935 ppb	58.857 ppb	59.463 ppb
Concentration per Run 3	107.323 %	60.995 ppb	60.862 ppb	61.475 ppb	6,082.495 ppb	60.016 ppb	58.477 ppb	59.531 ppb	59.775 ppb
Recovery Percentage 1		100.762 %	100.308 %	99.929 %	100.283 %	99.110 %	98.662 %	97.845 %	98.467 %
Concentration RSD	4.5 %	3.1 %	1.9 %	3.3 %	2.9 %	2.9 %	1.2 %	1.5 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.456 %	59.392 ppb	58.840 ppb	59.949 ppb	57.890 ppb	102.377 %	58.783 ppb	58.377 ppb	99.923 %
Concentration per Run 1	100.101 %	60.179 ppb	56.653 ppb	60.305 ppb	55.603 ppb	103.241 %	58.517 ppb	58.463 ppb	101.887 %
Concentration per Run 2	99.239 %	59.654 ppb	61.078 ppb	60.496 ppb	58.854 ppb	101.060 %	58.580 ppb	57.565 ppb	100.221 %
Concentration per Run 3	102.028 %	58.343 ppb	58.788 ppb	59.045 ppb	59.212 ppb	102.832 %	59.252 ppb	59.101 ppb	97.661 %
Recovery Percentage 1		98.987 %	98.066 %	99.914 %	96.483 %		97.971 %	97.294 %	
Concentration RSD	1.4 %	1.6 %	3.8 %	1.3 %	3.4 %	1.1 %	0.7 %	1.3 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	60.174 ppb	56.915 ppb	106.643 %	105.898 %	57.849 ppb	58.657 ppb
Concentration per Run 1	58.587 ppb	55.557 ppb	106.922 %	105.971 %	53.341 ppb	58.609 ppb
Concentration per Run 2	60.370 ppb	56.626 ppb	106.464 %	105.227 %	60.106 ppb	59.676 ppb
Concentration per Run 3	61.564 ppb	58.562 ppb	106.543 %	106.495 %	60.101 ppb	57.688 ppb
Recovery Percentage 1	100.290 %	94.858 %			96.416 %	97.762 %
Concentration RSD	2.5 %	2.7 %	0.2 %	0.6 %	6.7 %	1.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	29	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 7:25:17 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	84.595 %	95.330 %	0.020 ppb	-3.897 ppb	2.802 ppb	0.809 ppb	2.950 ppb	9.169 ppb	88.169 %
Concentration per Run 1	88.790 %	101.522 %	0.014 ppb	-12.237 ppb	2.906 ppb	1.230 ppb	3.932 ppb	8.504 ppb	91.434 %
Concentration per Run 2	84.442 %	92.865 %	0.027 ppb	2.041 ppb	3.041 ppb	0.643 ppb	3.700 ppb	7.537 ppb	87.003 %
Concentration per Run 3	80.552 %	91.605 %	0.019 ppb	-1.494 ppb	2.460 ppb	0.554 ppb	1.218 ppb	11.467 ppb	86.070 %
Recovery Percentage 1			3.935 %	-3.897 %	4.003 %	8.091 %	2.950 %	9.169 %	
Concentration RSD	4.9 %	5.7 %	33.9 %	190.8 %	10.8 %	45.4 %	51.0 %	22.3 %	3.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.495 %	-0.052 ppb	0.029 ppb	0.113 ppb	14.730 ppb	0.013 ppb	0.022 ppb	0.039 ppb	0.220 ppb
Concentration per Run 1	93.454 %	-0.029 ppb	0.041 ppb	0.147 ppb	18.450 ppb	0.019 ppb	0.047 ppb	0.044 ppb	0.214 ppb
Concentration per Run 2	85.377 %	-0.071 ppb	0.030 ppb	0.125 ppb	13.599 ppb	0.013 ppb	-0.013 ppb	0.055 ppb	0.255 ppb
Concentration per Run 3	89.653 %	-0.056 ppb	0.018 ppb	0.067 ppb	12.142 ppb	0.008 ppb	0.032 ppb	0.018 ppb	0.193 ppb
Recovery Percentage 1		-1.043 %	2.941 %	11.274 %	29.460 %	2.662 %	1.100 %	3.887 %	4.409 %
Concentration RSD	4.5 %	41.3 %	39.2 %	36.5 %	22.4 %	43.7 %	141.7 %	48.2 %	14.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.291 %	0.035 ppb	0.242 ppb	0.038 ppb	1.174 ppb	97.814 %	0.018 ppb	0.019 ppb	92.781 %
Concentration per Run 1	95.860 %	0.047 ppb	0.450 ppb	0.048 ppb	1.149 ppb	97.451 %	0.028 ppb	0.021 ppb	90.647 %
Concentration per Run 2	96.368 %	0.033 ppb	0.075 ppb	0.034 ppb	1.189 ppb	98.429 %	0.020 ppb	0.021 ppb	93.344 %
Concentration per Run 3	96.645 %	0.023 ppb	0.201 ppb	0.031 ppb	1.182 ppb	97.563 %	0.006 ppb	0.014 ppb	94.353 %
Recovery Percentage 1		6.905 %	4.838 %	0.378 %	58.678 %		4.465 %	9.285 %	
Concentration RSD	0.4 %	34.6 %	78.9 %	24.3 %	1.8 %	0.5 %	63.0 %	21.9 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.164 ppb	0.025 ppb	98.087 %	97.004 %	0.423 ppb	0.081 ppb
Concentration per Run 1	0.151 ppb	0.026 ppb	97.788 %	95.086 %	0.388 ppb	0.088 ppb
Concentration per Run 2	0.159 ppb	0.036 ppb	96.772 %	96.759 %	0.483 ppb	0.084 ppb
Concentration per Run 3	0.181 ppb	0.014 ppb	99.701 %	99.167 %	0.400 ppb	0.071 ppb
Recovery Percentage 1	4.092 %	5.032 %			42.345 %	8.102 %
Concentration RSD	9.4 %	44.7 %	1.5 %	2.1 %	12.2 %	11.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	30	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418411-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:34:06 AM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.265 %	101.784 %	0.007 ppb	3,475.861 ppb	7,120.531 ppb	5.414 ppb	407.320 ppb	33,235.327 ppb	97.335 %
Concentration per Run 1	97.454 %	104.827 %	0.007 ppb	3,481.918 ppb	7,186.636 ppb	5.163 ppb	409.001 ppb	33,442.059 ppb	101.622 %
Concentration per Run 2	91.067 %	97.901 %	0.013 ppb	3,517.630 ppb	7,228.476 ppb	5.825 ppb	424.472 ppb	33,598.140 ppb	96.800 %
Concentration per Run 3	88.276 %	102.623 %	0.003 ppb	3,428.034 ppb	6,946.480 ppb	5.255 ppb	388.486 ppb	32,665.782 ppb	93.582 %
Concentration RSD	5.1 %	3.5 %	67.1 %	1.3 %	2.1 %	6.6 %	4.4 %	1.5 %	4.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.187 %	-0.092 ppb	0.350 ppb	31.596 ppb	8.399 ppb	0.043 ppb	0.212 ppb	0.505 ppb	0.366 ppb
Concentration per Run 1	98.318 %	-0.097 ppb	0.380 ppb	32.230 ppb	8.682 ppb	0.049 ppb	0.277 ppb	0.477 ppb	0.377 ppb
Concentration per Run 2	108.705 %	-0.076 ppb	0.308 ppb	30.118 ppb	8.730 ppb	0.034 ppb	0.203 ppb	0.378 ppb	0.353 ppb
Concentration per Run 3	99.540 %	-0.102 ppb	0.363 ppb	32.441 ppb	7.785 ppb	0.046 ppb	0.157 ppb	0.661 ppb	0.368 ppb
Concentration RSD	5.6 %	15.0 %	10.7 %	4.1 %	6.3 %	18.2 %	28.5 %	28.5 %	3.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.080 %	-0.008 ppb	-0.050 ppb	141.233 ppb	0.342 ppb	101.050 %	0.002 ppb	0.004 ppb	101.329 %
Concentration per Run 1	100.077 %	0.054 ppb	-0.086 ppb	139.084 ppb	0.331 ppb	100.255 %	0.003 ppb	0.003 ppb	99.293 %
Concentration per Run 2	106.363 %	-0.011 ppb	-0.133 ppb	144.865 ppb	0.338 ppb	101.665 %	0.004 ppb	0.005 ppb	104.962 %
Concentration per Run 3	96.799 %	-0.069 ppb	0.069 ppb	139.752 ppb	0.358 ppb	101.229 %	0.000 ppb	0.003 ppb	99.731 %
Concentration RSD	4.8 %	730.0 %	211.6 %	2.2 %	4.1 %	0.7 %	110.7 %	35.7 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.139 ppb	0.339 ppb	106.340 %	105.575 %	0.071 ppb	0.047 ppb
Concentration per Run 1	0.145 ppb	0.346 ppb	104.148 %	100.820 %	0.058 ppb	0.052 ppb
Concentration per Run 2	0.127 ppb	0.335 ppb	109.350 %	110.920 %	0.074 ppb	0.041 ppb
Concentration per Run 3	0.146 ppb	0.335 ppb	105.522 %	104.985 %	0.081 ppb	0.048 ppb
Concentration RSD	7.7 %	1.8 %	2.5 %	4.8 %	16.2 %	11.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	31	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418411-02 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:38:46 AM	Vial	12		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	87.969 %	99.843 %	0.002 ppb	48,013.951 ppb	7,586.515 ppb	4.271 ppb	567.870 ppb	35,034.790 ppb	93.204 %
Concentration per Run 1	90.881 %	100.262 %	-0.002 ppb	48,664.278 ppb	7,841.916 ppb	4.460 ppb	574.319 ppb	35,076.391 ppb	93.828 %
Concentration per Run 2	87.696 %	105.614 %	0.005 ppb	46,496.153 ppb	7,396.842 ppb	3.909 ppb	576.673 ppb	34,906.876 ppb	93.859 %
Concentration per Run 3	85.330 %	93.652 %	0.003 ppb	48,881.422 ppb	7,520.787 ppb	4.444 ppb	552.619 ppb	35,121.104 ppb	91.924 %
Concentration RSD	3.2 %	6.0 %	153.9 %	2.7 %	3.0 %	7.3 %	2.3 %	0.3 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.069 %	-0.115 ppb	0.281 ppb	45.082 ppb	3,137.694 ppb	0.158 ppb	0.886 ppb	0.040 ppb	4.878 ppb
Concentration per Run 1	99.631 %	-0.122 ppb	0.240 ppb	44.908 ppb	3,144.586 ppb	0.155 ppb	0.918 ppb	0.010 ppb	4.991 ppb
Concentration per Run 2	99.970 %	-0.119 ppb	0.268 ppb	44.544 ppb	3,106.919 ppb	0.161 ppb	0.866 ppb	0.056 ppb	4.863 ppb
Concentration per Run 3	94.607 %	-0.104 ppb	0.335 ppb	45.793 ppb	3,161.578 ppb	0.157 ppb	0.875 ppb	0.054 ppb	4.780 ppb
Concentration RSD	3.1 %	8.4 %	17.3 %	1.4 %	0.9 %	1.7 %	3.2 %	64.7 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.043 %	-0.094 ppb	0.055 ppb	147.236 ppb	0.230 ppb	96.416 %	-0.003 ppb	0.002 ppb	96.349 %
Concentration per Run 1	98.917 %	-0.094 ppb	0.254 ppb	156.271 ppb	0.195 ppb	94.537 %	-0.003 ppb	0.003 ppb	95.927 %
Concentration per Run 2	100.718 %	0.036 ppb	0.020 ppb	145.369 ppb	0.239 ppb	98.814 %	-0.004 ppb	0.000 ppb	98.060 %
Concentration per Run 3	100.495 %	-0.223 ppb	-0.108 ppb	140.069 ppb	0.255 ppb	95.896 %	-0.002 ppb	0.003 ppb	95.060 %
Concentration RSD	1.0 %	138.4 %	331.4 %	5.6 %	13.6 %	2.3 %	39.3 %	69.7 %	1.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.127 ppb	2.255 ppb	101.892 %	102.338 %	0.047 ppb	0.034 ppb
Concentration per Run 1	0.137 ppb	2.323 ppb	99.882 %	101.352 %	0.032 ppb	0.033 ppb
Concentration per Run 2	0.120 ppb	2.319 ppb	103.268 %	101.747 %	0.056 ppb	0.036 ppb
Concentration per Run 3	0.125 ppb	2.125 ppb	102.527 %	103.916 %	0.053 ppb	0.034 ppb
Concentration RSD	6.6 %	5.0 %	1.7 %	1.3 %	27.2 %	4.3 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	32	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418475-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:43:26 AM	Vial	13		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.779 %	99.318 %	0.001 ppb	30,291.797 ppb	16,315.057 ppb	3.578 ppb	4,945.407 ppb	54,008.723 ppb	96.599 %
Concentration per Run 1	94.493 %	93.494 %	-0.004 ppb	31,108.719 ppb	16,567.382 ppb	3.676 ppb	4,981.563 ppb	54,055.144 ppb	98.409 %
Concentration per Run 2	89.622 %	101.994 %	0.011 ppb	28,793.829 ppb	15,599.320 ppb	3.464 ppb	4,835.111 ppb	53,022.595 ppb	96.273 %
Concentration per Run 3	88.222 %	102.466 %	-0.003 ppb	30,972.841 ppb	16,778.469 ppb	3.594 ppb	5,019.547 ppb	54,948.431 ppb	95.114 %
Concentration RSD	3.6 %	5.1 %	586.2 %	4.3 %	3.9 %	3.0 %	2.0 %	1.8 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.777 %	-0.016 ppb	0.078 ppb	0.344 ppb	11.772 ppb	0.051 ppb	1.377 ppb	0.603 ppb	6.715 ppb
Concentration per Run 1	98.770 %	-0.047 ppb	0.081 ppb	0.321 ppb	11.333 ppb	0.053 ppb	1.454 ppb	0.655 ppb	6.830 ppb
Concentration per Run 2	99.268 %	0.001 ppb	0.064 ppb	0.336 ppb	12.243 ppb	0.048 ppb	1.260 ppb	0.549 ppb	6.727 ppb
Concentration per Run 3	104.292 %	-0.002 ppb	0.088 ppb	0.375 ppb	11.739 ppb	0.053 ppb	1.417 ppb	0.604 ppb	6.587 ppb
Concentration RSD	3.0 %	171.6 %	15.5 %	8.2 %	3.9 %	6.1 %	7.5 %	8.8 %	1.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.328 %	9.182 ppb	0.016 ppb	228.186 ppb	7.010 ppb	96.765 %	-0.001 ppb	0.003 ppb	99.775 %
Concentration per Run 1	97.668 %	9.582 ppb	-0.106 ppb	227.949 ppb	6.903 ppb	95.900 %	-0.001 ppb	0.003 ppb	99.718 %
Concentration per Run 2	99.734 %	9.064 ppb	-0.049 ppb	221.436 ppb	6.727 ppb	97.725 %	-0.001 ppb	0.002 ppb	98.502 %
Concentration per Run 3	103.581 %	8.902 ppb	0.202 ppb	235.172 ppb	7.401 ppb	96.669 %	-0.002 ppb	0.006 ppb	101.106 %
Concentration RSD	3.0 %	3.9 %	1,044.8 %	3.0 %	5.0 %	0.9 %	57.4 %	56.3 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	4.918 ppb	30.395 ppb	104.093 %	104.088 %	0.056 ppb	0.158 ppb
Concentration per Run 1	4.884 ppb	30.233 ppb	104.655 %	102.709 %	0.042 ppb	0.159 ppb
Concentration per Run 2	4.948 ppb	30.152 ppb	104.280 %	104.902 %	0.064 ppb	0.154 ppb
Concentration per Run 3	4.921 ppb	30.800 ppb	103.344 %	104.651 %	0.064 ppb	0.161 ppb
Concentration RSD	0.7 %	1.2 %	0.6 %	1.2 %	22.7 %	2.3 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	33	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418475-03 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:48:02 AM	Vial	14		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.243 %	99.318 %	0.011 ppb	29,561.373 ppb	16,087.808 ppb	2.939 ppb	4,790.426 ppb	52,704.582 ppb	96.233 %
Concentration per Run 1	93.317 %	97.272 %	0.010 ppb	29,304.416 ppb	15,931.606 ppb	2.999 ppb	4,694.264 ppb	51,333.182 ppb	98.003 %
Concentration per Run 2	88.397 %	98.059 %	0.003 ppb	29,606.921 ppb	16,042.985 ppb	2.599 ppb	4,841.238 ppb	53,591.421 ppb	95.189 %
Concentration per Run 3	86.015 %	102.623 %	0.020 ppb	29,772.781 ppb	16,288.832 ppb	3.218 ppb	4,835.776 ppb	53,189.143 ppb	95.507 %
Concentration RSD	4.2 %	2.9 %	80.4 %	0.8 %	1.1 %	10.7 %	1.7 %	2.3 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.152 %	0.142 ppb	0.086 ppb	162.000 ppb	43.075 ppb	1.600 ppb	4.024 ppb	1.568 ppb	6.116 ppb
Concentration per Run 1	102.436 %	0.094 ppb	0.089 ppb	162.530 ppb	39.730 ppb	1.562 ppb	4.362 ppb	1.577 ppb	6.234 ppb
Concentration per Run 2	98.657 %	0.167 ppb	0.084 ppb	161.889 ppb	46.215 ppb	1.672 ppb	3.968 ppb	1.737 ppb	6.138 ppb
Concentration per Run 3	108.365 %	0.164 ppb	0.084 ppb	161.579 ppb	43.280 ppb	1.567 ppb	3.743 ppb	1.391 ppb	5.976 ppb
Concentration RSD	4.7 %	29.2 %	3.7 %	0.3 %	7.5 %	3.9 %	7.8 %	11.1 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.382 %	10.831 ppb	-0.044 ppb	226.174 ppb	9.290 ppb	98.449 %	-0.002 ppb	0.007 ppb	101.648 %
Concentration per Run 1	99.994 %	11.083 ppb	-0.054 ppb	222.586 ppb	8.987 ppb	99.372 %	0.001 ppb	0.004 ppb	102.782 %
Concentration per Run 2	100.890 %	10.584 ppb	-0.132 ppb	222.101 ppb	9.464 ppb	97.577 %	-0.004 ppb	0.012 ppb	97.384 %
Concentration per Run 3	106.262 %	10.826 ppb	0.053 ppb	233.835 ppb	9.418 ppb	98.397 %	-0.002 ppb	0.005 ppb	104.777 %
Concentration RSD	3.3 %	2.3 %	209.1 %	2.9 %	2.8 %	0.9 %	128.6 %	60.1 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	5.184 ppb	30.709 ppb	104.890 %	106.204 %	0.066 ppb	0.388 ppb
Concentration per Run 1	5.046 ppb	30.013 ppb	104.711 %	105.837 %	0.055 ppb	0.397 ppb
Concentration per Run 2	5.252 ppb	31.034 ppb	104.552 %	104.690 %	0.073 ppb	0.397 ppb
Concentration per Run 3	5.255 ppb	31.082 ppb	105.407 %	108.084 %	0.068 ppb	0.371 ppb
Concentration RSD	2.3 %	2.0 %	0.4 %	1.6 %	14.2 %	3.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	34	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418548-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:52:38 AM	Vial	15		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.932 %	117.996 %	22.002 ppb	2,777,667.218 ppb	320,668.335 ppb	5,044.221 ppb	36,663.689 ppb	361,904.552 ppb	108.509 %
Concentration per Run 1	98.766 %	124.974 %	21.089 ppb	2,726,728.576 ppb	314,606.400 ppb	4,850.016 ppb	35,066.424 ppb	356,194.776 ppb	111.334 %
Concentration per Run 2	91.944 %	112.697 %	22.362 ppb	2,828,643.911 ppb	326,174.768 ppb	5,177.539 ppb	36,905.422 ppb	358,858.855 ppb	106.182 %
Concentration per Run 3	88.087 %	116.317 %	22.557 ppb	2,777,629.168 ppb	321,223.835 ppb	5,105.107 ppb	38,019.221 ppb	370,660.025 ppb	108.010 %
Concentration RSD	5.8 %	5.3 %	3.6 %	1.8 %	1.8 %	3.4 %	4.1 %	2.1 %	2.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.601 %	0.520 ppb	44.709 ppb	28,634.852 ppb	24,017.566 ppb	284.060 ppb	4,377.010 ppb	436.127 ppb	838.221 ppb
Concentration per Run 1	95.286 %	0.567 ppb	44.095 ppb	28,509.138 ppb	23,842.168 ppb	286.022 ppb	4,429.446 ppb	443.756 ppb	867.657 ppb
Concentration per Run 2	91.915 %	0.480 ppb	44.589 ppb	28,580.312 ppb	24,118.784 ppb	285.706 ppb	4,417.902 ppb	438.250 ppb	831.795 ppb
Concentration per Run 3	90.603 %	0.514 ppb	45.442 ppb	28,815.105 ppb	24,091.745 ppb	280.452 ppb	4,283.682 ppb	426.376 ppb	815.211 ppb
Concentration RSD	2.6 %	8.4 %	1.5 %	0.6 %	0.6 %	1.1 %	1.9 %	2.0 %	3.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	87.925 %	1.393 ppb	11.253 ppb	4,543.137 ppb	1.876 ppb	79.262 %	0.044 ppb	7.434 ppb	78.953 %
Concentration per Run 1	85.212 %	1.494 ppb	11.479 ppb	4,678.391 ppb	1.909 ppb	77.915 %	0.032 ppb	7.607 ppb	78.089 %
Concentration per Run 2	87.511 %	1.361 ppb	11.386 ppb	4,522.716 ppb	1.874 ppb	80.035 %	0.048 ppb	7.192 ppb	80.266 %
Concentration per Run 3	91.051 %	1.323 ppb	10.895 ppb	4,428.303 ppb	1.843 ppb	79.834 %	0.051 ppb	7.501 ppb	78.505 %
Concentration RSD	3.3 %	6.5 %	2.8 %	2.8 %	1.8 %	1.5 %	24.4 %	2.9 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.125 ppb	24.052 ppb	96.256 %	91.158 %	0.659 ppb	15.198 ppb
Concentration per Run 1	0.117 ppb	23.978 ppb	95.522 %	90.978 %	0.638 ppb	15.419 ppb
Concentration per Run 2	0.131 ppb	24.153 ppb	96.917 %	91.415 %	0.665 ppb	15.228 ppb
Concentration per Run 3	0.128 ppb	24.025 ppb	96.330 %	91.081 %	0.674 ppb	14.947 ppb
Concentration RSD	6.2 %	0.4 %	0.7 %	0.3 %	2.9 %	1.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	35	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418548-02 6020TL	Rack	1		
Analysis started at:	4/10/2024 7:57:15 AM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	117.501 %	118.363 %	5.061 ppb	3,982,994.227 ppb	362,495.678 ppb	497.404 ppb	53,899.836 ppb	515,715.976 ppb	98.262 %
Concentration per Run 1	123.697 %	117.104 %	4.979 ppb	4,147,789.635 ppb	374,788.155 ppb	511.840 ppb	55,892.649 ppb	529,946.882 ppb	99.961 %
Concentration per Run 2	116.178 %	123.400 %	5.120 ppb	3,971,304.913 ppb	364,795.805 ppb	499.958 ppb	53,635.629 ppb	516,631.191 ppb	97.274 %
Concentration per Run 3	112.628 %	114.586 %	5.086 ppb	3,829,888.132 ppb	347,903.075 ppb	480.415 ppb	52,171.231 ppb	500,569.856 ppb	97.550 %
Concentration RSD	4.8 %	3.8 %	1.5 %	4.0 %	3.7 %	3.2 %	3.5 %	2.9 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	75.258 %	1.937 ppb	78.851 ppb	29,016.715 ppb	1,979.142 ppb	61.995 ppb	3,282.455 ppb	305.499 ppb	305.991 ppb
Concentration per Run 1	72.303 %	2.009 ppb	79.948 ppb	29,070.362 ppb	2,021.125 ppb	64.369 ppb	3,467.127 ppb	318.431 ppb	314.364 ppb
Concentration per Run 2	79.111 %	1.798 ppb	77.550 ppb	29,081.860 ppb	1,943.722 ppb	60.711 ppb	3,161.378 ppb	295.019 ppb	301.570 ppb
Concentration per Run 3	74.361 %	2.005 ppb	79.056 ppb	28,897.923 ppb	1,972.579 ppb	60.906 ppb	3,218.859 ppb	303.048 ppb	302.041 ppb
Concentration RSD	4.6 %	6.2 %	1.5 %	0.4 %	2.0 %	3.3 %	5.0 %	3.9 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.538 %	1.675 ppb	13.359 ppb	7,653.181 ppb	6.259 ppb	76.901 %	0.211 ppb	5.327 ppb	80.106 %
Concentration per Run 1	84.803 %	1.630 ppb	13.601 ppb	7,633.866 ppb	6.353 ppb	76.335 %	0.203 ppb	5.577 ppb	77.000 %
Concentration per Run 2	90.676 %	1.664 ppb	13.591 ppb	7,775.369 ppb	6.211 ppb	79.599 %	0.199 ppb	5.172 ppb	86.679 %
Concentration per Run 3	84.136 %	1.730 ppb	12.887 ppb	7,550.310 ppb	6.213 ppb	74.770 %	0.229 ppb	5.231 ppb	76.637 %
Concentration RSD	4.2 %	3.1 %	3.1 %	1.5 %	1.3 %	3.2 %	7.6 %	4.1 %	7.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.838 ppb	66.705 ppb	89.959 %	90.041 %	0.356 ppb	1.153 ppb
Concentration per Run 1	0.811 ppb	67.987 ppb	88.898 %	88.047 %	0.363 ppb	1.212 ppb
Concentration per Run 2	0.797 ppb	64.797 ppb	93.073 %	94.525 %	0.346 ppb	1.064 ppb
Concentration per Run 3	0.904 ppb	67.331 ppb	87.905 %	87.551 %	0.358 ppb	1.184 ppb
Concentration RSD	7.0 %	2.5 %	3.0 %	4.3 %	2.4 %	6.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	36	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418548-03 6020TL	Rack	1		
Analysis started at:	4/10/2024 8:01:52 AM	Vial	17		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.473 %	92.602 %	0.023 ppb	332,880.161 ppb	9,618.482 ppb	218.106 ppb	9,173.848 ppb	45,072.992 ppb	103.496 %
Concentration per Run 1	106.064 %	86.883 %	0.011 ppb	347,299.327 ppb	9,884.629 ppb	217.521 ppb	9,156.137 ppb	45,570.026 ppb	106.045 %
Concentration per Run 2	103.146 %	93.809 %	0.026 ppb	331,651.067 ppb	9,831.750 ppb	228.758 ppb	9,597.592 ppb	45,862.622 ppb	102.726 %
Concentration per Run 3	98.208 %	97.114 %	0.032 ppb	319,690.088 ppb	9,139.065 ppb	208.039 ppb	8,767.816 ppb	43,786.330 ppb	101.718 %
Concentration RSD	3.9 %	5.6 %	46.0 %	4.2 %	4.3 %	4.8 %	4.5 %	2.5 %	2.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.004 %	6.813 ppb	3.470 ppb	188.731 ppb	814.913 ppb	0.345 ppb	4.061 ppb	4.355 ppb	59.443 ppb
Concentration per Run 1	91.824 %	7.094 ppb	3.457 ppb	190.990 ppb	822.440 ppb	0.360 ppb	4.321 ppb	4.534 ppb	61.711 ppb
Concentration per Run 2	95.897 %	6.711 ppb	3.501 ppb	187.982 ppb	822.524 ppb	0.355 ppb	4.105 ppb	4.373 ppb	58.283 ppb
Concentration per Run 3	94.291 %	6.636 ppb	3.451 ppb	187.221 ppb	799.775 ppb	0.320 ppb	3.756 ppb	4.158 ppb	58.335 ppb
Concentration RSD	2.2 %	3.6 %	0.8 %	1.1 %	1.6 %	6.4 %	7.0 %	4.3 %	3.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.382 %	0.445 ppb	0.151 ppb	139.929 ppb	1.770 ppb	95.325 %	0.031 ppb	0.028 ppb	97.486 %
Concentration per Run 1	99.119 %	0.497 ppb	-0.015 ppb	140.989 ppb	1.926 ppb	94.076 %	0.029 ppb	0.042 ppb	94.662 %
Concentration per Run 2	105.187 %	0.554 ppb	0.307 ppb	142.854 ppb	1.690 ppb	96.253 %	0.029 ppb	0.022 ppb	100.344 %
Concentration per Run 3	102.842 %	0.285 ppb	0.160 ppb	135.945 ppb	1.692 ppb	95.646 %	0.034 ppb	0.020 ppb	97.454 %
Concentration RSD	3.0 %	31.8 %	106.8 %	2.6 %	7.7 %	1.2 %	9.6 %	43.2 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.432 ppb	20.378 ppb	100.718 %	101.327 %	0.027 ppb	1.354 ppb
Concentration per Run 1	0.449 ppb	20.727 ppb	99.448 %	99.029 %	0.021 ppb	1.392 ppb
Concentration per Run 2	0.441 ppb	20.767 ppb	101.320 %	102.068 %	0.029 ppb	1.349 ppb
Concentration per Run 3	0.406 ppb	19.642 ppb	101.386 %	102.884 %	0.031 ppb	1.322 ppb
Concentration RSD	5.3 %	3.1 %	1.1 %	2.0 %	19.6 %	2.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	37	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418548-04 6020TL	Rack	1		
Analysis started at:	4/10/2024 8:06:29 AM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	109.568 %	89.821 %	0.045 ppb	53,739.346 ppb	51,566.452 ppb	82.931 ppb	19,242.572 ppb	146,723.459 ppb	104.476 %
Concentration per Run 1	112.437 %	87.513 %	0.052 ppb	55,222.428 ppb	52,368.405 ppb	85.045 ppb	20,438.003 ppb	152,526.323 ppb	106.727 %
Concentration per Run 2	109.745 %	91.920 %	0.034 ppb	54,225.967 ppb	52,714.457 ppb	84.515 ppb	18,788.970 ppb	149,812.742 ppb	105.179 %
Concentration per Run 3	106.522 %	90.031 %	0.050 ppb	51,769.642 ppb	49,616.492 ppb	79.234 ppb	18,500.743 ppb	137,831.313 ppb	101.523 %
Concentration RSD	2.7 %	2.5 %	21.3 %	3.3 %	3.3 %	3.9 %	5.4 %	5.3 %	2.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.973 %	1.141 ppb	4.397 ppb	2,000.513 ppb	2,152.536 ppb	1.731 ppb	6.123 ppb	56.862 ppb	21.618 ppb
Concentration per Run 1	92.775 %	1.224 ppb	4.578 ppb	2,080.390 ppb	2,235.731 ppb	1.769 ppb	6.486 ppb	60.503 ppb	22.430 ppb
Concentration per Run 2	97.006 %	1.125 ppb	4.373 ppb	2,009.182 ppb	2,139.937 ppb	1.695 ppb	6.224 ppb	55.304 ppb	21.165 ppb
Concentration per Run 3	98.137 %	1.074 ppb	4.240 ppb	1,911.969 ppb	2,081.942 ppb	1.728 ppb	5.657 ppb	54.779 ppb	21.260 ppb
Concentration RSD	2.9 %	6.7 %	3.9 %	4.2 %	3.6 %	2.1 %	6.9 %	5.6 %	3.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.413 %	0.093 ppb	0.046 ppb	675.967 ppb	2.686 ppb	95.158 %	0.038 ppb	0.060 ppb	96.193 %
Concentration per Run 1	95.890 %	0.146 ppb	-0.104 ppb	696.257 ppb	2.694 ppb	92.014 %	0.037 ppb	0.071 ppb	92.101 %
Concentration per Run 2	105.433 %	0.098 ppb	0.178 ppb	679.293 ppb	2.627 ppb	96.390 %	0.042 ppb	0.057 ppb	101.971 %
Concentration per Run 3	99.918 %	0.035 ppb	0.064 ppb	652.351 ppb	2.738 ppb	97.070 %	0.036 ppb	0.053 ppb	94.507 %
Concentration RSD	4.8 %	59.5 %	309.1 %	3.3 %	2.1 %	2.9 %	8.3 %	16.3 %	5.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.494 ppb	67.903 ppb	99.922 %	102.487 %	0.060 ppb	0.696 ppb
Concentration per Run 1	0.512 ppb	69.988 ppb	96.258 %	97.266 %	0.058 ppb	0.747 ppb
Concentration per Run 2	0.475 ppb	66.658 ppb	102.503 %	105.824 %	0.061 ppb	0.662 ppb
Concentration per Run 3	0.494 ppb	67.062 ppb	101.006 %	104.370 %	0.059 ppb	0.679 ppb
Concentration RSD	3.7 %	2.7 %	3.3 %	4.5 %	2.8 %	6.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	38	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418548-05 6020TL	Rack	1		
Analysis started at:	4/10/2024 8:11:06 AM	Vial	19		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.171 %	92.078 %	10.598 ppb	607,843.917 ppb	109,896.669 ppb	1,705.861 ppb	26,599.248 ppb	315,368.077 ppb	108.626 %
Concentration per Run 1	110.549 %	86.883 %	10.176 ppb	603,860.223 ppb	107,910.506 ppb	1,663.655 ppb	26,067.490 ppb	307,597.580 ppb	112.394 %
Concentration per Run 2	101.924 %	96.800 %	10.528 ppb	614,722.983 ppb	111,917.601 ppb	1,771.992 ppb	27,290.309 ppb	323,279.609 ppb	106.726 %
Concentration per Run 3	97.042 %	92.550 %	11.091 ppb	604,948.545 ppb	109,861.900 ppb	1,681.937 ppb	26,439.946 ppb	315,227.044 ppb	106.759 %
Concentration RSD	6.6 %	5.4 %	4.4 %	1.0 %	1.8 %	3.4 %	2.4 %	2.5 %	3.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.299 %	0.353 ppb	43.586 ppb	2,061.064 ppb	5,878.036 ppb	16.258 ppb	350.800 ppb	113.178 ppb	121.844 ppb
Concentration per Run 1	99.924 %	0.364 ppb	43.184 ppb	2,039.566 ppb	5,756.624 ppb	16.271 ppb	347.421 ppb	110.968 ppb	120.614 ppb
Concentration per Run 2	102.030 %	0.278 ppb	43.123 ppb	2,058.641 ppb	5,813.102 ppb	15.801 ppb	343.738 ppb	111.208 ppb	121.097 ppb
Concentration per Run 3	95.942 %	0.417 ppb	44.453 ppb	2,084.986 ppb	6,064.382 ppb	16.704 ppb	361.242 ppb	117.359 ppb	123.820 ppb
Concentration RSD	3.1 %	19.9 %	1.7 %	1.1 %	2.8 %	2.8 %	2.6 %	3.2 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.309 %	0.394 ppb	2.173 ppb	2,322.843 ppb	0.173 ppb	87.673 %	0.074 ppb	0.831 ppb	92.998 %
Concentration per Run 1	94.338 %	0.378 ppb	2.184 ppb	2,287.132 ppb	0.211 ppb	87.038 %	0.071 ppb	0.855 ppb	90.696 %
Concentration per Run 2	98.688 %	0.375 ppb	2.203 ppb	2,385.607 ppb	0.142 ppb	88.235 %	0.075 ppb	0.774 ppb	98.418 %
Concentration per Run 3	92.901 %	0.429 ppb	2.133 ppb	2,295.790 ppb	0.167 ppb	87.747 %	0.075 ppb	0.864 ppb	89.882 %
Concentration RSD	3.2 %	7.8 %	1.7 %	2.3 %	20.3 %	0.7 %	3.4 %	5.9 %	5.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.279 ppb	31.332 ppb	101.331 %	101.093 %	0.112 ppb	2.081 ppb
Concentration per Run 1	0.289 ppb	31.348 ppb	102.502 %	100.793 %	0.100 ppb	2.096 ppb
Concentration per Run 2	0.258 ppb	31.550 ppb	103.107 %	104.931 %	0.107 ppb	2.003 ppb
Concentration per Run 3	0.290 ppb	31.099 ppb	98.384 %	97.554 %	0.128 ppb	2.144 ppb
Concentration RSD	6.6 %	0.7 %	2.5 %	3.7 %	12.8 %	3.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	39	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	I2418559-02 6020TL	Rack	1		
Analysis started at:	4/10/2024 8:15:43 AM	Vial	20		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.497 %	91.815 %	0.046 ppb	99,228.019 ppb	56,752.575 ppb	408.832 ppb	25,344.537 ppb	235,232.568 ppb	112.402 %
Concentration per Run 1	110.975 %	90.189 %	0.038 ppb	104,641.242 ppb	60,186.421 ppb	419.065 ppb	27,235.198 ppb	247,957.231 ppb	113.134 %
Concentration per Run 2	106.384 %	93.966 %	0.032 ppb	97,006.805 ppb	55,825.753 ppb	410.181 ppb	24,443.049 ppb	226,513.518 ppb	111.001 %
Concentration per Run 3	105.131 %	91.291 %	0.067 ppb	96,036.009 ppb	54,245.550 ppb	397.251 ppb	24,355.362 ppb	231,226.954 ppb	113.073 %
Concentration RSD	2.9 %	2.1 %	40.6 %	4.7 %	5.4 %	2.7 %	6.5 %	4.8 %	1.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.302 %	2.498 ppb	10.335 ppb	48.384 ppb	505.713 ppb	0.618 ppb	5.648 ppb	9.389 ppb	27.841 ppb
Concentration per Run 1	98.318 %	2.691 ppb	11.141 ppb	51.423 ppb	541.475 ppb	0.685 ppb	6.206 ppb	10.137 ppb	29.642 ppb
Concentration per Run 2	114.135 %	2.289 ppb	9.684 ppb	46.568 ppb	475.414 ppb	0.545 ppb	5.068 ppb	8.713 ppb	26.506 ppb
Concentration per Run 3	103.454 %	2.515 ppb	10.180 ppb	47.162 ppb	500.251 ppb	0.625 ppb	5.670 ppb	9.317 ppb	27.376 ppb
Concentration RSD	7.7 %	8.1 %	7.2 %	5.5 %	6.6 %	11.3 %	10.1 %	7.6 %	5.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.208 %	1.072 ppb	10.223 ppb	1,129.341 ppb	10.264 ppb	96.562 %	0.038 ppb	0.119 ppb	99.272 %
Concentration per Run 1	99.057 %	1.156 ppb	10.105 ppb	1,161.901 ppb	10.459 ppb	94.572 %	0.046 ppb	0.133 ppb	91.663 %
Concentration per Run 2	109.441 %	1.015 ppb	10.050 ppb	1,106.767 ppb	10.178 ppb	101.373 %	0.033 ppb	0.125 ppb	108.738 %
Concentration per Run 3	101.127 %	1.047 ppb	10.514 ppb	1,119.354 ppb	10.156 ppb	93.740 %	0.036 ppb	0.098 ppb	97.416 %
Concentration RSD	5.3 %	6.9 %	2.5 %	2.6 %	1.6 %	4.3 %	17.6 %	15.8 %	8.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	2.322 ppb	65.640 ppb	101.780 %	104.136 %	0.032 ppb	19.102 ppb
Concentration per Run 1	2.477 ppb	69.049 ppb	97.532 %	97.504 %	0.028 ppb	20.767 ppb
Concentration per Run 2	2.173 ppb	61.565 ppb	109.422 %	113.060 %	0.031 ppb	17.358 ppb
Concentration per Run 3	2.316 ppb	66.307 ppb	98.387 %	101.844 %	0.037 ppb	19.181 ppb
Concentration RSD	6.5 %	5.8 %	6.5 %	7.7 %	13.9 %	8.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	40	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 8:20:21 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	121.130 %	88.877 %	59.311 ppb	6,850.204 ppb	6,454.868 ppb	62.729 ppb	6,477.504 ppb	6,595.823 ppb	115.602 %
Concentration per Run 1	124.184 %	94.439 %	59.140 ppb	6,750.587 ppb	6,515.090 ppb	61.731 ppb	6,586.601 ppb	6,748.010 ppb	116.297 %
Concentration per Run 2	119.182 %	90.189 %	59.600 ppb	6,821.432 ppb	6,342.734 ppb	63.223 ppb	6,360.067 ppb	6,462.029 ppb	114.592 %
Concentration per Run 3	120.025 %	82.004 %	59.193 ppb	6,978.592 ppb	6,506.781 ppb	63.234 ppb	6,485.844 ppb	6,577.431 ppb	115.915 %
Recovery Percentage 1			98.852 %	114.170 %	107.581 %	104.549 %	107.958 %	109.930 %	
Concentration RSD	2.2 %	7.1 %	0.4 %	1.7 %	1.5 %	1.4 %	1.8 %	2.2 %	0.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.479 %	63.413 ppb	62.493 ppb	63.869 ppb	6,201.912 ppb	61.145 ppb	60.101 ppb	59.466 ppb	59.729 ppb
Concentration per Run 1	108.840 %	63.193 ppb	61.913 ppb	62.998 ppb	6,156.666 ppb	62.437 ppb	60.803 ppb	59.918 ppb	59.409 ppb
Concentration per Run 2	107.844 %	63.025 ppb	62.583 ppb	62.240 ppb	6,146.656 ppb	59.918 ppb	59.185 ppb	58.475 ppb	59.158 ppb
Concentration per Run 3	102.752 %	64.019 ppb	62.983 ppb	66.370 ppb	6,302.415 ppb	61.081 ppb	60.316 ppb	60.005 ppb	60.619 ppb
Recovery Percentage 1		105.688 %	104.155 %	106.449 %	103.365 %	101.909 %	100.169 %	99.110 %	99.548 %
Concentration RSD	3.1 %	0.8 %	0.9 %	3.4 %	1.4 %	2.1 %	1.4 %	1.4 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.918 %	60.219 ppb	63.830 ppb	64.341 ppb	58.730 ppb	98.951 %	58.311 ppb	57.573 ppb	101.133 %
Concentration per Run 1	104.433 %	60.282 ppb	62.951 ppb	64.274 ppb	57.311 ppb	101.361 %	57.843 ppb	56.350 ppb	104.618 %
Concentration per Run 2	102.534 %	59.997 ppb	63.082 ppb	64.223 ppb	59.033 ppb	100.454 %	58.672 ppb	57.981 ppb	102.193 %
Concentration per Run 3	95.787 %	60.378 ppb	65.458 ppb	64.526 ppb	59.846 ppb	95.037 %	58.418 ppb	58.386 ppb	96.586 %
Recovery Percentage 1		100.365 %	106.384 %	107.235 %	97.883 %		97.186 %	95.954 %	
Concentration RSD	4.5 %	0.3 %	2.2 %	0.3 %	2.2 %	3.5 %	0.7 %	1.9 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	60.166 ppb	59.444 ppb	98.147 %	100.888 %	55.921 ppb	57.004 ppb
Concentration per Run 1	58.814 ppb	59.197 ppb	100.855 %	102.392 %	51.665 ppb	56.755 ppb
Concentration per Run 2	59.917 ppb	59.232 ppb	97.629 %	100.451 %	56.647 ppb	56.942 ppb
Concentration per Run 3	61.766 ppb	59.903 ppb	95.959 %	99.821 %	59.452 ppb	57.316 ppb
Recovery Percentage 1	100.276 %	99.073 %			93.202 %	95.007 %
Concentration RSD	2.5 %	0.7 %	2.5 %	1.3 %	7.1 %	0.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	41	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 8:25:03 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	117.393 %	81.007 %	0.014 ppb	345.325 ppb	14.751 ppb	0.083 ppb	12.509 ppb	31.527 ppb	103.812 %
Concentration per Run 1	123.496 %	83.106 %	0.022 ppb	377.629 ppb	18.959 ppb	0.210 ppb	18.616 ppb	36.808 ppb	107.484 %
Concentration per Run 2	116.244 %	84.208 %	0.010 ppb	327.766 ppb	11.595 ppb	0.231 ppb	8.025 ppb	22.477 ppb	102.432 %
Concentration per Run 3	112.438 %	75.708 %	0.011 ppb	330.581 ppb	13.699 ppb	-0.191 ppb	10.886 ppb	35.297 ppb	101.521 %
Recovery Percentage 1			2.888 %	345.325 %	21.073 %	0.831 %	12.509 %	31.527 %	
Concentration RSD	4.8 %	5.7 %	44.6 %	8.1 %	25.7 %	286.1 %	43.8 %	25.0 %	3.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.730 %	0.018 ppb	0.026 ppb	0.710 ppb	15.810 ppb	0.021 ppb	0.078 ppb	0.090 ppb	0.210 ppb
Concentration per Run 1	96.532 %	-0.016 ppb	0.041 ppb	0.833 ppb	19.003 ppb	0.031 ppb	0.119 ppb	0.072 ppb	0.169 ppb
Concentration per Run 2	91.825 %	0.040 ppb	0.012 ppb	0.713 ppb	15.246 ppb	0.011 ppb	0.077 ppb	0.111 ppb	0.252 ppb
Concentration per Run 3	89.834 %	0.031 ppb	0.024 ppb	0.584 ppb	13.181 ppb	0.022 ppb	0.040 ppb	0.086 ppb	0.209 ppb
Recovery Percentage 1		0.366 %	2.551 %	71.021 %	31.620 %	4.275 %	3.920 %	8.958 %	4.200 %
Concentration RSD	3.7 %	165.3 %	57.0 %	17.5 %	18.7 %	47.9 %	50.4 %	22.0 %	19.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.303 %	-0.069 ppb	0.290 ppb	0.230 ppb	1.057 ppb	92.830 %	0.024 ppb	0.022 ppb	95.314 %
Concentration per Run 1	100.192 %	-0.038 ppb	0.322 ppb	0.285 ppb	1.074 ppb	96.822 %	0.028 ppb	0.021 ppb	99.715 %
Concentration per Run 2	94.704 %	-0.085 ppb	0.128 ppb	0.223 ppb	1.022 ppb	90.904 %	0.022 ppb	0.029 ppb	94.680 %
Concentration per Run 3	91.012 %	-0.083 ppb	0.419 ppb	0.182 ppb	1.075 ppb	90.764 %	0.021 ppb	0.016 ppb	91.548 %
Recovery Percentage 1		-13.747 %	5.800 %	2.301 %	52.845 %		5.915 %	11.060 %	
Concentration RSD	4.8 %	39.3 %	51.1 %	22.4 %	2.8 %	3.7 %	14.7 %	30.3 %	4.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.092 ppb	0.039 ppb	93.588 %	96.532 %	0.403 ppb	0.099 ppb
Concentration per Run 1	0.076 ppb	0.043 ppb	96.109 %	99.696 %	0.337 ppb	0.102 ppb
Concentration per Run 2	0.090 ppb	0.020 ppb	92.720 %	95.668 %	0.459 ppb	0.097 ppb
Concentration per Run 3	0.109 ppb	0.055 ppb	91.934 %	94.232 %	0.413 ppb	0.099 ppb
Recovery Percentage 1	2.288 %	7.865 %			40.297 %	9.945 %
Concentration RSD	18.3 %	44.9 %	2.4 %	2.9 %	15.3 %	2.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	42	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 8:39:44 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	123.495 %	80.850 %	59.482 ppb	6,214.347 ppb	6,021.580 ppb	60.779 ppb	6,305.257 ppb	6,561.718 ppb	112.363 %
Concentration per Run 1	130.064 %	82.161 %	57.434 ppb	6,444.697 ppb	6,280.410 ppb	63.452 ppb	6,690.189 ppb	6,878.474 ppb	115.589 %
Concentration per Run 2	122.926 %	76.495 %	60.012 ppb	6,281.550 ppb	6,015.498 ppb	59.828 ppb	6,216.957 ppb	6,487.988 ppb	112.357 %
Concentration per Run 3	117.493 %	83.893 %	61.000 ppb	5,916.793 ppb	5,768.833 ppb	59.057 ppb	6,008.624 ppb	6,318.692 ppb	109.143 %
Recovery Percentage 1			99.137 %	103.572 %	100.360 %	101.299 %	105.088 %	109.362 %	
Concentration RSD	5.1 %	4.8 %	3.1 %	4.3 %	4.2 %	3.9 %	5.5 %	4.4 %	2.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.567 %	63.417 ppb	62.413 ppb	62.848 ppb	6,092.728 ppb	60.042 ppb	59.383 ppb	59.358 ppb	58.567 ppb
Concentration per Run 1	94.313 %	63.941 ppb	63.768 ppb	63.819 ppb	6,285.070 ppb	62.994 ppb	61.113 ppb	59.830 ppb	60.379 ppb
Concentration per Run 2	89.382 %	63.692 ppb	62.537 ppb	63.147 ppb	6,105.665 ppb	60.052 ppb	60.684 ppb	60.234 ppb	57.944 ppb
Concentration per Run 3	97.006 %	62.619 ppb	60.934 ppb	61.577 ppb	5,887.449 ppb	57.079 ppb	56.351 ppb	58.010 ppb	57.378 ppb
Recovery Percentage 1		105.695 %	104.022 %	104.746 %	101.545 %	100.069 %	98.971 %	98.930 %	97.612 %
Concentration RSD	4.1 %	1.1 %	2.3 %	1.8 %	3.3 %	4.9 %	4.4 %	2.0 %	2.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.092 %	58.311 ppb	60.572 ppb	60.342 ppb	57.436 ppb	90.447 %	57.115 ppb	56.552 ppb	90.690 %
Concentration per Run 1	90.052 %	60.936 ppb	61.390 ppb	62.748 ppb	57.175 ppb	90.207 %	59.085 ppb	59.189 ppb	90.826 %
Concentration per Run 2	89.390 %	56.879 ppb	58.774 ppb	57.186 ppb	57.646 ppb	91.526 %	57.092 ppb	55.640 ppb	87.515 %
Concentration per Run 3	90.832 %	57.119 ppb	61.551 ppb	61.092 ppb	57.488 ppb	89.608 %	55.168 ppb	54.827 ppb	93.729 %
Recovery Percentage 1		97.186 %	100.953 %	100.570 %	95.727 %		95.192 %	94.253 %	
Concentration RSD	0.8 %	3.9 %	2.6 %	4.7 %	0.4 %	1.1 %	3.4 %	4.1 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	58.860 ppb	57.101 ppb	91.357 %	93.941 %	55.697 ppb	55.955 ppb
Concentration per Run 1	61.031 ppb	59.166 ppb	89.042 %	91.510 %	54.802 ppb	58.147 ppb
Concentration per Run 2	58.363 ppb	54.891 ppb	93.070 %	94.171 %	55.826 ppb	55.919 ppb
Concentration per Run 3	57.187 ppb	57.246 ppb	91.960 %	96.142 %	56.463 ppb	53.800 ppb
Recovery Percentage 1	98.100 %	95.168 %			92.828 %	93.259 %
Concentration RSD	3.3 %	3.8 %	2.3 %	2.5 %	1.5 %	3.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	43	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 9:12:58 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	124.091 %	66.946 %	0.000 ppb	69.348 ppb	0.843 ppb	-0.394 ppb	4.405 ppb	1.579 ppb	99.529 %
Concentration per Run 1	127.114 %	64.375 %	0.003 ppb	73.092 ppb	0.815 ppb	-0.346 ppb	3.811 ppb	3.731 ppb	99.495 %
Concentration per Run 2	124.037 %	67.838 %	0.003 ppb	74.277 ppb	1.219 ppb	-0.362 ppb	3.902 ppb	-0.002 ppb	99.708 %
Concentration per Run 3	121.121 %	68.625 %	-0.006 ppb	60.675 ppb	0.494 ppb	-0.473 ppb	5.502 ppb	1.007 ppb	99.386 %
Recovery Percentage 1			0.008 %	69.348 %	1.204 %	-3.938 %	4.405 %	1.579 %	
Concentration RSD	2.4 %	3.4 %	13,237.0 %	10.9 %	43.1 %	17.6 %	21.6 %	122.3 %	0.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	77.528 %	0.014 ppb	0.012 ppb	0.210 ppb	0.156 ppb	-0.001 ppb	0.005 ppb	0.017 ppb	0.000 ppb
Concentration per Run 1	78.523 %	-0.004 ppb	0.024 ppb	0.233 ppb	0.229 ppb	0.005 ppb	-0.002 ppb	0.004 ppb	-0.029 ppb
Concentration per Run 2	74.429 %	0.064 ppb	0.013 ppb	0.182 ppb	0.316 ppb	0.000 ppb	0.007 ppb	0.040 ppb	0.033 ppb
Concentration per Run 3	79.631 %	-0.017 ppb	-0.001 ppb	0.215 ppb	-0.076 ppb	-0.009 ppb	0.010 ppb	0.006 ppb	-0.004 ppb
Recovery Percentage 1		0.281 %	1.175 %	20.991 %	0.312 %	-0.204 %	0.258 %	1.683 %	-0.003 %
Concentration RSD	3.5 %	309.9 %	107.4 %	12.3 %	131.9 %	707.7 %	120.0 %	121.5 %	18,577.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	79.469 %	-0.035 ppb	-0.113 ppb	0.015 ppb	0.054 ppb	81.933 %	0.000 ppb	0.001 ppb	82.447 %
Concentration per Run 1	79.366 %	0.028 ppb	-0.005 ppb	0.021 ppb	0.034 ppb	80.893 %	0.000 ppb	0.004 ppb	83.111 %
Concentration per Run 2	76.659 %	0.016 ppb	-0.219 ppb	0.015 ppb	0.051 ppb	80.364 %	-0.001 ppb	-0.001 ppb	79.260 %
Concentration per Run 3	82.383 %	-0.151 ppb	-0.114 ppb	0.010 ppb	0.078 ppb	84.541 %	0.000 ppb	0.001 ppb	84.970 %
Recovery Percentage 1		-7.095 %	-2.252 %	0.152 %	2.712 %		-0.115 %	0.597 %	
Concentration RSD	3.6 %	281.8 %	95.0 %	34.4 %	41.1 %	2.8 %	118.8 %	199.1 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.012 ppb	0.002 ppb	81.332 %	85.042 %	0.021 ppb	0.047 ppb
Concentration per Run 1	0.008 ppb	0.009 ppb	79.719 %	84.458 %	0.013 ppb	0.057 ppb
Concentration per Run 2	0.013 ppb	-0.001 ppb	80.453 %	83.926 %	0.025 ppb	0.046 ppb
Concentration per Run 3	0.015 ppb	-0.001 ppb	83.824 %	86.741 %	0.025 ppb	0.038 ppb
Recovery Percentage 1	0.297 %	0.459 %			2.081 %	4.673 %
Concentration RSD	30.6 %	244.2 %	2.7 %	1.8 %	34.6 %	19.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	44	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905249-1 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:19:53 AM	Vial	22		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	128.434 %	77.807 %	-0.004 ppb	52.747 ppb	2.784 ppb	1.566 ppb	-0.023 ppb	17.637 ppb	105.547 %
Concentration per Run 1	130.095 %	73.032 %	-0.009 ppb	55.676 ppb	2.129 ppb	1.839 ppb	-2.226 ppb	12.119 ppb	105.223 %
Concentration per Run 2	129.611 %	74.449 %	-0.003 ppb	59.145 ppb	3.510 ppb	1.437 ppb	6.398 ppb	22.785 ppb	106.131 %
Concentration per Run 3	125.596 %	85.939 %	-0.001 ppb	43.420 ppb	2.714 ppb	1.421 ppb	-4.240 ppb	18.007 ppb	105.286 %
Concentration RSD	1.9 %	9.1 %	98.0 %	15.7 %	24.9 %	15.1 %	25,032.0 %	30.3 %	0.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	80.039 %	-0.018 ppb	0.032 ppb	0.145 ppb	1.587 ppb	0.000 ppb	0.041 ppb	0.023 ppb	0.287 ppb
Concentration per Run 1	77.076 %	-0.040 ppb	0.018 ppb	0.117 ppb	1.301 ppb	0.000 ppb	0.065 ppb	0.048 ppb	0.304 ppb
Concentration per Run 2	80.966 %	0.013 ppb	0.048 ppb	0.153 ppb	2.233 ppb	0.001 ppb	0.020 ppb	0.006 ppb	0.275 ppb
Concentration per Run 3	82.074 %	-0.027 ppb	0.029 ppb	0.164 ppb	1.227 ppb	-0.002 ppb	0.039 ppb	0.014 ppb	0.282 ppb
Concentration RSD	3.3 %	155.1 %	47.9 %	17.0 %	35.3 %	431.4 %	54.4 %	98.8 %	5.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.085 %	0.000 ppb	-0.010 ppb	0.012 ppb	0.037 ppb	87.517 %	-0.004 ppb	0.000 ppb	87.864 %
Concentration per Run 1	81.252 %	0.113 ppb	0.088 ppb	0.011 ppb	0.023 ppb	85.615 %	-0.002 ppb	0.002 ppb	85.280 %
Concentration per Run 2	89.088 %	0.035 ppb	-0.072 ppb	0.010 ppb	0.018 ppb	87.963 %	-0.004 ppb	-0.001 ppb	90.908 %
Concentration per Run 3	87.915 %	-0.149 ppb	-0.047 ppb	0.015 ppb	0.069 ppb	88.974 %	-0.004 ppb	-0.001 ppb	87.406 %
Concentration RSD	4.9 %	45,026.2 %	838.7 %	22.7 %	76.6 %	2.0 %	37.7 %	1,262.8 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.003 ppb	0.021 ppb	87.444 %	89.467 %	0.015 ppb	0.033 ppb
Concentration per Run 1	-0.004 ppb	0.023 ppb	84.765 %	86.363 %	0.006 ppb	0.041 ppb
Concentration per Run 2	0.009 ppb	0.021 ppb	88.869 %	90.031 %	0.023 ppb	0.032 ppb
Concentration per Run 3	0.004 ppb	0.019 ppb	88.699 %	92.005 %	0.016 ppb	0.027 ppb
Concentration RSD	219.7 %	9.7 %	2.7 %	3.2 %	58.2 %	20.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	45	User name	ALPHALAB\Metals-Instrument	Comment	FB
Analysis label:	I2418559-03 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:24:31 AM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	125.196 %	78.856 %	-0.001 ppb	37.594 ppb	2.457 ppb	6.778 ppb	-5.528 ppb	29.770 ppb	109.419 %
Concentration per Run 1	129.296 %	75.236 %	0.001 ppb	38.135 ppb	3.565 ppb	6.585 ppb	0.492 ppb	34.839 ppb	110.016 %
Concentration per Run 2	124.260 %	79.486 %	-0.002 ppb	40.452 ppb	1.979 ppb	7.326 ppb	-6.009 ppb	31.112 ppb	109.174 %
Concentration per Run 3	122.031 %	81.847 %	-0.002 ppb	34.194 ppb	1.827 ppb	6.423 ppb	-11.067 ppb	23.360 ppb	109.067 %
Concentration RSD	3.0 %	4.2 %	162.4 %	8.4 %	39.2 %	7.1 %	104.8 %	19.7 %	0.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.895 %	-0.027 ppb	0.039 ppb	0.044 ppb	1.570 ppb	0.000 ppb	0.090 ppb	0.237 ppb	0.249 ppb
Concentration per Run 1	92.141 %	-0.021 ppb	0.045 ppb	0.046 ppb	2.039 ppb	-0.003 ppb	0.137 ppb	0.286 ppb	0.263 ppb
Concentration per Run 2	93.182 %	-0.036 ppb	0.025 ppb	0.030 ppb	1.560 ppb	0.003 ppb	0.101 ppb	0.222 ppb	0.239 ppb
Concentration per Run 3	93.363 %	-0.023 ppb	0.046 ppb	0.056 ppb	1.110 ppb	0.000 ppb	0.033 ppb	0.204 ppb	0.244 ppb
Concentration RSD	0.7 %	30.1 %	29.9 %	30.2 %	29.6 %	970.5 %	58.3 %	18.1 %	5.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.518 %	-0.006 ppb	0.061 ppb	0.212 ppb	0.028 ppb	92.415 %	-0.003 ppb	0.000 ppb	93.357 %
Concentration per Run 1	90.913 %	0.008 ppb	0.054 ppb	0.209 ppb	0.016 ppb	93.823 %	-0.001 ppb	0.000 ppb	95.829 %
Concentration per Run 2	90.767 %	-0.022 ppb	0.149 ppb	0.211 ppb	0.013 ppb	91.614 %	-0.004 ppb	0.001 ppb	92.839 %
Concentration per Run 3	89.876 %	-0.005 ppb	-0.019 ppb	0.216 ppb	0.056 ppb	91.809 %	-0.003 ppb	-0.001 ppb	91.403 %
Concentration RSD	0.6 %	234.6 %	136.4 %	1.7 %	85.7 %	1.3 %	62.7 %	1,652.2 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	-0.001 ppb	0.159 ppb	89.998 %	92.111 %	0.011 ppb	0.032 ppb
Concentration per Run 1	-0.008 ppb	0.144 ppb	90.121 %	93.481 %	0.003 ppb	0.029 ppb
Concentration per Run 2	0.004 ppb	0.151 ppb	90.945 %	90.760 %	0.016 ppb	0.036 ppb
Concentration per Run 3	0.000 ppb	0.181 ppb	88.928 %	92.092 %	0.014 ppb	0.031 ppb
Concentration RSD	522.8 %	12.2 %	1.1 %	1.5 %	66.6 %	10.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	46	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	LDR Ni 5ppm	Rack	4		
Analysis started at:	4/10/2024 9:29:10 AM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	125.122 %	80.325 %	0.001 ppb	59.746 ppb	5.075 ppb	1.108 ppb	14.424 ppb	18.633 ppb	102.124 %
Concentration per Run 1	131.501 %	75.236 %	0.001 ppb	76.200 ppb	6.552 ppb	1.337 ppb	25.748 ppb	30.133 ppb	105.177 %
Concentration per Run 2	124.102 %	89.717 %	0.001 ppb	45.307 ppb	4.353 ppb	1.174 ppb	6.319 ppb	16.379 ppb	101.296 %
Concentration per Run 3	119.763 %	76.023 %	0.001 ppb	57.731 ppb	4.318 ppb	0.814 ppb	11.206 ppb	9.388 ppb	99.900 %
Concentration RSD	4.7 %	10.1 %	45.1 %	26.0 %	25.2 %	24.2 %	70.1 %	56.6 %	2.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	83.205 %	0.006 ppb	0.044 ppb	0.355 ppb	3.748 ppb	0.016 ppb	5,126.528 ppb	0.132 ppb	0.802 ppb
Concentration per Run 1	80.875 %	0.024 ppb	0.052 ppb	0.357 ppb	4.012 ppb	0.016 ppb	5,346.673 ppb	0.099 ppb	0.816 ppb
Concentration per Run 2	83.816 %	-0.016 ppb	0.047 ppb	0.361 ppb	2.733 ppb	0.025 ppb	5,004.483 ppb	0.130 ppb	0.815 ppb
Concentration per Run 3	84.925 %	0.011 ppb	0.033 ppb	0.346 ppb	4.500 ppb	0.007 ppb	5,028.428 ppb	0.169 ppb	0.776 ppb
Concentration RSD	2.5 %	320.7 %	22.7 %	2.2 %	24.3 %	55.6 %	3.7 %	26.6 %	2.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.102 %	0.003 ppb	0.410 ppb	0.077 ppb	0.052 ppb	90.265 %	0.009 ppb	0.008 ppb	89.908 %
Concentration per Run 1	88.169 %	0.066 ppb	0.393 ppb	0.087 ppb	0.028 ppb	89.070 %	0.012 ppb	0.011 ppb	88.101 %
Concentration per Run 2	90.895 %	-0.030 ppb	0.539 ppb	0.074 ppb	0.066 ppb	91.783 %	0.008 ppb	0.001 ppb	90.191 %
Concentration per Run 3	91.241 %	-0.026 ppb	0.299 ppb	0.070 ppb	0.060 ppb	89.942 %	0.006 ppb	0.012 ppb	91.430 %
Concentration RSD	1.9 %	1,646.5 %	29.4 %	11.3 %	39.3 %	1.5 %	38.9 %	80.7 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.010 ppb	0.074 ppb	87.357 %	90.619 %	0.017 ppb	0.048 ppb
Concentration per Run 1	0.010 ppb	0.069 ppb	83.261 %	86.949 %	0.011 ppb	0.053 ppb
Concentration per Run 2	0.007 ppb	0.082 ppb	89.669 %	92.381 %	0.017 ppb	0.046 ppb
Concentration per Run 3	0.014 ppb	0.070 ppb	89.140 %	92.527 %	0.023 ppb	0.045 ppb
Concentration RSD	35.4 %	10.1 %	4.1 %	3.5 %	37.2 %	8.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	47	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905249-2d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:36:36 AM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	122.912 %	83.525 %	5.213 ppb	1,102.033 ppb	1,039.184 ppb	210.863 ppb	1,102.597 ppb	1,133.250 ppb	106.035 %
Concentration per Run 1	130.920 %	82.634 %	5.096 ppb	1,139.875 ppb	1,056.531 ppb	216.875 ppb	1,116.465 ppb	1,115.125 ppb	110.326 %
Concentration per Run 2	121.413 %	78.384 %	5.260 ppb	1,111.151 ppb	1,058.120 ppb	213.551 ppb	1,049.015 ppb	1,092.970 ppb	104.494 %
Concentration per Run 3	116.404 %	89.559 %	5.282 ppb	1,055.073 ppb	1,002.900 ppb	202.162 ppb	1,142.313 ppb	1,191.654 ppb	103.285 %
Concentration RSD	6.0 %	6.8 %	1.9 %	3.9 %	3.0 %	3.7 %	4.4 %	4.6 %	3.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.712 %	55.326 ppb	22.174 ppb	56.154 ppb	112.297 ppb	53.041 ppb	53.601 ppb	25.497 ppb	51.575 ppb
Concentration per Run 1	94.585 %	56.068 ppb	22.214 ppb	55.920 ppb	112.824 ppb	53.314 ppb	54.235 ppb	25.735 ppb	51.746 ppb
Concentration per Run 2	89.472 %	55.695 ppb	22.509 ppb	55.725 ppb	113.787 ppb	53.531 ppb	53.484 ppb	25.611 ppb	51.919 ppb
Concentration per Run 3	91.078 %	54.216 ppb	21.799 ppb	56.818 ppb	110.279 ppb	52.276 ppb	53.084 ppb	25.145 ppb	51.061 ppb
Concentration RSD	2.9 %	1.8 %	1.6 %	1.0 %	1.6 %	1.3 %	1.1 %	1.2 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.591 %	11.787 ppb	11.491 ppb	100.160 ppb	97.999 ppb	92.124 %	4.893 ppb	5.256 ppb	92.811 %
Concentration per Run 1	92.869 %	11.878 ppb	11.894 ppb	102.002 ppb	97.926 ppb	93.213 %	4.954 ppb	5.279 ppb	95.553 %
Concentration per Run 2	89.386 %	11.713 ppb	11.192 ppb	97.548 ppb	97.566 ppb	91.993 %	4.866 ppb	5.185 ppb	91.669 %
Concentration per Run 3	92.520 %	11.770 ppb	11.387 ppb	100.930 ppb	98.506 ppb	91.166 %	4.858 ppb	5.304 ppb	91.212 %
Concentration RSD	2.1 %	0.7 %	3.2 %	2.3 %	0.5 %	1.1 %	1.1 %	1.2 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	45.233 ppb	197.452 ppb	92.412 %	95.413 %	11.948 ppb	50.049 ppb
Concentration per Run 1	45.300 ppb	197.539 ppb	93.119 %	96.892 %	11.967 ppb	49.481 ppb
Concentration per Run 2	44.628 ppb	195.067 ppb	93.074 %	94.046 %	11.966 ppb	50.711 ppb
Concentration per Run 3	45.770 ppb	199.749 ppb	91.044 %	95.301 %	11.912 ppb	49.956 ppb
Concentration RSD	1.3 %	1.2 %	1.3 %	1.5 %	0.3 %	1.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	48	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905249-3d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:41:13 AM	Vial	25		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	121.610 %	78.646 %	4.930 ppb	1,431.989 ppb	1,107.083 ppb	235.894 ppb	1,226.233 ppb	1,830.224 ppb	104.337 %
Concentration per Run 1	128.402 %	81.217 %	4.774 ppb	1,460.746 ppb	1,138.242 ppb	240.477 ppb	1,280.126 ppb	1,872.600 ppb	106.656 %
Concentration per Run 2	119.907 %	75.393 %	4.968 ppb	1,423.869 ppb	1,104.485 ppb	235.218 ppb	1,212.948 ppb	1,882.466 ppb	103.551 %
Concentration per Run 3	116.521 %	79.328 %	5.049 ppb	1,411.352 ppb	1,078.522 ppb	231.988 ppb	1,185.625 ppb	1,735.607 ppb	102.805 %
Concentration RSD	5.0 %	3.8 %	2.9 %	1.8 %	2.7 %	1.8 %	4.0 %	4.5 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.928 %	56.780 ppb	22.465 ppb	61.391 ppb	385.543 ppb	53.300 ppb	53.238 ppb	25.649 ppb	51.628 ppb
Concentration per Run 1	85.196 %	59.170 ppb	23.655 ppb	64.679 ppb	395.183 ppb	55.340 ppb	55.260 ppb	26.584 ppb	54.007 ppb
Concentration per Run 2	82.369 %	56.327 ppb	22.474 ppb	60.240 ppb	392.308 ppb	53.813 ppb	54.018 ppb	25.945 ppb	50.760 ppb
Concentration per Run 3	90.218 %	54.844 ppb	21.266 ppb	59.253 ppb	369.139 ppb	50.748 ppb	50.436 ppb	24.418 ppb	50.117 ppb
Concentration RSD	4.6 %	3.9 %	5.3 %	4.7 %	3.7 %	4.4 %	4.7 %	4.3 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.635 %	11.360 ppb	11.413 ppb	104.619 ppb	96.267 ppb	89.238 %	4.893 ppb	5.385 ppb	89.058 %
Concentration per Run 1	89.434 %	11.977 ppb	12.116 ppb	110.466 ppb	98.381 ppb	87.700 %	5.071 ppb	5.696 ppb	86.831 %
Concentration per Run 2	91.284 %	10.890 ppb	10.680 ppb	99.613 ppb	94.029 ppb	88.741 %	4.758 ppb	5.279 ppb	86.746 %
Concentration per Run 3	94.188 %	11.214 ppb	11.441 ppb	103.778 ppb	96.389 ppb	91.273 %	4.851 ppb	5.179 ppb	93.598 %
Concentration RSD	2.6 %	4.9 %	6.3 %	5.2 %	2.3 %	2.1 %	3.3 %	5.1 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	46.488 ppb	200.379 ppb	89.143 %	91.973 %	11.895 ppb	51.167 ppb
Concentration per Run 1	48.184 ppb	208.287 ppb	88.166 %	90.748 %	12.113 ppb	53.071 ppb
Concentration per Run 2	46.660 ppb	199.665 ppb	87.563 %	89.921 %	12.029 ppb	51.699 ppb
Concentration per Run 3	44.621 ppb	193.187 ppb	91.700 %	95.251 %	11.544 ppb	48.730 ppb
Concentration RSD	3.8 %	3.8 %	2.5 %	3.1 %	2.6 %	4.3 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	49	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905249-5d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:45:50 AM	Vial	27		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	122.449 %	80.850 %	0.006 ppb	327.671 ppb	43.935 ppb	20.822 ppb	42.370 ppb	665.119 ppb	108.108 %
Concentration per Run 1	125.289 %	79.643 %	0.003 ppb	329.916 ppb	47.032 ppb	20.953 ppb	37.360 ppb	633.222 ppb	107.528 %
Concentration per Run 2	121.275 %	76.338 %	0.002 ppb	345.607 ppb	41.987 ppb	20.749 ppb	46.192 ppb	690.058 ppb	108.237 %
Concentration per Run 3	120.782 %	86.569 %	0.012 ppb	307.489 ppb	42.787 ppb	20.764 ppb	43.557 ppb	672.078 ppb	108.558 %
Concentration RSD	2.0 %	6.5 %	94.9 %	5.8 %	6.2 %	0.5 %	10.7 %	4.4 %	0.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.940 %	0.129 ppb	0.057 ppb	4.900 ppb	277.710 ppb	0.295 ppb	0.413 ppb	0.073 ppb	1.529 ppb
Concentration per Run 1	95.897 %	0.151 ppb	0.066 ppb	4.958 ppb	262.464 ppb	0.310 ppb	0.419 ppb	0.082 ppb	1.420 ppb
Concentration per Run 2	82.889 %	0.138 ppb	0.047 ppb	4.812 ppb	293.387 ppb	0.274 ppb	0.360 ppb	0.099 ppb	1.689 ppb
Concentration per Run 3	91.033 %	0.099 ppb	0.057 ppb	4.930 ppb	277.280 ppb	0.302 ppb	0.460 ppb	0.037 ppb	1.478 ppb
Concentration RSD	7.3 %	21.1 %	17.1 %	1.6 %	5.6 %	6.4 %	12.1 %	43.5 %	9.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.706 %	0.124 ppb	-0.039 ppb	5.671 ppb	2.058 ppb	91.910 %	-0.002 ppb	0.013 ppb	91.928 %
Concentration per Run 1	98.132 %	0.075 ppb	-0.065 ppb	5.546 ppb	2.012 ppb	96.823 %	-0.002 ppb	0.004 ppb	97.963 %
Concentration per Run 2	87.280 %	0.199 ppb	0.027 ppb	5.787 ppb	2.029 ppb	87.163 %	-0.001 ppb	0.011 ppb	86.251 %
Concentration per Run 3	95.704 %	0.099 ppb	-0.079 ppb	5.680 ppb	2.132 ppb	91.743 %	-0.003 ppb	0.023 ppb	91.571 %
Concentration RSD	6.1 %	52.9 %	148.2 %	2.1 %	3.2 %	5.3 %	55.2 %	73.6 %	6.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	1.329 ppb	1.581 ppb	90.728 %	93.494 %	0.091 ppb	0.093 ppb
Concentration per Run 1	1.336 ppb	1.525 ppb	93.778 %	96.700 %	0.083 ppb	0.098 ppb
Concentration per Run 2	1.353 ppb	1.617 ppb	86.346 %	87.413 %	0.106 ppb	0.094 ppb
Concentration per Run 3	1.299 ppb	1.602 ppb	92.061 %	96.370 %	0.084 ppb	0.087 ppb
Concentration RSD	2.1 %	3.1 %	4.3 %	5.6 %	14.3 %	5.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	50	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905249-4 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:50:26 AM	Vial	26		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	117.253 %	82.738 %	0.071 ppb	3,041.734 ppb	435.452 ppb	194.179 ppb	536.693 ppb	6,550.069 ppb	107.342 %
Concentration per Run 1	122.482 %	82.634 %	0.077 ppb	3,296.783 ppb	469.474 ppb	210.657 ppb	597.650 ppb	7,087.121 ppb	108.389 %
Concentration per Run 2	115.117 %	84.522 %	0.072 ppb	2,878.302 ppb	427.231 ppb	179.549 ppb	508.425 ppb	6,244.897 ppb	105.383 %
Concentration per Run 3	114.160 %	81.060 %	0.064 ppb	2,950.116 ppb	409.650 ppb	192.332 ppb	504.005 ppb	6,318.191 ppb	108.253 %
Concentration RSD	3.9 %	2.1 %	9.6 %	7.4 %	7.1 %	8.1 %	9.8 %	7.1 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.935 %	0.584 ppb	0.430 ppb	50.064 ppb	2,856.585 ppb	3.082 ppb	1.384 ppb	0.918 ppb	11.333 ppb
Concentration per Run 1	87.911 %	0.660 ppb	0.481 ppb	53.270 ppb	3,020.117 ppb	3.193 ppb	1.286 ppb	1.023 ppb	11.943 ppb
Concentration per Run 2	88.613 %	0.607 ppb	0.423 ppb	49.207 ppb	2,780.143 ppb	3.077 ppb	1.529 ppb	0.908 ppb	11.125 ppb
Concentration per Run 3	96.282 %	0.487 ppb	0.385 ppb	47.715 ppb	2,769.495 ppb	2.976 ppb	1.335 ppb	0.824 ppb	10.932 ppb
Concentration RSD	5.1 %	15.2 %	11.2 %	5.7 %	5.0 %	3.5 %	9.3 %	10.9 %	4.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.698 %	2.496 ppb	-0.004 ppb	58.409 ppb	0.884 ppb	92.010 %	-0.002 ppb	0.113 ppb	94.451 %
Concentration per Run 1	91.179 %	2.664 ppb	0.067 ppb	61.926 ppb	0.901 ppb	88.512 %	-0.003 ppb	0.115 ppb	91.170 %
Concentration per Run 2	89.653 %	2.497 ppb	-0.014 ppb	54.919 ppb	0.849 ppb	94.408 %	-0.002 ppb	0.115 ppb	92.449 %
Concentration per Run 3	91.262 %	2.329 ppb	-0.065 ppb	58.384 ppb	0.902 ppb	93.108 %	-0.002 ppb	0.111 ppb	99.735 %
Concentration RSD	1.0 %	6.7 %	1,652.2 %	6.0 %	3.5 %	3.4 %	31.2 %	2.2 %	4.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.677 ppb	15.055 ppb	93.004 %	96.710 %	0.031 ppb	0.470 ppb
Concentration per Run 1	0.703 ppb	15.858 ppb	88.862 %	92.370 %	0.024 ppb	0.502 ppb
Concentration per Run 2	0.642 ppb	14.607 ppb	95.559 %	98.197 %	0.036 ppb	0.450 ppb
Concentration per Run 3	0.684 ppb	14.699 ppb	94.591 %	99.562 %	0.032 ppb	0.459 ppb
Concentration RSD	4.6 %	4.6 %	3.9 %	3.9 %	19.4 %	5.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	51	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418227-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:55:03 AM	Vial	24		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.932 %	81.951 %	0.062 ppb	3,071.482 ppb	425.641 ppb	195.615 ppb	537.622 ppb	6,693.643 ppb	102.735 %
Concentration per Run 1	118.237 %	79.328 %	0.064 ppb	3,133.724 ppb	429.700 ppb	198.885 ppb	550.561 ppb	6,751.985 ppb	102.370 %
Concentration per Run 2	114.731 %	81.847 %	0.059 ppb	3,039.134 ppb	427.192 ppb	193.417 ppb	521.302 ppb	6,556.728 ppb	103.916 %
Concentration per Run 3	111.829 %	84.680 %	0.064 ppb	3,041.590 ppb	420.031 ppb	194.544 ppb	541.003 ppb	6,772.216 ppb	101.918 %
Concentration RSD	2.8 %	3.3 %	4.5 %	1.8 %	1.2 %	1.5 %	2.8 %	1.8 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.759 %	0.554 ppb	0.413 ppb	50.466 ppb	2,864.218 ppb	3.084 ppb	1.182 ppb	0.889 ppb	11.522 ppb
Concentration per Run 1	88.885 %	0.584 ppb	0.441 ppb	51.360 ppb	2,959.004 ppb	3.248 ppb	1.267 ppb	0.983 ppb	12.085 ppb
Concentration per Run 2	90.829 %	0.507 ppb	0.420 ppb	50.023 ppb	2,840.152 ppb	3.099 ppb	1.040 ppb	0.870 ppb	11.369 ppb
Concentration per Run 3	89.562 %	0.573 ppb	0.379 ppb	50.014 ppb	2,793.498 ppb	2.906 ppb	1.239 ppb	0.814 ppb	11.113 ppb
Concentration RSD	1.1 %	7.5 %	7.6 %	1.5 %	3.0 %	5.5 %	10.5 %	9.7 %	4.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.053 %	2.639 ppb	0.181 ppb	59.294 ppb	0.571 ppb	90.113 %	-0.003 ppb	0.129 ppb	89.568 %
Concentration per Run 1	85.765 %	2.940 ppb	0.171 ppb	60.690 ppb	0.571 ppb	86.191 %	-0.001 ppb	0.111 ppb	85.318 %
Concentration per Run 2	92.173 %	2.528 ppb	0.177 ppb	58.463 ppb	0.545 ppb	93.207 %	-0.003 ppb	0.154 ppb	90.654 %
Concentration per Run 3	95.220 %	2.451 ppb	0.194 ppb	58.730 ppb	0.596 ppb	90.943 %	-0.004 ppb	0.123 ppb	92.733 %
Concentration RSD	5.3 %	10.0 %	6.7 %	2.1 %	4.5 %	4.0 %	48.1 %	17.2 %	4.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.408 ppb	15.324 ppb	90.030 %	93.423 %	0.021 ppb	0.504 ppb
Concentration per Run 1	0.409 ppb	15.268 ppb	85.787 %	88.856 %	0.011 ppb	0.536 ppb
Concentration per Run 2	0.378 ppb	15.135 ppb	93.726 %	95.093 %	0.023 ppb	0.486 ppb
Concentration per Run 3	0.436 ppb	15.569 ppb	90.577 %	96.319 %	0.028 ppb	0.489 ppb
Concentration RSD	7.0 %	1.4 %	4.4 %	4.3 %	41.6 %	5.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	52	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2415144-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 9:59:42 AM	Vial	29		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	111.330 %	83.158 %	0.000 ppb	10.852 ppb	2.634 ppb	1.545 ppb	-9.400 ppb	5.297 ppb	102.455 %
Concentration per Run 1	113.268 %	86.883 %	0.002 ppb	7.948 ppb	2.185 ppb	1.198 ppb	-6.594 ppb	7.042 ppb	102.367 %
Concentration per Run 2	111.819 %	85.467 %	-0.006 ppb	11.118 ppb	2.838 ppb	1.565 ppb	-4.518 ppb	2.604 ppb	102.847 %
Concentration per Run 3	108.902 %	77.125 %	0.005 ppb	13.489 ppb	2.880 ppb	1.871 ppb	-17.089 ppb	6.246 ppb	102.151 %
Concentration RSD	2.0 %	6.3 %	2,736.1 %	25.6 %	14.8 %	21.8 %	71.7 %	44.7 %	0.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.555 %	-0.001 ppb	0.963 ppb	0.114 ppb	14.296 ppb	0.003 ppb	0.443 ppb	0.214 ppb	0.228 ppb
Concentration per Run 1	85.582 %	-0.017 ppb	0.937 ppb	0.137 ppb	14.600 ppb	0.001 ppb	0.554 ppb	0.250 ppb	0.219 ppb
Concentration per Run 2	87.752 %	-0.025 ppb	1.045 ppb	0.137 ppb	14.601 ppb	0.004 ppb	0.401 ppb	0.224 ppb	0.272 ppb
Concentration per Run 3	95.331 %	0.039 ppb	0.908 ppb	0.069 ppb	13.687 ppb	0.003 ppb	0.375 ppb	0.167 ppb	0.194 ppb
Concentration RSD	5.7 %	3,209.5 %	7.5 %	34.6 %	3.7 %	55.9 %	21.9 %	20.0 %	17.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.233 %	-0.092 ppb	-0.135 ppb	0.017 ppb	0.231 ppb	90.356 %	-0.004 ppb	-0.001 ppb	90.485 %
Concentration per Run 1	85.814 %	-0.001 ppb	-0.083 ppb	0.018 ppb	0.237 ppb	90.316 %	-0.004 ppb	-0.001 ppb	88.843 %
Concentration per Run 2	90.578 %	-0.111 ppb	-0.153 ppb	0.016 ppb	0.247 ppb	88.866 %	-0.004 ppb	-0.001 ppb	89.670 %
Concentration per Run 3	94.306 %	-0.166 ppb	-0.168 ppb	0.017 ppb	0.209 ppb	91.888 %	-0.006 ppb	-0.001 ppb	92.942 %
Concentration RSD	4.7 %	91.0 %	33.8 %	5.8 %	8.4 %	1.7 %	21.7 %	0.0 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.208 ppb	0.019 ppb	91.062 %	93.414 %	0.008 ppb	0.018 ppb
Concentration per Run 1	0.207 ppb	0.016 ppb	89.243 %	90.692 %	0.002 ppb	0.018 ppb
Concentration per Run 2	0.218 ppb	0.022 ppb	89.509 %	92.305 %	0.013 ppb	0.016 ppb
Concentration per Run 3	0.200 ppb	0.020 ppb	94.435 %	97.246 %	0.010 ppb	0.020 ppb
Concentration RSD	4.2 %	15.4 %	3.2 %	3.7 %	66.3 %	10.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	53	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905249-6d5 6020TL	Rack	1		
Analysis started at:	4/10/2024 10:04:20 AM	Vial	28		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	116.063 %	84.050 %	0.006 ppb	600.888 ppb	88.327 ppb	38.965 ppb	91.524 ppb	1,252.235 ppb	104.107 %
Concentration per Run 1	118.155 %	83.735 %	0.007 ppb	591.559 ppb	91.707 ppb	37.706 ppb	88.697 ppb	1,245.879 ppb	103.283 %
Concentration per Run 2	116.793 %	90.661 %	0.006 ppb	577.677 ppb	83.463 ppb	38.581 ppb	91.238 ppb	1,237.560 ppb	104.350 %
Concentration per Run 3	113.241 %	77.754 %	0.007 ppb	633.428 ppb	89.811 ppb	40.609 ppb	94.636 ppb	1,273.267 ppb	104.688 %
Concentration RSD	2.2 %	7.7 %	8.9 %	4.8 %	4.9 %	3.8 %	3.3 %	1.5 %	0.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.863 %	0.096 ppb	0.069 ppb	10.009 ppb	556.034 ppb	0.631 ppb	0.408 ppb	0.149 ppb	2.637 ppb
Concentration per Run 1	89.767 %	0.113 ppb	0.068 ppb	9.759 ppb	537.782 ppb	0.631 ppb	0.353 ppb	0.177 ppb	2.636 ppb
Concentration per Run 2	92.910 %	0.114 ppb	0.071 ppb	10.086 ppb	560.772 ppb	0.609 ppb	0.497 ppb	0.167 ppb	2.647 ppb
Concentration per Run 3	92.911 %	0.060 ppb	0.069 ppb	10.183 ppb	569.546 ppb	0.653 ppb	0.373 ppb	0.102 ppb	2.627 ppb
Concentration RSD	2.0 %	32.4 %	2.3 %	2.2 %	3.0 %	3.5 %	19.1 %	27.2 %	0.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.089 %	0.352 ppb	0.022 ppb	11.235 ppb	0.187 ppb	93.230 %	-0.003 ppb	0.022 ppb	94.447 %
Concentration per Run 1	91.353 %	0.364 ppb	-0.011 ppb	10.756 ppb	0.169 ppb	94.348 %	-0.002 ppb	0.032 ppb	91.667 %
Concentration per Run 2	92.908 %	0.299 ppb	0.097 ppb	11.546 ppb	0.174 ppb	92.811 %	-0.003 ppb	0.022 ppb	96.019 %
Concentration per Run 3	95.005 %	0.392 ppb	-0.019 ppb	11.404 ppb	0.218 ppb	92.530 %	-0.004 ppb	0.013 ppb	95.655 %
Concentration RSD	2.0 %	13.5 %	288.1 %	3.7 %	14.6 %	1.0 %	23.7 %	44.0 %	2.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.154 ppb	2.868 ppb	94.232 %	96.700 %	0.007 ppb	0.114 ppb
Concentration per Run 1	0.136 ppb	2.740 ppb	95.316 %	95.967 %	-0.001 ppb	0.115 ppb
Concentration per Run 2	0.172 ppb	3.031 ppb	93.321 %	97.395 %	0.011 ppb	0.109 ppb
Concentration per Run 3	0.153 ppb	2.833 ppb	94.058 %	96.737 %	0.010 ppb	0.116 ppb
Concentration RSD	11.5 %	5.2 %	1.1 %	0.7 %	95.1 %	3.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	54	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 10:08:57 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	113.058 %	83.788 %	57.855 ppb	6,124.489 ppb	6,112.679 ppb	60.487 ppb	6,136.957 ppb	6,384.841 ppb	116.436 %
Concentration per Run 1	116.100 %	77.912 %	57.891 ppb	6,387.066 ppb	6,214.799 ppb	60.306 ppb	6,201.479 ppb	6,480.515 ppb	116.844 %
Concentration per Run 2	112.983 %	83.578 %	57.430 ppb	6,025.216 ppb	6,153.150 ppb	61.112 ppb	6,150.256 ppb	6,375.524 ppb	116.447 %
Concentration per Run 3	110.091 %	89.874 %	58.244 ppb	5,961.186 ppb	5,970.088 ppb	60.043 ppb	6,059.136 ppb	6,298.483 ppb	116.017 %
Recovery Percentage 1			96.426 %	102.075 %	101.878 %	100.811 %	102.283 %	106.414 %	
Concentration RSD	2.7 %	7.1 %	0.7 %	3.7 %	2.1 %	0.9 %	1.2 %	1.4 %	0.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.312 %	61.020 ppb	60.779 ppb	61.283 ppb	6,032.071 ppb	60.074 ppb	59.350 ppb	58.925 ppb	59.378 ppb
Concentration per Run 1	98.590 %	63.254 ppb	62.398 ppb	61.936 ppb	6,138.450 ppb	61.832 ppb	61.674 ppb	60.509 ppb	60.604 ppb
Concentration per Run 2	102.164 %	59.560 ppb	60.731 ppb	61.339 ppb	6,011.415 ppb	59.136 ppb	58.580 ppb	58.676 ppb	59.987 ppb
Concentration per Run 3	103.182 %	60.246 ppb	59.208 ppb	60.573 ppb	5,946.348 ppb	59.254 ppb	57.795 ppb	57.589 ppb	57.543 ppb
Recovery Percentage 1		101.700 %	101.298 %	102.138 %	100.535 %	100.124 %	98.917 %	98.208 %	98.964 %
Concentration RSD	2.4 %	3.2 %	2.6 %	1.1 %	1.6 %	2.5 %	3.5 %	2.5 %	2.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.824 %	58.809 ppb	61.065 ppb	61.082 ppb	58.308 ppb	93.040 %	58.635 ppb	58.542 ppb	93.257 %
Concentration per Run 1	89.564 %	59.719 ppb	60.648 ppb	61.258 ppb	56.467 ppb	90.840 %	59.497 ppb	59.147 ppb	89.557 %
Concentration per Run 2	94.397 %	59.041 ppb	62.254 ppb	61.548 ppb	59.465 ppb	93.905 %	58.345 ppb	58.527 ppb	94.449 %
Concentration per Run 3	97.510 %	57.667 ppb	60.293 ppb	60.438 ppb	58.992 ppb	94.374 %	58.064 ppb	57.952 ppb	95.767 %
Recovery Percentage 1		98.015 %	101.775 %	101.803 %	97.180 %		97.726 %	97.570 %	
Concentration RSD	4.3 %	1.8 %	1.7 %	0.9 %	2.8 %	2.1 %	1.3 %	1.0 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	60.837 ppb	58.963 ppb	94.345 %	97.029 %	57.470 ppb	57.426 ppb
Concentration per Run 1	61.393 ppb	57.984 ppb	91.965 %	95.332 %	54.596 ppb	58.444 ppb
Concentration per Run 2	61.252 ppb	59.983 ppb	96.713 %	98.538 %	57.668 ppb	57.071 ppb
Concentration per Run 3	59.866 ppb	58.923 ppb	94.357 %	97.219 %	60.146 ppb	56.764 ppb
Recovery Percentage 1	101.395 %	98.272 %			95.783 %	95.710 %
Concentration RSD	1.4 %	1.7 %	2.5 %	1.7 %	4.8 %	1.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	55	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 10:13:38 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.304 %	83.578 %	0.007 ppb	26.552 ppb	1.068 ppb	-0.308 ppb	5.004 ppb	2.517 ppb	97.483 %
Concentration per Run 1	110.484 %	78.384 %	0.012 ppb	33.322 ppb	1.912 ppb	-0.336 ppb	16.402 ppb	2.627 ppb	98.210 %
Concentration per Run 2	106.646 %	90.031 %	-0.001 ppb	18.796 ppb	0.164 ppb	-0.289 ppb	2.776 ppb	5.167 ppb	96.854 %
Concentration per Run 3	104.781 %	82.319 %	0.010 ppb	27.538 ppb	1.127 ppb	-0.300 ppb	-4.165 ppb	-0.242 ppb	97.385 %
Recovery Percentage 1			1.403 %	26.552 %	1.525 %	-3.084 %	5.004 %	2.517 %	
Concentration RSD	2.7 %	7.1 %	99.4 %	27.5 %	82.0 %	8.0 %	209.1 %	107.5 %	0.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.063 %	-0.029 ppb	0.012 ppb	0.160 ppb	10.173 ppb	0.009 ppb	0.031 ppb	-0.011 ppb	-0.011 ppb
Concentration per Run 1	83.816 %	-0.040 ppb	0.032 ppb	0.177 ppb	13.050 ppb	0.016 ppb	0.055 ppb	0.013 ppb	-0.018 ppb
Concentration per Run 2	88.047 %	-0.027 ppb	0.000 ppb	0.172 ppb	9.117 ppb	0.000 ppb	0.028 ppb	-0.026 ppb	-0.016 ppb
Concentration per Run 3	86.327 %	-0.020 ppb	0.003 ppb	0.130 ppb	8.354 ppb	0.010 ppb	0.011 ppb	-0.019 ppb	0.001 ppb
Recovery Percentage 1		-0.575 %	1.170 %	15.979 %	20.347 %	1.719 %	1.566 %	-1.064 %	-0.222 %
Concentration RSD	2.5 %	34.3 %	154.2 %	16.0 %	24.8 %	88.5 %	72.1 %	194.9 %	91.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	92.275 %	0.057 ppb	0.216 ppb	0.015 ppb	1.033 ppb	89.827 %	0.005 ppb	0.010 ppb	89.789 %
Concentration per Run 1	89.357 %	0.091 ppb	0.363 ppb	0.019 ppb	1.018 ppb	87.880 %	0.007 ppb	0.009 ppb	87.589 %
Concentration per Run 2	93.121 %	0.070 ppb	0.184 ppb	0.017 ppb	1.026 ppb	91.125 %	0.001 ppb	0.010 ppb	90.693 %
Concentration per Run 3	94.347 %	0.009 ppb	0.101 ppb	0.008 ppb	1.055 ppb	90.476 %	0.007 ppb	0.009 ppb	91.084 %
Recovery Percentage 1		11.352 %	4.320 %	0.145 %	51.646 %		1.304 %	4.790 %	
Concentration RSD	2.8 %	75.6 %	62.0 %	37.1 %	1.9 %	1.9 %	64.1 %	7.7 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.158 ppb	0.018 ppb	88.991 %	90.917 %	0.521 ppb	0.029 ppb
Concentration per Run 1	0.150 ppb	0.019 ppb	86.772 %	87.934 %	0.599 ppb	0.035 ppb
Concentration per Run 2	0.153 ppb	0.010 ppb	89.985 %	93.042 %	0.527 ppb	0.031 ppb
Concentration per Run 3	0.172 ppb	0.024 ppb	90.217 %	91.777 %	0.437 ppb	0.021 ppb
Recovery Percentage 1	3.954 %	3.552 %			52.122 %	2.894 %
Concentration RSD	7.5 %	41.2 %	2.2 %	2.9 %	15.6 %	24.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	56	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418087-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 10:23:20 AM	Vial	30		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.933 %	89.821 %	0.031 ppb	9,480.488 ppb	7,655.311 ppb	370.231 ppb	2,258.378 ppb	28,731.748 ppb	109.203 %
Concentration per Run 1	120.526 %	85.939 %	0.040 ppb	9,530.241 ppb	7,817.308 ppb	377.472 ppb	2,239.423 ppb	27,973.077 ppb	111.788 %
Concentration per Run 2	113.491 %	96.485 %	0.019 ppb	9,167.166 ppb	7,397.934 ppb	355.088 ppb	2,255.867 ppb	29,292.168 ppb	107.544 %
Concentration per Run 3	110.782 %	87.041 %	0.034 ppb	9,744.057 ppb	7,750.691 ppb	378.133 ppb	2,279.845 ppb	28,929.999 ppb	108.278 %
Concentration RSD	4.4 %	6.5 %	34.2 %	3.1 %	2.9 %	3.5 %	0.9 %	2.4 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.072 %	3.716 ppb	1.463 ppb	59.735 ppb	340.197 ppb	0.284 ppb	1.221 ppb	11.382 ppb	19.701 ppb
Concentration per Run 1	103.409 %	3.442 ppb	1.369 ppb	57.195 ppb	339.471 ppb	0.291 ppb	1.210 ppb	11.084 ppb	19.628 ppb
Concentration per Run 2	96.576 %	3.856 ppb	1.522 ppb	62.319 ppb	348.792 ppb	0.278 ppb	1.240 ppb	11.495 ppb	19.743 ppb
Concentration per Run 3	97.232 %	3.851 ppb	1.499 ppb	59.691 ppb	332.330 ppb	0.285 ppb	1.212 ppb	11.568 ppb	19.732 ppb
Concentration RSD	3.8 %	6.4 %	5.6 %	4.3 %	2.4 %	2.3 %	1.4 %	2.3 %	0.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.952 %	0.808 ppb	0.182 ppb	74.947 ppb	0.678 ppb	96.729 %	0.008 ppb	0.016 ppb	99.725 %
Concentration per Run 1	101.090 %	0.932 ppb	0.107 ppb	74.552 ppb	0.642 ppb	98.901 %	0.014 ppb	0.017 ppb	103.352 %
Concentration per Run 2	99.600 %	0.793 ppb	0.146 ppb	74.654 ppb	0.690 ppb	95.858 %	0.005 ppb	0.019 ppb	99.520 %
Concentration per Run 3	99.166 %	0.698 ppb	0.294 ppb	75.634 ppb	0.703 ppb	95.429 %	0.006 ppb	0.012 ppb	96.304 %
Concentration RSD	1.0 %	14.6 %	54.1 %	0.8 %	4.8 %	2.0 %	57.5 %	19.9 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.182 ppb	106.561 ppb	100.092 %	102.194 %	0.071 ppb	1.036 ppb
Concentration per Run 1	0.178 ppb	103.156 ppb	103.641 %	104.090 %	0.065 ppb	1.015 ppb
Concentration per Run 2	0.184 ppb	106.811 ppb	97.900 %	101.940 %	0.081 ppb	1.043 ppb
Concentration per Run 3	0.185 ppb	109.716 ppb	98.736 %	100.550 %	0.068 ppb	1.048 ppb
Concentration RSD	2.1 %	3.1 %	3.1 %	1.7 %	12.0 %	1.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	57	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418087-02 6020TL	Rack	1		
Analysis started at:	4/10/2024 10:27:57 AM	Vial	31		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	114.068 %	94.543 %	0.022 ppb	9,270.279 ppb	7,387.358 ppb	276.624 ppb	2,165.705 ppb	28,808.072 ppb	109.248 %
Concentration per Run 1	117.778 %	93.652 %	0.024 ppb	9,295.790 ppb	7,297.681 ppb	275.368 ppb	2,179.986 ppb	28,512.016 ppb	109.974 %
Concentration per Run 2	113.315 %	96.485 %	0.021 ppb	9,163.136 ppb	7,331.563 ppb	273.756 ppb	2,165.120 ppb	28,851.760 ppb	109.152 %
Concentration per Run 3	111.112 %	93.494 %	0.022 ppb	9,351.911 ppb	7,532.830 ppb	280.746 ppb	2,152.009 ppb	29,060.441 ppb	108.618 %
Concentration RSD	3.0 %	1.8 %	6.4 %	1.0 %	1.7 %	1.3 %	0.6 %	1.0 %	0.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.291 %	3.449 ppb	1.322 ppb	23.005 ppb	236.484 ppb	0.159 ppb	1.556 ppb	11.919 ppb	29.956 ppb
Concentration per Run 1	100.988 %	3.383 ppb	1.285 ppb	22.968 ppb	230.527 ppb	0.157 ppb	1.499 ppb	11.929 ppb	29.514 ppb
Concentration per Run 2	97.662 %	3.714 ppb	1.364 ppb	23.088 ppb	245.221 ppb	0.183 ppb	1.445 ppb	11.743 ppb	30.587 ppb
Concentration per Run 3	99.223 %	3.249 ppb	1.318 ppb	22.959 ppb	233.704 ppb	0.138 ppb	1.725 ppb	12.086 ppb	29.766 ppb
Concentration RSD	1.7 %	6.9 %	3.0 %	0.3 %	3.3 %	14.3 %	9.6 %	1.4 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.589 %	0.772 ppb	0.216 ppb	76.318 ppb	0.615 ppb	96.876 %	0.005 ppb	0.024 ppb	99.066 %
Concentration per Run 1	100.692 %	0.773 ppb	0.364 ppb	74.116 ppb	0.542 ppb	99.430 %	0.005 ppb	0.028 ppb	102.435 %
Concentration per Run 2	95.752 %	0.695 ppb	-0.003 ppb	77.582 ppb	0.626 ppb	95.867 %	0.004 ppb	0.020 ppb	97.398 %
Concentration per Run 3	96.324 %	0.848 ppb	0.287 ppb	77.255 ppb	0.676 ppb	95.330 %	0.004 ppb	0.024 ppb	97.364 %
Concentration RSD	2.8 %	9.9 %	89.4 %	2.5 %	11.0 %	2.3 %	16.0 %	16.3 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.164 ppb	104.314 ppb	99.314 %	101.882 %	0.039 ppb	1.579 ppb
Concentration per Run 1	0.153 ppb	102.176 ppb	101.279 %	103.079 %	0.028 ppb	1.566 ppb
Concentration per Run 2	0.177 ppb	104.839 ppb	99.101 %	101.548 %	0.043 ppb	1.539 ppb
Concentration per Run 3	0.163 ppb	105.927 ppb	97.563 %	101.018 %	0.045 ppb	1.632 ppb
Concentration RSD	7.3 %	1.8 %	1.9 %	1.1 %	23.5 %	3.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	58	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418227-02 6020TL	Rack	1		
Analysis started at:	4/10/2024 10:32:35 AM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.821 %	90.346 %	0.139 ppb	1,795.215 ppb	881.416 ppb	283.332 ppb	512.024 ppb	738.619 ppb	103.840 %
Concentration per Run 1	112.065 %	93.966 %	0.135 ppb	1,708.543 ppb	842.727 ppb	265.279 ppb	495.438 ppb	717.303 ppb	105.543 %
Concentration per Run 2	107.245 %	92.392 %	0.130 ppb	1,777.823 ppb	875.455 ppb	283.735 ppb	511.450 ppb	766.067 ppb	103.405 %
Concentration per Run 3	104.154 %	84.680 %	0.151 ppb	1,899.280 ppb	926.065 ppb	300.982 ppb	529.184 ppb	732.487 ppb	102.571 %
Concentration RSD	3.7 %	5.5 %	8.0 %	5.4 %	4.8 %	6.3 %	3.3 %	3.4 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.799 %	0.222 ppb	0.205 ppb	29.919 ppb	79.488 ppb	1.702 ppb	2.016 ppb	0.554 ppb	7.642 ppb
Concentration per Run 1	94.993 %	0.092 ppb	0.176 ppb	29.549 ppb	78.816 ppb	1.713 ppb	1.996 ppb	0.600 ppb	7.394 ppb
Concentration per Run 2	97.164 %	0.280 ppb	0.228 ppb	29.759 ppb	75.131 ppb	1.735 ppb	2.100 ppb	0.573 ppb	7.722 ppb
Concentration per Run 3	95.241 %	0.294 ppb	0.211 ppb	30.450 ppb	84.516 ppb	1.658 ppb	1.952 ppb	0.489 ppb	7.809 ppb
Concentration RSD	1.2 %	50.9 %	13.1 %	1.6 %	5.9 %	2.3 %	3.8 %	10.4 %	2.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.203 %	-0.095 ppb	0.029 ppb	20.844 ppb	0.092 ppb	97.854 %	-0.003 ppb	0.210 ppb	97.655 %
Concentration per Run 1	93.143 %	-0.050 ppb	-0.086 ppb	20.147 ppb	0.071 ppb	98.773 %	-0.003 ppb	0.201 ppb	97.216 %
Concentration per Run 2	97.015 %	-0.044 ppb	0.185 ppb	21.418 ppb	0.098 ppb	96.567 %	-0.002 ppb	0.204 ppb	99.003 %
Concentration per Run 3	98.450 %	-0.192 ppb	-0.010 ppb	20.966 ppb	0.106 ppb	98.220 %	-0.005 ppb	0.227 ppb	96.747 %
Concentration RSD	2.9 %	87.7 %	474.6 %	3.1 %	20.2 %	1.2 %	47.6 %	6.8 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.103 ppb	84.209 ppb	98.897 %	100.893 %	0.028 ppb	0.316 ppb
Concentration per Run 1	0.092 ppb	80.762 ppb	98.258 %	100.801 %	0.014 ppb	0.308 ppb
Concentration per Run 2	0.105 ppb	86.212 ppb	99.597 %	100.203 %	0.038 ppb	0.320 ppb
Concentration per Run 3	0.111 ppb	85.653 ppb	98.836 %	101.676 %	0.031 ppb	0.319 ppb
Concentration RSD	9.5 %	3.6 %	0.7 %	0.7 %	44.1 %	2.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	59	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418557-01 6020TL	Rack	1		
Analysis started at:	4/10/2024 10:37:13 AM	Vial	33		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	109.195 %	92.760 %	-0.004 ppb	3,101.901 ppb	2,272.568 ppb	31.641 ppb	1,914.778 ppb	26,894.231 ppb	108.729 %
Concentration per Run 1	112.989 %	101.207 %	-0.002 ppb	3,012.134 ppb	2,203.958 ppb	30.985 ppb	1,893.461 ppb	26,787.599 ppb	109.780 %
Concentration per Run 2	109.068 %	88.457 %	-0.008 ppb	3,119.547 ppb	2,310.364 ppb	32.024 ppb	1,937.073 ppb	26,800.829 ppb	109.836 %
Concentration per Run 3	105.526 %	88.615 %	-0.002 ppb	3,174.023 ppb	2,303.383 ppb	31.912 ppb	1,913.801 ppb	27,094.264 ppb	106.570 %
Concentration RSD	3.4 %	7.9 %	74.7 %	2.7 %	2.6 %	1.8 %	1.1 %	0.6 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.184 %	58.370 ppb	0.345 ppb	109.720 ppb	6,562.701 ppb	0.339 ppb	3.855 ppb	1.015 ppb	29.759 ppb
Concentration per Run 1	99.924 %	58.224 ppb	0.348 ppb	110.264 ppb	6,581.551 ppb	0.352 ppb	3.617 ppb	1.047 ppb	29.957 ppb
Concentration per Run 2	92.549 %	58.934 ppb	0.341 ppb	109.329 ppb	6,562.793 ppb	0.348 ppb	3.945 ppb	1.108 ppb	29.945 ppb
Concentration per Run 3	96.078 %	57.953 ppb	0.345 ppb	109.567 ppb	6,543.759 ppb	0.318 ppb	4.002 ppb	0.891 ppb	29.376 ppb
Concentration RSD	3.8 %	0.9 %	1.0 %	0.4 %	0.3 %	5.5 %	5.4 %	11.0 %	1.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.625 %	2.044 ppb	0.209 ppb	141.220 ppb	0.533 ppb	97.133 %	-0.002 ppb	0.035 ppb	97.125 %
Concentration per Run 1	99.281 %	2.011 ppb	0.244 ppb	143.317 ppb	0.483 ppb	98.338 %	-0.003 ppb	0.033 ppb	99.527 %
Concentration per Run 2	96.950 %	1.972 ppb	0.267 ppb	135.766 ppb	0.605 ppb	96.272 %	-0.002 ppb	0.039 ppb	92.872 %
Concentration per Run 3	96.643 %	2.149 ppb	0.117 ppb	144.576 ppb	0.513 ppb	96.789 %	-0.003 ppb	0.034 ppb	98.977 %
Concentration RSD	1.5 %	4.5 %	38.5 %	3.4 %	12.0 %	1.1 %	34.4 %	8.7 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.292 ppb	35.745 ppb	99.620 %	101.404 %	0.023 ppb	0.527 ppb
Concentration per Run 1	0.282 ppb	35.851 ppb	99.911 %	101.607 %	0.017 ppb	0.527 ppb
Concentration per Run 2	0.297 ppb	36.346 ppb	98.665 %	98.783 %	0.027 ppb	0.543 ppb
Concentration per Run 3	0.297 ppb	35.039 ppb	100.283 %	103.823 %	0.024 ppb	0.511 ppb
Concentration RSD	2.9 %	1.8 %	0.9 %	2.5 %	23.6 %	3.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	60	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418557-02 6020TL	Rack	1		
Analysis started at:	4/10/2024 10:41:51 AM	Vial	34		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.877 %	91.133 %	0.001 ppb	192.204 ppb	2.810 ppb	3.032 ppb	-17.213 ppb	5.407 ppb	100.389 %
Concentration per Run 1	106.875 %	88.772 %	-0.001 ppb	203.297 ppb	3.072 ppb	3.205 ppb	-12.135 ppb	7.220 ppb	101.080 %
Concentration per Run 2	104.915 %	90.661 %	-0.001 ppb	182.479 ppb	3.115 ppb	2.683 ppb	-17.820 ppb	4.361 ppb	101.815 %
Concentration per Run 3	99.842 %	93.966 %	0.005 ppb	190.836 ppb	2.244 ppb	3.208 ppb	-21.683 ppb	4.639 ppb	98.272 %
Concentration RSD	3.5 %	2.9 %	324.4 %	5.5 %	17.5 %	10.0 %	27.9 %	29.2 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.504 %	0.060 ppb	0.165 ppb	0.167 ppb	11.288 ppb	0.002 ppb	0.019 ppb	0.016 ppb	0.649 ppb
Concentration per Run 1	93.906 %	0.046 ppb	0.176 ppb	0.210 ppb	10.173 ppb	0.008 ppb	0.054 ppb	0.034 ppb	0.651 ppb
Concentration per Run 2	89.563 %	0.091 ppb	0.182 ppb	0.161 ppb	15.653 ppb	-0.001 ppb	0.017 ppb	0.014 ppb	0.685 ppb
Concentration per Run 3	94.042 %	0.044 ppb	0.137 ppb	0.130 ppb	8.037 ppb	-0.001 ppb	-0.014 ppb	-0.002 ppb	0.610 ppb
Concentration RSD	2.8 %	43.9 %	14.7 %	23.9 %	34.8 %	304.3 %	181.0 %	115.6 %	5.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	93.428 %	-0.183 ppb	-0.059 ppb	0.119 ppb	0.085 ppb	94.863 %	-0.003 ppb	0.002 ppb	94.020 %
Concentration per Run 1	93.377 %	-0.134 ppb	0.237 ppb	0.120 ppb	0.059 ppb	95.683 %	-0.004 ppb	0.000 ppb	95.956 %
Concentration per Run 2	91.135 %	-0.157 ppb	-0.345 ppb	0.120 ppb	0.079 ppb	93.288 %	-0.002 ppb	0.003 ppb	88.999 %
Concentration per Run 3	95.771 %	-0.259 ppb	-0.071 ppb	0.116 ppb	0.117 ppb	95.619 %	-0.003 ppb	0.002 ppb	97.105 %
Concentration RSD	2.5 %	36.4 %	490.4 %	2.0 %	34.3 %	1.4 %	26.8 %	77.5 %	4.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.037 ppb	0.144 ppb	96.638 %	98.613 %	0.013 ppb	0.004 ppb
Concentration per Run 1	0.030 ppb	0.128 ppb	96.913 %	99.630 %	0.006 ppb	0.003 ppb
Concentration per Run 2	0.033 ppb	0.158 ppb	94.358 %	94.534 %	0.018 ppb	0.009 ppb
Concentration per Run 3	0.048 ppb	0.147 ppb	98.642 %	101.675 %	0.015 ppb	0.001 ppb
Concentration RSD	26.5 %	10.5 %	2.2 %	3.7 %	50.7 %	97.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	61	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418557-04 6020TL	Rack	1		
Analysis started at:	4/10/2024 10:46:30 AM	Vial	35		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.583 %	91.920 %	0.002 ppb	3,154.693 ppb	2,269.438 ppb	35.072 ppb	1,912.877 ppb	27,005.620 ppb	102.235 %
Concentration per Run 1	110.558 %	91.291 %	0.003 ppb	3,220.672 ppb	2,305.810 ppb	35.146 ppb	1,918.986 ppb	27,432.477 ppb	104.192 %
Concentration per Run 2	105.170 %	94.911 %	0.001 ppb	3,104.192 ppb	2,235.749 ppb	34.776 ppb	1,941.974 ppb	26,850.215 ppb	102.147 %
Concentration per Run 3	101.020 %	89.559 %	0.002 ppb	3,139.213 ppb	2,266.756 ppb	35.295 ppb	1,877.670 ppb	26,734.169 ppb	100.367 %
Concentration RSD	4.5 %	3.0 %	61.0 %	1.9 %	1.5 %	0.8 %	1.7 %	1.4 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.872 %	60.985 ppb	0.446 ppb	109.298 ppb	6,566.023 ppb	0.335 ppb	4.215 ppb	1.369 ppb	33.491 ppb
Concentration per Run 1	92.753 %	62.675 ppb	0.515 ppb	111.648 ppb	6,771.836 ppb	0.335 ppb	4.323 ppb	1.413 ppb	34.873 ppb
Concentration per Run 2	95.241 %	61.890 ppb	0.404 ppb	109.025 ppb	6,584.920 ppb	0.367 ppb	4.335 ppb	1.435 ppb	33.275 ppb
Concentration per Run 3	96.621 %	58.389 ppb	0.419 ppb	107.220 ppb	6,341.313 ppb	0.302 ppb	3.986 ppb	1.258 ppb	32.324 ppb
Concentration RSD	2.1 %	3.7 %	13.5 %	2.0 %	3.3 %	9.7 %	4.7 %	7.0 %	3.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.799 %	2.136 ppb	0.130 ppb	143.048 ppb	0.504 ppb	95.552 %	-0.002 ppb	0.040 ppb	94.058 %
Concentration per Run 1	89.524 %	2.471 ppb	0.146 ppb	146.356 ppb	0.536 ppb	93.122 %	-0.002 ppb	0.039 ppb	88.622 %
Concentration per Run 2	97.213 %	1.990 ppb	0.208 ppb	143.852 ppb	0.461 ppb	95.080 %	-0.001 ppb	0.040 ppb	96.365 %
Concentration per Run 3	100.661 %	1.948 ppb	0.036 ppb	138.936 ppb	0.516 ppb	98.452 %	-0.003 ppb	0.041 ppb	97.187 %
Concentration RSD	6.0 %	13.6 %	66.8 %	2.6 %	7.7 %	2.8 %	43.7 %	2.8 %	5.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.280 ppb	36.568 ppb	98.556 %	100.258 %	0.018 ppb	0.593 ppb
Concentration per Run 1	0.279 ppb	38.518 ppb	94.539 %	95.055 %	0.009 ppb	0.624 ppb
Concentration per Run 2	0.290 ppb	35.774 ppb	98.067 %	100.833 %	0.024 ppb	0.585 ppb
Concentration per Run 3	0.269 ppb	35.411 ppb	103.061 %	104.886 %	0.022 ppb	0.570 ppb
Concentration RSD	3.7 %	4.6 %	4.3 %	4.9 %	45.4 %	4.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	62	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 11:06:19 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.654 %	89.559 %	58.576 ppb	5,951.488 ppb	5,920.860 ppb	60.780 ppb	5,933.164 ppb	6,158.719 ppb	111.037 %
Concentration per Run 1	110.409 %	85.624 %	57.536 ppb	6,087.320 ppb	6,042.230 ppb	61.598 ppb	6,087.809 ppb	6,398.781 ppb	111.976 %
Concentration per Run 2	104.420 %	88.930 %	59.391 ppb	5,921.102 ppb	5,863.042 ppb	60.616 ppb	5,883.370 ppb	6,103.433 ppb	112.055 %
Concentration per Run 3	102.132 %	94.124 %	58.801 ppb	5,846.043 ppb	5,857.308 ppb	60.126 ppb	5,828.314 ppb	5,973.943 ppb	109.081 %
Recovery Percentage 1			97.626 %	99.191 %	98.681 %	101.300 %	98.886 %	102.645 %	
Concentration RSD	4.0 %	4.8 %	1.6 %	2.1 %	1.8 %	1.2 %	2.3 %	3.5 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.157 %	60.123 ppb	60.333 ppb	60.476 ppb	5,918.946 ppb	58.502 ppb	57.966 ppb	57.696 ppb	58.533 ppb
Concentration per Run 1	97.481 %	62.016 ppb	61.962 ppb	62.037 ppb	5,992.912 ppb	59.168 ppb	58.951 ppb	58.943 ppb	58.607 ppb
Concentration per Run 2	103.862 %	59.900 ppb	60.282 ppb	60.617 ppb	5,970.841 ppb	59.959 ppb	58.529 ppb	57.600 ppb	59.538 ppb
Concentration per Run 3	105.129 %	58.452 ppb	58.756 ppb	58.774 ppb	5,793.083 ppb	56.380 ppb	56.417 ppb	56.544 ppb	57.453 ppb
Recovery Percentage 1		100.204 %	100.555 %	100.793 %	98.649 %	97.504 %	96.610 %	96.159 %	97.554 %
Concentration RSD	4.0 %	3.0 %	2.7 %	2.7 %	1.9 %	3.2 %	2.3 %	2.1 %	1.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.353 %	57.891 ppb	59.976 ppb	61.622 ppb	56.543 ppb	94.227 %	57.322 ppb	56.690 ppb	96.244 %
Concentration per Run 1	93.379 %	57.365 ppb	56.958 ppb	59.565 ppb	54.445 ppb	94.189 %	57.993 ppb	56.518 ppb	94.086 %
Concentration per Run 2	93.398 %	59.171 ppb	62.077 ppb	64.196 ppb	56.617 ppb	93.942 %	56.989 ppb	56.624 ppb	97.868 %
Concentration per Run 3	99.282 %	57.138 ppb	60.893 ppb	61.105 ppb	58.568 ppb	94.551 %	56.985 ppb	56.928 ppb	96.780 %
Recovery Percentage 1		96.485 %	99.960 %	102.703 %	94.238 %		95.537 %	94.483 %	
Concentration RSD	3.6 %	1.9 %	4.5 %	3.8 %	3.6 %	0.3 %	1.0 %	0.4 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	59.918 ppb	58.016 ppb	99.106 %	100.970 %	56.787 ppb	57.329 ppb
Concentration per Run 1	58.703 ppb	57.011 ppb	99.664 %	100.021 %	53.154 ppb	58.182 ppb
Concentration per Run 2	60.524 ppb	58.665 ppb	98.272 %	103.003 %	57.682 ppb	55.994 ppb
Concentration per Run 3	60.526 ppb	58.371 ppb	99.383 %	99.887 %	59.525 ppb	57.811 ppb
Recovery Percentage 1	99.863 %	96.693 %			94.645 %	95.548 %
Concentration RSD	1.8 %	1.5 %	0.7 %	1.7 %	5.8 %	2.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	63	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 11:11:00 AM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.560 %	91.658 %	0.003 ppb	-1.920 ppb	0.617 ppb	-0.414 ppb	-6.492 ppb	0.533 ppb	99.895 %
Concentration per Run 1	105.932 %	88.300 %	0.005 ppb	-0.500 ppb	0.874 ppb	-0.333 ppb	-4.860 ppb	2.910 ppb	101.699 %
Concentration per Run 2	100.301 %	97.744 %	-0.002 ppb	-4.561 ppb	0.073 ppb	-0.345 ppb	-3.251 ppb	-0.121 ppb	100.518 %
Concentration per Run 3	98.446 %	88.930 %	0.005 ppb	-0.699 ppb	0.904 ppb	-0.563 ppb	-11.366 ppb	-1.192 ppb	97.469 %
Recovery Percentage 1			0.602 %	-1.920 %	0.881 %	-4.138 %	-6.492 %	0.533 %	
Concentration RSD	3.8 %	5.8 %	132.3 %	119.2 %	76.3 %	31.3 %	66.2 %	399.6 %	2.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.645 %	-0.037 ppb	0.005 ppb	0.086 ppb	10.931 ppb	0.006 ppb	0.015 ppb	-0.006 ppb	0.011 ppb
Concentration per Run 1	94.562 %	-0.073 ppb	0.017 ppb	0.080 ppb	11.028 ppb	0.012 ppb	0.020 ppb	0.023 ppb	0.015 ppb
Concentration per Run 2	98.997 %	-0.035 ppb	0.004 ppb	0.064 ppb	10.676 ppb	0.007 ppb	0.006 ppb	-0.008 ppb	0.019 ppb
Concentration per Run 3	90.377 %	-0.003 ppb	-0.007 ppb	0.114 ppb	11.090 ppb	0.000 ppb	0.020 ppb	-0.031 ppb	-0.001 ppb
Recovery Percentage 1		-0.742 %	0.486 %	8.584 %	21.863 %	1.264 %	0.770 %	-0.567 %	0.218 %
Concentration RSD	4.6 %	94.0 %	245.0 %	29.7 %	2.0 %	94.3 %	53.2 %	480.0 %	95.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.338 %	-0.024 ppb	0.308 ppb	0.006 ppb	1.043 ppb	96.677 %	0.007 ppb	0.010 ppb	97.044 %
Concentration per Run 1	93.258 %	0.065 ppb	0.329 ppb	0.009 ppb	1.022 ppb	96.298 %	0.011 ppb	0.010 ppb	95.611 %
Concentration per Run 2	99.680 %	-0.037 ppb	0.557 ppb	0.008 ppb	1.020 ppb	97.119 %	0.004 ppb	0.015 ppb	99.818 %
Concentration per Run 3	96.077 %	-0.099 ppb	0.038 ppb	0.002 ppb	1.088 ppb	96.615 %	0.007 ppb	0.006 ppb	95.703 %
Recovery Percentage 1		-4.796 %	6.160 %	0.062 %	52.155 %		1.865 %	5.044 %	
Concentration RSD	3.3 %	345.8 %	84.6 %	53.5 %	3.8 %	0.4 %	51.5 %	43.9 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.092 ppb	0.001 ppb	98.954 %	97.826 %	0.527 ppb	0.024 ppb
Concentration per Run 1	0.093 ppb	0.003 ppb	98.046 %	97.454 %	0.633 ppb	0.024 ppb
Concentration per Run 2	0.103 ppb	-0.008 ppb	98.814 %	97.521 %	0.552 ppb	0.024 ppb
Concentration per Run 3	0.082 ppb	0.008 ppb	100.002 %	98.501 %	0.396 ppb	0.023 ppb
Recovery Percentage 1	2.311 %	0.223 %			52.707 %	2.373 %
Concentration RSD	11.2 %	734.8 %	1.0 %	0.6 %	22.9 %	3.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	64	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906770-1 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:20:52 AM	Vial	36		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.395 %	93.389 %	0.004 ppb	-6.154 ppb	2.925 ppb	2.060 ppb	-10.021 ppb	3.231 ppb	104.990 %
Concentration per Run 1	109.390 %	94.124 %	0.004 ppb	-0.891 ppb	3.464 ppb	2.645 ppb	-7.099 ppb	6.690 ppb	105.991 %
Concentration per Run 2	104.880 %	91.920 %	0.012 ppb	-6.667 ppb	2.574 ppb	1.993 ppb	-13.130 ppb	0.253 ppb	104.818 %
Concentration per Run 3	101.916 %	94.124 %	-0.003 ppb	-10.904 ppb	2.737 ppb	1.544 ppb	-9.833 ppb	2.751 ppb	104.161 %
Concentration RSD	3.6 %	1.4 %	180.5 %	81.7 %	16.2 %	26.9 %	30.1 %	100.4 %	0.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.747 %	-0.048 ppb	0.025 ppb	0.048 ppb	1.756 ppb	0.003 ppb	0.017 ppb	0.018 ppb	0.241 ppb
Concentration per Run 1	103.454 %	-0.036 ppb	0.017 ppb	0.036 ppb	0.920 ppb	-0.001 ppb	-0.006 ppb	-0.003 ppb	0.250 ppb
Concentration per Run 2	94.924 %	-0.048 ppb	0.039 ppb	0.077 ppb	2.508 ppb	0.010 ppb	0.029 ppb	0.037 ppb	0.201 ppb
Concentration per Run 3	88.862 %	-0.060 ppb	0.019 ppb	0.031 ppb	1.841 ppb	-0.001 ppb	0.027 ppb	0.020 ppb	0.272 ppb
Concentration RSD	7.7 %	24.4 %	48.8 %	52.0 %	45.4 %	231.4 %	116.9 %	111.6 %	15.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.108 %	0.007 ppb	0.115 ppb	0.026 ppb	0.132 ppb	99.304 %	0.000 ppb	0.001 ppb	98.313 %
Concentration per Run 1	102.025 %	-0.007 ppb	0.120 ppb	0.031 ppb	0.110 ppb	99.909 %	-0.001 ppb	0.003 ppb	103.310 %
Concentration per Run 2	98.756 %	-0.007 ppb	0.184 ppb	0.024 ppb	0.142 ppb	99.126 %	0.000 ppb	0.000 ppb	98.635 %
Concentration per Run 3	93.542 %	0.034 ppb	0.041 ppb	0.023 ppb	0.144 ppb	98.876 %	0.000 ppb	0.000 ppb	92.996 %
Concentration RSD	4.4 %	341.9 %	62.2 %	17.1 %	14.5 %	0.5 %	185.6 %	110.6 %	5.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.028 ppb	0.010 ppb	100.395 %	99.740 %	0.053 ppb	0.007 ppb
Concentration per Run 1	0.029 ppb	0.012 ppb	101.378 %	103.564 %	0.047 ppb	0.009 ppb
Concentration per Run 2	0.025 ppb	0.005 ppb	100.133 %	98.012 %	0.058 ppb	0.010 ppb
Concentration per Run 3	0.030 ppb	0.011 ppb	99.674 %	97.645 %	0.055 ppb	0.003 ppb
Concentration RSD	10.2 %	39.8 %	0.9 %	3.3 %	10.3 %	54.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	65	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2419283-12 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:25:31 AM	Vial	43		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.266 %	94.281 %	0.005 ppb	-4.583 ppb	3.105 ppb	5.625 ppb	-7.348 ppb	25.093 ppb	99.852 %
Concentration per Run 1	106.472 %	94.281 %	-0.001 ppb	-0.662 ppb	2.802 ppb	5.866 ppb	-2.600 ppb	27.455 ppb	100.998 %
Concentration per Run 2	100.100 %	94.596 %	0.007 ppb	-5.107 ppb	3.800 ppb	5.954 ppb	-11.342 ppb	21.273 ppb	98.810 %
Concentration per Run 3	97.226 %	93.966 %	0.009 ppb	-7.981 ppb	2.712 ppb	5.054 ppb	-8.101 ppb	26.550 ppb	99.747 %
Concentration RSD	4.7 %	0.3 %	107.5 %	80.5 %	19.4 %	8.8 %	60.1 %	13.3 %	1.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.474 %	-0.031 ppb	0.059 ppb	0.072 ppb	3.559 ppb	-0.002 ppb	0.034 ppb	0.002 ppb	0.681 ppb
Concentration per Run 1	96.531 %	-0.004 ppb	0.076 ppb	0.095 ppb	4.358 ppb	-0.005 ppb	0.022 ppb	0.010 ppb	0.697 ppb
Concentration per Run 2	96.304 %	-0.083 ppb	0.044 ppb	0.046 ppb	3.010 ppb	0.003 ppb	0.023 ppb	0.000 ppb	0.671 ppb
Concentration per Run 3	84.586 %	-0.005 ppb	0.055 ppb	0.077 ppb	3.309 ppb	-0.004 ppb	0.057 ppb	-0.003 ppb	0.675 ppb
Concentration RSD	7.4 %	149.3 %	27.4 %	33.9 %	19.9 %	198.4 %	58.5 %	332.0 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.786 %	0.073 ppb	0.032 ppb	0.232 ppb	0.113 ppb	98.071 %	-0.003 ppb	0.001 ppb	94.356 %
Concentration per Run 1	101.027 %	0.149 ppb	0.114 ppb	0.250 ppb	0.053 ppb	98.272 %	-0.003 ppb	0.000 ppb	98.881 %
Concentration per Run 2	99.055 %	0.009 ppb	0.072 ppb	0.230 ppb	0.123 ppb	97.724 %	-0.005 ppb	0.003 ppb	94.300 %
Concentration per Run 3	96.276 %	0.060 ppb	-0.090 ppb	0.215 ppb	0.164 ppb	98.216 %	-0.001 ppb	-0.001 ppb	89.887 %
Concentration RSD	2.4 %	97.2 %	333.4 %	7.5 %	49.6 %	0.3 %	60.7 %	225.4 %	4.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.033 ppb	0.248 ppb	97.270 %	96.703 %	0.036 ppb	0.024 ppb
Concentration per Run 1	0.030 ppb	0.286 ppb	96.792 %	98.835 %	0.023 ppb	0.024 ppb
Concentration per Run 2	0.032 ppb	0.219 ppb	97.181 %	96.795 %	0.042 ppb	0.023 ppb
Concentration per Run 3	0.036 ppb	0.240 ppb	97.836 %	94.480 %	0.042 ppb	0.024 ppb
Concentration RSD	9.3 %	13.8 %	0.5 %	2.3 %	29.9 %	2.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	66	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906770-2d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:30:09 AM	Vial	37		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.442 %	94.858 %	4.946 ppb	1,060.782 ppb	1,035.255 ppb	202.221 ppb	1,083.913 ppb	1,034.415 ppb	105.134 %
Concentration per Run 1	108.119 %	94.596 %	4.892 ppb	1,086.668 ppb	1,075.394 ppb	207.552 ppb	1,127.102 ppb	1,032.785 ppb	109.129 %
Concentration per Run 2	101.105 %	94.911 %	5.045 ppb	1,050.063 ppb	1,028.540 ppb	201.944 ppb	1,082.403 ppb	1,053.024 ppb	104.456 %
Concentration per Run 3	98.103 %	95.068 %	4.903 ppb	1,045.614 ppb	1,001.831 ppb	197.169 ppb	1,042.233 ppb	1,017.435 ppb	101.816 %
Concentration RSD	5.0 %	0.3 %	1.7 %	2.1 %	3.6 %	2.6 %	3.9 %	1.7 %	3.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.971 %	50.151 ppb	19.964 ppb	50.658 ppb	103.661 ppb	49.757 ppb	49.183 ppb	23.804 ppb	48.244 ppb
Concentration per Run 1	103.409 %	50.738 ppb	20.488 ppb	50.897 ppb	100.428 ppb	49.782 ppb	48.391 ppb	23.958 ppb	48.524 ppb
Concentration per Run 2	103.861 %	49.480 ppb	19.429 ppb	50.413 ppb	106.873 ppb	50.292 ppb	49.264 ppb	23.939 ppb	48.077 ppb
Concentration per Run 3	101.644 %	50.235 ppb	19.975 ppb	50.664 ppb	103.680 ppb	49.198 ppb	49.894 ppb	23.516 ppb	48.132 ppb
Concentration RSD	1.1 %	1.3 %	2.7 %	0.5 %	3.1 %	1.1 %	1.5 %	1.0 %	0.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.137 %	11.160 ppb	11.848 ppb	95.753 ppb	90.497 ppb	102.370 %	4.591 ppb	4.894 ppb	101.459 %
Concentration per Run 1	105.924 %	11.251 ppb	11.629 ppb	96.427 ppb	86.692 ppb	103.989 %	4.518 ppb	4.672 ppb	106.142 %
Concentration per Run 2	103.679 %	11.224 ppb	11.919 ppb	95.601 ppb	91.652 ppb	101.796 %	4.541 ppb	5.077 ppb	99.219 %
Concentration per Run 3	102.807 %	11.006 ppb	11.998 ppb	95.230 ppb	93.147 ppb	101.327 %	4.713 ppb	4.932 ppb	99.014 %
Concentration RSD	1.5 %	1.2 %	1.6 %	0.6 %	3.7 %	1.4 %	2.3 %	4.2 %	4.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	34.430 ppb	183.740 ppb	105.475 %	104.066 %	11.623 ppb	49.250 ppb
Concentration per Run 1	33.078 ppb	180.303 ppb	107.809 %	106.567 %	11.406 ppb	48.326 ppb
Concentration per Run 2	34.718 ppb	186.474 ppb	104.549 %	101.637 %	11.665 ppb	50.429 ppb
Concentration per Run 3	35.493 ppb	184.442 ppb	104.067 %	103.994 %	11.798 ppb	48.997 ppb
Concentration RSD	3.6 %	1.7 %	1.9 %	2.4 %	1.7 %	2.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	67	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906770-3d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:34:46 AM	Vial	39		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.676 %	93.914 %	4.644 ppb	1,088.945 ppb	1,126.202 ppb	213.832 ppb	1,149.286 ppb	1,549.029 ppb	100.365 %
Concentration per Run 1	105.693 %	95.068 %	4.480 ppb	1,093.889 ppb	1,120.091 ppb	212.419 ppb	1,199.359 ppb	1,660.188 ppb	102.098 %
Concentration per Run 2	100.840 %	97.429 %	4.669 ppb	1,064.588 ppb	1,105.832 ppb	215.426 ppb	1,145.270 ppb	1,438.613 ppb	99.182 %
Concentration per Run 3	98.495 %	89.244 %	4.782 ppb	1,108.359 ppb	1,152.682 ppb	213.650 ppb	1,103.230 ppb	1,548.287 ppb	99.814 %
Concentration RSD	3.6 %	4.5 %	3.3 %	2.0 %	2.1 %	0.7 %	4.2 %	7.2 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.083 %	51.900 ppb	20.747 ppb	54.218 ppb	153.302 ppb	49.797 ppb	49.264 ppb	23.499 ppb	48.125 ppb
Concentration per Run 1	91.712 %	54.842 ppb	21.846 ppb	55.772 ppb	158.289 ppb	52.662 ppb	51.797 ppb	24.984 ppb	50.316 ppb
Concentration per Run 2	99.743 %	50.024 ppb	19.959 ppb	52.416 ppb	150.894 ppb	47.652 ppb	47.336 ppb	22.389 ppb	46.786 ppb
Concentration per Run 3	93.793 %	50.834 ppb	20.435 ppb	54.466 ppb	150.725 ppb	49.077 ppb	48.660 ppb	23.124 ppb	47.273 ppb
Concentration RSD	4.4 %	5.0 %	4.7 %	3.1 %	2.8 %	5.2 %	4.7 %	5.7 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.580 %	10.321 ppb	11.622 ppb	95.447 ppb	91.391 ppb	99.724 %	4.568 ppb	4.849 ppb	96.604 %
Concentration per Run 1	99.084 %	10.606 ppb	11.633 ppb	96.533 ppb	90.633 ppb	99.398 %	4.757 ppb	4.984 ppb	93.594 %
Concentration per Run 2	108.502 %	10.035 ppb	12.084 ppb	97.815 ppb	90.624 ppb	100.175 %	4.473 ppb	4.785 ppb	101.129 %
Concentration per Run 3	103.154 %	10.321 ppb	11.150 ppb	91.992 ppb	92.915 ppb	99.598 %	4.474 ppb	4.777 ppb	95.088 %
Concentration RSD	4.6 %	2.8 %	4.0 %	3.2 %	1.4 %	0.4 %	3.6 %	2.4 %	4.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	37.144 ppb	183.791 ppb	101.523 %	100.898 %	11.533 ppb	49.226 ppb
Concentration per Run 1	37.027 ppb	186.278 ppb	100.590 %	98.287 %	11.637 ppb	50.824 ppb
Concentration per Run 2	37.304 ppb	182.947 ppb	102.249 %	103.573 %	11.650 ppb	48.197 ppb
Concentration per Run 3	37.102 ppb	182.148 ppb	101.730 %	100.834 %	11.314 ppb	48.656 ppb
Concentration RSD	0.4 %	1.2 %	0.8 %	2.6 %	1.7 %	2.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	68	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906770-5d10 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:39:23 AM	Vial	41		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.367 %	98.951 %	48.320 ppb	5,251.667 ppb	5,274.926 ppb	62.142 ppb	5,458.273 ppb	5,904.683 ppb	102.474 %
Concentration per Run 1	103.679 %	104.355 %	47.600 ppb	5,105.694 ppb	5,067.773 ppb	57.757 ppb	5,281.153 ppb	5,772.457 ppb	103.018 %
Concentration per Run 2	100.501 %	98.846 %	48.496 ppb	5,323.605 ppb	5,446.826 ppb	64.234 ppb	5,634.157 ppb	5,989.772 ppb	103.645 %
Concentration per Run 3	96.921 %	93.652 %	48.863 ppb	5,325.702 ppb	5,310.180 ppb	64.436 ppb	5,459.510 ppb	5,951.818 ppb	100.758 %
Concentration RSD	3.4 %	5.4 %	1.3 %	2.4 %	3.6 %	6.1 %	3.2 %	2.0 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.991 %	53.379 ppb	52.479 ppb	54.201 ppb	5,297.181 ppb	51.219 ppb	50.838 ppb	49.270 ppb	50.718 ppb
Concentration per Run 1	102.526 %	53.693 ppb	53.081 ppb	53.826 ppb	5,326.596 ppb	52.063 ppb	51.940 ppb	50.676 ppb	51.871 ppb
Concentration per Run 2	106.260 %	53.329 ppb	52.120 ppb	54.257 ppb	5,256.414 ppb	50.160 ppb	50.189 ppb	48.404 ppb	50.586 ppb
Concentration per Run 3	97.186 %	53.114 ppb	52.237 ppb	54.519 ppb	5,308.533 ppb	51.432 ppb	50.384 ppb	48.731 ppb	49.697 ppb
Concentration RSD	4.5 %	0.5 %	1.0 %	0.6 %	0.7 %	1.9 %	1.9 %	2.5 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.016 %	49.097 ppb	50.071 ppb	50.171 ppb	50.327 ppb	102.044 %	9.158 ppb	47.864 ppb	99.977 %
Concentration per Run 1	99.653 %	50.590 ppb	49.458 ppb	50.681 ppb	49.546 ppb	101.238 %	9.457 ppb	48.321 ppb	100.958 %
Concentration per Run 2	105.589 %	49.024 ppb	52.668 ppb	51.446 ppb	50.361 ppb	102.675 %	8.904 ppb	47.561 ppb	101.312 %
Concentration per Run 3	100.808 %	47.678 ppb	48.088 ppb	48.386 ppb	51.074 ppb	102.219 %	9.113 ppb	47.710 ppb	97.661 %
Concentration RSD	3.1 %	3.0 %	4.7 %	3.2 %	1.5 %	0.7 %	3.0 %	0.8 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	51.774 ppb	47.568 ppb	103.517 %	103.879 %	47.587 ppb	47.873 ppb
Concentration per Run 1	52.115 ppb	47.625 ppb	102.209 %	102.844 %	45.699 ppb	48.604 ppb
Concentration per Run 2	52.454 ppb	48.794 ppb	104.010 %	106.305 %	47.438 ppb	47.295 ppb
Concentration per Run 3	50.751 ppb	46.286 ppb	104.333 %	102.490 %	49.624 ppb	47.719 ppb
Concentration RSD	1.7 %	2.6 %	1.1 %	2.0 %	4.1 %	1.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	69	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906770-4 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:44:00 AM	Vial	40		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.560 %	97.849 %	0.008 ppb	77.548 ppb	779.278 ppb	98.676 ppb	66.245 ppb	4,121.145 ppb	100.679 %
Concentration per Run 1	99.272 %	100.735 %	0.003 ppb	75.201 ppb	763.091 ppb	96.841 ppb	67.003 ppb	4,253.068 ppb	103.243 %
Concentration per Run 2	95.567 %	99.475 %	0.006 ppb	75.596 ppb	799.059 ppb	99.200 ppb	70.084 ppb	4,149.214 ppb	101.510 %
Concentration per Run 3	91.842 %	93.337 %	0.014 ppb	81.845 ppb	775.683 ppb	99.986 ppb	61.648 ppb	3,961.154 ppb	97.285 %
Concentration RSD	3.9 %	4.0 %	70.8 %	4.8 %	2.3 %	1.7 %	6.4 %	3.6 %	3.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.848 %	0.219 ppb	3.255 ppb	14.761 ppb	520.570 ppb	0.107 ppb	1.506 ppb	0.435 ppb	2.377 ppb
Concentration per Run 1	96.983 %	0.191 ppb	3.440 ppb	14.510 ppb	527.723 ppb	0.113 ppb	1.496 ppb	0.401 ppb	2.438 ppb
Concentration per Run 2	108.750 %	0.192 ppb	2.968 ppb	14.437 ppb	498.506 ppb	0.107 ppb	1.449 ppb	0.394 ppb	2.316 ppb
Concentration per Run 3	99.811 %	0.273 ppb	3.358 ppb	15.337 ppb	535.480 ppb	0.102 ppb	1.573 ppb	0.510 ppb	2.379 ppb
Concentration RSD	6.0 %	21.6 %	7.7 %	3.4 %	3.7 %	5.1 %	4.2 %	15.0 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.580 %	0.004 ppb	0.247 ppb	3.306 ppb	2.569 ppb	99.648 %	0.000 ppb	0.008 ppb	102.119 %
Concentration per Run 1	97.490 %	0.155 ppb	0.259 ppb	3.317 ppb	2.564 ppb	98.707 %	0.001 ppb	0.007 ppb	98.406 %
Concentration per Run 2	108.792 %	-0.149 ppb	0.360 ppb	3.329 ppb	2.430 ppb	101.658 %	-0.001 ppb	0.011 ppb	108.390 %
Concentration per Run 3	98.459 %	0.007 ppb	0.123 ppb	3.271 ppb	2.712 ppb	98.579 %	0.000 ppb	0.006 ppb	99.562 %
Concentration RSD	6.2 %	3,473.1 %	48.1 %	0.9 %	5.5 %	1.7 %	696.8 %	37.0 %	5.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.913 ppb	1.091 ppb	103.162 %	103.243 %	0.459 ppb	0.160 ppb
Concentration per Run 1	0.908 ppb	1.040 ppb	100.481 %	100.296 %	0.514 ppb	0.169 ppb
Concentration per Run 2	0.876 ppb	1.124 ppb	107.853 %	107.899 %	0.474 ppb	0.148 ppb
Concentration per Run 3	0.955 ppb	1.108 ppb	101.153 %	101.532 %	0.389 ppb	0.163 ppb
Concentration RSD	4.3 %	4.1 %	4.0 %	4.0 %	13.9 %	6.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	70	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2419308-08 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:48:37 AM	Vial	38		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.776 %	98.846 %	0.009 ppb	75.100 ppb	748.039 ppb	97.618 ppb	60.938 ppb	4,015.117 ppb	103.988 %
Concentration per Run 1	103.947 %	99.003 %	0.004 ppb	75.384 ppb	766.490 ppb	97.763 ppb	61.797 ppb	4,101.721 ppb	107.262 %
Concentration per Run 2	97.358 %	97.744 %	-0.003 ppb	74.890 ppb	742.676 ppb	98.218 ppb	58.384 ppb	3,979.245 ppb	102.848 %
Concentration per Run 3	95.024 %	99.790 %	0.027 ppb	75.027 ppb	734.950 ppb	96.871 ppb	62.632 ppb	3,964.384 ppb	101.854 %
Concentration RSD	4.7 %	1.0 %	166.0 %	0.3 %	2.2 %	0.7 %	3.7 %	1.9 %	2.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.104 %	0.193 ppb	3.353 ppb	14.149 ppb	539.648 ppb	0.095 ppb	1.468 ppb	0.485 ppb	2.276 ppb
Concentration per Run 1	101.191 %	0.159 ppb	3.403 ppb	14.127 ppb	551.306 ppb	0.094 ppb	1.430 ppb	0.471 ppb	2.310 ppb
Concentration per Run 2	103.907 %	0.166 ppb	3.286 ppb	13.808 ppb	523.168 ppb	0.097 ppb	1.579 ppb	0.480 ppb	2.232 ppb
Concentration per Run 3	101.214 %	0.252 ppb	3.369 ppb	14.512 ppb	544.469 ppb	0.094 ppb	1.393 ppb	0.502 ppb	2.287 ppb
Concentration RSD	1.5 %	26.9 %	1.8 %	2.5 %	2.7 %	1.4 %	6.7 %	3.3 %	1.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.746 %	0.002 ppb	-0.017 ppb	3.147 ppb	1.484 ppb	102.607 %	-0.002 ppb	0.009 ppb	102.319 %
Concentration per Run 1	103.364 %	0.109 ppb	-0.078 ppb	3.151 ppb	1.353 ppb	103.228 %	-0.001 ppb	0.010 ppb	103.180 %
Concentration per Run 2	101.448 %	-0.017 ppb	0.080 ppb	3.184 ppb	1.556 ppb	102.156 %	-0.002 ppb	0.005 ppb	101.126 %
Concentration per Run 3	103.428 %	-0.085 ppb	-0.052 ppb	3.106 ppb	1.544 ppb	102.438 %	-0.003 ppb	0.010 ppb	102.651 %
Concentration RSD	1.1 %	4,091.7 %	504.7 %	1.2 %	7.7 %	0.5 %	64.8 %	32.4 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.488 ppb	1.100 ppb	105.337 %	104.371 %	0.106 ppb	0.151 ppb
Concentration per Run 1	0.463 ppb	1.037 ppb	104.653 %	104.677 %	0.084 ppb	0.153 ppb
Concentration per Run 2	0.491 ppb	1.209 ppb	105.182 %	102.969 %	0.116 ppb	0.151 ppb
Concentration per Run 3	0.510 ppb	1.052 ppb	106.176 %	105.467 %	0.118 ppb	0.150 ppb
Concentration RSD	4.8 %	8.7 %	0.7 %	1.2 %	18.3 %	1.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	71	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906770-6d5 6020TL	Rack	1		
Analysis started at:	4/10/2024 11:53:14 AM	Vial	42		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.920 %	93.232 %	-0.006 ppb	9.754 ppb	159.973 ppb	20.556 ppb	5.303 ppb	843.035 ppb	102.588 %
Concentration per Run 1	100.321 %	88.457 %	-0.006 ppb	12.721 ppb	173.481 ppb	19.834 ppb	0.172 ppb	864.928 ppb	96.867 %
Concentration per Run 2	101.080 %	95.698 %	-0.010 ppb	6.478 ppb	150.412 ppb	19.535 ppb	3.678 ppb	815.677 ppb	100.854 %
Concentration per Run 3	104.357 %	95.540 %	-0.001 ppb	10.064 ppb	156.027 ppb	22.298 ppb	12.058 ppb	848.499 ppb	110.043 %
Concentration RSD	2.1 %	4.4 %	80.1 %	32.1 %	7.5 %	7.4 %	115.2 %	3.0 %	6.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	91.659 %	0.005 ppb	0.730 ppb	3.228 ppb	114.038 ppb	0.031 ppb	0.435 ppb	0.062 ppb	0.855 ppb
Concentration per Run 1	88.251 %	0.001 ppb	0.736 ppb	3.591 ppb	120.125 ppb	0.032 ppb	0.504 ppb	0.088 ppb	0.945 ppb
Concentration per Run 2	95.060 %	0.010 ppb	0.759 ppb	2.982 ppb	108.860 ppb	0.033 ppb	0.326 ppb	0.027 ppb	0.795 ppb
Concentration per Run 3	91.666 %	0.003 ppb	0.695 ppb	3.111 ppb	113.130 ppb	0.028 ppb	0.475 ppb	0.071 ppb	0.826 ppb
Concentration RSD	3.7 %	105.9 %	4.4 %	9.9 %	5.0 %	7.9 %	21.9 %	50.3 %	9.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.255 %	-0.081 ppb	-0.011 ppb	0.673 ppb	0.534 ppb	96.259 %	-0.003 ppb	0.008 ppb	93.566 %
Concentration per Run 1	92.849 %	-0.038 ppb	-0.005 ppb	0.689 ppb	0.469 ppb	95.362 %	-0.001 ppb	0.007 ppb	91.087 %
Concentration per Run 2	102.183 %	-0.089 ppb	-0.175 ppb	0.663 ppb	0.523 ppb	97.760 %	-0.003 ppb	0.007 ppb	94.367 %
Concentration per Run 3	99.734 %	-0.115 ppb	0.145 ppb	0.666 ppb	0.610 ppb	95.653 %	-0.004 ppb	0.010 ppb	95.242 %
Concentration RSD	4.9 %	48.6 %	1,416.5 %	2.1 %	13.3 %	1.4 %	41.4 %	18.2 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.284 ppb	0.293 ppb	97.902 %	97.144 %	0.056 ppb	0.052 ppb
Concentration per Run 1	0.263 ppb	0.313 ppb	94.589 %	93.467 %	0.034 ppb	0.050 ppb
Concentration per Run 2	0.290 ppb	0.291 ppb	99.527 %	99.631 %	0.064 ppb	0.053 ppb
Concentration per Run 3	0.299 ppb	0.276 ppb	99.590 %	98.334 %	0.070 ppb	0.053 ppb
Concentration RSD	6.7 %	6.3 %	2.9 %	3.3 %	35.1 %	3.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	72	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 11:59:07 AM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.877 %	99.685 %	57.375 ppb	5,853.186 ppb	5,800.212 ppb	59.343 ppb	6,048.000 ppb	6,098.980 ppb	112.263 %
Concentration per Run 1	104.865 %	102.623 %	56.155 ppb	5,854.137 ppb	5,751.086 ppb	56.881 ppb	6,047.266 ppb	6,118.850 ppb	113.974 %
Concentration per Run 2	99.107 %	90.818 %	57.804 ppb	6,032.203 ppb	5,870.488 ppb	60.539 ppb	5,894.725 ppb	6,014.991 ppb	110.992 %
Concentration per Run 3	95.659 %	105.614 %	58.167 ppb	5,673.217 ppb	5,779.061 ppb	60.609 ppb	6,202.010 ppb	6,163.099 ppb	111.825 %
Recovery Percentage 1			95.626 %	97.553 %	96.670 %	98.905 %	100.800 %	101.650 %	
Concentration RSD	4.7 %	7.8 %	1.9 %	3.1 %	1.1 %	3.6 %	2.5 %	1.2 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.366 %	58.500 ppb	58.501 ppb	58.946 ppb	5,908.568 ppb	58.221 ppb	56.951 ppb	57.568 ppb	57.451 ppb
Concentration per Run 1	108.771 %	59.822 ppb	59.241 ppb	58.761 ppb	5,893.566 ppb	58.221 ppb	57.540 ppb	58.603 ppb	58.142 ppb
Concentration per Run 2	109.563 %	58.616 ppb	59.650 ppb	59.628 ppb	6,065.460 ppb	59.854 ppb	57.973 ppb	58.569 ppb	58.465 ppb
Concentration per Run 3	115.765 %	57.061 ppb	56.611 ppb	58.450 ppb	5,766.677 ppb	56.587 ppb	55.341 ppb	55.532 ppb	55.747 ppb
Recovery Percentage 1		97.500 %	97.501 %	98.244 %	98.476 %	97.035 %	94.918 %	95.947 %	95.752 %
Concentration RSD	3.4 %	2.4 %	2.8 %	1.0 %	2.5 %	2.8 %	2.5 %	3.1 %	2.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.551 %	57.689 ppb	60.007 ppb	60.099 ppb	56.750 ppb	101.600 %	56.908 ppb	56.862 ppb	100.083 %
Concentration per Run 1	102.045 %	57.282 ppb	60.593 ppb	59.287 ppb	54.919 ppb	102.515 %	57.639 ppb	57.940 ppb	97.036 %
Concentration per Run 2	100.033 %	59.433 ppb	59.622 ppb	59.890 ppb	57.097 ppb	100.075 %	56.813 ppb	56.630 ppb	99.153 %
Concentration per Run 3	108.575 %	56.351 ppb	59.806 ppb	61.118 ppb	58.234 ppb	102.210 %	56.274 ppb	56.015 ppb	104.060 %
Recovery Percentage 1		96.148 %	100.012 %	100.164 %	94.583 %		94.847 %	94.769 %	
Concentration RSD	4.3 %	2.7 %	0.9 %	1.6 %	3.0 %	1.3 %	1.2 %	1.7 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	59.841 ppb	57.208 ppb	105.750 %	105.395 %	55.728 ppb	55.901 ppb
Concentration per Run 1	60.813 ppb	57.793 ppb	105.568 %	104.572 %	52.684 ppb	56.342 ppb
Concentration per Run 2	59.325 ppb	56.783 ppb	103.813 %	104.038 %	58.206 ppb	56.446 ppb
Concentration per Run 3	59.384 ppb	57.047 ppb	107.869 %	107.577 %	56.293 ppb	54.916 ppb
Recovery Percentage 1	99.735 %	95.346 %			92.880 %	93.168 %
Concentration RSD	1.4 %	0.9 %	1.9 %	1.8 %	5.0 %	1.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	73	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 12:03:48 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.921 %	92.182 %	0.005 ppb	-11.683 ppb	0.539 ppb	-0.330 ppb	-5.350 ppb	-5.691 ppb	97.675 %
Concentration per Run 1	97.986 %	82.319 %	0.009 ppb	-4.374 ppb	0.959 ppb	-0.347 ppb	-2.902 ppb	-8.712 ppb	99.969 %
Concentration per Run 2	94.630 %	92.392 %	0.003 ppb	-14.287 ppb	0.431 ppb	-0.339 ppb	-7.513 ppb	-2.421 ppb	97.000 %
Concentration per Run 3	92.145 %	101.836 %	0.003 ppb	-16.390 ppb	0.227 ppb	-0.304 ppb	-5.635 ppb	-5.941 ppb	96.057 %
Recovery Percentage 1			1.008 %	-11.683 %	0.770 %	-3.299 %	-5.350 %	-5.691 %	
Concentration RSD	3.1 %	10.6 %	64.4 %	54.9 %	70.1 %	7.0 %	43.3 %	55.4 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.108 %	-0.072 ppb	0.017 ppb	0.105 ppb	11.259 ppb	0.002 ppb	0.025 ppb	-0.023 ppb	-0.023 ppb
Concentration per Run 1	91.960 %	-0.072 ppb	0.020 ppb	0.117 ppb	11.946 ppb	0.003 ppb	-0.003 ppb	-0.024 ppb	-0.035 ppb
Concentration per Run 2	93.657 %	-0.077 ppb	0.013 ppb	0.127 ppb	12.752 ppb	-0.001 ppb	0.042 ppb	-0.020 ppb	-0.003 ppb
Concentration per Run 3	102.708 %	-0.067 ppb	0.019 ppb	0.070 ppb	9.079 ppb	0.004 ppb	0.036 ppb	-0.024 ppb	-0.031 ppb
Recovery Percentage 1		-1.437 %	1.713 %	10.463 %	22.518 %	0.346 %	1.256 %	-2.266 %	-0.456 %
Concentration RSD	6.0 %	6.5 %	23.2 %	29.0 %	17.1 %	156.1 %	96.9 %	11.3 %	76.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.366 %	-0.055 ppb	0.318 ppb	0.006 ppb	1.086 ppb	98.235 %	0.007 ppb	0.010 ppb	97.852 %
Concentration per Run 1	96.597 %	-0.060 ppb	0.225 ppb	0.007 ppb	1.049 ppb	97.879 %	0.013 ppb	0.015 ppb	97.621 %
Concentration per Run 2	93.873 %	-0.118 ppb	0.385 ppb	0.006 ppb	1.067 ppb	97.957 %	0.007 ppb	0.011 ppb	94.856 %
Concentration per Run 3	101.628 %	0.014 ppb	0.343 ppb	0.005 ppb	1.141 ppb	98.869 %	0.002 ppb	0.003 ppb	101.080 %
Recovery Percentage 1		-10.951 %	6.351 %	0.057 %	54.301 %		1.819 %	4.825 %	
Concentration RSD	4.0 %	120.3 %	26.1 %	16.1 %	4.5 %	0.6 %	78.4 %	63.0 %	3.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.218 ppb	0.002 ppb	100.449 %	100.168 %	0.503 ppb	0.020 ppb
Concentration per Run 1	0.206 ppb	0.000 ppb	99.612 %	99.271 %	0.574 ppb	0.024 ppb
Concentration per Run 2	0.220 ppb	-0.002 ppb	99.054 %	98.165 %	0.543 ppb	0.020 ppb
Concentration per Run 3	0.229 ppb	0.007 ppb	102.681 %	103.067 %	0.392 ppb	0.016 ppb
Recovery Percentage 1	5.460 %	0.344 %			50.304 %	2.016 %
Concentration RSD	5.5 %	297.8 %	1.9 %	2.6 %	19.4 %	19.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	74	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906345-1 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 12:15:39 PM	Vial	44		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.872 %	95.803 %	-0.007 ppb	-17.200 ppb	2.258 ppb	1.610 ppb	-9.970 ppb	29.452 ppb	97.521 %
Concentration per Run 1	107.479 %	97.114 %	-0.007 ppb	-17.938 ppb	2.333 ppb	1.195 ppb	-7.270 ppb	32.384 ppb	105.573 %
Concentration per Run 2	95.855 %	91.920 %	-0.009 ppb	-15.719 ppb	2.500 ppb	1.910 ppb	-7.054 ppb	32.587 ppb	95.253 %
Concentration per Run 3	90.281 %	98.374 %	-0.003 ppb	-17.942 ppb	1.941 ppb	1.727 ppb	-15.587 ppb	23.387 ppb	91.737 %
Concentration RSD	9.0 %	3.6 %	46.6 %	7.5 %	12.7 %	23.1 %	48.8 %	17.8 %	7.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.858 %	-0.060 ppb	0.024 ppb	0.150 ppb	0.575 ppb	0.004 ppb	0.008 ppb	0.013 ppb	1.371 ppb
Concentration per Run 1	97.820 %	-0.063 ppb	0.024 ppb	0.159 ppb	-0.243 ppb	0.010 ppb	0.012 ppb	0.018 ppb	1.307 ppb
Concentration per Run 2	99.404 %	-0.085 ppb	0.023 ppb	0.157 ppb	0.915 ppb	-0.002 ppb	0.001 ppb	0.003 ppb	1.334 ppb
Concentration per Run 3	96.349 %	-0.033 ppb	0.025 ppb	0.135 ppb	1.053 ppb	0.004 ppb	0.012 ppb	0.018 ppb	1.472 ppb
Concentration RSD	1.6 %	43.4 %	3.3 %	8.8 %	123.8 %	143.7 %	77.3 %	65.0 %	6.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.713 %	-0.095 ppb	0.110 ppb	0.024 ppb	0.135 ppb	101.734 %	-0.003 ppb	0.001 ppb	100.661 %
Concentration per Run 1	98.138 %	-0.060 ppb	-0.047 ppb	0.026 ppb	0.128 ppb	102.721 %	-0.001 ppb	0.002 ppb	101.133 %
Concentration per Run 2	98.220 %	-0.064 ppb	0.193 ppb	0.022 ppb	0.133 ppb	101.109 %	-0.003 ppb	0.002 ppb	101.144 %
Concentration per Run 3	99.780 %	-0.160 ppb	0.184 ppb	0.024 ppb	0.145 ppb	101.370 %	-0.005 ppb	0.000 ppb	99.706 %
Concentration RSD	0.9 %	59.4 %	123.9 %	10.3 %	6.4 %	0.9 %	75.4 %	57.8 %	0.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.092 ppb	0.024 ppb	102.514 %	101.266 %	0.063 ppb	0.010 ppb
Concentration per Run 1	0.088 ppb	0.020 ppb	103.747 %	103.583 %	0.067 ppb	0.006 ppb
Concentration per Run 2	0.107 ppb	0.036 ppb	101.363 %	99.726 %	0.065 ppb	0.014 ppb
Concentration per Run 3	0.080 ppb	0.015 ppb	102.432 %	100.489 %	0.058 ppb	0.011 ppb
Concentration RSD	14.9 %	45.3 %	1.2 %	2.0 %	7.1 %	40.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	75	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906345-2d10 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 12:20:18 PM	Vial	45		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.678 %	97.009 %	5.036 ppb	1,057.997 ppb	1,034.302 ppb	201.112 ppb	1,063.018 ppb	1,016.538 ppb	103.919 %
Concentration per Run 1	104.009 %	99.161 %	4.853 ppb	1,042.850 ppb	1,017.685 ppb	197.627 ppb	1,093.841 ppb	1,051.740 ppb	105.452 %
Concentration per Run 2	98.276 %	92.707 %	5.105 ppb	1,099.710 ppb	1,059.832 ppb	204.383 ppb	1,037.818 ppb	1,010.696 ppb	102.291 %
Concentration per Run 3	96.750 %	99.161 %	5.152 ppb	1,031.432 ppb	1,025.389 ppb	201.327 ppb	1,057.393 ppb	987.179 ppb	104.014 %
Concentration RSD	3.8 %	3.8 %	3.2 %	3.5 %	2.2 %	1.7 %	2.7 %	3.2 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.556 %	52.446 ppb	20.933 ppb	52.839 ppb	108.937 ppb	51.742 ppb	50.581 ppb	24.889 ppb	50.848 ppb
Concentration per Run 1	103.273 %	51.807 ppb	20.743 ppb	53.626 ppb	109.576 ppb	51.297 ppb	49.663 ppb	24.732 ppb	50.488 ppb
Concentration per Run 2	102.707 %	53.129 ppb	21.107 ppb	52.188 ppb	112.159 ppb	51.779 ppb	51.490 ppb	24.612 ppb	51.194 ppb
Concentration per Run 3	101.689 %	52.402 ppb	20.950 ppb	52.702 ppb	105.077 ppb	52.150 ppb	50.589 ppb	25.323 ppb	50.864 ppb
Concentration RSD	0.8 %	1.3 %	0.9 %	1.4 %	3.3 %	0.8 %	1.8 %	1.5 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.766 %	11.524 ppb	11.772 ppb	97.131 ppb	93.032 ppb	102.810 %	4.790 ppb	5.123 ppb	100.308 %
Concentration per Run 1	105.523 %	11.229 ppb	11.600 ppb	95.376 ppb	88.207 ppb	105.273 %	4.739 ppb	5.063 ppb	100.972 %
Concentration per Run 2	100.158 %	11.912 ppb	12.009 ppb	98.733 ppb	94.004 ppb	101.090 %	4.807 ppb	5.139 ppb	101.742 %
Concentration per Run 3	102.619 %	11.432 ppb	11.707 ppb	97.284 ppb	96.886 ppb	102.067 %	4.823 ppb	5.167 ppb	98.211 %
Concentration RSD	2.6 %	3.0 %	1.8 %	1.7 %	4.8 %	2.1 %	0.9 %	1.1 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	35.653 ppb	187.951 ppb	105.262 %	103.342 %	11.964 ppb	50.736 ppb
Concentration per Run 1	34.259 ppb	185.088 ppb	106.140 %	104.456 %	11.730 ppb	50.606 ppb
Concentration per Run 2	36.595 ppb	186.891 ppb	104.504 %	103.234 %	12.076 ppb	50.507 ppb
Concentration per Run 3	36.104 ppb	191.874 ppb	105.141 %	102.336 %	12.086 ppb	51.097 ppb
Concentration RSD	3.5 %	1.9 %	0.8 %	1.0 %	1.7 %	0.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	76	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906345-3d10 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 12:24:56 PM	Vial	46		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.008 %	97.272 %	5.059 ppb	1,068.883 ppb	1,050.650 ppb	206.794 ppb	1,114.744 ppb	1,112.197 ppb	99.923 %
Concentration per Run 1	101.527 %	96.642 %	5.025 ppb	1,083.996 ppb	1,062.444 ppb	208.386 ppb	1,164.811 ppb	1,171.471 ppb	102.079 %
Concentration per Run 2	96.818 %	100.105 %	5.020 ppb	1,026.841 ppb	1,022.268 ppb	197.185 ppb	1,066.752 ppb	1,034.394 ppb	98.049 %
Concentration per Run 3	95.677 %	95.068 %	5.131 ppb	1,095.812 ppb	1,067.238 ppb	214.810 ppb	1,112.669 ppb	1,130.727 ppb	99.642 %
Concentration RSD	3.2 %	2.6 %	1.2 %	3.5 %	2.4 %	4.3 %	4.4 %	6.3 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.850 %	54.710 ppb	21.470 ppb	55.221 ppb	113.321 ppb	53.025 ppb	52.254 ppb	25.327 ppb	51.157 ppb
Concentration per Run 1	95.897 %	56.496 ppb	21.906 ppb	56.509 ppb	122.090 ppb	53.702 ppb	53.656 ppb	25.479 ppb	51.669 ppb
Concentration per Run 2	102.549 %	52.937 ppb	20.832 ppb	54.249 ppb	104.130 ppb	51.899 ppb	51.210 ppb	24.909 ppb	50.368 ppb
Concentration per Run 3	95.105 %	54.696 ppb	21.672 ppb	54.906 ppb	113.744 ppb	53.474 ppb	51.895 ppb	25.592 ppb	51.434 ppb
Concentration RSD	4.2 %	3.3 %	2.6 %	2.1 %	7.9 %	1.9 %	2.4 %	1.4 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.557 %	11.822 ppb	11.753 ppb	98.879 ppb	97.261 ppb	100.129 %	4.865 ppb	5.112 ppb	98.117 %
Concentration per Run 1	99.982 %	12.204 ppb	12.647 ppb	99.826 ppb	94.104 ppb	101.062 %	4.902 ppb	5.261 ppb	96.341 %
Concentration per Run 2	101.199 %	11.656 ppb	11.268 ppb	98.655 ppb	97.394 ppb	99.483 %	4.863 ppb	4.924 ppb	101.595 %
Concentration per Run 3	100.489 %	11.606 ppb	11.343 ppb	98.155 ppb	100.284 ppb	99.842 %	4.829 ppb	5.151 ppb	96.415 %
Concentration RSD	0.6 %	2.8 %	6.6 %	0.9 %	3.2 %	0.8 %	0.8 %	3.4 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	38.276 ppb	193.476 ppb	102.185 %	100.939 %	12.222 ppb	51.730 ppb
Concentration per Run 1	37.070 ppb	194.392 ppb	100.980 %	98.591 %	12.266 ppb	52.551 ppb
Concentration per Run 2	38.773 ppb	190.278 ppb	103.181 %	102.720 %	12.005 ppb	50.802 ppb
Concentration per Run 3	38.984 ppb	195.759 ppb	102.396 %	101.505 %	12.395 ppb	51.838 ppb
Concentration RSD	2.7 %	1.5 %	1.1 %	2.1 %	1.6 %	1.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index: 77
Analysis label: L2418020-01 MCP-6020TL-10
Analysis started at: 4/10/2024 12:52:32 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 47
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.299 %	92.707 %	0.005 ppb	250,680.733 ppb	5,139.914 ppb	276.059 ppb	8,435.837 ppb	46,514.751 ppb	104.751 %
Concentration per Run 1	100.528 %	93.966 %	0.010 ppb	254,958.763 ppb	5,221.172 ppb	280.377 ppb	8,780.657 ppb	48,698.619 ppb	104.869 %
Concentration per Run 2	96.230 %	93.179 %	-0.001 ppb	250,418.644 ppb	5,135.407 ppb	280.445 ppb	8,544.449 ppb	46,491.614 ppb	102.934 %
Concentration per Run 3	95.138 %	90.976 %	0.008 ppb	246,664.793 ppb	5,063.163 ppb	267.354 ppb	7,982.405 ppb	44,354.021 ppb	106.449 %
Concentration RSD	2.9 %	1.7 %	102.8 %	1.7 %	1.5 %	2.7 %	4.9 %	4.7 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.043 %	0.538 ppb	1.618 ppb	23.813 ppb	590.804 ppb	1.474 ppb	60.130 ppb	27,963.437 ppb	5,933.906 ppb
Concentration per Run 1	97.866 %	0.596 ppb	1.618 ppb	24.226 ppb	605.709 ppb	1.500 ppb	60.967 ppb	27,771.911 ppb	5,930.276 ppb
Concentration per Run 2	95.535 %	0.493 ppb	1.574 ppb	23.715 ppb	577.383 ppb	1.501 ppb	59.774 ppb	28,050.526 ppb	5,991.746 ppb
Concentration per Run 3	97.730 %	0.526 ppb	1.662 ppb	23.496 ppb	589.321 ppb	1.421 ppb	59.651 ppb	28,067.874 ppb	5,879.697 ppb
Concentration RSD	1.3 %	9.7 %	2.7 %	1.6 %	2.4 %	3.1 %	1.2 %	0.6 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.474 %	1.979 ppb	0.413 ppb	202.323 ppb	1.282 ppb	93.845 %	6.390 ppb	5.380 ppb	97.725 %
Concentration per Run 1	99.986 %	2.143 ppb	0.344 ppb	207.240 ppb	1.162 ppb	96.305 %	6.298 ppb	5.229 ppb	103.252 %
Concentration per Run 2	98.413 %	1.935 ppb	0.429 ppb	199.317 ppb	1.290 ppb	94.431 %	6.349 ppb	5.561 ppb	96.738 %
Concentration per Run 3	97.023 %	1.858 ppb	0.468 ppb	200.412 ppb	1.393 ppb	90.799 %	6.522 ppb	5.349 ppb	93.187 %
Concentration RSD	1.5 %	7.5 %	15.4 %	2.1 %	9.0 %	3.0 %	1.8 %	3.1 %	5.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	11.454 ppb	40.232 ppb	100.733 %	100.437 %	0.039 ppb	1,499.767 ppb
Concentration per Run 1	11.265 ppb	39.593 ppb	100.001 %	103.153 %	0.045 ppb	1,455.036 ppb
Concentration per Run 2	11.466 ppb	40.125 ppb	102.503 %	99.621 %	0.037 ppb	1,524.156 ppb
Concentration per Run 3	11.630 ppb	40.978 ppb	99.695 %	98.537 %	0.036 ppb	1,520.108 ppb
Concentration RSD	1.6 %	1.7 %	1.5 %	2.4 %	13.4 %	2.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	78	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418020-02 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 12:57:11 PM	Vial	48		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.723 %	91.815 %	0.005 ppb	251,598.652 ppb	5,057.157 ppb	91.446 ppb	8,444.471 ppb	46,693.476 ppb	100.521 %
Concentration per Run 1	97.554 %	97.272 %	-0.001 ppb	251,828.492 ppb	5,006.284 ppb	90.986 ppb	8,556.843 ppb	46,625.336 ppb	101.783 %
Concentration per Run 2	93.896 %	90.504 %	0.006 ppb	249,018.613 ppb	5,049.130 ppb	91.374 ppb	8,478.552 ppb	46,853.097 ppb	100.553 %
Concentration per Run 3	89.718 %	87.670 %	0.009 ppb	253,948.851 ppb	5,116.056 ppb	91.977 ppb	8,298.017 ppb	46,601.994 ppb	99.226 %
Concentration RSD	4.2 %	5.4 %	111.0 %	1.0 %	1.1 %	0.5 %	1.6 %	0.3 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.044 %	0.375 ppb	0.755 ppb	22.603 ppb	186.315 ppb	0.312 ppb	2.252 ppb	52.807 ppb	150.710 ppb
Concentration per Run 1	104.405 %	0.342 ppb	0.731 ppb	22.201 ppb	184.285 ppb	0.333 ppb	2.032 ppb	51.013 ppb	148.049 ppb
Concentration per Run 2	95.399 %	0.415 ppb	0.768 ppb	22.693 ppb	183.360 ppb	0.278 ppb	2.576 ppb	53.221 ppb	152.130 ppb
Concentration per Run 3	91.327 %	0.367 ppb	0.767 ppb	22.916 ppb	191.301 ppb	0.323 ppb	2.149 ppb	54.187 ppb	151.950 ppb
Concentration RSD	6.9 %	9.9 %	2.8 %	1.6 %	2.3 %	9.4 %	12.7 %	3.1 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.491 %	0.825 ppb	0.362 ppb	196.876 ppb	1.482 ppb	94.151 %	0.011 ppb	0.137 ppb	93.353 %
Concentration per Run 1	101.879 %	0.958 ppb	0.426 ppb	201.109 ppb	1.462 ppb	98.172 %	0.011 ppb	0.136 ppb	100.369 %
Concentration per Run 2	96.452 %	0.708 ppb	0.381 ppb	197.975 ppb	1.513 ppb	92.118 %	0.006 ppb	0.153 ppb	92.097 %
Concentration per Run 3	94.144 %	0.810 ppb	0.281 ppb	191.544 ppb	1.471 ppb	92.163 %	0.015 ppb	0.121 ppb	87.592 %
Concentration RSD	4.1 %	15.2 %	20.5 %	2.5 %	1.9 %	3.7 %	41.2 %	11.7 %	6.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.374 ppb	40.545 ppb	101.403 %	100.994 %	0.017 ppb	19.364 ppb
Concentration per Run 1	0.363 ppb	40.240 ppb	104.960 %	104.857 %	0.010 ppb	18.686 ppb
Concentration per Run 2	0.374 ppb	41.205 ppb	100.407 %	99.173 %	0.021 ppb	19.810 ppb
Concentration per Run 3	0.383 ppb	40.190 ppb	98.840 %	98.953 %	0.020 ppb	19.597 ppb
Concentration RSD	2.7 %	1.4 %	3.1 %	3.3 %	35.1 %	3.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	79	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418245-07 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 1:01:51 PM	Vial	49		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.759 %	90.451 %	-0.002 ppb	47.199 ppb	2.524 ppb	2.400 ppb	-3.990 ppb	14.029 ppb	95.245 %
Concentration per Run 1	99.644 %	91.605 %	0.000 ppb	61.734 ppb	3.370 ppb	2.097 ppb	5.702 ppb	16.055 ppb	96.018 %
Concentration per Run 2	95.077 %	95.698 %	-0.001 ppb	38.498 ppb	2.307 ppb	2.624 ppb	-7.857 ppb	14.225 ppb	94.427 %
Concentration per Run 3	92.557 %	84.050 %	-0.005 ppb	41.367 ppb	1.895 ppb	2.480 ppb	-9.814 ppb	11.807 ppb	95.290 %
Concentration RSD	3.8 %	6.5 %	158.0 %	26.8 %	30.2 %	11.4 %	211.8 %	15.2 %	0.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.277 %	-0.073 ppb	0.034 ppb	0.044 ppb	1.979 ppb	0.001 ppb	0.026 ppb	1.548 ppb	1.669 ppb
Concentration per Run 1	96.305 %	-0.037 ppb	0.025 ppb	0.051 ppb	0.524 ppb	0.000 ppb	0.018 ppb	1.679 ppb	1.657 ppb
Concentration per Run 2	94.539 %	-0.117 ppb	0.045 ppb	0.053 ppb	1.681 ppb	0.003 ppb	0.036 ppb	1.512 ppb	1.710 ppb
Concentration per Run 3	85.988 %	-0.066 ppb	0.032 ppb	0.028 ppb	3.731 ppb	0.001 ppb	0.023 ppb	1.452 ppb	1.640 ppb
Concentration RSD	6.0 %	55.2 %	29.8 %	31.7 %	82.1 %	146.1 %	35.9 %	7.6 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.444 %	-0.012 ppb	-0.043 ppb	0.041 ppb	0.131 ppb	98.242 %	-0.005 ppb	0.000 ppb	95.792 %
Concentration per Run 1	98.731 %	0.061 ppb	0.048 ppb	0.047 ppb	0.110 ppb	97.908 %	-0.005 ppb	-0.001 ppb	101.164 %
Concentration per Run 2	96.042 %	-0.030 ppb	-0.155 ppb	0.041 ppb	0.113 ppb	99.393 %	-0.006 ppb	0.000 ppb	95.159 %
Concentration per Run 3	91.558 %	-0.067 ppb	-0.021 ppb	0.034 ppb	0.171 ppb	97.425 %	-0.004 ppb	0.002 ppb	91.053 %
Concentration RSD	3.8 %	540.2 %	242.4 %	15.9 %	26.3 %	1.0 %	16.4 %	277.4 %	5.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.133 ppb	0.041 ppb	100.332 %	97.644 %	0.005 ppb	0.117 ppb
Concentration per Run 1	0.141 ppb	0.031 ppb	100.653 %	98.983 %	0.000 ppb	0.131 ppb
Concentration per Run 2	0.125 ppb	0.061 ppb	101.024 %	97.461 %	0.006 ppb	0.115 ppb
Concentration per Run 3	0.134 ppb	0.031 ppb	99.321 %	96.488 %	0.009 ppb	0.104 ppb
Concentration RSD	6.1 %	43.1 %	0.9 %	1.3 %	98.2 %	11.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index: 80
Analysis label: L2418245-08 MCP-6020TL-10
Analysis started at: 4/10/2024 1:06:29 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 50
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.017 %	94.439 %	0.008 ppb	27,376.548 ppb	9,489.683 ppb	144.884 ppb	27,827.043 ppb	32,892.847 ppb	97.325 %
Concentration per Run 1	101.276 %	93.966 %	-0.002 ppb	28,932.200 ppb	9,984.679 ppb	157.523 ppb	29,891.022 ppb	34,952.998 ppb	99.245 %
Concentration per Run 2	97.711 %	94.911 %	0.016 ppb	27,437.201 ppb	9,463.633 ppb	139.428 ppb	27,843.556 ppb	32,511.367 ppb	96.448 %
Concentration per Run 3	95.062 %	94.439 %	0.011 ppb	25,760.243 ppb	9,020.738 ppb	137.703 ppb	25,746.552 ppb	31,214.176 ppb	96.282 %
Concentration RSD	3.2 %	0.5 %	107.4 %	5.8 %	5.1 %	7.6 %	7.4 %	5.8 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.925 %	0.158 ppb	0.589 ppb	351.957 ppb	2,359.875 ppb	0.134 ppb	0.946 ppb	1.963 ppb	8.926 ppb
Concentration per Run 1	101.328 %	0.183 ppb	0.593 ppb	350.203 ppb	2,334.456 ppb	0.113 ppb	0.888 ppb	2.009 ppb	8.947 ppb
Concentration per Run 2	92.752 %	0.149 ppb	0.562 ppb	354.424 ppb	2,351.769 ppb	0.140 ppb	0.909 ppb	2.014 ppb	8.727 ppb
Concentration per Run 3	90.694 %	0.141 ppb	0.613 ppb	351.244 ppb	2,393.400 ppb	0.149 ppb	1.040 ppb	1.865 ppb	9.102 ppb
Concentration RSD	5.9 %	14.2 %	4.4 %	0.6 %	1.3 %	14.0 %	8.7 %	4.3 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.144 %	1.246 ppb	0.067 ppb	150.761 ppb	1.647 ppb	95.085 %	0.026 ppb	0.007 ppb	92.780 %
Concentration per Run 1	103.560 %	1.323 ppb	0.083 ppb	158.935 ppb	1.486 ppb	97.724 %	0.020 ppb	0.002 ppb	98.175 %
Concentration per Run 2	99.800 %	1.224 ppb	0.049 ppb	148.137 ppb	1.733 ppb	95.744 %	0.020 ppb	0.013 ppb	93.082 %
Concentration per Run 3	94.073 %	1.193 ppb	0.068 ppb	145.210 ppb	1.722 ppb	91.788 %	0.037 ppb	0.008 ppb	87.084 %
Concentration RSD	4.8 %	5.4 %	26.3 %	4.8 %	8.5 %	3.2 %	38.3 %	74.1 %	6.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	2.269 ppb	20.825 ppb	101.032 %	99.096 %	0.010 ppb	0.234 ppb
Concentration per Run 1	2.258 ppb	21.599 ppb	101.710 %	100.578 %	0.005 ppb	0.237 ppb
Concentration per Run 2	2.252 ppb	20.673 ppb	102.394 %	100.752 %	0.010 ppb	0.233 ppb
Concentration per Run 3	2.296 ppb	20.203 ppb	98.993 %	95.959 %	0.015 ppb	0.233 ppb
Concentration RSD	1.1 %	3.4 %	1.8 %	2.7 %	45.8 %	1.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	81	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418245-09 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 1:11:07 PM	Vial	51		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.610 %	95.488 %	0.012 ppb	22,812.252 ppb	8,205.105 ppb	95.425 ppb	21,241.402 ppb	30,020.855 ppb	100.603 %
Concentration per Run 1	98.783 %	98.059 %	0.013 ppb	22,922.972 ppb	8,203.464 ppb	97.138 ppb	21,625.060 ppb	30,127.186 ppb	102.787 %
Concentration per Run 2	96.399 %	97.114 %	0.007 ppb	22,821.833 ppb	8,246.507 ppb	98.553 ppb	21,978.306 ppb	30,964.302 ppb	101.268 %
Concentration per Run 3	91.647 %	91.291 %	0.016 ppb	22,691.951 ppb	8,165.344 ppb	90.582 ppb	20,120.839 ppb	28,971.077 ppb	97.754 %
Concentration RSD	3.8 %	3.8 %	35.3 %	0.5 %	0.5 %	4.5 %	4.6 %	3.3 %	2.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.532 %	0.100 ppb	0.446 ppb	328.844 ppb	2,044.097 ppb	0.085 ppb	0.622 ppb	1.921 ppb	5.254 ppb
Concentration per Run 1	98.612 %	0.148 ppb	0.431 ppb	321.424 ppb	1,978.738 ppb	0.085 ppb	0.662 ppb	1.929 ppb	5.317 ppb
Concentration per Run 2	92.707 %	0.104 ppb	0.488 ppb	336.285 ppb	2,104.228 ppb	0.084 ppb	0.585 ppb	1.958 ppb	5.377 ppb
Concentration per Run 3	92.277 %	0.049 ppb	0.419 ppb	328.822 ppb	2,049.325 ppb	0.085 ppb	0.619 ppb	1.877 ppb	5.068 ppb
Concentration RSD	3.7 %	49.5 %	8.3 %	2.3 %	3.1 %	1.0 %	6.2 %	2.1 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.521 %	2.321 ppb	-0.046 ppb	139.024 ppb	1.918 ppb	96.834 %	0.019 ppb	0.004 ppb	95.557 %
Concentration per Run 1	98.766 %	2.338 ppb	-0.020 ppb	140.814 ppb	1.689 ppb	98.797 %	0.023 ppb	0.006 ppb	98.108 %
Concentration per Run 2	95.244 %	2.330 ppb	-0.150 ppb	141.037 ppb	1.968 ppb	96.584 %	0.021 ppb	0.003 ppb	94.243 %
Concentration per Run 3	92.552 %	2.295 ppb	0.031 ppb	135.222 ppb	2.096 ppb	95.121 %	0.014 ppb	0.003 ppb	94.319 %
Concentration RSD	3.3 %	1.0 %	201.8 %	2.4 %	10.9 %	1.9 %	23.3 %	35.4 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	1.467 ppb	17.587 ppb	103.532 %	102.330 %	0.007 ppb	0.183 ppb
Concentration per Run 1	1.487 ppb	17.773 ppb	104.474 %	104.282 %	0.000 ppb	0.182 ppb
Concentration per Run 2	1.486 ppb	17.690 ppb	104.065 %	103.023 %	0.010 ppb	0.180 ppb
Concentration per Run 3	1.429 ppb	17.297 ppb	102.057 %	99.684 %	0.009 ppb	0.186 ppb
Concentration RSD	2.3 %	1.4 %	1.2 %	2.3 %	88.1 %	1.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	82	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417800-01 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 1:15:44 PM	Vial	55		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.441 %	97.114 %	0.007 ppb	6,186.621 ppb	2,221.682 ppb	78.033 ppb	3,516.367 ppb	25,156.498 ppb	112.010 %
Concentration per Run 1	98.464 %	94.911 %	0.017 ppb	6,310.589 ppb	2,274.640 ppb	79.561 ppb	3,499.932 ppb	25,266.046 ppb	106.000 %
Concentration per Run 2	99.075 %	97.587 %	0.000 ppb	6,039.513 ppb	2,192.229 ppb	76.876 ppb	3,561.175 ppb	25,524.700 ppb	110.908 %
Concentration per Run 3	106.783 %	98.846 %	0.003 ppb	6,209.762 ppb	2,198.178 ppb	77.661 ppb	3,487.993 ppb	24,678.748 ppb	119.121 %
Concentration RSD	4.6 %	2.1 %	132.1 %	2.2 %	2.1 %	1.8 %	1.1 %	1.7 %	5.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.578 %	1.052 ppb	0.240 ppb	30.141 ppb	205.854 ppb	0.390 ppb	0.867 ppb	3.428 ppb	1.700 ppb
Concentration per Run 1	107.369 %	1.104 ppb	0.252 ppb	30.163 ppb	209.643 ppb	0.383 ppb	0.787 ppb	3.438 ppb	1.671 ppb
Concentration per Run 2	99.789 %	0.977 ppb	0.246 ppb	30.460 ppb	198.738 ppb	0.413 ppb	0.867 ppb	3.494 ppb	1.782 ppb
Concentration per Run 3	106.577 %	1.075 ppb	0.221 ppb	29.799 ppb	209.180 ppb	0.372 ppb	0.948 ppb	3.353 ppb	1.647 ppb
Concentration RSD	4.0 %	6.3 %	7.0 %	1.1 %	3.0 %	5.5 %	9.3 %	2.1 %	4.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.497 %	6.251 ppb	-0.032 ppb	55.140 ppb	1.338 ppb	100.939 %	-0.002 ppb	0.018 ppb	97.998 %
Concentration per Run 1	98.720 %	6.337 ppb	0.100 ppb	56.203 ppb	1.273 ppb	101.979 %	0.000 ppb	0.017 ppb	99.932 %
Concentration per Run 2	100.711 %	5.957 ppb	-0.258 ppb	52.891 ppb	1.372 ppb	99.002 %	-0.005 ppb	0.016 ppb	94.285 %
Concentration per Run 3	99.061 %	6.459 ppb	0.061 ppb	56.326 ppb	1.370 ppb	101.836 %	-0.001 ppb	0.020 ppb	99.777 %
Concentration RSD	1.1 %	4.2 %	608.2 %	3.5 %	4.2 %	1.7 %	101.6 %	9.2 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.510 ppb	12.144 ppb	104.527 %	102.372 %	0.017 ppb	0.413 ppb
Concentration per Run 1	0.504 ppb	12.028 ppb	103.559 %	103.352 %	0.009 ppb	0.403 ppb
Concentration per Run 2	0.494 ppb	12.293 ppb	103.028 %	98.333 %	0.022 ppb	0.427 ppb
Concentration per Run 3	0.533 ppb	12.112 ppb	106.995 %	105.431 %	0.022 ppb	0.410 ppb
Concentration RSD	4.0 %	1.1 %	2.1 %	3.6 %	43.6 %	2.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	83	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417800-02 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 1:20:23 PM	Vial	56		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	96.205 %	92.917 %	0.005 ppb	9,394.934 ppb	3,546.161 ppb	57.541 ppb	6,329.656 ppb	38,654.806 ppb	99.120 %
Concentration per Run 1	100.879 %	90.189 %	0.008 ppb	9,452.757 ppb	3,617.960 ppb	58.174 ppb	6,212.089 ppb	37,726.884 ppb	100.582 %
Concentration per Run 2	95.534 %	94.439 %	-0.001 ppb	9,430.856 ppb	3,588.773 ppb	57.765 ppb	6,579.170 ppb	40,287.349 ppb	99.167 %
Concentration per Run 3	92.202 %	94.124 %	0.009 ppb	9,301.191 ppb	3,431.750 ppb	56.685 ppb	6,197.709 ppb	37,950.185 ppb	97.612 %
Concentration RSD	4.5 %	2.5 %	99.0 %	0.9 %	2.8 %	1.3 %	3.4 %	3.7 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.184 %	0.145 ppb	0.238 ppb	3.206 ppb	35.489 ppb	0.202 ppb	0.704 ppb	3.587 ppb	2.300 ppb
Concentration per Run 1	103.500 %	0.138 ppb	0.266 ppb	3.103 ppb	36.053 ppb	0.185 ppb	0.701 ppb	4.761 ppb	2.564 ppb
Concentration per Run 2	85.174 %	0.166 ppb	0.232 ppb	3.203 ppb	35.560 ppb	0.216 ppb	0.755 ppb	3.112 ppb	2.279 ppb
Concentration per Run 3	99.879 %	0.132 ppb	0.218 ppb	3.312 ppb	34.854 ppb	0.207 ppb	0.656 ppb	2.888 ppb	2.057 ppb
Concentration RSD	10.1 %	12.6 %	10.3 %	3.3 %	1.7 %	7.9 %	7.0 %	28.5 %	11.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.829 %	0.420 ppb	-0.044 ppb	66.133 ppb	1.625 ppb	97.066 %	-0.003 ppb	0.022 ppb	92.612 %
Concentration per Run 1	96.707 %	0.587 ppb	0.100 ppb	68.273 ppb	1.593 ppb	96.514 %	-0.002 ppb	0.023 ppb	96.313 %
Concentration per Run 2	93.022 %	0.362 ppb	-0.177 ppb	64.681 ppb	1.651 ppb	95.474 %	-0.002 ppb	0.028 ppb	90.557 %
Concentration per Run 3	100.757 %	0.313 ppb	-0.054 ppb	65.444 ppb	1.632 ppb	99.212 %	-0.004 ppb	0.014 ppb	90.967 %
Concentration RSD	4.0 %	34.7 %	316.6 %	2.9 %	1.8 %	2.0 %	52.6 %	32.7 %	3.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.359 ppb	14.661 ppb	99.622 %	99.393 %	0.012 ppb	0.229 ppb
Concentration per Run 1	0.365 ppb	14.735 ppb	99.630 %	99.804 %	0.008 ppb	0.345 ppb
Concentration per Run 2	0.347 ppb	14.173 ppb	98.303 %	97.257 %	0.013 ppb	0.182 ppb
Concentration per Run 3	0.365 ppb	15.076 ppb	100.934 %	101.117 %	0.014 ppb	0.160 ppb
Concentration RSD	2.8 %	3.1 %	1.3 %	2.0 %	25.0 %	44.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	84	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 1:25:01 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.254 %	97.849 %	59.166 ppb	5,895.790 ppb	5,746.680 ppb	57.917 ppb	5,756.333 ppb	5,858.891 ppb	108.445 %
Concentration per Run 1	99.466 %	93.022 %	57.465 ppb	6,180.475 ppb	5,956.709 ppb	59.772 ppb	5,780.027 ppb	5,878.221 ppb	111.167 %
Concentration per Run 2	95.137 %	93.809 %	59.960 ppb	5,957.827 ppb	5,744.105 ppb	59.749 ppb	5,873.658 ppb	5,838.755 ppb	108.196 %
Concentration per Run 3	91.157 %	106.716 %	60.072 ppb	5,549.068 ppb	5,539.226 ppb	54.231 ppb	5,615.314 ppb	5,859.698 ppb	105.970 %
Recovery Percentage 1			98.610 %	98.263 %	95.778 %	96.529 %	95.939 %	97.648 %	
Concentration RSD	4.4 %	7.9 %	2.5 %	5.4 %	3.6 %	5.5 %	2.3 %	0.3 %	2.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	107.799 %	59.453 ppb	59.667 ppb	59.736 ppb	5,983.128 ppb	60.114 ppb	59.026 ppb	59.068 ppb	58.851 ppb
Concentration per Run 1	109.088 %	60.032 ppb	59.819 ppb	60.522 ppb	6,035.930 ppb	61.168 ppb	59.602 ppb	59.151 ppb	58.648 ppb
Concentration per Run 2	101.825 %	60.296 ppb	61.194 ppb	60.749 ppb	6,065.542 ppb	61.439 ppb	60.748 ppb	61.030 ppb	59.698 ppb
Concentration per Run 3	112.482 %	58.029 ppb	57.988 ppb	57.935 ppb	5,847.912 ppb	57.736 ppb	56.727 ppb	57.024 ppb	58.208 ppb
Recovery Percentage 1		99.088 %	99.445 %	99.559 %	99.719 %	100.191 %	98.376 %	98.447 %	98.086 %
Concentration RSD	5.1 %	2.1 %	2.7 %	2.6 %	2.0 %	3.4 %	3.5 %	3.4 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.516 %	58.324 ppb	59.155 ppb	58.351 ppb	56.757 ppb	100.284 %	57.622 ppb	57.496 ppb	97.004 %
Concentration per Run 1	101.013 %	57.946 ppb	58.353 ppb	58.351 ppb	52.675 ppb	102.768 %	56.787 ppb	56.149 ppb	101.210 %
Concentration per Run 2	97.198 %	58.073 ppb	57.793 ppb	56.929 ppb	57.659 ppb	99.062 %	58.166 ppb	58.070 ppb	92.825 %
Concentration per Run 3	100.337 %	58.951 ppb	61.317 ppb	59.773 ppb	59.937 ppb	99.021 %	57.914 ppb	58.268 ppb	96.977 %
Recovery Percentage 1		97.206 %	98.591 %	97.251 %	94.595 %		96.037 %	95.826 %	
Concentration RSD	2.0 %	0.9 %	3.2 %	2.4 %	6.5 %	2.1 %	1.3 %	2.0 %	4.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	59.879 ppb	56.183 ppb	103.972 %	103.244 %	56.603 ppb	56.578 ppb
Concentration per Run 1	57.516 ppb	54.064 ppb	105.155 %	105.295 %	52.043 ppb	55.421 ppb
Concentration per Run 2	60.746 ppb	56.736 ppb	101.795 %	99.148 %	59.440 ppb	59.197 ppb
Concentration per Run 3	61.375 ppb	57.748 ppb	104.966 %	105.289 %	58.326 ppb	55.117 ppb
Recovery Percentage 1	99.799 %	93.638 %			94.338 %	94.297 %
Concentration RSD	3.5 %	3.4 %	1.8 %	3.4 %	7.0 %	4.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	85	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 1:29:43 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.877 %	94.229 %	0.000 ppb	-12.005 ppb	0.785 ppb	-0.339 ppb	0.239 ppb	1.060 ppb	92.123 %
Concentration per Run 1	93.736 %	89.559 %	0.000 ppb	-7.633 ppb	0.719 ppb	-0.364 ppb	14.511 ppb	4.160 ppb	93.776 %
Concentration per Run 2	90.653 %	95.855 %	0.007 ppb	-12.227 ppb	0.417 ppb	-0.129 ppb	-1.788 ppb	-4.692 ppb	91.283 %
Concentration per Run 3	88.242 %	97.272 %	-0.008 ppb	-16.155 ppb	1.219 ppb	-0.525 ppb	-12.005 ppb	3.711 ppb	91.309 %
Recovery Percentage 1			-0.083 %	-12.005 %	1.122 %	-3.392 %	0.239 %	1.060 %	
Concentration RSD	3.0 %	4.4 %	1,914.7 %	35.5 %	51.6 %	58.7 %	5,587.0 %	470.6 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	89.743 %	-0.050 ppb	0.010 ppb	0.105 ppb	9.921 ppb	0.005 ppb	0.017 ppb	0.163 ppb	0.088 ppb
Concentration per Run 1	85.988 %	-0.034 ppb	0.010 ppb	0.147 ppb	10.721 ppb	0.005 ppb	0.022 ppb	0.182 ppb	0.083 ppb
Concentration per Run 2	92.006 %	-0.036 ppb	0.010 ppb	0.122 ppb	11.612 ppb	0.006 ppb	0.025 ppb	0.165 ppb	0.103 ppb
Concentration per Run 3	91.236 %	-0.080 ppb	0.010 ppb	0.045 ppb	7.429 ppb	0.005 ppb	0.003 ppb	0.141 ppb	0.077 ppb
Recovery Percentage 1		-0.999 %	0.990 %	10.480 %	19.842 %	1.061 %	0.848 %	16.267 %	1.750 %
Concentration RSD	3.6 %	51.7 %	3.1 %	50.6 %	22.2 %	13.0 %	70.1 %	12.5 %	15.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.489 %	0.029 ppb	0.285 ppb	0.012 ppb	1.029 ppb	95.202 %	0.005 ppb	0.009 ppb	90.583 %
Concentration per Run 1	94.561 %	0.020 ppb	0.464 ppb	0.013 ppb	0.987 ppb	94.893 %	0.008 ppb	0.002 ppb	89.993 %
Concentration per Run 2	96.481 %	-0.041 ppb	0.287 ppb	0.013 ppb	1.049 ppb	96.245 %	0.007 ppb	0.013 ppb	91.888 %
Concentration per Run 3	95.424 %	0.108 ppb	0.105 ppb	0.010 ppb	1.050 ppb	94.468 %	0.000 ppb	0.012 ppb	89.866 %
Recovery Percentage 1		5.771 %	5.708 %	0.118 %	51.452 %		1.210 %	4.417 %	
Concentration RSD	1.0 %	259.7 %	63.1 %	15.5 %	3.5 %	1.0 %	94.9 %	68.0 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.119 ppb	0.020 ppb	95.277 %	92.973 %	0.527 ppb	0.035 ppb
Concentration per Run 1	0.114 ppb	0.032 ppb	93.224 %	90.573 %	0.626 ppb	0.040 ppb
Concentration per Run 2	0.108 ppb	0.012 ppb	95.993 %	93.282 %	0.543 ppb	0.037 ppb
Concentration per Run 3	0.135 ppb	0.015 ppb	96.614 %	95.062 %	0.411 ppb	0.028 ppb
Recovery Percentage 1	2.978 %	3.915 %			52.685 %	3.504 %
Concentration RSD	12.0 %	56.6 %	1.9 %	2.4 %	20.6 %	17.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	86	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906406-1 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 1:41:17 PM	Vial	52		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.214 %	91.868 %	0.003 ppb	-10.898 ppb	1.745 ppb	1.732 ppb	-2.613 ppb	8.703 ppb	96.272 %
Concentration per Run 1	100.850 %	88.457 %	0.011 ppb	-9.005 ppb	2.193 ppb	1.800 ppb	3.421 ppb	12.970 ppb	97.231 %
Concentration per Run 2	97.996 %	91.920 %	0.004 ppb	-12.849 ppb	1.887 ppb	1.672 ppb	-4.208 ppb	1.814 ppb	95.333 %
Concentration per Run 3	95.796 %	95.226 %	-0.006 ppb	-10.839 ppb	1.154 ppb	1.722 ppb	-7.053 ppb	11.326 ppb	96.253 %
Concentration RSD	2.6 %	3.7 %	276.4 %	17.6 %	30.6 %	3.7 %	207.2 %	69.2 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.434 %	-0.066 ppb	0.046 ppb	0.088 ppb	1.611 ppb	0.000 ppb	0.046 ppb	0.075 ppb	0.217 ppb
Concentration per Run 1	90.128 %	-0.083 ppb	0.063 ppb	0.084 ppb	1.477 ppb	-0.004 ppb	0.050 ppb	0.072 ppb	0.213 ppb
Concentration per Run 2	92.707 %	-0.068 ppb	0.040 ppb	0.096 ppb	1.600 ppb	0.005 ppb	0.047 ppb	0.059 ppb	0.233 ppb
Concentration per Run 3	100.468 %	-0.046 ppb	0.034 ppb	0.085 ppb	1.756 ppb	0.001 ppb	0.040 ppb	0.093 ppb	0.205 ppb
Concentration RSD	5.7 %	28.2 %	34.6 %	7.4 %	8.7 %	1,385.7 %	11.3 %	23.5 %	6.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.147 %	0.089 ppb	0.028 ppb	0.013 ppb	0.100 ppb	98.496 %	-0.002 ppb	0.001 ppb	96.949 %
Concentration per Run 1	92.853 %	0.104 ppb	-0.109 ppb	0.012 ppb	0.069 ppb	96.490 %	-0.003 ppb	0.002 ppb	92.337 %
Concentration per Run 2	96.509 %	0.063 ppb	0.136 ppb	0.014 ppb	0.103 ppb	99.045 %	-0.001 ppb	0.000 ppb	97.477 %
Concentration per Run 3	105.079 %	0.101 ppb	0.057 ppb	0.011 ppb	0.128 ppb	99.953 %	-0.002 ppb	0.002 ppb	101.034 %
Concentration RSD	6.4 %	25.4 %	445.6 %	10.8 %	29.5 %	1.8 %	41.4 %	58.2 %	4.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.057 ppb	0.036 ppb	98.794 %	98.775 %	0.052 ppb	0.019 ppb
Concentration per Run 1	0.049 ppb	0.031 ppb	95.003 %	94.633 %	0.060 ppb	0.023 ppb
Concentration per Run 2	0.054 ppb	0.034 ppb	100.328 %	100.353 %	0.047 ppb	0.017 ppb
Concentration per Run 3	0.069 ppb	0.044 ppb	101.052 %	101.339 %	0.050 ppb	0.015 ppb
Concentration RSD	18.5 %	17.8 %	3.3 %	3.7 %	13.3 %	23.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	87	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906406-2d10 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 1:48:52 PM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.720 %	99.265 %	5.224 ppb	1,023.466 ppb	977.578 ppb	185.346 ppb	1,022.508 ppb	1,004.931 ppb	96.124 %
Concentration per Run 1	94.748 %	98.216 %	5.152 ppb	1,018.041 ppb	984.896 ppb	182.607 ppb	1,001.362 ppb	971.558 ppb	99.198 %
Concentration per Run 2	91.703 %	99.633 %	5.208 ppb	1,007.309 ppb	964.365 ppb	186.539 ppb	1,003.602 ppb	1,017.503 ppb	96.169 %
Concentration per Run 3	88.708 %	99.948 %	5.310 ppb	1,045.047 ppb	983.472 ppb	186.891 ppb	1,062.560 ppb	1,025.733 ppb	93.004 %
Concentration RSD	3.3 %	0.9 %	1.5 %	1.9 %	1.2 %	1.3 %	3.4 %	2.9 %	3.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	108.138 %	47.874 ppb	19.297 ppb	48.986 ppb	102.207 ppb	47.882 ppb	47.310 ppb	23.540 ppb	46.657 ppb
Concentration per Run 1	107.867 %	47.502 ppb	19.100 ppb	47.938 ppb	103.480 ppb	48.399 ppb	48.458 ppb	24.094 ppb	46.214 ppb
Concentration per Run 2	112.686 %	47.480 ppb	18.684 ppb	48.229 ppb	100.516 ppb	46.559 ppb	45.805 ppb	22.744 ppb	46.616 ppb
Concentration per Run 3	103.861 %	48.641 ppb	20.107 ppb	50.789 ppb	102.625 ppb	48.689 ppb	47.665 ppb	23.780 ppb	47.142 ppb
Concentration RSD	4.1 %	1.4 %	3.8 %	3.2 %	1.5 %	2.4 %	2.9 %	3.0 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	102.888 %	11.269 ppb	11.499 ppb	96.449 ppb	92.095 ppb	103.898 %	4.548 ppb	4.769 ppb	102.137 %
Concentration per Run 1	101.732 %	10.938 ppb	10.733 ppb	94.385 ppb	86.980 ppb	106.624 %	4.389 ppb	4.607 ppb	107.579 %
Concentration per Run 2	104.035 %	11.424 ppb	11.505 ppb	96.307 ppb	93.387 ppb	103.454 %	4.643 ppb	4.852 ppb	100.604 %
Concentration per Run 3	102.896 %	11.447 ppb	12.259 ppb	98.655 ppb	95.919 ppb	101.616 %	4.613 ppb	4.846 ppb	98.229 %
Concentration RSD	1.1 %	2.6 %	6.6 %	2.2 %	5.0 %	2.4 %	3.1 %	2.9 %	4.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	33.585 ppb	179.489 ppb	105.238 %	103.960 %	11.996 ppb	51.341 ppb
Concentration per Run 1	31.715 ppb	171.616 ppb	109.237 %	106.458 %	11.712 ppb	50.901 ppb
Concentration per Run 2	33.922 ppb	179.351 ppb	106.519 %	104.261 %	11.851 ppb	50.692 ppb
Concentration per Run 3	35.118 ppb	187.499 ppb	99.957 %	101.160 %	12.424 ppb	52.429 ppb
Concentration RSD	5.1 %	4.4 %	4.5 %	2.6 %	3.1 %	1.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	88	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906406-3d10 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 1:55:51 PM	Vial	54		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.355 %	95.330 %	4.683 ppb	986.069 ppb	949.577 ppb	182.875 ppb	947.598 ppb	919.264 ppb	107.460 %
Concentration per Run 1	101.828 %	98.688 %	4.553 ppb	920.771 ppb	912.181 ppb	177.695 ppb	893.951 ppb	857.972 ppb	107.634 %
Concentration per Run 2	98.515 %	92.550 %	4.725 ppb	1,024.792 ppb	987.346 ppb	191.674 ppb	981.538 ppb	920.660 ppb	109.023 %
Concentration per Run 3	94.723 %	94.753 %	4.772 ppb	1,012.644 ppb	949.205 ppb	179.257 ppb	967.304 ppb	979.161 ppb	105.723 %
Concentration RSD	3.6 %	3.3 %	2.5 %	5.8 %	4.0 %	4.2 %	5.0 %	6.6 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	116.853 %	44.690 ppb	17.851 ppb	45.153 ppb	96.603 ppb	45.673 ppb	45.373 ppb	22.461 ppb	45.178 ppb
Concentration per Run 1	140.052 %	39.999 ppb	15.911 ppb	41.760 ppb	91.161 ppb	41.704 ppb	40.710 ppb	20.732 ppb	42.370 ppb
Concentration per Run 2	108.455 %	46.646 ppb	18.233 ppb	47.106 ppb	99.275 ppb	47.768 ppb	46.560 ppb	23.298 ppb	45.975 ppb
Concentration per Run 3	102.052 %	47.424 ppb	19.409 ppb	46.592 ppb	99.373 ppb	47.548 ppb	48.849 ppb	23.352 ppb	47.189 ppb
Concentration RSD	17.4 %	9.1 %	10.0 %	6.5 %	4.9 %	7.5 %	9.3 %	6.7 %	5.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.238 %	10.926 ppb	10.952 ppb	92.687 ppb	88.330 ppb	103.929 %	4.392 ppb	4.688 ppb	103.317 %
Concentration per Run 1	109.690 %	11.000 ppb	10.929 ppb	94.141 ppb	82.663 ppb	109.804 %	4.122 ppb	4.380 ppb	120.395 %
Concentration per Run 2	102.161 %	10.581 ppb	11.340 ppb	92.468 ppb	89.910 ppb	103.630 %	4.478 ppb	4.876 ppb	97.651 %
Concentration per Run 3	97.861 %	11.198 ppb	10.588 ppb	91.452 ppb	92.418 ppb	98.352 %	4.577 ppb	4.809 ppb	91.907 %
Concentration RSD	5.8 %	2.9 %	3.4 %	1.5 %	5.7 %	5.5 %	5.4 %	5.7 %	14.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	35.303 ppb	173.753 ppb	108.829 %	109.333 %	11.015 ppb	46.842 ppb
Concentration per Run 1	31.174 ppb	159.869 ppb	122.631 %	126.756 %	9.363 ppb	40.437 ppb
Concentration per Run 2	37.830 ppb	182.590 ppb	103.226 %	101.170 %	11.918 ppb	50.831 ppb
Concentration per Run 3	36.904 ppb	178.801 ppb	100.629 %	100.072 %	11.764 ppb	49.259 ppb
Concentration RSD	10.2 %	7.0 %	11.0 %	13.8 %	13.0 %	12.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	89	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417800-03 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 2:00:28 PM	Vial	57		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	98.326 %	98.478 %	0.007 ppb	8,862.575 ppb	4,569.696 ppb	24.465 ppb	5,181.173 ppb	72,826.936 ppb	106.437 %
Concentration per Run 1	103.390 %	96.800 %	0.025 ppb	9,251.502 ppb	4,831.439 ppb	26.042 ppb	5,519.890 ppb	75,773.983 ppb	108.300 %
Concentration per Run 2	98.112 %	100.105 %	0.010 ppb	8,740.725 ppb	4,518.600 ppb	23.781 ppb	4,947.184 ppb	69,849.228 ppb	106.837 %
Concentration per Run 3	93.478 %	98.531 %	-0.013 ppb	8,595.499 ppb	4,359.048 ppb	23.572 ppb	5,076.445 ppb	72,857.598 ppb	104.172 %
Concentration RSD	5.0 %	1.7 %	252.5 %	3.9 %	5.3 %	5.6 %	5.8 %	4.1 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.153 %	0.190 ppb	0.212 ppb	15.211 ppb	16.441 ppb	0.417 ppb	0.474 ppb	3.679 ppb	1.473 ppb
Concentration per Run 1	111.646 %	0.237 ppb	0.207 ppb	15.073 ppb	16.720 ppb	0.395 ppb	0.495 ppb	3.587 ppb	1.450 ppb
Concentration per Run 2	103.635 %	0.194 ppb	0.214 ppb	15.078 ppb	16.777 ppb	0.431 ppb	0.485 ppb	3.660 ppb	1.498 ppb
Concentration per Run 3	94.178 %	0.139 ppb	0.215 ppb	15.482 ppb	15.825 ppb	0.425 ppb	0.443 ppb	3.791 ppb	1.470 ppb
Concentration RSD	8.5 %	25.9 %	1.9 %	1.5 %	3.2 %	4.7 %	5.8 %	2.8 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.625 %	0.905 ppb	0.223 ppb	95.515 ppb	4.956 ppb	98.823 %	-0.003 ppb	0.013 ppb	97.707 %
Concentration per Run 1	102.678 %	1.019 ppb	0.467 ppb	103.697 ppb	5.258 ppb	96.898 %	-0.001 ppb	0.015 ppb	100.506 %
Concentration per Run 2	102.160 %	0.942 ppb	0.145 ppb	94.121 ppb	5.034 ppb	98.231 %	-0.005 ppb	0.010 ppb	96.393 %
Concentration per Run 3	97.038 %	0.754 ppb	0.056 ppb	88.726 ppb	4.575 ppb	101.341 %	-0.002 ppb	0.016 ppb	96.223 %
Concentration RSD	3.1 %	15.1 %	97.0 %	7.9 %	7.0 %	2.3 %	72.0 %	25.0 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	3.057 ppb	22.654 ppb	99.248 %	99.033 %	0.078 ppb	0.056 ppb
Concentration per Run 1	3.383 ppb	23.677 ppb	96.863 %	96.930 %	0.081 ppb	0.068 ppb
Concentration per Run 2	3.103 ppb	22.775 ppb	98.201 %	99.386 %	0.087 ppb	0.051 ppb
Concentration per Run 3	2.685 ppb	21.511 ppb	102.679 %	100.784 %	0.066 ppb	0.049 ppb
Concentration RSD	11.5 %	4.8 %	3.1 %	2.0 %	13.9 %	18.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	90	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418020-01 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 2:05:07 PM	Vial	58		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.944 %	96.170 %	0.000 ppb	255,858.106 ppb	5,195.250 ppb	30.173 ppb	8,508.233 ppb	47,563.668 ppb	99.932 %
Concentration per Run 1	96.593 %	104.197 %	0.006 ppb	247,823.960 ppb	5,086.344 ppb	29.874 ppb	8,561.007 ppb	48,051.343 ppb	103.993 %
Concentration per Run 2	92.914 %	96.327 %	0.003 ppb	261,362.915 ppb	5,223.764 ppb	30.272 ppb	8,631.445 ppb	47,800.740 ppb	100.660 %
Concentration per Run 3	86.325 %	87.985 %	-0.008 ppb	258,387.444 ppb	5,275.641 ppb	30.373 ppb	8,332.247 ppb	46,838.920 ppb	95.145 %
Concentration RSD	5.7 %	8.4 %	3,266.1 %	2.8 %	1.9 %	0.9 %	1.8 %	1.3 %	4.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.810 %	0.288 ppb	0.413 ppb	23.556 ppb	66.003 ppb	2.121 ppb	81.260 ppb	86.991 ppb	9,142.747 ppb
Concentration per Run 1	102.753 %	0.207 ppb	0.383 ppb	23.123 ppb	62.995 ppb	2.061 ppb	80.649 ppb	84.889 ppb	9,044.136 ppb
Concentration per Run 2	95.919 %	0.305 ppb	0.433 ppb	24.004 ppb	67.789 ppb	2.087 ppb	80.778 ppb	85.853 ppb	9,083.783 ppb
Concentration per Run 3	91.757 %	0.353 ppb	0.423 ppb	23.540 ppb	67.227 ppb	2.215 ppb	82.351 ppb	90.232 ppb	9,300.323 ppb
Concentration RSD	5.7 %	25.9 %	6.4 %	1.9 %	4.0 %	3.9 %	1.2 %	3.3 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.920 %	0.611 ppb	0.398 ppb	196.661 ppb	2.128 ppb	96.204 %	0.007 ppb	5.405 ppb	96.269 %
Concentration per Run 1	104.372 %	0.690 ppb	0.541 ppb	200.114 ppb	2.034 ppb	99.122 %	0.005 ppb	5.292 ppb	100.193 %
Concentration per Run 2	101.937 %	0.645 ppb	0.390 ppb	197.625 ppb	2.074 ppb	96.796 %	0.012 ppb	5.473 ppb	98.123 %
Concentration per Run 3	96.452 %	0.500 ppb	0.262 ppb	192.244 ppb	2.275 ppb	92.695 %	0.004 ppb	5.449 ppb	90.491 %
Concentration RSD	4.0 %	16.3 %	35.1 %	2.0 %	6.1 %	3.4 %	54.7 %	1.8 %	5.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.798 ppb	40.596 ppb	100.268 %	101.064 %	0.038 ppb	11.164 ppb
Concentration per Run 1	0.786 ppb	40.620 ppb	104.577 %	105.537 %	0.029 ppb	10.799 ppb
Concentration per Run 2	0.809 ppb	40.676 ppb	99.151 %	100.995 %	0.043 ppb	11.078 ppb
Concentration per Run 3	0.800 ppb	40.491 ppb	97.074 %	96.660 %	0.043 ppb	11.615 ppb
Concentration RSD	1.5 %	0.2 %	3.9 %	4.4 %	21.4 %	3.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	91	User name	ALPHALAB\Metals-Instrument	Comment	CCV/MCCV
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 2:10:56 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.141 %	96.590 %	59.343 ppb	5,954.212 ppb	5,878.098 ppb	59.994 ppb	5,941.944 ppb	5,969.271 ppb	110.318 %
Concentration per Run 1	101.656 %	99.948 %	58.375 ppb	5,955.981 ppb	5,975.008 ppb	60.785 ppb	6,045.863 ppb	6,092.812 ppb	112.658 %
Concentration per Run 2	95.709 %	98.531 %	59.754 ppb	5,793.019 ppb	5,710.964 ppb	57.460 ppb	5,810.289 ppb	5,909.747 ppb	109.162 %
Concentration per Run 3	94.056 %	91.291 %	59.900 ppb	6,113.636 ppb	5,948.323 ppb	61.736 ppb	5,969.682 ppb	5,905.253 ppb	109.134 %
Recovery Percentage 1			98.905 %	99.237 %	97.968 %	99.990 %	99.032 %	99.488 %	
Concentration RSD	4.1 %	4.8 %	1.4 %	2.7 %	2.5 %	3.7 %	2.0 %	1.8 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.378 %	59.257 ppb	59.115 ppb	59.456 ppb	5,985.829 ppb	59.539 ppb	58.762 ppb	59.284 ppb	61.130 ppb
Concentration per Run 1	108.658 %	60.262 ppb	60.323 ppb	60.906 ppb	6,026.010 ppb	60.457 ppb	60.008 ppb	60.646 ppb	62.515 ppb
Concentration per Run 2	112.370 %	58.692 ppb	58.232 ppb	58.268 ppb	5,985.124 ppb	58.959 ppb	58.275 ppb	59.111 ppb	60.536 ppb
Concentration per Run 3	110.106 %	58.818 ppb	58.789 ppb	59.194 ppb	5,946.354 ppb	59.200 ppb	58.005 ppb	58.095 ppb	60.340 ppb
Recovery Percentage 1		98.762 %	98.525 %	99.093 %	99.764 %	99.231 %	97.937 %	98.807 %	101.884 %
Concentration RSD	1.7 %	1.5 %	1.8 %	2.3 %	0.7 %	1.4 %	1.8 %	2.2 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.004 %	59.532 ppb	59.963 ppb	60.127 ppb	58.078 ppb	98.679 %	58.124 ppb	57.924 ppb	97.671 %
Concentration per Run 1	97.842 %	59.916 ppb	58.841 ppb	60.777 ppb	56.094 ppb	98.502 %	58.211 ppb	57.480 ppb	97.462 %
Concentration per Run 2	99.173 %	59.755 ppb	60.735 ppb	59.981 ppb	59.181 ppb	98.200 %	59.040 ppb	58.923 ppb	96.771 %
Concentration per Run 3	99.996 %	58.926 ppb	60.313 ppb	59.621 ppb	58.960 ppb	99.335 %	57.123 ppb	57.370 ppb	98.780 %
Recovery Percentage 1		99.220 %	99.938 %	100.211 %	96.797 %		96.874 %	96.541 %	
Concentration RSD	1.1 %	0.9 %	1.7 %	1.0 %	3.0 %	0.6 %	1.7 %	1.5 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	61.494 ppb	58.060 ppb	101.046 %	101.228 %	58.244 ppb	58.489 ppb
Concentration per Run 1	61.817 ppb	58.571 ppb	101.004 %	101.259 %	55.154 ppb	58.939 ppb
Concentration per Run 2	61.342 ppb	57.378 ppb	102.006 %	101.621 %	58.051 ppb	57.677 ppb
Concentration per Run 3	61.322 ppb	58.230 ppb	100.126 %	100.805 %	61.526 ppb	58.852 ppb
Recovery Percentage 1	102.490 %	96.766 %			97.073 %	97.482 %
Concentration RSD	0.5 %	1.1 %	0.9 %	0.4 %	5.5 %	1.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	92	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 2:15:38 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.606 %	92.760 %	0.016 ppb	-1.234 ppb	0.563 ppb	-0.315 ppb	-3.361 ppb	0.543 ppb	93.631 %
Concentration per Run 1	96.234 %	92.550 %	0.014 ppb	3.514 ppb	1.100 ppb	-0.261 ppb	-5.129 ppb	1.347 ppb	97.991 %
Concentration per Run 2	89.531 %	87.670 %	0.013 ppb	-2.365 ppb	0.046 ppb	-0.376 ppb	-5.944 ppb	2.753 ppb	92.146 %
Concentration per Run 3	86.053 %	98.059 %	0.020 ppb	-4.852 ppb	0.542 ppb	-0.307 ppb	0.990 ppb	-2.471 ppb	90.756 %
Recovery Percentage 1			3.182 %	-1.234 %	0.804 %	-3.146 %	-3.361 %	0.543 %	
Concentration RSD	5.7 %	5.6 %	23.3 %	348.1 %	93.7 %	18.4 %	112.8 %	497.9 %	4.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.692 %	-0.060 ppb	-0.001 ppb	0.083 ppb	9.626 ppb	0.007 ppb	0.015 ppb	0.030 ppb	0.922 ppb
Concentration per Run 1	98.702 %	-0.093 ppb	0.016 ppb	0.074 ppb	9.714 ppb	0.007 ppb	0.017 ppb	0.073 ppb	1.018 ppb
Concentration per Run 2	93.114 %	-0.076 ppb	-0.004 ppb	0.060 ppb	9.790 ppb	0.008 ppb	-0.002 ppb	0.023 ppb	0.962 ppb
Concentration per Run 3	101.259 %	-0.010 ppb	-0.014 ppb	0.114 ppb	9.375 ppb	0.006 ppb	0.031 ppb	-0.006 ppb	0.787 ppb
Recovery Percentage 1		-1.193 %	-0.093 %	8.300 %	19.253 %	1.396 %	0.764 %	3.019 %	18.449 %
Concentration RSD	4.3 %	73.9 %	1,639.7 %	33.5 %	2.3 %	9.9 %	108.7 %	133.0 %	13.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.606 %	0.040 ppb	0.336 ppb	0.018 ppb	1.084 ppb	97.672 %	0.003 ppb	0.007 ppb	96.648 %
Concentration per Run 1	97.982 %	0.019 ppb	0.341 ppb	0.026 ppb	1.077 ppb	97.665 %	0.008 ppb	0.013 ppb	93.457 %
Concentration per Run 2	93.162 %	0.076 ppb	0.152 ppb	0.016 ppb	1.090 ppb	96.293 %	0.003 ppb	0.007 ppb	97.335 %
Concentration per Run 3	101.675 %	0.027 ppb	0.516 ppb	0.012 ppb	1.084 ppb	99.056 %	-0.002 ppb	0.002 ppb	99.151 %
Recovery Percentage 1		8.092 %	6.727 %	0.180 %	54.186 %		0.746 %	3.565 %	
Concentration RSD	4.4 %	76.5 %	54.1 %	37.8 %	0.6 %	1.4 %	169.2 %	76.5 %	3.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.274 ppb	0.016 ppb	97.015 %	97.996 %	0.533 ppb	0.024 ppb
Concentration per Run 1	0.270 ppb	0.022 ppb	97.062 %	96.944 %	0.645 ppb	0.035 ppb
Concentration per Run 2	0.265 ppb	0.006 ppb	96.130 %	96.841 %	0.548 ppb	0.020 ppb
Concentration per Run 3	0.287 ppb	0.019 ppb	97.853 %	100.203 %	0.406 ppb	0.018 ppb
Recovery Percentage 1	6.848 %	3.119 %			53.295 %	2.407 %
Concentration RSD	4.2 %	56.2 %	0.9 %	2.0 %	22.6 %	38.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	93	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906345-2d10 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 2:27:05 PM	Vial	45		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.285 %	102.466 %	4.990 ppb	1,038.226 ppb	1,014.766 ppb	199.790 ppb	1,072.913 ppb	1,097.585 ppb	109.450 %
Concentration per Run 1	109.186 %	101.207 %	4.914 ppb	1,041.830 ppb	1,031.651 ppb	200.232 ppb	1,080.480 ppb	1,148.685 ppb	111.921 %
Concentration per Run 2	103.157 %	104.040 %	4.869 ppb	1,001.592 ppb	957.718 ppb	190.255 ppb	1,013.833 ppb	1,079.634 ppb	107.711 %
Concentration per Run 3	100.512 %	102.151 %	5.186 ppb	1,071.257 ppb	1,054.931 ppb	208.882 ppb	1,124.426 ppb	1,064.435 ppb	108.717 %
Concentration RSD	4.3 %	1.4 %	3.4 %	3.4 %	5.0 %	4.7 %	5.2 %	4.1 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.709 %	52.632 ppb	21.258 ppb	53.447 ppb	112.948 ppb	52.645 ppb	51.966 ppb	25.280 ppb	51.527 ppb
Concentration per Run 1	96.282 %	53.811 ppb	21.803 ppb	54.506 ppb	114.553 ppb	53.847 ppb	53.669 ppb	25.579 ppb	52.612 ppb
Concentration per Run 2	101.304 %	51.248 ppb	20.845 ppb	52.429 ppb	111.904 ppb	51.920 ppb	50.987 ppb	25.158 ppb	50.632 ppb
Concentration per Run 3	104.540 %	52.838 ppb	21.125 ppb	53.406 ppb	112.385 ppb	52.166 ppb	51.242 ppb	25.105 ppb	51.338 ppb
Concentration RSD	4.1 %	2.5 %	2.3 %	1.9 %	1.2 %	2.0 %	2.8 %	1.0 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.656 %	11.792 ppb	11.576 ppb	96.355 ppb	99.154 ppb	103.359 %	4.772 ppb	5.105 ppb	99.587 %
Concentration per Run 1	100.913 %	12.146 ppb	12.176 ppb	95.998 ppb	98.854 ppb	101.488 %	4.829 ppb	5.306 ppb	96.697 %
Concentration per Run 2	101.577 %	11.548 ppb	11.281 ppb	95.167 ppb	98.416 ppb	102.964 %	4.786 ppb	5.102 ppb	98.898 %
Concentration per Run 3	108.480 %	11.681 ppb	11.272 ppb	97.901 ppb	100.191 ppb	105.625 %	4.701 ppb	4.907 ppb	103.166 %
Concentration RSD	4.0 %	2.7 %	4.5 %	1.5 %	0.9 %	2.0 %	1.4 %	3.9 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	40.232 ppb	193.958 ppb	103.834 %	103.359 %	12.269 ppb	51.825 ppb
Concentration per Run 1	40.381 ppb	195.516 ppb	101.038 %	99.385 %	12.516 ppb	53.239 ppb
Concentration per Run 2	39.446 ppb	190.108 ppb	103.134 %	103.738 %	11.965 ppb	50.515 ppb
Concentration per Run 3	40.870 ppb	196.250 ppb	107.329 %	106.955 %	12.325 ppb	51.722 ppb
Concentration RSD	1.8 %	1.7 %	3.1 %	3.7 %	2.3 %	2.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	94	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906345-3d10 MCP-6020TL-10	Rack	1		
Analysis started at:	4/10/2024 2:31:42 PM	Vial	46		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	100.448 %	103.253 %	5.184 ppb	1,076.012 ppb	1,038.639 ppb	209.052 ppb	1,107.900 ppb	1,124.840 ppb	104.172 %
Concentration per Run 1	106.396 %	98.059 %	4.985 ppb	1,095.035 ppb	1,041.824 ppb	209.978 ppb	1,124.795 ppb	1,150.039 ppb	107.910 %
Concentration per Run 2	99.962 %	110.336 %	5.213 ppb	1,060.208 ppb	1,039.706 ppb	207.659 ppb	1,115.212 ppb	1,180.008 ppb	104.056 %
Concentration per Run 3	94.985 %	101.364 %	5.354 ppb	1,072.792 ppb	1,034.387 ppb	209.517 ppb	1,083.693 ppb	1,044.475 ppb	100.550 %
Concentration RSD	5.7 %	6.2 %	3.6 %	1.6 %	0.4 %	0.6 %	1.9 %	6.3 %	3.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.505 %	54.058 ppb	21.496 ppb	54.485 ppb	112.920 ppb	53.610 ppb	53.260 ppb	25.872 ppb	51.660 ppb
Concentration per Run 1	97.662 %	55.412 ppb	21.672 ppb	53.521 ppb	115.828 ppb	54.449 ppb	55.040 ppb	26.770 ppb	52.206 ppb
Concentration per Run 2	100.241 %	55.155 ppb	21.841 ppb	55.323 ppb	114.538 ppb	54.039 ppb	53.944 ppb	25.977 ppb	52.078 ppb
Concentration per Run 3	103.612 %	51.606 ppb	20.975 ppb	54.611 ppb	108.393 ppb	52.343 ppb	50.795 ppb	24.869 ppb	50.696 ppb
Concentration RSD	3.0 %	3.9 %	2.1 %	1.7 %	3.5 %	2.1 %	4.1 %	3.7 %	1.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	107.229 %	11.485 ppb	11.397 ppb	95.580 ppb	96.342 ppb	105.826 %	4.777 ppb	5.118 ppb	101.632 %
Concentration per Run 1	102.458 %	12.007 ppb	11.788 ppb	95.669 ppb	94.642 ppb	102.015 %	5.008 ppb	5.284 ppb	95.803 %
Concentration per Run 2	109.159 %	11.068 ppb	10.869 ppb	96.684 ppb	97.268 ppb	106.318 %	4.681 ppb	5.167 ppb	103.140 %
Concentration per Run 3	110.070 %	11.380 ppb	11.535 ppb	94.387 ppb	97.115 ppb	109.144 %	4.641 ppb	4.904 ppb	105.951 %
Concentration RSD	3.9 %	4.2 %	4.2 %	1.2 %	1.5 %	3.4 %	4.2 %	3.8 %	5.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	39.771 ppb	193.620 ppb	105.203 %	105.138 %	12.236 ppb	51.487 ppb
Concentration per Run 1	39.562 ppb	198.273 ppb	101.848 %	100.764 %	12.639 ppb	53.110 ppb
Concentration per Run 2	40.285 ppb	192.326 ppb	105.416 %	105.154 %	12.277 ppb	51.844 ppb
Concentration per Run 3	39.465 ppb	190.261 ppb	108.344 %	109.496 %	11.792 ppb	49.507 ppb
Concentration RSD	1.1 %	2.1 %	3.1 %	4.2 %	3.5 %	3.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	95	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906406-2d10 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 2:36:21 PM	Vial	53		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.599 %	103.778 %	4.920 ppb	1,076.029 ppb	1,045.335 ppb	196.204 ppb	1,090.533 ppb	1,095.180 ppb	107.331 %
Concentration per Run 1	103.143 %	96.485 %	4.763 ppb	1,101.858 ppb	1,051.729 ppb	199.187 ppb	1,111.303 ppb	1,097.451 ppb	109.250 %
Concentration per Run 2	98.812 %	107.345 %	5.021 ppb	1,096.869 ppb	1,075.910 ppb	199.179 ppb	1,120.496 ppb	1,177.987 ppb	107.485 %
Concentration per Run 3	96.841 %	107.503 %	4.977 ppb	1,029.361 ppb	1,008.367 ppb	190.245 ppb	1,039.800 ppb	1,010.102 ppb	105.259 %
Concentration RSD	3.2 %	6.1 %	2.8 %	3.8 %	3.3 %	2.6 %	4.1 %	7.7 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.462 %	50.562 ppb	20.362 ppb	50.542 ppb	107.519 ppb	50.564 ppb	50.002 ppb	24.340 ppb	48.982 ppb
Concentration per Run 1	98.409 %	51.077 ppb	20.658 ppb	51.164 ppb	113.098 ppb	52.139 ppb	52.108 ppb	24.952 ppb	50.597 ppb
Concentration per Run 2	101.440 %	53.159 ppb	21.253 ppb	52.710 ppb	107.001 ppb	52.091 ppb	50.311 ppb	24.398 ppb	49.709 ppb
Concentration per Run 3	110.536 %	47.452 ppb	19.174 ppb	47.751 ppb	102.459 ppb	47.463 ppb	47.588 ppb	23.669 ppb	46.641 ppb
Concentration RSD	6.1 %	5.7 %	5.3 %	5.0 %	5.0 %	5.3 %	4.6 %	2.6 %	4.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	106.097 %	11.834 ppb	11.738 ppb	96.921 ppb	96.943 ppb	106.184 %	4.540 ppb	4.889 ppb	103.132 %
Concentration per Run 1	102.243 %	11.892 ppb	11.744 ppb	95.274 ppb	94.212 ppb	106.622 %	4.577 ppb	4.951 ppb	99.669 %
Concentration per Run 2	107.521 %	11.927 ppb	12.047 ppb	99.133 ppb	98.725 ppb	105.922 %	4.595 ppb	5.069 ppb	102.671 %
Concentration per Run 3	108.528 %	11.683 ppb	11.423 ppb	96.356 ppb	97.893 ppb	106.009 %	4.449 ppb	4.647 ppb	107.057 %
Concentration RSD	3.2 %	1.1 %	2.7 %	2.1 %	2.5 %	0.4 %	1.8 %	4.5 %	3.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	39.456 ppb	185.369 ppb	105.347 %	105.411 %	12.213 ppb	52.128 ppb
Concentration per Run 1	38.843 ppb	186.400 ppb	103.040 %	102.240 %	12.190 ppb	53.233 ppb
Concentration per Run 2	40.221 ppb	187.829 ppb	104.819 %	104.954 %	12.646 ppb	53.010 ppb
Concentration per Run 3	39.303 ppb	181.878 ppb	108.180 %	109.038 %	11.803 ppb	50.142 ppb
Concentration RSD	1.8 %	1.7 %	2.5 %	3.2 %	3.5 %	3.3 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	96	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906406-3d10 MCP-6020SL-10	Rack	1		
Analysis started at:	4/10/2024 2:40:59 PM	Vial	54		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.128 %	96.170 %	4.890 ppb	1,110.819 ppb	1,081.072 ppb	207.209 ppb	1,139.586 ppb	1,095.890 ppb	100.297 %
Concentration per Run 1	103.443 %	100.577 %	4.935 ppb	991.969 ppb	990.750 ppb	187.358 ppb	1,034.047 ppb	1,021.378 ppb	102.041 %
Concentration per Run 2	99.046 %	86.569 %	4.838 ppb	1,244.490 ppb	1,212.084 ppb	233.478 ppb	1,221.477 ppb	1,174.576 ppb	99.277 %
Concentration per Run 3	94.895 %	101.364 %	4.897 ppb	1,095.997 ppb	1,040.382 ppb	200.792 ppb	1,163.233 ppb	1,091.716 ppb	99.573 %
Concentration RSD	4.3 %	8.7 %	1.0 %	11.4 %	10.7 %	11.4 %	8.4 %	7.0 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.926 %	53.018 ppb	21.110 ppb	52.698 ppb	110.682 ppb	51.618 ppb	51.619 ppb	24.863 ppb	49.398 ppb
Concentration per Run 1	103.840 %	49.168 ppb	19.950 ppb	48.532 ppb	103.046 ppb	48.446 ppb	47.639 ppb	23.944 ppb	46.539 ppb
Concentration per Run 2	92.775 %	57.113 ppb	22.382 ppb	56.377 ppb	122.043 ppb	55.132 ppb	54.862 ppb	25.980 ppb	52.222 ppb
Concentration per Run 3	97.164 %	52.772 ppb	20.999 ppb	53.186 ppb	106.955 ppb	51.274 ppb	52.358 ppb	24.666 ppb	49.433 ppb
Concentration RSD	5.7 %	7.5 %	5.8 %	7.5 %	9.1 %	6.5 %	7.1 %	4.2 %	5.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.407 %	11.416 ppb	11.603 ppb	96.668 ppb	97.997 ppb	102.439 %	4.749 ppb	5.116 ppb	98.109 %
Concentration per Run 1	105.818 %	10.988 ppb	10.735 ppb	89.463 ppb	89.927 ppb	107.579 %	4.435 ppb	4.818 ppb	104.095 %
Concentration per Run 2	100.993 %	11.809 ppb	12.884 ppb	103.551 ppb	103.958 ppb	96.761 %	5.067 ppb	5.378 ppb	92.746 %
Concentration per Run 3	106.410 %	11.452 ppb	11.191 ppb	96.989 ppb	100.108 ppb	102.975 %	4.744 ppb	5.154 ppb	97.485 %
Concentration RSD	2.8 %	3.6 %	9.8 %	7.3 %	7.4 %	5.3 %	6.6 %	5.5 %	5.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	41.786 ppb	193.182 ppb	101.445 %	101.915 %	12.214 ppb	51.967 ppb
Concentration per Run 1	36.550 ppb	173.256 ppb	106.371 %	107.882 %	11.231 ppb	47.767 ppb
Concentration per Run 2	45.913 ppb	212.216 ppb	95.538 %	93.782 %	13.391 ppb	57.514 ppb
Concentration per Run 3	42.894 ppb	194.074 ppb	102.425 %	104.082 %	12.018 ppb	50.619 ppb
Concentration RSD	11.4 %	10.1 %	5.4 %	7.2 %	9.0 %	9.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index: 97
Analysis label: OB 8411-01 INF
Analysis started at: 4/10/2024 2:55:44 PM
User name ALPHALAB\Metals-Instrument
Rack 1
Vial 59
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.714 %	108.027 %	-0.008 ppb	3,379.382 ppb	6,884.891 ppb	3.667 ppb	390.682 ppb	32,005.674 ppb	107.191 %
Concentration per Run 1	112.778 %	107.818 %	-0.009 ppb	3,296.155 ppb	6,721.928 ppb	3.526 ppb	375.702 ppb	30,767.733 ppb	110.651 %
Concentration per Run 2	106.514 %	106.086 %	-0.003 ppb	3,387.703 ppb	6,905.903 ppb	3.749 ppb	383.488 ppb	31,498.316 ppb	106.138 %
Concentration per Run 3	103.849 %	110.179 %	-0.012 ppb	3,454.289 ppb	7,026.842 ppb	3.725 ppb	412.856 ppb	33,750.972 ppb	104.783 %
Concentration RSD	4.3 %	1.9 %	59.5 %	2.3 %	2.2 %	3.3 %	5.0 %	4.9 %	2.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	109.896 %	-0.111 ppb	0.341 ppb	30.953 ppb	3.000 ppb	0.037 ppb	0.721 ppb	0.507 ppb	0.353 ppb
Concentration per Run 1	113.411 %	-0.123 ppb	0.331 ppb	30.109 ppb	2.859 ppb	0.037 ppb	0.738 ppb	0.466 ppb	0.368 ppb
Concentration per Run 2	106.961 %	-0.106 ppb	0.339 ppb	30.810 ppb	2.308 ppb	0.035 ppb	0.703 ppb	0.579 ppb	0.361 ppb
Concentration per Run 3	109.315 %	-0.103 ppb	0.354 ppb	31.941 ppb	3.832 ppb	0.039 ppb	0.723 ppb	0.477 ppb	0.331 ppb
Concentration RSD	3.0 %	9.6 %	3.4 %	3.0 %	25.7 %	5.8 %	2.4 %	12.3 %	5.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	110.828 %	0.025 ppb	0.015 ppb	132.863 ppb	0.468 ppb	109.441 %	-0.003 ppb	0.003 ppb	110.714 %
Concentration per Run 1	110.976 %	0.042 ppb	-0.021 ppb	128.308 ppb	0.467 ppb	113.859 %	-0.002 ppb	0.002 ppb	116.661 %
Concentration per Run 2	106.451 %	0.027 ppb	-0.076 ppb	133.235 ppb	0.499 ppb	106.991 %	-0.004 ppb	0.002 ppb	105.640 %
Concentration per Run 3	115.056 %	0.005 ppb	0.141 ppb	137.046 ppb	0.438 ppb	107.474 %	-0.003 ppb	0.005 ppb	109.842 %
Concentration RSD	3.9 %	74.9 %	767.5 %	3.3 %	6.5 %	3.5 %	30.8 %	59.6 %	5.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.418 ppb	0.322 ppb	115.324 %	115.422 %	0.065 ppb	0.022 ppb
Concentration per Run 1	0.377 ppb	0.300 ppb	124.037 %	120.980 %	0.085 ppb	0.022 ppb
Concentration per Run 2	0.439 ppb	0.294 ppb	110.331 %	111.532 %	0.062 ppb	0.024 ppb
Concentration per Run 3	0.439 ppb	0.371 ppb	111.603 %	113.754 %	0.047 ppb	0.020 ppb
Concentration RSD	8.5 %	13.4 %	6.6 %	4.3 %	30.0 %	10.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	98	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	OB 8411-02 EFF	Rack	1		
Analysis started at:	4/10/2024 3:00:23 PM	Vial	60		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.433 %	103.883 %	-0.003 ppb	45,225.735 ppb	7,021.120 ppb	2.659 ppb	547.425 ppb	32,397.849 ppb	103.935 %
Concentration per Run 1	102.383 %	101.994 %	-0.004 ppb	45,937.033 ppb	7,102.366 ppb	2.622 ppb	560.117 ppb	33,103.773 ppb	105.083 %
Concentration per Run 2	99.336 %	98.531 %	-0.001 ppb	45,381.703 ppb	7,003.808 ppb	2.544 ppb	523.769 ppb	31,732.970 ppb	104.037 %
Concentration per Run 3	96.579 %	111.123 %	-0.004 ppb	44,358.470 ppb	6,957.186 ppb	2.810 ppb	558.389 ppb	32,356.805 ppb	102.685 %
Concentration RSD	2.9 %	6.3 %	47.4 %	1.8 %	1.1 %	5.1 %	3.7 %	2.1 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.867 %	-0.102 ppb	0.258 ppb	43.588 ppb	2,921.029 ppb	0.164 ppb	0.849 ppb	0.016 ppb	4.668 ppb
Concentration per Run 1	97.186 %	-0.105 ppb	0.302 ppb	44.920 ppb	2,979.458 ppb	0.178 ppb	0.913 ppb	0.026 ppb	4.587 ppb
Concentration per Run 2	99.653 %	-0.127 ppb	0.253 ppb	42.383 ppb	2,893.360 ppb	0.135 ppb	0.750 ppb	0.020 ppb	4.803 ppb
Concentration per Run 3	105.762 %	-0.075 ppb	0.220 ppb	43.462 ppb	2,890.270 ppb	0.179 ppb	0.882 ppb	0.003 ppb	4.613 ppb
Concentration RSD	4.4 %	25.6 %	15.9 %	2.9 %	1.7 %	15.2 %	10.2 %	73.1 %	2.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.612 %	-0.129 ppb	0.565 ppb	135.473 ppb	0.238 ppb	99.294 %	-0.003 ppb	0.001 ppb	99.106 %
Concentration per Run 1	103.299 %	-0.049 ppb	0.487 ppb	134.095 ppb	0.165 ppb	99.587 %	-0.005 ppb	0.004 ppb	96.597 %
Concentration per Run 2	101.056 %	-0.155 ppb	0.558 ppb	133.720 ppb	0.227 ppb	100.077 %	-0.004 ppb	0.000 ppb	98.638 %
Concentration per Run 3	109.482 %	-0.183 ppb	0.648 ppb	138.604 ppb	0.321 ppb	98.218 %	-0.001 ppb	-0.001 ppb	102.082 %
Concentration RSD	4.2 %	54.8 %	14.3 %	2.0 %	33.1 %	1.0 %	65.4 %	207.6 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.332 ppb	2.086 ppb	104.540 %	105.895 %	0.025 ppb	0.017 ppb
Concentration per Run 1	0.340 ppb	2.022 ppb	102.715 %	102.208 %	0.024 ppb	0.021 ppb
Concentration per Run 2	0.309 ppb	2.070 ppb	106.171 %	107.513 %	0.025 ppb	0.019 ppb
Concentration per Run 3	0.346 ppb	2.166 ppb	104.735 %	107.964 %	0.027 ppb	0.012 ppb
Concentration RSD	6.1 %	3.5 %	1.7 %	3.0 %	6.7 %	26.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	99	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 3:05:02 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.594 %	92.707 %	59.729 ppb	6,131.003 ppb	6,006.801 ppb	61.795 ppb	6,094.242 ppb	6,250.153 ppb	105.157 %
Concentration per Run 1	98.426 %	93.179 %	59.182 ppb	6,172.110 ppb	6,092.435 ppb	61.677 ppb	6,128.428 ppb	6,212.516 ppb	105.251 %
Concentration per Run 2	94.923 %	94.439 %	59.822 ppb	6,043.191 ppb	5,968.077 ppb	61.624 ppb	6,205.280 ppb	6,352.744 ppb	104.531 %
Concentration per Run 3	93.433 %	90.504 %	60.183 ppb	6,177.707 ppb	5,959.892 ppb	62.082 ppb	5,949.018 ppb	6,185.200 ppb	105.688 %
Recovery Percentage 1			99.548 %	102.183 %	100.113 %	102.991 %	101.571 %	104.169 %	
Concentration RSD	2.7 %	2.2 %	0.8 %	1.2 %	1.2 %	0.4 %	2.2 %	1.4 %	0.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.143 %	61.229 ppb	61.446 ppb	61.812 ppb	6,208.853 ppb	60.184 ppb	60.426 ppb	60.055 ppb	59.409 ppb
Concentration per Run 1	107.730 %	60.311 ppb	61.306 ppb	61.167 ppb	6,198.861 ppb	61.263 ppb	61.799 ppb	62.050 ppb	60.956 ppb
Concentration per Run 2	101.712 %	62.646 ppb	63.063 ppb	63.443 ppb	6,403.443 ppb	61.222 ppb	62.016 ppb	61.494 ppb	61.123 ppb
Concentration per Run 3	105.988 %	60.729 ppb	59.969 ppb	60.827 ppb	6,024.255 ppb	58.067 ppb	57.462 ppb	56.621 ppb	56.150 ppb
Recovery Percentage 1		102.048 %	102.410 %	103.021 %	103.481 %	100.306 %	100.709 %	100.092 %	99.016 %
Concentration RSD	2.9 %	2.0 %	2.5 %	2.3 %	3.1 %	3.0 %	4.3 %	5.0 %	4.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.027 %	60.113 ppb	60.661 ppb	61.125 ppb	59.419 ppb	97.472 %	58.858 ppb	58.476 ppb	98.094 %
Concentration per Run 1	94.194 %	63.246 ppb	63.462 ppb	63.889 ppb	59.554 ppb	94.535 %	60.804 ppb	60.370 ppb	96.977 %
Concentration per Run 2	96.410 %	60.311 ppb	62.699 ppb	61.153 ppb	60.329 ppb	98.600 %	58.106 ppb	57.576 ppb	98.073 %
Concentration per Run 3	103.477 %	56.781 ppb	55.822 ppb	58.334 ppb	58.373 ppb	99.281 %	57.663 ppb	57.482 ppb	99.233 %
Recovery Percentage 1		100.188 %	101.102 %	101.875 %	99.031 %		98.096 %	97.460 %	
Concentration RSD	4.9 %	5.4 %	6.9 %	4.5 %	1.7 %	2.6 %	2.9 %	2.8 %	1.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	61.857 ppb	58.734 ppb	100.757 %	102.227 %	57.778 ppb	58.407 ppb
Concentration per Run 1	63.328 ppb	59.781 ppb	96.191 %	99.848 %	55.707 ppb	60.428 ppb
Concentration per Run 2	61.865 ppb	58.670 ppb	104.016 %	102.750 %	58.811 ppb	58.687 ppb
Concentration per Run 3	60.378 ppb	57.750 ppb	102.063 %	104.082 %	58.815 ppb	56.105 ppb
Recovery Percentage 1	103.094 %	97.889 %			96.296 %	97.344 %
Concentration RSD	2.4 %	1.7 %	4.0 %	2.1 %	3.1 %	3.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	100	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 3:09:44 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.933 %	97.167 %	0.003 ppb	-20.388 ppb	0.891 ppb	-0.359 ppb	-7.770 ppb	-2.817 ppb	94.673 %
Concentration per Run 1	96.755 %	89.559 %	-0.003 ppb	-16.420 ppb	1.620 ppb	-0.282 ppb	-6.020 ppb	-4.149 ppb	95.647 %
Concentration per Run 2	94.328 %	96.327 %	0.010 ppb	-21.672 ppb	0.637 ppb	-0.382 ppb	-11.487 ppb	-2.026 ppb	94.006 %
Concentration per Run 3	90.718 %	105.614 %	0.000 ppb	-23.072 ppb	0.418 ppb	-0.412 ppb	-5.804 ppb	-2.276 ppb	94.366 %
Recovery Percentage 1			0.504 %	-20.388 %	1.274 %	-3.589 %	-7.770 %	-2.817 %	
Concentration RSD	3.2 %	8.3 %	260.3 %	17.2 %	71.8 %	18.9 %	41.4 %	41.2 %	0.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.813 %	-0.040 ppb	0.002 ppb	0.067 ppb	11.095 ppb	0.002 ppb	0.021 ppb	-0.002 ppb	0.090 ppb
Concentration per Run 1	91.960 %	-0.058 ppb	0.010 ppb	0.091 ppb	10.924 ppb	0.002 ppb	0.020 ppb	-0.013 ppb	0.089 ppb
Concentration per Run 2	89.019 %	-0.028 ppb	0.012 ppb	0.026 ppb	10.003 ppb	0.000 ppb	0.027 ppb	0.008 ppb	0.102 ppb
Concentration per Run 3	97.459 %	-0.034 ppb	-0.016 ppb	0.085 ppb	12.359 ppb	0.004 ppb	0.017 ppb	0.000 ppb	0.078 ppb
Recovery Percentage 1		-0.801 %	0.170 %	6.723 %	22.191 %	0.394 %	1.063 %	-0.172 %	1.790 %
Concentration RSD	4.6 %	40.2 %	909.6 %	53.8 %	10.7 %	96.4 %	23.5 %	611.3 %	13.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.716 %	-0.049 ppb	0.301 ppb	0.014 ppb	0.970 ppb	95.984 %	0.005 ppb	0.007 ppb	97.478 %
Concentration per Run 1	96.801 %	-0.075 ppb	0.192 ppb	0.015 ppb	0.995 ppb	95.248 %	0.011 ppb	0.002 ppb	94.008 %
Concentration per Run 2	94.858 %	0.012 ppb	0.313 ppb	0.012 ppb	0.980 ppb	95.694 %	0.003 ppb	0.011 ppb	98.154 %
Concentration per Run 3	98.488 %	-0.084 ppb	0.398 ppb	0.015 ppb	0.934 ppb	97.011 %	0.003 ppb	0.008 ppb	100.274 %
Recovery Percentage 1		-9.744 %	6.016 %	0.141 %	48.490 %		1.345 %	3.496 %	
Concentration RSD	1.9 %	109.2 %	34.4 %	12.7 %	3.3 %	1.0 %	83.9 %	66.8 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.305 ppb	0.009 ppb	98.518 %	98.478 %	0.510 ppb	0.025 ppb
Concentration per Run 1	0.282 ppb	0.012 ppb	95.652 %	95.229 %	0.588 ppb	0.026 ppb
Concentration per Run 2	0.303 ppb	0.011 ppb	99.008 %	97.770 %	0.555 ppb	0.025 ppb
Concentration per Run 3	0.329 ppb	0.005 ppb	100.894 %	102.435 %	0.388 ppb	0.022 ppb
Recovery Percentage 1	7.620 %	1.823 %			51.041 %	2.459 %
Concentration RSD	7.8 %	38.5 %	2.7 %	3.7 %	21.0 %	10.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	101	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 4:56:50 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.900 %	89.612 %	58.578 ppb	5,931.375 ppb	5,854.856 ppb	61.411 ppb	6,003.651 ppb	6,081.291 ppb	107.572 %
Concentration per Run 1	104.570 %	89.087 %	57.047 ppb	6,048.453 ppb	5,910.861 ppb	60.524 ppb	6,072.742 ppb	6,205.212 ppb	109.683 %
Concentration per Run 2	99.342 %	88.143 %	58.541 ppb	5,822.056 ppb	5,722.156 ppb	59.737 ppb	5,889.800 ppb	5,974.864 ppb	107.614 %
Concentration per Run 3	95.786 %	91.605 %	60.146 ppb	5,923.615 ppb	5,931.551 ppb	63.973 ppb	6,048.411 ppb	6,063.798 ppb	105.420 %
Recovery Percentage 1			97.630 %	98.856 %	97.581 %	102.352 %	100.061 %	101.355 %	
Concentration RSD	4.4 %	2.0 %	2.6 %	1.9 %	2.0 %	3.7 %	1.7 %	1.9 %	2.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.298 %	60.798 ppb	60.805 ppb	61.365 ppb	6,123.456 ppb	60.444 ppb	60.222 ppb	60.183 ppb	59.584 ppb
Concentration per Run 1	95.603 %	63.484 ppb	62.948 ppb	62.504 ppb	6,203.048 ppb	62.501 ppb	62.245 ppb	61.695 ppb	60.390 ppb
Concentration per Run 2	97.820 %	60.227 ppb	60.618 ppb	61.008 ppb	6,083.646 ppb	60.437 ppb	61.316 ppb	61.100 ppb	60.420 ppb
Concentration per Run 3	104.472 %	58.682 ppb	58.850 ppb	60.584 ppb	6,083.675 ppb	58.392 ppb	57.106 ppb	57.754 ppb	57.943 ppb
Recovery Percentage 1		101.329 %	101.342 %	102.275 %	102.058 %	100.739 %	100.370 %	100.305 %	99.307 %
Concentration RSD	4.6 %	4.0 %	3.4 %	1.6 %	1.1 %	3.4 %	4.5 %	3.5 %	2.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.573 %	59.727 ppb	62.441 ppb	60.780 ppb	58.340 ppb	89.992 %	57.683 ppb	57.581 ppb	92.013 %
Concentration per Run 1	88.766 %	60.452 ppb	61.508 ppb	60.168 ppb	55.608 ppb	88.829 %	58.682 ppb	58.039 ppb	90.370 %
Concentration per Run 2	90.876 %	59.407 ppb	61.669 ppb	59.581 ppb	59.643 ppb	89.457 %	57.679 ppb	57.624 ppb	89.040 %
Concentration per Run 3	95.078 %	59.322 ppb	64.147 ppb	62.589 ppb	59.769 ppb	91.688 %	56.688 ppb	57.081 ppb	96.628 %
Recovery Percentage 1		99.545 %	104.069 %	101.300 %	97.233 %		96.138 %	95.969 %	
Concentration RSD	3.5 %	1.1 %	2.4 %	2.6 %	4.1 %	1.7 %	1.7 %	0.8 %	4.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	60.118 ppb	58.260 ppb	95.047 %	95.146 %	56.182 ppb	57.014 ppb
Concentration per Run 1	60.217 ppb	58.024 ppb	93.303 %	93.298 %	53.851 ppb	57.993 ppb
Concentration per Run 2	61.131 ppb	59.176 ppb	95.741 %	93.775 %	58.337 ppb	58.559 ppb
Concentration per Run 3	59.006 ppb	57.581 ppb	96.096 %	98.365 %	56.359 ppb	54.490 ppb
Recovery Percentage 1	100.197 %	97.101 %			93.637 %	95.023 %
Concentration RSD	1.8 %	1.4 %	1.6 %	2.9 %	4.0 %	3.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	102	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 5:01:33 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	83.252 %	87.985 %	0.001 ppb	-16.144 ppb	-0.140 ppb	-0.310 ppb	5.911 ppb	-2.608 ppb	85.215 %
Concentration per Run 1	86.430 %	85.152 %	-0.004 ppb	-10.508 ppb	-0.225 ppb	-0.342 ppb	9.762 ppb	2.433 ppb	86.567 %
Concentration per Run 2	83.202 %	85.309 %	0.014 ppb	-18.204 ppb	-0.025 ppb	-0.293 ppb	5.055 ppb	-5.328 ppb	84.011 %
Concentration per Run 3	80.125 %	93.494 %	-0.005 ppb	-19.719 ppb	-0.170 ppb	-0.296 ppb	2.917 ppb	-4.929 ppb	85.068 %
Recovery Percentage 1			0.277 %	-16.144 %	-0.200 %	-3.104 %	5.911 %	-2.608 %	
Concentration RSD	3.8 %	5.4 %	778.2 %	30.6 %	73.6 %	8.9 %	59.2 %	167.6 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.196 %	-0.077 ppb	0.015 ppb	0.095 ppb	8.745 ppb	0.006 ppb	0.002 ppb	0.012 ppb	0.116 ppb
Concentration per Run 1	80.468 %	-0.074 ppb	0.032 ppb	0.077 ppb	8.849 ppb	0.007 ppb	0.030 ppb	0.025 ppb	0.130 ppb
Concentration per Run 2	87.300 %	-0.066 ppb	0.018 ppb	0.112 ppb	9.134 ppb	0.006 ppb	0.007 ppb	0.009 ppb	0.113 ppb
Concentration per Run 3	87.821 %	-0.090 ppb	-0.004 ppb	0.095 ppb	8.253 ppb	0.006 ppb	-0.030 ppb	0.001 ppb	0.105 ppb
Recovery Percentage 1		-1.532 %	1.512 %	9.465 %	17.491 %	1.210 %	0.121 %	1.191 %	2.314 %
Concentration RSD	4.8 %	15.9 %	120.1 %	18.6 %	5.1 %	11.7 %	1,245.4 %	103.1 %	10.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	84.575 %	0.331 ppb	0.393 ppb	0.003 ppb	1.070 ppb	83.392 %	0.004 ppb	0.008 ppb	83.902 %
Concentration per Run 1	80.285 %	0.419 ppb	0.355 ppb	0.006 ppb	1.145 ppb	82.686 %	0.002 ppb	0.013 ppb	81.143 %
Concentration per Run 2	86.740 %	0.281 ppb	0.519 ppb	0.001 ppb	1.009 ppb	84.224 %	0.004 ppb	0.005 ppb	85.655 %
Concentration per Run 3	86.700 %	0.295 ppb	0.305 ppb	0.003 ppb	1.056 ppb	83.266 %	0.007 ppb	0.007 ppb	84.909 %
Recovery Percentage 1		66.298 %	7.865 %	0.033 %	53.509 %		1.094 %	4.183 %	
Concentration RSD	4.4 %	22.9 %	28.5 %	74.0 %	6.4 %	0.9 %	58.3 %	51.3 %	2.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.085 ppb	0.009 ppb	85.293 %	85.334 %	0.465 ppb	0.041 ppb
Concentration per Run 1	0.097 ppb	0.021 ppb	83.370 %	81.617 %	0.540 ppb	0.051 ppb
Concentration per Run 2	0.077 ppb	0.005 ppb	88.111 %	88.260 %	0.466 ppb	0.036 ppb
Concentration per Run 3	0.081 ppb	0.002 ppb	84.398 %	86.125 %	0.388 ppb	0.038 ppb
Recovery Percentage 1	2.122 %	1.844 %			46.479 %	4.145 %
Concentration RSD	12.5 %	114.0 %	2.9 %	4.0 %	16.4 %	20.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index: 103
Analysis label: WG1906871-1 6020TL
Analysis started at: 4/10/2024 5:10:56 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 1
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	85.910 %	90.136 %	0.003 ppb	-18.749 ppb	1.562 ppb	1.258 ppb	-2.498 ppb	16.004 ppb	84.787 %
Concentration per Run 1	90.727 %	87.670 %	0.004 ppb	-22.065 ppb	2.030 ppb	1.199 ppb	-1.244 ppb	8.566 ppb	87.769 %
Concentration per Run 2	85.121 %	92.707 %	0.004 ppb	-14.892 ppb	1.353 ppb	1.361 ppb	0.462 ppb	13.236 ppb	83.746 %
Concentration per Run 3	81.882 %	90.031 %	0.000 ppb	-19.291 ppb	1.303 ppb	1.213 ppb	-6.711 ppb	26.211 ppb	82.845 %
Concentration RSD	5.2 %	2.8 %	73.0 %	19.3 %	26.0 %	7.2 %	150.0 %	57.1 %	3.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	87.587 %	-0.100 ppb	0.023 ppb	0.010 ppb	0.476 ppb	0.003 ppb	0.024 ppb	0.026 ppb	0.241 ppb
Concentration per Run 1	87.617 %	-0.099 ppb	0.041 ppb	0.001 ppb	0.395 ppb	0.004 ppb	0.024 ppb	0.016 ppb	0.224 ppb
Concentration per Run 2	93.477 %	-0.094 ppb	0.020 ppb	0.045 ppb	0.398 ppb	0.005 ppb	0.026 ppb	0.024 ppb	0.233 ppb
Concentration per Run 3	81.667 %	-0.106 ppb	0.008 ppb	-0.014 ppb	0.636 ppb	0.000 ppb	0.021 ppb	0.038 ppb	0.265 ppb
Concentration RSD	6.7 %	6.0 %	71.1 %	298.5 %	29.0 %	102.4 %	10.7 %	41.4 %	8.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	88.779 %	0.336 ppb	0.083 ppb	0.014 ppb	0.130 ppb	86.866 %	-0.002 ppb	0.001 ppb	86.355 %
Concentration per Run 1	88.397 %	0.383 ppb	0.025 ppb	0.011 ppb	0.092 ppb	88.033 %	-0.004 ppb	0.001 ppb	85.926 %
Concentration per Run 2	92.360 %	0.323 ppb	0.139 ppb	0.015 ppb	0.144 ppb	88.547 %	-0.001 ppb	-0.001 ppb	91.044 %
Concentration per Run 3	85.580 %	0.303 ppb	0.085 ppb	0.017 ppb	0.155 ppb	84.019 %	-0.002 ppb	0.004 ppb	82.096 %
Concentration RSD	3.8 %	12.3 %	69.1 %	20.0 %	25.9 %	2.9 %	74.4 %	201.4 %	5.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.037 ppb	0.012 ppb	88.443 %	87.952 %	0.057 ppb	0.019 ppb
Concentration per Run 1	0.028 ppb	0.007 ppb	89.007 %	87.111 %	0.052 ppb	0.020 ppb
Concentration per Run 2	0.040 ppb	0.015 ppb	91.808 %	91.672 %	0.055 ppb	0.017 ppb
Concentration per Run 3	0.042 ppb	0.015 ppb	84.515 %	85.072 %	0.064 ppb	0.021 ppb
Concentration RSD	21.8 %	34.9 %	4.2 %	3.8 %	10.9 %	10.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	104	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906871-2d10 6020TL	Rack	2		
Analysis started at:	4/10/2024 5:15:34 PM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.067 %	100.525 %	4.976 ppb	954.749 ppb	936.477 ppb	194.600 ppb	1,017.090 ppb	997.232 ppb	97.166 %
Concentration per Run 1	95.626 %	100.892 %	4.952 ppb	944.924 ppb	932.686 ppb	189.523 ppb	1,001.873 ppb	1,000.729 ppb	99.358 %
Concentration per Run 2	91.303 %	103.725 %	5.060 ppb	954.168 ppb	941.325 ppb	203.849 ppb	1,048.385 ppb	1,028.245 ppb	95.462 %
Concentration per Run 3	89.270 %	96.957 %	4.918 ppb	965.155 ppb	935.421 ppb	190.428 ppb	1,001.013 ppb	962.721 ppb	96.679 %
Concentration RSD	3.5 %	3.4 %	1.5 %	1.1 %	0.5 %	4.1 %	2.7 %	3.3 %	2.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.451 %	50.344 ppb	20.077 ppb	51.099 ppb	102.897 ppb	50.113 ppb	48.823 ppb	24.262 ppb	48.295 ppb
Concentration per Run 1	96.304 %	49.874 ppb	20.355 ppb	50.586 ppb	100.937 ppb	50.378 ppb	49.666 ppb	24.615 ppb	49.066 ppb
Concentration per Run 2	100.038 %	50.799 ppb	19.904 ppb	51.343 ppb	102.706 ppb	49.662 ppb	47.124 ppb	23.481 ppb	47.315 ppb
Concentration per Run 3	96.010 %	50.359 ppb	19.970 ppb	51.368 ppb	105.049 ppb	50.299 ppb	49.680 ppb	24.689 ppb	48.503 ppb
Concentration RSD	2.3 %	0.9 %	1.2 %	0.9 %	2.0 %	0.8 %	3.0 %	2.8 %	1.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.769 %	11.261 ppb	11.336 ppb	93.146 ppb	89.174 ppb	95.587 %	4.445 ppb	4.670 ppb	96.406 %
Concentration per Run 1	97.091 %	11.477 ppb	10.681 ppb	90.915 ppb	86.021 ppb	94.770 %	4.576 ppb	4.776 ppb	93.243 %
Concentration per Run 2	100.302 %	11.179 ppb	12.053 ppb	97.194 ppb	90.332 ppb	97.253 %	4.322 ppb	4.622 ppb	101.922 %
Concentration per Run 3	95.915 %	11.129 ppb	11.275 ppb	91.329 ppb	91.168 ppb	94.737 %	4.436 ppb	4.613 ppb	94.054 %
Concentration RSD	2.3 %	1.7 %	6.1 %	3.8 %	3.1 %	1.5 %	2.9 %	2.0 %	5.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	36.943 ppb	188.072 ppb	97.121 %	98.170 %	11.036 ppb	47.593 ppb
Concentration per Run 1	37.343 ppb	189.036 ppb	96.014 %	96.842 %	11.031 ppb	48.204 ppb
Concentration per Run 2	36.081 ppb	187.608 ppb	98.792 %	101.585 %	10.681 ppb	45.664 ppb
Concentration per Run 3	37.404 ppb	187.572 ppb	96.557 %	96.082 %	11.396 ppb	48.911 ppb
Concentration RSD	2.0 %	0.4 %	1.5 %	3.0 %	3.2 %	3.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	105	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906871-3d10 6020TL	Rack	2		
Analysis started at:	4/10/2024 5:20:13 PM	Vial	4		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.664 %	100.210 %	4.931 ppb	2,217.523 ppb	1,584.572 ppb	220.498 ppb	1,376.623 ppb	3,964.468 ppb	95.851 %
Concentration per Run 1	98.497 %	92.865 %	4.795 ppb	2,383.197 ppb	1,665.600 ppb	232.533 ppb	1,413.248 ppb	4,043.987 ppb	99.306 %
Concentration per Run 2	93.344 %	105.614 %	4.979 ppb	2,107.419 ppb	1,547.275 ppb	214.374 ppb	1,362.965 ppb	3,917.425 ppb	94.936 %
Concentration per Run 3	89.152 %	102.151 %	5.018 ppb	2,161.952 ppb	1,540.840 ppb	214.588 ppb	1,353.656 ppb	3,931.992 ppb	93.310 %
Concentration RSD	5.0 %	6.6 %	2.4 %	6.6 %	4.4 %	4.7 %	2.3 %	1.7 %	3.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.861 %	53.808 ppb	21.424 ppb	632.436 ppb	140.048 ppb	52.295 ppb	52.439 ppb	25.163 ppb	50.365 ppb
Concentration per Run 1	95.558 %	53.752 ppb	21.601 ppb	635.880 ppb	145.103 ppb	52.439 ppb	52.770 ppb	25.607 ppb	51.422 ppb
Concentration per Run 2	92.413 %	54.414 ppb	21.878 ppb	646.183 ppb	142.043 ppb	53.180 ppb	53.510 ppb	25.978 ppb	51.081 ppb
Concentration per Run 3	93.612 %	53.259 ppb	20.793 ppb	615.246 ppb	132.998 ppb	51.264 ppb	51.038 ppb	23.904 ppb	48.593 ppb
Concentration RSD	1.7 %	1.1 %	2.6 %	2.5 %	4.5 %	1.8 %	2.4 %	4.4 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.741 %	12.035 ppb	11.799 ppb	102.324 ppb	95.251 ppb	96.226 %	4.721 ppb	5.008 ppb	93.993 %
Concentration per Run 1	97.008 %	12.231 ppb	12.031 ppb	104.771 ppb	93.609 ppb	95.810 %	4.860 ppb	5.254 ppb	92.501 %
Concentration per Run 2	95.059 %	12.586 ppb	12.182 ppb	102.496 ppb	95.922 ppb	96.202 %	4.650 ppb	4.893 ppb	94.622 %
Concentration per Run 3	101.156 %	11.287 ppb	11.183 ppb	99.704 ppb	96.221 ppb	96.666 %	4.653 ppb	4.877 ppb	94.855 %
Concentration RSD	3.2 %	5.6 %	4.6 %	2.5 %	1.5 %	0.4 %	2.5 %	4.3 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	45.023 ppb	196.885 ppb	97.439 %	97.400 %	11.805 ppb	50.095 ppb
Concentration per Run 1	45.308 ppb	198.308 ppb	96.377 %	95.387 %	12.086 ppb	51.105 ppb
Concentration per Run 2	45.319 ppb	198.827 ppb	96.318 %	97.355 %	11.854 ppb	50.455 ppb
Concentration per Run 3	44.442 ppb	193.521 ppb	99.623 %	99.459 %	11.476 ppb	48.724 ppb
Concentration RSD	1.1 %	1.5 %	1.9 %	2.1 %	2.6 %	2.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	106	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906871-4d10 6020TL	Rack	2		
Analysis started at:	4/10/2024 5:24:51 PM	Vial	5		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.242 %	94.806 %	4.952 ppb	2,289.592 ppb	1,654.738 ppb	228.226 ppb	1,409.555 ppb	4,062.418 ppb	93.778 %
Concentration per Run 1	95.440 %	95.226 %	4.908 ppb	2,379.839 ppb	1,714.445 ppb	231.799 ppb	1,439.594 ppb	4,211.200 ppb	96.666 %
Concentration per Run 2	91.165 %	93.337 %	4.949 ppb	2,283.727 ppb	1,660.469 ppb	228.114 ppb	1,414.138 ppb	3,982.710 ppb	93.867 %
Concentration per Run 3	87.120 %	95.855 %	4.998 ppb	2,205.209 ppb	1,589.299 ppb	224.765 ppb	1,374.933 ppb	3,993.344 ppb	90.802 %
Concentration RSD	4.6 %	1.4 %	0.9 %	3.8 %	3.8 %	1.5 %	2.3 %	3.2 %	3.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	90.686 %	55.012 ppb	21.516 ppb	640.883 ppb	137.295 ppb	52.326 ppb	52.073 ppb	24.950 ppb	49.711 ppb
Concentration per Run 1	88.635 %	56.316 ppb	22.201 ppb	650.399 ppb	138.398 ppb	53.305 ppb	53.712 ppb	25.031 ppb	50.153 ppb
Concentration per Run 2	91.757 %	53.712 ppb	20.982 ppb	636.298 ppb	136.968 ppb	52.562 ppb	51.582 ppb	24.826 ppb	49.733 ppb
Concentration per Run 3	91.666 %	55.007 ppb	21.365 ppb	635.952 ppb	136.519 ppb	51.112 ppb	50.925 ppb	24.993 ppb	49.245 ppb
Concentration RSD	2.0 %	2.4 %	2.9 %	1.3 %	0.7 %	2.1 %	2.8 %	0.4 %	0.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.060 %	11.558 ppb	11.784 ppb	101.734 ppb	95.632 ppb	93.944 %	4.753 ppb	5.091 ppb	92.290 %
Concentration per Run 1	99.012 %	11.626 ppb	12.028 ppb	104.110 ppb	95.149 ppb	92.448 %	4.955 ppb	5.186 ppb	90.953 %
Concentration per Run 2	100.583 %	11.295 ppb	11.825 ppb	100.084 ppb	94.394 ppb	93.817 %	4.644 ppb	5.106 ppb	92.071 %
Concentration per Run 3	97.585 %	11.754 ppb	11.501 ppb	101.008 ppb	97.353 ppb	95.567 %	4.660 ppb	4.982 ppb	93.845 %
Concentration RSD	1.5 %	2.0 %	2.3 %	2.1 %	1.6 %	1.7 %	3.7 %	2.0 %	1.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	45.632 ppb	197.860 ppb	96.205 %	95.800 %	12.053 ppb	51.056 ppb
Concentration per Run 1	46.503 ppb	201.954 ppb	93.752 %	94.379 %	12.250 ppb	51.785 ppb
Concentration per Run 2	45.996 ppb	199.607 ppb	95.842 %	95.744 %	12.072 ppb	51.284 ppb
Concentration per Run 3	44.398 ppb	192.018 ppb	99.020 %	97.277 %	11.838 ppb	50.099 ppb
Concentration RSD	2.4 %	2.6 %	2.8 %	1.5 %	1.7 %	1.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	107	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906871-5d10 6020TL	Rack	2		
Analysis started at:	4/10/2024 5:29:30 PM	Vial	6		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.783 %	97.009 %	50.162 ppb	6,449.953 ppb	5,719.460 ppb	70.954 ppb	5,480.489 ppb	8,114.610 ppb	103.595 %
Concentration per Run 1	95.083 %	93.022 %	49.544 ppb	6,750.744 ppb	5,988.782 ppb	77.264 ppb	5,854.889 ppb	8,782.194 ppb	105.471 %
Concentration per Run 2	92.056 %	98.216 %	50.451 ppb	6,267.702 ppb	5,574.114 ppb	65.555 ppb	5,225.065 ppb	7,929.129 ppb	102.784 %
Concentration per Run 3	88.211 %	99.790 %	50.491 ppb	6,331.413 ppb	5,595.484 ppb	70.042 ppb	5,361.513 ppb	7,632.509 ppb	102.531 %
Concentration RSD	3.8 %	3.7 %	1.1 %	4.1 %	4.1 %	8.3 %	6.0 %	7.4 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	97.964 %	54.008 ppb	53.546 ppb	660.990 ppb	5,442.414 ppb	53.157 ppb	52.162 ppb	51.095 ppb	51.590 ppb
Concentration per Run 1	93.273 %	57.502 ppb	57.805 ppb	705.400 ppb	5,779.896 ppb	56.486 ppb	55.916 ppb	53.749 ppb	53.891 ppb
Concentration per Run 2	98.635 %	53.379 ppb	51.449 ppb	630.737 ppb	5,225.520 ppb	50.807 ppb	49.429 ppb	49.371 ppb	49.886 ppb
Concentration per Run 3	101.983 %	51.142 ppb	51.385 ppb	646.833 ppb	5,321.826 ppb	52.179 ppb	51.142 ppb	50.165 ppb	50.992 ppb
Concentration RSD	4.5 %	6.0 %	6.9 %	5.9 %	5.4 %	5.6 %	6.4 %	4.6 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.535 %	50.516 ppb	51.047 ppb	57.741 ppb	51.602 ppb	94.678 %	7.041 ppb	49.019 ppb	94.514 %
Concentration per Run 1	95.620 %	52.256 ppb	51.495 ppb	60.173 ppb	51.761 ppb	91.230 %	7.136 ppb	51.060 ppb	90.389 %
Concentration per Run 2	100.115 %	48.718 ppb	49.631 ppb	55.873 ppb	50.850 ppb	96.707 %	6.716 ppb	47.477 ppb	97.266 %
Concentration per Run 3	96.870 %	50.573 ppb	52.014 ppb	57.177 ppb	52.195 ppb	96.097 %	7.272 ppb	48.520 ppb	95.888 %
Concentration RSD	2.4 %	3.5 %	2.5 %	3.8 %	1.3 %	3.2 %	4.1 %	3.8 %	3.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	54.834 ppb	52.552 ppb	99.113 %	98.572 %	47.997 ppb	49.160 ppb
Concentration per Run 1	58.738 ppb	55.294 ppb	94.424 %	93.917 %	48.164 ppb	52.350 ppb
Concentration per Run 2	52.111 ppb	49.598 ppb	101.458 %	102.018 %	45.951 ppb	46.076 ppb
Concentration per Run 3	53.654 ppb	52.764 ppb	101.457 %	99.780 %	49.876 ppb	49.055 ppb
Concentration RSD	6.3 %	5.4 %	4.1 %	4.2 %	4.1 %	6.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	108	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906871-6d5 6020TL	Rack	2		
Analysis started at:	4/10/2024 5:34:08 PM	Vial	7		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.050 %	95.383 %	0.009 ppb	2,615.390 ppb	1,326.373 ppb	38.384 ppb	634.521 ppb	6,067.138 ppb	91.858 %
Concentration per Run 1	93.725 %	97.272 %	0.026 ppb	2,600.108 ppb	1,307.745 ppb	37.185 ppb	628.622 ppb	6,008.672 ppb	91.821 %
Concentration per Run 2	89.553 %	95.226 %	-0.001 ppb	2,584.884 ppb	1,315.468 ppb	39.111 ppb	622.912 ppb	5,963.720 ppb	90.636 %
Concentration per Run 3	86.871 %	93.652 %	0.001 ppb	2,661.177 ppb	1,355.906 ppb	38.857 ppb	652.029 ppb	6,229.022 ppb	93.117 %
Concentration RSD	3.8 %	1.9 %	175.9 %	1.5 %	2.0 %	2.7 %	2.4 %	2.3 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	93.944 %	0.094 ppb	0.288 ppb	1,216.926 ppb	67.817 ppb	0.198 ppb	0.216 ppb	0.223 ppb	0.331 ppb
Concentration per Run 1	95.625 %	0.076 ppb	0.288 ppb	1,213.226 ppb	71.599 ppb	0.182 ppb	0.183 ppb	0.216 ppb	0.301 ppb
Concentration per Run 2	95.376 %	0.109 ppb	0.295 ppb	1,180.403 ppb	65.248 ppb	0.182 ppb	0.229 ppb	0.218 ppb	0.345 ppb
Concentration per Run 3	90.829 %	0.098 ppb	0.281 ppb	1,257.149 ppb	66.604 ppb	0.231 ppb	0.237 ppb	0.235 ppb	0.347 ppb
Concentration RSD	2.9 %	18.0 %	2.3 %	3.2 %	4.9 %	14.3 %	13.4 %	4.8 %	7.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.665 %	0.038 ppb	0.314 ppb	16.809 ppb	1.907 ppb	92.390 %	0.014 ppb	0.017 ppb	94.349 %
Concentration per Run 1	96.243 %	0.224 ppb	0.328 ppb	16.900 ppb	1.824 ppb	92.944 %	0.011 ppb	0.017 ppb	96.323 %
Concentration per Run 2	98.786 %	-0.015 ppb	0.320 ppb	16.513 ppb	1.843 ppb	93.784 %	0.022 ppb	0.018 ppb	92.898 %
Concentration per Run 3	97.965 %	-0.096 ppb	0.294 ppb	17.015 ppb	2.055 ppb	90.442 %	0.009 ppb	0.017 ppb	93.825 %
Concentration RSD	1.3 %	443.8 %	5.7 %	1.6 %	6.7 %	1.9 %	47.7 %	5.2 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.727 ppb	3.789 ppb	96.871 %	97.603 %	0.463 ppb	0.063 ppb
Concentration per Run 1	0.664 ppb	3.764 ppb	97.210 %	98.360 %	0.480 ppb	0.064 ppb
Concentration per Run 2	0.757 ppb	3.819 ppb	97.208 %	96.968 %	0.495 ppb	0.070 ppb
Concentration per Run 3	0.759 ppb	3.785 ppb	96.195 %	97.483 %	0.414 ppb	0.056 ppb
Concentration RSD	7.5 %	0.7 %	0.6 %	0.7 %	9.3 %	10.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	109	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417074-02 6020TL	Rack	2		
Analysis started at:	4/10/2024 5:38:46 PM	Vial	3		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.999 %	95.226 %	0.013 ppb	12,210.496 ppb	6,343.633 ppb	178.282 ppb	3,027.647 ppb	28,536.483 ppb	95.260 %
Concentration per Run 1	92.938 %	90.976 %	0.012 ppb	12,475.955 ppb	6,434.896 ppb	177.789 ppb	2,931.816 ppb	27,506.353 ppb	100.774 %
Concentration per Run 2	87.995 %	94.596 %	0.006 ppb	12,165.440 ppb	6,280.767 ppb	172.598 ppb	2,989.879 ppb	28,666.097 ppb	96.589 %
Concentration per Run 3	80.064 %	100.105 %	0.021 ppb	11,990.093 ppb	6,315.236 ppb	184.458 ppb	3,161.245 ppb	29,436.998 ppb	88.417 %
Concentration RSD	7.5 %	4.8 %	56.7 %	2.0 %	1.3 %	3.3 %	3.9 %	3.4 %	6.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.516 %	0.599 ppb	1.269 ppb	5,583.616 ppb	280.635 ppb	0.824 ppb	0.770 ppb	0.716 ppb	0.822 ppb
Concentration per Run 1	103.069 %	0.614 ppb	1.239 ppb	5,403.475 ppb	267.165 ppb	0.879 ppb	0.737 ppb	0.706 ppb	0.825 ppb
Concentration per Run 2	97.435 %	0.591 ppb	1.307 ppb	5,692.310 ppb	300.924 ppb	0.827 ppb	0.883 ppb	0.718 ppb	0.881 ppb
Concentration per Run 3	104.043 %	0.591 ppb	1.262 ppb	5,655.062 ppb	273.815 ppb	0.765 ppb	0.689 ppb	0.724 ppb	0.759 ppb
Concentration RSD	3.5 %	2.2 %	2.7 %	2.8 %	6.4 %	6.9 %	13.1 %	1.3 %	7.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.926 %	0.082 ppb	0.086 ppb	81.508 ppb	1.901 ppb	95.353 %	0.000 ppb	0.024 ppb	100.806 %
Concentration per Run 1	99.915 %	0.140 ppb	0.112 ppb	80.044 ppb	1.792 ppb	96.793 %	-0.002 ppb	0.028 ppb	102.489 %
Concentration per Run 2	99.517 %	0.027 ppb	-0.008 ppb	80.591 ppb	1.849 ppb	94.515 %	0.004 ppb	0.019 ppb	96.948 %
Concentration per Run 3	103.345 %	0.078 ppb	0.153 ppb	83.889 ppb	2.061 ppb	94.752 %	-0.003 ppb	0.023 ppb	102.981 %
Concentration RSD	2.1 %	69.3 %	97.2 %	2.6 %	7.4 %	1.3 %	3,219.0 %	19.7 %	3.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.433 ppb	18.531 ppb	101.543 %	101.659 %	0.194 ppb	0.190 ppb
Concentration per Run 1	0.390 ppb	18.681 ppb	103.414 %	102.734 %	0.162 ppb	0.187 ppb
Concentration per Run 2	0.441 ppb	18.498 ppb	99.023 %	99.117 %	0.224 ppb	0.203 ppb
Concentration per Run 3	0.467 ppb	18.413 ppb	102.190 %	103.124 %	0.196 ppb	0.180 ppb
Concentration RSD	9.1 %	0.7 %	2.2 %	2.2 %	16.0 %	6.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	110	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2417074-01 6020TL	Rack	2		
Analysis started at:	4/10/2024 5:43:25 PM	Vial	8		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	88.421 %	95.593 %	0.009 ppb	3,817.691 ppb	834.734 ppb	16.585 ppb	1,342.878 ppb	3,788.928 ppb	94.727 %
Concentration per Run 1	93.556 %	92.235 %	0.005 ppb	3,913.395 ppb	857.719 ppb	15.911 ppb	1,333.251 ppb	3,775.585 ppb	98.819 %
Concentration per Run 2	87.580 %	93.809 %	0.019 ppb	3,771.854 ppb	827.139 ppb	18.160 ppb	1,329.425 ppb	3,704.802 ppb	94.169 %
Concentration per Run 3	84.128 %	100.735 %	0.002 ppb	3,767.825 ppb	819.344 ppb	15.683 ppb	1,365.959 ppb	3,886.398 ppb	91.192 %
Concentration RSD	5.4 %	4.7 %	109.2 %	2.2 %	2.4 %	8.3 %	1.5 %	2.4 %	4.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.970 %	0.049 ppb	0.654 ppb	4.125 ppb	18.860 ppb	0.034 ppb	0.075 ppb	0.235 ppb	0.330 ppb
Concentration per Run 1	99.019 %	0.039 ppb	0.690 ppb	4.179 ppb	19.254 ppb	0.041 ppb	0.065 ppb	0.211 ppb	0.289 ppb
Concentration per Run 2	96.666 %	0.039 ppb	0.677 ppb	4.049 ppb	19.182 ppb	0.020 ppb	0.071 ppb	0.256 ppb	0.356 ppb
Concentration per Run 3	104.224 %	0.069 ppb	0.594 ppb	4.147 ppb	18.143 ppb	0.041 ppb	0.089 ppb	0.237 ppb	0.346 ppb
Concentration RSD	3.9 %	34.9 %	8.0 %	1.6 %	3.3 %	35.9 %	16.9 %	9.6 %	10.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.877 %	-0.090 ppb	0.158 ppb	15.216 ppb	0.384 ppb	95.110 %	-0.001 ppb	0.012 ppb	100.195 %
Concentration per Run 1	98.696 %	-0.030 ppb	0.207 ppb	14.831 ppb	0.349 ppb	96.800 %	-0.002 ppb	0.016 ppb	98.832 %
Concentration per Run 2	99.187 %	-0.162 ppb	0.141 ppb	15.074 ppb	0.397 ppb	92.891 %	0.001 ppb	0.011 ppb	100.116 %
Concentration per Run 3	104.750 %	-0.078 ppb	0.125 ppb	15.743 ppb	0.405 ppb	95.638 %	-0.002 ppb	0.009 ppb	101.638 %
Concentration RSD	3.3 %	74.6 %	27.6 %	3.1 %	8.0 %	2.1 %	177.3 %	28.8 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.271 ppb	10.404 ppb	100.600 %	101.782 %	0.058 ppb	0.023 ppb
Concentration per Run 1	0.261 ppb	10.513 ppb	100.862 %	100.571 %	0.038 ppb	0.026 ppb
Concentration per Run 2	0.278 ppb	10.186 ppb	98.554 %	99.216 %	0.070 ppb	0.022 ppb
Concentration per Run 3	0.273 ppb	10.513 ppb	102.383 %	105.559 %	0.065 ppb	0.020 ppb
Concentration RSD	3.2 %	1.8 %	1.9 %	3.3 %	29.8 %	13.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	111	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 5:53:24 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.445 %	100.472 %	59.492 ppb	5,693.056 ppb	5,668.097 ppb	59.478 ppb	5,792.747 ppb	5,831.941 ppb	105.599 %
Concentration per Run 1	94.241 %	97.744 %	58.847 ppb	5,850.840 ppb	5,666.192 ppb	56.429 ppb	5,931.463 ppb	6,005.880 ppb	106.077 %
Concentration per Run 2	90.995 %	106.401 %	59.928 ppb	5,758.387 ppb	5,717.633 ppb	62.532 ppb	5,982.311 ppb	5,961.713 ppb	105.642 %
Concentration per Run 3	89.098 %	97.272 %	59.703 ppb	5,469.941 ppb	5,620.465 ppb	59.473 ppb	5,464.465 ppb	5,528.229 ppb	105.077 %
Recovery Percentage 1			99.154 %	94.884 %	94.468 %	99.130 %	96.546 %	97.199 %	
Concentration RSD	2.8 %	5.1 %	1.0 %	3.5 %	0.9 %	5.1 %	4.9 %	4.5 %	0.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.800 %	60.109 ppb	59.852 ppb	60.461 ppb	6,048.881 ppb	59.652 ppb	59.045 ppb	58.895 ppb	59.206 ppb
Concentration per Run 1	101.757 %	62.063 ppb	61.431 ppb	59.336 ppb	6,063.969 ppb	60.756 ppb	60.771 ppb	59.558 ppb	59.914 ppb
Concentration per Run 2	109.700 %	59.208 ppb	58.824 ppb	61.586 ppb	5,954.872 ppb	58.151 ppb	58.515 ppb	57.435 ppb	58.284 ppb
Concentration per Run 3	105.943 %	59.057 ppb	59.301 ppb	60.461 ppb	6,127.803 ppb	60.050 ppb	57.849 ppb	59.693 ppb	59.421 ppb
Recovery Percentage 1		100.182 %	99.753 %	100.768 %	100.815 %	99.421 %	98.408 %	98.159 %	98.677 %
Concentration RSD	3.8 %	2.8 %	2.3 %	1.9 %	1.4 %	2.3 %	2.6 %	2.2 %	1.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.289 %	58.625 ppb	60.618 ppb	59.762 ppb	59.345 ppb	93.166 %	58.301 ppb	58.205 ppb	95.989 %
Concentration per Run 1	96.547 %	59.086 ppb	59.439 ppb	58.974 ppb	58.915 ppb	92.194 %	59.180 ppb	59.287 ppb	93.810 %
Concentration per Run 2	101.586 %	58.844 ppb	63.139 ppb	62.061 ppb	59.088 ppb	93.823 %	57.918 ppb	57.377 ppb	100.377 %
Concentration per Run 3	96.733 %	57.944 ppb	59.277 ppb	58.252 ppb	60.031 ppb	93.483 %	57.803 ppb	57.951 ppb	93.780 %
Recovery Percentage 1		97.708 %	101.030 %	99.604 %	98.908 %		97.168 %	97.009 %	
Concentration RSD	2.9 %	1.0 %	3.6 %	3.4 %	1.0 %	0.9 %	1.3 %	1.7 %	4.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	63.255 ppb	60.531 ppb	98.660 %	99.778 %	57.010 ppb	57.397 ppb
Concentration per Run 1	63.232 ppb	60.205 ppb	98.350 %	98.050 %	53.515 ppb	58.744 ppb
Concentration per Run 2	62.453 ppb	60.265 ppb	98.552 %	102.294 %	57.233 ppb	55.424 ppb
Concentration per Run 3	64.080 ppb	61.122 ppb	99.078 %	98.991 %	60.282 ppb	58.024 ppb
Recovery Percentage 1	105.425 %	100.885 %			95.017 %	95.662 %
Concentration RSD	1.3 %	0.8 %	0.4 %	2.2 %	5.9 %	3.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	112	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 5:58:06 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.041 %	88.825 %	0.006 ppb	-22.703 ppb	0.472 ppb	-0.243 ppb	-0.814 ppb	-4.094 ppb	86.094 %
Concentration per Run 1	84.126 %	88.615 %	0.002 ppb	-16.524 ppb	0.626 ppb	-0.262 ppb	10.301 ppb	-7.177 ppb	86.764 %
Concentration per Run 2	81.760 %	88.457 %	0.008 ppb	-25.142 ppb	0.834 ppb	-0.118 ppb	-1.411 ppb	-6.313 ppb	85.140 %
Concentration per Run 3	80.235 %	89.402 %	0.009 ppb	-26.445 ppb	-0.043 ppb	-0.349 ppb	-11.331 ppb	1.209 ppb	86.379 %
Recovery Percentage 1			1.264 %	-22.703 %	0.675 %	-2.431 %	-0.814 %	-4.094 %	
Concentration RSD	2.4 %	0.6 %	62.1 %	23.7 %	97.1 %	48.0 %	1,330.6 %	112.7 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.177 %	-0.042 ppb	0.014 ppb	0.185 ppb	9.197 ppb	0.005 ppb	0.024 ppb	-0.005 ppb	0.034 ppb
Concentration per Run 1	85.106 %	-0.017 ppb	0.011 ppb	0.214 ppb	8.563 ppb	0.002 ppb	0.031 ppb	-0.008 ppb	0.030 ppb
Concentration per Run 2	86.508 %	-0.057 ppb	0.028 ppb	0.137 ppb	9.760 ppb	0.002 ppb	0.029 ppb	-0.018 ppb	0.052 ppb
Concentration per Run 3	86.915 %	-0.052 ppb	0.003 ppb	0.205 ppb	9.267 ppb	0.010 ppb	0.012 ppb	0.012 ppb	0.019 ppb
Recovery Percentage 1		-0.842 %	1.412 %	18.535 %	18.393 %	0.991 %	1.194 %	-0.451 %	0.674 %
Concentration RSD	1.1 %	52.0 %	89.9 %	22.6 %	6.5 %	92.9 %	43.3 %	333.4 %	50.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	90.162 %	0.162 ppb	0.194 ppb	0.007 ppb	1.075 ppb	86.407 %	0.006 ppb	0.016 ppb	87.645 %
Concentration per Run 1	89.135 %	0.196 ppb	0.234 ppb	0.008 ppb	1.086 ppb	85.374 %	0.010 ppb	0.021 ppb	86.073 %
Concentration per Run 2	91.958 %	0.050 ppb	0.089 ppb	0.007 ppb	1.123 ppb	87.059 %	0.002 ppb	0.012 ppb	88.420 %
Concentration per Run 3	89.394 %	0.238 ppb	0.258 ppb	0.007 ppb	1.016 ppb	86.788 %	0.006 ppb	0.015 ppb	88.443 %
Recovery Percentage 1		32.309 %	3.875 %	0.073 %	53.744 %		1.456 %	8.142 %	
Concentration RSD	1.7 %	61.0 %	47.3 %	5.0 %	5.1 %	1.0 %	64.3 %	29.1 %	1.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.179 ppb	0.004 ppb	89.139 %	89.948 %	0.494 ppb	0.022 ppb
Concentration per Run 1	0.171 ppb	-0.007 ppb	88.131 %	88.386 %	0.561 ppb	0.031 ppb
Concentration per Run 2	0.173 ppb	0.016 ppb	90.688 %	92.584 %	0.512 ppb	0.017 ppb
Concentration per Run 3	0.194 ppb	0.004 ppb	88.596 %	88.874 %	0.409 ppb	0.019 ppb
Recovery Percentage 1	4.480 %	0.836 %			49.368 %	2.249 %
Concentration RSD	7.2 %	278.0 %	1.5 %	2.6 %	15.7 %	32.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	113	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	WG1906871-2d10 6020TL	Rack	2		
Analysis started at:	4/10/2024 6:27:42 PM	Vial	2		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.274 %	98.479 %	4.935 ppb	966.184 ppb	956.069 ppb	198.677 ppb	1,001.367 ppb	942.572 ppb	96.822 %
Concentration per Run 1	98.867 %	105.771 %	4.767 ppb	960.439 ppb	947.203 ppb	201.652 ppb	1,008.973 ppb	1,008.442 ppb	101.039 %
Concentration per Run 2	94.087 %	91.763 %	4.915 ppb	999.930 ppb	990.984 ppb	201.207 ppb	982.347 ppb	878.584 ppb	95.870 %
Concentration per Run 3	89.867 %	97.901 %	5.125 ppb	938.182 ppb	930.021 ppb	193.171 ppb	1,012.780 ppb	940.690 ppb	93.555 %
Concentration RSD	4.8 %	7.1 %	3.6 %	3.2 %	3.3 %	2.4 %	1.7 %	6.9 %	4.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.829 %	52.090 ppb	20.350 ppb	52.107 ppb	111.743 ppb	50.688 ppb	50.360 ppb	23.999 ppb	48.921 ppb
Concentration per Run 1	97.572 %	53.391 ppb	20.517 ppb	53.056 ppb	113.369 ppb	50.635 ppb	50.718 ppb	24.147 ppb	49.065 ppb
Concentration per Run 2	95.444 %	51.381 ppb	20.063 ppb	50.999 ppb	117.603 ppb	50.380 ppb	50.033 ppb	23.936 ppb	48.879 ppb
Concentration per Run 3	94.472 %	51.499 ppb	20.469 ppb	52.265 ppb	104.258 ppb	51.048 ppb	50.331 ppb	23.915 ppb	48.820 ppb
Concentration RSD	1.7 %	2.2 %	1.2 %	2.0 %	6.1 %	0.7 %	0.7 %	0.5 %	0.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.993 %	11.336 ppb	11.885 ppb	92.713 ppb	96.990 ppb	93.713 %	4.530 ppb	4.731 ppb	95.609 %
Concentration per Run 1	98.867 %	11.543 ppb	12.551 ppb	95.331 ppb	99.294 ppb	93.810 %	4.649 ppb	4.772 ppb	96.440 %
Concentration per Run 2	97.097 %	11.324 ppb	11.699 ppb	91.754 ppb	95.132 ppb	93.277 %	4.436 ppb	4.763 ppb	95.788 %
Concentration per Run 3	95.013 %	11.142 ppb	11.405 ppb	91.055 ppb	96.544 ppb	94.053 %	4.504 ppb	4.660 ppb	94.599 %
Concentration RSD	2.0 %	1.8 %	5.0 %	2.5 %	2.2 %	0.4 %	2.4 %	1.3 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	40.954 ppb	189.190 ppb	98.364 %	97.925 %	11.175 ppb	47.508 ppb
Concentration per Run 1	41.652 ppb	194.228 ppb	97.456 %	98.045 %	11.209 ppb	47.445 ppb
Concentration per Run 2	40.800 ppb	187.020 ppb	98.091 %	96.962 %	11.392 ppb	48.214 ppb
Concentration per Run 3	40.409 ppb	186.323 ppb	99.545 %	98.768 %	10.925 ppb	46.864 ppb
Concentration RSD	1.6 %	2.3 %	1.1 %	0.9 %	2.1 %	1.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	114	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 6:33:59 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.272 %	100.105 %	59.299 ppb	5,734.379 ppb	5,608.904 ppb	58.624 ppb	5,590.174 ppb	5,686.685 ppb	108.843 %
Concentration per Run 1	95.348 %	97.587 %	58.227 ppb	5,745.468 ppb	5,566.626 ppb	58.126 ppb	5,485.813 ppb	5,676.097 ppb	110.708 %
Concentration per Run 2	89.914 %	99.790 %	58.918 ppb	5,766.616 ppb	5,659.201 ppb	57.545 ppb	5,552.528 ppb	5,623.344 ppb	107.919 %
Concentration per Run 3	88.555 %	102.938 %	60.752 ppb	5,691.054 ppb	5,600.884 ppb	60.200 ppb	5,732.182 ppb	5,760.613 ppb	107.901 %
Recovery Percentage 1			98.832 %	95.573 %	93.482 %	97.707 %	93.170 %	94.778 %	
Concentration RSD	3.9 %	2.7 %	2.2 %	0.7 %	0.8 %	2.4 %	2.3 %	1.2 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	105.378 %	61.042 ppb	60.390 ppb	60.560 ppb	6,143.720 ppb	61.384 ppb	61.122 ppb	61.242 ppb	59.684 ppb
Concentration per Run 1	103.025 %	61.454 ppb	61.594 ppb	60.508 ppb	6,275.857 ppb	62.232 ppb	62.206 ppb	62.518 ppb	60.266 ppb
Concentration per Run 2	108.455 %	61.159 ppb	59.760 ppb	60.937 ppb	6,014.749 ppb	59.925 ppb	60.028 ppb	59.778 ppb	58.211 ppb
Concentration per Run 3	104.653 %	60.513 ppb	59.815 ppb	60.235 ppb	6,140.554 ppb	61.994 ppb	61.132 ppb	61.430 ppb	60.574 ppb
Recovery Percentage 1		101.737 %	100.650 %	100.933 %	102.395 %	102.306 %	101.870 %	102.070 %	99.473 %
Concentration RSD	2.6 %	0.8 %	1.7 %	0.6 %	2.1 %	2.1 %	1.8 %	2.3 %	2.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.279 %	58.747 ppb	59.746 ppb	58.044 ppb	60.944 ppb	94.145 %	58.022 ppb	57.377 ppb	95.261 %
Concentration per Run 1	95.475 %	58.476 ppb	57.765 ppb	56.377 ppb	58.869 ppb	95.350 %	58.537 ppb	56.958 ppb	93.931 %
Concentration per Run 2	100.167 %	58.006 ppb	61.006 ppb	57.637 ppb	60.349 ppb	93.905 %	58.184 ppb	58.300 ppb	95.443 %
Concentration per Run 3	96.194 %	59.759 ppb	60.467 ppb	60.119 ppb	63.615 ppb	93.180 %	57.344 ppb	56.873 ppb	96.410 %
Recovery Percentage 1		97.912 %	99.576 %	96.741 %	101.574 %		96.703 %	95.628 %	
Concentration RSD	2.6 %	1.5 %	2.9 %	3.3 %	4.0 %	1.2 %	1.1 %	1.4 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	63.687 ppb	59.476 ppb	101.081 %	99.180 %	56.942 ppb	57.748 ppb
Concentration per Run 1	63.475 ppb	58.136 ppb	101.853 %	97.028 %	54.645 ppb	59.579 ppb
Concentration per Run 2	63.172 ppb	59.258 ppb	99.855 %	100.177 %	57.292 ppb	56.603 ppb
Concentration per Run 3	64.415 ppb	61.034 ppb	101.536 %	100.334 %	58.888 ppb	57.062 ppb
Recovery Percentage 1	106.145 %	99.127 %			94.903 %	96.247 %
Concentration RSD	1.0 %	2.5 %	1.1 %	1.9 %	3.8 %	2.8 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	115	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 6:38:42 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	82.776 %	94.334 %	0.011 ppb	-32.158 ppb	0.533 ppb	-0.287 ppb	-8.076 ppb	-4.338 ppb	89.202 %
Concentration per Run 1	86.280 %	89.402 %	0.007 ppb	-28.746 ppb	0.417 ppb	-0.256 ppb	-5.795 ppb	-3.349 ppb	90.742 %
Concentration per Run 2	82.741 %	94.753 %	0.008 ppb	-31.080 ppb	0.771 ppb	-0.249 ppb	-3.557 ppb	-9.641 ppb	89.396 %
Concentration per Run 3	79.308 %	98.846 %	0.017 ppb	-36.649 ppb	0.411 ppb	-0.357 ppb	-14.877 ppb	-0.024 ppb	87.469 %
Recovery Percentage 1			2.137 %	-32.158 %	0.761 %	-2.875 %	-8.076 %	-4.338 %	
Concentration RSD	4.2 %	5.0 %	53.3 %	12.6 %	38.7 %	21.0 %	74.2 %	112.6 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	86.305 %	-0.074 ppb	0.023 ppb	0.044 ppb	12.454 ppb	0.015 ppb	0.029 ppb	-0.005 ppb	0.027 ppb
Concentration per Run 1	82.618 %	-0.091 ppb	0.033 ppb	0.084 ppb	13.588 ppb	0.016 ppb	0.040 ppb	-0.005 ppb	0.052 ppb
Concentration per Run 2	86.780 %	-0.071 ppb	0.016 ppb	0.023 ppb	11.775 ppb	0.018 ppb	0.024 ppb	0.012 ppb	-0.012 ppb
Concentration per Run 3	89.517 %	-0.059 ppb	0.019 ppb	0.027 ppb	12.000 ppb	0.012 ppb	0.023 ppb	-0.021 ppb	0.042 ppb
Recovery Percentage 1		-1.477 %	2.250 %	4.442 %	24.909 %	3.065 %	1.439 %	-0.493 %	0.542 %
Concentration RSD	4.0 %	22.0 %	39.6 %	77.2 %	7.9 %	22.5 %	32.9 %	335.0 %	127.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	88.307 %	0.112 ppb	0.357 ppb	0.009 ppb	1.371 ppb	86.935 %	0.006 ppb	0.011 ppb	87.323 %
Concentration per Run 1	85.373 %	0.104 ppb	0.110 ppb	0.010 ppb	1.201 ppb	87.325 %	0.006 ppb	0.011 ppb	84.933 %
Concentration per Run 2	89.732 %	0.210 ppb	0.624 ppb	0.008 ppb	1.332 ppb	85.653 %	0.007 ppb	0.012 ppb	88.481 %
Concentration per Run 3	89.817 %	0.022 ppb	0.336 ppb	0.008 ppb	1.581 ppb	87.827 %	0.006 ppb	0.009 ppb	88.557 %
Recovery Percentage 1		22.451 %	7.133 %	0.085 %	68.572 %		1.578 %	5.439 %	
Concentration RSD	2.9 %	84.2 %	72.2 %	14.5 %	14.1 %	1.3 %	6.3 %	13.9 %	2.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.584 ppb	0.015 ppb	92.152 %	89.970 %	0.477 ppb	0.022 ppb
Concentration per Run 1	0.560 ppb	0.016 ppb	91.371 %	87.375 %	0.523 ppb	0.027 ppb
Concentration per Run 2	0.584 ppb	0.010 ppb	91.671 %	89.975 %	0.532 ppb	0.024 ppb
Concentration per Run 3	0.607 ppb	0.018 ppb	93.412 %	92.561 %	0.376 ppb	0.016 ppb
Recovery Percentage 1	14.590 %	2.946 %			47.727 %	2.246 %
Concentration RSD	4.0 %	29.8 %	1.2 %	2.9 %	18.3 %	24.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index: 116
Analysis label: wg1905986-1 6020SL
Analysis started at: 4/10/2024 7:10:59 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 9
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.051 %	85.991 %	0.003 ppb	-57.734 ppb	0.614 ppb	1.077 ppb	-49.955 ppb	-1.507 ppb	121.647 %
Concentration per Run 1	95.271 %	89.559 %	0.017 ppb	-77.994 ppb	0.315 ppb	0.737 ppb	-67.212 ppb	-8.203 ppb	123.517 %
Concentration per Run 2	90.448 %	80.587 %	-0.004 ppb	-49.342 ppb	0.757 ppb	1.221 ppb	-43.325 ppb	-1.801 ppb	120.817 %
Concentration per Run 3	87.433 %	87.828 %	-0.005 ppb	-45.868 ppb	0.771 ppb	1.274 ppb	-39.327 ppb	5.483 ppb	120.607 %
Concentration RSD	4.3 %	5.5 %	430.7 %	30.5 %	42.2 %	27.4 %	30.2 %	454.4 %	1.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	177.501 %	-0.119 ppb	0.031 ppb	0.000 ppb	1.879 ppb	-0.003 ppb	0.031 ppb	0.174 ppb	0.054 ppb
Concentration per Run 1	266.345 %	-0.141 ppb	0.005 ppb	-0.001 ppb	1.592 ppb	-0.006 ppb	0.010 ppb	0.144 ppb	0.036 ppb
Concentration per Run 2	144.962 %	-0.128 ppb	0.045 ppb	-0.013 ppb	2.012 ppb	-0.006 ppb	0.022 ppb	0.163 ppb	0.069 ppb
Concentration per Run 3	121.195 %	-0.087 ppb	0.043 ppb	0.014 ppb	2.033 ppb	0.002 ppb	0.061 ppb	0.216 ppb	0.058 ppb
Concentration RSD	43.9 %	23.8 %	72.5 %	4,950.6 %	13.2 %	137.2 %	86.3 %	21.4 %	31.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	86.449 %	0.241 ppb	-0.010 ppb	0.012 ppb	0.489 ppb	97.539 %	0.004 ppb	0.000 ppb	117.661 %
Concentration per Run 1	87.239 %	0.196 ppb	-0.043 ppb	0.012 ppb	0.840 ppb	112.267 %	0.000 ppb	0.001 ppb	165.762 %
Concentration per Run 2	87.370 %	0.276 ppb	0.012 ppb	0.010 ppb	0.312 ppb	93.038 %	0.008 ppb	0.000 ppb	94.555 %
Concentration per Run 3	84.738 %	0.252 ppb	0.001 ppb	0.013 ppb	0.316 ppb	87.312 %	0.005 ppb	-0.001 ppb	92.666 %
Concentration RSD	1.7 %	16.9 %	289.6 %	15.5 %	62.1 %	13.4 %	88.0 %	541.7 %	35.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.227 ppb	0.017 ppb	108.407 %	106.847 %	0.086 ppb	0.027 ppb
Concentration per Run 1	0.155 ppb	0.012 ppb	142.371 %	141.108 %	0.108 ppb	0.017 ppb
Concentration per Run 2	0.267 ppb	0.017 ppb	93.680 %	91.132 %	0.084 ppb	0.037 ppb
Concentration per Run 3	0.259 ppb	0.021 ppb	89.169 %	88.300 %	0.067 ppb	0.028 ppb
Concentration RSD	27.6 %	28.9 %	27.2 %	27.8 %	24.1 %	34.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	117	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-2d10 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:15:37 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.647 %	96.642 %	5.202 ppb	1,057.926 ppb	1,028.352 ppb	214.819 ppb	1,077.504 ppb	1,039.691 ppb	98.079 %
Concentration per Run 1	97.724 %	96.013 %	5.117 ppb	1,088.871 ppb	1,050.966 ppb	220.991 ppb	1,139.932 ppb	1,066.394 ppb	101.266 %
Concentration per Run 2	94.363 %	101.522 %	5.230 ppb	1,006.570 ppb	992.119 ppb	209.007 ppb	1,001.699 ppb	1,018.631 ppb	97.989 %
Concentration per Run 3	88.856 %	92.392 %	5.260 ppb	1,078.337 ppb	1,041.971 ppb	214.457 ppb	1,090.879 ppb	1,034.049 ppb	94.983 %
Concentration RSD	4.8 %	4.8 %	1.4 %	4.2 %	3.1 %	2.8 %	6.5 %	2.3 %	3.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.912 %	55.262 ppb	22.240 ppb	55.707 ppb	113.930 ppb	55.190 ppb	55.148 ppb	26.610 ppb	52.921 ppb
Concentration per Run 1	94.562 %	56.691 ppb	22.735 ppb	57.593 ppb	117.396 ppb	57.441 ppb	56.340 ppb	26.948 ppb	53.767 ppb
Concentration per Run 2	97.051 %	54.766 ppb	22.403 ppb	55.029 ppb	110.077 ppb	54.630 ppb	53.997 ppb	27.187 ppb	52.263 ppb
Concentration per Run 3	96.123 %	54.329 ppb	21.581 ppb	54.498 ppb	114.317 ppb	53.498 ppb	55.108 ppb	25.696 ppb	52.734 ppb
Concentration RSD	1.3 %	2.3 %	2.7 %	3.0 %	3.2 %	3.7 %	2.1 %	3.0 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.826 %	12.248 ppb	12.270 ppb	98.802 ppb	99.923 ppb	93.086 %	5.015 ppb	5.353 ppb	93.602 %
Concentration per Run 1	97.038 %	12.653 ppb	12.478 ppb	100.967 ppb	99.646 ppb	92.704 %	5.247 ppb	5.531 ppb	91.981 %
Concentration per Run 2	97.236 %	12.232 ppb	11.786 ppb	98.503 ppb	99.782 ppb	92.191 %	4.937 ppb	5.329 ppb	94.769 %
Concentration per Run 3	99.203 %	11.859 ppb	12.546 ppb	96.937 ppb	100.342 ppb	94.362 %	4.861 ppb	5.200 ppb	94.055 %
Concentration RSD	1.2 %	3.2 %	3.4 %	2.1 %	0.4 %	1.2 %	4.1 %	3.1 %	1.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	39.989 ppb	209.460 ppb	97.196 %	94.811 %	12.620 ppb	53.611 ppb
Concentration per Run 1	39.689 ppb	214.033 ppb	96.082 %	93.340 %	12.730 ppb	54.466 ppb
Concentration per Run 2	40.493 ppb	208.645 ppb	97.355 %	95.505 %	12.736 ppb	53.224 ppb
Concentration per Run 3	39.785 ppb	205.703 ppb	98.151 %	95.588 %	12.394 ppb	53.143 ppb
Concentration RSD	1.1 %	2.0 %	1.1 %	1.3 %	1.6 %	1.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	118	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-3d10 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:20:16 PM	Vial	12		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.750 %	102.256 %	5.311 ppb	29,979.421 ppb	4,960.365 ppb	206.851 ppb	1,400.125 ppb	15,207.412 ppb	100.601 %
Concentration per Run 1	97.176 %	96.013 %	5.091 ppb	31,921.282 ppb	5,210.161 ppb	220.278 ppb	1,471.687 ppb	16,061.452 ppb	102.709 %
Concentration per Run 2	90.426 %	104.670 %	5.445 ppb	29,356.397 ppb	4,846.423 ppb	200.455 ppb	1,358.126 ppb	14,768.913 ppb	100.006 %
Concentration per Run 3	87.647 %	106.086 %	5.396 ppb	28,660.583 ppb	4,824.511 ppb	199.820 ppb	1,370.563 ppb	14,791.872 ppb	99.088 %
Concentration RSD	5.3 %	5.3 %	3.6 %	5.7 %	4.4 %	5.6 %	4.4 %	4.9 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.445 %	54.051 ppb	21.347 ppb	58.926 ppb	113.613 ppb	53.039 ppb	52.272 ppb	25.681 ppb	51.308 ppb
Concentration per Run 1	98.996 %	55.956 ppb	22.007 ppb	59.468 ppb	111.561 ppb	54.284 ppb	53.897 ppb	26.700 ppb	52.968 ppb
Concentration per Run 2	100.807 %	53.008 ppb	20.945 ppb	58.810 ppb	111.827 ppb	52.987 ppb	50.974 ppb	25.158 ppb	50.373 ppb
Concentration per Run 3	101.531 %	53.189 ppb	21.089 ppb	58.498 ppb	117.452 ppb	51.845 ppb	51.945 ppb	25.184 ppb	50.583 ppb
Concentration RSD	1.3 %	3.1 %	2.7 %	0.8 %	2.9 %	2.3 %	2.8 %	3.4 %	2.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.814 %	12.064 ppb	12.390 ppb	164.378 ppb	101.589 ppb	93.455 %	4.904 ppb	5.299 ppb	95.626 %
Concentration per Run 1	98.158 %	12.462 ppb	12.039 ppb	168.559 ppb	101.307 ppb	92.735 %	5.052 ppb	5.434 ppb	95.247 %
Concentration per Run 2	102.674 %	11.872 ppb	12.881 ppb	162.246 ppb	100.400 ppb	93.122 %	4.780 ppb	5.273 ppb	97.140 %
Concentration per Run 3	101.611 %	11.859 ppb	12.249 ppb	162.328 ppb	103.061 ppb	94.510 %	4.880 ppb	5.189 ppb	94.492 %
Concentration RSD	2.3 %	2.9 %	3.5 %	2.2 %	1.3 %	1.0 %	2.8 %	2.3 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	43.697 ppb	214.834 ppb	99.404 %	99.024 %	12.189 ppb	51.469 ppb
Concentration per Run 1	43.452 ppb	214.845 ppb	98.867 %	96.991 %	12.392 ppb	52.944 ppb
Concentration per Run 2	43.771 ppb	215.274 ppb	98.404 %	98.902 %	12.280 ppb	51.669 ppb
Concentration per Run 3	43.869 ppb	214.384 ppb	100.941 %	101.180 %	11.896 ppb	49.794 ppb
Concentration RSD	0.5 %	0.2 %	1.4 %	2.1 %	2.1 %	3.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	119	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-4d10 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:24:56 PM	Vial	13		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	90.642 %	95.068 %	5.427 ppb	32,156.537 ppb	5,313.985 ppb	220.420 ppb	1,502.369 ppb	15,807.735 ppb	95.538 %
Concentration per Run 1	94.623 %	98.374 %	5.341 ppb	31,930.910 ppb	5,238.691 ppb	218.896 ppb	1,530.637 ppb	15,984.439 ppb	97.029 %
Concentration per Run 2	89.753 %	95.540 %	5.298 ppb	32,005.732 ppb	5,282.979 ppb	223.749 ppb	1,488.581 ppb	16,205.525 ppb	94.292 %
Concentration per Run 3	87.551 %	91.291 %	5.641 ppb	32,532.969 ppb	5,420.284 ppb	218.615 ppb	1,487.888 ppb	15,233.241 ppb	95.293 %
Concentration RSD	4.0 %	3.7 %	3.4 %	1.0 %	1.8 %	1.3 %	1.6 %	3.2 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.098 %	58.288 ppb	22.645 ppb	61.955 ppb	122.282 ppb	56.352 ppb	55.370 ppb	27.395 ppb	53.765 ppb
Concentration per Run 1	95.444 %	59.719 ppb	23.093 ppb	63.225 ppb	124.133 ppb	57.433 ppb	56.755 ppb	27.785 ppb	54.791 ppb
Concentration per Run 2	92.888 %	58.349 ppb	22.604 ppb	63.211 ppb	125.029 ppb	57.450 ppb	55.587 ppb	27.371 ppb	54.516 ppb
Concentration per Run 3	96.960 %	56.797 ppb	22.240 ppb	59.428 ppb	117.685 ppb	54.174 ppb	53.769 ppb	27.029 ppb	51.987 ppb
Concentration RSD	2.2 %	2.5 %	1.9 %	3.5 %	3.3 %	3.3 %	2.7 %	1.4 %	2.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.244 %	12.522 ppb	12.747 ppb	168.595 ppb	107.486 ppb	90.971 %	5.110 ppb	5.501 ppb	93.732 %
Concentration per Run 1	98.211 %	12.625 ppb	12.992 ppb	170.986 ppb	105.731 ppb	90.093 %	5.159 ppb	5.558 ppb	92.719 %
Concentration per Run 2	99.177 %	12.732 ppb	12.722 ppb	168.059 ppb	109.623 ppb	91.349 %	5.128 ppb	5.639 ppb	91.436 %
Concentration per Run 3	100.344 %	12.211 ppb	12.527 ppb	166.740 ppb	107.104 ppb	91.469 %	5.043 ppb	5.306 ppb	97.040 %
Concentration RSD	1.1 %	2.2 %	1.8 %	1.3 %	1.8 %	0.8 %	1.2 %	3.2 %	3.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	48.427 ppb	224.037 ppb	96.478 %	95.030 %	12.869 ppb	53.848 ppb
Concentration per Run 1	48.474 ppb	227.974 ppb	94.386 %	93.738 %	13.041 ppb	54.786 ppb
Concentration per Run 2	49.244 ppb	229.299 ppb	96.694 %	93.904 %	12.820 ppb	54.562 ppb
Concentration per Run 3	47.564 ppb	214.837 ppb	98.352 %	97.447 %	12.746 ppb	52.195 ppb
Concentration RSD	1.7 %	3.6 %	2.1 %	2.2 %	1.2 %	2.7 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index: 120
Analysis label: wg1905986-7d10 6020SL
Analysis started at: 4/10/2024 7:29:35 PM
User name ALPHALAB\Metals-Instrument
Rack 2
Vial 17
Comment <Comment>

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.095 %	103.305 %	5.318 ppb	27,347.913 ppb	14,883.485 ppb	209.824 ppb	1,484.490 ppb	14,253.073 ppb	101.059 %
Concentration per Run 1	94.796 %	104.355 %	5.393 ppb	27,001.538 ppb	14,866.019 ppb	204.537 ppb	1,487.469 ppb	14,581.782 ppb	101.717 %
Concentration per Run 2	91.478 %	105.299 %	5.188 ppb	27,769.839 ppb	14,843.882 ppb	213.321 ppb	1,514.621 ppb	13,854.659 ppb	100.998 %
Concentration per Run 3	90.011 %	100.262 %	5.373 ppb	27,272.360 ppb	14,940.554 ppb	211.613 ppb	1,451.382 ppb	14,322.779 ppb	100.463 %
Concentration RSD	2.7 %	2.6 %	2.1 %	1.4 %	0.3 %	2.2 %	2.1 %	2.6 %	0.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.602 %	54.529 ppb	21.565 ppb	57.899 ppb	253.941 ppb	53.655 ppb	53.078 ppb	26.115 ppb	51.818 ppb
Concentration per Run 1	105.128 %	53.975 ppb	21.379 ppb	56.413 ppb	252.538 ppb	53.261 ppb	52.054 ppb	25.914 ppb	50.988 ppb
Concentration per Run 2	100.037 %	55.888 ppb	22.023 ppb	60.251 ppb	271.603 ppb	55.268 ppb	54.664 ppb	26.898 ppb	53.042 ppb
Concentration per Run 3	102.639 %	53.723 ppb	21.292 ppb	57.032 ppb	237.683 ppb	52.438 ppb	52.516 ppb	25.534 ppb	51.424 ppb
Concentration RSD	2.5 %	2.2 %	1.9 %	3.6 %	6.7 %	2.7 %	2.6 %	2.7 %	2.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.458 %	13.300 ppb	12.049 ppb	2,808.564 ppb	104.347 ppb	94.009 %	4.961 ppb	5.367 ppb	97.480 %
Concentration per Run 1	102.319 %	13.281 ppb	11.872 ppb	2,796.388 ppb	100.307 ppb	94.542 %	4.942 ppb	5.328 ppb	98.565 %
Concentration per Run 2	98.629 %	13.663 ppb	12.712 ppb	2,871.072 ppb	105.961 ppb	92.966 %	4.991 ppb	5.456 ppb	96.837 %
Concentration per Run 3	103.428 %	12.956 ppb	11.564 ppb	2,758.231 ppb	106.772 ppb	94.519 %	4.949 ppb	5.317 ppb	97.039 %
Concentration RSD	2.5 %	2.7 %	4.9 %	2.0 %	3.4 %	1.0 %	0.5 %	1.4 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	53.686 ppb	219.829 ppb	100.325 %	98.456 %	12.105 ppb	51.604 ppb
Concentration per Run 1	52.666 ppb	214.154 ppb	102.393 %	99.354 %	11.768 ppb	50.923 ppb
Concentration per Run 2	54.780 ppb	224.387 ppb	99.188 %	97.736 %	12.503 ppb	52.386 ppb
Concentration per Run 3	53.613 ppb	220.946 ppb	99.395 %	98.279 %	12.044 ppb	51.504 ppb
Concentration RSD	2.0 %	2.4 %	1.8 %	0.8 %	3.1 %	1.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	121	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-8d10 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:34:14 PM	Vial	18		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.754 %	102.571 %	5.455 ppb	27,771.170 ppb	15,122.208 ppb	212.827 ppb	1,564.971 ppb	14,698.586 ppb	97.345 %
Concentration per Run 1	94.651 %	104.670 %	5.190 ppb	27,374.659 ppb	14,802.133 ppb	211.035 ppb	1,563.170 ppb	14,692.218 ppb	101.499 %
Concentration per Run 2	89.159 %	104.197 %	5.597 ppb	27,317.808 ppb	14,960.205 ppb	209.944 ppb	1,527.871 ppb	14,432.769 ppb	95.652 %
Concentration per Run 3	85.451 %	98.846 %	5.578 ppb	28,621.044 ppb	15,604.287 ppb	217.501 ppb	1,603.871 ppb	14,970.771 ppb	94.885 %
Concentration RSD	5.2 %	3.2 %	4.2 %	2.7 %	2.8 %	1.9 %	2.4 %	1.8 %	3.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.244 %	55.617 ppb	21.952 ppb	59.208 ppb	255.330 ppb	54.696 ppb	53.889 ppb	25.958 ppb	52.484 ppb
Concentration per Run 1	101.305 %	54.301 ppb	21.718 ppb	58.122 ppb	247.080 ppb	54.089 ppb	53.992 ppb	25.805 ppb	51.756 ppb
Concentration per Run 2	102.119 %	56.590 ppb	22.072 ppb	59.390 ppb	260.528 ppb	55.098 ppb	52.927 ppb	26.361 ppb	53.088 ppb
Concentration per Run 3	100.309 %	55.959 ppb	22.066 ppb	60.113 ppb	258.382 ppb	54.902 ppb	54.748 ppb	25.709 ppb	52.608 ppb
Concentration RSD	0.9 %	2.1 %	0.9 %	1.7 %	2.8 %	1.0 %	1.7 %	1.4 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.819 %	13.505 ppb	11.948 ppb	2,833.174 ppb	107.065 ppb	93.336 %	5.025 ppb	5.406 ppb	96.131 %
Concentration per Run 1	102.584 %	13.501 ppb	11.742 ppb	2,773.507 ppb	101.207 ppb	94.712 %	4.950 ppb	5.377 ppb	98.753 %
Concentration per Run 2	99.119 %	13.645 ppb	11.960 ppb	2,881.942 ppb	109.901 ppb	92.500 %	5.115 ppb	5.482 ppb	96.578 %
Concentration per Run 3	100.753 %	13.368 ppb	12.143 ppb	2,844.074 ppb	110.088 ppb	92.794 %	5.009 ppb	5.359 ppb	93.061 %
Concentration RSD	1.7 %	1.0 %	1.7 %	1.9 %	4.7 %	1.3 %	1.7 %	1.2 %	3.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	52.829 ppb	227.009 ppb	97.921 %	97.679 %	12.447 ppb	52.813 ppb
Concentration per Run 1	52.036 ppb	221.026 ppb	99.696 %	97.683 %	12.297 ppb	53.059 ppb
Concentration per Run 2	52.114 ppb	226.600 ppb	97.047 %	97.204 %	12.455 ppb	52.707 ppb
Concentration per Run 3	54.337 ppb	233.401 ppb	97.018 %	98.150 %	12.588 ppb	52.673 ppb
Concentration RSD	2.5 %	2.7 %	1.6 %	0.5 %	1.2 %	0.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	122	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-5d10 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:38:53 PM	Vial	14		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	89.505 %	97.534 %	48.491 ppb	34,355.208 ppb	8,864.370 ppb	52.007 ppb	5,232.731 ppb	18,762.102 ppb	100.796 %
Concentration per Run 1	92.251 %	100.105 %	47.961 ppb	34,634.481 ppb	8,817.269 ppb	51.792 ppb	5,370.821 ppb	19,092.155 ppb	100.668 %
Concentration per Run 2	89.965 %	90.818 %	48.602 ppb	35,819.821 ppb	9,332.333 ppb	55.141 ppb	5,254.850 ppb	18,839.632 ppb	100.783 %
Concentration per Run 3	86.300 %	101.679 %	48.911 ppb	32,611.321 ppb	8,443.508 ppb	49.089 ppb	5,072.522 ppb	18,354.517 ppb	100.936 %
Concentration RSD	3.4 %	6.0 %	1.0 %	4.7 %	5.0 %	5.8 %	2.9 %	2.0 %	0.1 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.819 %	51.970 ppb	50.796 ppb	55.461 ppb	5,149.983 ppb	50.850 ppb	49.852 ppb	48.571 ppb	48.783 ppb
Concentration per Run 1	99.969 %	53.051 ppb	51.118 ppb	55.528 ppb	5,170.565 ppb	51.611 ppb	50.730 ppb	49.789 ppb	49.492 ppb
Concentration per Run 2	98.499 %	51.425 ppb	50.862 ppb	55.652 ppb	5,176.602 ppb	50.701 ppb	50.616 ppb	48.561 ppb	49.026 ppb
Concentration per Run 3	100.987 %	51.434 ppb	50.408 ppb	55.205 ppb	5,102.783 ppb	50.236 ppb	48.210 ppb	47.364 ppb	47.832 ppb
Concentration RSD	1.3 %	1.8 %	0.7 %	0.4 %	0.8 %	1.4 %	2.9 %	2.5 %	1.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.054 %	48.382 ppb	48.526 ppb	113.488 ppb	51.098 ppb	91.996 %	6.967 ppb	46.777 ppb	96.534 %
Concentration per Run 1	98.800 %	49.765 ppb	50.176 ppb	114.529 ppb	49.803 ppb	92.569 %	7.094 ppb	46.845 ppb	98.895 %
Concentration per Run 2	100.321 %	47.418 ppb	47.650 ppb	112.215 ppb	51.139 ppb	91.691 %	6.937 ppb	46.907 ppb	93.658 %
Concentration per Run 3	98.042 %	47.961 ppb	47.752 ppb	113.721 ppb	52.353 ppb	91.729 %	6.871 ppb	46.578 ppb	97.050 %
Concentration RSD	1.2 %	2.5 %	2.9 %	1.0 %	2.5 %	0.5 %	1.7 %	0.4 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	52.322 ppb	57.400 ppb	97.228 %	97.138 %	46.279 ppb	46.688 ppb
Concentration per Run 1	51.936 ppb	57.881 ppb	96.002 %	96.291 %	44.142 ppb	47.276 ppb
Concentration per Run 2	53.585 ppb	58.019 ppb	97.657 %	98.317 %	46.542 ppb	46.123 ppb
Concentration per Run 3	51.446 ppb	56.301 ppb	98.023 %	96.805 %	48.155 ppb	46.666 ppb
Concentration RSD	2.1 %	1.7 %	1.1 %	1.1 %	4.4 %	1.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	123	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-6d5 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:43:32 PM	Vial	15		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.395 %	99.056 %	0.010 ppb	59,302.390 ppb	8,013.413 ppb	1.790 ppb	717.187 ppb	28,090.575 ppb	100.190 %
Concentration per Run 1	95.949 %	101.679 %	0.023 ppb	58,039.617 ppb	7,868.830 ppb	1.535 ppb	702.151 ppb	27,473.406 ppb	102.447 %
Concentration per Run 2	90.903 %	95.540 %	0.000 ppb	60,988.622 ppb	8,265.579 ppb	2.414 ppb	737.815 ppb	28,602.323 ppb	100.201 %
Concentration per Run 3	87.333 %	99.948 %	0.006 ppb	58,878.932 ppb	7,905.830 ppb	1.422 ppb	711.594 ppb	28,195.995 ppb	97.922 %
Concentration RSD	4.7 %	3.2 %	119.7 %	2.6 %	2.7 %	30.3 %	2.6 %	2.0 %	2.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.033 %	-0.050 ppb	0.040 ppb	8.940 ppb	12.621 ppb	0.055 ppb	0.134 ppb	0.088 ppb	0.335 ppb
Concentration per Run 1	105.377 %	-0.069 ppb	0.043 ppb	8.631 ppb	13.966 ppb	0.048 ppb	0.111 ppb	0.063 ppb	0.313 ppb
Concentration per Run 2	98.046 %	-0.060 ppb	0.041 ppb	9.083 ppb	12.961 ppb	0.056 ppb	0.160 ppb	0.082 ppb	0.313 ppb
Concentration per Run 3	99.675 %	-0.020 ppb	0.037 ppb	9.106 ppb	10.936 ppb	0.062 ppb	0.132 ppb	0.118 ppb	0.378 ppb
Concentration RSD	3.8 %	53.1 %	7.9 %	3.0 %	12.2 %	12.4 %	18.5 %	31.9 %	11.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.680 %	-0.027 ppb	0.509 ppb	132.736 ppb	1.997 ppb	93.748 %	-0.002 ppb	0.011 ppb	99.019 %
Concentration per Run 1	102.088 %	0.012 ppb	0.497 ppb	132.138 ppb	1.863 ppb	94.932 %	-0.004 ppb	0.007 ppb	99.798 %
Concentration per Run 2	100.118 %	-0.010 ppb	0.593 ppb	132.659 ppb	2.051 ppb	93.554 %	-0.002 ppb	0.012 ppb	100.417 %
Concentration per Run 3	99.832 %	-0.083 ppb	0.437 ppb	133.409 ppb	2.076 ppb	92.757 %	0.000 ppb	0.014 ppb	96.841 %
Concentration RSD	1.2 %	185.4 %	15.5 %	0.5 %	5.8 %	1.2 %	98.1 %	32.8 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.701 ppb	16.803 ppb	101.276 %	99.663 %	0.422 ppb	0.044 ppb
Concentration per Run 1	0.668 ppb	16.233 ppb	102.190 %	100.425 %	0.450 ppb	0.052 ppb
Concentration per Run 2	0.679 ppb	17.196 ppb	99.810 %	100.223 %	0.447 ppb	0.034 ppb
Concentration per Run 3	0.756 ppb	16.981 ppb	101.828 %	98.339 %	0.368 ppb	0.046 ppb
Concentration RSD	6.9 %	3.0 %	1.3 %	1.2 %	11.0 %	20.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	124	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-07 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:48:11 PM	Vial	11		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	93.215 %	104.565 %	0.006 ppb	283,752.559 ppb	37,634.249 ppb	7.151 ppb	3,623.331 ppb	140,225.026 ppb	98.930 %
Concentration per Run 1	96.347 %	101.836 %	-0.003 ppb	283,607.326 ppb	38,061.474 ppb	7.126 ppb	3,634.133 ppb	137,769.809 ppb	100.119 %
Concentration per Run 2	92.604 %	100.735 %	0.009 ppb	289,236.567 ppb	38,235.440 ppb	7.500 ppb	3,646.412 ppb	139,327.638 ppb	98.319 %
Concentration per Run 3	90.694 %	111.123 %	0.011 ppb	278,413.784 ppb	36,605.833 ppb	6.829 ppb	3,589.448 ppb	143,577.632 ppb	98.352 %
Concentration RSD	3.1 %	5.5 %	128.2 %	1.9 %	2.4 %	4.7 %	0.8 %	2.1 %	1.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.031 %	-0.005 ppb	0.103 ppb	43.847 ppb	25.462 ppb	0.253 ppb	0.578 ppb	0.459 ppb	1.333 ppb
Concentration per Run 1	101.078 %	-0.028 ppb	0.105 ppb	42.949 ppb	25.093 ppb	0.288 ppb	0.660 ppb	0.485 ppb	1.283 ppb
Concentration per Run 2	96.689 %	0.028 ppb	0.103 ppb	44.972 ppb	24.853 ppb	0.226 ppb	0.644 ppb	0.422 ppb	1.469 ppb
Concentration per Run 3	96.327 %	-0.015 ppb	0.100 ppb	43.622 ppb	26.440 ppb	0.246 ppb	0.430 ppb	0.472 ppb	1.246 ppb
Concentration RSD	2.7 %	590.2 %	2.5 %	2.3 %	3.4 %	12.4 %	22.2 %	7.3 %	9.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	95.174 %	0.192 ppb	1.744 ppb	689.499 ppb	1.983 ppb	85.293 %	-0.002 ppb	0.020 ppb	91.602 %
Concentration per Run 1	94.096 %	0.262 ppb	1.992 ppb	693.454 ppb	1.836 ppb	84.450 %	0.000 ppb	0.012 ppb	92.416 %
Concentration per Run 2	93.810 %	0.178 ppb	1.594 ppb	697.152 ppb	1.917 ppb	84.635 %	-0.002 ppb	0.016 ppb	90.598 %
Concentration per Run 3	97.615 %	0.138 ppb	1.646 ppb	677.891 ppb	2.195 ppb	86.794 %	-0.003 ppb	0.032 ppb	91.793 %
Concentration RSD	2.2 %	32.8 %	12.4 %	1.5 %	9.5 %	1.5 %	96.6 %	51.8 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.789 ppb	87.625 ppb	94.695 %	94.402 %	0.112 ppb	0.138 ppb
Concentration per Run 1	0.747 ppb	86.135 ppb	94.635 %	93.475 %	0.083 ppb	0.142 ppb
Concentration per Run 2	0.800 ppb	89.458 ppb	95.898 %	94.104 %	0.124 ppb	0.134 ppb
Concentration per Run 3	0.820 ppb	87.280 ppb	93.552 %	95.627 %	0.129 ppb	0.139 ppb
Concentration RSD	4.8 %	1.9 %	1.2 %	1.2 %	22.2 %	2.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	125	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418621-02 6020SL	Rack	2		
Analysis started at:	4/10/2024 7:52:51 PM	Vial	16		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.028 %	106.873 %	0.003 ppb	237,548.681 ppb	131,519.439 ppb	3.188 ppb	4,320.778 ppb	125,211.466 ppb	99.752 %
Concentration per Run 1	104.499 %	106.244 %	0.004 ppb	241,520.359 ppb	133,931.482 ppb	3.540 ppb	4,502.443 ppb	130,550.541 ppb	101.855 %
Concentration per Run 2	97.873 %	105.929 %	0.011 ppb	235,978.209 ppb	128,549.072 ppb	2.838 ppb	4,134.284 ppb	120,914.274 ppb	98.223 %
Concentration per Run 3	94.713 %	108.447 %	-0.006 ppb	235,147.474 ppb	132,077.763 ppb	3.186 ppb	4,325.609 ppb	124,169.583 ppb	99.178 %
Concentration RSD	5.0 %	1.3 %	280.5 %	1.5 %	2.1 %	11.0 %	4.3 %	3.9 %	1.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.066 %	0.073 ppb	0.218 ppb	35.666 ppb	1,363.196 ppb	0.174 ppb	2.678 ppb	0.220 ppb	0.775 ppb
Concentration per Run 1	99.766 %	0.083 ppb	0.224 ppb	36.942 ppb	1,383.456 ppb	0.182 ppb	2.641 ppb	0.181 ppb	0.794 ppb
Concentration per Run 2	104.155 %	0.065 ppb	0.186 ppb	34.596 ppb	1,309.673 ppb	0.158 ppb	2.655 ppb	0.203 ppb	0.739 ppb
Concentration per Run 3	102.277 %	0.070 ppb	0.243 ppb	35.462 ppb	1,396.460 ppb	0.183 ppb	2.738 ppb	0.275 ppb	0.793 ppb
Concentration RSD	2.2 %	12.4 %	13.4 %	3.3 %	3.4 %	8.0 %	2.0 %	22.2 %	4.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.637 %	8.027 ppb	0.003 ppb	27,920.785 ppb	7.401 ppb	86.489 %	0.002 ppb	0.011 ppb	94.024 %
Concentration per Run 1	100.806 %	8.317 ppb	-0.072 ppb	28,080.227 ppb	7.105 ppb	86.187 %	-0.001 ppb	0.009 ppb	93.578 %
Concentration per Run 2	104.395 %	7.777 ppb	0.003 ppb	27,062.575 ppb	7.421 ppb	89.043 %	0.004 ppb	0.006 ppb	95.088 %
Concentration per Run 3	99.709 %	7.987 ppb	0.077 ppb	28,619.553 ppb	7.678 ppb	84.235 %	0.004 ppb	0.018 ppb	93.405 %
Concentration RSD	2.4 %	3.4 %	2,827.7 %	2.8 %	3.9 %	2.8 %	129.8 %	55.3 %	1.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.413 ppb	137.479 ppb	97.199 %	96.567 %	0.050 ppb	0.050 ppb
Concentration per Run 1	0.388 ppb	138.154 ppb	95.922 %	95.241 %	0.039 ppb	0.048 ppb
Concentration per Run 2	0.422 ppb	133.209 ppb	100.494 %	98.559 %	0.054 ppb	0.052 ppb
Concentration per Run 3	0.429 ppb	141.075 ppb	95.180 %	95.901 %	0.056 ppb	0.051 ppb
Concentration RSD	5.3 %	2.9 %	3.0 %	1.8 %	19.1 %	4.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	126	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 7:57:30 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	91.002 %	102.099 %	62.320 ppb	6,077.490 ppb	5,842.189 ppb	62.879 ppb	5,776.692 ppb	5,730.059 ppb	111.014 %
Concentration per Run 1	96.646 %	100.577 %	60.648 ppb	6,171.100 ppb	5,931.600 ppb	62.305 ppb	5,891.321 ppb	5,711.542 ppb	114.287 %
Concentration per Run 2	90.972 %	101.049 %	62.367 ppb	6,060.881 ppb	5,792.931 ppb	63.566 ppb	5,675.626 ppb	5,656.795 ppb	110.005 %
Concentration per Run 3	85.389 %	104.670 %	63.946 ppb	6,000.489 ppb	5,802.036 ppb	62.766 ppb	5,763.129 ppb	5,821.840 ppb	108.751 %
Recovery Percentage 1			103.867 %	101.291 %	97.370 %	104.798 %	96.278 %	95.501 %	
Concentration RSD	6.2 %	2.2 %	2.6 %	1.4 %	1.3 %	1.0 %	1.9 %	1.5 %	2.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	111.638 %	59.960 ppb	59.477 ppb	60.184 ppb	6,160.630 ppb	60.819 ppb	59.653 ppb	59.996 ppb	58.796 ppb
Concentration per Run 1	113.818 %	59.814 ppb	59.554 ppb	59.819 ppb	6,056.997 ppb	61.076 ppb	60.202 ppb	60.115 ppb	58.406 ppb
Concentration per Run 2	113.116 %	58.691 ppb	58.352 ppb	59.566 ppb	6,105.598 ppb	60.486 ppb	58.875 ppb	59.326 ppb	58.754 ppb
Concentration per Run 3	107.979 %	61.376 ppb	60.524 ppb	61.167 ppb	6,319.293 ppb	60.896 ppb	59.882 ppb	60.547 ppb	59.228 ppb
Recovery Percentage 1		99.933 %	99.128 %	100.307 %	102.677 %	101.365 %	99.422 %	99.994 %	97.993 %
Concentration RSD	2.9 %	2.2 %	1.8 %	1.4 %	2.3 %	0.5 %	1.2 %	1.0 %	0.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.772 %	58.803 ppb	59.963 ppb	61.164 ppb	59.796 ppb	96.246 %	58.347 ppb	58.191 ppb	99.073 %
Concentration per Run 1	106.092 %	58.475 ppb	59.600 ppb	60.928 ppb	58.355 ppb	97.728 %	57.994 ppb	57.155 ppb	100.098 %
Concentration per Run 2	105.876 %	58.654 ppb	58.886 ppb	61.603 ppb	60.125 ppb	97.137 %	58.685 ppb	58.805 ppb	98.619 %
Concentration per Run 3	102.348 %	59.281 ppb	61.403 ppb	60.962 ppb	60.908 ppb	93.873 %	58.361 ppb	58.614 ppb	98.502 %
Recovery Percentage 1		98.005 %	99.938 %	101.941 %	99.660 %		97.245 %	96.986 %	
Concentration RSD	2.0 %	0.7 %	2.2 %	0.6 %	2.2 %	2.2 %	0.6 %	1.6 %	0.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	64.567 ppb	61.885 ppb	99.399 %	98.943 %	56.782 ppb	57.413 ppb
Concentration per Run 1	64.230 ppb	62.152 ppb	99.103 %	97.517 %	54.478 ppb	58.838 ppb
Concentration per Run 2	64.384 ppb	60.494 ppb	100.789 %	99.868 %	57.300 ppb	57.357 ppb
Concentration per Run 3	65.086 ppb	63.010 ppb	98.305 %	99.444 %	58.568 ppb	56.043 ppb
Recovery Percentage 1	107.611 %	103.142 %			94.637 %	95.688 %
Concentration RSD	0.7 %	2.1 %	1.3 %	1.3 %	3.7 %	2.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	127	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 8:02:12 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	86.282 %	96.432 %	0.009 ppb	44.153 ppb	18.938 ppb	-0.273 ppb	-6.018 ppb	25.379 ppb	92.012 %
Concentration per Run 1	90.318 %	95.698 %	0.013 ppb	14.315 ppb	7.435 ppb	-0.376 ppb	-12.923 ppb	7.016 ppb	95.005 %
Concentration per Run 2	85.792 %	97.272 %	0.003 ppb	9.656 ppb	6.841 ppb	-0.269 ppb	-6.929 ppb	5.645 ppb	90.816 %
Concentration per Run 3	82.737 %	96.327 %	0.012 ppb	108.486 ppb	42.539 ppb	-0.175 ppb	1.798 ppb	63.477 ppb	90.216 %
Recovery Percentage 1			1.864 %	44.153 %	27.055 %	-2.734 %	-6.018 %	25.379 %	
Concentration RSD	4.4 %	0.8 %	56.8 %	126.3 %	107.9 %	36.8 %	123.0 %	130.0 %	2.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	92.662 %	0.017 ppb	0.031 ppb	0.181 ppb	10.765 ppb	0.032 ppb	0.026 ppb	0.034 ppb	0.043 ppb
Concentration per Run 1	94.132 %	-0.025 ppb	0.024 ppb	0.141 ppb	9.158 ppb	0.003 ppb	0.008 ppb	0.018 ppb	-0.007 ppb
Concentration per Run 2	92.073 %	-0.001 ppb	0.017 ppb	0.175 ppb	10.111 ppb	0.006 ppb	0.020 ppb	0.034 ppb	0.032 ppb
Concentration per Run 3	91.779 %	0.076 ppb	0.051 ppb	0.229 ppb	13.025 ppb	0.086 ppb	0.049 ppb	0.050 ppb	0.105 ppb
Recovery Percentage 1		0.335 %	3.053 %	18.142 %	21.529 %	6.376 %	1.287 %	3.381 %	0.869 %
Concentration RSD	1.4 %	314.1 %	59.8 %	24.4 %	18.7 %	148.4 %	81.2 %	48.2 %	131.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	94.843 %	0.088 ppb	0.249 ppb	3.321 ppb	1.166 ppb	90.483 %	0.012 ppb	0.021 ppb	92.839 %
Concentration per Run 1	95.460 %	0.113 ppb	0.298 ppb	1.190 ppb	1.141 ppb	91.151 %	0.012 ppb	0.013 ppb	94.128 %
Concentration per Run 2	95.004 %	0.131 ppb	0.175 ppb	1.031 ppb	1.160 ppb	89.753 %	0.002 ppb	0.010 ppb	91.035 %
Concentration per Run 3	94.065 %	0.019 ppb	0.273 ppb	7.742 ppb	1.198 ppb	90.545 %	0.021 ppb	0.041 ppb	93.353 %
Recovery Percentage 1		17.538 %	4.971 %	33.211 %	58.321 %		2.940 %	10.659 %	
Concentration RSD	0.7 %	68.7 %	26.2 %	115.3 %	2.5 %	0.8 %	79.4 %	78.8 %	1.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.255 ppb	0.084 ppb	92.888 %	92.824 %	0.474 ppb	0.040 ppb
Concentration per Run 1	0.219 ppb	0.020 ppb	94.534 %	92.943 %	0.475 ppb	0.022 ppb
Concentration per Run 2	0.246 ppb	0.015 ppb	91.792 %	91.602 %	0.515 ppb	0.024 ppb
Concentration per Run 3	0.300 ppb	0.217 ppb	92.337 %	93.927 %	0.433 ppb	0.074 ppb
Recovery Percentage 1	6.374 %	16.830 %			47.449 %	3.988 %
Concentration RSD	16.1 %	137.0 %	1.6 %	1.3 %	8.6 %	73.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	128	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-9d10 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:06:55 PM	Vial	19		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	92.929 %	97.849 %	45.976 ppb	32,831.890 ppb	19,436.678 ppb	49.791 ppb	5,273.263 ppb	18,747.693 ppb	101.665 %
Concentration per Run 1	97.561 %	97.744 %	44.477 ppb	33,738.136 ppb	19,886.455 ppb	50.409 ppb	5,491.390 ppb	19,451.378 ppb	104.601 %
Concentration per Run 2	93.081 %	91.763 %	45.541 ppb	33,723.266 ppb	20,459.397 ppb	52.048 ppb	5,300.271 ppb	18,484.258 ppb	101.792 %
Concentration per Run 3	88.146 %	104.040 %	47.911 ppb	31,034.268 ppb	17,964.182 ppb	46.915 ppb	5,028.127 ppb	18,307.442 ppb	98.602 %
Concentration RSD	5.1 %	6.3 %	3.8 %	4.7 %	6.7 %	5.3 %	4.4 %	3.3 %	3.0 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	100.844 %	50.540 ppb	48.676 ppb	52.808 ppb	5,055.278 ppb	47.740 ppb	47.582 ppb	45.450 ppb	45.622 ppb
Concentration per Run 1	97.481 %	53.101 ppb	50.366 ppb	54.183 ppb	5,194.272 ppb	50.241 ppb	49.271 ppb	47.512 ppb	47.358 ppb
Concentration per Run 2	100.897 %	49.446 ppb	48.779 ppb	52.119 ppb	5,038.255 ppb	47.436 ppb	48.102 ppb	45.308 ppb	45.102 ppb
Concentration per Run 3	104.155 %	49.075 ppb	46.884 ppb	52.122 ppb	4,933.306 ppb	45.543 ppb	45.374 ppb	43.529 ppb	44.406 ppb
Concentration RSD	3.3 %	4.4 %	3.6 %	2.3 %	2.6 %	5.0 %	4.2 %	4.4 %	3.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.608 %	45.896 ppb	45.186 ppb	2,735.470 ppb	45.886 ppb	95.948 %	6.446 ppb	44.109 ppb	99.845 %
Concentration per Run 1	104.154 %	47.147 ppb	45.502 ppb	2,815.515 ppb	45.704 ppb	93.589 %	6.766 ppb	46.540 ppb	96.635 %
Concentration per Run 2	104.807 %	46.454 ppb	45.642 ppb	2,738.841 ppb	46.028 ppb	95.933 %	6.333 ppb	42.913 ppb	101.794 %
Concentration per Run 3	107.862 %	44.088 ppb	44.415 ppb	2,652.055 ppb	45.927 ppb	98.321 %	6.240 ppb	42.873 ppb	101.106 %
Concentration RSD	1.9 %	3.5 %	1.5 %	3.0 %	0.4 %	2.5 %	4.4 %	4.8 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	49.035 ppb	60.233 ppb	101.124 %	100.736 %	42.397 ppb	43.109 ppb
Concentration per Run 1	50.548 ppb	61.911 ppb	99.524 %	98.845 %	40.563 ppb	43.714 ppb
Concentration per Run 2	48.272 ppb	59.633 ppb	101.045 %	101.090 %	43.373 ppb	43.520 ppb
Concentration per Run 3	48.287 ppb	59.153 ppb	102.804 %	102.272 %	43.255 ppb	42.092 ppb
Concentration RSD	2.7 %	2.4 %	1.6 %	1.7 %	3.7 %	2.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	129	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	wg1905986-10d5 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:11:34 PM	Vial	20		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.054 %	104.565 %	0.012 ppb	55,856.448 ppb	28,922.801 ppb	1.181 ppb	988.486 ppb	28,959.092 ppb	100.367 %
Concentration per Run 1	98.910 %	104.512 %	0.015 ppb	57,345.531 ppb	29,742.137 ppb	1.311 ppb	1,022.152 ppb	29,609.847 ppb	102.457 %
Concentration per Run 2	94.360 %	104.984 %	0.006 ppb	53,858.451 ppb	27,949.226 ppb	1.113 ppb	963.124 ppb	27,807.521 ppb	99.597 %
Concentration per Run 3	91.892 %	104.197 %	0.014 ppb	56,365.363 ppb	29,077.040 ppb	1.120 ppb	980.181 ppb	29,459.910 ppb	99.047 %
Concentration RSD	3.7 %	0.4 %	40.3 %	3.2 %	3.1 %	9.5 %	3.1 %	3.5 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	94.623 %	0.035 ppb	0.076 ppb	8.142 ppb	313.390 ppb	0.046 ppb	0.599 ppb	0.068 ppb	0.275 ppb
Concentration per Run 1	92.820 %	0.020 ppb	0.072 ppb	8.682 ppb	327.107 ppb	0.034 ppb	0.625 ppb	0.078 ppb	0.316 ppb
Concentration per Run 2	96.259 %	0.037 ppb	0.085 ppb	7.851 ppb	303.016 ppb	0.051 ppb	0.587 ppb	0.096 ppb	0.258 ppb
Concentration per Run 3	94.788 %	0.048 ppb	0.072 ppb	7.894 ppb	310.048 ppb	0.053 ppb	0.585 ppb	0.029 ppb	0.251 ppb
Concentration RSD	1.8 %	40.3 %	10.0 %	5.7 %	4.0 %	22.6 %	3.8 %	50.9 %	12.9 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.928 %	1.756 ppb	0.329 ppb	5,677.988 ppb	2.667 ppb	91.230 %	-0.002 ppb	0.008 ppb	95.096 %
Concentration per Run 1	96.451 %	2.015 ppb	0.456 ppb	5,960.880 ppb	2.923 ppb	88.656 %	-0.001 ppb	0.010 ppb	92.598 %
Concentration per Run 2	104.582 %	1.654 ppb	0.229 ppb	5,556.034 ppb	2.538 ppb	92.314 %	-0.002 ppb	0.007 ppb	95.970 %
Concentration per Run 3	104.749 %	1.599 ppb	0.300 ppb	5,517.050 ppb	2.539 ppb	92.721 %	-0.002 ppb	0.006 ppb	96.720 %
Concentration RSD	4.7 %	12.9 %	35.4 %	4.3 %	8.3 %	2.5 %	33.4 %	29.5 %	2.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.211 ppb	28.690 ppb	97.952 %	97.446 %	0.463 ppb	0.023 ppb
Concentration per Run 1	0.204 ppb	29.963 ppb	95.008 %	93.457 %	0.532 ppb	0.026 ppb
Concentration per Run 2	0.226 ppb	27.680 ppb	99.426 %	100.441 %	0.465 ppb	0.020 ppb
Concentration per Run 3	0.203 ppb	28.426 ppb	99.421 %	98.439 %	0.392 ppb	0.023 ppb
Concentration RSD	6.2 %	4.1 %	2.6 %	3.7 %	15.1 %	12.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	130	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-01 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:16:13 PM	Vial	21		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	97.211 %	102.413 %	0.007 ppb	318,959.589 ppb	39,474.230 ppb	3.475 ppb	4,418.883 ppb	146,553.839 ppb	107.273 %
Concentration per Run 1	101.367 %	101.522 %	0.011 ppb	321,356.107 ppb	39,482.809 ppb	3.257 ppb	4,480.118 ppb	149,019.482 ppb	110.240 %
Concentration per Run 2	96.376 %	108.919 %	0.002 ppb	306,856.179 ppb	37,982.505 ppb	3.627 ppb	4,312.559 ppb	144,437.390 ppb	106.145 %
Concentration per Run 3	93.890 %	96.800 %	0.008 ppb	328,666.482 ppb	40,957.375 ppb	3.540 ppb	4,463.972 ppb	146,204.646 ppb	105.435 %
Concentration RSD	3.9 %	6.0 %	61.2 %	3.5 %	3.8 %	5.6 %	2.1 %	1.6 %	2.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.925 %	-0.040 ppb	0.085 ppb	366.814 ppb	45.468 ppb	0.845 ppb	1.468 ppb	0.299 ppb	1.497 ppb
Concentration per Run 1	105.400 %	-0.061 ppb	0.083 ppb	360.412 ppb	45.865 ppb	0.869 ppb	1.521 ppb	0.294 ppb	1.459 ppb
Concentration per Run 2	104.608 %	-0.037 ppb	0.099 ppb	368.907 ppb	46.214 ppb	0.826 ppb	1.519 ppb	0.351 ppb	1.559 ppb
Concentration per Run 3	104.766 %	-0.021 ppb	0.071 ppb	371.122 ppb	44.325 ppb	0.839 ppb	1.365 ppb	0.252 ppb	1.472 ppb
Concentration RSD	0.4 %	50.6 %	16.6 %	1.5 %	2.2 %	2.6 %	6.1 %	16.6 %	3.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.620 %	0.154 ppb	0.429 ppb	805.027 ppb	1.669 ppb	88.430 %	-0.001 ppb	0.011 ppb	95.397 %
Concentration per Run 1	99.009 %	0.238 ppb	0.253 ppb	815.873 ppb	1.563 ppb	87.721 %	-0.002 ppb	0.016 ppb	95.575 %
Concentration per Run 2	99.386 %	0.154 ppb	0.505 ppb	802.357 ppb	1.709 ppb	87.858 %	-0.002 ppb	0.014 ppb	95.831 %
Concentration per Run 3	100.466 %	0.070 ppb	0.529 ppb	796.850 ppb	1.735 ppb	89.711 %	0.000 ppb	0.002 ppb	94.785 %
Concentration RSD	0.8 %	54.5 %	35.7 %	1.2 %	5.6 %	1.3 %	69.1 %	71.5 %	0.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.330 ppb	67.995 ppb	98.042 %	99.017 %	0.144 ppb	0.037 ppb
Concentration per Run 1	0.312 ppb	67.672 ppb	98.617 %	100.605 %	0.105 ppb	0.034 ppb
Concentration per Run 2	0.316 ppb	69.008 ppb	96.938 %	97.318 %	0.171 ppb	0.041 ppb
Concentration per Run 3	0.363 ppb	67.304 ppb	98.571 %	99.127 %	0.154 ppb	0.037 ppb
Concentration RSD	8.6 %	1.3 %	1.0 %	1.7 %	23.8 %	9.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	131	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-02 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:20:52 PM	Vial	22		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.446 %	107.031 %	0.004 ppb	107,625.418 ppb	40,588.458 ppb	28.645 ppb	10,560.030 ppb	159,593.507 ppb	104.533 %
Concentration per Run 1	99.937 %	107.503 %	0.005 ppb	109,713.352 ppb	41,722.596 ppb	30.387 ppb	10,806.777 ppb	164,323.344 ppb	106.344 %
Concentration per Run 2	95.022 %	105.929 %	0.004 ppb	106,607.307 ppb	40,221.577 ppb	28.028 ppb	10,816.154 ppb	160,802.655 ppb	104.045 %
Concentration per Run 3	91.380 %	107.660 %	0.003 ppb	106,555.594 ppb	39,821.200 ppb	27.520 ppb	10,057.159 ppb	153,654.523 ppb	103.211 %
Concentration RSD	4.5 %	0.9 %	16.5 %	1.7 %	2.5 %	5.3 %	4.1 %	3.4 %	1.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	104.744 %	0.123 ppb	0.110 ppb	60.555 ppb	103.623 ppb	0.200 ppb	16.698 ppb	5.027 ppb	24.503 ppb
Concentration per Run 1	103.227 %	0.146 ppb	0.121 ppb	61.486 ppb	105.813 ppb	0.206 ppb	17.174 ppb	5.136 ppb	24.625 ppb
Concentration per Run 2	103.929 %	0.133 ppb	0.099 ppb	61.132 ppb	104.145 ppb	0.204 ppb	16.604 ppb	5.012 ppb	24.783 ppb
Concentration per Run 3	107.074 %	0.091 ppb	0.111 ppb	59.049 ppb	100.912 ppb	0.189 ppb	16.317 ppb	4.932 ppb	24.100 ppb
Concentration RSD	2.0 %	23.4 %	10.0 %	2.2 %	2.4 %	4.6 %	2.6 %	2.0 %	1.5 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	103.927 %	0.197 ppb	28.603 ppb	668.473 ppb	1.398 ppb	90.200 %	0.001 ppb	0.024 ppb	99.080 %
Concentration per Run 1	103.968 %	0.264 ppb	28.993 ppb	673.655 ppb	1.191 ppb	89.725 %	0.000 ppb	0.027 ppb	99.134 %
Concentration per Run 2	103.305 %	0.158 ppb	28.842 ppb	665.297 ppb	1.429 ppb	91.134 %	0.003 ppb	0.019 ppb	97.685 %
Concentration per Run 3	104.508 %	0.168 ppb	27.976 ppb	666.467 ppb	1.575 ppb	89.739 %	0.000 ppb	0.024 ppb	100.421 %
Concentration RSD	0.6 %	29.8 %	1.9 %	0.7 %	13.8 %	0.9 %	196.3 %	17.0 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.488 ppb	98.309 ppb	98.504 %	99.703 %	0.087 ppb	3.723 ppb
Concentration per Run 1	0.481 ppb	99.710 ppb	97.693 %	99.108 %	0.067 ppb	3.753 ppb
Concentration per Run 2	0.499 ppb	98.005 ppb	99.183 %	98.999 %	0.099 ppb	3.731 ppb
Concentration per Run 3	0.483 ppb	97.210 ppb	98.637 %	101.002 %	0.095 ppb	3.684 ppb
Concentration RSD	1.9 %	1.3 %	0.8 %	1.1 %	20.0 %	1.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	132	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-03 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:25:32 PM	Vial	23		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	95.500 %	104.984 %	-0.003 ppb	218,282.809 ppb	35,069.409 ppb	3.791 ppb	7,323.514 ppb	140,420.324 ppb	98.216 %
Concentration per Run 1	100.165 %	106.086 %	0.005 ppb	223,123.988 ppb	35,674.178 ppb	4.123 ppb	7,486.830 ppb	143,631.339 ppb	101.214 %
Concentration per Run 2	94.154 %	105.614 %	-0.009 ppb	214,402.607 ppb	34,724.171 ppb	3.705 ppb	7,237.939 ppb	139,165.628 ppb	96.146 %
Concentration per Run 3	92.181 %	103.253 %	-0.004 ppb	217,321.832 ppb	34,809.879 ppb	3.545 ppb	7,245.772 ppb	138,464.006 ppb	97.287 %
Concentration RSD	4.4 %	1.4 %	272.6 %	2.0 %	1.5 %	7.9 %	1.9 %	2.0 %	2.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.621 %	0.120 ppb	0.324 ppb	18.066 ppb	17.381 ppb	0.208 ppb	0.710 ppb	0.593 ppb	1.673 ppb
Concentration per Run 1	97.164 %	0.129 ppb	0.364 ppb	18.828 ppb	18.451 ppb	0.217 ppb	0.690 ppb	0.714 ppb	1.801 ppb
Concentration per Run 2	95.580 %	0.142 ppb	0.303 ppb	17.783 ppb	17.308 ppb	0.175 ppb	0.776 ppb	0.516 ppb	1.623 ppb
Concentration per Run 3	97.119 %	0.088 ppb	0.307 ppb	17.586 ppb	16.385 ppb	0.232 ppb	0.664 ppb	0.549 ppb	1.595 ppb
Concentration RSD	0.9 %	23.5 %	10.5 %	3.7 %	6.0 %	14.2 %	8.3 %	17.9 %	6.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.045 %	0.169 ppb	4.823 ppb	716.100 ppb	1.261 ppb	85.475 %	0.001 ppb	0.017 ppb	92.074 %
Concentration per Run 1	94.398 %	0.309 ppb	5.404 ppb	744.674 ppb	1.332 ppb	83.947 %	0.001 ppb	0.021 ppb	91.191 %
Concentration per Run 2	99.883 %	0.092 ppb	4.821 ppb	703.935 ppb	1.213 ppb	86.060 %	0.003 ppb	0.008 ppb	91.568 %
Concentration per Run 3	99.853 %	0.105 ppb	4.243 ppb	699.691 ppb	1.239 ppb	86.419 %	-0.002 ppb	0.023 ppb	93.464 %
Concentration RSD	3.2 %	72.3 %	12.0 %	3.5 %	4.9 %	1.6 %	358.5 %	48.2 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.351 ppb	107.364 ppb	93.431 %	94.989 %	0.059 ppb	0.070 ppb
Concentration per Run 1	0.351 ppb	110.236 ppb	90.169 %	91.301 %	0.044 ppb	0.069 ppb
Concentration per Run 2	0.357 ppb	106.398 ppb	95.103 %	95.647 %	0.068 ppb	0.073 ppb
Concentration per Run 3	0.345 ppb	105.457 ppb	95.020 %	98.020 %	0.063 ppb	0.068 ppb
Concentration RSD	1.7 %	2.4 %	3.0 %	3.6 %	21.8 %	4.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	133	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-04 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:30:12 PM	Vial	24		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	106.559 %	100.944 %	0.002 ppb	232,436.914 ppb	38,149.692 ppb	33.629 ppb	5,004.425 ppb	125,867.609 ppb	111.232 %
Concentration per Run 1	107.363 %	95.855 %	0.002 ppb	235,172.731 ppb	38,112.936 ppb	34.577 ppb	5,120.862 ppb	124,963.760 ppb	105.638 %
Concentration per Run 2	104.392 %	101.364 %	-0.005 ppb	229,529.590 ppb	38,208.771 ppb	33.224 ppb	4,867.437 ppb	123,637.761 ppb	111.773 %
Concentration per Run 3	107.922 %	105.614 %	0.011 ppb	232,608.422 ppb	38,127.369 ppb	33.088 ppb	5,024.974 ppb	129,001.306 ppb	116.284 %
Concentration RSD	1.8 %	4.8 %	349.3 %	1.2 %	0.1 %	2.4 %	2.6 %	2.2 %	4.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.884 %	0.128 ppb	0.201 ppb	256.887 ppb	72.218 ppb	0.516 ppb	0.995 ppb	0.552 ppb	1.035 ppb
Concentration per Run 1	106.237 %	0.112 ppb	0.223 ppb	248.820 ppb	68.727 ppb	0.492 ppb	0.992 ppb	0.524 ppb	1.019 ppb
Concentration per Run 2	104.653 %	0.125 ppb	0.200 ppb	252.305 ppb	67.874 ppb	0.532 ppb	0.969 ppb	0.545 ppb	0.957 ppb
Concentration per Run 3	100.761 %	0.147 ppb	0.181 ppb	269.535 ppb	80.052 ppb	0.525 ppb	1.025 ppb	0.587 ppb	1.129 ppb
Concentration RSD	2.7 %	13.8 %	10.4 %	4.3 %	9.4 %	4.1 %	2.8 %	5.9 %	8.4 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	101.374 %	0.236 ppb	3.241 ppb	643.553 ppb	1.761 ppb	90.595 %	0.003 ppb	0.025 ppb	97.323 %
Concentration per Run 1	103.704 %	0.206 ppb	2.776 ppb	631.563 ppb	1.640 ppb	91.481 %	0.002 ppb	0.019 ppb	99.991 %
Concentration per Run 2	101.733 %	0.236 ppb	3.298 ppb	633.151 ppb	1.703 ppb	92.093 %	0.000 ppb	0.027 ppb	98.298 %
Concentration per Run 3	98.685 %	0.265 ppb	3.648 ppb	665.946 ppb	1.941 ppb	88.210 %	0.008 ppb	0.030 ppb	93.680 %
Concentration RSD	2.5 %	12.5 %	13.5 %	3.0 %	9.0 %	2.3 %	136.5 %	22.4 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.327 ppb	96.189 ppb	98.316 %	98.765 %	0.047 ppb	0.751 ppb
Concentration per Run 1	0.303 ppb	96.070 ppb	99.096 %	98.670 %	0.029 ppb	0.766 ppb
Concentration per Run 2	0.324 ppb	92.983 ppb	99.741 %	100.472 %	0.051 ppb	0.723 ppb
Concentration per Run 3	0.355 ppb	99.515 ppb	96.109 %	97.152 %	0.062 ppb	0.763 ppb
Concentration RSD	7.9 %	3.4 %	2.0 %	1.7 %	35.0 %	3.3 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	134	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-08 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:34:52 PM	Vial	25		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.630 %	105.194 %	-0.008 ppb	301,154.591 ppb	38,466.398 ppb	3.344 ppb	4,070.678 ppb	153,609.856 ppb	104.196 %
Concentration per Run 1	107.027 %	103.883 %	-0.010 ppb	307,139.229 ppb	38,635.975 ppb	3.431 ppb	4,186.895 ppb	153,455.170 ppb	109.200 %
Concentration per Run 2	102.296 %	100.105 %	-0.007 ppb	311,983.708 ppb	39,774.493 ppb	3.441 ppb	4,083.781 ppb	156,196.712 ppb	103.639 %
Concentration per Run 3	95.566 %	111.595 %	-0.008 ppb	284,340.835 ppb	36,988.726 ppb	3.161 ppb	3,941.358 ppb	151,177.685 ppb	99.749 %
Concentration RSD	5.7 %	5.6 %	23.0 %	4.9 %	3.6 %	4.8 %	3.0 %	1.6 %	4.6 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	103.914 %	0.063 ppb	0.073 ppb	95.440 ppb	18.666 ppb	0.904 ppb	1.266 ppb	0.369 ppb	2.424 ppb
Concentration per Run 1	104.246 %	0.109 ppb	0.060 ppb	94.987 ppb	18.580 ppb	0.927 ppb	1.350 ppb	0.355 ppb	2.525 ppb
Concentration per Run 2	102.549 %	0.040 ppb	0.059 ppb	97.280 ppb	21.297 ppb	0.921 ppb	1.241 ppb	0.325 ppb	2.457 ppb
Concentration per Run 3	104.947 %	0.039 ppb	0.099 ppb	94.052 ppb	16.122 ppb	0.863 ppb	1.207 ppb	0.426 ppb	2.290 ppb
Concentration RSD	1.2 %	63.5 %	31.6 %	1.7 %	13.9 %	3.9 %	5.9 %	14.1 %	5.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.397 %	-0.003 ppb	0.396 ppb	705.168 ppb	1.115 ppb	91.829 %	0.006 ppb	0.019 ppb	98.841 %
Concentration per Run 1	103.046 %	0.130 ppb	0.395 ppb	711.829 ppb	1.164 ppb	92.291 %	0.007 ppb	0.020 ppb	98.474 %
Concentration per Run 2	103.523 %	-0.031 ppb	0.374 ppb	711.514 ppb	1.172 ppb	90.880 %	0.006 ppb	0.025 ppb	97.844 %
Concentration per Run 3	106.622 %	-0.108 ppb	0.419 ppb	692.162 ppb	1.009 ppb	92.314 %	0.006 ppb	0.012 ppb	100.204 %
Concentration RSD	1.9 %	4,326.0 %	5.7 %	1.6 %	8.2 %	0.9 %	4.7 %	32.9 %	1.2 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.279 ppb	66.237 ppb	100.661 %	102.213 %	0.052 ppb	0.014 ppb
Concentration per Run 1	0.269 ppb	66.217 ppb	100.174 %	101.371 %	0.034 ppb	0.012 ppb
Concentration per Run 2	0.288 ppb	67.214 ppb	99.735 %	102.751 %	0.059 ppb	0.010 ppb
Concentration per Run 3	0.280 ppb	65.280 ppb	102.074 %	102.519 %	0.062 ppb	0.019 ppb
Concentration RSD	3.4 %	1.5 %	1.2 %	0.7 %	30.1 %	33.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	135	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-09 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:39:31 PM	Vial	26		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	101.855 %	108.447 %	-0.002 ppb	296,711.405 ppb	33,862.403 ppb	2.768 ppb	4,248.901 ppb	140,501.105 ppb	105.399 %
Concentration per Run 1	106.995 %	106.716 %	-0.012 ppb	301,867.384 ppb	33,925.696 ppb	2.647 ppb	4,410.452 ppb	140,824.085 ppb	108.926 %
Concentration per Run 2	100.981 %	111.280 %	0.005 ppb	294,646.145 ppb	33,613.083 ppb	2.705 ppb	4,300.322 ppb	143,742.426 ppb	104.137 %
Concentration per Run 3	97.590 %	107.345 %	0.000 ppb	293,620.684 ppb	34,048.431 ppb	2.952 ppb	4,035.930 ppb	136,936.803 ppb	103.136 %
Concentration RSD	4.7 %	2.3 %	387.1 %	1.5 %	0.7 %	5.9 %	4.5 %	2.4 %	2.9 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.119 %	0.091 ppb	0.031 ppb	850.071 ppb	39.618 ppb	0.121 ppb	0.246 ppb	0.238 ppb	0.549 ppb
Concentration per Run 1	101.983 %	0.090 ppb	0.038 ppb	849.807 ppb	45.353 ppb	0.104 ppb	0.263 ppb	0.217 ppb	0.554 ppb
Concentration per Run 2	100.988 %	0.139 ppb	0.032 ppb	865.394 ppb	36.623 ppb	0.133 ppb	0.275 ppb	0.297 ppb	0.549 ppb
Concentration per Run 3	103.386 %	0.043 ppb	0.023 ppb	835.012 ppb	36.879 ppb	0.125 ppb	0.199 ppb	0.201 ppb	0.544 ppb
Concentration RSD	1.2 %	52.4 %	24.2 %	1.8 %	12.5 %	12.4 %	16.6 %	21.6 %	1.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.852 %	0.405 ppb	0.232 ppb	714.308 ppb	1.352 ppb	89.986 %	0.003 ppb	0.000 ppb	96.878 %
Concentration per Run 1	101.675 %	0.323 ppb	0.175 ppb	709.789 ppb	1.276 ppb	90.855 %	0.003 ppb	-0.001 ppb	96.875 %
Concentration per Run 2	98.644 %	0.430 ppb	0.332 ppb	719.364 ppb	1.443 ppb	90.109 %	0.005 ppb	-0.001 ppb	95.578 %
Concentration per Run 3	102.238 %	0.463 ppb	0.191 ppb	713.771 ppb	1.338 ppb	88.992 %	0.002 ppb	0.002 ppb	98.179 %
Concentration RSD	1.9 %	18.1 %	37.1 %	0.7 %	6.3 %	1.0 %	42.3 %	4,454.7 %	1.3 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.261 ppb	124.958 ppb	99.305 %	100.240 %	0.024 ppb	0.013 ppb
Concentration per Run 1	0.263 ppb	124.115 ppb	98.762 %	97.728 %	0.014 ppb	0.010 ppb
Concentration per Run 2	0.272 ppb	128.556 ppb	99.001 %	99.842 %	0.031 ppb	0.014 ppb
Concentration per Run 3	0.248 ppb	122.202 ppb	100.153 %	103.150 %	0.028 ppb	0.014 ppb
Concentration RSD	4.6 %	2.6 %	0.7 %	2.7 %	36.5 %	18.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	136	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-10 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:44:11 PM	Vial	27		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	103.205 %	100.735 %	0.005 ppb	283,694.213 ppb	34,386.416 ppb	6.736 ppb	4,718.151 ppb	158,111.492 ppb	103.617 %
Concentration per Run 1	108.794 %	94.911 %	0.006 ppb	300,389.365 ppb	36,155.316 ppb	7.652 ppb	4,839.650 ppb	160,428.667 ppb	104.912 %
Concentration per Run 2	101.883 %	106.558 %	0.005 ppb	270,235.633 ppb	33,284.977 ppb	5.966 ppb	4,727.268 ppb	159,104.556 ppb	102.364 %
Concentration per Run 3	98.938 %	100.735 %	0.004 ppb	280,457.640 ppb	33,718.955 ppb	6.589 ppb	4,587.535 ppb	154,801.253 ppb	103.576 %
Concentration RSD	4.9 %	5.8 %	27.4 %	5.4 %	4.5 %	12.7 %	2.7 %	1.9 %	1.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	96.674 %	0.171 ppb	0.611 ppb	7.391 ppb	19.254 ppb	0.032 ppb	2.559 ppb	0.517 ppb	2.607 ppb
Concentration per Run 1	99.291 %	0.286 ppb	0.589 ppb	7.485 ppb	18.995 ppb	0.035 ppb	2.789 ppb	0.523 ppb	2.687 ppb
Concentration per Run 2	94.449 %	0.111 ppb	0.641 ppb	7.183 ppb	18.461 ppb	0.030 ppb	2.585 ppb	0.494 ppb	2.684 ppb
Concentration per Run 3	96.282 %	0.115 ppb	0.602 ppb	7.505 ppb	20.307 ppb	0.030 ppb	2.302 ppb	0.534 ppb	2.451 ppb
Concentration RSD	2.5 %	58.6 %	4.5 %	2.4 %	4.9 %	8.8 %	9.6 %	4.0 %	5.2 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.958 %	0.016 ppb	2.296 ppb	689.520 ppb	0.655 ppb	86.747 %	0.008 ppb	0.049 ppb	92.797 %
Concentration per Run 1	100.080 %	0.066 ppb	2.622 ppb	702.482 ppb	0.666 ppb	86.042 %	0.008 ppb	0.048 ppb	94.339 %
Concentration per Run 2	99.390 %	0.033 ppb	2.159 ppb	685.011 ppb	0.580 ppb	87.477 %	0.011 ppb	0.049 ppb	91.074 %
Concentration per Run 3	100.405 %	-0.051 ppb	2.108 ppb	681.068 ppb	0.719 ppb	86.722 %	0.004 ppb	0.050 ppb	92.978 %
Concentration RSD	0.5 %	382.7 %	12.3 %	1.7 %	10.7 %	0.8 %	44.8 %	1.8 %	1.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.424 ppb	121.035 ppb	95.207 %	96.933 %	0.030 ppb	0.051 ppb
Concentration per Run 1	0.405 ppb	122.877 ppb	92.562 %	95.646 %	0.020 ppb	0.053 ppb
Concentration per Run 2	0.431 ppb	120.685 ppb	96.221 %	96.643 %	0.036 ppb	0.055 ppb
Concentration per Run 3	0.435 ppb	119.543 ppb	96.839 %	98.511 %	0.034 ppb	0.044 ppb
Concentration RSD	3.8 %	1.4 %	2.4 %	1.5 %	28.7 %	11.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	137	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418369-11 6020SL	Rack	2		
Analysis started at:	4/10/2024 8:48:50 PM	Vial	28		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	107.546 %	99.738 %	-0.001 ppb	313,627.532 ppb	35,944.823 ppb	4.264 ppb	4,358.332 ppb	143,810.572 ppb	109.928 %
Concentration per Run 1	113.030 %	97.429 %	0.011 ppb	315,349.895 ppb	35,694.178 ppb	4.197 ppb	4,334.478 ppb	143,350.719 ppb	112.879 %
Concentration per Run 2	107.175 %	98.059 %	-0.009 ppb	318,913.135 ppb	36,795.561 ppb	4.559 ppb	4,281.599 ppb	142,900.550 ppb	108.595 %
Concentration per Run 3	102.434 %	103.725 %	-0.004 ppb	306,619.566 ppb	35,344.730 ppb	4.034 ppb	4,458.921 ppb	145,180.448 ppb	108.310 %
Concentration RSD	4.9 %	3.5 %	1,887.3 %	2.0 %	2.1 %	6.3 %	2.1 %	0.8 %	2.3 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	99.539 %	0.049 ppb	0.056 ppb	845.586 ppb	232.404 ppb	0.099 ppb	0.253 ppb	0.225 ppb	0.969 ppb
Concentration per Run 1	101.214 %	0.040 ppb	0.057 ppb	830.112 ppb	232.088 ppb	0.107 ppb	0.238 ppb	0.225 ppb	0.987 ppb
Concentration per Run 2	98.046 %	0.079 ppb	0.032 ppb	845.799 ppb	234.961 ppb	0.092 ppb	0.298 ppb	0.208 ppb	0.928 ppb
Concentration per Run 3	99.358 %	0.026 ppb	0.079 ppb	860.848 ppb	230.164 ppb	0.099 ppb	0.224 ppb	0.243 ppb	0.991 ppb
Concentration RSD	1.6 %	56.4 %	41.6 %	1.8 %	1.0 %	7.4 %	15.6 %	7.8 %	3.6 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	98.113 %	0.390 ppb	0.097 ppb	737.631 ppb	1.231 ppb	87.115 %	0.003 ppb	0.002 ppb	95.817 %
Concentration per Run 1	98.196 %	0.531 ppb	0.014 ppb	740.313 ppb	1.226 ppb	86.898 %	0.004 ppb	0.001 ppb	96.410 %
Concentration per Run 2	97.164 %	0.424 ppb	0.375 ppb	738.630 ppb	1.202 ppb	86.069 %	0.002 ppb	0.002 ppb	94.077 %
Concentration per Run 3	98.980 %	0.215 ppb	-0.099 ppb	733.950 ppb	1.265 ppb	88.377 %	0.002 ppb	0.005 ppb	96.963 %
Concentration RSD	0.9 %	41.3 %	255.5 %	0.4 %	2.6 %	1.3 %	28.9 %	88.1 %	1.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.431 ppb	124.700 ppb	97.237 %	99.076 %	0.016 ppb	0.035 ppb
Concentration per Run 1	0.437 ppb	122.409 ppb	95.649 %	98.950 %	0.007 ppb	0.034 ppb
Concentration per Run 2	0.414 ppb	128.234 ppb	96.419 %	96.892 %	0.019 ppb	0.035 ppb
Concentration per Run 3	0.442 ppb	123.458 ppb	99.644 %	101.386 %	0.024 ppb	0.036 ppb
Concentration RSD	3.5 %	2.5 %	2.2 %	2.3 %	53.8 %	3.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	138	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 8:53:30 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	111.784 %	95.278 %	57.984 ppb	6,154.652 ppb	5,963.000 ppb	61.945 ppb	5,847.448 ppb	5,990.784 ppb	113.235 %
Concentration per Run 1	115.169 %	97.744 %	57.415 ppb	6,013.769 ppb	5,749.191 ppb	60.227 ppb	5,745.432 ppb	5,744.512 ppb	114.766 %
Concentration per Run 2	111.790 %	93.652 %	57.923 ppb	6,310.001 ppb	6,184.694 ppb	61.855 ppb	5,856.654 ppb	6,060.175 ppb	113.335 %
Concentration per Run 3	108.393 %	94.439 %	58.613 ppb	6,140.188 ppb	5,955.114 ppb	63.751 ppb	5,940.258 ppb	6,167.666 ppb	111.605 %
Recovery Percentage 1			96.640 %	102.578 %	99.383 %	103.241 %	97.457 %	99.846 %	
Concentration RSD	3.0 %	2.3 %	1.0 %	2.4 %	3.7 %	2.8 %	1.7 %	3.7 %	1.4 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	110.650 %	62.387 ppb	61.766 ppb	62.725 ppb	6,136.608 ppb	60.306 ppb	59.591 ppb	59.732 ppb	59.077 ppb
Concentration per Run 1	115.107 %	61.166 ppb	60.564 ppb	60.845 ppb	6,065.307 ppb	60.450 ppb	59.402 ppb	60.785 ppb	58.540 ppb
Concentration per Run 2	110.265 %	62.201 ppb	61.344 ppb	63.093 ppb	6,074.463 ppb	59.186 ppb	58.295 ppb	57.584 ppb	58.233 ppb
Concentration per Run 3	106.577 %	63.794 ppb	63.389 ppb	64.236 ppb	6,270.053 ppb	61.282 ppb	61.078 ppb	60.827 ppb	60.460 ppb
Recovery Percentage 1		103.978 %	102.943 %	104.541 %	102.277 %	100.510 %	99.319 %	99.554 %	98.462 %
Concentration RSD	3.9 %	2.1 %	2.4 %	2.8 %	1.9 %	1.8 %	2.4 %	3.1 %	2.0 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	104.178 %	58.879 ppb	60.362 ppb	59.847 ppb	58.552 ppb	97.345 %	57.839 ppb	57.374 ppb	101.753 %
Concentration per Run 1	104.883 %	59.221 ppb	59.723 ppb	59.438 ppb	56.336 ppb	98.658 %	57.116 ppb	57.760 ppb	100.521 %
Concentration per Run 2	106.779 %	57.147 ppb	59.219 ppb	58.885 ppb	57.221 ppb	97.990 %	57.913 ppb	56.511 ppb	103.952 %
Concentration per Run 3	100.873 %	60.269 ppb	62.145 ppb	61.218 ppb	62.100 ppb	95.388 %	58.488 ppb	57.850 ppb	100.785 %
Recovery Percentage 1		98.131 %	100.603 %	99.745 %	97.587 %		96.399 %	95.623 %	
Concentration RSD	2.9 %	2.7 %	2.6 %	2.0 %	5.3 %	1.8 %	1.2 %	1.3 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	63.859 ppb	61.948 ppb	102.033 %	103.842 %	56.992 ppb	57.161 ppb
Concentration per Run 1	64.897 ppb	61.201 ppb	102.851 %	103.783 %	53.758 ppb	57.172 ppb
Concentration per Run 2	61.918 ppb	61.461 ppb	103.206 %	105.753 %	55.468 ppb	55.265 ppb
Concentration per Run 3	64.762 ppb	63.182 ppb	100.043 %	101.990 %	61.751 ppb	59.047 ppb
Recovery Percentage 1	106.431 %	103.246 %			94.987 %	95.269 %
Concentration RSD	2.6 %	1.7 %	1.7 %	1.8 %	7.4 %	3.3 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	139	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 8:58:12 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	108.966 %	96.904 %	0.014 ppb	44.804 ppb	4.175 ppb	-0.337 ppb	-15.698 ppb	4.083 ppb	106.532 %
Concentration per Run 1	114.346 %	94.753 %	0.021 ppb	52.341 ppb	4.462 ppb	-0.337 ppb	-6.273 ppb	2.838 ppb	109.479 %
Concentration per Run 2	108.083 %	91.133 %	0.009 ppb	49.882 ppb	4.687 ppb	-0.495 ppb	-19.217 ppb	2.556 ppb	105.976 %
Concentration per Run 3	104.467 %	104.827 %	0.012 ppb	32.188 ppb	3.376 ppb	-0.179 ppb	-21.605 ppb	6.856 ppb	104.142 %
Recovery Percentage 1			2.770 %	44.804 %	5.964 %	-3.370 %	-15.698 %	4.083 %	
Concentration RSD	4.6 %	7.3 %	43.0 %	24.5 %	16.8 %	46.9 %	52.5 %	58.9 %	2.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.363 %	0.058 ppb	0.005 ppb	0.172 ppb	10.901 ppb	0.006 ppb	-0.004 ppb	0.038 ppb	-0.008 ppb
Concentration per Run 1	97.616 %	0.050 ppb	0.008 ppb	0.149 ppb	11.493 ppb	0.007 ppb	-0.010 ppb	0.000 ppb	0.023 ppb
Concentration per Run 2	97.073 %	0.059 ppb	0.005 ppb	0.178 ppb	10.458 ppb	0.003 ppb	0.012 ppb	0.064 ppb	-0.010 ppb
Concentration per Run 3	100.399 %	0.065 ppb	0.003 ppb	0.188 ppb	10.753 ppb	0.008 ppb	-0.016 ppb	0.049 ppb	-0.038 ppb
Recovery Percentage 1		1.160 %	0.537 %	17.194 %	21.802 %	1.158 %	-0.225 %	3.768 %	-0.167 %
Concentration RSD	1.8 %	13.0 %	45.7 %	11.7 %	4.9 %	49.7 %	315.8 %	89.1 %	367.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.688 %	-0.136 ppb	0.123 ppb	0.074 ppb	1.074 ppb	95.330 %	0.005 ppb	0.010 ppb	100.381 %
Concentration per Run 1	98.337 %	-0.121 ppb	0.176 ppb	0.083 ppb	0.997 ppb	95.798 %	0.010 ppb	0.010 ppb	100.119 %
Concentration per Run 2	100.415 %	-0.127 ppb	0.181 ppb	0.069 ppb	1.097 ppb	93.537 %	0.002 ppb	0.014 ppb	97.973 %
Concentration per Run 3	100.313 %	-0.161 ppb	0.012 ppb	0.069 ppb	1.128 ppb	96.656 %	0.004 ppb	0.007 ppb	103.050 %
Recovery Percentage 1		-27.292 %	2.461 %	0.738 %	53.694 %		1.313 %	4.994 %	
Concentration RSD	1.2 %	15.8 %	78.5 %	11.3 %	6.4 %	1.7 %	82.3 %	35.2 %	2.5 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.112 ppb	0.014 ppb	97.941 %	100.932 %	0.496 ppb	0.019 ppb
Concentration per Run 1	0.108 ppb	0.024 ppb	97.392 %	99.757 %	0.541 ppb	0.019 ppb
Concentration per Run 2	0.103 ppb	0.003 ppb	97.357 %	99.865 %	0.515 ppb	0.019 ppb
Concentration per Run 3	0.125 ppb	0.015 ppb	99.075 %	103.174 %	0.432 ppb	0.018 ppb
Recovery Percentage 1	2.806 %	2.808 %			49.600 %	1.850 %
Concentration RSD	10.1 %	75.2 %	1.0 %	1.9 %	11.4 %	4.5 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	140	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418621-01 6020SL	Rack	2		
Analysis started at:	4/10/2024 9:02:55 PM	Vial	29		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	108.647 %	100.525 %	0.003 ppb	354,235.364 ppb	54,647.796 ppb	8.022 ppb	10,441.177 ppb	134,604.581 ppb	108.565 %
Concentration per Run 1	114.331 %	101.364 %	0.001 ppb	354,477.692 ppb	54,607.029 ppb	7.800 ppb	10,972.705 ppb	138,154.786 ppb	112.517 %
Concentration per Run 2	107.132 %	99.161 %	0.000 ppb	358,692.335 ppb	55,157.074 ppb	8.544 ppb	10,182.598 ppb	133,944.636 ppb	107.031 %
Concentration per Run 3	104.480 %	101.049 %	0.009 ppb	349,536.064 ppb	54,179.286 ppb	7.722 ppb	10,168.229 ppb	131,714.322 ppb	106.147 %
Concentration RSD	4.7 %	1.2 %	150.0 %	1.3 %	0.9 %	5.7 %	4.4 %	2.4 %	3.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	101.365 %	0.295 ppb	0.318 ppb	66.604 ppb	1,071.437 ppb	0.141 ppb	0.641 ppb	0.595 ppb	1.539 ppb
Concentration per Run 1	99.653 %	0.342 ppb	0.376 ppb	66.976 ppb	1,082.006 ppb	0.157 ppb	0.661 ppb	0.654 ppb	1.594 ppb
Concentration per Run 2	100.286 %	0.228 ppb	0.293 ppb	66.673 ppb	1,043.066 ppb	0.128 ppb	0.657 ppb	0.551 ppb	1.512 ppb
Concentration per Run 3	104.155 %	0.316 ppb	0.285 ppb	66.164 ppb	1,089.239 ppb	0.138 ppb	0.606 ppb	0.581 ppb	1.511 ppb
Concentration RSD	2.4 %	20.1 %	15.7 %	0.6 %	2.3 %	10.6 %	4.8 %	8.9 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.740 %	1.745 ppb	0.008 ppb	7,483.294 ppb	8.833 ppb	87.263 %	0.002 ppb	0.007 ppb	95.559 %
Concentration per Run 1	96.854 %	1.765 ppb	0.065 ppb	7,575.909 ppb	8.364 ppb	87.678 %	0.005 ppb	0.007 ppb	93.924 %
Concentration per Run 2	101.470 %	1.677 ppb	-0.174 ppb	7,365.388 ppb	8.929 ppb	86.670 %	0.001 ppb	0.005 ppb	97.863 %
Concentration per Run 3	100.895 %	1.794 ppb	0.133 ppb	7,508.585 ppb	9.204 ppb	87.442 %	-0.001 ppb	0.009 ppb	94.890 %
Concentration RSD	2.5 %	3.5 %	2,021.4 %	1.4 %	4.8 %	0.6 %	149.6 %	31.2 %	2.1 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.154 ppb	45.677 ppb	96.734 %	99.051 %	0.120 ppb	0.093 ppb
Concentration per Run 1	0.158 ppb	45.881 ppb	96.467 %	98.503 %	0.088 ppb	0.095 ppb
Concentration per Run 2	0.142 ppb	44.160 ppb	96.670 %	100.670 %	0.137 ppb	0.088 ppb
Concentration per Run 3	0.161 ppb	46.991 ppb	97.065 %	97.982 %	0.136 ppb	0.095 ppb
Concentration RSD	6.7 %	3.1 %	0.3 %	1.4 %	23.4 %	4.6 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	141	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418621-03 6020SL	Rack	2		
Analysis started at:	4/10/2024 9:07:35 PM	Vial	30		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	113.634 %	100.577 %	0.004 ppb	67,356.701 ppb	81,350.145 ppb	6.252 ppb	4,649.741 ppb	54,416.229 ppb	109.936 %
Concentration per Run 1	118.390 %	107.660 %	0.007 ppb	65,726.623 ppb	79,544.048 ppb	6.273 ppb	4,669.763 ppb	54,506.232 ppb	111.771 %
Concentration per Run 2	112.939 %	90.818 %	0.012 ppb	69,675.459 ppb	82,730.221 ppb	6.167 ppb	4,621.441 ppb	55,397.491 ppb	109.191 %
Concentration per Run 3	109.572 %	103.253 %	-0.008 ppb	66,668.022 ppb	81,776.166 ppb	6.317 ppb	4,658.019 ppb	53,344.963 ppb	108.845 %
Concentration RSD	3.9 %	8.7 %	265.3 %	3.1 %	2.0 %	1.2 %	0.5 %	1.9 %	1.5 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.363 %	0.858 ppb	0.355 ppb	47.307 ppb	178.150 ppb	0.381 ppb	0.479 ppb	0.400 ppb	1.877 ppb
Concentration per Run 1	98.612 %	0.965 ppb	0.365 ppb	48.742 ppb	170.226 ppb	0.389 ppb	0.479 ppb	0.471 ppb	1.968 ppb
Concentration per Run 2	97.910 %	0.850 ppb	0.373 ppb	46.001 ppb	185.553 ppb	0.395 ppb	0.458 ppb	0.393 ppb	1.877 ppb
Concentration per Run 3	98.566 %	0.760 ppb	0.326 ppb	47.178 ppb	178.671 ppb	0.358 ppb	0.500 ppb	0.337 ppb	1.787 ppb
Concentration RSD	0.4 %	12.0 %	7.1 %	2.9 %	4.3 %	5.3 %	4.4 %	16.9 %	4.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	105.057 %	5.407 ppb	0.316 ppb	16,869.354 ppb	10.358 ppb	90.600 %	0.003 ppb	0.007 ppb	95.336 %
Concentration per Run 1	101.588 %	5.821 ppb	0.329 ppb	17,333.887 ppb	10.359 ppb	89.973 %	0.000 ppb	0.009 ppb	93.668 %
Concentration per Run 2	106.260 %	5.209 ppb	0.353 ppb	16,567.980 ppb	10.273 ppb	91.025 %	0.003 ppb	0.002 ppb	95.401 %
Concentration per Run 3	107.324 %	5.190 ppb	0.265 ppb	16,706.196 ppb	10.443 ppb	90.802 %	0.005 ppb	0.010 ppb	96.940 %
Concentration RSD	2.9 %	6.6 %	14.5 %	2.4 %	0.8 %	0.6 %	85.4 %	63.6 %	1.7 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.384 ppb	101.604 ppb	95.134 %	96.987 %	0.079 ppb	0.029 ppb
Concentration per Run 1	0.401 ppb	104.149 ppb	92.439 %	93.228 %	0.059 ppb	0.029 ppb
Concentration per Run 2	0.363 ppb	99.351 ppb	96.429 %	99.372 %	0.087 ppb	0.027 ppb
Concentration per Run 3	0.388 ppb	101.311 ppb	96.533 %	98.360 %	0.092 ppb	0.030 ppb
Concentration RSD	5.1 %	2.4 %	2.5 %	3.4 %	22.0 %	5.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	142	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418782-01 6020SL	Rack	2		
Analysis started at:	4/10/2024 9:12:14 PM	Vial	31		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	104.696 %	93.494 %	-0.001 ppb	93,191.479 ppb	47,095.783 ppb	14.912 ppb	14,061.663 ppb	85,197.625 ppb	105.154 %
Concentration per Run 1	109.331 %	91.448 %	-0.005 ppb	97,033.609 ppb	49,342.601 ppb	15.551 ppb	14,720.958 ppb	87,832.923 ppb	107.238 %
Concentration per Run 2	103.618 %	98.688 %	0.001 ppb	90,032.734 ppb	45,316.415 ppb	13.926 ppb	13,785.798 ppb	84,652.677 ppb	104.672 %
Concentration per Run 3	101.138 %	90.346 %	0.000 ppb	92,508.093 ppb	46,628.333 ppb	15.259 ppb	13,678.232 ppb	83,107.275 ppb	103.551 %
Concentration RSD	4.0 %	4.8 %	234.8 %	3.8 %	4.4 %	5.8 %	4.1 %	2.8 %	1.8 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	95.452 %	1.363 ppb	0.308 ppb	7,032.208 ppb	2,965.462 ppb	2.769 ppb	4.459 ppb	0.507 ppb	2.610 ppb
Concentration per Run 1	95.331 %	1.420 ppb	0.321 ppb	7,282.029 ppb	3,089.786 ppb	2.921 ppb	4.827 ppb	0.518 ppb	2.822 ppb
Concentration per Run 2	95.557 %	1.311 ppb	0.317 ppb	6,912.372 ppb	2,907.838 ppb	2.666 ppb	4.193 ppb	0.503 ppb	2.538 ppb
Concentration per Run 3	95.467 %	1.358 ppb	0.285 ppb	6,902.224 ppb	2,898.762 ppb	2.719 ppb	4.359 ppb	0.498 ppb	2.470 ppb
Concentration RSD	0.1 %	4.0 %	6.5 %	3.1 %	3.6 %	4.9 %	7.4 %	2.1 %	7.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	99.203 %	6.146 ppb	0.156 ppb	314.328 ppb	5.593 ppb	90.754 %	0.005 ppb	0.005 ppb	96.207 %
Concentration per Run 1	96.713 %	6.613 ppb	0.165 ppb	325.431 ppb	5.536 ppb	90.927 %	0.002 ppb	0.009 ppb	95.737 %
Concentration per Run 2	100.277 %	6.021 ppb	0.073 ppb	310.591 ppb	5.583 ppb	90.426 %	0.005 ppb	0.005 ppb	96.911 %
Concentration per Run 3	100.619 %	5.803 ppb	0.229 ppb	306.963 ppb	5.661 ppb	90.908 %	0.007 ppb	0.002 ppb	95.974 %
Concentration RSD	2.2 %	6.8 %	50.2 %	3.1 %	1.1 %	0.3 %	52.0 %	68.3 %	0.6 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.479 ppb	92.366 ppb	98.746 %	102.165 %	0.046 ppb	1.504 ppb
Concentration per Run 1	0.465 ppb	95.003 ppb	96.776 %	99.278 %	0.029 ppb	1.557 ppb
Concentration per Run 2	0.494 ppb	91.007 ppb	100.242 %	104.341 %	0.051 ppb	1.456 ppb
Concentration per Run 3	0.477 ppb	91.087 ppb	99.218 %	102.875 %	0.057 ppb	1.501 ppb
Concentration RSD	3.0 %	2.5 %	1.8 %	2.5 %	31.5 %	3.4 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	143	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	L2418782-02 6020SL	Rack	2		
Analysis started at:	4/10/2024 9:16:54 PM	Vial	32		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	109.178 %	97.534 %	0.001 ppb	21,747.564 ppb	5,205.089 ppb	16.487 ppb	6,398.989 ppb	38,228.099 ppb	103.257 %
Concentration per Run 1	112.888 %	100.892 %	-0.003 ppb	21,759.273 ppb	5,237.783 ppb	16.422 ppb	6,430.520 ppb	38,045.874 ppb	104.879 %
Concentration per Run 2	107.308 %	99.948 %	0.005 ppb	21,769.119 ppb	5,170.628 ppb	16.687 ppb	6,441.893 ppb	39,191.754 ppb	101.428 %
Concentration per Run 3	107.338 %	91.763 %	0.000 ppb	21,714.299 ppb	5,206.856 ppb	16.354 ppb	6,324.555 ppb	37,446.670 ppb	103.463 %
Concentration RSD	2.9 %	5.1 %	708.1 %	0.1 %	0.6 %	1.1 %	1.0 %	2.3 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	98.061 %	3.165 ppb	7.324 ppb	4.414 ppb	24.901 ppb	0.229 ppb	0.828 ppb	4.752 ppb	3.047 ppb
Concentration per Run 1	98.816 %	3.246 ppb	7.136 ppb	4.285 ppb	27.732 ppb	0.244 ppb	0.748 ppb	4.744 ppb	3.052 ppb
Concentration per Run 2	95.128 %	3.205 ppb	7.562 ppb	4.521 ppb	22.691 ppb	0.204 ppb	0.924 ppb	4.924 ppb	3.085 ppb
Concentration per Run 3	100.241 %	3.045 ppb	7.274 ppb	4.437 ppb	24.279 ppb	0.239 ppb	0.813 ppb	4.589 ppb	3.003 ppb
Concentration RSD	2.7 %	3.4 %	3.0 %	2.7 %	10.4 %	9.4 %	10.8 %	3.5 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	100.544 %	3.035 ppb	2.426 ppb	159.717 ppb	4.474 ppb	92.709 %	0.006 ppb	0.037 ppb	99.436 %
Concentration per Run 1	101.146 %	3.165 ppb	2.648 ppb	157.315 ppb	4.379 ppb	95.511 %	0.005 ppb	0.042 ppb	101.655 %
Concentration per Run 2	98.730 %	3.123 ppb	2.277 ppb	162.409 ppb	4.506 ppb	91.884 %	0.007 ppb	0.039 ppb	98.879 %
Concentration per Run 3	101.756 %	2.815 ppb	2.354 ppb	159.426 ppb	4.537 ppb	90.733 %	0.005 ppb	0.030 ppb	97.772 %
Concentration RSD	1.6 %	6.3 %	8.1 %	1.6 %	1.9 %	2.7 %	25.2 %	16.5 %	2.0 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	2.019 ppb	20.446 ppb	98.020 %	101.637 %	0.039 ppb	4.616 ppb
Concentration per Run 1	1.948 ppb	20.032 ppb	100.358 %	102.386 %	0.022 ppb	4.582 ppb
Concentration per Run 2	2.040 ppb	20.497 ppb	97.147 %	101.752 %	0.047 ppb	4.586 ppb
Concentration per Run 3	2.070 ppb	20.808 ppb	96.555 %	100.774 %	0.049 ppb	4.679 ppb
Concentration RSD	3.2 %	1.9 %	2.1 %	0.8 %	38.5 %	1.2 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	144	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 9:21:33 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	105.654 %	94.753 %	59.404 ppb	6,116.334 ppb	5,958.770 ppb	61.670 ppb	6,083.748 ppb	6,230.780 ppb	105.738 %
Concentration per Run 1	110.645 %	95.540 %	58.026 ppb	6,155.002 ppb	5,949.014 ppb	59.611 ppb	6,182.924 ppb	6,372.116 ppb	107.294 %
Concentration per Run 2	106.443 %	94.753 %	59.878 ppb	6,219.769 ppb	6,149.806 ppb	62.718 ppb	6,107.859 ppb	6,255.587 ppb	106.829 %
Concentration per Run 3	99.873 %	93.966 %	60.308 ppb	5,974.230 ppb	5,777.489 ppb	62.680 ppb	5,960.462 ppb	6,064.635 ppb	103.091 %
Recovery Percentage 1			99.007 %	101.939 %	99.313 %	102.783 %	101.396 %	103.846 %	
Concentration RSD	5.1 %	0.8 %	2.0 %	2.1 %	3.1 %	2.9 %	1.9 %	2.5 %	2.2 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	102.255 %	63.996 ppb	64.288 ppb	64.177 ppb	6,339.431 ppb	62.627 ppb	62.514 ppb	61.426 ppb	61.554 ppb
Concentration per Run 1	105.807 %	64.695 ppb	64.639 ppb	64.960 ppb	6,420.358 ppb	64.488 ppb	63.090 ppb	63.158 ppb	63.760 ppb
Concentration per Run 2	100.965 %	64.510 ppb	64.735 ppb	64.221 ppb	6,409.882 ppb	62.015 ppb	62.442 ppb	60.913 ppb	60.439 ppb
Concentration per Run 3	99.992 %	62.784 ppb	63.489 ppb	63.350 ppb	6,188.051 ppb	61.377 ppb	62.010 ppb	60.209 ppb	60.462 ppb
Recovery Percentage 1		106.661 %	107.146 %	106.962 %	105.657 %	104.378 %	104.190 %	102.377 %	102.590 %
Concentration RSD	3.0 %	1.6 %	1.1 %	1.3 %	2.1 %	2.6 %	0.9 %	2.5 %	3.1 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	96.742 %	60.041 ppb	62.160 ppb	61.950 ppb	60.537 ppb	93.112 %	59.238 ppb	59.607 ppb	97.734 %
Concentration per Run 1	94.488 %	63.674 ppb	65.484 ppb	64.192 ppb	61.522 ppb	93.611 %	61.547 ppb	61.510 ppb	97.345 %
Concentration per Run 2	97.999 %	59.018 ppb	60.712 ppb	61.435 ppb	59.416 ppb	93.318 %	58.110 ppb	59.279 ppb	99.787 %
Concentration per Run 3	97.739 %	57.432 ppb	60.283 ppb	60.224 ppb	60.674 ppb	92.408 %	58.056 ppb	58.031 ppb	96.068 %
Recovery Percentage 1		100.069 %	103.600 %	103.250 %	100.896 %		98.729 %	99.344 %	
Concentration RSD	2.0 %	5.4 %	4.6 %	3.3 %	1.7 %	0.7 %	3.4 %	3.0 %	1.9 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	**65.750 ppb**	62.499 ppb	98.337 %	101.685 %	56.980 ppb	57.372 ppb
Concentration per Run 1	66.808 ppb	63.020 ppb	98.248 %	101.555 %	54.833 ppb	58.829 ppb
Concentration per Run 2	64.956 ppb	61.987 ppb	98.436 %	101.555 %	58.667 ppb	57.817 ppb
Concentration per Run 3	65.486 ppb	62.492 ppb	98.328 %	101.945 %	57.439 ppb	55.471 ppb
Recovery Percentage 1	109.583 %	104.165 %			94.966 %	95.621 %
Concentration RSD	1.5 %	0.8 %	0.1 %	0.2 %	3.4 %	3.0 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	145	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 9:26:16 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	99.667 %	90.556 %	0.011 ppb	21.802 ppb	3.166 ppb	-0.404 ppb	-8.654 ppb	2.348 ppb	96.144 %
Concentration per Run 1	101.171 %	89.402 %	0.013 ppb	22.809 ppb	3.570 ppb	-0.340 ppb	-7.488 ppb	1.089 ppb	94.234 %
Concentration per Run 2	100.073 %	90.818 %	0.018 ppb	18.366 ppb	3.632 ppb	-0.438 ppb	-7.308 ppb	-1.474 ppb	97.391 %
Concentration per Run 3	97.758 %	91.448 %	0.002 ppb	24.230 ppb	2.297 ppb	-0.433 ppb	-11.165 ppb	7.429 ppb	96.807 %
Recovery Percentage 1			2.215 %	21.802 %	4.523 %	-4.036 %	-8.654 %	2.348 %	
Concentration RSD	1.7 %	1.2 %	73.0 %	14.0 %	23.8 %	13.7 %	25.2 %	195.2 %	1.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	88.778 %	0.016 ppb	0.031 ppb	0.205 ppb	8.899 ppb	0.004 ppb	0.001 ppb	0.027 ppb	-0.011 ppb
Concentration per Run 1	89.607 %	0.036 ppb	0.045 ppb	0.220 ppb	9.472 ppb	0.005 ppb	0.005 ppb	0.034 ppb	0.000 ppb
Concentration per Run 2	89.902 %	0.039 ppb	0.020 ppb	0.164 ppb	9.316 ppb	-0.004 ppb	-0.002 ppb	0.047 ppb	-0.021 ppb
Concentration per Run 3	86.825 %	-0.029 ppb	0.026 ppb	0.231 ppb	7.910 ppb	0.012 ppb	0.000 ppb	-0.001 ppb	-0.012 ppb
Recovery Percentage 1		0.311 %	3.055 %	20.507 %	17.799 %	0.843 %	0.053 %	2.694 %	-0.216 %
Concentration RSD	1.9 %	248.2 %	43.1 %	17.7 %	9.7 %	191.2 %	326.1 %	92.6 %	100.7 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	91.566 %	-0.098 ppb	0.213 ppb	0.276 ppb	1.050 ppb	87.495 %	0.008 ppb	0.011 ppb	92.398 %
Concentration per Run 1	90.823 %	-0.074 ppb	0.262 ppb	0.309 ppb	0.976 ppb	89.716 %	0.009 ppb	0.013 ppb	95.522 %
Concentration per Run 2	93.504 %	-0.090 ppb	0.271 ppb	0.267 ppb	1.104 ppb	87.765 %	0.007 ppb	0.008 ppb	92.397 %
Concentration per Run 3	90.371 %	-0.129 ppb	0.105 ppb	0.253 ppb	1.070 ppb	85.005 %	0.008 ppb	0.012 ppb	89.275 %
Recovery Percentage 1		-19.506 %	4.252 %	2.764 %	52.491 %		2.036 %	5.438 %	
Concentration RSD	1.8 %	29.0 %	43.9 %	10.6 %	6.3 %	2.7 %	8.0 %	26.3 %	3.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.111 ppb	0.018 ppb	90.187 %	93.477 %	0.497 ppb	0.023 ppb
Concentration per Run 1	0.085 ppb	0.015 ppb	91.322 %	94.419 %	0.529 ppb	0.021 ppb
Concentration per Run 2	0.098 ppb	0.030 ppb	90.183 %	94.513 %	0.523 ppb	0.023 ppb
Concentration per Run 3	0.149 ppb	0.010 ppb	89.054 %	91.499 %	0.440 ppb	0.026 ppb
Recovery Percentage 1	2.772 %	3.616 %			49.701 %	2.309 %
Concentration RSD	30.3 %	56.5 %	1.3 %	1.8 %	10.0 %	10.9 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	146	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/10/2024 9:30:59 PM	Vial	9		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	102.083 %	94.124 %	59.980 ppb	5,813.760 ppb	5,669.194 ppb	59.067 ppb	5,612.559 ppb	5,744.077 ppb	108.872 %
Concentration per Run 1	107.247 %	99.633 %	58.241 ppb	5,781.791 ppb	5,593.146 ppb	58.940 ppb	5,686.349 ppb	5,833.593 ppb	112.284 %
Concentration per Run 2	100.823 %	90.189 %	59.968 ppb	5,888.425 ppb	5,803.767 ppb	59.506 ppb	5,625.194 ppb	5,747.510 ppb	107.482 %
Concentration per Run 3	98.179 %	92.550 %	61.730 ppb	5,771.063 ppb	5,610.667 ppb	58.756 ppb	5,526.134 ppb	5,651.128 ppb	106.849 %
Recovery Percentage 1			99.966 %	96.896 %	94.487 %	98.446 %	93.543 %	95.735 %	
Concentration RSD	4.6 %	5.2 %	2.9 %	1.1 %	2.1 %	0.7 %	1.4 %	1.6 %	2.7 %

Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	106.576 %	59.997 ppb	60.151 ppb	60.647 ppb	5,966.401 ppb	59.201 ppb	59.428 ppb	59.328 ppb	58.640 ppb
Concentration per Run 1	106.011 %	60.962 ppb	61.114 ppb	60.249 ppb	6,016.218 ppb	59.665 ppb	58.650 ppb	59.682 ppb	58.189 ppb
Concentration per Run 2	107.685 %	60.085 ppb	59.940 ppb	60.970 ppb	5,947.133 ppb	59.707 ppb	60.943 ppb	59.653 ppb	59.549 ppb
Concentration per Run 3	106.033 %	58.945 ppb	59.398 ppb	60.723 ppb	5,935.851 ppb	58.231 ppb	58.690 ppb	58.648 ppb	58.181 ppb
Recovery Percentage 1		99.996 %	100.251 %	101.079 %	99.440 %	98.669 %	99.046 %	98.880 %	97.733 %
Concentration RSD	0.9 %	1.7 %	1.5 %	0.6 %	0.7 %	1.4 %	2.2 %	1.0 %	1.3 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	97.060 %	59.374 ppb	61.037 ppb	59.877 ppb	59.744 ppb	92.477 %	57.522 ppb	57.599 ppb	98.428 %
Concentration per Run 1	98.240 %	59.094 ppb	61.441 ppb	60.029 ppb	57.619 ppb	92.732 %	57.764 ppb	57.332 ppb	101.585 %
Concentration per Run 2	95.710 %	60.261 ppb	62.420 ppb	60.706 ppb	61.415 ppb	91.463 %	57.499 ppb	57.756 ppb	96.473 %
Concentration per Run 3	97.232 %	58.768 ppb	59.249 ppb	58.896 ppb	60.196 ppb	93.238 %	57.302 ppb	57.710 ppb	97.226 %
Recovery Percentage 1		98.957 %	101.728 %	99.795 %	99.573 %		95.870 %	95.999 %	
Concentration RSD	1.3 %	1.3 %	2.7 %	1.5 %	3.2 %	1.0 %	0.4 %	0.4 %	2.8 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	62.999 ppb	61.031 ppb	96.161 %	99.637 %	55.615 ppb	55.989 ppb
Concentration per Run 1	62.054 ppb	61.386 ppb	97.259 %	101.755 %	50.965 ppb	54.624 ppb
Concentration per Run 2	64.250 ppb	61.706 ppb	95.689 %	99.124 %	57.328 ppb	56.754 ppb
Concentration per Run 3	62.693 ppb	60.002 ppb	95.536 %	98.032 %	58.553 ppb	56.589 ppb
Recovery Percentage 1	104.998 %	101.719 %			92.692 %	93.315 %
Concentration RSD	1.8 %	1.5 %	1.0 %	1.9 %	7.3 %	2.1 %

Alpha ICPMSQ Data with SRD

4/11/2024 5:21:17 AM

Analysis index:	147	User name	ALPHALAB\Metals-Instrument	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/10/2024 9:35:41 PM	Vial	10		

Category	6Li (STD AGD)	6Li (KED AGD)	9Be (STD AGD)	23Na (KED AGD)	24Mg (KED AGD)	27Al (KED AGD)	39K (KED AGD)	44Ca (KED AGD)	45Sc (STD AGD)
Concentration average	94.291 %	83.211 %	0.009 ppb	14.113 ppb	1.574 ppb	-0.333 ppb	-8.582 ppb	-5.463 ppb	88.387 %
Concentration per Run 1	99.126 %	85.467 %	0.009 ppb	12.759 ppb	1.857 ppb	-0.342 ppb	-10.618 ppb	-7.884 ppb	90.612 %
Concentration per Run 2	93.136 %	80.115 %	0.014 ppb	18.017 ppb	1.312 ppb	-0.355 ppb	-4.543 ppb	-1.927 ppb	87.158 %
Concentration per Run 3	90.611 %	84.050 %	0.006 ppb	11.564 ppb	1.553 ppb	-0.304 ppb	-10.586 ppb	-6.579 ppb	87.391 %
Recovery Percentage 1			1.894 %	14.113 %	2.249 %	-3.334 %	-8.582 %	-5.463 %	
Concentration RSD	4.6 %	3.3 %	43.7 %	24.3 %	17.4 %	7.9 %	40.8 %	57.3 %	2.2 %

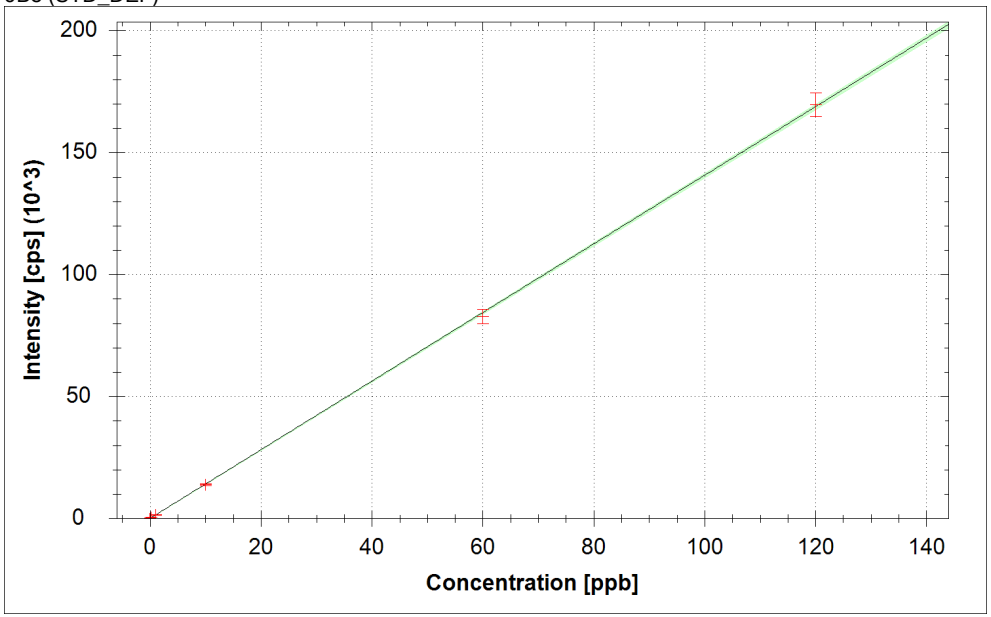
Category	45Sc (KED AGD)	51V (KED AGD)	52Cr (KED AGD)	55Mn (KED AGD)	57Fe (KED AGD)	59Co (KED AGD)	60Ni (KED AGD)	65Cu (KED AGD)	66Zn (KED AGD)
Concentration average	85.355 %	0.039 ppb	0.022 ppb	0.139 ppb	10.622 ppb	0.014 ppb	-0.009 ppb	0.004 ppb	0.013 ppb
Concentration per Run 1	86.961 %	0.009 ppb	0.032 ppb	0.172 ppb	11.829 ppb	0.015 ppb	0.018 ppb	0.012 ppb	0.022 ppb
Concentration per Run 2	82.708 %	0.041 ppb	0.010 ppb	0.118 ppb	13.033 ppb	0.024 ppb	-0.011 ppb	0.024 ppb	0.011 ppb
Concentration per Run 3	86.395 %	0.066 ppb	0.025 ppb	0.128 ppb	7.005 ppb	0.002 ppb	-0.036 ppb	-0.025 ppb	0.006 ppb
Recovery Percentage 1		0.776 %	2.222 %	13.945 %	21.244 %	2.796 %	-0.469 %	0.393 %	0.259 %
Concentration RSD	2.7 %	73.6 %	51.4 %	20.6 %	30.0 %	79.7 %	287.9 %	648.5 %	63.8 %

Category	74Ge (KED AGD)	75As (KED AGD)	78Se (KED AGD)	88Sr (KED AGD)	95Mo (KED AGD)	103Rh (KED AGD)	107Ag (KED AGD)	111Cd (KED AGD)	115In (KED AGD)
Concentration average	88.111 %	0.023 ppb	0.354 ppb	0.111 ppb	1.075 ppb	84.644 %	0.011 ppb	0.014 ppb	87.402 %
Concentration per Run 1	88.630 %	0.073 ppb	0.344 ppb	0.133 ppb	1.047 ppb	84.388 %	0.016 ppb	0.016 ppb	86.686 %
Concentration per Run 2	85.961 %	0.022 ppb	0.341 ppb	0.103 ppb	1.119 ppb	83.509 %	0.010 ppb	0.010 ppb	86.681 %
Concentration per Run 3	89.741 %	-0.025 ppb	0.377 ppb	0.096 ppb	1.059 ppb	86.035 %	0.007 ppb	0.017 ppb	88.838 %
Recovery Percentage 1		4.630 %	7.081 %	1.108 %	53.743 %		2.761 %	6.950 %	
Concentration RSD	2.2 %	211.0 %	5.5 %	17.6 %	3.6 %	1.5 %	42.2 %	27.1 %	1.4 %

Category	121Sb (KED AGD)	137Ba (KED AGD)	159Tb (KED AGD)	175Lu (KED AGD)	205Tl (KED AGD)	208Pb (KED AGD)
Concentration average	0.122 ppb	0.011 ppb	87.604 %	89.804 %	0.545 ppb	0.024 ppb
Concentration per Run 1	0.120 ppb	0.004 ppb	87.949 %	90.653 %	0.532 ppb	0.023 ppb
Concentration per Run 2	0.122 ppb	0.011 ppb	85.695 %	89.103 %	0.607 ppb	0.027 ppb
Concentration per Run 3	0.124 ppb	0.019 ppb	89.169 %	89.655 %	0.494 ppb	0.022 ppb
Recovery Percentage 1	3.048 %	2.269 %			54.456 %	2.420 %
Concentration RSD	2.0 %	63.6 %	2.0 %	0.9 %	10.5 %	11.0 %

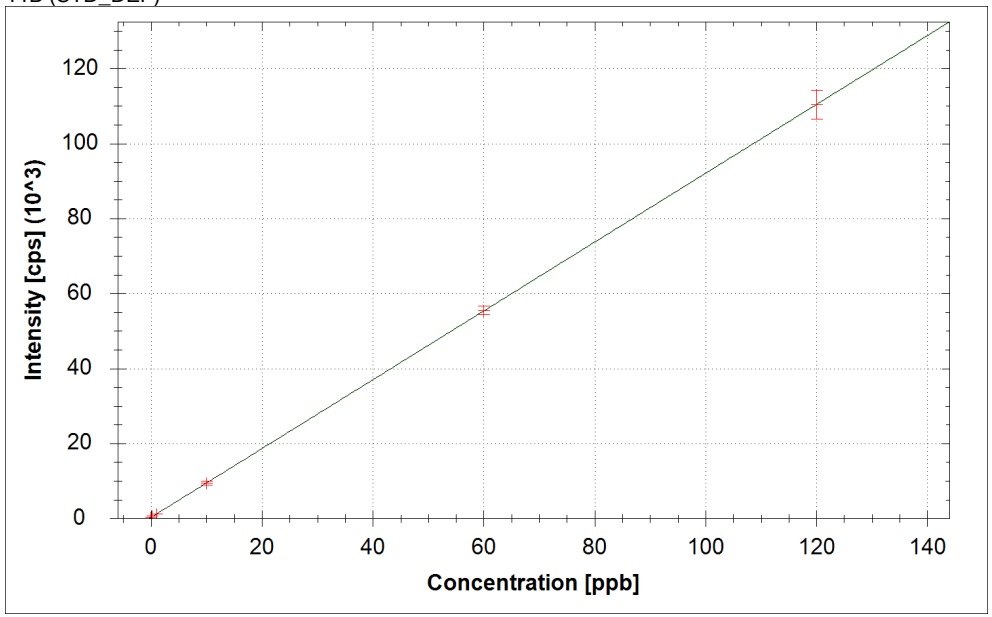
Calibration Curves:

9Be (STD_DEF)



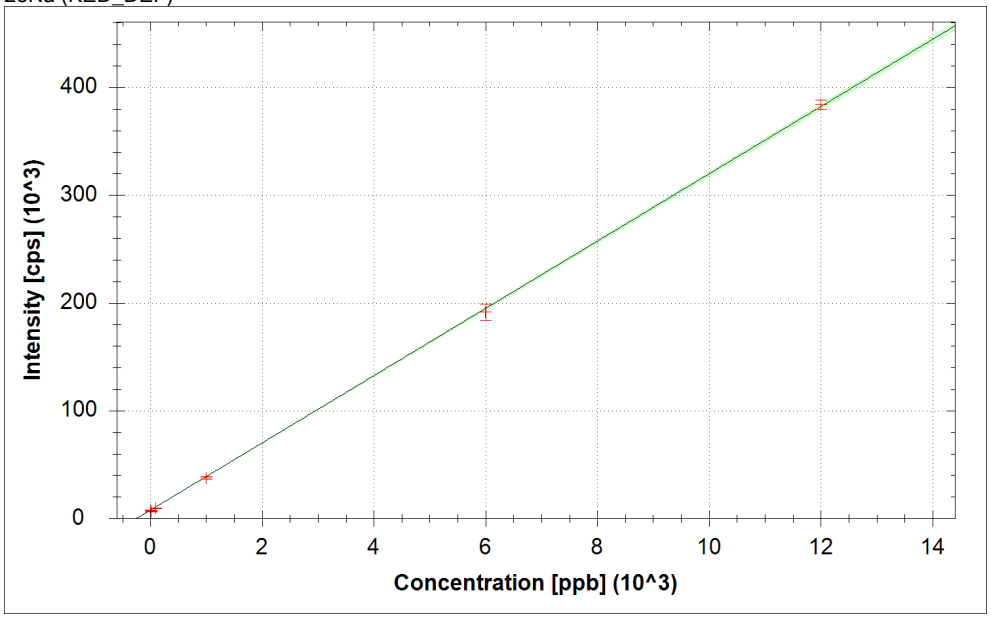
f(x) = 1406.0007*x + 55.9133
R² = 0.9998
BEC = 0.040 ppb
LoD = 0.0148 ppb

11B (STD_DEF)



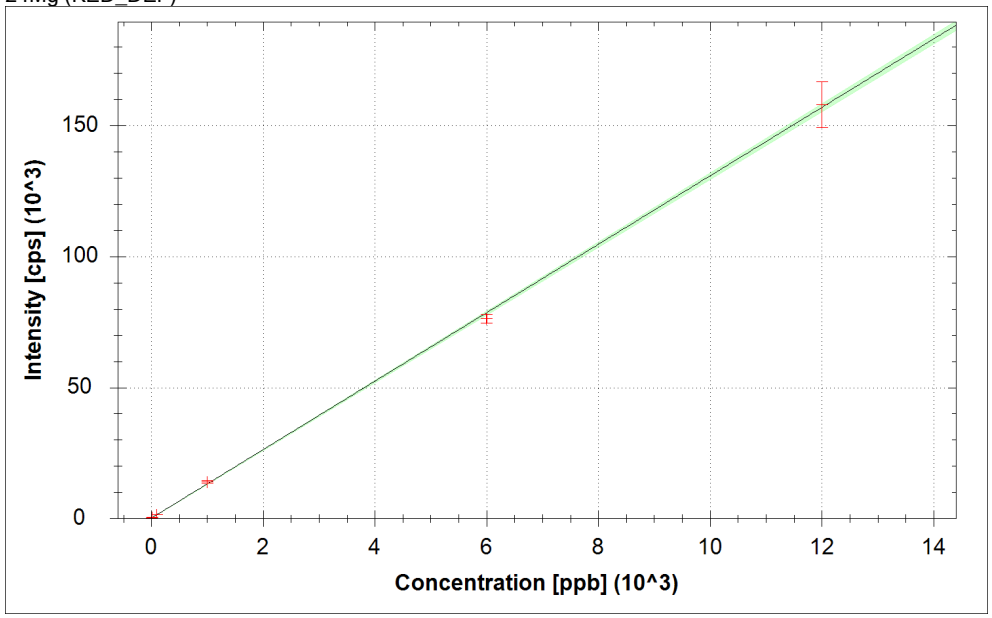
f(x) = 917.8445*x + 279.0004
R² = 1.0000
BEC = 0.304 ppb
LoD = 0.0835 ppb

23Na (KED_DEF)



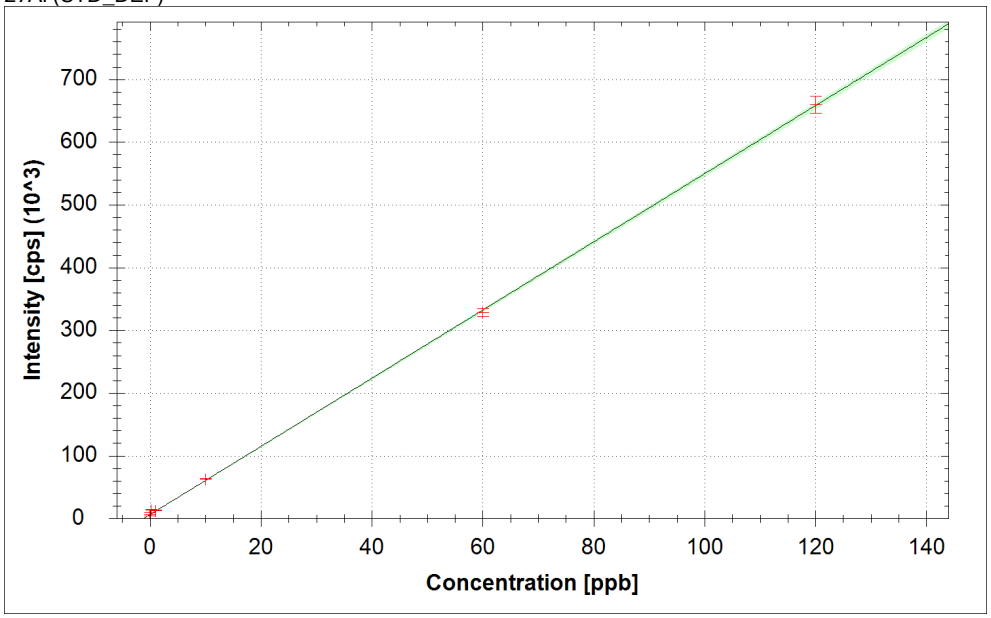
f(x) = 31.2024*x + 7646.5051
R² = 0.9998
BEC = 245.061 ppb
LoD = 32.3806 ppb

24Mg (KED_DEF)



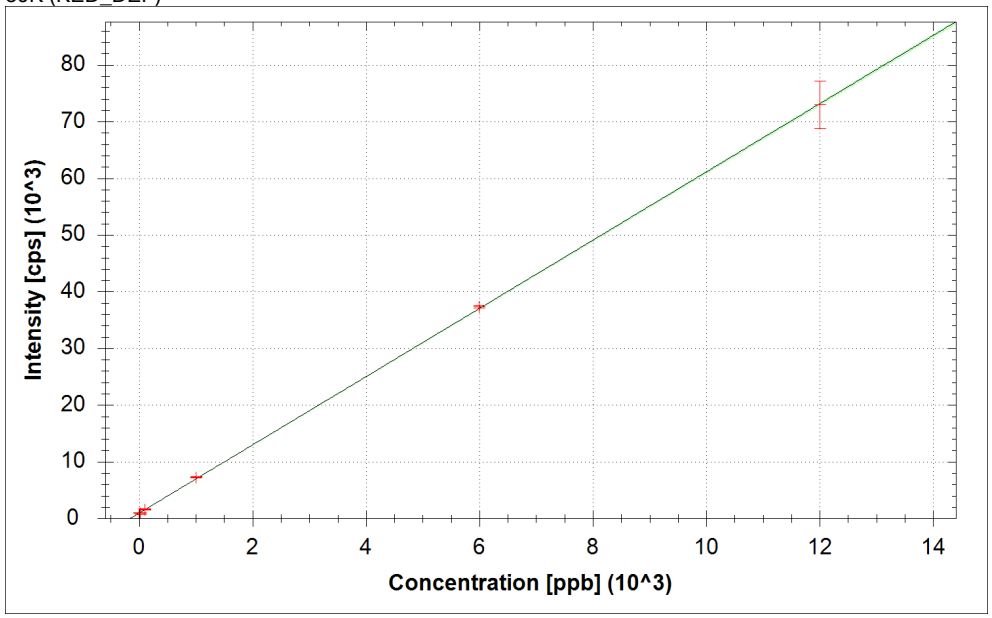
f(x) = 13.0665*x + 125.4196
R² = 0.9997
BEC = 9.599 ppb
LoD = 10.7653 ppb

27Al (STD_DEF)



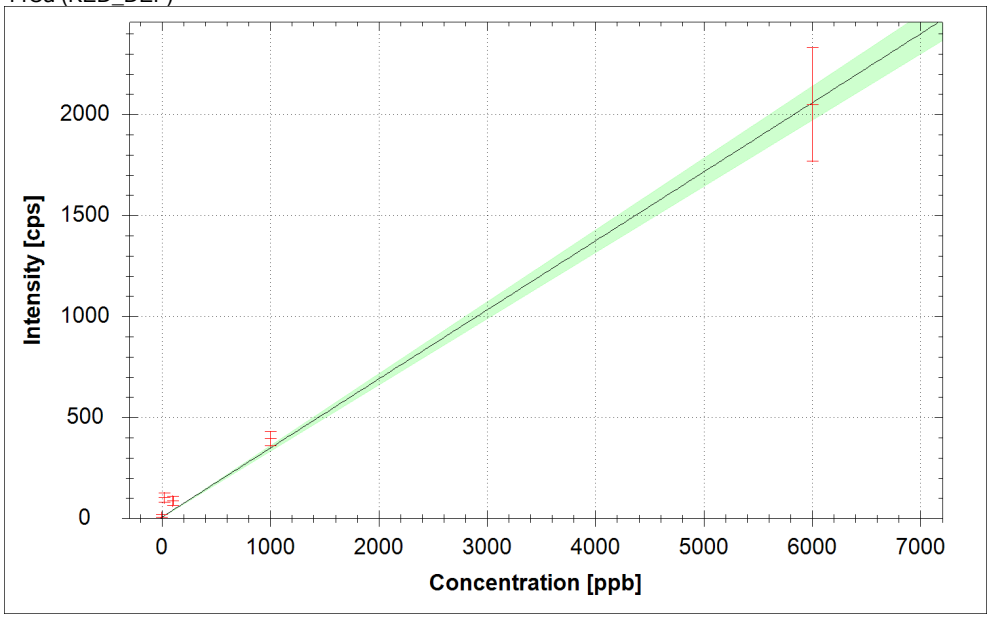
f(x) = 5430.9671*x + 6256.1485
R² = 0.9998
BEC = 1.152 ppb
LoD = 1.4715 ppb

39K (KED_DEF)



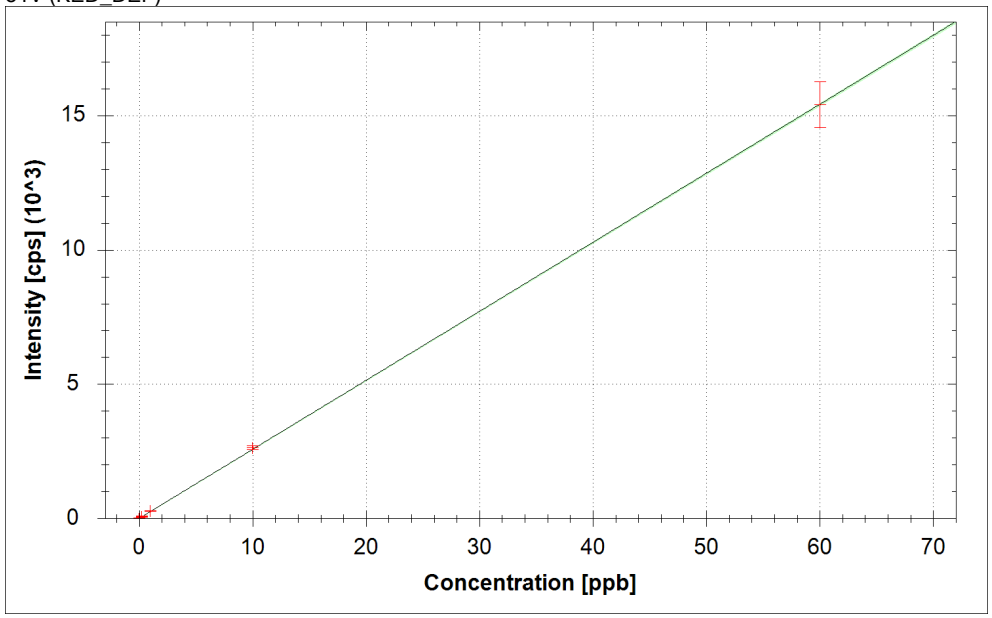
f(x) = 6.0168*x + 940.5864
R² = 1.0000
BEC = 156.326 ppb
LoD = 33.4673 ppb

44Ca (KED_DEF)



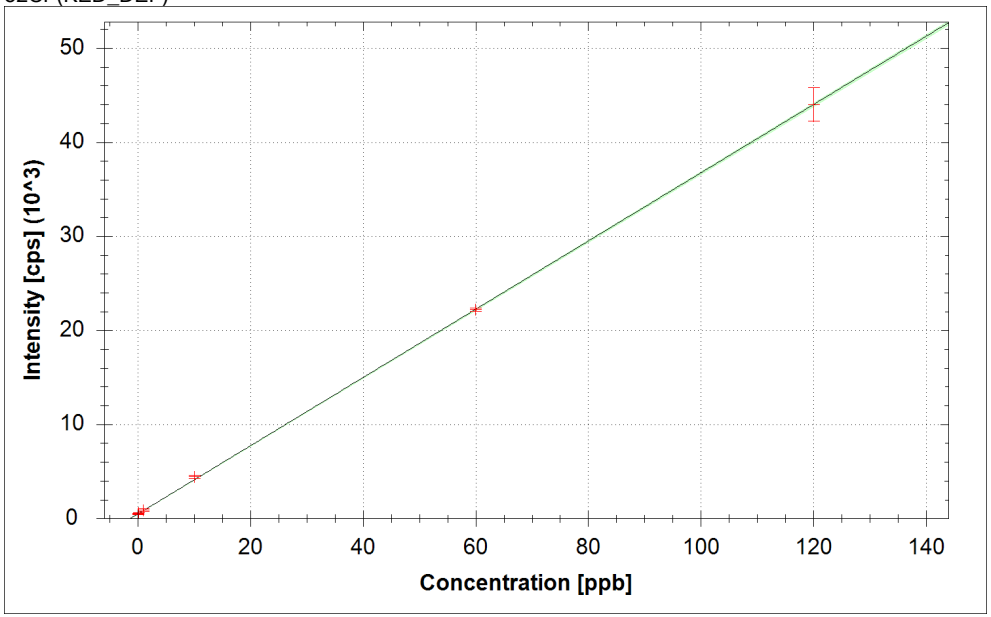
f(x) = 0.3418*x + 6.6233
R² = 0.9959
BEC = 19.378 ppb
LoD = 103.6755 ppb

51V (KED_DEF)



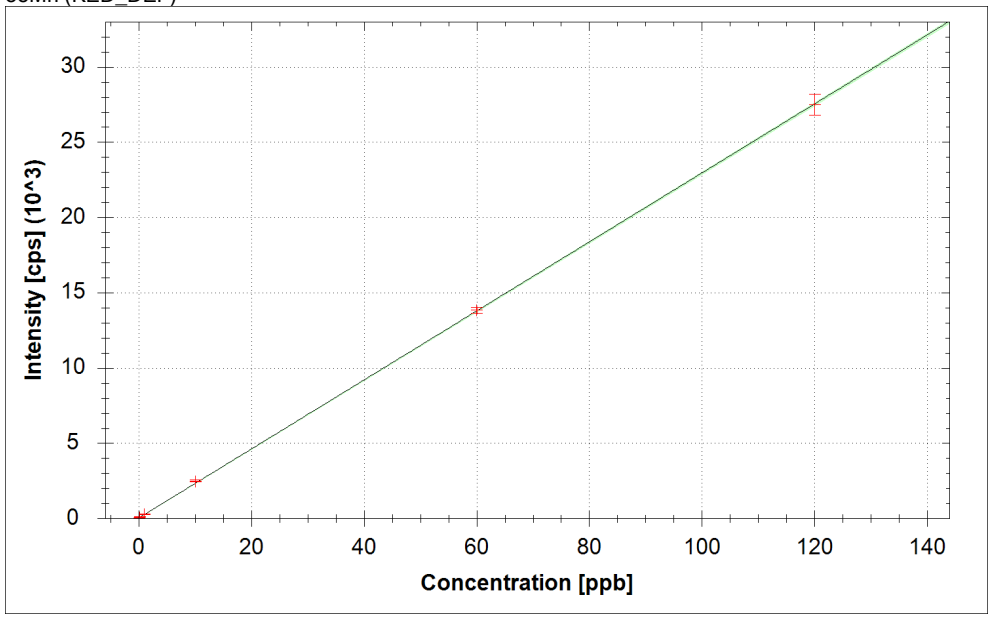
f(x) = 256.8343*x + 2.2755
R² = 1.0000
BEC = 0.009 ppb
LoD = 0.0460 ppb

52Cr (KED_DEF)



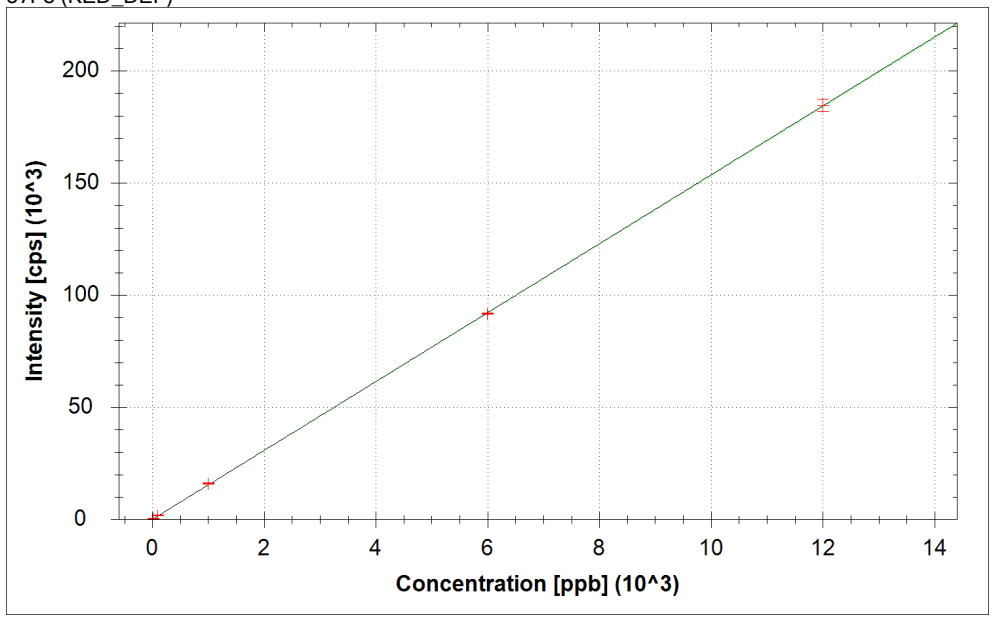
f(x) = 362.6205*x + 476.7708
R² = 0.9999
BEC = 1.315 ppb
LoD = 0.5072 ppb

55Mn (KED_DEF)



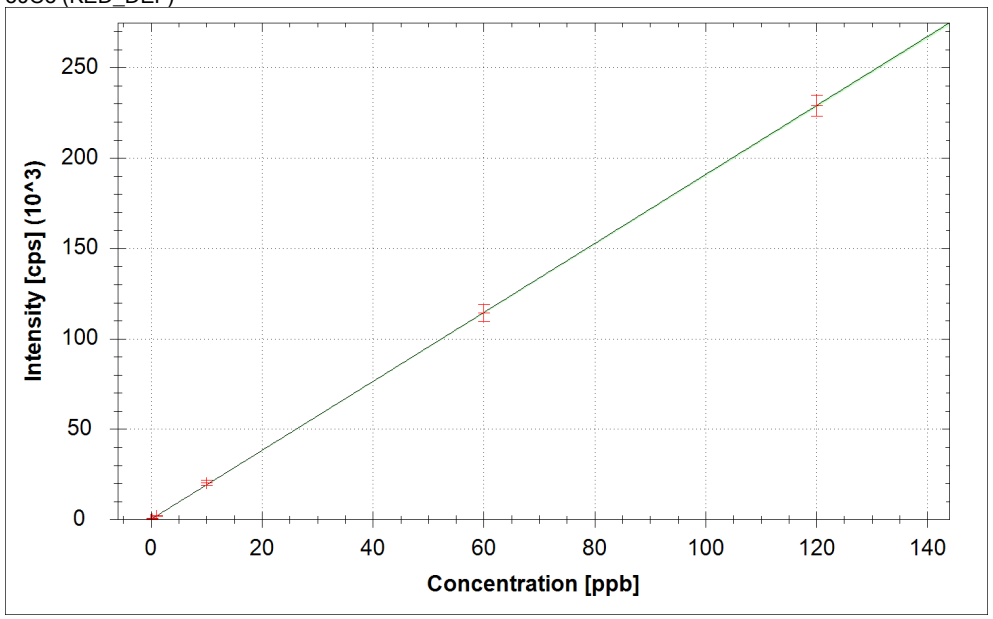
f(x) = 229.1093*x + 36.4818
R² = 0.9999
BEC = 0.159 ppb
LoD = 0.0316 ppb

57Fe (KED_DEF)



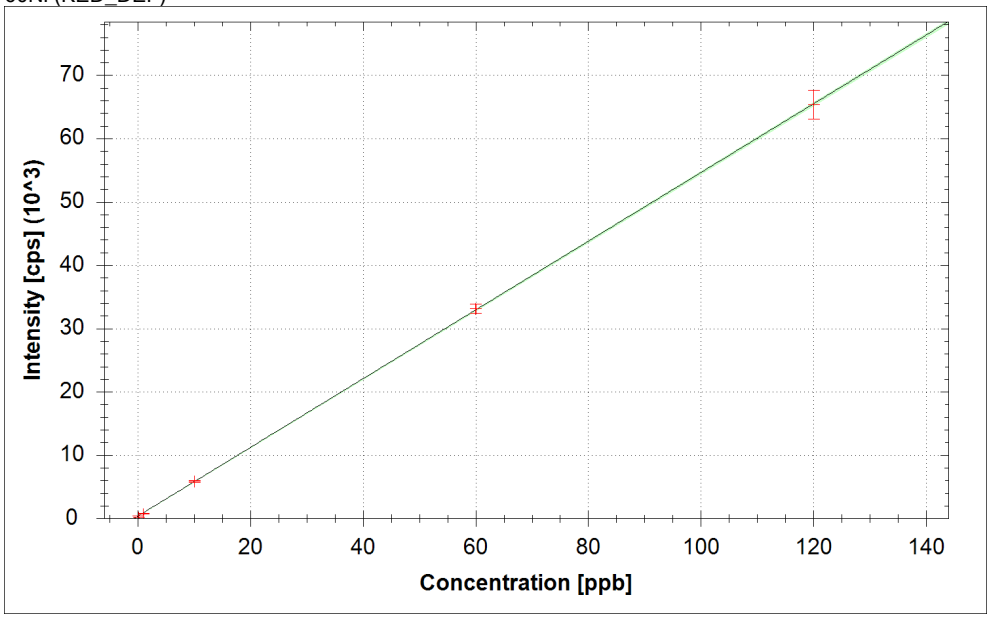
f(x) = 15.3564*x + 28.9688
R² = 1.0000
BEC = 1.886 ppb
LoD = 2.7757 ppb

59Co (KED_DEF)



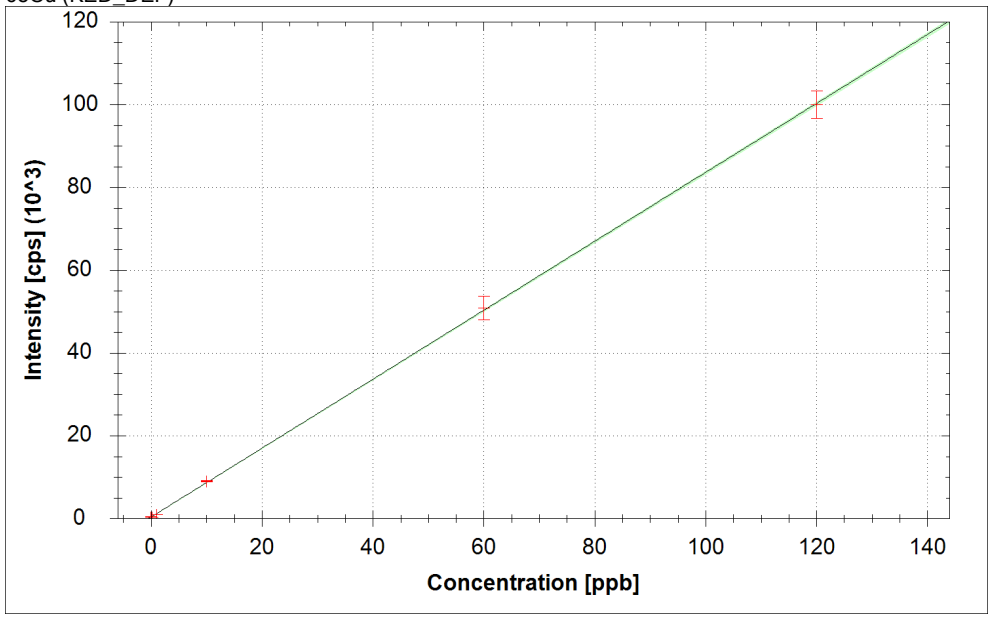
f(x) = 1907.2506*x + 55.7831
R² = 1.0000
BEC = 0.029 ppb
LoD = 0.0284 ppb

60Ni (KED_DEF)



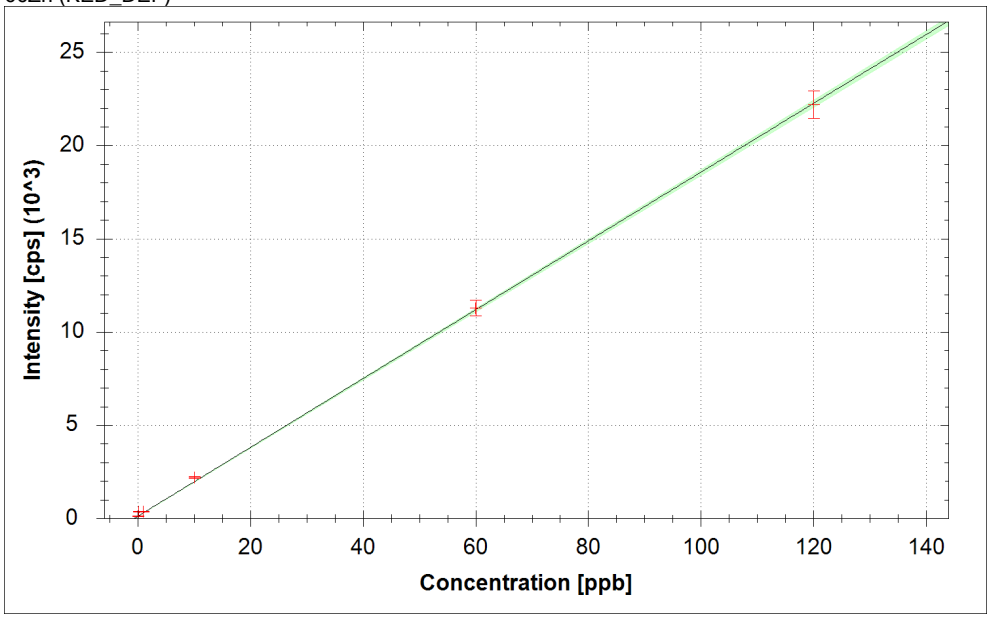
f(x) = 542.4548*x + 376.0582
R² = 0.9999
BEC = 0.693 ppb
LoD = 0.2231 ppb

65Cu (KED_DEF)



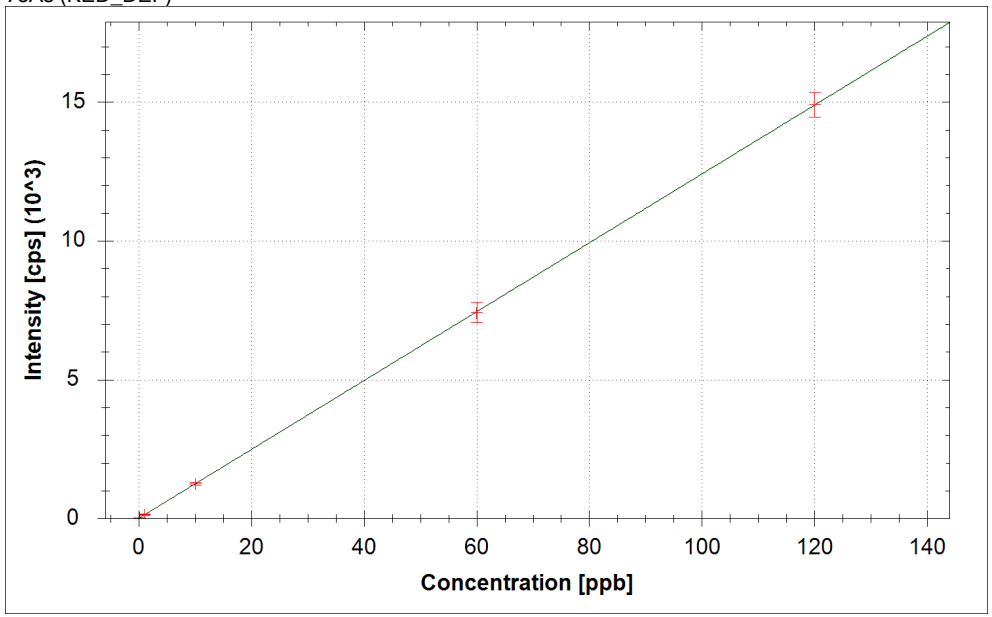
f(x) = 832.4559*x + 335.5528
R² = 0.9999
BEC = 0.403 ppb
LoD = 0.1353 ppb

66Zn (KED_DEF)



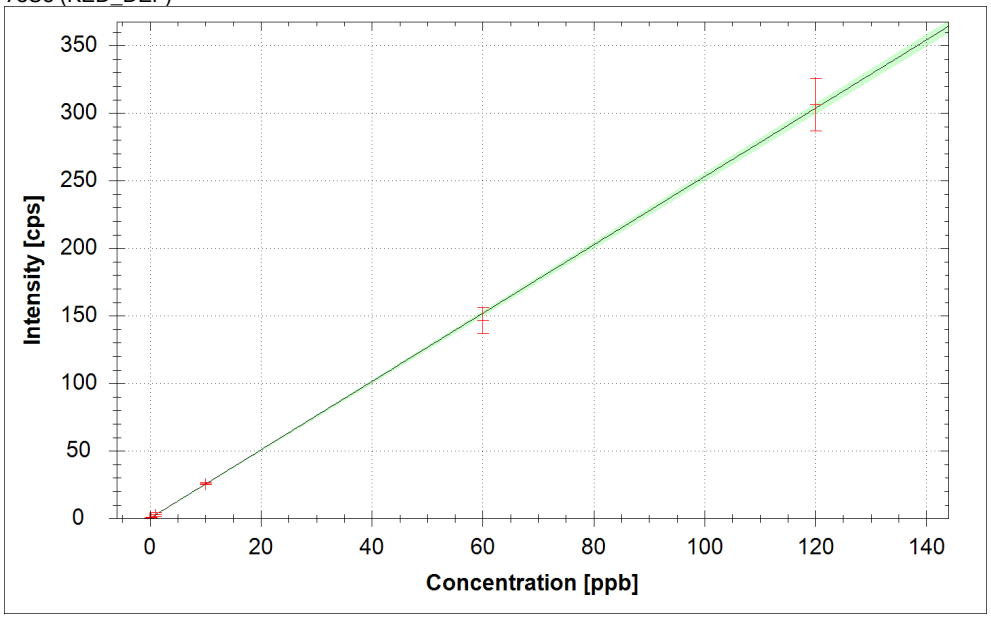
f(x) = 184.3709*x + 121.7028
R² = 0.9997
BEC = 0.660 ppb
LoD = 0.3111 ppb

75As (KED_DEF)



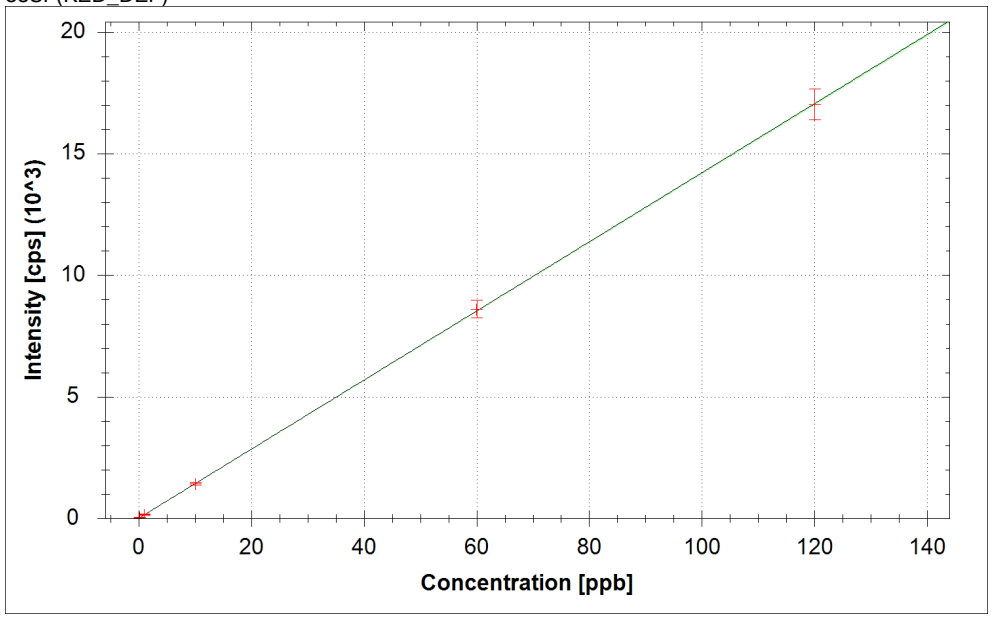
f(x) = 124.0146*x + 6.8949
R² = 1.0000
BEC = 0.056 ppb
LoD = 0.0551 ppb

78Se (KED_DEF)



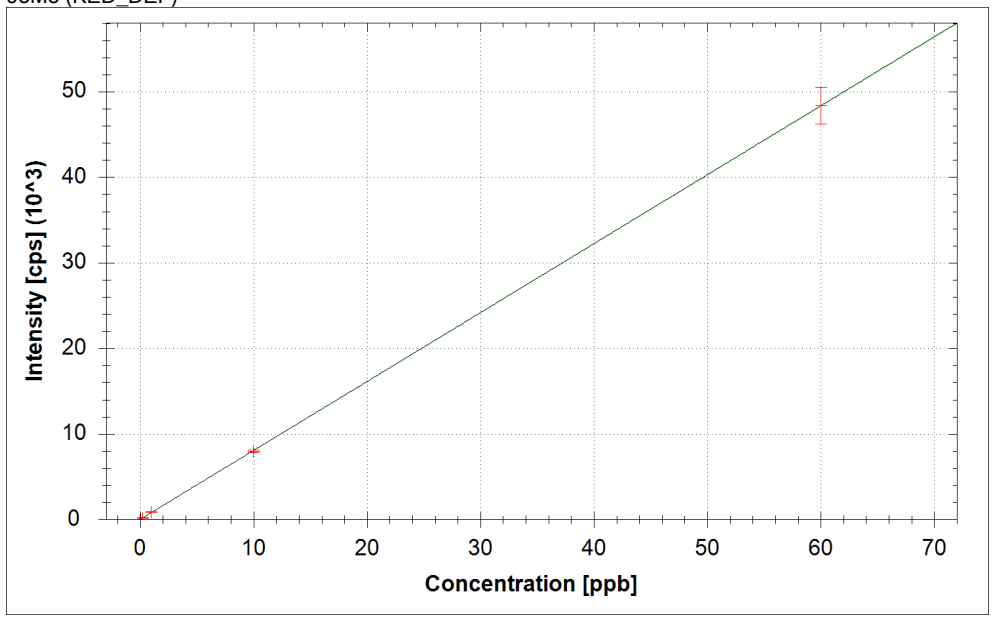
f(x) = 2.5276*x + 0.1919
R² = 0.9995
BEC = 0.076 ppb
LoD = 0.2182 ppb

88Sr (KED_DEF)



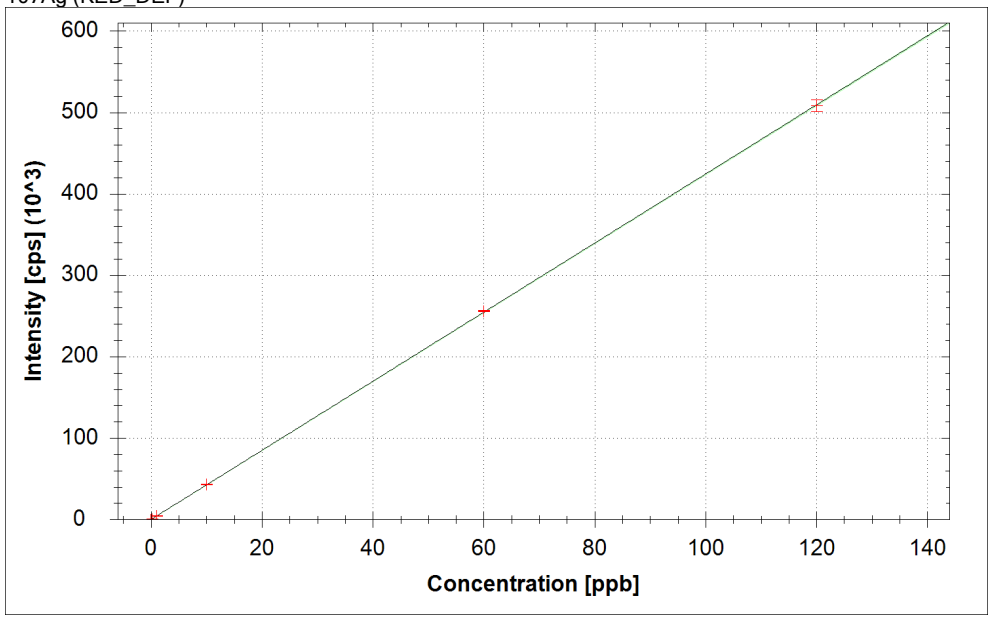
f(x) = 141.9693*x + 11.9314
R² = 1.0000
BEC = 0.084 ppb
LoD = 0.1267 ppb

95Mo (KED_DEF)



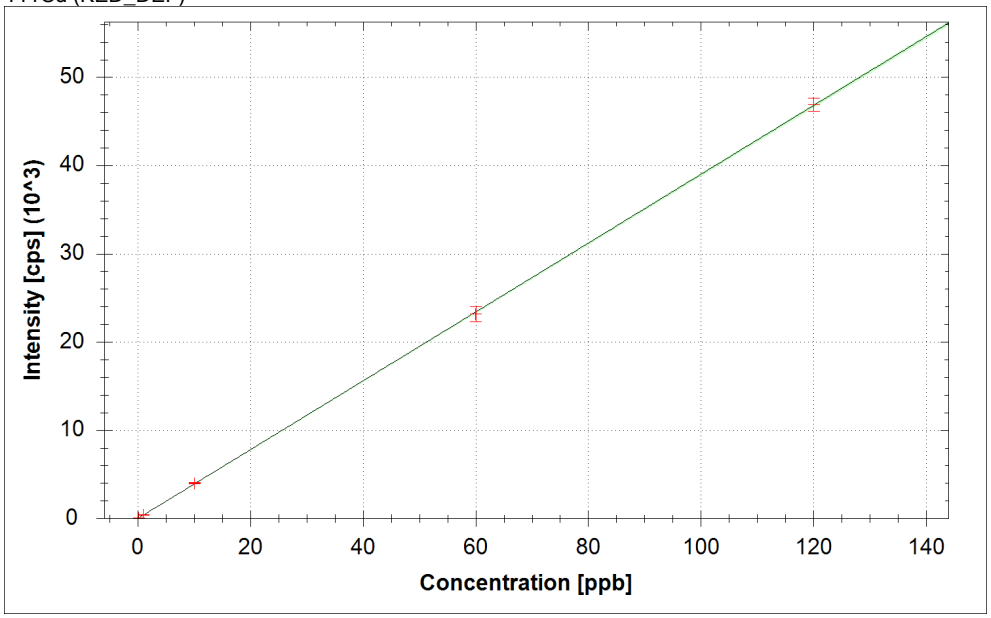
f(x) = 805.5630*x + 6.6207
R² = 1.0000
BEC = 0.008 ppb
LoD = 0.0243 ppb

107Ag (KED_DEF)



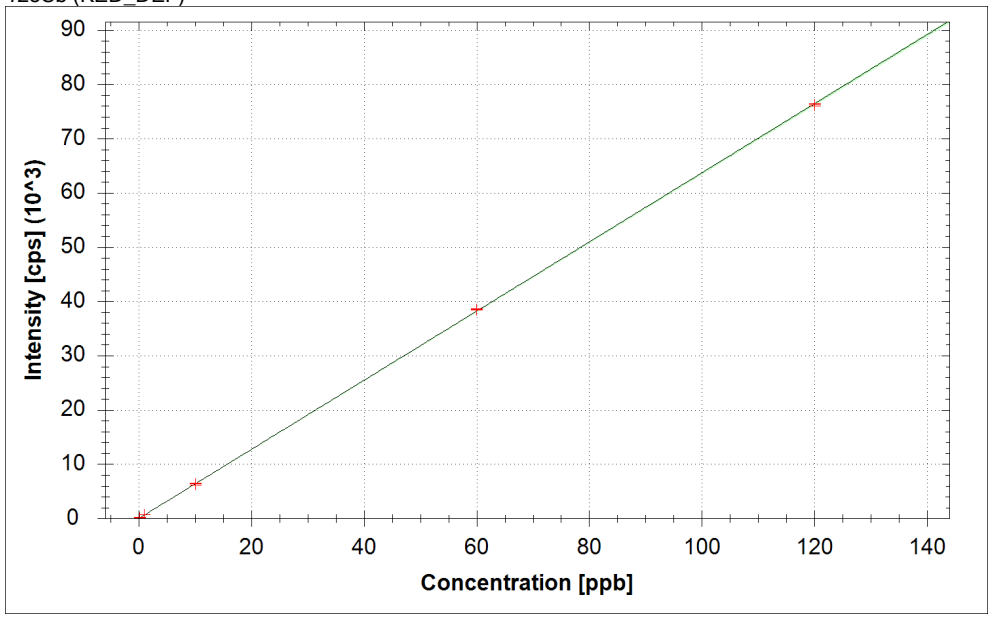
f(x) = 4241.8973*x + 13.3214
R² = 1.0000
BEC = 0.003 ppb
LoD = 0.0023 ppb

111Cd (KED_DEF)



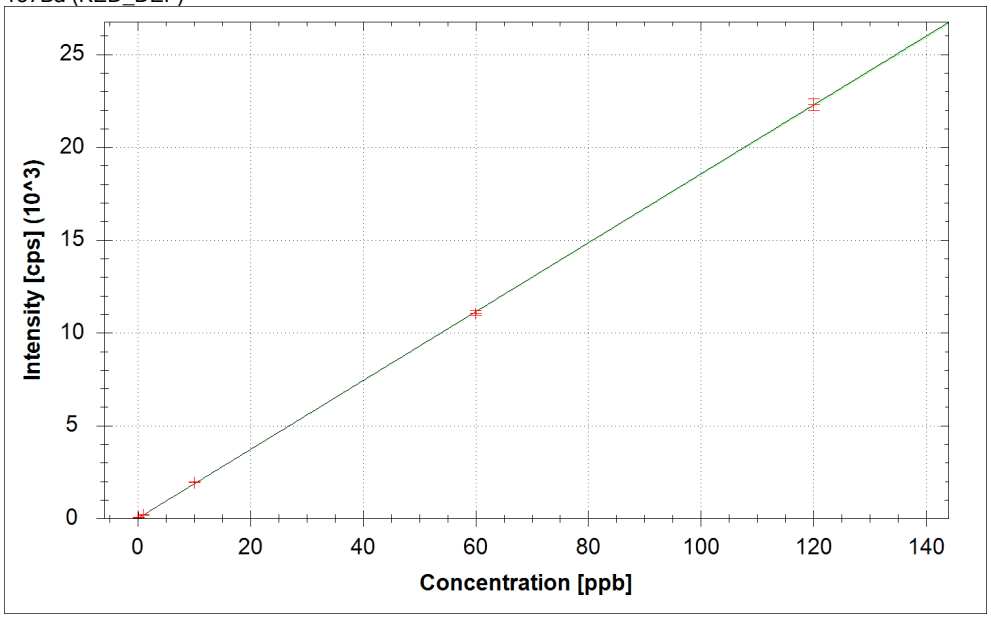
f(x) = 389.8059*x + 0.4400
R² = 1.0000
BEC = 0.001 ppb
LoD = 0.0059 ppb

123Sb (KED_DEF)



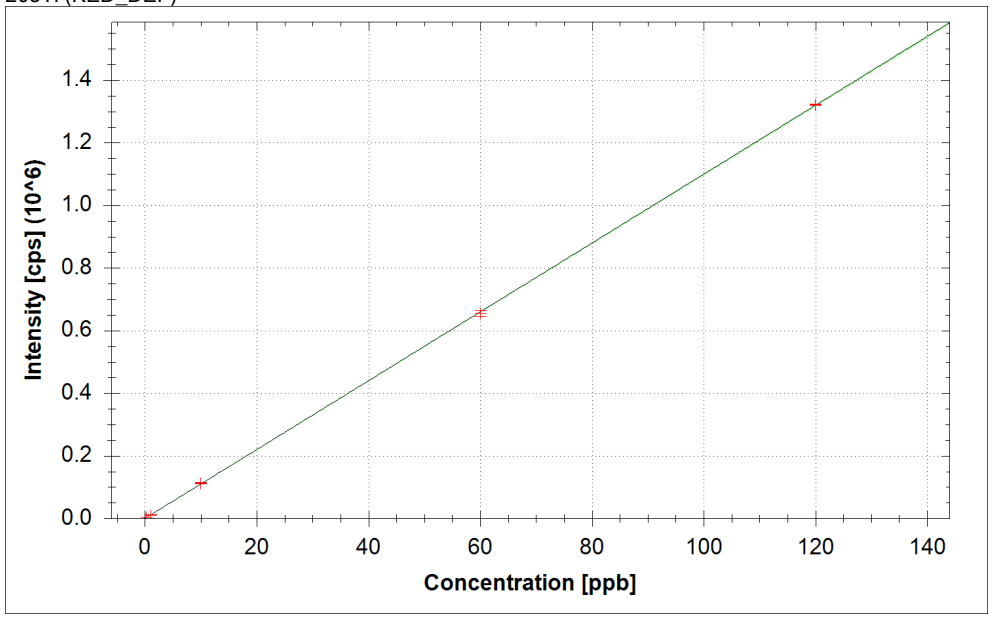
f(x) = 636.8507*x + 0.8842
R² = 1.0000
BEC = 0.001 ppb
LoD = 0.0072 ppb

137Ba (KED_DEF)



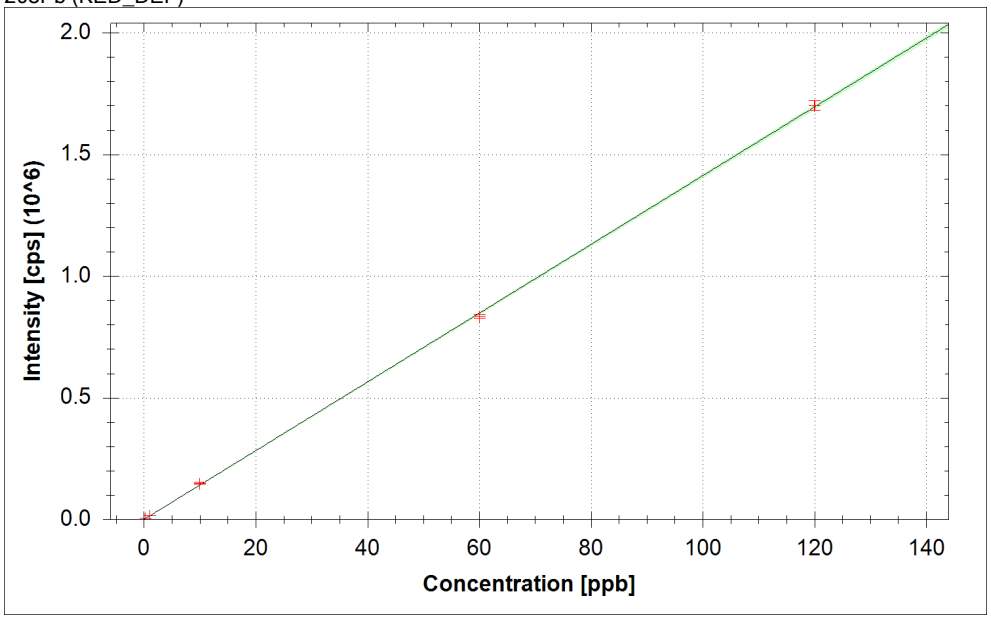
f(x) = 185.4918*x + 5.5455
R² = 1.0000
BEC = 0.030 ppb
LoD = 0.0617 ppb

205Tl (KED_DEF)



f(x) = 10992.8271*x + 131.4490
R² = 1.0000
BEC = 0.012 ppb
LoD = 0.0125 ppb

208Pb (KED_DEF)



f(x) = 14120.2106*x + 173.1161
R² = 0.9999
BEC = 0.012 ppb
LoD = 0.0058 ppb

Standards:

Analysis Index: 4
Analysis Name: 0.2/20 Cal
Analysis Type: STD
Analysis Started at: 4/14/2024 12:17:01 PM
Total Dilution Factor 50000
Rack 0
Vial 2

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	99.932 %	0.9 %		0.000 %
6Li (KED_DEF)	102.335 %	10.1 %		0.000 %
9Be (STD_DEF)	0.210 ppb	4.6 %	0.200 ppb	4.929 %
11B (STD_DEF)	0.346 ppb	4.9 %	0.200 ppb	72.927 %
23Na (KED_DEF)	-31.720 ppb	47.4 %	20.000 ppb	258.601 %
24Mg (KED_DEF)	19.336 ppb	21.1 %	20.000 ppb	3.319 %
27Al (STD_DEF)	1.368 ppb	9.6 %	0.200 ppb	584.208 %
39K (KED_DEF)	-14.581 ppb	161.8 %	20.000 ppb	172.904 %
44Ca (KED_DEF)	281.295 ppb	22.5 %	20.000 ppb	1,306.475 %
45Sc (STD_DEF)	99.963 %	1.1 %		0.000 %
45Sc (KED_DEF)	98.900 %	4.0 %		0.000 %
51V (KED_DEF)	0.234 ppb	44.9 %	0.200 ppb	17.206 %
52Cr (KED_DEF)	0.358 ppb	15.3 %	0.200 ppb	78.811 %
55Mn (KED_DEF)	0.246 ppb	22.2 %	0.200 ppb	23.160 %
57Fe (KED_DEF)	22.765 ppb	10.5 %	20.000 ppb	13.827 %
59Co (KED_DEF)	0.192 ppb	15.3 %	0.200 ppb	3.843 %
60Ni (KED_DEF)	-0.382 ppb	11.2 %	0.200 ppb	290.880 %
65Cu (KED_DEF)	-0.113 ppb	43.9 %	0.200 ppb	156.684 %
66Zn (KED_DEF)	1.310 ppb	10.8 %	0.200 ppb	554.768 %
74Ge (STD_DEF)	100.647 %	1.6 %		0.000 %
74Ge (KED_DEF)	101.713 %	4.7 %		0.000 %
75As (KED_DEF)	0.119 ppb	36.9 %	0.200 ppb	40.716 %
78Se (KED_DEF)	0.122 ppb	164.4 %	0.200 ppb	38.785 %
88Sr (KED_DEF)	0.256 ppb	21.9 %	0.200 ppb	27.919 %
95Mo (KED_DEF)	0.204 ppb	18.8 %	0.200 ppb	1.905 %
103Rh (STD_DEF)	98.831 %	0.7 %		0.000 %
103Rh (KED_DEF)	97.627 %	2.6 %		0.000 %
107Ag (KED_DEF)	0.217 ppb	4.0 %	0.200 ppb	8.603 %
111Cd (KED_DEF)	0.200 ppb	9.1 %	0.200 ppb	0.062 %
115In (STD_DEF)	100.742 %	2.1 %		0.000 %
115In (KED_DEF)	95.985 %	4.5 %		0.000 %
123Sb (KED_DEF)	0.226 ppb	12.9 %	0.200 ppb	13.162 %
137Ba (KED_DEF)	0.299 ppb	16.3 %	0.200 ppb	49.655 %
159Tb (STD_DEF)	101.224 %	2.2 %		0.000 %
159Tb (KED_DEF)	97.318 %	4.0 %		0.000 %
175Lu (STD_DEF)	101.327 %	2.6 %		0.000 %
175Lu (KED_DEF)	97.821 %	0.9 %		0.000 %
205Tl (KED_DEF)	0.230 ppb	4.5 %	0.200 ppb	14.931 %
208Pb (KED_DEF)	0.235 ppb	3.7 %	0.200 ppb	17.453 %
209Bi (STD_DEF)	100.021 %	0.9 %		0.000 %
209Bi (KED_DEF)	98.787 %	2.6 %		0.000 %

Standards:

Analysis Index: 5
Analysis Name: 1/100 Cal
Analysis Type: STD
Analysis Started at: 4/14/2024 12:21:41 PM
Total Dilution Factor 10000
Rack 0
Vial 3

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	101.884 %	2.3 %		0.000 %
6Li (KED_DEF)	98.444 %	10.7 %		0.000 %
9Be (STD_DEF)	0.964 ppb	4.6 %	1.000 ppb	3.597 %
11B (STD_DEF)	0.943 ppb	5.3 %	1.000 ppb	5.697 %
23Na (KED_DEF)	54.792 ppb	26.1 %	100.000 ppb	45.208 %
24Mg (KED_DEF)	101.020 ppb	1.0 %	100.000 ppb	1.020 %
27Al (STD_DEF)	1.193 ppb	2.7 %	1.000 ppb	19.331 %
39K (KED_DEF)	101.165 ppb	16.9 %	100.000 ppb	1.165 %
44Ca (KED_DEF)	234.050 ppb	28.0 %	100.000 ppb	134.050 %
45Sc (STD_DEF)	102.635 %	4.2 %		0.000 %
45Sc (KED_DEF)	99.678 %	5.3 %		0.000 %
51V (KED_DEF)	1.060 ppb	7.5 %	1.000 ppb	6.026 %
52Cr (KED_DEF)	1.137 ppb	27.6 %	1.000 ppb	13.671 %
55Mn (KED_DEF)	1.065 ppb	9.5 %	1.000 ppb	6.531 %
57Fe (KED_DEF)	110.649 ppb	6.3 %	100.000 ppb	10.649 %
59Co (KED_DEF)	0.994 ppb	5.0 %	1.000 ppb	0.620 %
60Ni (KED_DEF)	0.619 ppb	14.2 %	1.000 ppb	38.081 %
65Cu (KED_DEF)	0.616 ppb	3.5 %	1.000 ppb	38.387 %
66Zn (KED_DEF)	1.309 ppb	8.2 %	1.000 ppb	30.935 %
74Ge (STD_DEF)	101.114 %	3.2 %		0.000 %
74Ge (KED_DEF)	99.457 %	4.1 %		0.000 %
75As (KED_DEF)	1.079 ppb	13.9 %	1.000 ppb	7.860 %
78Se (KED_DEF)	1.072 ppb	52.5 %	1.000 ppb	7.177 %
88Sr (KED_DEF)	1.034 ppb	21.7 %	1.000 ppb	3.407 %
95Mo (KED_DEF)	1.075 ppb	6.2 %	1.000 ppb	7.542 %
103Rh (STD_DEF)	99.127 %	1.3 %		0.000 %
103Rh (KED_DEF)	97.787 %	0.5 %		0.000 %
107Ag (KED_DEF)	0.988 ppb	0.7 %	1.000 ppb	1.208 %
111Cd (KED_DEF)	1.027 ppb	5.7 %	1.000 ppb	2.724 %
115In (STD_DEF)	99.842 %	3.9 %		0.000 %
115In (KED_DEF)	97.141 %	0.4 %		0.000 %
123Sb (KED_DEF)	1.003 ppb	0.8 %	1.000 ppb	0.293 %
137Ba (KED_DEF)	0.973 ppb	8.6 %	1.000 ppb	2.665 %
159Tb (STD_DEF)	101.154 %	1.8 %		0.000 %
159Tb (KED_DEF)	98.696 %	1.1 %		0.000 %
175Lu (STD_DEF)	100.210 %	2.6 %		0.000 %
175Lu (KED_DEF)	98.366 %	2.2 %		0.000 %
205Tl (KED_DEF)	0.970 ppb	2.6 %	1.000 ppb	2.958 %
208Pb (KED_DEF)	1.030 ppb	3.4 %	1.000 ppb	3.037 %
209Bi (STD_DEF)	107.379 %	3.4 %		0.000 %
209Bi (KED_DEF)	107.421 %	2.1 %		0.000 %

Standards:

Analysis Index: 6
Analysis Name: 10/10000 Cal
Analysis Type: STD
Analysis Started at: 4/14/2024 12:26:22 PM
Total Dilution Factor 1000
Rack 0
Vial 4

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	100.176 %	3.3 %		0.000 %
6Li (KED_DEF)	103.502 %	5.2 %		0.000 %
9Be (STD_DEF)	9.763 ppb	3.4 %	10.000 ppb	2.366 %
11B (STD_DEF)	9.949 ppb	5.1 %	10.000 ppb	0.509 %
23Na (KED_DEF)	965.081 ppb	3.7 %	1,000.000 ppb	3.492 %
24Mg (KED_DEF)	1,057.369 ppb	3.0 %	1,000.000 ppb	5.737 %
27Al (STD_DEF)	10.427 ppb	0.2 %	10.000 ppb	4.275 %
39K (KED_DEF)	1,043.763 ppb	2.0 %	1,000.000 ppb	4.376 %
44Ca (KED_DEF)	1,136.384 ppb	9.5 %	1,000.000 ppb	13.638 %
45Sc (STD_DEF)	103.736 %	1.0 %		0.000 %
45Sc (KED_DEF)	100.886 %	3.3 %		0.000 %
51V (KED_DEF)	10.232 ppb	2.4 %	10.000 ppb	2.315 %
52Cr (KED_DEF)	10.852 ppb	5.1 %	10.000 ppb	8.517 %
55Mn (KED_DEF)	10.710 ppb	2.3 %	10.000 ppb	7.103 %
57Fe (KED_DEF)	1,037.324 ppb	2.0 %	1,000.000 ppb	3.732 %
59Co (KED_DEF)	10.602 ppb	7.3 %	10.000 ppb	6.018 %
60Ni (KED_DEF)	10.084 ppb	2.7 %	10.000 ppb	0.840 %
65Cu (KED_DEF)	10.407 ppb	2.5 %	10.000 ppb	4.071 %
66Zn (KED_DEF)	11.253 ppb	2.4 %	10.000 ppb	12.530 %
74Ge (STD_DEF)	102.966 %	3.3 %		0.000 %
74Ge (KED_DEF)	103.330 %	1.6 %		0.000 %
75As (KED_DEF)	9.967 ppb	4.4 %	10.000 ppb	0.326 %
78Se (KED_DEF)	10.137 ppb	2.6 %	10.000 ppb	1.372 %
88Sr (KED_DEF)	9.913 ppb	3.1 %	10.000 ppb	0.868 %
95Mo (KED_DEF)	9.860 ppb	1.6 %	10.000 ppb	1.398 %
103Rh (STD_DEF)	98.226 %	2.9 %		0.000 %
103Rh (KED_DEF)	99.476 %	1.6 %		0.000 %
107Ag (KED_DEF)	10.156 ppb	1.0 %	10.000 ppb	1.555 %
111Cd (KED_DEF)	10.292 ppb	1.4 %	10.000 ppb	2.923 %
115In (STD_DEF)	100.554 %	3.9 %		0.000 %
115In (KED_DEF)	98.436 %	1.8 %		0.000 %
123Sb (KED_DEF)	9.928 ppb	2.3 %	10.000 ppb	0.717 %
137Ba (KED_DEF)	10.466 ppb	0.4 %	10.000 ppb	4.660 %
159Tb (STD_DEF)	101.496 %	2.6 %		0.000 %
159Tb (KED_DEF)	98.816 %	3.0 %		0.000 %
175Lu (STD_DEF)	101.049 %	3.2 %		0.000 %
175Lu (KED_DEF)	99.516 %	1.1 %		0.000 %
205Tl (KED_DEF)	10.214 ppb	1.4 %	10.000 ppb	2.142 %
208Pb (KED_DEF)	10.501 ppb	2.6 %	10.000 ppb	5.011 %
209Bi (STD_DEF)	109.042 %	2.2 %		0.000 %
209Bi (KED_DEF)	106.883 %	0.9 %		0.000 %

Standards:

Analysis Index: 7
Analysis Name: 60/6000 Cal
Analysis Type: STD
Analysis Started at: 4/14/2024 12:31:03 PM
Total Dilution Factor 166.66666666
Rack 0
Vial 5

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	98.778 %	1.4 %		0.000 %
6Li (KED_DEF)	101.751 %	5.9 %		0.000 %
9Be (STD_DEF)	58.813 ppb	3.6 %	60.000 ppb	1.978 %
11B (STD_DEF)	60.143 ppb	2.1 %	60.000 ppb	0.238 %
23Na (KED_DEF)	5,886.374 ppb	4.0 %	6,000.000 ppb	1.894 %
24Mg (KED_DEF)	5,825.598 ppb	2.1 %	6,000.000 ppb	2.907 %
27Al (STD_DEF)	59.314 ppb	2.0 %	60.000 ppb	1.143 %
39K (KED_DEF)	6,046.266 ppb	0.7 %	6,000.000 ppb	0.771 %
44Ca (KED_DEF)	5,974.164 ppb	13.7 %	6,000.000 ppb	0.431 %
45Sc (STD_DEF)	109.169 %	2.2 %		0.000 %
45Sc (KED_DEF)	105.663 %	2.7 %		0.000 %
51V (KED_DEF)	59.960 ppb	5.6 %	60.000 ppb	0.066 %
52Cr (KED_DEF)	59.874 ppb	0.7 %	60.000 ppb	0.210 %
55Mn (KED_DEF)	60.245 ppb	1.4 %	60.000 ppb	0.408 %
57Fe (KED_DEF)	5,972.193 ppb	0.3 %	6,000.000 ppb	0.463 %
59Co (KED_DEF)	59.888 ppb	4.2 %	60.000 ppb	0.187 %
60Ni (KED_DEF)	60.439 ppb	2.2 %	60.000 ppb	0.732 %
65Cu (KED_DEF)	60.596 ppb	5.6 %	60.000 ppb	0.994 %
66Zn (KED_DEF)	60.468 ppb	3.8 %	60.000 ppb	0.780 %
74Ge (STD_DEF)	103.368 %	0.7 %		0.000 %
74Ge (KED_DEF)	101.701 %	6.2 %		0.000 %
75As (KED_DEF)	59.711 ppb	4.9 %	60.000 ppb	0.482 %
78Se (KED_DEF)	57.809 ppb	6.7 %	60.000 ppb	3.652 %
88Sr (KED_DEF)	60.516 ppb	4.1 %	60.000 ppb	0.860 %
95Mo (KED_DEF)	60.022 ppb	4.4 %	60.000 ppb	0.037 %
103Rh (STD_DEF)	98.702 %	2.4 %		0.000 %
103Rh (KED_DEF)	96.059 %	2.0 %		0.000 %
107Ag (KED_DEF)	60.366 ppb	0.3 %	60.000 ppb	0.609 %
111Cd (KED_DEF)	59.393 ppb	3.7 %	60.000 ppb	1.012 %
115In (STD_DEF)	98.711 %	2.7 %		0.000 %
115In (KED_DEF)	97.025 %	0.9 %		0.000 %
123Sb (KED_DEF)	60.516 ppb	0.4 %	60.000 ppb	0.860 %
137Ba (KED_DEF)	59.624 ppb	1.2 %	60.000 ppb	0.627 %
159Tb (STD_DEF)	99.929 %	2.1 %		0.000 %
159Tb (KED_DEF)	98.978 %	0.7 %		0.000 %
175Lu (STD_DEF)	102.369 %	2.3 %		0.000 %
175Lu (KED_DEF)	99.414 %	1.2 %		0.000 %
205Tl (KED_DEF)	59.534 ppb	1.4 %	60.000 ppb	0.777 %
208Pb (KED_DEF)	59.111 ppb	1.1 %	60.000 ppb	1.481 %
209Bi (STD_DEF)	108.171 %	1.5 %		0.000 %
209Bi (KED_DEF)	106.731 %	0.7 %		0.000 %

Standards:

Analysis Index: 8
Analysis Name: 120/120000 Cal
Analysis Type: STD
Analysis Started at: 4/14/2024 12:35:45 PM
Total Dilution Factor 83.33333333
Rack 0
Vial 6

Category	Concentration average	Concentration RSD	Standard Concentration	Standard Relative Difference
6Li (STD_DEF)	96.790 %	2.6 %		0.000 %
6Li (KED_DEF)	96.693 %	3.5 %		0.000 %
9Be (STD_DEF)	120.614 ppb	2.9 %	120.000 ppb	0.511 %
11B (STD_DEF)	119.933 ppb	3.5 %	120.000 ppb	0.056 %
23Na (KED_DEF)	12,060.186 ppb	1.1 %	12,000.000 ppb	0.502 %
24Mg (KED_DEF)	12,082.413 ppb	5.5 %	12,000.000 ppb	0.687 %
27Al (STD_DEF)	120.304 ppb	2.1 %	120.000 ppb	0.253 %
39K (KED_DEF)	11,973.268 ppb	5.8 %	12,000.000 ppb	0.223 %
44Ca (KED_DEF)	11,156.582 ppb	3.6 %	12,000.000 ppb	7.028 %
45Sc (STD_DEF)	108.203 %	2.2 %		0.000 %
45Sc (KED_DEF)	106.952 %	3.2 %		0.000 %
51V (KED_DEF)	117.166 ppb	5.1 %	120.000 ppb	2.362 %
52Cr (KED_DEF)	119.991 ppb	4.1 %	120.000 ppb	0.008 %
55Mn (KED_DEF)	119.818 ppb	2.5 %	120.000 ppb	0.152 %
57Fe (KED_DEF)	12,010.700 ppb	1.5 %	12,000.000 ppb	0.089 %
59Co (KED_DEF)	120.006 ppb	2.5 %	120.000 ppb	0.005 %
60Ni (KED_DEF)	119.777 ppb	3.5 %	120.000 ppb	0.185 %
65Cu (KED_DEF)	119.672 ppb	3.4 %	120.000 ppb	0.274 %
66Zn (KED_DEF)	119.657 ppb	3.4 %	120.000 ppb	0.286 %
74Ge (STD_DEF)	105.570 %	2.7 %		0.000 %
74Ge (KED_DEF)	103.025 %	4.5 %		0.000 %
75As (KED_DEF)	120.147 ppb	3.0 %	120.000 ppb	0.122 %
78Se (KED_DEF)	121.084 ppb	6.3 %	120.000 ppb	0.903 %
88Sr (KED_DEF)	119.749 ppb	3.7 %	120.000 ppb	0.209 %
95Mo (KED_DEF)	118.266 ppb	1.1 %	120.000 ppb	1.445 %
103Rh (STD_DEF)	98.359 %	2.0 %		0.000 %
103Rh (KED_DEF)	97.714 %	0.8 %		0.000 %
107Ag (KED_DEF)	119.804 ppb	1.4 %	120.000 ppb	0.163 %
111Cd (KED_DEF)	120.279 ppb	1.6 %	120.000 ppb	0.233 %
115In (STD_DEF)	98.490 %	2.8 %		0.000 %
115In (KED_DEF)	97.417 %	1.3 %		0.000 %
123Sb (KED_DEF)	119.748 ppb	0.3 %	120.000 ppb	0.210 %
137Ba (KED_DEF)	120.149 ppb	1.4 %	120.000 ppb	0.124 %
159Tb (STD_DEF)	101.121 %	1.5 %		0.000 %
159Tb (KED_DEF)	98.035 %	2.7 %		0.000 %
175Lu (STD_DEF)	103.059 %	2.1 %		0.000 %
175Lu (KED_DEF)	100.090 %	1.6 %		0.000 %
205Tl (KED_DEF)	120.215 ppb	0.2 %	120.000 ppb	0.179 %
208Pb (KED_DEF)	120.402 ppb	1.2 %	120.000 ppb	0.335 %
209Bi (STD_DEF)	109.313 %	2.2 %		0.000 %
209Bi (KED_DEF)	105.842 %	0.6 %		0.000 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 1 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: Rinse Rack 0
Analysis started at: 4/14/2024 12:02:59 PM Vial 1

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	100.912 %	104.475 %	0.003 ppb	0.253 ppb	-48.896 ppb	-4.317 ppb	0.242 ppb	0.665 ppb	34.714 ppb
Concentration per Run 1	104.241 %	110.311 %	-0.003 ppb	0.246 ppb	-51.532 ppb	-3.995 ppb	0.183 ppb	1.092 ppb	16.384 ppb
Concentration per Run 2	100.845 %	102.140 %	0.013 ppb	0.271 ppb	-54.793 ppb	-2.321 ppb	0.222 ppb	-4.041 ppb	52.000 ppb
Concentration per Run 3	97.650 %	100.973 %	-0.001 ppb	0.240 ppb	-40.364 ppb	-6.633 ppb	0.320 ppb	4.944 ppb	35.757 ppb
Concentration RSD	3.3 %	4.9 %	268.3 %	6.6 %	15.5 %	50.4 %	29.2 %	678.0 %	51.4 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	101.549 %	107.542 %	0.087 ppb	0.038 ppb	0.102 ppb	5.662 ppb	-0.023 ppb	-0.252 ppb	-0.122 ppb
Concentration per Run 1	105.863 %	108.052 %	0.112 ppb	0.046 ppb	0.091 ppb	5.018 ppb	-0.019 ppb	-0.428 ppb	-0.139 ppb
Concentration per Run 2	101.889 %	108.696 %	0.110 ppb	0.155 ppb	0.100 ppb	3.696 ppb	-0.023 ppb	-0.118 ppb	-0.153 ppb
Concentration per Run 3	96.896 %	105.878 %	0.040 ppb	-0.088 ppb	0.116 ppb	8.273 ppb	-0.026 ppb	-0.211 ppb	-0.075 ppb
Concentration RSD	4.4 %	1.4 %	47.0 %	322.9 %	12.6 %	41.6 %	14.4 %	63.1 %	34.0 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.508 ppb	100.688 %	107.523 %	-0.089 ppb	-0.058 ppb	-0.036 ppb	0.002 ppb	99.000 %	103.277 %
Concentration per Run 1	0.506 ppb	104.109 %	105.254 %	-0.033 ppb	-0.084 ppb	-0.039 ppb	-0.008 ppb	101.073 %	102.340 %
Concentration per Run 2	0.501 ppb	99.496 %	109.143 %	-0.132 ppb	0.016 ppb	-0.013 ppb	0.008 ppb	99.164 %	102.157 %
Concentration per Run 3	0.517 ppb	98.459 %	108.171 %	-0.102 ppb	-0.106 ppb	-0.058 ppb	0.007 ppb	96.762 %	105.336 %
Concentration RSD	1.6 %	3.0 %	1.9 %	57.0 %	112.8 %	61.4 %	398.7 %	2.2 %	1.7 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.000 ppb	0.001 ppb	97.776 %	107.870 %	0.005 ppb	0.099 ppb	102.810 %	105.768 %	100.125 %
Concentration per Run 1	-0.002 ppb	0.002 ppb	97.438 %	106.571 %	-0.001 ppb	0.156 ppb	107.882 %	106.525 %	103.346 %
Concentration per Run 2	0.001 ppb	-0.001 ppb	95.423 %	106.510 %	0.006 ppb	0.106 ppb	100.695 %	105.217 %	98.666 %
Concentration per Run 3	0.000 ppb	0.002 ppb	100.468 %	110.529 %	0.010 ppb	0.037 ppb	99.853 %	105.562 %	98.363 %
Concentration RSD	292.8 %	184.1 %	2.6 %	2.1 %	115.9 %	60.1 %	4.3 %	0.6 %	2.8 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	110.528 %	0.018 ppb	0.082 ppb	53.860 %	47.922 %
Concentration per Run 1	111.215 %	0.008 ppb	0.071 ppb	51.510 %	50.394 %
Concentration per Run 2	108.264 %	0.019 ppb	0.096 ppb	54.459 %	44.598 %
Concentration per Run 3	112.105 %	0.026 ppb	0.080 ppb	55.612 %	48.775 %
Concentration RSD	1.8 %	50.5 %	15.6 %	3.9 %	6.2 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	2	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CAL LOT #M24-1045	Rack	0		
Analysis started at:	4/14/2024 12:07:38 PM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	100.935 %	93.969 %	-0.003 ppb	0.190 ppb	-38.682 ppb	-6.360 ppb	0.227 ppb	8.875 ppb	19.600 ppb
Concentration per Run 1	103.591 %	96.303 %	0.000 ppb	0.186 ppb	-45.280 ppb	-7.535 ppb	0.211 ppb	-14.896 ppb	37.973 ppb
Concentration per Run 2	100.105 %	97.471 %	-0.006 ppb	0.180 ppb	-40.609 ppb	-7.478 ppb	0.209 ppb	18.295 ppb	-19.891 ppb
Concentration per Run 3	99.110 %	88.132 %	-0.001 ppb	0.202 ppb	-30.158 ppb	-4.067 ppb	0.261 ppb	23.227 ppb	40.718 ppb
Concentration RSD	2.3 %	5.4 %	110.3 %	5.9 %	20.0 %	31.2 %	12.9 %	233.6 %	174.6 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	102.022 %	97.906 %	0.027 ppb	0.117 ppb	0.134 ppb	5.055 ppb	-0.020 ppb	-0.235 ppb	-0.125 ppb
Concentration per Run 1	104.463 %	101.933 %	0.017 ppb	0.070 ppb	0.116 ppb	6.779 ppb	-0.022 ppb	-0.324 ppb	-0.039 ppb
Concentration per Run 2	102.999 %	94.766 %	0.046 ppb	-0.025 ppb	0.129 ppb	4.446 ppb	-0.015 ppb	-0.195 ppb	-0.204 ppb
Concentration per Run 3	98.602 %	97.021 %	0.018 ppb	0.307 ppb	0.156 ppb	3.940 ppb	-0.022 ppb	-0.186 ppb	-0.130 ppb
Concentration RSD	3.0 %	3.7 %	60.9 %	145.5 %	15.3 %	30.0 %	21.8 %	32.8 %	66.5 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.623 ppb	100.720 %	97.356 %	-0.090 ppb	-0.106 ppb	-0.040 ppb	0.006 ppb	98.913 %	99.470 %
Concentration per Run 1	0.561 ppb	104.641 %	97.738 %	-0.097 ppb	-0.092 ppb	-0.065 ppb	0.000 ppb	100.869 %	98.800 %
Concentration per Run 2	0.609 ppb	98.520 %	97.685 %	-0.062 ppb	-0.100 ppb	-0.018 ppb	-0.008 ppb	97.033 %	100.050 %
Concentration per Run 3	0.700 ppb	98.997 %	96.644 %	-0.111 ppb	-0.126 ppb	-0.036 ppb	0.025 ppb	98.839 %	99.560 %
Concentration RSD	11.3 %	3.4 %	0.6 %	28.2 %	16.3 %	60.4 %	303.1 %	1.9 %	0.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.000 ppb	0.002 ppb	98.535 %	97.884 %	0.006 ppb	0.116 ppb	100.282 %	99.533 %	99.375 %
Concentration per Run 1	-0.001 ppb	0.006 ppb	100.435 %	98.187 %	0.003 ppb	0.244 ppb	104.161 %	98.646 %	101.372 %
Concentration per Run 2	0.000 ppb	0.002 ppb	98.312 %	97.216 %	0.005 ppb	0.080 ppb	99.172 %	99.274 %	97.738 %
Concentration per Run 3	-0.001 ppb	-0.001 ppb	96.857 %	98.248 %	0.011 ppb	0.024 ppb	97.513 %	100.679 %	99.016 %
Concentration RSD	92.1 %	147.9 %	1.8 %	0.6 %	68.5 %	98.4 %	3.5 %	1.0 %	1.9 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.348 %	0.001 ppb	0.031 ppb	93.330 %	91.652 %
Concentration per Run 1	98.122 %	-0.003 ppb	0.033 ppb	96.122 %	94.090 %
Concentration per Run 2	97.397 %	0.002 ppb	0.029 ppb	93.596 %	89.353 %
Concentration per Run 3	99.524 %	0.005 ppb	0.033 ppb	90.271 %	91.512 %
Concentration RSD	1.1 %	287.5 %	7.1 %	3.1 %	2.6 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	3	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Blank WKP ICPMSRQ	Rack	4		
Analysis started at:	4/14/2024 12:12:17 PM	Vial	49		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.0 %	0.1 %	0.1 %	0.0 %	0.4 %	0.4 %	0.1 %	1.8 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration per Run	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb
Concentration RSD	0.0 %	0.0 %	1.7 %	0.1 %	0.1 %	0.5 %	0.3 %	0.1 %	0.1 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	100.000 %
Concentration per Run	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	0.000 ppb	0.000 ppb	100.000 %	100.000 %
Concentration RSD	0.2 %	0.0 %	0.0 %	0.3 %	1.0 %	0.5 %	1.0 %	0.0 %	0.0 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %	100.000 %	100.000 %
Concentration per Run	0.000 ppb	0.000 ppb	100.000 %	100.000 %	0.000 ppb	0.000 ppb	100.000 %	100.000 %	100.000 %
Concentration RSD	0.2 %	1.7 %	0.0 %	0.0 %	1.7 %	0.7 %	0.0 %	0.0 %	0.0 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	100.000 %	0.000 ppb	0.000 ppb	100.000 %	100.000 %
Concentration per Run	100.000 %	0.000 ppb	0.000 ppb	100.000 %	100.000 %
Concentration RSD	0.0 %	0.3 %	0.2 %	0.0 %	0.0 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 4 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: 0.2/20 Cal Rack 0
Analysis started at: 4/14/2024 12:17:01 PM Vial 2

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	99.932 %	102.335 %	0.210 ppb	0.346 ppb	-31.720 ppb	19.336 ppb	1.368 ppb	-14.581 ppb	281.295 ppb
Concentration per Run 1	100.850 %	91.051 %	0.199 ppb	0.339 ppb	-14.373 ppb	17.957 ppb	1.269 ppb	5.418 ppb	329.460 ppb
Concentration per Run 2	99.100 %	104.475 %	0.218 ppb	0.365 ppb	-40.109 ppb	16.131 ppb	1.318 ppb	-8.562 ppb	304.919 ppb
Concentration per Run 3	99.844 %	111.479 %	0.212 ppb	0.333 ppb	-40.679 ppb	23.920 ppb	1.518 ppb	-40.598 ppb	209.505 ppb
Concentration RSD	0.9 %	10.1 %	4.6 %	4.9 %	47.4 %	21.1 %	9.6 %	161.8 %	22.5 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	99.963 %	98.900 %	0.234 ppb	0.358 ppb	0.246 ppb	22.765 ppb	0.192 ppb	-0.382 ppb	-0.113 ppb
Concentration per Run 1	99.691 %	94.364 %	0.210 ppb	0.421 ppb	0.309 ppb	25.494 ppb	0.224 ppb	-0.332 ppb	-0.169 ppb
Concentration per Run 2	101.161 %	101.530 %	0.143 ppb	0.328 ppb	0.217 ppb	21.701 ppb	0.187 ppb	-0.408 ppb	-0.072 ppb
Concentration per Run 3	99.037 %	100.805 %	0.350 ppb	0.325 ppb	0.212 ppb	21.101 ppb	0.166 ppb	-0.405 ppb	-0.099 ppb
Concentration RSD	1.1 %	4.0 %	44.9 %	15.3 %	22.2 %	10.5 %	15.3 %	11.2 %	43.9 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	1.310 ppb	100.647 %	101.713 %	0.119 ppb	0.122 ppb	0.256 ppb	0.204 ppb	98.831 %	97.627 %
Concentration per Run 1	1.471 ppb	102.390 %	96.227 %	0.083 ppb	0.294 ppb	0.299 ppb	0.183 ppb	99.382 %	94.861 %
Concentration per Run 2	1.248 ppb	99.208 %	105.255 %	0.105 ppb	-0.099 ppb	0.193 ppb	0.248 ppb	98.049 %	98.101 %
Concentration per Run 3	1.210 ppb	100.343 %	103.657 %	0.167 ppb	0.172 ppb	0.276 ppb	0.180 ppb	99.062 %	99.919 %
Concentration RSD	10.8 %	1.6 %	4.7 %	36.9 %	164.4 %	21.9 %	18.8 %	0.7 %	2.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.217 ppb	0.200 ppb	100.742 %	95.985 %	0.226 ppb	0.299 ppb	101.224 %	97.318 %	101.327 %
Concentration per Run 1	0.227 ppb	0.221 ppb	102.791 %	91.041 %	0.227 ppb	0.340 ppb	103.667 %	93.426 %	103.282 %
Concentration per Run 2	0.210 ppb	0.190 ppb	100.919 %	98.636 %	0.196 ppb	0.245 ppb	100.784 %	97.311 %	98.390 %
Concentration per Run 3	0.214 ppb	0.189 ppb	98.516 %	98.278 %	0.255 ppb	0.312 ppb	99.222 %	101.217 %	102.310 %
Concentration RSD	4.0 %	9.1 %	2.1 %	4.5 %	12.9 %	16.3 %	2.2 %	4.0 %	2.6 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	97.821 %	0.230 ppb	0.235 ppb	100.021 %	98.787 %
Concentration per Run 1	97.099 %	0.229 ppb	0.238 ppb	100.615 %	98.233 %
Concentration per Run 2	98.862 %	0.241 ppb	0.242 ppb	100.502 %	96.509 %
Concentration per Run 3	97.501 %	0.220 ppb	0.225 ppb	98.945 %	101.618 %
Concentration RSD	0.9 %	4.5 %	3.7 %	0.9 %	2.6 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 5
Analysis label: 1/100 Cal
Analysis started at: 4/14/2024 12:21:41 PM
User name ALPHALAB\ICPMSRQ
Rack 0
Vial 3
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	101.884 %	98.444 %	0.964 ppb	0.943 ppb	54.792 ppb	101.020 ppb	1.193 ppb	101.165 ppb	234.050 ppb
Concentration per Run 1	104.541 %	105.642 %	0.959 ppb	0.892 ppb	43.411 ppb	100.547 ppb	1.159 ppb	120.823 ppb	176.483 ppb
Concentration per Run 2	100.906 %	103.307 %	1.011 ppb	0.945 ppb	50.089 ppb	102.207 ppb	1.223 ppb	89.738 ppb	220.120 ppb
Concentration per Run 3	100.204 %	86.381 %	0.922 ppb	0.992 ppb	70.876 ppb	100.306 ppb	1.198 ppb	92.933 ppb	305.545 ppb
Concentration RSD	2.3 %	10.7 %	4.6 %	5.3 %	26.1 %	1.0 %	2.7 %	16.9 %	28.0 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	102.635 %	99.678 %	1.060 ppb	1.137 ppb	1.065 ppb	110.649 ppb	0.994 ppb	0.619 ppb	0.616 ppb
Concentration per Run 1	107.522 %	104.590 %	0.976 ppb	1.089 ppb	0.966 ppb	102.560 ppb	0.956 ppb	0.645 ppb	0.628 ppb
Concentration per Run 2	99.428 %	94.042 %	1.072 ppb	0.849 ppb	1.170 ppb	114.471 ppb	1.050 ppb	0.521 ppb	0.629 ppb
Concentration per Run 3	100.954 %	100.403 %	1.133 ppb	1.472 ppb	1.060 ppb	114.917 ppb	0.976 ppb	0.691 ppb	0.591 ppb
Concentration RSD	4.2 %	5.3 %	7.5 %	27.6 %	9.5 %	6.3 %	5.0 %	14.2 %	3.5 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	1.309 ppb	101.114 %	99.457 %	1.079 ppb	1.072 ppb	1.034 ppb	1.075 ppb	99.127 %	97.787 %
Concentration per Run 1	1.407 ppb	104.792 %	95.933 %	1.166 ppb	1.689 ppb	1.262 ppb	1.070 ppb	100.523 %	98.098 %
Concentration per Run 2	1.326 ppb	99.910 %	103.935 %	0.906 ppb	0.941 ppb	1.026 ppb	1.145 ppb	98.810 %	97.190 %
Concentration per Run 3	1.195 ppb	98.640 %	98.502 %	1.165 ppb	0.586 ppb	0.814 ppb	1.012 ppb	98.048 %	98.073 %
Concentration RSD	8.2 %	3.2 %	4.1 %	13.9 %	52.5 %	21.7 %	6.2 %	1.3 %	0.5 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.988 ppb	1.027 ppb	99.842 %	97.141 %	1.003 ppb	0.973 ppb	101.154 %	98.696 %	100.210 %
Concentration per Run 1	0.988 ppb	1.021 ppb	104.318 %	97.594 %	1.010 ppb	1.070 ppb	103.074 %	98.418 %	103.156 %
Concentration per Run 2	0.995 ppb	1.089 ppb	97.402 %	96.827 %	0.994 ppb	0.920 ppb	100.970 %	99.897 %	99.171 %
Concentration per Run 3	0.981 ppb	0.972 ppb	97.806 %	97.001 %	1.005 ppb	0.930 ppb	99.419 %	97.774 %	98.302 %
Concentration RSD	0.7 %	5.7 %	3.9 %	0.4 %	0.8 %	8.6 %	1.8 %	1.1 %	2.6 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.366 %	0.970 ppb	1.030 ppb	107.379 %	107.421 %
Concentration per Run 1	95.820 %	0.998 ppb	0.991 ppb	111.034 %	109.982 %
Concentration per Run 2	99.652 %	0.950 ppb	1.055 ppb	107.467 %	105.626 %
Concentration per Run 3	99.625 %	0.963 ppb	1.046 ppb	103.637 %	106.656 %
Concentration RSD	2.2 %	2.6 %	3.4 %	3.4 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	6	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	10/10000 Cal	Rack	0		
Analysis started at:	4/14/2024 12:26:22 PM	Vial	4		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	100.176 %	103.502 %	9.763 ppb	9.949 ppb	965.081 ppb	1,057.369 ppb	10.427 ppb	1,043.763 ppb	1,136.384 ppb
Concentration per Run 1	103.921 %	100.973 %	9.382 ppb	9.362 ppb	960.043 ppb	1,045.193 ppb	10.428 ppb	1,067.530 ppb	1,087.701 ppb
Concentration per Run 2	98.929 %	99.805 %	9.917 ppb	10.308 ppb	1,003.456 ppb	1,093.576 ppb	10.407 ppb	1,034.099 ppb	1,061.412 ppb
Concentration per Run 3	97.677 %	109.728 %	9.990 ppb	10.177 ppb	931.742 ppb	1,033.338 ppb	10.447 ppb	1,029.662 ppb	1,260.040 ppb
Concentration RSD	3.3 %	5.2 %	3.4 %	5.1 %	3.7 %	3.0 %	0.2 %	2.0 %	9.5 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	103.736 %	100.886 %	10.232 ppb	10.852 ppb	10.710 ppb	1,037.324 ppb	10.602 ppb	10.084 ppb	10.407 ppb
Concentration per Run 1	104.389 %	104.509 %	10.166 ppb	10.644 ppb	10.566 ppb	1,032.113 ppb	10.038 ppb	9.768 ppb	10.622 ppb
Concentration per Run 2	102.564 %	97.826 %	10.024 ppb	11.473 ppb	11.000 ppb	1,060.230 ppb	11.481 ppb	10.203 ppb	10.477 ppb
Concentration per Run 3	104.256 %	100.322 %	10.505 ppb	10.438 ppb	10.565 ppb	1,019.630 ppb	10.286 ppb	10.281 ppb	10.122 ppb
Concentration RSD	1.0 %	3.3 %	2.4 %	5.1 %	2.3 %	2.0 %	7.3 %	2.7 %	2.5 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	11.253 ppb	102.966 %	103.330 %	9.967 ppb	10.137 ppb	9.913 ppb	9.860 ppb	98.226 %	99.476 %
Concentration per Run 1	11.306 ppb	106.676 %	103.747 %	9.468 ppb	10.423 ppb	9.683 ppb	9.732 ppb	100.565 %	97.800 %
Concentration per Run 2	10.956 ppb	102.226 %	101.508 %	10.284 ppb	10.075 ppb	9.790 ppb	9.807 ppb	98.996 %	99.704 %
Concentration per Run 3	11.497 ppb	99.995 %	104.736 %	10.149 ppb	9.914 ppb	10.267 ppb	10.042 ppb	95.116 %	100.925 %
Concentration RSD	2.4 %	3.3 %	1.6 %	4.4 %	2.6 %	3.1 %	1.6 %	2.9 %	1.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	10.156 ppb	10.292 ppb	100.554 %	98.436 %	9.928 ppb	10.466 ppb	101.496 %	98.816 %	101.049 %
Concentration per Run 1	10.258 ppb	10.427 ppb	105.027 %	96.562 %	10.172 ppb	10.491 ppb	104.342 %	96.469 %	103.790 %
Concentration per Run 2	10.147 ppb	10.133 ppb	97.539 %	98.565 %	9.883 ppb	10.419 ppb	101.101 %	97.854 %	97.477 %
Concentration per Run 3	10.061 ppb	10.317 ppb	99.094 %	100.180 %	9.731 ppb	10.488 ppb	99.045 %	102.124 %	101.880 %
Concentration RSD	1.0 %	1.4 %	3.9 %	1.8 %	2.3 %	0.4 %	2.6 %	3.0 %	3.2 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	99.516 %	10.214 ppb	10.501 ppb	109.042 %	106.883 %
Concentration per Run 1	98.220 %	10.369 ppb	10.270 ppb	111.790 %	107.962 %
Concentration per Run 2	99.953 %	10.078 ppb	10.429 ppb	107.725 %	106.264 %
Concentration per Run 3	100.374 %	10.195 ppb	10.805 ppb	107.613 %	106.424 %
Concentration RSD	1.1 %	1.4 %	2.6 %	2.2 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	7	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	60/6000 Cal	Rack	0		
Analysis started at:	4/14/2024 12:31:03 PM	Vial	5		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	98.778 %	101.751 %	58.813 ppb	60.143 ppb	5,886.374 ppb	5,825.598 ppb	59.314 ppb	6,046.266 ppb	5,974.164 ppb
Concentration per Run 1	100.307 %	95.136 %	56.337 ppb	58.700 ppb	6,147.266 ppb	5,894.654 ppb	57.978 ppb	6,043.484 ppb	5,052.438 ppb
Concentration per Run 2	97.694 %	103.307 %	59.977 ppb	60.989 ppb	5,829.868 ppb	5,898.110 ppb	59.785 ppb	6,092.835 ppb	6,625.333 ppb
Concentration per Run 3	98.334 %	106.809 %	60.125 ppb	60.739 ppb	5,681.988 ppb	5,684.030 ppb	60.180 ppb	6,002.478 ppb	6,244.722 ppb
Concentration RSD	1.4 %	5.9 %	3.6 %	2.1 %	4.0 %	2.1 %	2.0 %	0.7 %	13.7 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	109.169 %	105.663 %	59.960 ppb	59.874 ppb	60.245 ppb	5,972.193 ppb	59.888 ppb	60.439 ppb	60.596 ppb
Concentration per Run 1	111.508 %	108.616 %	58.701 ppb	59.456 ppb	59.256 ppb	5,982.643 ppb	61.488 ppb	61.609 ppb	64.371 ppb
Concentration per Run 2	109.271 %	102.899 %	57.444 ppb	59.832 ppb	60.853 ppb	5,981.406 ppb	57.017 ppb	60.714 ppb	59.686 ppb
Concentration per Run 3	106.728 %	105.475 %	63.736 ppb	60.334 ppb	60.625 ppb	5,952.529 ppb	61.159 ppb	58.996 ppb	57.732 ppb
Concentration RSD	2.2 %	2.7 %	5.6 %	0.7 %	1.4 %	0.3 %	4.2 %	2.2 %	5.6 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	60.468 ppb	103.368 %	101.701 %	59.711 ppb	57.809 ppb	60.516 ppb	60.022 ppb	98.702 %	96.059 %
Concentration per Run 1	63.099 ppb	104.131 %	94.686 %	62.934 ppb	61.946 ppb	62.311 ppb	62.251 ppb	100.968 %	95.577 %
Concentration per Run 2	58.985 ppb	103.244 %	106.806 %	57.217 ppb	54.344 ppb	57.647 ppb	57.095 ppb	98.909 %	98.165 %
Concentration per Run 3	59.319 ppb	102.728 %	103.611 %	58.981 ppb	57.136 ppb	61.589 ppb	60.721 ppb	96.229 %	94.437 %
Concentration RSD	3.8 %	0.7 %	6.2 %	4.9 %	6.7 %	4.1 %	4.4 %	2.4 %	2.0 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	60.366 ppb	59.393 ppb	98.711 %	97.025 %	60.516 ppb	59.624 ppb	99.929 %	98.978 %	102.369 %
Concentration per Run 1	60.414 ppb	56.953 ppb	101.747 %	96.408 %	60.699 ppb	59.455 ppb	102.243 %	99.195 %	103.690 %
Concentration per Run 2	60.179 ppb	59.952 ppb	97.008 %	96.612 %	60.237 ppb	59.024 ppb	98.034 %	98.167 %	99.672 %
Concentration per Run 3	60.504 ppb	61.273 ppb	97.379 %	98.054 %	60.613 ppb	60.393 ppb	99.508 %	99.574 %	103.746 %
Concentration RSD	0.3 %	3.7 %	2.7 %	0.9 %	0.4 %	1.2 %	2.1 %	0.7 %	2.3 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	99.414 %	59.534 ppb	59.111 ppb	108.171 %	106.731 %
Concentration per Run 1	99.600 %	58.669 ppb	58.675 ppb	109.503 %	107.421 %
Concentration per Run 2	98.131 %	59.641 ppb	58.809 ppb	106.439 %	106.744 %
Concentration per Run 3	100.510 %	60.291 ppb	59.850 ppb	108.572 %	106.028 %
Concentration RSD	1.2 %	1.4 %	1.1 %	1.5 %	0.7 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	8	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	120/120000 Cal	Rack	0		
Analysis started at:	4/14/2024 12:35:45 PM	Vial	6		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	96.790 %	96.693 %	120.614 ppb	119.933 ppb	12,060.186 ppb	12,082.413 ppb	120.304 ppb	11,973.268 ppb	11,156.552 ppb
Concentration per Run 1	99.595 %	98.054 %	116.763 ppb	115.427 ppb	11,909.863 ppb	11,410.722 ppb	117.886 ppb	11,334.124 ppb	10,879.574 ppb
Concentration per Run 2	95.902 %	99.222 %	121.481 ppb	120.532 ppb	12,158.325 ppb	12,086.169 ppb	120.136 ppb	11,880.762 ppb	11,621.043 ppb
Concentration per Run 3	94.874 %	92.802 %	123.597 ppb	123.841 ppb	12,112.369 ppb	12,750.348 ppb	122.889 ppb	12,704.918 ppb	10,969.129 ppb
Concentration RSD	2.6 %	3.5 %	2.9 %	3.5 %	1.1 %	5.5 %	2.1 %	5.8 %	3.0 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	108.203 %	106.952 %	117.166 ppb	119.991 ppb	119.818 ppb	12,010.700 ppb	120.006 ppb	119.777 ppb	119.672 ppb
Concentration per Run 1	110.892 %	110.709 %	111.456 ppb	118.000 ppb	118.680 ppb	12,042.612 ppb	121.004 ppb	124.106 ppb	121.316 ppb
Concentration per Run 2	106.875 %	106.281 %	116.655 ppb	116.412 ppb	117.497 ppb	11,812.911 ppb	116.638 ppb	115.624 ppb	115.087 ppb
Concentration per Run 3	106.843 %	103.865 %	123.388 ppb	125.561 ppb	123.277 ppb	12,176.577 ppb	122.376 ppb	119.602 ppb	122.612 ppb
Concentration RSD	2.2 %	3.2 %	5.1 %	4.1 %	2.5 %	1.5 %	2.5 %	3.5 %	3.4 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	119.657 ppb	105.570 %	103.025 %	120.147 ppb	121.084 ppb	119.749 ppb	118.266 ppb	98.359 %	97.714 %
Concentration per Run 1	123.184 ppb	108.666 %	98.517 %	123.562 ppb	127.591 ppb	122.052 ppb	119.265 ppb	100.596 %	97.208 %
Concentration per Run 2	115.277 ppb	104.847 %	107.723 %	116.408 ppb	112.631 ppb	114.610 ppb	118.666 ppb	96.851 %	98.661 %
Concentration per Run 3	120.511 ppb	103.196 %	102.835 %	120.471 ppb	123.029 ppb	122.585 ppb	116.867 ppb	97.628 %	97.273 %
Concentration RSD	3.4 %	2.7 %	4.5 %	3.0 %	6.3 %	3.7 %	1.1 %	2.0 %	0.8 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	119.804 ppb	120.279 ppb	98.490 %	97.417 %	119.748 ppb	120.149 ppb	101.121 %	98.035 %	103.059 %
Concentration per Run 1	121.642 ppb	120.365 ppb	101.597 %	96.050 %	119.547 ppb	118.165 ppb	102.767 %	95.101 %	105.596 %
Concentration per Run 2	118.381 ppb	122.120 ppb	96.340 %	97.778 %	119.568 ppb	120.863 ppb	100.701 %	100.158 %	101.820 %
Concentration per Run 3	119.390 ppb	118.352 ppb	97.534 %	98.422 %	120.129 ppb	121.419 ppb	99.895 %	98.844 %	101.760 %
Concentration RSD	1.4 %	1.6 %	2.8 %	1.3 %	0.3 %	1.4 %	1.5 %	2.7 %	2.1 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	100.090 %	120.215 ppb	120.402 ppb	109.313 %	105.842 %
Concentration per Run 1	100.078 %	120.388 ppb	118.747 ppb	112.048 %	106.588 %
Concentration per Run 2	98.521 %	120.287 ppb	121.370 ppb	108.095 %	105.664 %
Concentration per Run 3	101.671 %	119.971 ppb	121.090 ppb	107.796 %	105.274 %
Concentration RSD	1.6 %	0.2 %	1.2 %	2.2 %	0.6 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	9	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Sr 200ppb	Rack	4		
Analysis started at:	4/14/2024 12:40:28 PM	Vial	55		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	102.658 %	109.533 %	0.058 ppb	0.331 ppb	-59.863 ppb	-4.107 ppb	0.632 ppb	-26.678 ppb	-9.224 ppb
Concentration per Run 1	106.145 %	107.977 %	0.063 ppb	0.368 ppb	-66.442 ppb	-7.205 ppb	0.509 ppb	-31.286 ppb	0.723 ppb
Concentration per Run 2	101.369 %	107.393 %	0.048 ppb	0.335 ppb	-55.782 ppb	-2.021 ppb	0.684 ppb	-22.973 ppb	39.156 ppb
Concentration per Run 3	100.459 %	113.230 %	0.064 ppb	0.290 ppb	-57.364 ppb	-3.093 ppb	0.702 ppb	-25.774 ppb	-67.550 ppb
Concentration RSD	3.0 %	2.9 %	15.3 %	11.8 %	9.6 %	66.6 %	16.9 %	15.9 %	585.9 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	107.205 %	106.307 %	0.049 ppb	0.020 ppb	0.064 ppb	11.289 ppb	-0.002 ppb	-0.542 ppb	-0.344 ppb
Concentration per Run 1	109.484 %	104.992 %	0.090 ppb	0.075 ppb	0.067 ppb	11.870 ppb	-0.019 ppb	-0.587 ppb	-0.318 ppb
Concentration per Run 2	106.534 %	108.133 %	0.040 ppb	-0.085 ppb	0.068 ppb	14.506 ppb	0.014 ppb	-0.553 ppb	-0.342 ppb
Concentration per Run 3	105.598 %	105.798 %	0.016 ppb	0.070 ppb	0.057 ppb	7.492 ppb	0.000 ppb	-0.486 ppb	-0.373 ppb
Concentration RSD	1.9 %	1.5 %	78.7 %	447.6 %	9.5 %	31.4 %	974.7 %	9.5 %	8.0 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.300 ppb	102.204 %	104.392 %	-0.006 ppb	0.199 ppb	192.543 ppb	0.278 ppb	103.130 %	101.219 %
Concentration per Run 1	0.185 ppb	104.453 %	102.946 %	0.080 ppb	0.420 ppb	191.301 ppb	0.248 ppb	106.180 %	103.619 %
Concentration per Run 2	0.401 ppb	102.277 %	102.824 %	0.006 ppb	0.158 ppb	196.216 ppb	0.302 ppb	102.378 %	100.727 %
Concentration per Run 3	0.314 ppb	99.883 %	107.407 %	-0.103 ppb	0.018 ppb	190.110 ppb	0.285 ppb	100.831 %	99.313 %
Concentration RSD	36.2 %	2.2 %	2.5 %	1,590.7 %	102.8 %	1.7 %	10.0 %	2.7 %	2.2 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.012 ppb	0.015 ppb	101.718 %	99.925 %	0.044 ppb	0.036 ppb	102.309 %	99.461 %	101.931 %
Concentration per Run 1	0.009 ppb	0.019 ppb	104.789 %	98.790 %	0.047 ppb	0.060 ppb	105.500 %	100.739 %	103.483 %
Concentration per Run 2	0.012 ppb	0.009 ppb	100.858 %	99.628 %	0.043 ppb	0.024 ppb	100.083 %	98.944 %	101.274 %
Concentration per Run 3	0.015 ppb	0.016 ppb	99.509 %	101.357 %	0.042 ppb	0.024 ppb	101.345 %	98.701 %	101.036 %
Concentration RSD	24.1 %	35.1 %	2.7 %	1.3 %	6.2 %	57.4 %	2.8 %	1.1 %	1.3 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	99.273 %	0.422 ppb	0.017 ppb	114.005 %	114.038 %
Concentration per Run 1	97.090 %	0.286 ppb	0.017 ppb	118.869 %	119.603 %
Concentration per Run 2	99.843 %	0.485 ppb	0.019 ppb	112.718 %	111.448 %
Concentration per Run 3	100.886 %	0.494 ppb	0.014 ppb	110.427 %	111.064 %
Concentration RSD	2.0 %	27.9 %	16.5 %	3.8 %	4.2 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 10 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: ICV Rack 0
Analysis started at: 4/14/2024 12:45:12 PM Vial 7

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	99.713 %	100.195 %	52.215 ppb	53.936 ppb	5,488.246 ppb	5,302.482 ppb	53.052 ppb	5,245.598 ppb	6,034.715 ppb
Concentration per Run 1	102.452 %	95.720 %	50.705 ppb	52.111 ppb	5,638.988 ppb	5,660.114 ppb	50.392 ppb	5,634.351 ppb	5,931.981 ppb
Concentration per Run 2	98.625 %	100.973 %	52.208 ppb	54.408 ppb	5,397.190 ppb	5,141.099 ppb	53.541 ppb	5,298.056 ppb	5,936.624 ppb
Concentration per Run 3	98.061 %	103.891 %	53.732 ppb	55.289 ppb	5,428.559 ppb	5,106.234 ppb	55.224 ppb	4,804.386 ppb	6,235.540 ppb
Recovery Percentage 1			104.430 %	107.871 %	109.765 %	106.050 %	106.104 %	104.912 %	120.694 %
Concentration RSD	2.4 %	4.1 %	2.9 %	3.0 %	2.4 %	5.9 %	4.6 %	8.0 %	2.9 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	105.740 %	98.229 %	55.334 ppb	54.633 ppb	52.449 ppb	5,493.611 ppb	54.350 ppb	54.961 ppb	54.287 ppb
Concentration per Run 1	110.433 %	98.712 %	59.475 ppb	59.567 ppb	55.611 ppb	6,008.505 ppb	60.838 ppb	59.674 ppb	56.475 ppb
Concentration per Run 2	106.585 %	97.504 %	52.384 ppb	50.590 ppb	51.189 ppb	5,362.423 ppb	50.892 ppb	52.862 ppb	52.715 ppb
Concentration per Run 3	100.203 %	98.470 %	54.141 ppb	53.740 ppb	50.545 ppb	5,109.905 ppb	51.319 ppb	52.348 ppb	53.671 ppb
Recovery Percentage 1			110.667 %	109.265 %	104.897 %	109.872 %	108.699 %	109.923 %	108.574 %
Concentration RSD	4.9 %	0.7 %	6.7 %	8.3 %	5.3 %	8.4 %	10.3 %	7.4 %	3.6 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	55.102 ppb	104.515 %	100.050 %	54.237 ppb	55.132 ppb	54.162 ppb	54.803 ppb	101.677 %	97.592 %
Concentration per Run 1	56.969 ppb	107.497 %	91.459 %	56.487 ppb	61.167 ppb	56.836 ppb	56.442 ppb	103.757 %	94.730 %
Concentration per Run 2	55.055 ppb	104.051 %	103.208 %	53.627 ppb	54.320 ppb	52.332 ppb	54.978 ppb	100.198 %	98.143 %
Concentration per Run 3	53.281 ppb	101.997 %	105.483 %	52.598 ppb	49.908 ppb	53.318 ppb	52.989 ppb	101.075 %	99.904 %
Recovery Percentage 1	110.203 %			108.474 %	110.264 %	108.324 %	109.606 %		
Concentration RSD	3.3 %	2.7 %	7.5 %	3.7 %	10.3 %	4.4 %	3.2 %	1.8 %	2.7 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	54.142 ppb	53.872 ppb	99.328 %	97.021 %	53.710 ppb	53.728 ppb	104.554 %	98.183 %	102.718 %
Concentration per Run 1	56.126 ppb	55.710 ppb	100.886 %	94.680 %	55.098 ppb	55.825 ppb	107.142 %	94.507 %	103.712 %
Concentration per Run 2	53.907 ppb	52.644 ppb	98.585 %	97.655 %	53.165 ppb	53.268 ppb	102.332 %	98.855 %	104.395 %
Concentration per Run 3	52.393 ppb	53.262 ppb	98.514 %	98.729 %	52.867 ppb	52.091 ppb	104.188 %	101.185 %	100.047 %
Recovery Percentage 1	108.284 %	107.744 %			107.419 %	107.456 %			
Concentration RSD	3.5 %	3.0 %	1.4 %	2.2 %	2.3 %	3.6 %	2.3 %	3.5 %	2.3 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	97.885 %	53.699 ppb	55.063 ppb	112.313 %	105.139 %
Concentration per Run 1	92.672 %	54.955 ppb	57.354 ppb	114.295 %	106.301 %
Concentration per Run 2	99.602 %	51.563 ppb	54.211 ppb	110.610 %	106.137 %
Concentration per Run 3	101.382 %	54.579 ppb	53.625 ppb	112.034 %	102.977 %
Recovery Percentage 1		107.398 %	110.126 %		
Concentration RSD	4.7 %	3.5 %	3.6 %	1.7 %	1.8 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	11	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	ICB	Rack	0		
Analysis started at:	4/14/2024 12:49:55 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	102.562 %	106.031 %	0.056 ppb	0.287 ppb	-35.467 ppb	-6.135 ppb	-0.677 ppb	-13.489 ppb	-20.022 ppb
Concentration per Run 1	104.338 %	102.140 %	0.061 ppb	0.284 ppb	-34.304 ppb	-5.868 ppb	-0.680 ppb	-10.293 ppb	-20.063 ppb
Concentration per Run 2	101.801 %	110.895 %	0.056 ppb	0.311 ppb	-39.413 ppb	-6.574 ppb	-0.625 ppb	-19.073 ppb	-20.119 ppb
Concentration per Run 3	101.547 %	105.058 %	0.052 ppb	0.266 ppb	-32.685 ppb	-5.961 ppb	-0.726 ppb	-11.102 ppb	-19.884 ppb
Recovery Percentage 1			11.239 %	2.872 %	-35.467 %	-8.764 %	-6.769 %	-13.489 %	-20.022 %
Concentration RSD	1.5 %	4.2 %	8.2 %	8.0 %	9.9 %	6.3 %	7.5 %	36.0 %	0.6 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	104.734 %	99.946 %	0.063 ppb	-0.066 ppb	0.006 ppb	1.577 ppb	-0.011 ppb	-0.416 ppb	-0.223 ppb
Concentration per Run 1	109.240 %	101.288 %	0.041 ppb	-0.008 ppb	0.013 ppb	2.769 ppb	-0.022 ppb	-0.394 ppb	-0.184 ppb
Concentration per Run 2	100.365 %	102.818 %	0.060 ppb	-0.163 ppb	0.020 ppb	0.141 ppb	-0.009 ppb	-0.465 ppb	-0.277 ppb
Concentration per Run 3	104.597 %	95.732 %	0.087 ppb	-0.027 ppb	-0.014 ppb	1.820 ppb	-0.002 ppb	-0.390 ppb	-0.208 ppb
Recovery Percentage 1			1.254 %	-6.585 %	0.630 %	3.154 %	-2.244 %	-20.809 %	-22.332 %
Concentration RSD	4.2 %	3.7 %	37.4 %	128.3 %	288.5 %	84.4 %	88.5 %	10.1 %	21.6 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.050 ppb	103.849 %	103.507 %	-0.031 ppb	0.029 ppb	0.001 ppb	0.150 ppb	102.654 %	102.550 %
Concentration per Run 1	-0.032 ppb	107.918 %	100.794 %	-0.017 ppb	-0.084 ppb	0.009 ppb	0.089 ppb	106.360 %	102.154 %
Concentration per Run 2	-0.012 ppb	102.450 %	106.002 %	0.027 ppb	0.144 ppb	0.015 ppb	0.192 ppb	103.895 %	102.421 %
Concentration per Run 3	-0.107 ppb	101.178 %	103.727 %	-0.102 ppb	0.028 ppb	-0.020 ppb	0.168 ppb	97.706 %	103.075 %
Recovery Percentage 1	-1.005 %			-6.179 %	0.586 %	0.206 %	7.489 %		
Concentration RSD	99.4 %	3.4 %	2.5 %	211.6 %	388.3 %	1,831.7 %	35.8 %	4.3 %	0.5 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.006 ppb	0.005 ppb	101.233 %	98.715 %	0.035 ppb	-0.006 ppb	104.205 %	98.738 %	103.516 %
Concentration per Run 1	0.006 ppb	0.006 ppb	105.117 %	97.042 %	0.018 ppb	-0.012 ppb	106.397 %	100.089 %	106.527 %
Concentration per Run 2	0.007 ppb	0.006 ppb	99.329 %	97.175 %	0.027 ppb	-0.011 ppb	100.759 %	96.908 %	101.899 %
Concentration per Run 3	0.005 ppb	0.002 ppb	99.251 %	101.929 %	0.061 ppb	0.006 ppb	105.458 %	99.218 %	102.123 %
Recovery Percentage 1	1.544 %				0.876 %	-1.147 %			
Concentration RSD	14.0 %	44.9 %	3.3 %	2.8 %	64.3 %	174.8 %	2.9 %	1.7 %	2.5 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	99.139 %	0.302 ppb	0.010 ppb	112.006 %	114.366 %
Concentration per Run 1	95.615 %	0.197 ppb	0.011 ppb	116.238 %	116.054 %
Concentration per Run 2	98.592 %	0.333 ppb	0.009 ppb	112.030 %	115.492 %
Concentration per Run 3	103.210 %	0.377 ppb	0.008 ppb	107.752 %	111.551 %
Recovery Percentage 1		30.224 %	0.951 %		
Concentration RSD	3.9 %	31.1 %	17.2 %	3.8 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 12 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: ICV Rack 0
Analysis started at: 4/14/2024 12:59:16 PM Vial 7

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	99.024 %	108.949 %	49.094 ppb	49.094 ppb	4,800.634 ppb	4,990.412 ppb	50.575 ppb	5,011.153 ppb	5,056.631 ppb
Concentration per Run 1	102.989 %	108.560 %	46.906 ppb	47.226 ppb	4,782.067 ppb	4,841.972 ppb	47.105 ppb	4,969.608 ppb	5,281.112 ppb
Concentration per Run 2	97.100 %	108.560 %	50.464 ppb	50.387 ppb	4,805.300 ppb	5,080.896 ppb	51.869 ppb	4,984.482 ppb	4,639.350 ppb
Concentration per Run 3	96.983 %	109.728 %	49.911 ppb	49.670 ppb	4,814.535 ppb	5,048.366 ppb	52.751 ppb	5,079.369 ppb	5,249.431 ppb
Recovery Percentage 1			98.187 %	98.189 %	96.013 %	99.808 %	101.150 %	100.223 %	101.133 %
Concentration RSD	3.5 %	0.6 %	3.9 %	3.4 %	0.3 %	2.6 %	6.0 %	1.2 %	7.2 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	105.809 %	113.125 %	48.484 ppb	50.174 ppb	51.473 ppb	5,085.145 ppb	48.287 ppb	50.470 ppb	50.216 ppb
Concentration per Run 1	110.156 %	115.541 %	46.588 ppb	50.847 ppb	51.531 ppb	5,107.158 ppb	48.802 ppb	50.286 ppb	50.545 ppb
Concentration per Run 2	101.264 %	115.380 %	49.521 ppb	47.624 ppb	49.536 ppb	5,068.295 ppb	46.227 ppb	49.163 ppb	50.408 ppb
Concentration per Run 3	106.008 %	108.455 %	49.342 ppb	52.051 ppb	53.351 ppb	5,079.984 ppb	49.831 ppb	51.961 ppb	49.697 ppb
Recovery Percentage 1			96.967 %	100.348 %	102.945 %	101.703 %	96.573 %	100.940 %	100.433 %
Concentration RSD	4.2 %	3.6 %	3.4 %	4.6 %	3.7 %	0.4 %	3.8 %	2.8 %	0.9 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	50.730 ppb	104.552 %	106.234 %	50.427 ppb	47.853 ppb	49.909 ppb	49.862 ppb	99.155 %	102.544 %
Concentration per Run 1	50.943 ppb	105.450 %	105.837 %	50.152 ppb	47.079 ppb	48.891 ppb	50.113 ppb	101.512 %	104.584 %
Concentration per Run 2	49.132 ppb	104.453 %	108.701 %	49.832 ppb	44.327 ppb	49.594 ppb	51.314 ppb	98.168 %	101.997 %
Concentration per Run 3	52.117 ppb	103.753 %	104.164 %	51.298 ppb	52.152 ppb	51.244 ppb	48.159 ppb	97.786 %	101.052 %
Recovery Percentage 1	101.461 %			100.855 %	95.706 %	99.819 %	99.724 %		
Concentration RSD	3.0 %	0.8 %	2.2 %	1.5 %	8.3 %	2.4 %	3.2 %	2.1 %	1.8 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	50.056 ppb	49.577 ppb	98.610 %	102.311 %	50.651 ppb	49.676 ppb	103.965 %	104.229 %	104.080 %
Concentration per Run 1	49.137 ppb	49.751 ppb	102.206 %	103.544 %	50.190 ppb	49.959 ppb	106.302 %	105.112 %	105.351 %
Concentration per Run 2	49.780 ppb	47.646 ppb	97.914 %	103.719 %	50.118 ppb	49.090 ppb	101.648 %	102.843 %	103.553 %
Concentration per Run 3	51.252 ppb	51.332 ppb	95.711 %	99.669 %	51.645 ppb	49.979 ppb	103.947 %	104.733 %	103.335 %
Recovery Percentage 1	100.112 %	99.153 %			101.302 %	99.352 %			
Concentration RSD	2.2 %	3.7 %	3.3 %	2.2 %	1.7 %	1.0 %	2.2 %	1.2 %	1.1 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	104.474 %	47.617 ppb	48.444 ppb	114.090 %	116.897 %
Concentration per Run 1	105.172 %	48.755 ppb	48.857 ppb	118.678 %	115.680 %
Concentration per Run 2	104.080 %	47.786 ppb	48.139 ppb	112.827 %	117.095 %
Concentration per Run 3	104.170 %	46.309 ppb	48.336 ppb	110.765 %	117.917 %
Recovery Percentage 1		95.233 %	96.888 %		
Concentration RSD	0.6 %	2.6 %	0.8 %	3.6 %	1.0 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	13	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	ICB	Rack	0		
Analysis started at:	4/14/2024 1:04:00 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	103.086 %	105.642 %	0.043 ppb	0.253 ppb	-35.717 ppb	-6.110 ppb	-0.651 ppb	-18.221 ppb	32.465 ppb
Concentration per Run 1	106.222 %	99.222 %	0.040 ppb	0.273 ppb	-24.695 ppb	-6.980 ppb	-0.672 ppb	-9.632 ppb	0.115 ppb
Concentration per Run 2	102.161 %	106.226 %	0.053 ppb	0.276 ppb	-37.093 ppb	-6.563 ppb	-0.645 ppb	-44.825 ppb	0.370 ppb
Concentration per Run 3	100.875 %	111.479 %	0.036 ppb	0.210 ppb	-45.363 ppb	-4.787 ppb	-0.636 ppb	-0.207 ppb	96.911 ppb
Recovery Percentage 1			8.604 %	2.528 %	-35.717 %	-8.729 %	-6.509 %	-18.221 %	32.465 %
Concentration RSD	2.7 %	5.8 %	20.6 %	14.7 %	29.1 %	19.1 %	2.8 %	129.1 %	171.9 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	103.542 %	96.538 %	0.026 ppb	0.036 ppb	0.034 ppb	1.822 ppb	-0.006 ppb	-0.425 ppb	-0.221 ppb
Concentration per Run 1	108.823 %	95.330 %	-0.009 ppb	-0.012 ppb	0.049 ppb	2.216 ppb	0.004 ppb	-0.435 ppb	-0.201 ppb
Concentration per Run 2	101.663 %	94.605 %	0.018 ppb	0.014 ppb	0.042 ppb	1.686 ppb	-0.011 ppb	-0.379 ppb	-0.209 ppb
Concentration per Run 3	100.141 %	99.678 %	0.069 ppb	0.107 ppb	0.012 ppb	1.565 ppb	-0.012 ppb	-0.462 ppb	-0.253 ppb
Recovery Percentage 1			0.522 %	3.629 %	3.411 %	3.645 %	-1.298 %	-21.270 %	-22.095 %
Concentration RSD	4.5 %	2.8 %	151.4 %	172.1 %	57.8 %	19.0 %	137.3 %	9.9 %	12.6 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.006 ppb	103.343 %	99.341 %	-0.024 ppb	0.078 ppb	0.026 ppb	0.158 ppb	102.688 %	100.382 %
Concentration per Run 1	0.039 ppb	107.557 %	95.100 %	-0.082 ppb	-0.101 ppb	0.043 ppb	0.154 ppb	104.266 %	97.465 %
Concentration per Run 2	-0.019 ppb	101.579 %	100.949 %	0.010 ppb	0.170 ppb	0.019 ppb	0.214 ppb	102.436 %	100.320 %
Concentration per Run 3	-0.039 ppb	100.892 %	101.974 %	0.001 ppb	0.167 ppb	0.017 ppb	0.104 ppb	101.361 %	103.360 %
Recovery Percentage 1	-0.125 %			-4.749 %	1.567 %	5.202 %	7.877 %		
Concentration RSD	649.1 %	3.5 %	3.7 %	215.2 %	198.4 %	56.1 %	34.9 %	1.4 %	2.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.010 ppb	0.012 ppb	101.575 %	97.867 %	0.028 ppb	0.015 ppb	103.376 %	96.915 %	104.880 %
Concentration per Run 1	0.018 ppb	0.024 ppb	104.232 %	93.791 %	0.023 ppb	0.105 ppb	105.952 %	93.264 %	107.480 %
Concentration per Run 2	0.008 ppb	0.006 ppb	100.244 %	99.067 %	0.028 ppb	-0.030 ppb	102.672 %	98.553 %	102.451 %
Concentration per Run 3	0.005 ppb	0.006 ppb	100.249 %	100.743 %	0.034 ppb	-0.030 ppb	101.505 %	98.928 %	104.708 %
Recovery Percentage 1	2.541 %				0.712 %	2.987 %			
Concentration RSD	69.5 %	90.0 %	2.3 %	3.7 %	19.1 %	519.9 %	2.2 %	3.3 %	2.4 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	97.838 %	0.303 ppb	0.010 ppb	115.301 %	107.664 %
Concentration per Run 1	94.276 %	0.198 ppb	0.013 ppb	119.221 %	107.995 %
Concentration per Run 2	98.550 %	0.354 ppb	0.007 ppb	115.722 %	107.205 %
Concentration per Run 3	100.689 %	0.356 ppb	0.009 ppb	110.959 %	107.793 %
Recovery Percentage 1		30.262 %	0.972 %		
Concentration RSD	3.3 %	29.9 %	30.0 %	3.6 %	0.4 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	14	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	ICSA	Rack	4		
Analysis started at:	4/14/2024 1:10:25 PM	Vial	53		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	95.700 %	106.420 %	0.049 ppb	3.005 ppb	228,018.653 ppb	95,701.905 ppb	82,976.793 ppb	101,543.959 ppb	305,178.228 ppb
Concentration per Run 1	98.527 %	107.977 %	0.047 ppb	2.827 ppb	222,629.161 ppb	94,862.956 ppb	79,751.268 ppb	100,629.033 ppb	297,950.491 ppb
Concentration per Run 2	95.682 %	107.393 %	0.054 ppb	3.025 ppb	233,018.770 ppb	94,368.870 ppb	84,511.797 ppb	101,676.995 ppb	309,833.498 ppb
Concentration per Run 3	92.892 %	103.891 %	0.047 ppb	3.163 ppb	228,408.028 ppb	97,873.889 ppb	84,667.315 ppb	102,325.850 ppb	307,750.695 ppb
Recovery Percentage 1			4.928 %	15.026 %	91.207 %	95.702 %	82.977 %	101.544 %	101.726 %
Concentration RSD	2.9 %	2.1 %	8.9 %	5.6 %	2.3 %	2.0 %	3.4 %	0.8 %	2.1 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	111.522 %	106.200 %	0.104 ppb	1.354 ppb	4.566 ppb	230,058.273 ppb	2.014 ppb	2.370 ppb	0.826 ppb
Concentration per Run 1	116.824 %	109.662 %	0.158 ppb	1.378 ppb	4.604 ppb	235,281.144 ppb	1.943 ppb	2.492 ppb	0.808 ppb
Concentration per Run 2	109.001 %	103.623 %	0.089 ppb	1.357 ppb	4.644 ppb	221,441.168 ppb	2.023 ppb	2.543 ppb	0.777 ppb
Concentration per Run 3	108.740 %	105.314 %	0.064 ppb	1.326 ppb	4.449 ppb	233,452.507 ppb	2.077 ppb	2.075 ppb	0.893 ppb
Recovery Percentage 1			2.079 %	41.024 %	80.100 %	92.023 %	70.186 %	38.848 %	29.286 %
Concentration RSD	4.1 %	2.9 %	46.8 %	1.9 %	2.3 %	3.3 %	3.4 %	10.8 %	7.3 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	2.610 ppb	114.698 %	110.047 %	0.378 ppb	5.014 ppb	2.402 ppb	2,051.484 ppb	99.262 %	96.085 %
Concentration per Run 1	2.421 ppb	117.785 %	105.046 %	0.388 ppb	6.166 ppb	2.110 ppb	2,128.200 ppb	102.015 %	94.066 %
Concentration per Run 2	2.875 ppb	113.465 %	114.768 %	0.314 ppb	3.757 ppb	2.555 ppb	1,964.813 ppb	98.378 %	96.692 %
Concentration per Run 3	2.533 ppb	112.845 %	110.327 %	0.432 ppb	5.118 ppb	2.540 ppb	2,061.439 ppb	97.395 %	97.497 %
Recovery Percentage 1	22.893 %			23.186 %	38.867 %	88.955 %	102.574 %		
Concentration RSD	9.1 %	2.3 %	4.4 %	15.7 %	24.1 %	10.5 %	4.0 %	2.5 %	1.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.026 ppb	0.275 ppb	98.013 %	95.318 %	0.199 ppb	1.409 ppb	106.057 %	101.842 %	107.861 %
Concentration per Run 1	0.024 ppb	0.298 ppb	99.248 %	95.263 %	0.194 ppb	1.430 ppb	107.430 %	101.662 %	110.195 %
Concentration per Run 2	0.024 ppb	0.233 ppb	98.209 %	92.002 %	0.190 ppb	1.320 ppb	106.155 %	102.425 %	105.674 %
Concentration per Run 3	0.028 ppb	0.295 ppb	96.584 %	98.688 %	0.214 ppb	1.479 ppb	104.587 %	101.438 %	107.714 %
Recovery Percentage 1	3.192 %	68.805 %			2.493 %	74.973 %			
Concentration RSD	8.9 %	13.4 %	1.4 %	3.5 %	6.4 %	5.8 %	1.3 %	0.5 %	2.1 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	103.867 %	0.088 ppb	1.535 ppb	109.911 %	110.311 %
Concentration per Run 1	103.630 %	0.065 ppb	1.532 ppb	113.663 %	110.994 %
Concentration per Run 2	103.762 %	0.092 ppb	1.514 ppb	110.351 %	108.973 %
Concentration per Run 3	104.210 %	0.108 ppb	1.557 ppb	105.718 %	110.967 %
Recovery Percentage 1		4.422 %	49.506 %		
Concentration RSD	0.3 %	24.8 %	1.4 %	3.6 %	1.1 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	15	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	LDR Check (10/1)	Rack	4		
Analysis started at:	4/14/2024 1:15:09 PM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	105.272 %	102.529 %	0.025 ppb	0.203 ppb	109.467 ppb	10.081 ppb	8.432 ppb	26.651 ppb	29.196 ppb
Concentration per Run 1	108.343 %	91.051 %	0.028 ppb	0.151 ppb	159.606 ppb	24.111 ppb	8.453 ppb	59.134 ppb	38.187 ppb
Concentration per Run 2	104.034 %	100.973 %	0.024 ppb	0.212 ppb	105.799 ppb	5.528 ppb	8.745 ppb	14.184 ppb	32.352 ppb
Concentration per Run 3	103.440 %	115.564 %	0.023 ppb	0.247 ppb	62.997 ppb	0.604 ppb	8.099 ppb	6.635 ppb	17.049 ppb
Concentration RSD	2.5 %	12.0 %	10.9 %	23.9 %	44.2 %	123.0 %	3.8 %	106.5 %	37.4 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	110.640 %	100.698 %	0.008 ppb	0.081 ppb	9,706.164 ppb	53.752 ppb	0.020 ppb	-0.262 ppb	10,537.140 ppb
Concentration per Run 1	114.084 %	97.101 %	-0.009 ppb	0.081 ppb	9,905.934 ppb	63.402 ppb	0.036 ppb	-0.272 ppb	10,611.093 ppb
Concentration per Run 2	110.247 %	101.449 %	0.016 ppb	0.156 ppb	9,720.655 ppb	53.165 ppb	0.015 ppb	-0.184 ppb	10,916.536 ppb
Concentration per Run 3	107.588 %	103.543 %	0.016 ppb	0.007 ppb	9,491.903 ppb	44.689 ppb	0.010 ppb	-0.329 ppb	10,083.791 ppb
Concentration RSD	3.0 %	3.3 %	185.0 %	90.9 %	2.1 %	17.4 %	69.7 %	28.0 %	4.0 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	10,008.918 ppb	108.794 %	108.345 %	1,025.021 ppb	0.080 ppb	0.337 ppb	2.193 ppb	103.255 %	105.883 %
Concentration per Run 1	10,008.029 ppb	112.090 %	106.713 %	1,037.817 ppb	0.296 ppb	0.262 ppb	2.136 ppb	104.696 %	104.859 %
Concentration per Run 2	10,248.076 ppb	108.039 %	105.949 %	1,046.738 ppb	-0.083 ppb	0.689 ppb	2.287 ppb	102.674 %	105.532 %
Concentration per Run 3	9,770.648 ppb	106.254 %	112.374 %	990.509 ppb	0.028 ppb	0.061 ppb	2.155 ppb	102.396 %	107.257 %
Concentration RSD	2.4 %	2.7 %	3.2 %	2.9 %	243.6 %	95.0 %	3.8 %	1.2 %	1.2 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.042 ppb	0.019 ppb	103.097 %	103.995 %	0.013 ppb	9,947.372 ppb	102.312 %	99.435 %	102.569 %
Concentration per Run 1	0.044 ppb	0.015 ppb	105.727 %	105.252 %	0.017 ppb	10,020.977 ppb	105.027 %	97.596 %	104.152 %
Concentration per Run 2	0.037 ppb	0.025 ppb	104.582 %	103.514 %	0.011 ppb	9,997.407 ppb	101.324 %	98.639 %	103.623 %
Concentration per Run 3	0.044 ppb	0.015 ppb	98.981 %	103.217 %	0.011 ppb	9,823.732 ppb	100.586 %	102.068 %	99.931 %
Concentration RSD	10.5 %	31.1 %	3.5 %	1.1 %	26.7 %	1.1 %	2.3 %	2.4 %	2.2 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	101.600 %	0.054 ppb	10,830.719 ppb	115.076 %	111.811 %
Concentration per Run 1	99.410 %	0.027 ppb	10,645.853 ppb	120.401 %	111.850 %
Concentration per Run 2	101.003 %	0.064 ppb	10,916.536 ppb	111.622 %	112.989 %
Concentration per Run 3	104.386 %	0.073 ppb	10,929.767 ppb	113.205 %	110.596 %
Concentration RSD	2.5 %	44.8 %	1.5 %	4.1 %	1.1 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	16	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	Rinse	Rack	0		
Analysis started at:	4/14/2024 1:23:36 PM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	103.186 %	105.058 %	0.020 ppb	0.292 ppb	-39.350 ppb	-4.263 ppb	3.103 ppb	-5.668 ppb	16.757 ppb
Concentration per Run 1	106.604 %	113.230 %	0.014 ppb	0.260 ppb	-53.426 ppb	-4.595 ppb	1.332 ppb	8.934 ppb	15.576 ppb
Concentration per Run 2	101.457 %	102.724 %	0.031 ppb	0.338 ppb	-34.614 ppb	-5.667 ppb	4.433 ppb	-19.819 ppb	35.683 ppb
Concentration per Run 3	101.496 %	99.222 %	0.014 ppb	0.278 ppb	-30.010 ppb	-2.528 ppb	3.542 ppb	-6.119 ppb	-0.987 ppb
Concentration RSD	2.9 %	6.9 %	49.0 %	14.0 %	31.5 %	37.4 %	51.5 %	253.7 %	109.6 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	106.870 %	106.388 %	0.007 ppb	-0.006 ppb	0.601 ppb	13.732 ppb	-0.019 ppb	-0.260 ppb	0.276 ppb
Concentration per Run 1	112.644 %	110.951 %	-0.009 ppb	0.051 ppb	0.641 ppb	15.869 ppb	-0.023 ppb	-0.234 ppb	0.387 ppb
Concentration per Run 2	103.159 %	105.073 %	0.040 ppb	-0.070 ppb	0.601 ppb	10.669 ppb	-0.026 ppb	-0.283 ppb	0.224 ppb
Concentration per Run 3	104.806 %	103.140 %	-0.009 ppb	0.000 ppb	0.561 ppb	14.659 ppb	-0.009 ppb	-0.262 ppb	0.215 ppb
Concentration RSD	4.7 %	3.8 %	379.3 %	938.2 %	6.7 %	19.8 %	45.7 %	9.3 %	35.2 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	1.104 ppb	104.943 %	108.814 %	0.133 ppb	0.025 ppb	-0.022 ppb	0.221 ppb	100.698 %	102.942 %
Concentration per Run 1	1.066 ppb	107.462 %	108.727 %	0.195 ppb	0.039 ppb	-0.057 ppb	0.232 ppb	105.726 %	101.563 %
Concentration per Run 2	1.029 ppb	103.136 %	110.185 %	0.198 ppb	-0.091 ppb	0.003 ppb	0.218 ppb	98.098 %	104.481 %
Concentration per Run 3	1.217 ppb	104.233 %	107.530 %	0.007 ppb	0.126 ppb	-0.013 ppb	0.214 ppb	98.269 %	102.782 %
Concentration RSD	9.0 %	2.1 %	1.2 %	81.8 %	439.8 %	141.7 %	4.1 %	4.3 %	1.4 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.001 ppb	0.001 ppb	100.380 %	104.775 %	0.003 ppb	0.469 ppb	97.917 %	102.174 %	98.584 %
Concentration per Run 1	0.004 ppb	0.002 ppb	103.809 %	104.812 %	0.003 ppb	0.423 ppb	98.509 %	101.414 %	100.277 %
Concentration per Run 2	-0.001 ppb	-0.001 ppb	99.163 %	104.250 %	-0.001 ppb	0.601 ppb	97.190 %	100.772 %	97.998 %
Concentration per Run 3	0.000 ppb	0.002 ppb	98.168 %	105.262 %	0.007 ppb	0.382 ppb	98.052 %	104.335 %	97.478 %
Concentration RSD	269.6 %	178.6 %	3.0 %	0.5 %	152.8 %	24.9 %	0.7 %	1.9 %	1.5 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	101.858 %	0.024 ppb	0.501 ppb	118.658 %	121.384 %
Concentration per Run 1	101.237 %	0.017 ppb	0.561 ppb	120.025 %	121.938 %
Concentration per Run 2	102.598 %	0.024 ppb	0.502 ppb	118.125 %	120.461 %
Concentration per Run 3	101.740 %	0.030 ppb	0.440 ppb	117.823 %	121.754 %
Concentration RSD	0.7 %	26.6 %	12.1 %	1.0 %	0.7 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	17	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/14/2024 1:28:15 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	99.865 %	95.914 %	58.281 ppb	57.770 ppb	6,239.138 ppb	6,409.704 ppb	59.964 ppb	6,280.616 ppb	6,058.285 ppb
Concentration per Run 1	102.446 %	92.802 %	57.200 ppb	57.111 ppb	6,348.232 ppb	6,507.095 ppb	58.212 ppb	6,222.722 ppb	6,063.038 ppb
Concentration per Run 2	99.315 %	100.389 %	58.348 ppb	57.681 ppb	6,207.617 ppb	6,333.641 ppb	61.303 ppb	6,332.183 ppb	6,148.899 ppb
Concentration per Run 3	97.835 %	94.553 %	59.296 ppb	58.518 ppb	6,161.565 ppb	6,388.376 ppb	60.378 ppb	6,286.942 ppb	5,962.919 ppb
Recovery Percentage 1			97.136 %	96.284 %	103.986 %	106.828 %	99.940 %	104.677 %	100.971 %
Concentration RSD	2.4 %	4.1 %	1.8 %	1.2 %	1.6 %	1.4 %	2.6 %	0.9 %	1.5 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	105.245 %	103.060 %	58.883 ppb	58.667 ppb	62.263 ppb	6,187.416 ppb	60.071 ppb	60.804 ppb	61.123 ppb
Concentration per Run 1	105.896 %	104.268 %	56.773 ppb	57.508 ppb	62.090 ppb	6,091.527 ppb	59.525 ppb	59.506 ppb	60.739 ppb
Concentration per Run 2	102.943 %	97.665 %	60.173 ppb	59.791 ppb	62.897 ppb	6,476.369 ppb	63.254 ppb	60.503 ppb	61.107 ppb
Concentration per Run 3	106.895 %	107.247 %	59.701 ppb	58.701 ppb	61.801 ppb	5,994.352 ppb	57.435 ppb	62.402 ppb	61.525 ppb
Recovery Percentage 1			98.138 %	97.778 %	103.771 %	103.124 %	100.119 %	101.339 %	101.872 %
Concentration RSD	2.0 %	4.8 %	3.1 %	1.9 %	0.9 %	4.1 %	4.9 %	2.4 %	0.6 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	60.845 ppb	103.777 %	102.373 %	59.687 ppb	58.747 ppb	60.050 ppb	58.228 ppb	98.823 %	98.940 %
Concentration per Run 1	61.560 ppb	106.029 %	101.720 %	61.874 ppb	59.859 ppb	59.699 ppb	56.331 ppb	101.504 %	99.480 %
Concentration per Run 2	60.126 ppb	102.955 %	105.814 %	56.418 ppb	56.298 ppb	59.116 ppb	58.273 ppb	95.740 %	98.491 %
Concentration per Run 3	60.850 ppb	102.347 %	99.584 %	60.770 ppb	60.085 ppb	61.334 ppb	60.080 ppb	99.224 %	98.850 %
Recovery Percentage 1	101.409 %			99.478 %	97.912 %	100.083 %	97.047 %		
Concentration RSD	1.2 %	1.9 %	3.1 %	4.8 %	3.6 %	1.9 %	3.2 %	2.9 %	0.5 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	59.573 ppb	57.865 ppb	97.916 %	101.149 %	56.733 ppb	58.385 ppb	100.737 %	99.332 %	100.134 %
Concentration per Run 1	61.319 ppb	57.696 ppb	101.605 %	100.682 %	57.080 ppb	57.778 ppb	103.728 %	100.969 %	101.632 %
Concentration per Run 2	58.560 ppb	58.208 ppb	96.488 %	100.436 %	57.072 ppb	58.019 ppb	98.539 %	98.950 %	97.780 %
Concentration per Run 3	58.840 ppb	57.691 ppb	95.656 %	102.328 %	56.046 ppb	59.357 ppb	99.944 %	98.077 %	100.989 %
Recovery Percentage 1	99.288 %	96.441 %			94.554 %	97.308 %			
Concentration RSD	2.5 %	0.5 %	3.3 %	1.0 %	1.0 %	1.5 %	2.7 %	1.5 %	2.1 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	100.747 %	56.800 ppb	57.047 ppb	111.070 %	109.865 %
Concentration per Run 1	99.735 %	55.232 ppb	55.750 ppb	113.033 %	112.561 %
Concentration per Run 2	100.999 %	57.249 ppb	58.032 ppb	110.662 %	108.180 %
Concentration per Run 3	101.507 %	57.920 ppb	57.359 ppb	109.516 %	108.853 %
Recovery Percentage 1		94.667 %	95.078 %		
Concentration RSD	0.9 %	2.5 %	2.1 %	1.6 %	2.1 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	18	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/14/2024 1:33:00 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	104.061 %	113.424 %	0.045 ppb	0.291 ppb	-37.396 ppb	-3.446 ppb	-0.273 ppb	-16.828 ppb	51.340 ppb
Concentration per Run 1	106.564 %	109.728 %	0.050 ppb	0.278 ppb	-30.156 ppb	-3.725 ppb	-0.374 ppb	-21.792 ppb	59.845 ppb
Concentration per Run 2	102.833 %	117.899 %	0.046 ppb	0.318 ppb	-43.826 ppb	-1.281 ppb	-0.095 ppb	-21.257 ppb	56.692 ppb
Concentration per Run 3	102.787 %	112.646 %	0.040 ppb	0.276 ppb	-38.207 ppb	-5.332 ppb	-0.350 ppb	-7.435 ppb	37.485 ppb
Recovery Percentage 1			9.019 %	2.908 %	-37.396 %	-4.923 %	-2.729 %	-16.828 %	51.340 %
Concentration RSD	2.1 %	3.7 %	11.4 %	8.1 %	18.4 %	59.2 %	56.7 %	48.4 %	23.6 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	106.142 %	100.429 %	0.034 ppb	-0.011 ppb	0.103 ppb	3.956 ppb	-0.013 ppb	-0.408 ppb	-0.218 ppb
Concentration per Run 1	111.657 %	97.826 %	0.043 ppb	0.162 ppb	0.105 ppb	5.428 ppb	-0.009 ppb	-0.439 ppb	-0.162 ppb
Concentration per Run 2	104.269 %	101.691 %	0.042 ppb	-0.065 ppb	0.090 ppb	4.113 ppb	-0.009 ppb	-0.353 ppb	-0.229 ppb
Concentration per Run 3	102.500 %	101.771 %	0.016 ppb	-0.131 ppb	0.115 ppb	2.327 ppb	-0.022 ppb	-0.432 ppb	-0.264 ppb
Recovery Percentage 1			0.681 %	-1.130 %	10.344 %	7.912 %	-2.638 %	-20.404 %	-21.832 %
Concentration RSD	4.6 %	2.2 %	44.7 %	1,358.0 %	12.0 %	39.3 %	61.0 %	11.7 %	23.8 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.070 ppb	103.240 %	103.607 %	0.027 ppb	0.129 ppb	-0.035 ppb	0.266 ppb	101.431 %	102.448 %
Concentration per Run 1	0.069 ppb	107.256 %	105.254 %	-0.051 ppb	-0.084 ppb	-0.048 ppb	0.245 ppb	103.709 %	104.368 %
Concentration per Run 2	0.077 ppb	102.658 %	100.761 %	-0.027 ppb	0.546 ppb	-0.038 ppb	0.287 ppb	100.484 %	101.211 %
Concentration per Run 3	0.063 ppb	99.806 %	104.805 %	0.160 ppb	-0.076 ppb	-0.020 ppb	0.266 ppb	100.100 %	101.766 %
Recovery Percentage 1	1.395 %			5.493 %	2.579 %	-7.078 %	13.291 %		
Concentration RSD	10.1 %	3.6 %	2.4 %	421.4 %	280.3 %	39.6 %	7.8 %	2.0 %	1.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.006 ppb	0.006 ppb	99.522 %	101.796 %	0.051 ppb	0.090 ppb	101.240 %	98.168 %	98.585 %
Concentration per Run 1	0.008 ppb	0.005 ppb	102.493 %	102.829 %	0.048 ppb	0.133 ppb	103.854 %	96.025 %	99.440 %
Concentration per Run 2	0.005 ppb	0.002 ppb	95.984 %	101.949 %	0.050 ppb	0.024 ppb	99.913 %	99.498 %	99.622 %
Concentration per Run 3	0.003 ppb	0.009 ppb	100.090 %	100.610 %	0.055 ppb	0.114 ppb	99.953 %	98.980 %	96.692 %
Recovery Percentage 1	1.387 %				1.277 %	18.037 %			
Concentration RSD	46.5 %	60.9 %	3.3 %	1.1 %	6.9 %	64.7 %	2.2 %	1.9 %	1.7 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	97.426 %	0.260 ppb	0.109 ppb	112.289 %	113.846 %
Concentration per Run 1	97.090 %	0.174 ppb	0.124 ppb	119.732 %	115.040 %
Concentration per Run 2	97.566 %	0.294 ppb	0.100 ppb	108.728 %	113.111 %
Concentration per Run 3	97.621 %	0.313 ppb	0.104 ppb	108.406 %	113.386 %
Recovery Percentage 1		26.014 %	10.921 %		
Concentration RSD	0.3 %	28.9 %	11.9 %	5.7 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	19	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2355850-02d100 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 1:42:11 PM	Vial	1		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	105.046 %	106.226 %	0.068 ppb	52.647 ppb	1,485.891 ppb	622.730 ppb	752.911 ppb	241.249 ppb	658.098 ppb
Concentration per Run 1	107.330 %	107.977 %	0.069 ppb	51.237 ppb	1,400.010 ppb	585.449 ppb	745.959 ppb	233.256 ppb	593.335 ppb
Concentration per Run 2	104.766 %	107.977 %	0.068 ppb	52.968 ppb	1,485.060 ppb	606.176 ppb	747.291 ppb	213.875 ppb	664.050 ppb
Concentration per Run 3	103.042 %	102.724 %	0.066 ppb	53.736 ppb	1,572.604 ppb	676.565 ppb	765.482 ppb	276.616 ppb	716.909 ppb
Concentration RSD	2.1 %	2.9 %	2.7 %	2.4 %	5.8 %	7.7 %	1.4 %	13.3 %	9.4 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	112.734 %	122.224 %	2.375 ppb	8.646 ppb	108.483 ppb	2,068.723 ppb	0.656 ppb	2.699 ppb	6.789 ppb
Concentration per Run 1	115.691 %	133.658 %	2.171 ppb	8.177 ppb	102.579 ppb	1,967.625 ppb	0.569 ppb	2.731 ppb	6.762 ppb
Concentration per Run 2	113.298 %	122.224 %	2.608 ppb	8.652 ppb	108.506 ppb	2,045.754 ppb	0.701 ppb	2.640 ppb	6.671 ppb
Concentration per Run 3	109.213 %	110.790 %	2.346 ppb	9.108 ppb	114.363 ppb	2,192.788 ppb	0.698 ppb	2.727 ppb	6.934 ppb
Concentration RSD	2.9 %	9.4 %	9.3 %	5.4 %	5.4 %	5.5 %	11.5 %	1.9 %	2.0 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	67.181 ppb	105.558 %	107.946 %	0.785 ppb	0.355 ppb	5.431 ppb	0.341 ppb	103.232 %	108.401 %
Concentration per Run 1	66.934 ppb	110.230 %	103.571 %	0.802 ppb	0.399 ppb	5.423 ppb	0.352 ppb	106.134 %	109.496 %
Concentration per Run 2	66.976 ppb	103.510 %	106.904 %	0.851 ppb	0.626 ppb	5.570 ppb	0.360 ppb	101.323 %	108.076 %
Concentration per Run 3	67.631 ppb	102.932 %	113.363 %	0.703 ppb	0.041 ppb	5.300 ppb	0.310 ppb	102.239 %	107.629 %
Concentration RSD	0.6 %	3.8 %	4.6 %	9.6 %	82.9 %	2.5 %	7.9 %	2.5 %	0.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.147 ppb	0.056 ppb	100.632 %	108.906 %	0.062 ppb	74.003 ppb	101.754 %	108.596 %	100.466 %
Concentration per Run 1	0.139 ppb	0.049 ppb	102.244 %	110.315 %	0.054 ppb	74.386 ppb	103.824 %	109.230 %	103.456 %
Concentration per Run 2	0.151 ppb	0.072 ppb	100.440 %	106.336 %	0.075 ppb	75.526 ppb	102.569 %	107.851 %	100.557 %
Concentration per Run 3	0.150 ppb	0.046 ppb	99.212 %	110.069 %	0.058 ppb	72.098 ppb	98.868 %	108.708 %	97.385 %
Concentration RSD	4.8 %	26.3 %	1.5 %	2.0 %	18.3 %	2.4 %	2.5 %	0.6 %	3.0 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	109.215 %	0.109 ppb	9.192 ppb	116.372 %	127.888 %
Concentration per Run 1	113.417 %	0.079 ppb	8.616 ppb	120.370 %	135.771 %
Concentration per Run 2	105.819 %	0.135 ppb	9.371 ppb	113.829 %	125.952 %
Concentration per Run 3	108.411 %	0.113 ppb	9.588 ppb	114.916 %	121.941 %
Concentration RSD	3.5 %	25.7 %	5.5 %	3.0 %	5.6 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	20	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2355850-05d100 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 1:46:49 PM	Vial	2		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	104.713 %	104.086 %	0.070 ppb	31.387 ppb	1,635.667 ppb	670.326 ppb	797.336 ppb	257.845 ppb	596.149 ppb
Concentration per Run 1	106.383 %	108.560 %	0.070 ppb	30.946 ppb	1,627.576 ppb	642.815 ppb	790.760 ppb	229.314 ppb	702.499 ppb
Concentration per Run 2	104.359 %	101.556 %	0.073 ppb	31.441 ppb	1,626.148 ppb	668.775 ppb	800.471 ppb	256.941 ppb	529.981 ppb
Concentration per Run 3	103.398 %	102.140 %	0.066 ppb	31.776 ppb	1,653.278 ppb	699.387 ppb	800.776 ppb	287.279 ppb	555.967 ppb
Concentration RSD	1.5 %	3.7 %	4.7 %	1.3 %	0.9 %	4.2 %	0.7 %	11.2 %	15.6 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	105.925 %	102.523 %	2.438 ppb	8.997 ppb	103.233 ppb	2,168.576 ppb	0.735 ppb	2.725 ppb	6.756 ppb
Concentration per Run 1	106.811 %	102.174 %	2.933 ppb	8.872 ppb	105.647 ppb	2,165.592 ppb	0.760 ppb	2.661 ppb	7.108 ppb
Concentration per Run 2	104.652 %	103.221 %	2.294 ppb	8.936 ppb	101.007 ppb	2,187.087 ppb	0.711 ppb	3.074 ppb	6.461 ppb
Concentration per Run 3	106.312 %	102.174 %	2.085 ppb	9.182 ppb	103.046 ppb	2,153.048 ppb	0.735 ppb	2.440 ppb	6.700 ppb
Concentration RSD	1.1 %	0.6 %	18.1 %	1.8 %	2.3 %	0.8 %	3.3 %	11.8 %	4.8 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	47.819 ppb	104.890 %	103.294 %	0.694 ppb	0.144 ppb	5.021 ppb	0.247 ppb	99.737 %	101.016 %
Concentration per Run 1	49.362 ppb	107.266 %	98.763 %	0.784 ppb	0.000 ppb	5.498 ppb	0.212 ppb	100.939 %	102.269 %
Concentration per Run 2	46.962 ppb	101.687 %	105.516 %	0.661 ppb	0.161 ppb	4.904 ppb	0.286 ppb	98.327 %	99.492 %
Concentration per Run 3	47.134 ppb	105.717 %	105.602 %	0.637 ppb	0.270 ppb	4.661 ppb	0.242 ppb	99.945 %	101.286 %
Concentration RSD	2.8 %	2.7 %	3.8 %	11.4 %	94.4 %	8.6 %	15.1 %	1.3 %	1.4 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.153 ppb	0.031 ppb	100.056 %	100.208 %	0.040 ppb	46.617 ppb	100.026 %	101.328 %	100.056 %
Concentration per Run 1	0.145 ppb	0.029 ppb	102.518 %	100.007 %	0.028 ppb	43.736 ppb	101.795 %	100.185 %	103.064 %
Concentration per Run 2	0.152 ppb	0.033 ppb	99.297 %	98.750 %	0.047 ppb	48.115 ppb	101.122 %	101.686 %	99.150 %
Concentration per Run 3	0.162 ppb	0.029 ppb	98.354 %	101.867 %	0.046 ppb	48.001 ppb	97.161 %	102.114 %	97.953 %
Concentration RSD	5.4 %	7.8 %	2.2 %	1.6 %	26.7 %	5.4 %	2.5 %	1.0 %	2.7 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.507 %	0.043 ppb	8.208 ppb	113.833 %	113.168 %
Concentration per Run 1	95.204 %	0.029 ppb	8.031 ppb	119.137 %	114.599 %
Concentration per Run 2	99.900 %	0.046 ppb	8.409 ppb	111.792 %	109.268 %
Concentration per Run 3	100.417 %	0.055 ppb	8.183 ppb	110.571 %	115.635 %
Concentration RSD	2.9 %	29.7 %	2.3 %	4.1 %	3.0 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	21	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2355850-07d100 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 1:51:29 PM	Vial	3		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	105.176 %	112.062 %	0.065 ppb	38.860 ppb	1,380.806 ppb	605.362 ppb	858.634 ppb	267.633 ppb	710.729 ppb
Concentration per Run 1	106.183 %	110.311 %	0.068 ppb	38.688 ppb	1,386.819 ppb	610.374 ppb	859.384 ppb	254.951 ppb	708.950 ppb
Concentration per Run 2	105.188 %	115.564 %	0.064 ppb	39.246 ppb	1,333.967 ppb	602.740 ppb	866.843 ppb	266.557 ppb	795.251 ppb
Concentration per Run 3	104.158 %	110.311 %	0.063 ppb	38.645 ppb	1,421.631 ppb	602.970 ppb	849.675 ppb	281.391 ppb	627.985 ppb
Concentration RSD	1.0 %	2.7 %	4.5 %	0.9 %	3.2 %	0.7 %	1.0 %	5.0 %	11.8 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	107.353 %	103.328 %	2.358 ppb	11.169 ppb	99.827 ppb	2,222.039 ppb	0.720 ppb	5.035 ppb	8.614 ppb
Concentration per Run 1	106.651 %	106.039 %	2.420 ppb	11.380 ppb	97.656 ppb	2,169.186 ppb	0.790 ppb	4.916 ppb	8.271 ppb
Concentration per Run 2	107.814 %	101.932 %	2.223 ppb	11.004 ppb	100.391 ppb	2,187.753 ppb	0.678 ppb	4.848 ppb	8.379 ppb
Concentration per Run 3	107.595 %	102.013 %	2.430 ppb	11.124 ppb	101.435 ppb	2,309.179 ppb	0.694 ppb	5.340 ppb	9.191 ppb
Concentration RSD	0.6 %	2.3 %	4.9 %	1.7 %	2.0 %	3.4 %	8.4 %	5.3 %	5.8 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	59.324 ppb	103.765 %	103.849 %	0.717 ppb	0.153 ppb	5.695 ppb	0.446 ppb	100.951 %	100.478 %
Concentration per Run 1	57.457 ppb	102.939 %	104.805 %	0.688 ppb	0.043 ppb	6.049 ppb	0.446 ppb	101.887 %	98.322 %
Concentration per Run 2	60.137 ppb	103.725 %	103.849 %	0.631 ppb	0.394 ppb	5.760 ppb	0.443 ppb	99.427 %	102.127 %
Concentration per Run 3	60.379 ppb	104.629 %	102.893 %	0.832 ppb	0.021 ppb	5.276 ppb	0.448 ppb	101.539 %	100.985 %
Concentration RSD	2.7 %	0.8 %	0.9 %	14.4 %	136.8 %	6.9 %	0.5 %	1.3 %	1.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.150 ppb	0.037 ppb	99.503 %	98.494 %	0.087 ppb	60.794 ppb	100.082 %	98.006 %	101.140 %
Concentration per Run 1	0.145 ppb	0.034 ppb	99.727 %	98.668 %	0.067 ppb	59.677 ppb	99.569 %	98.679 %	102.305 %
Concentration per Run 2	0.151 ppb	0.036 ppb	100.172 %	99.639 %	0.097 ppb	58.941 ppb	101.186 %	99.072 %	101.650 %
Concentration per Run 3	0.154 ppb	0.041 ppb	98.610 %	97.175 %	0.098 ppb	63.764 ppb	99.490 %	96.268 %	99.464 %
Concentration RSD	2.9 %	9.6 %	0.8 %	1.3 %	20.6 %	4.3 %	1.0 %	1.5 %	1.5 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	96.589 %	0.031 ppb	8.885 ppb	106.467 %	110.300 %
Concentration per Run 1	93.812 %	0.021 ppb	8.836 ppb	108.839 %	112.175 %
Concentration per Run 2	97.676 %	0.034 ppb	8.827 ppb	104.961 %	108.609 %
Concentration per Run 3	98.280 %	0.038 ppb	8.992 ppb	105.601 %	110.116 %
Concentration RSD	2.5 %	29.7 %	1.0 %	2.0 %	1.6 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 22
Analysis label: I2414393-02d10 A2-6020T
Analysis started at: 4/14/2024 1:56:09 PM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 4
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	107.113 %	113.230 %	0.555 ppb	115.370 ppb	11,013.281 ppb	6,058.919 ppb	8,076.436 ppb	1,953.003 ppb	4,369.071 ppb
Concentration per Run 1	111.439 %	133.658 %	0.532 ppb	110.296 ppb	9,710.326 ppb	5,357.307 ppb	7,608.062 ppb	1,818.930 ppb	4,483.420 ppb
Concentration per Run 2	105.654 %	104.475 %	0.566 ppb	117.950 ppb	11,880.852 ppb	6,516.323 ppb	8,083.115 ppb	2,100.920 ppb	4,116.353 ppb
Concentration per Run 3	104.247 %	101.556 %	0.566 ppb	117.865 ppb	11,448.666 ppb	6,303.126 ppb	8,538.129 ppb	1,939.159 ppb	4,507.439 ppb
Concentration RSD	3.6 %	15.7 %	3.5 %	3.8 %	10.4 %	10.2 %	5.8 %	7.2 %	5.0 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	117.480 %	110.387 %	22.427 ppb	66.808 ppb	830.167 ppb	22,721.141 ppb	8.540 ppb	35.342 ppb	53.778 ppb
Concentration per Run 1	119.935 %	113.930 %	21.786 ppb	64.849 ppb	810.156 ppb	22,968.075 ppb	8.627 ppb	34.650 ppb	54.461 ppb
Concentration per Run 2	118.254 %	105.395 %	22.704 ppb	66.696 ppb	844.894 ppb	22,376.062 ppb	8.235 ppb	35.884 ppb	52.463 ppb
Concentration per Run 3	114.251 %	111.837 %	22.791 ppb	68.880 ppb	835.452 ppb	22,819.286 ppb	8.758 ppb	35.493 ppb	54.411 ppb
Concentration RSD	2.5 %	4.0 %	2.5 %	3.0 %	2.2 %	1.4 %	3.2 %	1.8 %	2.1 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	142.968 ppb	105.888 %	106.128 %	7.136 ppb	3.463 ppb	43.427 ppb	1.864 ppb	99.690 %	97.880 %
Concentration per Run 1	144.869 ppb	110.595 %	103.922 %	7.197 ppb	3.923 ppb	44.148 ppb	1.744 ppb	103.850 %	96.697 %
Concentration per Run 2	138.275 ppb	104.050 %	110.920 %	6.705 ppb	3.563 ppb	41.554 ppb	1.967 ppb	97.674 %	98.929 %
Concentration per Run 3	145.761 ppb	103.019 %	103.542 %	7.506 ppb	2.902 ppb	44.579 ppb	1.879 ppb	97.545 %	98.014 %
Concentration RSD	2.9 %	3.9 %	3.9 %	5.7 %	15.0 %	3.8 %	6.0 %	3.6 %	1.1 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.628 ppb	0.267 ppb	96.284 %	96.415 %	0.308 ppb	62.911 ppb	102.470 %	97.397 %	101.164 %
Concentration per Run 1	0.610 ppb	0.232 ppb	99.508 %	95.007 %	0.308 ppb	62.249 ppb	106.795 %	97.944 %	106.880 %
Concentration per Run 2	0.649 ppb	0.267 ppb	96.814 %	95.744 %	0.272 ppb	63.872 ppb	101.039 %	95.683 %	98.133 %
Concentration per Run 3	0.626 ppb	0.301 ppb	92.529 %	98.494 %	0.345 ppb	62.612 ppb	99.578 %	98.565 %	98.480 %
Concentration RSD	3.1 %	13.1 %	3.7 %	1.9 %	11.9 %	1.4 %	3.7 %	1.6 %	4.9 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	95.417 %	0.110 ppb	44.882 ppb	110.231 %	107.923 %
Concentration per Run 1	93.132 %	0.093 ppb	43.803 ppb	115.848 %	109.355 %
Concentration per Run 2	96.256 %	0.119 ppb	45.599 ppb	108.944 %	106.432 %
Concentration per Run 3	96.865 %	0.119 ppb	45.244 ppb	105.900 %	107.983 %
Concentration RSD	2.1 %	13.4 %	2.1 %	4.6 %	1.4 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	23	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2414393-04d10 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 2:00:49 PM	Vial	5		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	108.332 %	109.339 %	0.579 ppb	151.488 ppb	12,706.480 ppb	6,387.439 ppb	8,311.157 ppb	2,151.431 ppb	4,198.806 ppb
Concentration per Run 1	112.025 %	98.638 %	0.582 ppb	145.841 ppb	13,196.137 ppb	6,742.667 ppb	8,068.351 ppb	2,140.005 ppb	3,936.234 ppb
Concentration per Run 2	105.633 %	109.144 %	0.586 ppb	154.866 ppb	12,483.379 ppb	6,366.708 ppb	8,457.229 ppb	2,127.897 ppb	4,489.229 ppb
Concentration per Run 3	107.337 %	120.234 %	0.569 ppb	153.756 ppb	12,439.924 ppb	6,052.942 ppb	8,407.890 ppb	2,186.390 ppb	4,170.957 ppb
Concentration RSD	3.1 %	9.9 %	1.5 %	3.2 %	3.3 %	5.4 %	2.5 %	1.4 %	6.6 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	120.357 %	114.118 %	21.809 ppb	37.509 ppb	900.612 ppb	23,019.691 ppb	8.208 ppb	24.830 ppb	35.373 ppb
Concentration per Run 1	122.107 %	115.702 %	23.198 ppb	37.037 ppb	889.474 ppb	22,904.039 ppb	8.246 ppb	24.054 ppb	33.975 ppb
Concentration per Run 2	117.573 %	116.910 %	19.973 ppb	36.116 ppb	888.992 ppb	22,858.560 ppb	7.881 ppb	25.753 ppb	36.347 ppb
Concentration per Run 3	121.393 %	109.743 %	22.256 ppb	39.376 ppb	923.370 ppb	23,296.473 ppb	8.498 ppb	24.684 ppb	35.797 ppb
Concentration RSD	2.0 %	3.4 %	7.6 %	4.5 %	2.2 %	1.0 %	3.8 %	3.5 %	3.5 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	193.592 ppb	106.806 %	107.434 %	6.984 ppb	3.842 ppb	46.945 ppb	1.264 ppb	100.222 %	98.665 %
Concentration per Run 1	190.065 ppb	109.022 %	109.127 %	7.028 ppb	3.962 ppb	45.952 ppb	1.212 ppb	103.111 %	99.879 %
Concentration per Run 2	195.954 ppb	106.046 %	105.748 %	6.766 ppb	3.226 ppb	47.485 ppb	1.322 ppb	98.071 %	96.306 %
Concentration per Run 3	194.756 ppb	105.350 %	107.427 %	7.157 ppb	4.338 ppb	47.398 ppb	1.259 ppb	99.485 %	99.810 %
Concentration RSD	1.6 %	1.8 %	1.6 %	2.8 %	14.7 %	1.8 %	4.4 %	2.6 %	2.1 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.565 ppb	0.251 ppb	98.854 %	94.520 %	0.321 ppb	152.989 ppb	104.190 %	98.855 %	102.029 %
Concentration per Run 1	0.560 ppb	0.290 ppb	101.764 %	91.041 %	0.358 ppb	154.807 ppb	106.125 %	99.394 %	106.321 %
Concentration per Run 2	0.552 ppb	0.203 ppb	97.990 %	97.737 %	0.325 ppb	144.427 ppb	102.302 %	100.744 %	99.248 %
Concentration per Run 3	0.584 ppb	0.261 ppb	96.808 %	94.783 %	0.280 ppb	159.733 ppb	104.143 %	96.428 %	100.518 %
Concentration RSD	2.9 %	17.7 %	2.6 %	3.5 %	12.2 %	5.1 %	1.8 %	2.2 %	3.7 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	96.109 %	0.108 ppb	43.087 ppb	112.356 %	110.514 %
Concentration per Run 1	94.084 %	0.102 ppb	42.559 ppb	115.268 %	113.251 %
Concentration per Run 2	97.255 %	0.105 ppb	43.733 ppb	112.739 %	107.425 %
Concentration per Run 3	96.987 %	0.115 ppb	42.970 ppb	109.060 %	110.865 %
Concentration RSD	1.8 %	6.3 %	1.4 %	2.8 %	2.7 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	24	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2414393-06d10 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 2:05:30 PM	Vial	6		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	107.111 %	112.451 %	0.535 ppb	141.398 ppb	13,186.662 ppb	6,207.992 ppb	7,743.892 ppb	2,080.852 ppb	4,652.119 ppb
Concentration per Run 1	111.213 %	127.237 %	0.496 ppb	136.256 ppb	11,973.811 ppb	5,868.761 ppb	7,458.272 ppb	2,077.564 ppb	5,313.789 ppb
Concentration per Run 2	106.010 %	105.058 %	0.576 ppb	142.869 ppb	13,766.801 ppb	6,491.969 ppb	7,975.850 ppb	1,948.782 ppb	4,160.859 ppb
Concentration per Run 3	104.109 %	105.058 %	0.534 ppb	145.070 ppb	13,819.374 ppb	6,263.246 ppb	7,797.553 ppb	2,216.211 ppb	4,481.711 ppb
Concentration RSD	3.4 %	11.4 %	7.5 %	3.2 %	8.0 %	5.1 %	3.4 %	6.4 %	12.8 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	117.134 %	109.475 %	20.845 ppb	35.284 ppb	787.336 ppb	22,201.120 ppb	7.473 ppb	22.792 ppb	39.676 ppb
Concentration per Run 1	120.413 %	108.777 %	20.136 ppb	34.367 ppb	787.565 ppb	21,759.522 ppb	7.445 ppb	23.663 ppb	38.541 ppb
Concentration per Run 2	117.363 %	112.722 %	21.453 ppb	34.557 ppb	781.525 ppb	21,973.545 ppb	7.456 ppb	21.740 ppb	40.650 ppb
Concentration per Run 3	113.626 %	106.925 %	20.945 ppb	36.927 ppb	792.917 ppb	22,870.292 ppb	7.519 ppb	22.972 ppb	39.837 ppb
Concentration RSD	2.9 %	2.7 %	3.2 %	4.0 %	0.7 %	2.7 %	0.5 %	4.3 %	2.7 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	118.645 ppb	105.875 %	107.194 %	6.694 ppb	3.541 ppb	44.900 ppb	1.268 ppb	99.121 %	97.934 %
Concentration per Run 1	117.559 ppb	110.916 %	108.142 %	6.908 ppb	3.264 ppb	44.201 ppb	1.193 ppb	101.278 %	97.683 %
Concentration per Run 2	120.247 ppb	103.339 %	104.081 %	6.700 ppb	3.409 ppb	45.826 ppb	1.356 ppb	97.287 %	101.048 %
Concentration per Run 3	118.130 ppb	103.370 %	109.359 %	6.473 ppb	3.950 ppb	44.675 ppb	1.254 ppb	98.798 %	95.072 %
Concentration RSD	1.2 %	4.1 %	2.6 %	3.2 %	10.2 %	1.9 %	6.5 %	2.0 %	3.1 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.583 ppb	0.250 ppb	98.231 %	95.178 %	0.287 ppb	41.967 ppb	101.269 %	99.393 %	102.016 %
Concentration per Run 1	0.578 ppb	0.242 ppb	101.603 %	94.946 %	0.292 ppb	42.348 ppb	103.713 %	98.904 %	103.808 %
Concentration per Run 2	0.549 ppb	0.238 ppb	95.481 %	93.341 %	0.285 ppb	40.553 ppb	98.784 %	99.338 %	103.021 %
Concentration per Run 3	0.620 ppb	0.272 ppb	97.610 %	97.247 %	0.286 ppb	42.999 ppb	101.309 %	99.937 %	99.220 %
Concentration RSD	6.1 %	7.4 %	3.2 %	2.1 %	1.4 %	3.0 %	2.4 %	0.5 %	2.4 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	96.136 %	0.095 ppb	40.582 ppb	110.944 %	111.586 %
Concentration per Run 1	95.045 %	0.084 ppb	40.259 ppb	115.914 %	111.554 %
Concentration per Run 2	96.048 %	0.096 ppb	40.798 ppb	109.298 %	111.116 %
Concentration per Run 3	97.313 %	0.106 ppb	40.688 ppb	107.620 %	112.088 %
Concentration RSD	1.2 %	11.5 %	0.7 %	4.0 %	0.4 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	25	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2414393-08d10 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 2:10:11 PM	Vial	7		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	107.555 %	107.198 %	0.358 ppb	96.495 ppb	12,930.877 ppb	4,791.782 ppb	5,144.680 ppb	1,668.069 ppb	3,262.343 ppb
Concentration per Run 1	110.347 %	112.646 %	0.349 ppb	93.257 ppb	12,704.918 ppb	4,759.344 ppb	4,992.721 ppb	1,739.609 ppb	3,409.504 ppb
Concentration per Run 2	105.694 %	105.642 %	0.368 ppb	98.469 ppb	12,904.979 ppb	4,709.316 ppb	5,158.632 ppb	1,697.235 ppb	3,169.660 ppb
Concentration per Run 3	106.623 %	103.307 %	0.358 ppb	97.758 ppb	13,182.733 ppb	4,906.686 ppb	5,282.686 ppb	1,567.362 ppb	3,207.865 ppb
Concentration RSD	2.3 %	4.5 %	2.6 %	2.9 %	1.9 %	2.1 %	2.8 %	5.4 %	4.0 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	117.436 %	107.757 %	14.379 ppb	24.205 ppb	580.001 ppb	15,663.543 ppb	5.197 ppb	16.141 ppb	27.523 ppb
Concentration per Run 1	119.068 %	104.107 %	15.070 ppb	24.243 ppb	603.135 ppb	16,141.204 ppb	5.514 ppb	16.646 ppb	29.061 ppb
Concentration per Run 2	117.968 %	109.501 %	14.271 ppb	23.839 ppb	574.435 ppb	15,101.227 ppb	5.231 ppb	15.483 ppb	26.525 ppb
Concentration per Run 3	115.273 %	109.662 %	13.796 ppb	24.532 ppb	562.431 ppb	15,748.199 ppb	4.846 ppb	16.294 ppb	26.985 ppb
Concentration RSD	1.7 %	2.9 %	4.5 %	1.4 %	3.6 %	3.4 %	6.4 %	3.7 %	4.9 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	84.025 ppb	106.083 %	104.828 %	4.817 ppb	2.531 ppb	33.579 ppb	0.868 ppb	101.082 %	96.486 %
Concentration per Run 1	86.202 ppb	109.586 %	101.055 %	5.009 ppb	3.508 ppb	33.686 ppb	0.732 ppb	102.479 %	95.810 %
Concentration per Run 2	82.880 ppb	103.773 %	106.594 %	4.674 ppb	2.611 ppb	33.886 ppb	0.962 ppb	98.665 %	97.152 %
Concentration per Run 3	82.993 ppb	104.892 %	106.835 %	4.767 ppb	1.474 ppb	33.165 ppb	0.908 ppb	102.101 %	96.498 %
Concentration RSD	2.2 %	2.9 %	3.1 %	3.6 %	40.3 %	1.1 %	13.9 %	2.1 %	0.7 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.396 ppb	0.169 ppb	99.317 %	95.120 %	0.232 ppb	28.144 ppb	101.781 %	99.982 %	102.802 %
Concentration per Run 1	0.414 ppb	0.202 ppb	100.661 %	93.218 %	0.246 ppb	28.711 ppb	104.156 %	96.898 %	105.351 %
Concentration per Run 2	0.400 ppb	0.164 ppb	98.557 %	94.497 %	0.242 ppb	28.284 ppb	99.513 %	98.865 %	100.112 %
Concentration per Run 3	0.374 ppb	0.140 ppb	98.733 %	97.645 %	0.208 ppb	27.435 ppb	101.673 %	104.183 %	102.942 %
Concentration RSD	5.1 %	18.8 %	1.2 %	2.4 %	9.0 %	2.3 %	2.3 %	3.8 %	2.6 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	95.687 %	0.072 ppb	28.231 ppb	111.062 %	107.753 %
Concentration per Run 1	93.935 %	0.059 ppb	28.241 ppb	116.454 %	107.640 %
Concentration per Run 2	95.143 %	0.077 ppb	28.238 ppb	108.807 %	108.511 %
Concentration per Run 3	97.982 %	0.080 ppb	28.216 ppb	107.923 %	107.109 %
Concentration RSD	2.2 %	15.4 %	0.0 %	4.2 %	0.7 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 26
Analysis label: I2414393-02d50 A2-6020T
Analysis started at: 4/14/2024 2:14:52 PM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 8
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	107.683 %	113.424 %	0.126 ppb	23.190 ppb	2,239.608 ppb	1,255.930 ppb	1,675.555 ppb	421.468 ppb	880.983 ppb
Concentration per Run 1	110.193 %	120.817 %	0.133 ppb	22.899 ppb	2,128.473 ppb	1,252.094 ppb	1,638.702 ppb	398.346 ppb	1,072.174 ppb
Concentration per Run 2	105.823 %	115.564 %	0.126 ppb	23.463 ppb	2,179.231 ppb	1,224.030 ppb	1,686.872 ppb	424.611 ppb	714.217 ppb
Concentration per Run 3	107.034 %	103.891 %	0.118 ppb	23.208 ppb	2,411.119 ppb	1,291.667 ppb	1,701.089 ppb	441.445 ppb	856.559 ppb
Concentration RSD	2.1 %	7.6 %	6.0 %	1.2 %	6.7 %	2.7 %	2.0 %	5.2 %	20.5 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	112.390 %	102.630 %	4.651 ppb	13.966 ppb	175.936 ppb	4,627.860 ppb	1.688 ppb	6.854 ppb	10.663 ppb
Concentration per Run 1	116.067 %	101.047 %	4.165 ppb	14.817 ppb	175.750 ppb	4,521.966 ppb	1.750 ppb	7.444 ppb	10.699 ppb
Concentration per Run 2	110.068 %	105.234 %	4.461 ppb	13.471 ppb	173.593 ppb	4,585.820 ppb	1.769 ppb	6.487 ppb	10.745 ppb
Concentration per Run 3	111.035 %	101.610 %	5.328 ppb	13.610 ppb	178.466 ppb	4,775.793 ppb	1.544 ppb	6.631 ppb	10.545 ppb
Concentration RSD	2.9 %	2.2 %	13.0 %	5.3 %	1.4 %	2.9 %	7.4 %	7.5 %	1.0 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	29.834 ppb	104.731 %	110.058 %	1.266 ppb	0.745 ppb	8.163 ppb	0.423 ppb	101.766 %	99.238 %
Concentration per Run 1	29.460 ppb	108.151 %	108.657 %	1.399 ppb	0.747 ppb	7.958 ppb	0.367 ppb	104.760 %	98.892 %
Concentration per Run 2	30.524 ppb	103.860 %	110.308 %	1.065 ppb	0.645 ppb	8.297 ppb	0.464 ppb	99.163 %	98.378 %
Concentration per Run 3	29.517 ppb	102.182 %	111.210 %	1.333 ppb	0.842 ppb	8.235 ppb	0.440 ppb	101.375 %	100.445 %
Concentration RSD	2.0 %	2.9 %	1.2 %	14.0 %	13.2 %	2.2 %	12.0 %	2.8 %	1.1 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.130 ppb	0.074 ppb	101.315 %	98.439 %	0.052 ppb	11.954 ppb	100.008 %	99.271 %	100.914 %
Concentration per Run 1	0.118 ppb	0.080 ppb	104.987 %	96.326 %	0.042 ppb	11.382 ppb	103.383 %	100.220 %	103.177 %
Concentration per Run 2	0.138 ppb	0.065 ppb	99.763 %	99.322 %	0.068 ppb	12.677 ppb	98.645 %	99.542 %	99.701 %
Concentration per Run 3	0.136 ppb	0.078 ppb	99.195 %	99.670 %	0.045 ppb	11.805 ppb	97.997 %	98.051 %	99.862 %
Concentration RSD	8.4 %	11.2 %	3.2 %	1.9 %	27.9 %	5.5 %	2.9 %	1.1 %	1.9 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	97.077 %	0.032 ppb	8.819 ppb	110.077 %	110.109 %
Concentration per Run 1	97.479 %	0.023 ppb	8.967 ppb	114.431 %	106.429 %
Concentration per Run 2	96.371 %	0.034 ppb	8.967 ppb	109.011 %	109.459 %
Concentration per Run 3	97.381 %	0.038 ppb	8.523 ppb	106.790 %	114.440 %
Concentration RSD	0.6 %	26.0 %	2.9 %	3.6 %	3.7 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	27	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2414393-04d50 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 2:19:34 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	106.858 %	113.230 %	0.101 ppb	29.976 ppb	2,547.234 ppb	1,353.195 ppb	1,721.786 ppb	463.690 ppb	1,215.941 ppb
Concentration per Run 1	110.280 %	119.650 %	0.101 ppb	28.504 ppb	2,492.818 ppb	1,328.409 ppb	1,650.231 ppb	481.333 ppb	1,293.682 ppb
Concentration per Run 2	105.353 %	105.058 %	0.110 ppb	30.488 ppb	2,620.478 ppb	1,437.337 ppb	1,731.241 ppb	446.414 ppb	1,173.490 ppb
Concentration per Run 3	104.942 %	114.981 %	0.091 ppb	30.935 ppb	2,528.408 ppb	1,293.840 ppb	1,783.885 ppb	463.323 ppb	1,180.652 ppb
Concentration RSD	2.8 %	6.6 %	9.4 %	4.3 %	2.6 %	5.5 %	3.9 %	3.8 %	5.5 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	107.330 %	103.194 %	4.548 ppb	8.247 ppb	197.112 ppb	4,861.845 ppb	1.747 ppb	5.138 ppb	7.141 ppb
Concentration per Run 1	112.599 %	102.094 %	4.697 ppb	8.559 ppb	203.155 ppb	5,035.309 ppb	1.689 ppb	5.147 ppb	7.055 ppb
Concentration per Run 2	106.045 %	104.751 %	4.827 ppb	8.031 ppb	192.646 ppb	4,764.153 ppb	1.779 ppb	4.926 ppb	7.232 ppb
Concentration per Run 3	103.347 %	102.738 %	4.119 ppb	8.151 ppb	195.536 ppb	4,786.072 ppb	1.773 ppb	5.342 ppb	7.137 ppb
Concentration RSD	4.4 %	1.3 %	8.3 %	3.4 %	2.8 %	3.1 %	2.9 %	4.1 %	1.2 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	41.188 ppb	105.049 %	103.757 %	1.340 ppb	0.682 ppb	9.898 ppb	0.305 ppb	101.529 %	98.973 %
Concentration per Run 1	42.893 ppb	108.436 %	99.213 %	1.232 ppb	0.657 ppb	10.470 ppb	0.317 ppb	104.339 %	99.248 %
Concentration per Run 2	39.807 ppb	103.080 %	104.388 %	1.389 ppb	0.395 ppb	10.160 ppb	0.241 ppb	101.246 %	98.003 %
Concentration per Run 3	40.864 ppb	103.630 %	107.669 %	1.399 ppb	0.993 ppb	9.063 ppb	0.357 ppb	99.001 %	99.668 %
Concentration RSD	3.8 %	2.8 %	4.1 %	7.0 %	44.0 %	7.5 %	19.4 %	2.6 %	0.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.126 ppb	0.057 ppb	98.526 %	93.757 %	0.073 ppb	30.944 ppb	100.960 %	95.147 %	100.137 %
Concentration per Run 1	0.130 ppb	0.046 ppb	102.880 %	91.031 %	0.065 ppb	32.633 ppb	102.682 %	92.990 %	103.167 %
Concentration per Run 2	0.121 ppb	0.066 ppb	95.891 %	95.355 %	0.089 ppb	29.557 ppb	99.432 %	94.428 %	99.028 %
Concentration per Run 3	0.128 ppb	0.059 ppb	96.806 %	94.885 %	0.064 ppb	30.643 ppb	100.766 %	98.024 %	98.216 %
Concentration RSD	3.8 %	17.8 %	3.9 %	2.5 %	19.1 %	5.0 %	1.6 %	2.7 %	2.7 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	93.438 %	0.027 ppb	9.165 ppb	111.213 %	103.946 %
Concentration per Run 1	90.588 %	0.021 ppb	9.291 ppb	117.837 %	102.635 %
Concentration per Run 2	94.954 %	0.024 ppb	9.132 ppb	106.782 %	103.523 %
Concentration per Run 3	94.771 %	0.035 ppb	9.072 ppb	109.019 %	105.680 %
Concentration RSD	2.6 %	27.0 %	1.2 %	5.3 %	1.5 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	28	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2414393-06d50 A2-6020T	Rack	1		
Analysis started at:	4/14/2024 2:24:16 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	107.267 %	123.541 %	0.113 ppb	27.743 ppb	2,473.408 ppb	1,179.844 ppb	1,577.947 ppb	417.249 ppb	886.313 ppb
Concentration per Run 1	110.856 %	125.487 %	0.110 ppb	26.799 ppb	2,454.688 ppb	1,175.837 ppb	1,522.840 ppb	388.183 ppb	960.559 ppb
Concentration per Run 2	106.591 %	120.817 %	0.109 ppb	28.225 ppb	2,517.510 ppb	1,214.215 ppb	1,632.870 ppb	409.045 ppb	900.137 ppb
Concentration per Run 3	104.353 %	124.319 %	0.121 ppb	28.206 ppb	2,448.025 ppb	1,149.481 ppb	1,578.130 ppb	454.519 ppb	798.242 ppb
Concentration RSD	3.1 %	2.0 %	6.1 %	2.9 %	1.6 %	2.8 %	3.5 %	8.1 %	9.3 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	111.180 %	103.355 %	4.642 ppb	7.602 ppb	163.382 ppb	4,602.888 ppb	1.619 ppb	4.612 ppb	8.194 ppb
Concentration per Run 1	113.739 %	102.013 %	4.701 ppb	7.226 ppb	164.413 ppb	4,665.335 ppb	1.621 ppb	4.582 ppb	7.973 ppb
Concentration per Run 2	110.410 %	102.657 %	4.708 ppb	7.695 ppb	163.710 ppb	4,626.370 ppb	1.660 ppb	4.400 ppb	8.134 ppb
Concentration per Run 3	109.391 %	105.395 %	4.516 ppb	7.884 ppb	162.021 ppb	4,516.959 ppb	1.577 ppb	4.855 ppb	8.475 ppb
Concentration RSD	2.0 %	1.7 %	2.3 %	4.5 %	0.8 %	1.7 %	2.6 %	5.0 %	3.1 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	23.760 ppb	107.164 %	106.621 %	1.233 ppb	0.876 ppb	8.858 ppb	0.260 ppb	102.858 %	98.594 %
Concentration per Run 1	24.003 ppb	113.441 %	107.060 %	1.165 ppb	0.983 ppb	8.703 ppb	0.220 ppb	105.626 %	99.607 %
Concentration per Run 2	24.376 ppb	104.030 %	103.886 %	1.225 ppb	0.661 ppb	8.765 ppb	0.241 ppb	99.716 %	97.773 %
Concentration per Run 3	22.900 ppb	104.022 %	108.918 %	1.308 ppb	0.984 ppb	9.105 ppb	0.319 ppb	103.231 %	98.401 %
Concentration RSD	3.2 %	5.1 %	2.4 %	5.8 %	21.3 %	2.4 %	20.0 %	2.9 %	0.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.113 ppb	0.059 ppb	100.073 %	95.863 %	0.065 ppb	8.094 ppb	99.544 %	98.044 %	101.072 %
Concentration per Run 1	0.106 ppb	0.052 ppb	102.178 %	95.867 %	0.051 ppb	8.039 ppb	101.788 %	98.339 %	103.355 %
Concentration per Run 2	0.128 ppb	0.070 ppb	99.178 %	94.915 %	0.069 ppb	8.072 ppb	97.149 %	94.081 %	100.371 %
Concentration per Run 3	0.105 ppb	0.055 ppb	98.862 %	96.807 %	0.076 ppb	8.172 ppb	99.695 %	101.711 %	99.492 %
Concentration RSD	11.7 %	16.7 %	1.8 %	1.0 %	19.9 %	0.9 %	2.3 %	3.9 %	2.0 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	94.590 %	0.023 ppb	8.226 ppb	109.838 %	110.598 %
Concentration per Run 1	93.001 %	0.018 ppb	7.998 ppb	115.244 %	112.663 %
Concentration per Run 2	94.057 %	0.029 ppb	8.458 ppb	109.524 %	108.180 %
Concentration per Run 3	96.713 %	0.023 ppb	8.221 ppb	104.746 %	110.950 %
Concentration RSD	2.0 %	23.1 %	2.8 %	4.8 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 29 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: CCV Rack 0
Analysis started at: 4/14/2024 2:28:58 PM Vial 9

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	102.195 %	102.335 %	58.895 ppb	58.986 ppb	6,164.008 ppb	6,119.858 ppb	59.087 ppb	6,351.093 ppb	6,549.309 ppb
Concentration per Run 1	105.808 %	102.140 %	56.498 ppb	57.420 ppb	6,161.267 ppb	6,054.082 ppb	59.606 ppb	6,247.693 ppb	6,491.194 ppb
Concentration per Run 2	100.694 %	98.054 %	60.511 ppb	58.836 ppb	6,288.962 ppb	6,233.235 ppb	59.395 ppb	6,342.714 ppb	6,400.074 ppb
Concentration per Run 3	100.082 %	106.809 %	59.675 ppb	60.702 ppb	6,041.796 ppb	6,072.259 ppb	58.260 ppb	6,462.871 ppb	6,756.660 ppb
Recovery Percentage 1			98.158 %	98.310 %	102.733 %	101.998 %	98.478 %	105.852 %	109.155 %
Concentration RSD	3.1 %	4.3 %	3.6 %	2.8 %	2.0 %	1.6 %	1.2 %	1.7 %	2.8 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	112.385 %	105.234 %	60.566 ppb	59.956 ppb	62.631 ppb	6,220.136 ppb	58.885 ppb	63.053 ppb	60.325 ppb
Concentration per Run 1	113.374 %	107.327 %	59.696 ppb	58.234 ppb	62.481 ppb	6,246.865 ppb	59.067 ppb	64.324 ppb	59.796 ppb
Concentration per Run 2	112.453 %	103.865 %	62.844 ppb	61.421 ppb	61.822 ppb	6,127.125 ppb	59.143 ppb	63.537 ppb	61.547 ppb
Concentration per Run 3	111.330 %	104.509 %	59.157 ppb	60.212 ppb	63.589 ppb	6,286.419 ppb	58.447 ppb	61.298 ppb	59.632 ppb
Recovery Percentage 1			100.943 %	99.927 %	104.385 %	103.669 %	98.142 %	105.088 %	100.542 %
Concentration RSD	0.9 %	1.7 %	3.3 %	2.7 %	1.4 %	1.3 %	0.6 %	2.5 %	1.8 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	59.536 ppb	106.031 %	106.122 %	58.751 ppb	56.942 ppb	57.706 ppb	58.517 ppb	101.583 %	99.691 %
Concentration per Run 1	58.957 ppb	110.268 %	104.163 %	58.931 ppb	56.480 ppb	57.503 ppb	57.983 ppb	103.947 %	99.399 %
Concentration per Run 2	60.872 ppb	103.695 %	106.006 %	57.750 ppb	59.758 ppb	58.541 ppb	59.194 ppb	99.082 %	97.905 %
Concentration per Run 3	58.778 ppb	104.130 %	108.199 %	59.570 ppb	54.590 ppb	57.075 ppb	58.373 ppb	101.721 %	101.767 %
Recovery Percentage 1	99.227 %			97.918 %	94.904 %	96.177 %	97.528 %		
Concentration RSD	1.9 %	3.5 %	1.9 %	1.6 %	4.6 %	1.3 %	1.1 %	2.4 %	2.0 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	60.884 ppb	58.028 ppb	98.639 %	98.504 %	59.582 ppb	59.408 ppb	103.979 %	98.974 %	100.859 %
Concentration per Run 1	61.236 ppb	57.169 ppb	98.890 %	98.187 %	58.908 ppb	59.405 ppb	104.650 %	101.214 %	101.080 %
Concentration per Run 2	60.977 ppb	58.576 ppb	100.151 %	98.821 %	58.880 ppb	57.108 ppb	104.477 %	98.648 %	101.090 %
Concentration per Run 3	60.440 ppb	58.340 ppb	96.877 %	98.504 %	60.956 ppb	61.711 ppb	102.810 %	97.061 %	100.408 %
Recovery Percentage 1	101.473 %	96.714 %			99.303 %	99.013 %			
Concentration RSD	0.7 %	1.3 %	1.7 %	0.3 %	2.0 %	3.9 %	1.0 %	2.1 %	0.4 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.332 %	57.800 ppb	57.018 ppb	112.339 %	111.001 %
Concentration per Run 1	99.140 %	54.804 ppb	54.257 ppb	117.341 %	115.480 %
Concentration per Run 2	97.132 %	60.125 ppb	58.904 ppb	111.135 %	107.026 %
Concentration per Run 3	98.724 %	58.470 ppb	57.894 ppb	108.542 %	110.499 %
Recovery Percentage 1		96.333 %	95.031 %		
Concentration RSD	1.1 %	4.7 %	4.3 %	4.0 %	3.8 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	30	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/14/2024 2:33:42 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	105.222 %	106.226 %	0.036 ppb	0.491 ppb	-31.843 ppb	-4.865 ppb	-0.713 ppb	-13.840 ppb	-1.094 ppb
Concentration per Run 1	107.767 %	100.389 %	0.038 ppb	0.516 ppb	-22.285 ppb	-4.587 ppb	-0.717 ppb	0.754 ppb	-0.780 ppb
Concentration per Run 2	104.232 %	116.148 %	0.026 ppb	0.505 ppb	-50.900 ppb	-6.368 ppb	-0.712 ppb	-28.666 ppb	17.345 ppb
Concentration per Run 3	103.666 %	102.140 %	0.045 ppb	0.453 ppb	-22.346 ppb	-3.640 ppb	-0.711 ppb	-13.607 ppb	-19.848 ppb
Recovery Percentage 1			7.281 %	4.913 %	-31.843 %	-6.950 %	-7.134 %	-13.840 %	-1.094 %
Concentration RSD	2.1 %	8.1 %	25.9 %	6.8 %	51.8 %	28.5 %	0.5 %	106.3 %	1,699.5 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	107.717 %	103.650 %	0.016 ppb	-0.181 ppb	-0.021 ppb	3.781 ppb	-0.015 ppb	-0.412 ppb	-0.261 ppb
Concentration per Run 1	107.878 %	103.462 %	0.016 ppb	-0.201 ppb	0.014 ppb	6.017 ppb	-0.013 ppb	-0.388 ppb	-0.228 ppb
Concentration per Run 2	108.747 %	104.026 %	0.016 ppb	-0.187 ppb	-0.034 ppb	2.681 ppb	-0.013 ppb	-0.376 ppb	-0.281 ppb
Concentration per Run 3	106.526 %	103.462 %	0.016 ppb	-0.154 ppb	-0.043 ppb	2.646 ppb	-0.019 ppb	-0.473 ppb	-0.275 ppb
Recovery Percentage 1			0.321 %	-18.082 %	-2.097 %	7.562 %	-2.960 %	-20.611 %	-26.133 %
Concentration RSD	1.0 %	0.3 %	0.4 %	13.2 %	145.5 %	51.2 %	26.5 %	12.8 %	11.2 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.103 ppb	108.232 %	106.344 %	0.025 ppb	-0.026 ppb	-0.021 ppb	0.142 ppb	102.396 %	101.255 %
Concentration per Run 1	-0.082 ppb	110.873 %	105.655 %	0.116 ppb	0.019 ppb	-0.047 ppb	0.131 ppb	103.984 %	99.305 %
Concentration per Run 2	-0.068 ppb	105.520 %	105.307 %	0.014 ppb	-0.122 ppb	0.007 ppb	0.153 ppb	99.185 %	101.260 %
Concentration per Run 3	-0.159 ppb	108.303 %	108.069 %	-0.054 ppb	0.024 ppb	-0.022 ppb	0.142 ppb	104.020 %	103.200 %
Recovery Percentage 1	-2.056 %			5.063 %	-0.521 %	-4.164 %	7.111 %		
Concentration RSD	47.9 %	2.5 %	1.4 %	338.5 %	319.0 %	130.4 %	7.9 %	2.7 %	1.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.003 ppb	0.008 ppb	102.059 %	103.166 %	0.049 ppb	-0.018 ppb	101.777 %	100.555 %	100.438 %
Concentration per Run 1	-0.002 ppb	0.009 ppb	104.735 %	103.483 %	0.045 ppb	-0.012 ppb	104.460 %	100.709 %	102.141 %
Concentration per Run 2	0.006 ppb	0.012 ppb	101.713 %	103.657 %	0.045 ppb	-0.012 ppb	100.456 %	101.931 %	100.344 %
Concentration per Run 3	0.005 ppb	0.002 ppb	99.729 %	102.358 %	0.056 ppb	-0.030 ppb	100.416 %	99.025 %	98.828 %
Recovery Percentage 1	0.815 %				1.223 %	-3.640 %			
Concentration RSD	129.2 %	65.5 %	2.5 %	0.7 %	12.9 %	55.6 %	2.3 %	1.5 %	1.7 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.020 %	0.247 ppb	0.006 ppb	115.354 %	115.391 %
Concentration per Run 1	97.159 %	0.146 ppb	0.007 ppb	119.014 %	118.701 %
Concentration per Run 2	98.089 %	0.286 ppb	0.009 ppb	116.413 %	115.604 %
Concentration per Run 3	98.814 %	0.310 ppb	0.003 ppb	110.636 %	111.869 %
Recovery Percentage 1		24.743 %	0.633 %		
Concentration RSD	0.8 %	35.8 %	44.5 %	3.7 %	3.0 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	31	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1906880-1 6020SL	Rack	1		
Analysis started at:	4/14/2024 2:39:30 PM	Vial	11		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	103.917 %	111.090 %	0.020 ppb	0.371 ppb	-60.490 ppb	-4.841 ppb	1.535 ppb	-19.824 ppb	21.297 ppb
Concentration per Run 1	108.864 %	112.062 %	0.029 ppb	0.391 ppb	-59.506 ppb	-4.581 ppb	1.406 ppb	-28.322 ppb	-2.150 ppb
Concentration per Run 2	102.791 %	114.981 %	0.012 ppb	0.364 ppb	-61.067 ppb	-5.550 ppb	1.574 ppb	-14.010 ppb	50.108 ppb
Concentration per Run 3	100.096 %	106.226 %	0.020 ppb	0.359 ppb	-60.897 ppb	-4.391 ppb	1.625 ppb	-17.142 ppb	15.932 ppb
Concentration RSD	4.3 %	4.0 %	42.4 %	4.7 %	1.4 %	12.8 %	7.4 %	38.0 %	124.6 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	107.637 %	110.924 %	0.015 ppb	-0.122 ppb	-0.026 ppb	0.449 ppb	-0.020 ppb	-0.569 ppb	-0.315 ppb
Concentration per Run 1	112.922 %	111.595 %	0.038 ppb	-0.147 ppb	-0.007 ppb	0.862 ppb	-0.020 ppb	-0.593 ppb	-0.294 ppb
Concentration per Run 2	105.425 %	111.595 %	-0.009 ppb	-0.046 ppb	-0.038 ppb	0.808 ppb	-0.017 ppb	-0.519 ppb	-0.333 ppb
Concentration per Run 3	104.565 %	109.582 %	0.015 ppb	-0.174 ppb	-0.033 ppb	-0.321 ppb	-0.023 ppb	-0.594 ppb	-0.317 ppb
Concentration RSD	4.3 %	1.0 %	160.4 %	55.2 %	64.4 %	148.6 %	15.3 %	7.5 %	6.2 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.146 ppb	106.431 %	112.176 %	0.016 ppb	-0.105 ppb	-0.041 ppb	0.043 ppb	103.789 %	104.788 %
Concentration per Run 1	0.130 ppb	108.851 %	109.144 %	-0.067 ppb	-0.128 ppb	-0.049 ppb	0.007 ppb	109.167 %	105.141 %
Concentration per Run 2	0.237 ppb	105.171 %	114.491 %	0.029 ppb	-0.083 ppb	-0.032 ppb	0.046 ppb	102.438 %	103.647 %
Concentration per Run 3	0.070 ppb	105.269 %	112.893 %	0.087 ppb	-0.105 ppb	-0.041 ppb	0.076 ppb	99.762 %	105.575 %
Concentration RSD	58.1 %	2.0 %	2.4 %	479.4 %	21.2 %	20.2 %	79.9 %	4.7 %	1.0 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	-0.001 ppb	0.002 ppb	100.523 %	104.165 %	0.029 ppb	0.022 ppb	102.682 %	103.982 %	100.713 %
Concentration per Run 1	-0.002 ppb	0.005 ppb	103.757 %	105.252 %	0.026 ppb	0.055 ppb	104.353 %	106.057 %	104.615 %
Concentration per Run 2	-0.002 ppb	0.002 ppb	98.870 %	103.474 %	0.035 ppb	0.023 ppb	104.551 %	101.191 %	100.989 %
Concentration per Run 3	0.000 ppb	-0.001 ppb	98.943 %	103.770 %	0.025 ppb	-0.013 ppb	99.144 %	104.700 %	96.534 %
Concentration RSD	82.3 %	151.9 %	2.8 %	0.9 %	19.4 %	155.9 %	3.0 %	2.4 %	4.0 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	103.216 %	0.076 ppb	0.004 ppb	114.906 %	120.466 %
Concentration per Run 1	102.033 %	0.038 ppb	0.004 ppb	120.787 %	125.083 %
Concentration per Run 2	104.520 %	0.098 ppb	0.004 ppb	114.690 %	117.329 %
Concentration per Run 3	103.094 %	0.092 ppb	0.004 ppb	109.242 %	118.986 %
Concentration RSD	1.2 %	43.2 %	9.9 %	5.0 %	3.4 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	32	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1906880-2d10 6020SL	Rack	1		
Analysis started at:	4/14/2024 2:44:12 PM	Vial	12		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	104.793 %	109.144 %	4.823 ppb	96.768 ppb	995.361 ppb	1,016.727 ppb	199.770 ppb	1,082.826 ppb	917.404 ppb
Concentration per Run 1	107.374 %	109.144 %	4.730 ppb	95.845 ppb	978.145 ppb	1,012.255 ppb	201.161 ppb	1,099.729 ppb	660.440 ppb
Concentration per Run 2	103.572 %	110.895 %	4.879 ppb	97.356 ppb	985.880 ppb	1,029.697 ppb	196.828 ppb	1,077.793 ppb	912.394 ppb
Concentration per Run 3	103.433 %	107.393 %	4.860 ppb	97.102 ppb	1,022.056 ppb	1,008.229 ppb	201.320 ppb	1,070.957 ppb	1,179.379 ppb
Concentration RSD	2.1 %	1.6 %	1.7 %	0.8 %	2.4 %	1.1 %	1.3 %	1.4 %	28.3 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	109.280 %	102.630 %	49.188 ppb	20.145 ppb	53.571 ppb	108.847 ppb	50.687 ppb	50.600 ppb	24.859 ppb
Concentration per Run 1	108.226 %	102.899 %	47.645 ppb	19.222 ppb	52.833 ppb	100.700 ppb	51.065 ppb	50.590 ppb	24.345 ppb
Concentration per Run 2	110.440 %	103.382 %	49.857 ppb	21.296 ppb	54.553 ppb	116.845 ppb	50.492 ppb	50.693 ppb	25.418 ppb
Concentration per Run 3	109.176 %	101.610 %	50.061 ppb	19.918 ppb	53.328 ppb	108.997 ppb	50.503 ppb	50.517 ppb	24.814 ppb
Concentration RSD	1.0 %	0.9 %	2.7 %	5.2 %	1.7 %	7.4 %	0.6 %	0.2 %	2.2 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	48.836 ppb	105.943 %	107.641 %	11.560 ppb	12.184 ppb	96.950 ppb	95.061 ppb	99.916 %	100.696 %
Concentration per Run 1	47.766 ppb	109.078 %	107.877 %	11.569 ppb	13.832 ppb	95.844 ppb	90.796 ppb	101.115 %	101.353 %
Concentration per Run 2	49.583 ppb	104.716 %	105.397 %	11.849 ppb	11.855 ppb	98.502 ppb	96.835 ppb	98.346 %	100.610 %
Concentration per Run 3	49.160 ppb	104.034 %	109.650 %	11.263 ppb	10.865 ppb	96.504 ppb	97.552 ppb	100.288 %	100.125 %
Concentration RSD	1.9 %	2.6 %	2.0 %	2.5 %	12.4 %	1.4 %	3.9 %	1.4 %	0.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	4.949 ppb	5.047 ppb	101.816 %	102.471 %	47.285 ppb	188.812 ppb	102.867 %	99.807 %	101.012 %
Concentration per Run 1	4.904 ppb	5.083 ppb	104.761 %	101.223 %	47.436 ppb	187.454 ppb	106.448 %	97.940 %	100.823 %
Concentration per Run 2	4.982 ppb	5.056 ppb	99.838 %	101.193 %	47.723 ppb	186.057 ppb	101.037 %	100.726 %	100.024 %
Concentration per Run 3	4.961 ppb	5.002 ppb	100.851 %	104.997 %	46.698 ppb	192.925 ppb	101.117 %	100.755 %	102.188 %
Concentration RSD	0.8 %	0.8 %	2.6 %	2.1 %	1.1 %	1.9 %	3.0 %	1.6 %	1.1 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	96.802 %	11.292 ppb	51.090 ppb	114.908 %	113.027 %
Concentration per Run 1	96.756 %	10.912 ppb	49.116 ppb	118.696 %	114.681 %
Concentration per Run 2	97.392 %	11.799 ppb	53.731 ppb	113.521 %	108.169 %
Concentration per Run 3	96.257 %	11.167 ppb	50.424 ppb	112.508 %	116.231 %
Concentration RSD	0.6 %	4.0 %	4.7 %	2.9 %	3.8 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	33	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1906880-3d10 6020SL	Rack	1		
Analysis started at:	4/14/2024 2:48:55 PM	Vial	14		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	103.281 %	103.891 %	4.761 ppb	96.734 ppb	2,234.950 ppb	1,682.008 ppb	189.699 ppb	1,425.297 ppb	4,169.683 ppb
Concentration per Run 1	107.697 %	106.226 %	4.455 ppb	92.011 ppb	2,208.912 ppb	1,675.688 ppb	181.417 ppb	1,414.077 ppb	4,097.812 ppb
Concentration per Run 2	101.015 %	103.307 %	4.820 ppb	98.449 ppb	2,263.476 ppb	1,675.978 ppb	192.155 ppb	1,524.792 ppb	4,458.729 ppb
Concentration per Run 3	101.130 %	102.140 %	5.009 ppb	99.741 ppb	2,232.461 ppb	1,694.357 ppb	195.524 ppb	1,337.022 ppb	3,952.509 ppb
Concentration RSD	3.7 %	2.0 %	5.9 %	4.3 %	1.2 %	0.6 %	3.9 %	6.6 %	6.3 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	110.985 %	101.691 %	49.256 ppb	20.526 ppb	630.127 ppb	114.835 ppb	47.574 ppb	50.860 ppb	24.104 ppb
Concentration per Run 1	116.566 %	100.805 %	50.313 ppb	20.608 ppb	628.724 ppb	115.557 ppb	48.323 ppb	50.923 ppb	24.506 ppb
Concentration per Run 2	109.582 %	101.610 %	49.111 ppb	19.325 ppb	629.773 ppb	116.239 ppb	47.947 ppb	49.940 ppb	23.137 ppb
Concentration per Run 3	106.806 %	102.657 %	48.343 ppb	21.645 ppb	631.884 ppb	112.708 ppb	46.453 ppb	51.717 ppb	24.667 ppb
Concentration RSD	4.5 %	0.9 %	2.0 %	5.7 %	0.3 %	1.6 %	2.1 %	1.7 %	3.5 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	48.664 ppb	105.962 %	107.333 %	11.000 ppb	10.015 ppb	100.678 ppb	92.642 ppb	100.114 %	99.378 %
Concentration per Run 1	48.652 ppb	109.468 %	108.240 %	11.079 ppb	9.641 ppb	99.163 ppb	93.269 ppb	103.140 %	98.436 %
Concentration per Run 2	48.396 ppb	103.072 %	108.313 %	10.684 ppb	12.059 ppb	99.862 ppb	91.311 ppb	99.282 %	100.660 %
Concentration per Run 3	48.943 ppb	105.345 %	105.446 %	11.238 ppb	8.344 ppb	103.011 ppb	93.346 ppb	97.919 %	99.040 %
Concentration RSD	0.6 %	3.1 %	1.5 %	2.6 %	18.8 %	2.0 %	1.2 %	2.7 %	1.2 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	4.840 ppb	5.029 ppb	101.078 %	101.909 %	46.954 ppb	193.387 ppb	101.680 %	100.079 %	102.230 %
Concentration per Run 1	4.778 ppb	5.184 ppb	102.642 %	103.381 %	46.076 ppb	186.276 ppb	103.919 %	100.757 %	104.795 %
Concentration per Run 2	4.960 ppb	5.118 ppb	100.086 %	99.608 %	48.085 ppb	197.351 ppb	102.638 %	98.645 %	101.995 %
Concentration per Run 3	4.783 ppb	4.784 ppb	100.506 %	102.736 %	46.701 ppb	196.533 ppb	98.484 %	100.836 %	99.900 %
Concentration RSD	2.1 %	4.3 %	1.4 %	2.0 %	2.2 %	3.2 %	2.8 %	1.2 %	2.4 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	100.720 %	10.778 ppb	49.496 ppb	114.199 %	114.119 %
Concentration per Run 1	100.158 %	10.762 ppb	48.916 ppb	115.375 %	116.886 %
Concentration per Run 2	100.852 %	10.606 ppb	48.877 ppb	115.362 %	114.010 %
Concentration per Run 3	101.149 %	10.966 ppb	50.695 ppb	111.861 %	111.463 %
Concentration RSD	0.5 %	1.7 %	2.1 %	1.8 %	2.4 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 34
Analysis label: WG1906880-4d10 6020SL
Analysis started at: 4/14/2024 2:53:34 PM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 15
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	103.504 %	104.669 %	4.836 ppb	98.468 ppb	2,251.127 ppb	1,713.140 ppb	194.499 ppb	1,418.058 ppb	3,710.205 ppb
Concentration per Run 1	107.196 %	97.471 %	4.588 ppb	94.395 ppb	2,320.965 ppb	1,764.966 ppb	189.294 ppb	1,422.909 ppb	3,527.369 ppb
Concentration per Run 2	102.046 %	105.058 %	4.960 ppb	101.534 ppb	2,270.132 ppb	1,704.038 ppb	196.171 ppb	1,468.190 ppb	3,872.032 ppb
Concentration per Run 3	101.271 %	111.479 %	4.960 ppb	99.475 ppb	2,162.283 ppb	1,670.418 ppb	198.032 ppb	1,363.074 ppb	3,731.214 ppb
Concentration RSD	3.1 %	6.7 %	4.4 %	3.7 %	3.6 %	2.8 %	2.4 %	3.7 %	4.7 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	110.037 %	102.979 %	51.645 ppb	21.118 ppb	636.385 ppb	112.645 ppb	49.474 ppb	51.068 ppb	25.261 ppb
Concentration per Run 1	114.531 %	105.958 %	50.858 ppb	19.716 ppb	619.853 ppb	107.861 ppb	48.675 ppb	51.140 ppb	25.796 ppb
Concentration per Run 2	105.937 %	99.356 %	54.841 ppb	22.322 ppb	654.752 ppb	113.821 ppb	51.852 ppb	51.213 ppb	25.344 ppb
Concentration per Run 3	109.643 %	103.623 %	49.237 ppb	21.316 ppb	634.548 ppb	116.253 ppb	47.896 ppb	50.851 ppb	24.644 ppb
Concentration RSD	3.9 %	3.3 %	5.6 %	6.2 %	2.8 %	3.8 %	4.2 %	0.4 %	2.3 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	50.185 ppb	106.993 %	104.284 %	11.944 ppb	11.082 ppb	104.356 ppb	94.781 ppb	102.170 %	98.608 %
Concentration per Run 1	49.534 ppb	108.739 %	105.152 %	11.705 ppb	10.804 ppb	103.234 ppb	96.672 ppb	105.723 %	97.519 %
Concentration per Run 2	52.282 ppb	106.204 %	102.269 %	12.371 ppb	10.920 ppb	103.197 ppb	92.077 ppb	100.627 %	99.424 %
Concentration per Run 3	48.740 ppb	106.037 %	105.430 %	11.756 ppb	11.524 ppb	106.637 ppb	95.593 ppb	100.161 %	98.880 %
Concentration RSD	3.7 %	1.4 %	1.7 %	3.1 %	3.5 %	1.9 %	2.5 %	3.0 %	1.0 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	4.936 ppb	5.114 ppb	104.241 %	100.341 %	48.172 ppb	191.378 ppb	104.468 %	101.416 %	103.128 %
Concentration per Run 1	4.984 ppb	5.078 ppb	108.878 %	97.430 %	49.745 ppb	193.656 ppb	106.245 %	98.949 %	105.006 %
Concentration per Run 2	4.839 ppb	5.127 ppb	100.703 %	104.793 %	46.556 ppb	189.002 ppb	104.196 %	100.023 %	103.108 %
Concentration per Run 3	4.985 ppb	5.139 ppb	103.142 %	98.800 %	48.216 ppb	191.476 ppb	102.964 %	105.276 %	101.268 %
Concentration RSD	1.7 %	0.6 %	4.0 %	3.9 %	3.3 %	1.2 %	1.6 %	3.3 %	1.8 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.246 %	11.281 ppb	49.963 ppb	115.310 %	113.543 %
Concentration per Run 1	99.009 %	11.105 ppb	49.027 ppb	118.160 %	115.689 %
Concentration per Run 2	98.372 %	11.520 ppb	50.888 ppb	115.426 %	111.281 %
Concentration per Run 3	97.357 %	11.218 ppb	49.972 ppb	112.345 %	113.660 %
Concentration RSD	0.8 %	1.9 %	1.9 %	2.5 %	1.9 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	35	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1906880-5d10 6020SL	Rack	1		
Analysis started at:	4/14/2024 2:58:13 PM	Vial	16		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	101.970 %	101.167 %	49.416 ppb	51.744 ppb	6,362.412 ppb	5,882.001 ppb	51.345 ppb	5,572.130 ppb	7,969.401 ppb
Concentration per Run 1	103.957 %	96.887 %	48.852 ppb	49.876 ppb	6,669.059 ppb	6,342.594 ppb	49.737 ppb	5,830.210 ppb	7,790.931 ppb
Concentration per Run 2	101.895 %	101.556 %	49.515 ppb	53.215 ppb	6,349.094 ppb	5,638.017 ppb	51.804 ppb	5,634.096 ppb	8,522.508 ppb
Concentration per Run 3	100.059 %	105.058 %	49.880 ppb	52.142 ppb	6,069.084 ppb	5,665.393 ppb	52.495 ppb	5,252.085 ppb	7,594.763 ppb
Concentration RSD	1.9 %	4.1 %	1.1 %	3.3 %	4.7 %	6.8 %	2.8 %	5.3 %	6.1 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	108.848 %	109.877 %	49.798 ppb	50.127 ppb	600.550 ppb	5,092.983 ppb	49.088 ppb	47.932 ppb	48.499 ppb
Concentration per Run 1	112.142 %	106.442 %	51.742 ppb	48.754 ppb	603.966 ppb	5,159.108 ppb	49.421 ppb	49.101 ppb	47.253 ppb
Concentration per Run 2	108.502 %	108.616 %	50.290 ppb	52.553 ppb	615.462 ppb	5,296.579 ppb	50.684 ppb	47.810 ppb	49.801 ppb
Concentration per Run 3	105.899 %	114.574 %	47.362 ppb	49.074 ppb	582.222 ppb	4,823.262 ppb	47.160 ppb	46.886 ppb	48.443 ppb
Concentration RSD	2.9 %	3.8 %	4.5 %	4.2 %	2.8 %	4.8 %	3.6 %	2.3 %	2.6 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	49.816 ppb	108.268 %	106.328 %	50.318 ppb	48.737 ppb	54.837 ppb	50.284 ppb	101.151 %	100.903 %
Concentration per Run 1	49.624 ppb	110.360 %	109.858 %	48.957 ppb	47.164 ppb	54.534 ppb	49.455 ppb	101.578 %	100.597 %
Concentration per Run 2	51.010 ppb	106.898 %	102.983 %	51.142 ppb	50.659 ppb	54.915 ppb	51.171 ppb	101.638 %	100.298 %
Concentration per Run 3	48.815 ppb	107.546 %	106.144 %	50.857 ppb	48.389 ppb	55.063 ppb	50.225 ppb	100.237 %	101.814 %
Concentration RSD	2.2 %	1.7 %	3.2 %	2.4 %	3.6 %	0.5 %	1.7 %	0.8 %	0.8 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	2.062 ppb	49.425 ppb	99.245 %	99.915 %	50.426 ppb	51.392 ppb	102.271 %	98.551 %	101.749 %
Concentration per Run 1	2.071 ppb	48.733 ppb	101.200 %	99.618 %	50.318 ppb	49.139 ppb	105.721 %	98.909 %	106.708 %
Concentration per Run 2	1.970 ppb	48.980 ppb	99.138 %	101.500 %	50.086 ppb	53.004 ppb	101.842 %	95.784 %	100.907 %
Concentration per Run 3	2.146 ppb	50.563 ppb	97.399 %	98.627 %	50.875 ppb	52.032 ppb	99.251 %	100.961 %	97.632 %
Concentration RSD	4.3 %	2.0 %	1.9 %	1.5 %	0.8 %	3.9 %	3.2 %	2.6 %	4.5 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.581 %	48.360 ppb	48.934 ppb	112.923 %	112.910 %
Concentration per Run 1	96.251 %	49.177 ppb	48.522 ppb	111.847 %	113.004 %
Concentration per Run 2	97.521 %	48.439 ppb	49.483 ppb	113.856 %	112.773 %
Concentration per Run 3	101.972 %	47.463 ppb	48.796 ppb	113.066 %	112.953 %
Concentration RSD	3.0 %	1.8 %	1.0 %	0.9 %	0.1 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 36
Analysis label: WG1906880-6d5 6020SL
Analysis started at: 4/14/2024 3:02:52 PM
User name ALPHALAB\ICPMSRQ
Rack 1
Vial 17
Comment <Comment>

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	102.700 %	113.813 %	0.036 ppb	5.014 ppb	2,379.416 ppb	1,233.059 ppb	0.905 ppb	577.689 ppb	6,483.970 ppb
Concentration per Run 1	103.203 %	112.062 %	0.046 ppb	5.111 ppb	2,448.847 ppb	1,242.348 ppb	0.912 ppb	555.703 ppb	7,322.820 ppb
Concentration per Run 2	102.614 %	116.148 %	0.034 ppb	5.011 ppb	2,330.617 ppb	1,191.494 ppb	0.884 ppb	579.959 ppb	5,817.899 ppb
Concentration per Run 3	102.284 %	113.230 %	0.027 ppb	4.921 ppb	2,358.783 ppb	1,265.337 ppb	0.921 ppb	597.404 ppb	6,311.191 ppb
Concentration RSD	0.5 %	1.8 %	25.9 %	1.9 %	2.6 %	3.1 %	2.1 %	3.6 %	11.8 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	106.382 %	101.825 %	0.117 ppb	-0.114 ppb	1,167.103 ppb	21.179 ppb	0.150 ppb	-0.456 ppb	-0.313 ppb
Concentration per Run 1	102.527 %	101.208 %	0.143 ppb	-0.211 ppb	1,178.707 ppb	19.557 ppb	0.170 ppb	-0.468 ppb	-0.342 ppb
Concentration per Run 2	104.991 %	103.221 %	0.115 ppb	-0.067 ppb	1,136.063 ppb	21.267 ppb	0.120 ppb	-0.477 ppb	-0.293 ppb
Concentration per Run 3	111.627 %	101.047 %	0.092 ppb	-0.063 ppb	1,186.540 ppb	22.712 ppb	0.161 ppb	-0.424 ppb	-0.305 ppb
Concentration RSD	4.4 %	1.2 %	21.9 %	73.8 %	2.3 %	7.5 %	17.6 %	6.2 %	8.1 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.041 ppb	106.018 %	108.906 %	0.050 ppb	-0.045 ppb	15.341 ppb	0.504 ppb	102.142 %	98.259 %
Concentration per Run 1	-0.129 ppb	105.240 %	106.157 %	0.025 ppb	-0.091 ppb	15.473 ppb	0.480 ppb	103.302 %	97.738 %
Concentration per Run 2	0.006 ppb	109.459 %	112.060 %	0.049 ppb	-0.083 ppb	15.285 ppb	0.545 ppb	101.632 %	97.669 %
Concentration per Run 3	-0.001 ppb	103.356 %	108.502 %	0.077 ppb	0.040 ppb	15.264 ppb	0.487 ppb	101.493 %	99.368 %
Concentration RSD	184.2 %	2.9 %	2.7 %	51.5 %	163.1 %	0.7 %	7.1 %	1.0 %	1.0 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.001 ppb	0.006 ppb	100.721 %	98.858 %	0.069 ppb	3.292 ppb	103.201 %	99.010 %	101.737 %
Concentration per Run 1	0.001 ppb	-0.001 ppb	100.698 %	94.987 %	0.067 ppb	3.510 ppb	101.781 %	96.891 %	103.104 %
Concentration per Run 2	-0.001 ppb	0.013 ppb	101.219 %	100.947 %	0.059 ppb	2.939 ppb	104.398 %	100.018 %	102.888 %
Concentration per Run 3	0.002 ppb	0.006 ppb	100.247 %	100.641 %	0.082 ppb	3.425 ppb	103.423 %	100.121 %	99.220 %
Concentration RSD	206.6 %	119.9 %	0.5 %	3.4 %	16.9 %	9.4 %	1.3 %	1.9 %	2.1 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	99.547 %	0.328 ppb	0.020 ppb	105.353 %	110.334 %
Concentration per Run 1	96.591 %	0.204 ppb	0.018 ppb	105.711 %	112.443 %
Concentration per Run 2	100.960 %	0.365 ppb	0.020 ppb	105.229 %	109.573 %
Concentration per Run 3	101.092 %	0.416 ppb	0.020 ppb	105.119 %	108.984 %
Concentration RSD	2.6 %	33.6 %	5.4 %	0.3 %	1.7 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	37	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2417074-02 6020SL	Rack	1		
Analysis started at:	4/14/2024 3:07:32 PM	Vial	13		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	99.913 %	100.778 %	0.025 ppb	24.155 ppb	13,020.528 ppb	6,806.053 ppb	2.490 ppb	3,293.910 ppb	31,329.983 ppb
Concentration per Run 1	103.205 %	100.389 %	0.023 ppb	22.875 ppb	13,345.427 ppb	6,964.415 ppb	2.361 ppb	3,234.821 ppb	32,426.088 ppb
Concentration per Run 2	99.215 %	105.642 %	0.021 ppb	24.621 ppb	12,709.747 ppb	6,943.210 ppb	2.522 ppb	3,407.124 ppb	30,955.655 ppb
Concentration per Run 3	97.320 %	96.303 %	0.032 ppb	24.967 ppb	13,006.409 ppb	6,510.534 ppb	2.587 ppb	3,239.785 ppb	30,608.208 ppb
Concentration RSD	3.0 %	4.6 %	22.7 %	4.6 %	2.4 %	3.8 %	4.7 %	3.0 %	3.1 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	107.871 %	102.281 %	0.192 ppb	0.327 ppb	5,872.551 ppb	62.288 ppb	0.709 ppb	-0.016 ppb	-0.070 ppb
Concentration per Run 1	111.015 %	99.114 %	0.249 ppb	0.317 ppb	6,022.630 ppb	67.435 ppb	0.669 ppb	0.048 ppb	-0.126 ppb
Concentration per Run 2	108.091 %	101.208 %	0.190 ppb	0.386 ppb	5,783.806 ppb	59.497 ppb	0.666 ppb	-0.028 ppb	-0.059 ppb
Concentration per Run 3	104.507 %	106.522 %	0.138 ppb	0.277 ppb	5,811.216 ppb	59.931 ppb	0.792 ppb	-0.067 ppb	-0.024 ppb
Concentration RSD	3.0 %	3.7 %	29.0 %	16.8 %	2.2 %	7.2 %	10.1 %	368.5 %	74.1 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.180 ppb	109.367 %	109.369 %	0.082 ppb	0.031 ppb	82.556 ppb	1.328 ppb	99.736 %	97.670 %
Concentration per Run 1	0.151 ppb	112.675 %	106.296 %	0.093 ppb	-0.076 ppb	84.449 ppb	1.321 ppb	103.624 %	96.208 %
Concentration per Run 2	0.139 ppb	108.869 %	116.435 %	0.074 ppb	0.244 ppb	80.557 ppb	1.458 ppb	97.857 %	96.738 %
Concentration per Run 3	0.250 ppb	106.559 %	105.377 %	0.080 ppb	-0.076 ppb	82.661 ppb	1.206 ppb	97.727 %	100.064 %
Concentration RSD	33.8 %	2.8 %	5.6 %	12.0 %	602.2 %	2.4 %	9.5 %	3.4 %	2.1 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	-0.001 ppb	0.015 ppb	101.306 %	96.858 %	0.068 ppb	16.800 ppb	104.954 %	99.273 %	105.010 %
Concentration per Run 1	-0.001 ppb	0.013 ppb	104.329 %	94.353 %	0.069 ppb	17.324 ppb	105.219 %	97.661 %	107.071 %
Concentration per Run 2	-0.002 ppb	0.002 ppb	99.702 %	98.176 %	0.046 ppb	16.530 ppb	104.620 %	98.475 %	104.012 %
Concentration per Run 3	0.000 ppb	0.030 ppb	99.888 %	98.044 %	0.090 ppb	16.546 ppb	105.022 %	101.682 %	103.948 %
Concentration RSD	94.1 %	91.5 %	2.6 %	2.2 %	32.5 %	2.7 %	0.3 %	2.1 %	1.7 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	100.462 %	0.194 ppb	0.008 ppb	115.334 %	112.241 %
Concentration per Run 1	96.833 %	0.133 ppb	0.008 ppb	119.634 %	113.168 %
Concentration per Run 2	100.060 %	0.221 ppb	0.007 ppb	111.834 %	111.298 %
Concentration per Run 3	104.493 %	0.229 ppb	0.009 ppb	114.535 %	112.257 %
Concentration RSD	3.8 %	27.5 %	12.5 %	3.4 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	38	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	I2417628-05 6020SL	Rack	1		
Analysis started at:	4/14/2024 3:12:11 PM	Vial	18		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	100.233 %	102.529 %	0.019 ppb	83.919 ppb	54,563.539 ppb	27,686.720 ppb	2.853 ppb	2,431.811 ppb	40,582.370 ppb
Concentration per Run 1	102.138 %	113.813 %	0.007 ppb	83.078 ppb	50,043.922 ppb	25,615.598 ppb	2.842 ppb	2,290.317 ppb	40,501.312 ppb
Concentration per Run 2	99.001 %	102.724 %	0.031 ppb	85.104 ppb	54,736.829 ppb	27,744.891 ppb	2.971 ppb	2,534.295 ppb	42,827.769 ppb
Concentration per Run 3	99.560 %	91.051 %	0.020 ppb	83.575 ppb	58,909.866 ppb	29,699.670 ppb	2.745 ppb	2,470.821 ppb	38,418.030 ppb
Concentration RSD	1.7 %	11.1 %	62.6 %	1.3 %	8.1 %	7.4 %	4.0 %	5.2 %	5.4 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	112.432 %	103.489 %	0.260 ppb	0.136 ppb	24.674 ppb	96.531 ppb	0.076 ppb	0.382 ppb	-0.260 ppb
Concentration per Run 1	114.415 %	108.696 %	0.185 ppb	0.002 ppb	24.139 ppb	92.391 ppb	0.101 ppb	0.375 ppb	-0.271 ppb
Concentration per Run 2	110.410 %	101.369 %	0.371 ppb	0.199 ppb	24.394 ppb	90.328 ppb	0.062 ppb	0.322 ppb	-0.251 ppb
Concentration per Run 3	112.472 %	100.403 %	0.224 ppb	0.207 ppb	25.490 ppb	106.873 ppb	0.065 ppb	0.448 ppb	-0.259 ppb
Concentration RSD	1.8 %	4.4 %	37.7 %	85.4 %	2.9 %	9.3 %	28.6 %	16.6 %	4.0 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	0.347 ppb	107.773 %	102.494 %	4.088 ppb	0.200 ppb	5,093.312 ppb	6.657 ppb	99.746 %	95.504 %
Concentration per Run 1	0.168 ppb	110.662 %	100.863 %	4.202 ppb	0.040 ppb	5,016.866 ppb	6.290 ppb	101.257 %	96.247 %
Concentration per Run 2	0.426 ppb	105.734 %	106.713 %	3.979 ppb	0.403 ppb	4,951.902 ppb	6.480 ppb	97.889 %	94.999 %
Concentration per Run 3	0.446 ppb	106.922 %	99.907 %	4.084 ppb	0.157 ppb	5,311.169 ppb	7.202 ppb	100.091 %	95.267 %
Concentration RSD	44.7 %	2.4 %	3.6 %	2.7 %	92.7 %	3.8 %	7.2 %	1.7 %	0.7 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	-0.003 ppb	0.002 ppb	97.321 %	95.376 %	0.270 ppb	63.037 ppb	103.294 %	102.214 %	104.668 %
Concentration per Run 1	-0.003 ppb	0.006 ppb	97.662 %	93.597 %	0.287 ppb	63.663 ppb	105.922 %	98.349 %	106.060 %
Concentration per Run 2	-0.001 ppb	-0.001 ppb	96.944 %	96.807 %	0.270 ppb	61.700 ppb	99.787 %	104.039 %	103.894 %
Concentration per Run 3	-0.003 ppb	0.002 ppb	97.358 %	95.723 %	0.255 ppb	63.749 ppb	104.173 %	104.255 %	104.051 %
Concentration RSD	36.6 %	146.1 %	0.4 %	1.7 %	5.9 %	1.8 %	3.1 %	3.3 %	1.2 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	99.831 %	0.063 ppb	0.044 ppb	109.789 %	110.038 %
Concentration per Run 1	101.400 %	0.028 ppb	0.039 ppb	112.102 %	109.315 %
Concentration per Run 2	98.718 %	0.075 ppb	0.045 ppb	111.386 %	108.882 %
Concentration per Run 3	99.375 %	0.087 ppb	0.047 ppb	105.878 %	111.917 %
Concentration RSD	1.4 %	49.5 %	9.2 %	3.1 %	1.5 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	39	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	LDR Check Al 10ppm FAIL	Rack	4		
Analysis started at:	4/14/2024 3:18:23 PM	Vial	2		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	109.302 %	112.646 %	0.010 ppb	0.351 ppb	-62.087 ppb	-6.699 ppb	7,820.080 ppb	-19.594 ppb	14.899 ppb
Concentration per Run 1	112.568 %	110.895 %	0.006 ppb	0.359 ppb	-57.851 ppb	-7.315 ppb	7,517.780 ppb	-35.117 ppb	31.877 ppb
Concentration per Run 2	107.494 %	119.066 %	0.014 ppb	0.378 ppb	-65.687 ppb	-7.354 ppb	8,024.300 ppb	-8.090 ppb	-1.901 ppb
Concentration per Run 3	107.843 %	107.977 %	0.010 ppb	0.317 ppb	-62.723 ppb	-5.426 ppb	7,918.160 ppb	-15.574 ppb	14.721 ppb
Concentration RSD	2.6 %	5.1 %	43.4 %	8.8 %	6.4 %	16.5 %	3.4 %	71.2 %	113.4 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	108.128 %	110.844 %	0.163 ppb	-0.252 ppb	0.019 ppb	0.345 ppb	-0.023 ppb	-0.518 ppb	-0.344 ppb
Concentration per Run 1	113.856 %	112.722 %	0.199 ppb	-0.219 ppb	0.022 ppb	0.822 ppb	-0.020 ppb	-0.507 ppb	-0.346 ppb
Concentration per Run 2	104.426 %	107.327 %	0.135 ppb	-0.268 ppb	0.018 ppb	0.113 ppb	-0.023 ppb	-0.490 ppb	-0.366 ppb
Concentration per Run 3	106.102 %	112.481 %	0.155 ppb	-0.268 ppb	0.018 ppb	0.099 ppb	-0.026 ppb	-0.557 ppb	-0.321 ppb
Concentration RSD	4.7 %	2.7 %	19.9 %	11.2 %	11.9 %	119.9 %	13.4 %	6.8 %	6.6 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.347 ppb	108.138 %	108.889 %	0.019 ppb	-0.100 ppb	0.007 ppb	0.034 ppb	103.317 %	104.312 %
Concentration per Run 1	-0.395 ppb	111.363 %	111.504 %	-0.017 ppb	-0.098 ppb	0.011 ppb	0.007 ppb	106.377 %	105.338 %
Concentration per Run 2	-0.350 ppb	105.739 %	110.254 %	0.000 ppb	-0.120 ppb	0.004 ppb	0.047 ppb	104.126 %	103.396 %
Concentration per Run 3	-0.295 ppb	107.311 %	104.908 %	0.075 ppb	-0.084 ppb	0.006 ppb	0.047 ppb	99.447 %	104.202 %
Concentration RSD	14.4 %	2.7 %	3.2 %	250.8 %	18.3 %	55.3 %	68.0 %	3.4 %	0.9 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.095 ppb	0.004 ppb	103.073 %	104.826 %	0.094 ppb	0.016 ppb	103.499 %	104.948 %	104.259 %
Concentration per Run 1	0.082 ppb	-0.001 ppb	106.270 %	105.999 %	0.086 ppb	0.021 ppb	107.012 %	104.444 %	108.181 %
Concentration per Run 2	0.099 ppb	0.009 ppb	99.767 %	104.015 %	0.113 ppb	0.021 ppb	101.748 %	106.092 %	102.462 %
Concentration per Run 3	0.103 ppb	0.005 ppb	103.182 %	104.465 %	0.083 ppb	0.005 ppb	101.735 %	104.308 %	102.132 %
Concentration RSD	12.0 %	115.6 %	3.2 %	1.0 %	17.7 %	61.7 %	2.9 %	0.9 %	3.3 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	101.481 %	0.033 ppb	0.007 ppb	118.711 %	121.975 %
Concentration per Run 1	100.652 %	0.016 ppb	0.009 ppb	122.170 %	122.037 %
Concentration per Run 2	100.704 %	0.039 ppb	0.006 ppb	118.627 %	122.889 %
Concentration per Run 3	103.086 %	0.044 ppb	0.007 ppb	115.335 %	120.998 %
Concentration RSD	1.4 %	45.6 %	18.3 %	2.9 %	0.8 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	40	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	LDR Check Al 2ppm FAIL	Rack	4		
Analysis started at:	4/14/2024 3:25:35 PM	Vial	3		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	109.753 %	121.206 %	0.005 ppb	0.202 ppb	-75.147 ppb	-7.023 ppb	1,591.693 ppb	-26.700 ppb	-3.250 ppb
Concentration per Run 1	113.707 %	114.981 %	0.008 ppb	0.190 ppb	-71.530 ppb	-7.876 ppb	1,524.556 ppb	-36.741 ppb	-3.720 ppb
Concentration per Run 2	107.773 %	130.739 %	-0.008 ppb	0.200 ppb	-83.357 ppb	-7.554 ppb	1,621.933 ppb	-14.879 ppb	-3.171 ppb
Concentration per Run 3	107.779 %	117.899 %	0.014 ppb	0.218 ppb	-70.555 ppb	-5.640 ppb	1,628.590 ppb	-28.479 ppb	-2.859 ppb
Concentration RSD	3.1 %	6.9 %	250.1 %	6.9 %	9.5 %	17.2 %	3.7 %	41.3 %	13.4 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	109.163 %	118.064 %	0.036 ppb	-0.341 ppb	-0.007 ppb	1.400 ppb	-0.021 ppb	-0.553 ppb	-0.325 ppb
Concentration per Run 1	112.318 %	122.546 %	0.013 ppb	-0.393 ppb	-0.013 ppb	-0.389 ppb	-0.023 ppb	-0.543 ppb	-0.317 ppb
Concentration per Run 2	108.467 %	117.876 %	0.013 ppb	-0.360 ppb	-0.016 ppb	1.874 ppb	-0.020 ppb	-0.554 ppb	-0.319 ppb
Concentration per Run 3	106.703 %	113.769 %	0.083 ppb	-0.269 ppb	0.008 ppb	2.716 ppb	-0.020 ppb	-0.563 ppb	-0.339 ppb
Concentration RSD	2.6 %	3.7 %	110.5 %	18.8 %	183.9 %	114.7 %	8.5 %	1.8 %	3.8 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.275 ppb	105.040 %	110.365 %	-0.029 ppb	-0.095 ppb	-0.027 ppb	0.033 ppb	103.486 %	107.574 %
Concentration per Run 1	-0.276 ppb	108.194 %	106.713 %	-0.123 ppb	-0.091 ppb	-0.040 ppb	0.022 ppb	107.884 %	108.830 %
Concentration per Run 2	-0.221 ppb	103.478 %	111.990 %	0.031 ppb	-0.083 ppb	-0.041 ppb	0.015 ppb	101.276 %	107.839 %
Concentration per Run 3	-0.327 ppb	103.449 %	112.391 %	0.007 ppb	-0.112 ppb	0.002 ppb	0.061 ppb	101.297 %	106.055 %
Concentration RSD	19.3 %	2.6 %	2.9 %	290.7 %	15.6 %	92.7 %	76.1 %	3.7 %	1.3 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.017 ppb	0.000 ppb	102.909 %	110.107 %	0.027 ppb	-0.024 ppb	102.996 %	106.483 %	103.082 %
Concentration per Run 1	0.011 ppb	0.002 ppb	106.865 %	109.578 %	0.016 ppb	-0.030 ppb	105.533 %	108.827 %	105.231 %
Concentration per Run 2	0.024 ppb	-0.001 ppb	102.397 %	110.540 %	0.033 ppb	-0.030 ppb	100.036 %	105.903 %	101.970 %
Concentration per Run 3	0.016 ppb	-0.001 ppb	99.467 %	110.202 %	0.033 ppb	-0.013 ppb	103.418 %	104.720 %	102.044 %
Concentration RSD	39.4 %	2,103.1 %	3.6 %	0.4 %	36.4 %	39.7 %	2.7 %	2.0 %	1.8 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	107.239 %	0.031 ppb	0.004 ppb	117.716 %	130.005 %
Concentration per Run 1	106.453 %	0.023 ppb	0.007 ppb	121.831 %	133.656 %
Concentration per Run 2	105.634 %	0.035 ppb	0.002 ppb	117.103 %	129.454 %
Concentration per Run 3	109.630 %	0.035 ppb	0.003 ppb	114.215 %	126.904 %
Concentration RSD	2.0 %	22.8 %	69.0 %	3.3 %	2.6 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	41	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/14/2024 3:30:17 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	101.241 %	105.837 %	58.342 ppb	59.268 ppb	6,032.660 ppb	6,114.262 ppb	61.317 ppb	6,522.504 ppb	6,574.261 ppb
Concentration per Run 1	104.205 %	110.895 %	56.288 ppb	57.564 ppb	5,691.004 ppb	5,642.513 ppb	60.027 ppb	6,106.174 ppb	5,933.795 ppb
Concentration per Run 2	99.751 %	95.136 %	59.397 ppb	60.697 ppb	6,447.881 ppb	6,616.805 ppb	60.732 ppb	6,699.737 ppb	6,464.035 ppb
Concentration per Run 3	99.767 %	111.479 %	59.340 ppb	59.544 ppb	5,959.094 ppb	6,083.469 ppb	63.193 ppb	6,761.600 ppb	7,324.954 ppb
Recovery Percentage 1			97.236 %	98.781 %	100.544 %	101.904 %	102.195 %	108.708 %	109.571 %
Concentration RSD	2.5 %	8.8 %	3.0 %	2.7 %	6.4 %	8.0 %	2.7 %	5.5 %	10.7 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	105.640 %	102.308 %	62.642 ppb	61.958 ppb	62.519 ppb	6,137.641 ppb	58.734 ppb	58.608 ppb	59.305 ppb
Concentration per Run 1	106.760 %	108.938 %	60.412 ppb	58.141 ppb	59.529 ppb	5,774.079 ppb	57.056 ppb	57.138 ppb	57.630 ppb
Concentration per Run 2	103.855 %	101.047 %	63.759 ppb	63.101 ppb	63.493 ppb	6,284.539 ppb	60.579 ppb	59.024 ppb	60.874 ppb
Concentration per Run 3	106.304 %	96.940 %	63.756 ppb	64.631 ppb	64.534 ppb	6,354.304 ppb	58.566 ppb	59.663 ppb	59.411 ppb
Recovery Percentage 1			104.404 %	103.263 %	104.198 %	102.294 %	97.889 %	97.680 %	98.842 %
Concentration RSD	1.5 %	6.0 %	3.1 %	5.5 %	4.2 %	5.2 %	3.0 %	2.2 %	2.7 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	57.258 ppb	104.257 %	107.668 %	57.739 ppb	56.727 ppb	57.398 ppb	58.411 ppb	98.809 %	99.143 %
Concentration per Run 1	55.372 ppb	104.049 %	109.551 %	56.381 ppb	56.911 ppb	56.553 ppb	60.668 ppb	100.239 %	98.641 %
Concentration per Run 2	59.034 ppb	103.657 %	104.061 %	60.406 ppb	60.292 ppb	58.842 ppb	56.948 ppb	97.012 %	98.681 %
Concentration per Run 3	57.368 ppb	105.066 %	109.392 %	56.430 ppb	52.980 ppb	56.798 ppb	57.615 ppb	99.175 %	100.107 %
Recovery Percentage 1	95.430 %			96.231 %	94.546 %	95.663 %	97.351 %		
Concentration RSD	3.2 %	0.7 %	2.9 %	4.0 %	6.5 %	2.2 %	3.4 %	1.7 %	0.8 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	59.603 ppb	59.977 ppb	98.190 %	96.279 %	59.427 ppb	58.592 ppb	98.991 %	100.852 %	100.959 %
Concentration per Run 1	60.626 ppb	60.047 ppb	100.519 %	94.210 %	61.368 ppb	61.793 ppb	99.243 %	98.535 %	103.698 %
Concentration per Run 2	59.028 ppb	59.358 ppb	96.974 %	98.166 %	58.238 ppb	57.507 ppb	97.837 %	101.247 %	98.449 %
Concentration per Run 3	59.154 ppb	60.526 ppb	97.079 %	96.459 %	58.674 ppb	56.476 ppb	99.893 %	102.774 %	100.731 %
Recovery Percentage 1	99.338 %	99.962 %			99.045 %	97.653 %			
Concentration RSD	1.5 %	1.0 %	2.1 %	2.1 %	2.9 %	4.8 %	1.1 %	2.1 %	2.6 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	100.069 %	55.642 ppb	55.488 ppb	112.395 %	115.406 %
Concentration per Run 1	95.691 %	55.485 ppb	54.693 ppb	117.124 %	116.937 %
Concentration per Run 2	101.550 %	56.899 ppb	55.748 ppb	112.598 %	113.345 %
Concentration per Run 3	102.967 %	54.543 ppb	56.022 ppb	107.464 %	115.936 %
Recovery Percentage 1		92.737 %	92.479 %		
Concentration RSD	3.9 %	2.1 %	1.3 %	4.3 %	1.6 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index: 42 User name ALPHALAB\ICPMSRQ Comment <Comment>
Analysis label: CCB Rack 0
Analysis started at: 4/14/2024 3:35:02 PM Vial 10

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	103.116 %	108.560 %	0.040 ppb	0.444 ppb	-43.444 ppb	-5.868 ppb	-0.733 ppb	-13.715 ppb	19.101 ppb
Concentration per Run 1	103.482 %	101.556 %	0.045 ppb	0.447 ppb	-35.798 ppb	-5.062 ppb	-0.737 ppb	23.738 ppb	57.729 ppb
Concentration per Run 2	103.148 %	108.560 %	0.041 ppb	0.440 ppb	-38.805 ppb	-6.178 ppb	-0.726 ppb	-20.257 ppb	19.352 ppb
Concentration per Run 3	102.717 %	115.564 %	0.033 ppb	0.445 ppb	-55.728 ppb	-6.364 ppb	-0.737 ppb	-44.627 ppb	-19.776 ppb
Recovery Percentage 1			7.924 %	4.439 %	-43.444 %	-8.383 %	-7.332 %	-13.715 %	19.101 %
Concentration RSD	0.4 %	6.5 %	14.8 %	0.8 %	24.7 %	12.0 %	0.9 %	252.6 %	202.9 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	103.069 %	101.610 %	0.067 ppb	-0.175 ppb	0.009 ppb	1.949 ppb	-0.014 ppb	-0.290 ppb	-0.246 ppb
Concentration per Run 1	102.529 %	100.805 %	0.069 ppb	-0.207 ppb	0.038 ppb	2.451 ppb	-0.015 ppb	0.069 ppb	-0.226 ppb
Concentration per Run 2	103.671 %	99.597 %	0.017 ppb	-0.019 ppb	-0.026 ppb	1.574 ppb	-0.008 ppb	-0.571 ppb	-0.236 ppb
Concentration per Run 3	103.007 %	104.429 %	0.115 ppb	-0.299 ppb	0.015 ppb	1.823 ppb	-0.019 ppb	-0.367 ppb	-0.275 ppb
Recovery Percentage 1			1.338 %	-17.497 %	0.919 %	3.898 %	-2.863 %	-14.481 %	-24.573 %
Concentration RSD	0.6 %	2.5 %	73.1 %	81.4 %	352.2 %	23.2 %	38.6 %	113.0 %	10.4 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.122 ppb	100.786 %	102.391 %	-0.037 ppb	0.086 ppb	-0.038 ppb	0.177 ppb	99.121 %	99.331 %
Concentration per Run 1	-0.123 ppb	102.898 %	99.074 %	-0.052 ppb	0.183 ppb	-0.046 ppb	0.221 ppb	98.546 %	97.124 %
Concentration per Run 2	0.006 ppb	99.130 %	101.472 %	-0.044 ppb	-0.092 ppb	-0.037 ppb	0.149 ppb	101.154 %	99.615 %
Concentration per Run 3	-0.251 ppb	100.329 %	106.627 %	-0.014 ppb	0.166 ppb	-0.030 ppb	0.161 ppb	97.663 %	101.253 %
Recovery Percentage 1	-2.448 %			-7.328 %	1.712 %	-7.533 %	8.839 %		
Concentration RSD	104.9 %	1.9 %	3.8 %	54.9 %	179.7 %	21.1 %	21.7 %	1.8 %	2.1 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.003 ppb	0.000 ppb	97.641 %	97.488 %	0.053 ppb	-0.012 ppb	99.916 %	99.299 %	98.753 %
Concentration per Run 1	0.003 ppb	0.002 ppb	96.638 %	96.060 %	0.049 ppb	-0.011 ppb	101.597 %	97.622 %	99.014 %
Concentration per Run 2	0.001 ppb	-0.001 ppb	97.627 %	97.860 %	0.039 ppb	-0.012 ppb	99.210 %	99.175 %	99.119 %
Concentration per Run 3	0.005 ppb	-0.001 ppb	98.659 %	98.545 %	0.071 ppb	-0.012 ppb	98.940 %	101.099 %	98.125 %
Recovery Percentage 1	0.672 %				1.319 %	-2.326 %			
Concentration RSD	72.0 %	3,807.7 %	1.0 %	1.3 %	30.5 %	2.4 %	1.5 %	1.8 %	0.6 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	98.355 %	0.293 ppb	0.005 ppb	103.913 %	110.404 %
Concentration per Run 1	94.633 %	0.185 ppb	0.004 ppb	102.044 %	112.393 %
Concentration per Run 2	98.227 %	0.347 ppb	0.006 ppb	103.476 %	107.650 %
Concentration per Run 3	102.204 %	0.347 ppb	0.004 ppb	106.220 %	111.170 %
Recovery Percentage 1		29.340 %	0.484 %		
Concentration RSD	3.9 %	31.9 %	16.6 %	2.0 %	2.2 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	43	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1906880-2d50 6020SL	Rack	1		
Analysis started at:	4/14/2024 3:44:16 PM	Vial	19		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	104.841 %	108.755 %	0.968 ppb	19.410 ppb	163.225 ppb	204.794 ppb	38.580 ppb	204.732 ppb	200.495 ppb
Concentration per Run 1	107.898 %	84.630 %	0.942 ppb	19.054 ppb	227.556 ppb	227.625 ppb	37.533 ppb	208.521 ppb	59.082 ppb
Concentration per Run 2	103.692 %	130.156 %	0.984 ppb	19.763 ppb	114.027 ppb	192.591 ppb	39.431 ppb	229.028 ppb	224.271 ppb
Concentration per Run 3	102.935 %	111.479 %	0.978 ppb	19.413 ppb	148.091 ppb	194.165 ppb	38.774 ppb	176.646 ppb	318.134 ppb
Concentration RSD	2.6 %	21.0 %	2.3 %	1.8 %	35.7 %	9.7 %	2.5 %	12.9 %	65.4 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	109.175 %	106.817 %	10.334 ppb	4.093 ppb	10.846 ppb	22.368 ppb	9.844 ppb	10.009 ppb	4.854 ppb
Concentration per Run 1	111.491 %	107.730 %	10.194 ppb	4.110 ppb	10.987 ppb	24.760 ppb	9.887 ppb	10.149 ppb	5.138 ppb
Concentration per Run 2	107.268 %	102.416 %	10.645 ppb	4.202 ppb	11.128 ppb	22.760 ppb	10.028 ppb	10.549 ppb	5.137 ppb
Concentration per Run 3	108.767 %	110.307 %	10.162 ppb	3.967 ppb	10.422 ppb	19.583 ppb	9.618 ppb	9.329 ppb	4.287 ppb
Concentration RSD	2.0 %	3.8 %	2.6 %	2.9 %	3.4 %	11.7 %	2.1 %	6.2 %	10.1 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	9.944 ppb	104.620 %	108.397 %	2.662 ppb	1.739 ppb	19.387 ppb	19.138 ppb	100.519 %	105.712 %
Concentration per Run 1	9.766 ppb	107.272 %	107.252 %	2.900 ppb	1.861 ppb	19.064 ppb	19.802 ppb	101.403 %	104.560 %
Concentration per Run 2	10.168 ppb	102.448 %	110.324 %	2.795 ppb	2.091 ppb	19.801 ppb	18.276 ppb	99.802 %	104.885 %
Concentration per Run 3	9.899 ppb	104.141 %	107.616 %	2.290 ppb	1.265 ppb	19.295 ppb	19.336 ppb	100.354 %	107.690 %
Concentration RSD	2.1 %	2.3 %	1.5 %	12.3 %	24.5 %	1.9 %	4.1 %	0.8 %	1.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	1.005 ppb	0.999 ppb	99.978 %	105.386 %	9.830 ppb	39.442 ppb	100.628 %	104.431 %	101.149 %
Concentration per Run 1	0.990 ppb	0.989 ppb	101.085 %	103.730 %	9.896 ppb	38.902 ppb	104.775 %	105.063 %	105.893 %
Concentration per Run 2	1.027 ppb	0.872 ppb	99.968 %	106.244 %	10.000 ppb	38.516 ppb	97.510 %	104.077 %	97.287 %
Concentration per Run 3	0.998 ppb	1.137 ppb	98.881 %	106.184 %	9.595 ppb	40.907 ppb	99.598 %	104.152 %	100.266 %
Concentration RSD	1.9 %	13.3 %	1.1 %	1.4 %	2.1 %	3.3 %	3.7 %	0.5 %	4.3 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	105.039 %	2.308 ppb	10.253 ppb	114.377 %	122.875 %
Concentration per Run 1	102.379 %	2.383 ppb	10.311 ppb	119.557 %	121.013 %
Concentration per Run 2	106.204 %	2.272 ppb	10.173 ppb	115.030 %	123.617 %
Concentration per Run 3	106.533 %	2.270 ppb	10.275 ppb	108.544 %	123.995 %
Concentration RSD	2.2 %	2.8 %	0.7 %	4.8 %	1.3 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	44	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1906880-3d50 6020SL	Rack	1		
Analysis started at:	4/14/2024 3:48:56 PM	Vial	20		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	104.045 %	100.195 %	0.993 ppb	19.376 ppb	402.350 ppb	338.315 ppb	38.577 ppb	251.259 ppb	816.874 ppb
Concentration per Run 1	106.919 %	107.393 %	0.939 ppb	18.982 ppb	379.066 ppb	324.819 ppb	37.993 ppb	244.916 ppb	687.420 ppb
Concentration per Run 2	103.019 %	94.552 %	1.041 ppb	19.244 ppb	415.931 ppb	342.586 ppb	38.128 ppb	252.222 ppb	792.483 ppb
Concentration per Run 3	102.196 %	98.638 %	0.999 ppb	19.903 ppb	412.053 ppb	347.541 ppb	39.610 ppb	256.638 ppb	970.718 ppb
Concentration RSD	2.4 %	6.5 %	5.2 %	2.4 %	5.0 %	3.5 %	2.3 %	2.4 %	17.5 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	106.396 %	106.039 %	9.996 ppb	3.841 ppb	124.418 ppb	22.373 ppb	9.486 ppb	9.639 ppb	4.672 ppb
Concentration per Run 1	109.317 %	105.153 %	10.113 ppb	3.826 ppb	126.611 ppb	23.674 ppb	9.543 ppb	9.322 ppb	4.704 ppb
Concentration per Run 2	107.046 %	110.709 %	8.828 ppb	3.347 ppb	120.408 ppb	18.643 ppb	9.135 ppb	9.140 ppb	4.337 ppb
Concentration per Run 3	102.825 %	102.255 %	11.048 ppb	4.351 ppb	126.237 ppb	24.802 ppb	9.781 ppb	10.456 ppb	4.974 ppb
Concentration RSD	3.1 %	4.1 %	11.1 %	13.1 %	2.8 %	14.7 %	3.4 %	7.4 %	6.8 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	9.677 ppb	102.519 %	102.674 %	2.421 ppb	2.089 ppb	20.904 ppb	18.935 ppb	98.920 %	99.249 %
Concentration per Run 1	9.746 ppb	103.089 %	101.419 %	2.506 ppb	1.051 ppb	20.655 ppb	18.081 ppb	101.419 %	98.861 %
Concentration per Run 2	9.589 ppb	101.016 %	103.796 %	2.353 ppb	2.335 ppb	20.863 ppb	19.197 ppb	99.264 %	99.913 %
Concentration per Run 3	9.697 ppb	103.450 %	102.808 %	2.403 ppb	2.882 ppb	21.194 ppb	19.529 ppb	96.077 %	98.973 %
Concentration RSD	0.8 %	1.3 %	1.2 %	3.2 %	45.0 %	1.3 %	4.0 %	2.7 %	0.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.937 ppb	0.943 ppb	100.729 %	101.731 %	9.471 ppb	37.625 ppb	100.490 %	101.209 %	100.625 %
Concentration per Run 1	0.966 ppb	0.967 ppb	102.773 %	98.473 %	9.690 ppb	39.198 ppb	102.491 %	98.935 %	103.891 %
Concentration per Run 2	0.886 ppb	0.911 ppb	99.849 %	105.794 %	9.042 ppb	37.332 ppb	99.500 %	102.914 %	98.788 %
Concentration per Run 3	0.958 ppb	0.951 ppb	99.566 %	100.927 %	9.682 ppb	36.345 ppb	99.477 %	101.778 %	99.195 %
Concentration RSD	4.7 %	3.0 %	1.8 %	3.7 %	3.9 %	3.8 %	1.7 %	2.0 %	2.8 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	99.236 %	2.192 ppb	9.994 ppb	113.303 %	116.077 %
Concentration per Run 1	99.677 %	2.151 ppb	9.791 ppb	117.423 %	118.625 %
Concentration per Run 2	98.454 %	2.146 ppb	9.939 ppb	113.770 %	114.701 %
Concentration per Run 3	99.576 %	2.278 ppb	10.251 ppb	108.715 %	114.905 %
Concentration RSD	0.7 %	3.4 %	2.4 %	3.9 %	1.9 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	45	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	WG1906880-4d50 6020SL	Rack	1		
Analysis started at:	4/14/2024 3:53:37 PM	Vial	21		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	103.170 %	114.202 %	0.986 ppb	20.208 ppb	367.312 ppb	324.198 ppb	39.836 ppb	256.134 ppb	874.625 ppb
Concentration per Run 1	105.606 %	117.899 %	0.944 ppb	19.693 ppb	347.069 ppb	305.524 ppb	38.268 ppb	231.124 ppb	926.157 ppb
Concentration per Run 2	102.409 %	114.981 %	0.984 ppb	20.273 ppb	380.590 ppb	321.281 ppb	40.502 ppb	296.304 ppb	840.416 ppb
Concentration per Run 3	101.496 %	109.728 %	1.030 ppb	20.659 ppb	374.277 ppb	345.787 ppb	40.738 ppb	240.973 ppb	857.302 ppb
Concentration RSD	2.1 %	3.6 %	4.3 %	2.4 %	4.8 %	6.3 %	3.4 %	13.7 %	5.2 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	106.005 %	104.804 %	9.768 ppb	3.755 ppb	124.673 ppb	23.969 ppb	9.715 ppb	9.693 ppb	4.472 ppb
Concentration per Run 1	110.900 %	107.005 %	8.920 ppb	3.694 ppb	122.442 ppb	22.055 ppb	9.578 ppb	9.281 ppb	4.404 ppb
Concentration per Run 2	106.033 %	101.771 %	9.867 ppb	3.927 ppb	124.000 ppb	27.635 ppb	9.493 ppb	9.874 ppb	4.781 ppb
Concentration per Run 3	101.083 %	105.636 %	10.518 ppb	3.643 ppb	127.578 ppb	22.215 ppb	10.075 ppb	9.926 ppb	4.231 ppb
Concentration RSD	4.6 %	2.6 %	8.2 %	4.0 %	2.1 %	13.3 %	3.2 %	3.7 %	6.3 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	9.396 ppb	103.892 %	107.165 %	2.404 ppb	1.688 ppb	20.537 ppb	19.245 ppb	100.029 %	101.310 %
Concentration per Run 1	8.724 ppb	107.184 %	106.958 %	2.299 ppb	2.509 ppb	20.117 ppb	19.246 ppb	103.750 %	101.622 %
Concentration per Run 2	9.442 ppb	103.150 %	111.713 %	2.178 ppb	1.348 ppb	19.820 ppb	19.459 ppb	99.984 %	99.661 %
Concentration per Run 3	10.021 ppb	101.342 %	102.824 %	2.736 ppb	1.207 ppb	21.675 ppb	19.030 ppb	96.352 %	102.647 %
Concentration RSD	6.9 %	2.9 %	4.2 %	12.2 %	42.3 %	4.9 %	1.1 %	3.7 %	1.5 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.995 ppb	1.060 ppb	101.595 %	101.548 %	9.615 ppb	39.421 ppb	101.843 %	100.639 %	101.587 %
Concentration per Run 1	1.033 ppb	1.085 ppb	103.085 %	102.737 %	9.609 ppb	38.591 ppb	104.797 %	99.542 %	103.964 %
Concentration per Run 2	0.994 ppb	0.979 ppb	100.441 %	100.887 %	9.374 ppb	39.998 ppb	101.105 %	101.292 %	99.860 %
Concentration per Run 3	0.958 ppb	1.117 ppb	101.260 %	101.019 %	9.863 ppb	39.674 ppb	99.625 %	101.085 %	100.937 %
Concentration RSD	3.8 %	6.8 %	1.3 %	1.0 %	2.5 %	1.9 %	2.6 %	1.0 %	2.1 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	100.767 %	2.233 ppb	10.193 ppb	113.937 %	116.899 %
Concentration per Run 1	98.859 %	2.203 ppb	9.969 ppb	116.316 %	117.915 %
Concentration per Run 2	101.799 %	2.211 ppb	10.187 ppb	113.952 %	117.034 %
Concentration per Run 3	101.645 %	2.284 ppb	10.424 ppb	111.542 %	115.748 %
Concentration RSD	1.6 %	2.0 %	2.2 %	2.1 %	0.9 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	46	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCV	Rack	0		
Analysis started at:	4/14/2024 3:59:44 PM	Vial	9		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	100.920 %	109.728 %	58.834 ppb	58.790 ppb	5,871.987 ppb	5,981.650 ppb	59.885 ppb	6,399.677 ppb	6,042.410 ppb
Concentration per Run 1	103.922 %	98.054 %	56.802 ppb	56.860 ppb	6,278.354 ppb	6,579.304 ppb	57.927 ppb	6,479.623 ppb	5,548.361 ppb
Concentration per Run 2	99.668 %	122.568 %	59.727 ppb	60.024 ppb	5,464.531 ppb	5,591.917 ppb	61.717 ppb	6,313.903 ppb	6,396.361 ppb
Concentration per Run 3	99.169 %	108.560 %	59.974 ppb	59.488 ppb	5,873.075 ppb	5,773.731 ppb	60.013 ppb	6,405.504 ppb	6,182.507 ppb
Recovery Percentage 1			98.057 %	97.984 %	97.866 %	99.694 %	99.809 %	106.661 %	100.707 %
Concentration RSD	2.6 %	11.2 %	3.0 %	2.9 %	6.9 %	8.8 %	3.2 %	1.3 %	7.3 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	106.520 %	108.804 %	61.905 ppb	60.398 ppb	60.625 ppb	6,027.823 ppb	57.512 ppb	58.797 ppb	58.832 ppb
Concentration per Run 1	108.084 %	108.938 %	63.181 ppb	61.084 ppb	60.954 ppb	6,116.704 ppb	58.749 ppb	60.591 ppb	59.347 ppb
Concentration per Run 2	104.351 %	108.294 %	61.714 ppb	60.245 ppb	60.312 ppb	5,922.970 ppb	56.843 ppb	58.541 ppb	56.574 ppb
Concentration per Run 3	107.124 %	109.179 %	60.821 ppb	59.865 ppb	60.610 ppb	6,043.795 ppb	56.943 ppb	57.260 ppb	60.576 ppb
Recovery Percentage 1			103.175 %	100.664 %	101.042 %	100.464 %	95.853 %	97.996 %	98.054 %
Concentration RSD	1.8 %	0.4 %	1.9 %	1.0 %	0.5 %	1.6 %	1.9 %	2.9 %	3.5 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	57.087 ppb	105.079 %	108.813 %	58.256 ppb	56.645 ppb	57.293 ppb	58.507 ppb	98.935 %	100.703 %
Concentration per Run 1	58.361 ppb	109.376 %	105.540 %	59.378 ppb	57.121 ppb	58.340 ppb	59.580 ppb	101.259 %	100.769 %
Concentration per Run 2	55.868 ppb	103.812 %	112.309 %	56.969 ppb	53.024 ppb	55.737 ppb	57.719 ppb	97.919 %	101.147 %
Concentration per Run 3	57.033 ppb	102.050 %	108.592 %	58.420 ppb	59.791 ppb	57.801 ppb	58.222 ppb	97.628 %	100.194 %
Recovery Percentage 1	95.145 %			97.093 %	94.409 %	95.488 %	97.512 %		
Concentration RSD	2.2 %	3.6 %	3.1 %	2.1 %	6.0 %	2.4 %	1.6 %	2.0 %	0.5 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	60.508 ppb	59.922 ppb	98.495 %	98.920 %	59.999 ppb	59.884 ppb	101.324 %	102.478 %	100.371 %
Concentration per Run 1	60.796 ppb	58.849 ppb	101.899 %	98.136 %	59.852 ppb	60.081 ppb	103.704 %	99.560 %	102.070 %
Concentration per Run 2	59.748 ppb	60.745 ppb	97.944 %	99.362 %	59.404 ppb	59.526 ppb	101.126 %	104.286 %	98.663 %
Concentration per Run 3	60.978 ppb	60.172 ppb	95.641 %	99.260 %	60.740 ppb	60.044 ppb	99.142 %	103.588 %	100.381 %
Recovery Percentage 1	100.846 %	99.870 %			99.998 %	99.806 %			
Concentration RSD	1.1 %	1.6 %	3.2 %	0.7 %	1.1 %	0.5 %	2.3 %	2.5 %	1.7 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	103.418 %	57.159 ppb	57.138 ppb	113.863 %	118.100 %
Concentration per Run 1	101.416 %	57.666 ppb	58.017 ppb	118.595 %	116.845 %
Concentration per Run 2	103.145 %	58.049 ppb	57.565 ppb	111.631 %	116.627 %
Concentration per Run 3	105.692 %	55.763 ppb	55.831 ppb	111.363 %	120.829 %
Recovery Percentage 1		95.266 %	95.229 %		
Concentration RSD	2.1 %	2.1 %	2.0 %	3.6 %	2.0 %

Alpha ICPMSRQ Data with SRD

4/14/2024 4:15:13 PM

Analysis index:	47	User name	ALPHALAB\ICPMSRQ	Comment	<Comment>
Analysis label:	CCB	Rack	0		
Analysis started at:	4/14/2024 4:04:28 PM	Vial	10		

Category	6Li (STD_DEF)	6Li (KED_DEF)	9Be (STD_DEF)	11B (STD_DEF)	23Na (KED_DEF)	24Mg (KED_DEF)	27Al (STD_DEF)	39K (KED_DEF)	44Ca (KED_DEF)
Concentration average	102.518 %	111.284 %	0.034 ppb	0.430 ppb	-46.031 ppb	-5.224 ppb	-0.750 ppb	0.527 ppb	0.252 ppb
Concentration per Run 1	104.145 %	106.226 %	0.047 ppb	0.426 ppb	-44.263 ppb	-4.217 ppb	-0.742 ppb	-19.252 ppb	-0.482 ppb
Concentration per Run 2	101.871 %	117.315 %	0.038 ppb	0.443 ppb	-45.138 ppb	-7.216 ppb	-0.764 ppb	0.024 ppb	21.039 ppb
Concentration per Run 3	101.538 %	110.311 %	0.017 ppb	0.419 ppb	-48.690 ppb	-4.240 ppb	-0.745 ppb	20.808 ppb	-19.801 ppb
Recovery Percentage 1			6.803 %	4.295 %	-46.031 %	-7.463 %	-7.502 %	0.527 %	0.252 %
Concentration RSD	1.4 %	5.0 %	44.4 %	2.9 %	5.1 %	33.0 %	1.6 %	3,804.2 %	8,102.8 %

Category	45Sc (STD_DEF)	45Sc (KED_DEF)	51V (KED_DEF)	52Cr (KED_DEF)	55Mn (KED_DEF)	57Fe (KED_DEF)	59Co (KED_DEF)	60Ni (KED_DEF)	65Cu (KED_DEF)
Concentration average	104.137 %	98.443 %	0.026 ppb	-0.134 ppb	0.020 ppb	1.740 ppb	-0.013 ppb	-0.472 ppb	-0.207 ppb
Concentration per Run 1	107.804 %	102.013 %	0.017 ppb	-0.158 ppb	0.035 ppb	-0.152 ppb	-0.008 ppb	-0.397 ppb	-0.217 ppb
Concentration per Run 2	104.103 %	95.088 %	0.018 ppb	-0.105 ppb	0.045 ppb	2.123 ppb	-0.015 ppb	-0.518 ppb	-0.225 ppb
Concentration per Run 3	100.503 %	98.229 %	0.043 ppb	-0.139 ppb	-0.021 ppb	3.249 ppb	-0.016 ppb	-0.501 ppb	-0.179 ppb
Recovery Percentage 1			0.520 %	-13.391 %	1.957 %	3.480 %	-2.582 %	-23.598 %	-20.693 %
Concentration RSD	3.5 %	3.5 %	57.0 %	20.2 %	180.5 %	99.6 %	31.5 %	13.8 %	11.9 %

Category	66Zn (KED_DEF)	74Ge (STD_DEF)	74Ge (KED_DEF)	75As (KED_DEF)	78Se (KED_DEF)	88Sr (KED_DEF)	95Mo (KED_DEF)	103Rh (STD_DEF)	103Rh (KED_DEF)
Concentration average	-0.129 ppb	101.194 %	101.407 %	0.022 ppb	-0.011 ppb	-0.041 ppb	0.140 ppb	100.280 %	99.611 %
Concentration per Run 1	-0.118 ppb	104.468 %	97.408 %	-0.002 ppb	-0.092 ppb	-0.055 ppb	0.135 ppb	101.409 %	98.947 %
Concentration per Run 2	-0.215 ppb	97.016 %	100.794 %	0.068 ppb	-0.092 ppb	-0.037 ppb	0.107 ppb	100.606 %	99.877 %
Concentration per Run 3	-0.054 ppb	102.096 %	106.018 %	0.001 ppb	0.152 ppb	-0.029 ppb	0.179 ppb	98.826 %	100.008 %
Recovery Percentage 1	-2.584 %			4.440 %	-0.215 %	-8.132 %	7.018 %		
Concentration RSD	62.8 %	3.8 %	4.3 %	177.2 %	1,310.1 %	32.7 %	25.7 %	1.3 %	0.6 %

Category	107Ag (KED_DEF)	111Cd (KED_DEF)	115In (STD_DEF)	115In (KED_DEF)	123Sb (KED_DEF)	137Ba (KED_DEF)	159Tb (STD_DEF)	159Tb (KED_DEF)	175Lu (STD_DEF)
Concentration average	0.003 ppb	0.004 ppb	100.511 %	96.837 %	0.065 ppb	-0.018 ppb	98.356 %	98.317 %	98.980 %
Concentration per Run 1	0.007 ppb	0.002 ppb	102.602 %	94.721 %	0.052 ppb	-0.030 ppb	99.352 %	95.864 %	100.602 %
Concentration per Run 2	-0.001 ppb	0.002 ppb	98.691 %	94.833 %	0.071 ppb	-0.011 ppb	98.924 %	99.212 %	99.488 %
Concentration per Run 3	0.003 ppb	0.006 ppb	100.239 %	100.958 %	0.073 ppb	-0.012 ppb	96.791 %	99.875 %	96.850 %
Recovery Percentage 1	0.810 %				1.632 %	-3.551 %			
Concentration RSD	124.6 %	53.5 %	2.0 %	3.7 %	18.3 %	59.2 %	1.4 %	2.2 %	1.9 %

Category	175Lu (KED_DEF)	205Tl (KED_DEF)	208Pb (KED_DEF)	209Bi (STD_DEF)	209Bi (KED_DEF)
Concentration average	95.594 %	0.312 ppb	0.003 ppb	106.031 %	110.063 %
Concentration per Run 1	92.870 %	0.195 ppb	0.007 ppb	107.460 %	110.307 %
Concentration per Run 2	92.313 %	0.364 ppb	0.001 ppb	105.837 %	108.069 %
Concentration per Run 3	101.600 %	0.377 ppb	0.000 ppb	104.797 %	111.812 %
Recovery Percentage 1		31.209 %	0.282 %		
Concentration RSD	5.4 %	32.6 %	140.6 %	1.3 %	1.7 %

Interference Check Solutions
(ICP-MS)

Solution Component	Solution A Concentration (ug/L)	Solution AB Concentration (ug/L)
Al	20,000	20,000
Ca	60,000	60,000
Fe	50,000	50,000
Mg	20,000	20,000
Na	50,000	50,000
K	20,000	20,000
Mo	400	400
As	0.0	20
Cd	0.0	20
Cr	0.0	40
Co	0.0	40
Cu	0.0	40
Mn	0.0	40
Ni	0.0	40
Se	0.0	20
Ag	0.0	10
V	0.0	40
Zn	0.0	20

LCS & MS Concentrations
(ICP-MS)

Element	Liquid Concentration (mg/L)
Aluminum	2.00
Antimony	0.5
Arsenic	0.12
Barium	2.00
Beryllium	0.05
Cadmium	0.051
Calcium	10.0
Chromium	0.20
Cobalt	0.50
Copper	0.25
Iron	1.00
Lead	0.51
Magnesium	10.0
Manganese	0.50
Molybdenum	1.00
Nickel	0.50
Potassium	10.0
Selenium	0.12
Silver	0.05
Sodium	10.0
Thallium	0.12
Vanadium	0.50
Zinc	0.50

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D102-540
Certificate Issue Date: June 22, 2018
Expiration Date: January 31, 2022
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 030512.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8160	6.36	3960 - 12400	4080 - 12200
Antimony	120	60.9	9.42	0.822 - 121	12.0 - 166
Arsenic	144	135	5.08	112 - 158	94.6 - 176
Barium	469	443	6.77	366 - 521	332 - 554
Beryllium	207	197	5.86	164 - 229	148 - 246
Boron	213	174	12.6	127 - 221	105 - 244
Cadmium	224	204	6.65	169 - 240	153 - 256
Calcium	5190	4830	9.12	3950 - 5700	3510 - 6150
Chromium	138	132	8.56	109 - 155	92.2 - 171
Cobalt	182	179	7.93	151 - 207	134 - 224
Copper	191	184	6.72	155 - 213	138 - 230
Iron	15000	14400	10.7	8770 - 20000	5120 - 23600
Lead	225	216	7.72	178 - 254	159 - 274
Magnesium	2570	2340	6.13	1780 - 2900	1460 - 3230
Manganese	331	323	6.71	266 - 380	242 - 404
Mercury	16.8	13.2	16.0	8.64 - 17.7	7.89 - 18.5
Molybdenum	193	175	2.39	141 - 209	125 - 226
Nickel	163	152	5.95	126 - 178	106 - 197
Potassium	2420	2050	6.31	1440 - 2660	1210 - 2890
Selenium	81.9	74.9	4.13	59.3 - 90.5	47.0 - 103
Silver	57.6	53.9	9.00	43.0 - 64.8	37.8 - 70.0
Sodium	161	149	12.1	111 - 188	57.7 - 241
Strontium	100	96.2	4.04	78.1 - 114	69.0 - 123
Thallium	253	232	3.54	188 - 276	168 - 296

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Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Tin	146	134	10.8	106 - 163	79.5 - 189
Titanium	449	340	7.20	70.2 - 609	44.9 - 711
Uranium	114	113	7.10	85.5 - 140	71.9 - 153
Vanadium	180	172	8.85	137 - 207	126 - 218
Zinc	217	211	6.58	171 - 250	147 - 274

ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	8160	80.8	138	-	-
Antimony	120	60.9	50.8	135	-	-
Arsenic	144	135	93.8	184	-	-
Barium	469	443	94.5	158	-	-
Beryllium	207	197	95.0	148	-	-
Boron	213	174	81.8	107	-	-
Cadmium	224	204	91.3	199	-	-
Calcium	5190	4830	93.0	122	-	-
Chromium	138	132	95.5	172	-	-
Cobalt	182	179	98.4	140	-	-
Copper	191	184	96.3	183	-	-
Iron	15000	14400	95.6	133	-	-
Lead	225	216	96.2	204	-	-
Magnesium	2570	2340	91.2	122	-	-
Manganese	331	323	97.6	147	-	-
Mercury	16.8	13.2	78.3	128	-	-
Molybdenum	193	175	90.8	143	-	-
Nickel	163	152	93.1	185	-	-
Potassium	2420	2050	84.7	121	-	-
Selenium	81.9	74.9	91.5	163	-	-

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Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Silver	57.6	53.9	93.6	150	-	-
Sodium	161	149	92.8	105	-	-
Strontium	100	96.2	96.2	90	-	-
Thallium	253	232	91.6	147	-	-
Tin	146	134	92.0	100	-	-
Titanium	449	340	75.6	93	-	-
Uranium	114	113	98.8	35	-	-
Vanadium	180	172	95.4	139	-	-
Zinc	217	211	97.0	180	-	-

1. The **Certified Values** are the actual "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALs™)**are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **PT Data/Traceability** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. This product is traceable to the lot numbers of its starting materials. All gravimetric and volumetric measurements related to its manufacture are traceable to NIST through an unbroken chain of comparisons.
Traceability Recovery (%) = [(% recovery certified standard)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. For additional information on this product such as intended use, instructions for use, level of homogeneity, and safety information, please refer to the provided Instruction Sheet

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller

Quality Officer

Matthew Seebeck

ISO/IEC GUIDE 34:2009 ACCREDITED REFERENCE MATERIAL PRODUCER CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005 ACCREDITED CHEMICAL TESTING LABORATORY CERTIFICATE NO. 1539.02

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Reference Material

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Product: Metals in Soil
Catalog Number: 540
Lot No. D105-540
Certificate Issue Date: March 19, 2019
Expiration Date: October 12, 2022
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 030512.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8800	8.32	4600 - 13000	4470 - 13100
Antimony	282	147	7.70	6.17 - 289	28.2 - 366
Arsenic	155	143	6.34	119 - 168	100 - 186
Barium	439	415	5.37	343 - 488	311 - 519
Beryllium	192	179	2.78	149 - 210	134 - 224
Boron	216	160	7.08	113 - 208	96.1 - 238
Cadmium	61.5	56.2	0.528	46.6 - 65.9	42.2 - 70.3
Calcium	5190	4960	6.64	4090 - 5840	3610 - 6310
Chromium	104	101	4.75	83.2 - 118	70.5 - 131
Cobalt	196	189	0.500	158 - 219	141 - 236
Copper	65.0	63.1	2.65	53.1 - 73.1	47.3 - 78.9
Iron	15000	15700	8.94	10100 - 21300	6000 - 25400
Lead	126	125	4.77	103 - 146	89.3 - 160
Magnesium	2570	2410	6.26	1860 - 2970	1520 - 3310
Manganese	387	382	5.37	315 - 449	290 - 474
Mercury	7.76	7.61	13.7	5.53 - 9.69	4.57 - 10.7
Molybdenum	120	107	0.500	86.0 - 128	75.5 - 139
Nickel	117	108	0.514	89.5 - 127	75.7 - 141
Potassium	2420	2110	5.62	1500 - 2720	1260 - 2960
Selenium	84.6	77.9	7.10	61.8 - 94.0	49.2 - 107
Silver	34.6	34.3	8.34	27.8 - 40.9	23.6 - 45.1
Sodium	161	145	6.72	106 - 183	54.3 - 235
Strontium	104	104	3.95	85.1 - 123	74.8 - 133
Thallium	123	113	0.500	91.3 - 134	77.1 - 149

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Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Tin	118	107	0.500	83.5 - 130	61.2 - 152
Titanium	512	421	5.80	114 - 728	0.00 - 854
Uranium	103	104	6.18	79.1 - 128	71.9 - 135
Vanadium	87.3	83.7	8.55	66.8 - 101	54.2 - 113
Zinc	251	240	3.98	194 - 285	168 - 312

ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	8800	87.1	193	-	-
Antimony	282	147	52.3	216	-	-
Arsenic	155	143	92.5	240	-	-
Barium	439	415	94.6	222	-	-
Beryllium	192	179	93.4	220	-	-
Boron	216	160	74.2	152	-	-
Cadmium	61.5	56.2	91.5	239	-	-
Calcium	5190	4960	95.6	175	-	-
Chromium	104	101	96.8	237	-	-
Cobalt	196	189	96.2	215	-	-
Copper	65.0	63.1	97.1	237	-	-
Iron	15000	15700	105	195	-	-
Lead	126	125	99.0	243	-	-
Magnesium	2570	2410	93.9	177	-	-
Manganese	387	382	98.7	215	-	-
Mercury	7.76	7.61	98.0	157	-	-
Molybdenum	120	107	89.4	216	-	-
Nickel	117	108	92.5	235	-	-
Potassium	2420	2110	87.2	181	-	-
Selenium	84.6	77.9	92.1	231	-	-

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Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Silver	34.6	34.3	99.3	216	-	-
Sodium	161	145	89.8	166	-	-
Strontium	104	104	99.9	148	-	-
Thallium	123	113	91.8	215	-	-
Tin	118	107	90.4	164	-	-
Titanium	512	421	82.2	157	-	-
Uranium	103	104	101	61	-	-
Vanadium	87.3	83.7	95.9	214	-	-
Zinc	251	240	95.5	234	-	-

1. The **Certified Values** are the actual "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this reference material during the period of validity of this certificate.

2. The **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALs™)**are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **PT Data/Traceability** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. This product is traceable to the lot numbers of its starting materials. All gravimetric and volumetric measurements related to its manufacture are traceable to NIST through an unbroken chain of comparisons.
Traceability Recovery (%) = [(% recovery certified standard)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. For additional information on this product such as intended use, instructions for use, level of homogeneity, and safety information, please refer to the provided Instruction Sheet

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller

Brian Miller

Quality Officer

Matthew Seebeck

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Certified Reference Material

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D109-540
Certificate Issue Date: March 24, 2020
Expiration Date: October 03, 2023
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 090119.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value[7]	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8130	2.54	3920 - 12300	4060 - 12200
Antimony	259	134	5.03	4.56 - 264	25.9 - 335
Arsenic	171	156	3.38	129 - 183	109 - 203
Barium	253	239	4.81	197 - 280	179 - 298
Beryllium	179	169	6.59	141 - 198	127 - 212
Boron	114	87.5	10.3	62.5 - 113	52.5 - 125
Cadmium	149	137	5.43	113 - 160	103 - 171
Calcium	5190	4760	3.48	3890 - 5640	3460 - 6070
Chromium	163	154	3.79	126 - 181	108 - 200
Cobalt	127	121	5.07	101 - 141	90.8 - 151
Copper	57.0	54.9	4.13	46.1 - 63.6	41.1 - 68.6
Iron	15000	14100	6.27	8470 - 19700	4920 - 23200
Lead	133	130	3.00	107 - 152	93.3 - 167
Magnesium	2570	2320	3.32	1760 - 2880	1440 - 3200
Manganese	277	269	2.67	221 - 317	199 - 340
Mercury	21.6	20.5	7.72	14.7 - 26.3	12.3 - 28.6
Molybdenum	108	95.4	2.61	76.4 - 114	66.9 - 124
Nickel	58.7	53.9	4.97	44.5 - 63.3	37.7 - 70.0
Potassium	2420	2020	3.06	1410 - 2630	1190 - 2850
Selenium	181	167	5.63	132 - 201	113 - 221
Silver	35.5	33.6	5.20	26.8 - 40.3	23.0 - 44.1
Sodium	161	133	2.76	95.1 - 171	46.5 - 220
Strontium	89.7	87.9	4.59	71.7 - 104	62.8 - 113
Thallium	121	112	5.19	90.3 - 133	76.1 - 147

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Parameter	Certified Value[1]	Reference Value[7]	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Tin	83.5	74.0	5.42	57.6 - 90.4	39.7 - 108
Titanium	474	333	7.17	48.6 - 617	46.3 - 620
Uranium	51.9	51.9	3.36	39.6 - 64.3	35.9 - 68.0
Vanadium	68.1	62.6	6.00	49.4 - 75.8	37.0 - 88.3
Zinc	165	158	2.34	128 - 188	111 - 205

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ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number[6]	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	8130	80.5	196	-	-
Antimony	259	134	51.8	217	-	-
Arsenic	171	156	91.3	243	-	-
Barium	253	239	94.3	230	-	-
Beryllium	179	169	94.6	223	-	-
Boron	114	87.5	76.7	150	-	-
Cadmium	149	137	91.8	249	-	-
Calcium	5190	4760	91.8	184	-	-
Chromium	163	154	94.4	245	-	-
Cobalt	127	121	95.3	221	-	-
Copper	57.0	54.9	96.2	243	-	-
Iron	15000	14100	93.9	199	-	-
Lead	133	130	97.7	251	-	-
Magnesium	2570	2320	90.1	182	-	-
Manganese	277	269	97.2	220	-	-
Mercury	21.6	20.5	94.7	172	-	-
Molybdenum	108	95.4	88.3	218	-	-
Nickel	58.7	53.9	91.8	242	-	-
Potassium	2420	2020	83.5	187	-	-
Selenium	181	167	92.2	235	-	-
Silver	35.5	33.6	94.5	222	-	-
Sodium	161	133	82.7	177	-	-
Strontium	89.7	87.9	98.0	151	-	-
Thallium	121	112	92.2	219	-	-
Tin	83.5	74.0	88.6	170	-	-
Titanium	474	333	70.3	157	-	-
Uranium	51.9	51.9	100	60	-	-
Vanadium	68.1	62.6	91.9	213	-	-
Zinc	165	158	95.8	238	-	-

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1. The **Certified Values** are the actual gravimetric/volumetric "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this certified reference material alongside USEPA and NELAC compliant PT study materials. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and therefore, the acceptance limits of this certified reference material and any PT study material may differ relative to their difference in concentrations.

5. The **PT Performance Data** include the mean value, percent recovery and number of data points reported by laboratories in our Proficiency Testing study compared to the Certified Values. In the event this lot was not used in a proficiency testing scheme, the data displayed was generated internally by ERA.

6. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

7. The **Reference Values** are equal to the mean recoveries for the parameters as determined in an interlaboratory round robin study. The **Reference Values** represent the expected performance for the analytes in this standard. ERA recommends using the **Reference Values** when assessing or evaluating your results.

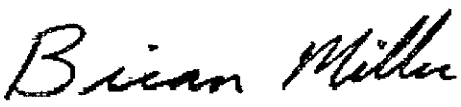
8. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

9. For additional information on this product such as intended use, storage information, instructions for use, minimum sample size, and safety information, please refer to the Product Use Instructions provided.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller



Quality Officer

Matthew Seebeck

ERA
A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D113-540
Certificate Issue Date: March 23, 2021
Expiration Date: October 13, 2024
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 090119.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8630	12.0	4420 - 12800	4370 - 12900
Antimony	256	129	16.8	0.742 - 257	25.6 - 323
Arsenic	91.6	84.5	15.1	70.0 - 99.0	59.2 - 110
Barium	259	249	9.94	206 - 292	187 - 311
Beryllium	175	163	3.89	135 - 191	122 - 204
Boron	95.7	76.7	12.8	55.7 - 97.7	48.0 - 107
Cadmium	107	99.0	11.5	82.2 - 116	74.2 - 124
Calcium	5190	4760	11.8	3890 - 5640	3460 - 6070
Chromium	129	122	14.6	101 - 144	85.7 - 159
Cobalt	63.6	61.7	11.5	51.9 - 71.6	46.3 - 77.2
Copper	62.3	61.5	12.3	51.9 - 71.0	46.1 - 76.8
Iron	15000	14500	15.7	8860 - 20100	5190 - 23800
Lead	122	123	13.9	103 - 144	88.3 - 158
Lithium	6.42	7.30	18.7	5.13 - 9.48	3.20 - 11.4
Magnesium	2570	2360	8.87	1810 - 2920	1480 - 3250
Manganese	470	456	13.4	375 - 538	350 - 563
Mercury	22.1	18.9	14.5	13.0 - 24.8	11.3 - 26.4
Molybdenum	80.1	72.8	11.0	58.7 - 87.0	50.5 - 95.2
Nickel	143	135	14.2	112 - 158	94.7 - 176
Potassium	2420	2090	8.21	1480 - 2700	1240 - 2940
Selenium	128	121	11.7	96.9 - 146	80.4 - 162
Silver	45.4	44.1	6.69	35.5 - 52.8	30.7 - 57.6
Sodium	161	136	9.34	97.4 - 174	48.1 - 223
Strontium	82.2	82.3	8.42	67.4 - 97.1	58.6 - 106

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Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Thallium	154	144	7.54	117 - 171	101 - 187
Tin	89.7	79.8	14.0	62.2 - 97.4	43.5 - 116
Titanium	705	546	10.3	123 - 969	118 - 974
Uranium	29.5	30.9	3.38	23.9 - 37.9	21.3 - 40.5
Vanadium	196	186	14.2	148 - 224	138 - 235
Zinc	307	295	10.4	240 - 351	207 - 384

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Calculation of Method 6020 Metals

Aqueous Samples

The instrument will calculate the concentration (µg/L). This value is divided by 1000 to convert the units to mg/L. If the sample is diluted (DF), the result is multiplied by the DF to generate the final result.

$$\text{Result, mg/L} = C_s \times (1\text{mg}/1000\mu\text{g}) \times (DF)$$

Where:

C_s = Concentration of sample (µg/L)

DF = Dilution Factor

Alpha ICPMSQ Seq

4/1/2024 6:18:17 PM

Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/1/2024 5:04:24 AM
2	CAL LOT #M24-1045	0	1	3	1	4/1/2024 5:09:01 AM
3	Blank EJF ICPMSQ	4	49	3	1	4/1/2024 5:13:37 AM
4	0.2/20 Cal	0	2	3	1	4/1/2024 5:18:19 AM
5	1/100 Cal	0	3	3	1	4/1/2024 5:22:56 AM
6	10/1000 Cal	0	4	3	1	4/1/2024 5:27:34 AM
7	60/6000 Cal	0	5	3	1	4/1/2024 5:32:12 AM
8	120/12000 Cal	0	6	3	1	4/1/2024 5:36:51 AM
9	Sr 200ppb	4	55	3	1	4/1/2024 5:46:33 AM
10	ICV	0	7	3	1	4/1/2024 5:51:15 AM
11	ICB	0	10	3	1	4/1/2024 5:55:54 AM
12	ICB	0	10	3	1	4/1/2024 6:07:01 AM
13	ICSA	4	53	3	1	4/1/2024 6:13:24 AM
14	LDR Check - 10/1[ppm	4	1	3	1	4/1/2024 6:18:08 AM
15	Rinse	0	1	3	1	4/1/2024 6:22:48 AM
16	CCV	0	9	3	1	4/1/2024 6:27:25 AM
17	CCB	0	10	3	1	4/1/2024 6:32:06 AM
18	WG1901949-1 MCP-6020TL-10	1	1	3	1	4/1/2024 6:44:34 AM
19	xWG1901949-2d10 MCP-6020TL-10	1	2	3	1	4/1/2024 6:49:11 AM
20	WG1901949-3d10 MCP-6020TL-10	1	3	3	1	4/1/2024 6:53:47 AM
21	I2416274-01 MCP-6020TL-10	1	4	3	1	4/1/2024 6:58:25 AM
22	I2416427-02 MCP-6020TL-10	1	5	3	1	4/1/2024 7:03:02 AM
23	I2416427-03 MCP-6020TL-10	1	6	3	1	4/1/2024 7:07:40 AM
24	I2416427-04 MCP-6020TL-10	1	7	3	1	4/1/2024 7:12:18 AM
25	I2416427-05 MCP-6020TL-10	1	8	3	1	4/1/2024 7:16:56 AM
26	I2416427-06 MCP-6020TL-10	1	9	3	1	4/1/2024 7:21:35 AM
27	I2416427-07 MCP-6020TL-10	1	10	3	1	4/1/2024 7:26:14 AM
28	CCV	0	9	3	1	4/1/2024 7:30:54 AM
29	CCB	0	10	3	1	4/1/2024 7:35:35 AM
30	wg1903075-1 2008SL	1	22	3	1	4/1/2024 7:41:17 AM
31	wg1903075-2d10 2008SL	1	23	3	1	4/1/2024 7:45:55 AM
32	WG1901949-2d10 MCP-6020TL-10	1	29	3	1	4/1/2024 7:55:00 AM
33	wg1903075-3d10 2008SL	1	25	3	1	4/1/2024 7:59:36 AM
34	wg1903075-4 2008SL	1	26	3	1	4/1/2024 8:04:12 AM
35	L2417416-01 2008SL	1	24	3	1	4/1/2024 8:08:48 AM
36	L2416206-01 2008SL	1	27	3	1	4/1/2024 8:13:27 AM
37	L2417416-02 2008SL	1	28	3	1	4/1/2024 8:18:03 AM
38	I2416427-08 MCP-6020TL-10	1	11	3	1	4/1/2024 8:22:40 AM
39	I2416427-09 MCP-6020TL-10	1	12	3	1	4/1/2024 8:27:19 AM
40	CCV	0	9	3	1	4/1/2024 8:31:59 AM
41	CCB	0	10	3	1	4/1/2024 8:36:40 AM
42	I2416613-03 MCP-6020TL-10	1	13	3	1	4/1/2024 8:43:22 AM
43	I2416613-04 MCP-6020TL-10	1	14	3	1	4/1/2024 8:47:58 AM
44	I2416613-05 MCP-6020TL-10	1	15	3	1	4/1/2024 8:52:34 AM
45	I2416613-06 MCP-6020TL-10	1	16	3	1	4/1/2024 8:57:10 AM
46	I2416613-07 MCP-6020TL-10	1	17	3	1	4/1/2024 9:01:47 AM
47	I2416613-08 MCP-6020TL-10	1	18	3	1	4/1/2024 9:06:24 AM
48	I2416613-09 MCP-6020TL-10	1	19	3	1	4/1/2024 9:11:01 AM
49	I2416613-10 MCP-6020TL-10	1	20	3	1	4/1/2024 9:15:39 AM
50	I2416613-11 MCP-6020TL-10	1	21	3	1	4/1/2024 9:20:17 AM
51	I2416304-01 2008TL	1	35	3	1	4/1/2024 9:24:55 AM

Alpha ICPMSQ Seq

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Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
52	CCV	0	9	3	1	4/1/2024 9:29:34 AM
53	CCB	0	10	3	1	4/1/2024 9:34:16 AM
54	WG1901983-1 2008TL	1	30	3	1	4/1/2024 9:41:16 AM
55	WG1901983-2d10 2008TL	1	31	3	1	4/1/2024 9:45:53 AM
56	WG1901983-3d10 2008TL	1	33	3	1	4/1/2024 9:50:31 AM
57	WG1901983-4 2008TL	1	34	3	1	4/1/2024 9:55:09 AM
58	I2416475-01 2008TL	1	32	3	1	4/1/2024 9:59:48 AM
59	I2416304-02 2008TL	1	36	3	1	4/1/2024 10:04:26 AM
60	I2416304-03 2008TL	1	37	3	1	4/1/2024 10:09:05 AM
61	I2416304-04 2008TL	1	38	3	1	4/1/2024 10:13:41 AM
62	I2416307-01 2008TL	1	39	3	1	4/1/2024 10:18:18 AM
63	I2416311-01 2008TL	1	40	3	1	4/1/2024 10:22:55 AM
64	CCV	0	9	3	1	4/1/2024 10:27:31 AM
65	CCB	0	10	3	1	4/1/2024 10:32:13 AM
66	WG1902616-1 CT-6020TL	1	44	3	1	4/1/2024 10:41:52 AM
67	xWG1902616-2d10 CT-6020TL	1	45	3	1	4/1/2024 10:46:31 AM
68	WG1902616-3d10 CT-6020TL	1	47	3	1	4/1/2024 10:51:09 AM
69	WG1902616-4d10 CT-6020TL	1	48	3	1	4/1/2024 10:55:48 AM
70	xL2414830-05 CT-6020TL	1	46	3	1	4/1/2024 11:00:27 AM
71	I2416311-02 2008TL	1	41	3	1	4/1/2024 11:05:06 AM
72	I2416475-02 2008TL	1	42	3	1	4/1/2024 11:09:43 AM
73	I2416477-01 2008TL	1	43	3	1	4/1/2024 11:14:58 AM
74	L2414830-01 CT-6020TL	1	49	3	1	4/1/2024 11:19:35 AM
75	L2414830-03 CT-6020TL	1	50	3	1	4/1/2024 11:24:13 AM
76	CCV	0	9	3	1	4/1/2024 11:28:50 AM
77	CCB	0	10	3	1	4/1/2024 11:33:32 AM
78	WG1902644-1 CT-6020SL	1	53	3	1	4/1/2024 11:42:41 AM
79	xWG1902616-2d5 CT-6020SL	1	60	3	1	4/1/2024 11:51:18 AM
80	WG1902644-2d10 CT-6020SL	1	54	3	1	4/1/2024 11:55:55 AM
81	WG1902616-2d20 CT-6020TL	2	3	3	1	4/1/2024 12:02:00 PM
82	WG1902644-3d10 CT-6020SL	1	56	3	1	4/1/2024 12:06:39 PM
83	WG1902644-4d10 CT-6020SL	1	57	3	1	4/1/2024 12:11:17 PM
84	L2414830-03d5 CT-6020TL	2	1	3	1	4/1/2024 12:15:56 PM
85	L2414830-05d10 CT-6020TL	2	2	3	1	4/1/2024 12:20:34 PM
86	CCV	0	9	3	1	4/1/2024 12:25:12 PM
87	CCB	0	10	3	1	4/1/2024 12:29:54 PM
88	wg1901982-1 2008SL	2	4	3	1	4/1/2024 12:45:22 PM
89	wg1901982-2d10 2008SL	2	5	3	1	4/1/2024 12:50:00 PM
90	wg1901982-3d10 2008SL	2	7	3	1	4/1/2024 12:54:38 PM
91	wg1901982-4 2008SL	2	8	3	1	4/1/2024 12:59:17 PM
92	L2416307-01 2008SL	2	6	3	1	4/1/2024 1:03:55 PM
93	L2415732-01 CT-6020TL	1	51	3	1	4/1/2024 1:08:34 PM
94	L2415732-04 CT-6020TL	1	52	3	1	4/1/2024 1:13:11 PM
95	L2414830-06d10 CT-6020SL	1	55	3	1	4/1/2024 1:17:49 PM
96	L2414830-02 CT-6020SL	1	58	3	1	4/1/2024 1:22:28 PM
97	L2414830-04 CT-6020SL	1	59	3	1	4/1/2024 1:27:07 PM
98	CCV	0	9	3	1	4/1/2024 1:31:46 PM
99	CCB	0	10	3	1	4/1/2024 1:36:28 PM
100	L2414830-04d10 CT-6020SL	2	9	3	1	4/1/2024 1:49:46 PM
101	CCV	0	9	3	1	4/1/2024 1:54:24 PM
102	CCB	0	10	3	1	4/1/2024 1:59:06 PM
103	WG1902455-1 6020TL	2	10	3	1	4/1/2024 2:10:37 PM
104	I2416511-05 6020TL	2	19	3	1	4/1/2024 2:15:16 PM
105	WG1902455-2d10 6020TL	2	11	3	1	4/1/2024 2:19:55 PM
106	WG1902455-3d10 6020TL	2	13	3	1	4/1/2024 2:24:35 PM
107	WG1902455-5d10 6020TL	2	15	3	1	4/1/2024 2:29:14 PM

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Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
108	WG1902455-4 6020TL	2	14	3	1	4/1/2024 2:33:52 PM
109	I2416511-01 6020TL	2	12	3	1	4/1/2024 2:38:31 PM
110	I2416511-02 6020TL	2	17	3	1	4/1/2024 2:43:11 PM
111	I2416511-03 6020TL	2	18	3	1	4/1/2024 2:47:50 PM
112	WG1902455-6d5 6020TL	2	16	3	1	4/1/2024 2:52:29 PM
113	CCV	0	9	3	1	4/1/2024 2:57:07 PM
114	CCB	0	10	3	1	4/1/2024 3:01:50 PM
115	LDR Check - 10/1 ppm	2	27	3	1	4/1/2024 3:06:32 PM
116	I2416581-04 6020TL	2	23	3	1	4/1/2024 3:20:07 PM
117	I2416749-27 6020TL	2	24	3	1	4/1/2024 3:24:47 PM
118	I2416581-01 6020TL	2	20	3	1	4/1/2024 3:29:27 PM
119	I2416581-02 6020TL	2	21	3	1	4/1/2024 3:34:06 PM
120	I2416581-03 6020TL	2	22	3	1	4/1/2024 3:38:45 PM
121	I2416752-05 6020TL	2	25	3	1	4/1/2024 3:43:27 PM
122	I2416851-01 6020TL	2	26	3	1	4/1/2024 3:48:06 PM
123	zLDR Check Ca 50ppm	4	3	3	1	4/1/2024 3:57:18 PM
124	WG1902455-2d10 6020TL	2	11	3	1	4/1/2024 4:11:50 PM
125	CCV	0	9	3	1	4/1/2024 4:18:23 PM
126	CCB	0	10	3	1	4/1/2024 4:23:05 PM
127	WG1902455-2d50 6020TL	2	28	3	1	4/1/2024 4:31:37 PM
128	WG1902455-6d25 6020TL	2	31	3	1	4/1/2024 4:38:35 PM
129	WG1902455-4d5 6020TL	2	30	3	1	4/1/2024 4:43:15 PM
130	I2416511-01d5 6020TL	2	29	3	1	4/1/2024 4:47:54 PM
131	I2416511-02d100 6020TL	2	32	3	1	4/1/2024 4:52:33 PM
132	I2416511-03d5 6020TL	2	33	3	1	4/1/2024 4:57:12 PM
133	I2416581-01d100 6020TL	2	34	3	1	4/1/2024 5:01:50 PM
134	I2416581-02d5 6020TL	2	35	3	1	4/1/2024 5:06:30 PM
135	I2416581-02d50 6020TL	2	36	3	1	4/1/2024 5:11:10 PM
136	I2416581-03d5 6020TL	2	37	3	1	4/1/2024 5:15:50 PM
137	CCV	0	9	3	1	4/1/2024 5:20:30 PM
138	CCB	0	10	3	1	4/1/2024 5:25:13 PM
139	I2416581-03d50 6020TL	2	38	3	1	4/1/2024 5:35:14 PM
140	I2416752-05d50 6020TL	2	39	3	1	4/1/2024 5:39:53 PM
141	I2416851-01d5 6020TL	2	40	3	1	4/1/2024 5:44:33 PM
142	CCV	0	9	3	1	4/1/2024 5:49:36 PM
143	CCB	0	10	3	1	4/1/2024 5:54:18 PM
144	Unknown	2	41	3	1	
145	Unknown	2	42	3	1	
146	Unknown	2	43	3	1	
147	Unknown	2	44	3	1	
148	Unknown	2	45	3	1	
149	Unknown	2	46	3	1	
150	Unknown	2	47	3	1	
151	Unknown	2	48	3	1	
152	Unknown	2	49	3	1	
153	Unknown	2	50	3	1	
154	CCV	0	9	3	1	
155	CCB	0	10	3	1	

Alpha ICPMSQ2 Seq

4/1/2024 4:58:48 PM

Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/1/2024 5:45:39 AM
2	CAL LOT #M24-1045	0	1	3	1	4/1/2024 5:50:05 AM
3	Blank EJF ICPMSQ2	4	49	3	1	4/1/2024 5:54:31 AM
4	0.2/20 Cal	0	2	3	1	4/1/2024 5:59:02 AM
5	1/100 Cal	0	3	3	1	4/1/2024 6:03:29 AM
6	10/1000 Cal	0	4	3	1	4/1/2024 6:07:57 AM
7	60/6000 Cal	0	5	3	1	4/1/2024 6:12:25 AM
8	120/12000 Cal	0	6	3	1	4/1/2024 6:16:53 AM
9	Sr 200ppb	4	55	3	1	4/1/2024 6:21:39 AM
10	ICV	0	7	3	1	4/1/2024 6:26:10 AM
11	ICB	0	10	3	1	4/1/2024 6:30:40 AM
12	ICSA	4	53	3	1	4/1/2024 6:38:31 AM
13	LDR Check -10/1ppm	4	1	3	1	4/1/2024 6:43:03 AM
14	Rinse	0	1	3	1	4/1/2024 6:47:33 AM
15	CCV	0	9	3	1	4/1/2024 6:51:59 AM
16	CCB	0	10	3	1	4/1/2024 6:56:30 AM
17	wg1901631-7d10 6020TL	1	2	3	1	4/1/2024 7:08:57 AM
18	wg1901631-8d10 6020TL	1	3	3	1	4/1/2024 7:13:24 AM
19	wg1901631-9d10 6020TL	1	4	3	1	4/1/2024 7:17:51 AM
20	wg1901631-10d50 6020TL	1	5	3	1	4/1/2024 7:22:18 AM
21	L2416487-08d10 6020TL	1	1	3	1	4/1/2024 7:26:46 AM
22	I2416277-02d10 6020TL	1	6	3	1	4/1/2024 7:31:13 AM
23	I2416277-03d10 6020TL	1	7	3	1	4/1/2024 7:35:41 AM
24	I2416277-04d10 6020TL	1	8	3	1	4/1/2024 7:40:09 AM
25	CCV	0	9	3	1	4/1/2024 7:44:38 AM
26	CCB	0	10	3	1	4/1/2024 7:49:09 AM
27	wg1902788-1 6020TL	1	9	3	1	4/1/2024 7:55:01 AM
28	wg1902788-2d10 6020TL	1	10	3	1	4/1/2024 7:59:30 AM
29	wg1902788-3d10 6020TL	1	12	3	1	4/1/2024 8:04:00 AM
30	wg1902788-4d10 6020TL	1	13	3	1	4/1/2024 8:08:30 AM
31	wg1902788-5d10 6020TL	1	14	3	1	4/1/2024 8:12:55 AM
32	wg1902788-6d5 6020TL	1	15	3	1	4/1/2024 8:17:22 AM
33	L2415362-01 6020TL	1	11	3	1	4/1/2024 8:21:48 AM
34	L2417426-12 6020TL	1	16	3	1	4/1/2024 8:27:29 AM
35	CCV	0	9	3	1	4/1/2024 8:32:25 AM
36	CCB	0	10	3	1	4/1/2024 8:36:56 AM
37	WG1897634-1d2 A2-6020T	1	17	3	1	4/1/2024 8:50:03 AM
38	WG1897634-2d10 A2-6020T	1	18	3	1	4/1/2024 8:54:30 AM
39	WG1897634-3d10 A2-6020T	1	19	3	1	4/1/2024 8:58:57 AM
40	WG1897634-4d10 A2-6020T	1	20	3	1	4/1/2024 9:03:25 AM
41	WG1897634-5d10 A2-6020T	1	21	3	1	4/1/2024 9:07:53 AM
42	CCV	0	9	3	1	4/1/2024 9:14:06 AM
43	CCB	0	10	3	1	4/1/2024 9:18:37 AM
44	WG1902448-1 6020SL	1	22	3	1	4/1/2024 9:29:11 AM
45	WG1902448-2d10 6020SL	1	23	3	1	4/1/2024 9:33:40 AM
46	WG1902448-3d10 6020SL	1	25	3	1	4/1/2024 9:38:09 AM
47	WG1902448-4d10 6020SL	1	26	3	1	4/1/2024 9:42:35 AM
48	WG1902448-5d10 6020SL	1	27	3	1	4/1/2024 9:47:01 AM
49	WG1902448-6d5 6020SL	1	28	3	1	4/1/2024 9:51:28 AM
50	I2416561-01 6020SL	1	24	3	1	4/1/2024 9:55:54 AM
51	I2416395-01 6020SL	1	29	3	1	4/1/2024 10:00:24 AM

Alpha ICPMSQ2 Seq

4/1/2024 4:58:48 PM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
52	I2416395-02 6020SL	1	30	3	1	4/1/2024 10:04:51 AM
53	I2416395-03 6020SL	1	31	3	1	4/1/2024 10:09:18 AM
54	CCV	0	9	3	1	4/1/2024 10:13:46 AM
55	CCB	0	10	3	1	4/1/2024 10:18:56 AM
56	CCV	0	5	3	1	4/1/2024 10:29:56 AM
57	CCB	0	10	3	1	4/1/2024 10:35:11 AM
58	I2416395-07 6020SL	1	35	3	1	4/1/2024 10:39:46 AM
59	I2416395-04 6020SL	1	32	3	1	4/1/2024 10:44:15 AM
60	I2416395-05 6020SL	1	33	3	1	4/1/2024 10:48:43 AM
61	I2416395-06 6020SL	1	34	3	1	4/1/2024 10:53:11 AM
62	I2416395-08 6020SL	1	36	3	1	4/1/2024 10:57:40 AM
63	I2416561-02 6020SL	1	37	3	1	4/1/2024 11:02:09 AM
64	I2416561-03 6020SL	1	38	3	1	4/1/2024 11:06:36 AM
65	I2416561-04 6020SL	1	39	3	1	4/1/2024 11:11:03 AM
66	CCV	0	9	3	1	4/1/2024 11:16:40 AM
67	CCB	0	10	3	1	4/1/2024 11:21:11 AM
68	wg1901969-1 6020SL	1	40	3	1	4/1/2024 12:06:19 PM
69	wg1901969-2d10 6020SL	1	41	3	1	4/1/2024 12:10:46 PM
70	wg1901969-3d10 6020SL	1	43	3	1	4/1/2024 12:15:13 PM
71	wg1901969-5d10 6020SL	1	45	3	1	4/1/2024 12:19:41 PM
72	wg1901969-4 6020SL	1	44	3	1	4/1/2024 12:24:10 PM
73	L2416408-06 6020SL	1	42	3	1	4/1/2024 12:28:38 PM
74	L2416277-01 6020SL	1	47	3	1	4/1/2024 12:33:05 PM
75	L2416277-02 6020SL	1	48	3	1	4/1/2024 12:37:34 PM
76	L2416277-03 6020SL	1	49	3	1	4/1/2024 12:42:04 PM
77	wg1901969-6d5 6020SL	1	46	3	1	4/1/2024 12:46:31 PM
78	CCV	0	9	3	1	4/1/2024 12:51:00 PM
79	CCB	0	10	3	1	4/1/2024 12:55:31 PM
80	L2416277-05 6020SL	1	51	3	1	4/1/2024 1:00:39 PM
81	L2416277-04 6020SL	1	50	3	1	4/1/2024 1:05:07 PM
82	CCV	0	9	3	1	4/1/2024 1:09:34 PM
83	CCB	0	10	3	1	4/1/2024 1:14:05 PM

Alpha ICPMSQ2 Seq

4/4/2024 7:21:31 AM

Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/3/2024 8:42:10 AM
2	CAL LOT #M24-1045	0	1	3	1	4/3/2024 8:46:35 AM
3	Blank NTB ICPMSQ2	4	49	3	1	4/3/2024 8:51:01 AM
4	0.2/20 Cal	0	2	3	1	4/3/2024 8:55:32 AM
5	1/100 Cal	0	3	3	1	4/3/2024 8:59:59 AM
6	10/1000 Cal	0	4	3	1	4/3/2024 9:04:27 AM
7	60/6000 Cal	0	5	3	1	4/3/2024 9:08:55 AM
8	120/12000 Cal	0	6	3	1	4/3/2024 9:13:24 AM
9	Sr 200ppb	4	55	3	1	4/3/2024 9:18:30 AM
10	ICV	0	7	3	1	4/3/2024 9:23:02 AM
11	ICB	0	10	3	1	4/3/2024 9:30:09 AM
12	ICV	0	7	3	1	4/3/2024 9:35:31 AM
13	ICB	0	10	3	1	4/3/2024 9:40:34 AM
14	ICSA	4	53	3	1	4/3/2024 9:45:05 AM
15	LDR Check - 10/1 ppm	4	1	3	1	4/3/2024 9:49:37 AM
16	Rinse	0	1	3	1	4/3/2024 9:55:41 AM
17	CCV	0	9	3	1	4/3/2024 10:00:07 AM
18	CCB	0	10	3	1	4/3/2024 10:05:15 AM
19	WG1903688-1 6020SL	1	18	3	1	4/3/2024 10:10:42 AM
20	WG1903688-2d10 6020SL	1	19	3	1	4/3/2024 10:15:09 AM
21	WG1903688-3d10 6020SL	1	21	3	1	4/3/2024 10:20:40 AM
22	WG1903688-5d10 6020SL	1	23	3	1	4/3/2024 10:25:08 AM
23	WG1903688-4 6020SL	1	22	3	1	4/3/2024 10:29:37 AM
24	I2417598-01 6020SL	1	20	3	1	4/3/2024 10:35:31 AM
25	WG1903688-6d5 6020SL	1	24	3	1	4/3/2024 10:39:59 AM
26	I2417598-01d10 6020SL	1	25	3	1	4/3/2024 10:44:28 AM
27	WG1903688-4d10 6020SL	1	26	3	1	4/3/2024 10:48:54 AM
28	WG1903688-6d50 6020SL	1	27	3	1	4/3/2024 10:53:20 AM
29	CCV	0	9	3	1	4/3/2024 10:57:46 AM
30	CCB	0	10	3	1	4/3/2024 11:02:18 AM
31	WG1902287-1 2008TL	1	7	3	1	4/3/2024 11:12:14 AM
32	xWG1902287-2d10 2008TL	1	8	3	1	4/3/2024 11:16:43 AM
33	CCV	0	9	3	1	4/3/2024 11:21:12 AM
34	CCB	0	10	3	1	4/3/2024 11:29:04 AM
35	WG1903663-1 6020TL	1	28	3	1	4/3/2024 11:37:10 AM
36	WG1903663-2d10 6020TL	1	29	3	1	4/3/2024 11:41:36 AM
37	WG1903663-3d5 6020TL	1	31	3	1	4/3/2024 11:46:03 AM
38	WG1903663-5d10 6020TL	1	33	3	1	4/3/2024 11:50:30 AM
39	WG1903663-4 6020TL	1	32	3	1	4/3/2024 11:54:59 AM
40	I2417353-01 6020TL	1	30	3	1	4/3/2024 11:59:27 AM
41	I2417598-01 6020TL	1	35	3	1	4/3/2024 12:03:54 PM
42	WG1903663-6d5 6020TL	1	34	3	1	4/3/2024 12:08:23 PM
43	I2417598-01d10 6020TL	1	36	3	1	4/3/2024 12:17:35 PM
44	CCV	0	9	3	1	4/3/2024 12:22:36 PM
45	CCB	0	10	3	1	4/3/2024 12:27:07 PM
46	WG1904115-1 6020TL	1	37	3	1	4/3/2024 12:38:34 PM
47	WG1904115-2d10 6020TL	1	38	3	1	4/3/2024 12:43:01 PM
48	WG1904115-3d10 6020TL	1	40	3	1	4/3/2024 12:51:45 PM
49	WG1904115-5d10 6020TL	1	42	3	1	4/3/2024 12:56:12 PM
50	WG1904115-4 6020TL	1	41	3	1	4/3/2024 1:00:40 PM
51	L2417832-01 6020TL	1	39	3	1	4/3/2024 1:05:07 PM

Alpha ICPMSQ2 Seq

4/4/2024 7:21:31 AM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
52	L2417832-02 6020TL	1	44	3	1	4/3/2024 1:09:34 PM
53	L2417832-03 6020TL	1	45	3	1	4/3/2024 1:14:02 PM
54	L2417832-04 6020TL	1	46	3	1	4/3/2024 1:18:30 PM
55	WG1904115-6d5 6020TL	1	43	3	1	4/3/2024 1:22:59 PM
56	CCV	0	9	3	1	4/3/2024 1:27:26 PM
57	CCB	0	10	3	1	4/3/2024 1:31:57 PM
58	CCB	0	10	3	1	4/3/2024 1:38:14 PM
59	L2417832-05 6020TL	1	47	3	1	4/3/2024 1:43:45 PM
60	L2417832-06 6020TL	1	48	3	1	4/3/2024 1:48:14 PM
61	L2417832-01d10 6020TL	1	49	3	1	4/3/2024 1:54:35 PM
62	L2417832-03d10 6020TL	1	52	3	1	4/3/2024 1:59:02 PM
63	WG1904115-4d10 6020TL	1	50	3	1	4/3/2024 2:03:30 PM
64	WG1904115-6d50 6020TL	1	51	3	1	4/3/2024 2:07:57 PM
65	CCV	0	9	3	1	4/3/2024 2:12:24 PM
66	CCB	0	10	3	1	4/3/2024 2:16:55 PM
67	CCV	0	9	3	1	4/3/2024 2:57:36 PM
68	CCB	0	10	3	1	4/3/2024 3:02:07 PM
69	WG1902287-2d10 2008TL	1	53	3	1	4/3/2024 3:15:22 PM
70	L2416667-01 2008TL	1	13	3	1	4/3/2024 3:19:50 PM
71	L2416691-01 2008TL	1	14	3	1	4/3/2024 3:24:16 PM
72	L2416819-01d20 2008TL	1	15	3	1	4/3/2024 3:28:42 PM
73	L2416819-02d20 2008TL	1	16	3	1	4/3/2024 3:33:09 PM
74	L2416819-03d20 2008TL	1	17	3	1	4/3/2024 3:37:36 PM
75	CCV	0	9	3	1	4/3/2024 3:56:54 PM
76	CCB	0	10	3	1	4/3/2024 4:01:25 PM
77	WG1903680-1 6020TL	1	54	3	1	4/3/2024 4:27:24 PM
78	zWG1903680-2D10 6020TL	1	55	3	1	4/3/2024 4:31:51 PM
79	WG1903680-3d10 6020TL	1	57	3	1	4/3/2024 4:36:20 PM
80	WG1903680-5d10 6020TL	1	59	3	1	4/3/2024 4:40:48 PM
81	WG1903680-4 6020TL	1	58	3	1	4/3/2024 4:45:17 PM
82	I2417531-01 6020TL	1	56	3	1	4/3/2024 4:49:46 PM
83	I2417531-02 6020TL	2	1	3	1	4/3/2024 4:54:14 PM
84	I2417531-03 6020TL	2	2	3	1	4/3/2024 4:58:42 PM
85	WG1903680-6d5 6020TL	1	60	3	1	4/3/2024 5:03:10 PM
86	WG1903680-2D10 6020TL	1	55	3	1	4/3/2024 5:12:38 PM
87	CCV	0	9	3	1	4/3/2024 5:17:05 PM
88	CCB	0	10	3	1	4/3/2024 5:21:36 PM
89	WG1904117-1 6020TL	2	3	3	1	4/3/2024 5:30:25 PM
90	WG1904117-2d10 6020TL	2	4	3	1	4/3/2024 5:34:53 PM
91	WG1904117-3d10 6020TL	2	6	3	1	4/3/2024 5:39:20 PM
92	WG1904117-5d10 6020TL	2	8	3	1	4/3/2024 5:43:48 PM
93	WG1904117-4 6020TL	2	7	3	1	4/3/2024 5:48:16 PM
94	I2417767-01 6020TL	2	5	3	1	4/3/2024 5:52:45 PM
95	I2417639-01 6020TL	2	10	3	1	4/3/2024 5:57:12 PM
96	I2417639-02 6020TL	2	11	3	1	4/3/2024 6:01:41 PM
97	WG1904117-6d5 6020TL	2	9	3	1	4/3/2024 6:06:11 PM
98	CCV	0	9	3	1	4/3/2024 6:10:39 PM
99	CCB	0	10	3	1	4/3/2024 6:15:11 PM
100	I2417639-03 6020TL	2	12	3	1	4/3/2024 6:23:31 PM
101	I2417767-02 6020TL	2	13	3	1	4/3/2024 6:28:01 PM
102	I2417639-01d10 6020TL	2	14	3	1	4/3/2024 6:32:34 PM
103	I2417639-02d10 6020TL	2	15	3	1	4/3/2024 6:37:03 PM
104	OB SCAN 639-02X	2	16	3	1	4/3/2024 6:46:11 PM
105	OB SCAN 639-03X	2	17	3	1	4/3/2024 6:50:39 PM
106	OB SCAN 767-02F	2	18	3	1	4/3/2024 6:55:07 PM
107	CCV	0	9	3	1	4/3/2024 7:04:07 PM

Alpha ICPMSQ2 Seq

4/4/2024 7:21:31 AM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
108	CCB	0	10	3	1	4/3/2024 7:08:38 PM
109	wg1903804-1 6020SL	2	19	3	1	4/3/2024 7:20:45 PM
110	wg1903804-2d10 6020SL	2	20	3	1	4/3/2024 7:25:14 PM
111	wg1903804-3d10 6020SL	2	22	3	1	4/3/2024 7:29:42 PM
112	wg1903804-5d10 6020SL	2	24	3	1	4/3/2024 7:34:11 PM
113	wg1903804-4 6020SL	2	23	3	1	4/3/2024 7:38:41 PM
114	L2417070-02 6020SL	2	21	3	1	4/3/2024 7:43:10 PM
115	L2417070-03 6020SL	2	26	3	1	4/3/2024 7:47:39 PM
116	L2417351-01 6020SL	2	27	3	1	4/3/2024 7:52:07 PM
117	L2417351-02 6020SL	2	28	3	1	4/3/2024 7:56:36 PM
118	wg1903804-6d5 6020SL	2	25	3	1	4/3/2024 8:01:04 PM
119	CCV	0	9	3	1	4/3/2024 8:05:33 PM
120	CCB	0	10	3	1	4/3/2024 8:10:04 PM
121	L2417351-03 6020SL	2	29	3	1	4/3/2024 8:14:37 PM
122	L2417351-04 6020SL	2	30	3	1	4/3/2024 8:19:05 PM
123	L2417351-05 6020SL	2	31	3	1	4/3/2024 8:23:34 PM
124	L2417351-06 6020SL	2	32	3	1	4/3/2024 8:28:02 PM
125	CCV	0	9	3	1	4/3/2024 8:32:31 PM
126	CCB	0	10	3	1	4/3/2024 8:37:02 PM
127	CCV	0	9	3	1	4/3/2024 8:41:34 PM
128	CCB	0	10	3	1	4/3/2024 8:46:05 PM
129	CCB	0	10	3	1	

Alpha ICPMSRQ Seq

4/4/2024 5:48:43 PM

Sample List Summary:

Instrument ID: iCAP RQ

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/4/2024 5:06:53 AM
2	CAL LOT #M24-1045	0	1	3	1	4/4/2024 5:11:33 AM
3	xBlank EJF ICPMSRQ	4	49	3	1	4/4/2024 5:16:12 AM
4	Blank EJF ICPMSRQ	4	49	3	1	4/4/2024 5:20:33 AM
5	0.2/20 Cal	0	2	3	1	4/4/2024 5:25:16 AM
6	1/100 Cal	0	3	3	1	4/4/2024 5:29:57 AM
7	10/10000 Cal	0	4	3	1	4/4/2024 5:34:37 AM
8	60/6000 Cal	0	5	3	1	4/4/2024 5:39:19 AM
9	120/120000 Cal	0	6	3	1	4/4/2024 5:44:01 AM
10	xSr 200ppb	4	55	3	1	4/4/2024 5:52:24 AM
11	Sr 200ppb	4	55	3	1	4/4/2024 5:56:38 AM
12	ICV	0	7	3	1	4/4/2024 6:01:20 AM
13	ICB	0	10	3	1	4/4/2024 6:06:03 AM
14	ICSA	4	53	3	1	4/4/2024 6:19:21 AM
15	LDR Check - 10/1ppm	4	1	3	1	4/4/2024 6:24:05 AM
16	Rinse	0	1	3	1	4/4/2024 6:28:48 AM
17	CCV	0	9	3	1	4/4/2024 6:33:27 AM
18	CCB	0	10	3	1	4/4/2024 6:38:11 AM
19	LDR 10x ICSA	4	2	3	1	4/4/2024 6:51:37 AM
20	Rinse	0	1	3	1	4/4/2024 6:58:27 AM
21	L2415578-01 6020TL	1	1	3	1	4/4/2024 7:03:06 AM
22	L2415578-02 6020TL	1	2	3	1	4/4/2024 7:07:45 AM
23	L2415578-03 6020TL	1	3	3	1	4/4/2024 7:12:25 AM
24	L2415578-04 6020TL	1	4	3	1	4/4/2024 7:17:05 AM
25	L2415578-05 6020TL	1	5	3	1	4/4/2024 7:21:45 AM
26	L2415578-06 6020TL	1	6	3	1	4/4/2024 7:26:26 AM
27	L2415578-07 6020TL	1	7	3	1	4/4/2024 7:31:07 AM
28	L2415578-08 6020TL	1	8	3	1	4/4/2024 7:35:48 AM
29	CCV	0	9	3	1	4/4/2024 7:40:30 AM
30	CCB	0	10	3	1	4/4/2024 7:45:14 AM
31	WG1903849-1 2008TL	1	9	3	1	4/4/2024 7:58:33 AM
32	WG1902884-1 2008TL	1	14	3	1	4/4/2024 8:03:15 AM
33	xWG1903849-2d10 2008TL	1	10	3	1	4/4/2024 8:07:54 AM
34	xWG1902884-2d10 2008TL	1	15	3	1	4/4/2024 8:12:36 AM
35	L2415578-02d10 6020TL	1	20	3	1	4/4/2024 8:17:15 AM
36	L2415578-03d10 6020TL	1	21	3	1	4/4/2024 8:21:56 AM
37	L2415578-04d10 6020TL	1	22	3	1	4/4/2024 8:26:37 AM
38	WG1903849-3d10 2008TL	1	12	3	1	4/4/2024 8:31:18 AM
39	WG1903849-4 2008TL	1	13	3	1	4/4/2024 8:36:01 AM
40	L2416965-01 2008TL	1	11	3	1	4/4/2024 8:40:40 AM
41	CCV	0	9	3	1	4/4/2024 8:45:22 AM
42	CCB	0	10	3	1	4/4/2024 8:50:06 AM
43	WG1903397-1d10 6020TS	1	23	3	1	4/4/2024 9:05:12 AM
44	WG1903397-2d10 6020TS	1	24	3	1	4/4/2024 9:09:53 AM
45	WG1902884-3d10 2008TL	1	17	3	1	4/4/2024 9:14:35 AM
46	WG1902884-4 2008TL	1	18	3	1	4/4/2024 9:20:36 AM
47	WG1903849-2d10 2008TL	1	37	3	1	4/4/2024 9:27:22 AM
48	WG1902884-2d10 2008TL	1	38	3	1	4/4/2024 9:32:01 AM
49	CCV	0	9	3	1	4/4/2024 9:38:40 AM
50	CCB	0	10	3	1	4/4/2024 9:43:25 AM
51	L2417275-01 2008TL	1	16	3	1	4/4/2024 9:53:30 AM

Alpha ICPMSRQ Seq

4/4/2024 5:48:43 PM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
52	L2416936-01 2008TL	1	19	3	1	4/4/2024 9:58:10 AM
53	WG1903397-3d10 6020TS	1	26	3	1	4/4/2024 10:02:50 AM
54	WG1903397-5d10 6020TS	1	28	3	1	4/4/2024 10:07:29 AM
55	WG1903397-4d10 6020TS	1	27	3	1	4/4/2024 10:12:09 AM
56	I2416870-01d10 6020TS	1	25	3	1	4/4/2024 10:16:48 AM
57	I2416870-02d10 6020TS	1	30	3	1	4/4/2024 10:21:27 AM
58	I2416870-03d10 6020TS	1	31	3	1	4/4/2024 10:26:07 AM
59	I2416870-04d10 6020TS	1	32	3	1	4/4/2024 10:30:47 AM
60	WG1903397-6d50 6020TS	1	29	3	1	4/4/2024 10:35:28 AM
61	CCV	0	9	3	1	4/4/2024 10:40:08 AM
62	CCB	0	10	3	1	4/4/2024 10:44:53 AM
63	I2416870-05d10 6020TS	1	33	3	1	4/4/2024 10:54:09 AM
64	I2416870-06d10 6020TS	1	34	3	1	4/4/2024 10:58:50 AM
65	I2416870-07d10 6020TS	1	35	3	1	4/4/2024 11:07:29 AM
66	I2416870-08d10 6020TS	1	36	3	1	4/4/2024 11:12:11 AM
67	CCV	0	9	3	1	4/4/2024 11:24:10 AM
68	CCB	0	10	3	1	4/4/2024 11:28:55 AM
69	wg1902467-1 CT-6020TL	1	39	3	1	4/4/2024 11:36:51 AM
70	wg1902467-2d10 CT-6020TL	1	40	3	1	4/4/2024 11:41:31 AM
71	L2415605-01 CT-6020TL	1	41	3	1	4/4/2024 11:46:10 AM
72	L2415605-03 CT-6020TL	1	42	3	1	4/4/2024 11:50:50 AM
73	L2415605-05 CT-6020TL	1	43	3	1	4/4/2024 11:55:31 AM
74	L2415605-07 CT-6020TL	1	44	3	1	4/4/2024 12:00:11 PM
75	L2415605-08 CT-6020TL	1	45	3	1	4/4/2024 12:04:52 PM
76	L2415605-10 CT-6020TL	1	46	3	1	4/4/2024 12:09:33 PM
77	L2415605-11 CT-6020TL	1	47	3	1	4/4/2024 12:14:15 PM
78	L2415605-13 CT-6020TL	1	48	3	1	4/4/2024 12:18:57 PM
79	CCV	0	9	3	1	4/4/2024 12:23:39 PM
80	CCB	0	10	3	1	4/4/2024 12:28:24 PM
81	L2415605-15 CT-6020TL	1	49	3	1	4/4/2024 1:01:22 PM
82	L2415605-18 CT-6020TL	1	50	3	1	4/4/2024 1:06:02 PM
83	L2415605-20 CT-6020TL	1	51	3	1	4/4/2024 1:10:42 PM
84	L2415605-22 CT-6020TL	1	52	3	1	4/4/2024 1:15:22 PM
85	L2415605-24 CT-6020TL	1	53	3	1	4/4/2024 1:20:02 PM
86	L2415605-26 CT-6020TL	1	54	3	1	4/4/2024 1:24:42 PM
87	L2415605-22d10 CT-6020TL	1	55	3	1	4/4/2024 1:33:59 PM
88	L2415605-24d10 CT-6020TL	1	56	3	1	4/4/2024 1:38:40 PM
89	CCV	0	9	3	1	4/4/2024 1:45:31 PM
90	CCB	0	10	3	1	4/4/2024 1:50:16 PM
91	wg1903897-1 6020TL	1	57	3	1	4/4/2024 2:02:15 PM
92	wg1903897-2d10 6020TL	1	58	3	1	4/4/2024 2:06:57 PM
93	wg1903897-3d10 6020TL	1	60	3	1	4/4/2024 2:11:39 PM
94	wg1903897-5d10 6020TL	2	2	3	1	4/4/2024 2:16:21 PM
95	wg1903897-4 6020TL	2	1	3	1	4/4/2024 2:21:01 PM
96	L2417070-02 6020TL	1	59	3	1	4/4/2024 2:25:42 PM
97	L2417070-03 6020TL	2	4	3	1	4/4/2024 2:30:24 PM
98	wg1903897-6d5 6020TL	2	3	3	1	4/4/2024 2:35:04 PM
99	CCV	0	9	3	1	4/4/2024 2:44:10 PM
100	CCB	0	10	3	1	4/4/2024 2:48:55 PM
101	wg1903862-1 6020TL	2	5	3	1	4/4/2024 3:13:11 PM
102	wg1903862-2d10 6020TL	2	6	3	1	4/4/2024 3:17:51 PM
103	wg1903862-3d10 6020TL	2	8	3	1	4/4/2024 3:22:32 PM
104	wg1903862-4d10 6020TL	2	9	3	1	4/4/2024 3:27:13 PM
105	wg1903862-5d10 6020TL	2	10	3	1	4/4/2024 3:31:55 PM
106	wg1903862-6d5 6020TL	2	11	3	1	4/4/2024 3:36:36 PM
107	L2417074-01 6020TL	2	7	3	1	4/4/2024 3:41:18 PM

Alpha ICPMSRQ Seq

4/4/2024 5:48:43 PM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
108	L2417074-04 6020TL	2	12	3	1	4/4/2024 3:45:59 PM
109	L2417074-05 6020TL	2	13	3	1	4/4/2024 3:50:42 PM
110	L2417074-06 6020TL	2	14	3	1	4/4/2024 3:55:23 PM
111	CCV	0	9	3	1	4/4/2024 4:00:04 PM
112	CCB	0	10	3	1	4/4/2024 4:04:49 PM
113	L2417074-07 6020TL	2	15	3	1	4/4/2024 4:11:13 PM
114	WG1904738-1D10 SPLP-6020T	2	16	3	1	4/4/2024 4:26:28 PM
115	WG1904738-2D10 SPLP-6020T	2	17	3	1	4/4/2024 4:31:09 PM
116	WG1904738-3D10 SPLP-6020T	2	19	3	1	4/4/2024 4:35:50 PM
117	WG1904738-5D10 SPLP-6020T	2	21	3	1	4/4/2024 4:40:31 PM
118	WG1904738-4D10 SPLP-6020T	2	20	3	1	4/4/2024 4:45:12 PM
119	L2417292-01d10 SPLP-6020T	2	18	3	1	4/4/2024 4:49:53 PM
120	L2417292-03d10 SPLP-6020T	2	23	3	1	4/4/2024 4:54:35 PM
121	L2417292-05d10 SPLP-6020T	2	24	3	1	4/4/2024 4:59:17 PM
122	WG1904738-6D50 SPLP-6020T	2	22	3	1	4/4/2024 5:03:59 PM
123	CCV	0	9	3	1	4/4/2024 5:08:41 PM
124	CCB	0	10	3	1	4/4/2024 5:13:26 PM
125	L2417292-06d10 SPLP-6020T	2	25	3	1	4/4/2024 5:21:16 PM
126	L2417292-07d10 SPLP-6020T	2	26	3	1	4/4/2024 5:25:58 PM
127	L2417292-09d10 SPLP-6020T	2	27	3	1	4/4/2024 5:30:39 PM
128	CCV	0	9	3	1	4/4/2024 5:37:51 PM
129	CCB	0	10	3	1	4/4/2024 5:42:36 PM

Alpha ICPMSQ Seq

4/7/2024 11:56:50 AM

Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/5/2024 7:29:43 AM
2	CAL LOT #M24-1045	0	1	3	1	4/5/2024 7:34:19 AM
3	Blank EJF ICPMSQ	4	49	3	1	4/5/2024 7:38:55 AM
4	0.2/20 Cal	0	2	3	1	4/5/2024 7:43:37 AM
5	1/100 Cal	0	3	3	1	4/5/2024 7:48:13 AM
6	10/1000 Cal	0	4	3	1	4/5/2024 7:52:51 AM
7	60/6000 Cal	0	5	3	1	4/5/2024 7:57:29 AM
8	120/12000 Cal	0	6	3	1	4/5/2024 8:02:07 AM
9	Sr 200ppb	4	55	3	1	4/5/2024 8:12:02 AM
10	ICV	0	7	3	1	4/5/2024 8:16:43 AM
11	ICB	0	10	3	1	4/5/2024 8:21:23 AM
12	ICSA	4	53	3	1	4/5/2024 8:47:32 AM
13	LDR Check - 10/1ppm	4	1	3	1	4/5/2024 8:52:14 AM
14	Rinse	0	1	3	1	4/5/2024 8:56:54 AM
15	CCV	0	9	3	1	4/5/2024 9:01:30 AM
16	CCB	0	10	3	1	4/5/2024 9:06:11 AM
17	WG1903435-1 6020SL	1	1	3	1	4/5/2024 9:21:33 AM
18	WG1903435-2d10 6020SL	1	2	3	1	4/5/2024 9:26:09 AM
19	WG1903435-3d10 6020SL	1	4	3	1	4/5/2024 9:30:46 AM
20	WG1903435-4d10 6020SL	1	5	3	1	4/5/2024 9:35:24 AM
21	WG1903435-5d10 6020SL	1	6	3	1	4/5/2024 9:40:02 AM
22	I2417074-01 6020SL	1	3	3	1	4/5/2024 9:44:40 AM
23	I2416485-02 6020SL	1	8	3	1	4/5/2024 9:49:18 AM
24	LDR - Ba 500ppb	4	3	3	1	4/5/2024 9:53:57 AM
25	LDR - Al 10ppm	4	4	3	1	4/5/2024 9:58:38 AM
26	WG1903435-6d5 6020SL	1	7	3	1	4/5/2024 10:03:18 AM
27	CCV	0	9	3	1	4/5/2024 10:07:57 AM
28	CCB	0	10	3	1	4/5/2024 10:12:38 AM
29	I2417074-02 6020SL	1	9	3	1	4/5/2024 10:20:41 AM
30	I2417074-03 6020SL	1	10	3	1	4/5/2024 10:25:20 AM
31	I2417074-04 6020SL	1	11	3	1	4/5/2024 10:29:59 AM
32	I2417074-05 6020SL	1	12	3	1	4/5/2024 10:34:39 AM
33	I2417074-06 6020SL	1	13	3	1	4/5/2024 10:39:18 AM
34	I2417123-01 6020SL	1	14	3	1	4/5/2024 10:43:54 AM
35	I2417123-02 6020SL	1	15	3	1	4/5/2024 10:48:30 AM
36	I2417123-03 6020SL	1	16	3	1	4/5/2024 10:53:07 AM
37	I2417123-04 6020SL	1	17	3	1	4/5/2024 10:57:43 AM
38	xLDR - Mn 10ppm	1	1	3	1	4/5/2024 11:02:20 AM
39	CCV	0	9	3	1	4/5/2024 11:06:57 AM
40	CCB	0	10	3	1	4/5/2024 11:11:38 AM
41	xLDR - Mn 10ppm	4	4	3	1	4/5/2024 11:19:56 AM
42	LDR - Al 100ppm (3x ISCA)	4	5	3	1	4/5/2024 11:24:36 AM
43	xLDR - Mn 5ppm	1	1	3	1	4/5/2024 11:29:17 AM
44	LDR - Mn 5ppm	4	6	3	1	4/5/2024 11:32:08 AM
45	I2417123-05 6020SL	1	18	3	1	4/5/2024 11:36:48 AM
46	I2417123-06 6020SL	1	19	3	1	4/5/2024 11:41:25 AM
47	I2417123-07 6020SL	1	20	3	1	4/5/2024 11:48:14 AM
48	I2417128-01 6020SL	1	21	3	1	4/5/2024 11:52:51 AM
49	I2417128-02 6020SL	1	22	3	1	4/5/2024 11:57:29 AM
50	I2417449-13 6020SL	1	23	3	1	4/5/2024 12:02:08 PM
51	CCV	0	9	3	1	4/5/2024 12:06:47 PM

Alpha ICPMSQ Seq

4/7/2024 11:56:50 AM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
52	CCB	0	10	3	1	4/5/2024 12:11:28 PM
53	I2416485-02d10 6020SL	1	24	3	1	4/5/2024 12:18:47 PM
54	I2417074-02d100 6020SL	1	25	3	1	4/5/2024 12:23:26 PM
55	I2417123-01d50 6020SL	1	26	3	1	4/5/2024 12:28:02 PM
56	I2417123-02d50 6020SL	1	27	3	1	4/5/2024 12:32:39 PM
57	I2417123-03d10 6020SL	1	28	3	1	4/5/2024 12:37:16 PM
58	I2417123-04d50 6020SL	1	29	3	1	4/5/2024 12:41:53 PM
59	I2417123-06d10 6020SL	1	30	3	1	4/5/2024 12:46:30 PM
60	I2417123-07d10 6020SL	1	31	3	1	4/5/2024 12:51:08 PM
61	I2417128-01d20 6020SL	1	32	3	1	4/5/2024 12:55:46 PM
62	I2417128-02d50 6020SL	1	33	3	1	4/5/2024 1:00:24 PM
63	CCV	0	9	3	1	4/5/2024 1:05:03 PM
64	CCB	0	10	3	1	4/5/2024 1:09:44 PM
65	I2417449-13d50 6020SL	1	34	3	1	4/5/2024 1:24:11 PM
66	L2417079-03 6020TL	1	35	3	1	4/5/2024 1:28:50 PM
67	L2417079-04 6020TL	1	36	3	1	4/5/2024 1:33:29 PM
68	L2417079-05 6020TL	1	37	3	1	4/5/2024 1:38:09 PM
69	L2417079-06 6020TL	1	38	3	1	4/5/2024 1:42:46 PM
70	L2417079-07 6020TL	1	39	3	1	4/5/2024 1:47:23 PM
71	L2417079-08d10 6020TL	1	40	3	1	4/5/2024 1:52:00 PM
72	L2417079-09 6020TL	1	41	3	1	4/5/2024 1:56:38 PM
73	L2417079-03d20 6020TL	1	42	3	1	4/5/2024 2:01:15 PM
74	CCV	0	9	3	1	4/5/2024 2:06:24 PM
75	CCB	0	10	3	1	4/5/2024 2:11:06 PM
76	WG1903823-1 6020TL	1	43	3	1	4/5/2024 2:26:42 PM
77	I2417299-06 6020TL	1	50	3	1	4/5/2024 2:31:19 PM
78	I2417314-21 6020TL	1	51	3	1	4/5/2024 2:35:56 PM
79	WG1903823-2d10 6020TL	1	44	3	1	4/5/2024 2:40:34 PM
80	WG1903823-3d10 6020TL	1	46	3	1	4/5/2024 2:45:13 PM
81	WG1903823-5d10 6020TL	1	48	3	1	4/5/2024 2:49:52 PM
82	WG1903823-4 6020TL	1	47	3	1	4/5/2024 2:54:31 PM
83	I2417079-11 6020TL	1	45	3	1	4/5/2024 2:59:11 PM
84	I2417359-01 6020TL	1	52	3	1	4/5/2024 3:03:49 PM
85	WG1903823-6d5 6020TL	1	49	3	1	4/5/2024 3:08:27 PM
86	CCV	0	9	3	1	4/5/2024 3:13:05 PM
87	CCB	0	10	3	1	4/5/2024 3:17:47 PM
88	xl2417363-01 6020TL	1	53	3	1	4/5/2024 4:21:47 PM
89	I2417363-01 6020TL	1	53	3	1	4/5/2024 4:36:58 PM
90	I2417373-01 6020TL	1	54	3	1	4/5/2024 4:41:35 PM
91	I2417359-01d4 6020TL	1	55	3	1	4/5/2024 4:46:13 PM
92	CCV	0	9	3	1	4/5/2024 4:50:52 PM
93	CCB	0	10	3	1	4/5/2024 4:55:34 PM
94	CCV	0	9	3	1	4/5/2024 5:00:16 PM
95	CCB	0	10	3	1	4/5/2024 5:04:59 PM
96	I2417373-01d4 6020TL	1	56	3	1	4/5/2024 6:08:13 PM
97	zl2417363-01d2 6020TL	1	57	3	1	4/5/2024 6:12:51 PM
98	CCV	0	9	3	1	4/5/2024 6:17:30 PM
99	CCB	0	10	3	1	4/5/2024 6:22:12 PM

Alpha ICPMSQ2 Seq

4/7/2024 7:09:28 PM

Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/7/2024 1:09:48 PM
2	CAL LOT #M24-1045	0	1	3	1	4/7/2024 1:14:14 PM
3	Blank WKP ICPMSQ2	4	49	3	1	4/7/2024 1:18:40 PM
4	0.2/20 Cal	0	2	3	1	4/7/2024 1:23:11 PM
5	1/100 Cal	0	3	3	1	4/7/2024 1:27:38 PM
6	10/1000 Cal	0	4	3	1	4/7/2024 1:32:06 PM
7	60/6000 Cal	0	5	3	1	4/7/2024 1:36:34 PM
8	120/12000 Cal	0	6	3	1	4/7/2024 1:41:03 PM
9	Sr 200ppb	4	55	3	1	4/7/2024 1:45:32 PM
10	ICV	0	7	3	1	4/7/2024 1:50:03 PM
11	ICB	0	10	3	1	4/7/2024 1:54:33 PM
12	ICSA	4	53	3	1	4/7/2024 2:03:00 PM
13	LDR Check (5/0.5)	4	2	3	1	4/7/2024 2:07:31 PM
14	LDR Check (10/1)	4	1	3	1	4/7/2024 2:12:24 PM
15	Rinse	0	1	3	1	4/7/2024 2:16:54 PM
16	CCV	0	9	3	1	4/7/2024 2:21:20 PM
17	CCB	0	10	3	1	4/7/2024 2:25:51 PM
18	LDR Check (1/0.1)	4	3	3	1	4/7/2024 2:35:24 PM
19	OB SCAN 074-01G TOT	1	1	3	1	4/7/2024 2:44:19 PM
20	OB SCAN 074-01G1 TOT	1	2	3	1	4/7/2024 2:48:45 PM
21	OB SCAN 074-01G2 TOT	1	3	3	1	4/7/2024 2:53:12 PM
22	OB SCAN 074-01F DIS	1	4	3	1	4/7/2024 2:57:40 PM
23	OB SCAN 074-01F1 DIS	1	5	3	1	4/7/2024 3:02:07 PM
24	OB SCAN 074-01F2 DIS	1	6	3	1	4/7/2024 3:06:35 PM
25	L2417281-02d10 6020TL	1	9	3	1	4/7/2024 3:17:06 PM
26	L2417302-01d10 6020TL	1	10	3	1	4/7/2024 3:21:35 PM
27	wg1903862-2d10 6020TL	1	8	3	1	4/7/2024 3:26:05 PM
28	CCV	0	9	3	1	4/7/2024 3:30:34 PM
29	CCB	0	10	3	1	4/7/2024 3:35:05 PM
30	wg1903862-1 6020TL	1	7	3	1	4/7/2024 3:46:06 PM
31	WG1904271-1 6020TL	1	13	3	1	4/7/2024 3:50:35 PM
32	WG1904271-2d10 6020TL	1	14	3	1	4/7/2024 3:55:01 PM
33	WG1904271-3d10 6020TL	1	16	3	1	4/7/2024 3:59:27 PM
34	WG1904271-5d10 6020TL	1	18	3	1	4/7/2024 4:03:54 PM
35	WG1904271-4 6020TL	1	17	3	1	4/7/2024 4:08:21 PM
36	I2417419-01 6020TL	1	15	3	1	4/7/2024 4:12:48 PM
37	L2417609-01d10 6020TL	1	11	3	1	4/7/2024 4:17:15 PM
38	L2417609-03d10 6020TL	1	12	3	1	4/7/2024 4:21:45 PM
39	WG1904271-6d5 6020TL	1	19	3	1	4/7/2024 4:26:15 PM
40	CCV	0	9	3	1	4/7/2024 4:30:42 PM
41	CCB	0	10	3	1	4/7/2024 4:35:13 PM
42	I2414638-25 6020TL	1	20	3	1	4/7/2024 4:40:35 PM
43	I2414638-27 6020TL	1	21	3	1	4/7/2024 4:45:02 PM
44	I2414638-28 6020TL	1	22	3	1	4/7/2024 4:49:30 PM
45	I2414638-29 6020TL	1	23	3	1	4/7/2024 4:53:58 PM
46	I2414638-30 6020TL	1	24	3	1	4/7/2024 4:58:27 PM
47	I2414638-31 6020TL	1	25	3	1	4/7/2024 5:02:57 PM
48	I2415819-01d5 6020TL	1	26	3	1	4/7/2024 5:07:23 PM
49	I2415819-02 6020TL	1	27	3	1	4/7/2024 5:11:49 PM
50	I2415819-03d5 6020TL	1	28	3	1	4/7/2024 5:16:16 PM
51	I2417429-01 6020TL	1	29	3	1	4/7/2024 5:20:43 PM

Alpha ICPMSQ2 Seq

4/7/2024 7:09:28 PM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
52	CCV	0	9	3	1	4/7/2024 5:25:10 PM
53	CCB	0	10	3	1	4/7/2024 5:29:41 PM
54	CCV	0	9	3	1	4/7/2024 5:35:57 PM
55	CCB	0	10	3	1	4/7/2024 5:40:28 PM
56	I2414638-25d10 6020TL	1	30	3	1	4/7/2024 5:54:38 PM
57	I2414638-27d10 6020TL	1	31	3	1	4/7/2024 5:59:06 PM
58	I2414638-29d10 6020TL	1	32	3	1	4/7/2024 6:03:33 PM
59	I2417429-01d5 6020TL	1	33	3	1	4/7/2024 6:08:01 PM
60	CCV	0	9	3	1	4/7/2024 6:13:50 PM
61	CCB	0	10	3	1	4/7/2024 6:18:21 PM

Alpha ICPMSQ Seq

4/11/2024 5:22:29 AM

Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/10/2024 4:57:25 AM
2	CAL LOT #M24-1045	0	1	3	1	4/10/2024 5:02:02 AM
3	Blank EJF ICPMSQ	4	49	3	1	4/10/2024 5:06:38 AM
4	0.2/20 Cal	0	2	3	1	4/10/2024 5:11:20 AM
5	1/100 Cal	0	3	3	1	4/10/2024 5:15:57 AM
6	10/1000 Cal	0	4	3	1	4/10/2024 5:20:34 AM
7	60/6000 Cal	0	5	3	1	4/10/2024 5:25:13 AM
8	120/12000 Cal	0	6	3	1	4/10/2024 5:29:52 AM
9	Sr 200ppb	4	55	3	1	4/10/2024 5:36:35 AM
10	ICV	0	7	3	1	4/10/2024 5:41:17 AM
11	ICB	0	10	3	1	4/10/2024 5:45:57 AM
12	ICB	0	10	3	1	4/10/2024 5:53:21 AM
13	ICSA	4	53	3	1	4/10/2024 6:00:45 AM
14	LDR Check 10/1ppm	4	1	3	1	4/10/2024 6:05:27 AM
15	Rinse	0	1	3	1	4/10/2024 6:10:07 AM
16	CCV	0	9	3	1	4/10/2024 6:14:43 AM
17	CCB	0	10	3	1	4/10/2024 6:19:24 AM
18	WG1905290-1 6020TL	1	1	3	1	4/10/2024 6:34:17 AM
19	WG1905290-2d10 6020TL	1	2	3	1	4/10/2024 6:38:54 AM
20	WG1905290-3d10 6020TL	1	4	3	1	4/10/2024 6:43:31 AM
21	WG1905290-4d10 6020TL	1	5	3	1	4/10/2024 6:48:08 AM
22	WG1905290-5d10 6020TL	1	6	3	1	4/10/2024 6:52:45 AM
23	L2418559-01 6020TL	1	3	3	1	4/10/2024 6:57:23 AM
24	I2417975-01 6020TL	1	8	3	1	4/10/2024 7:02:00 AM
25	I2418062-01 6020TL	1	9	3	1	4/10/2024 7:06:39 AM
26	I2418235-01 6020TL	1	10	3	1	4/10/2024 7:11:18 AM
27	WG1905290-6d5 6020TL	1	7	3	1	4/10/2024 7:15:58 AM
28	CCV	0	9	3	1	4/10/2024 7:20:36 AM
29	CCB	0	10	3	1	4/10/2024 7:25:17 AM
30	I2418411-01 6020TL	1	11	3	1	4/10/2024 7:34:06 AM
31	I2418411-02 6020TL	1	12	3	1	4/10/2024 7:38:46 AM
32	I2418475-01 6020TL	1	13	3	1	4/10/2024 7:43:26 AM
33	I2418475-03 6020TL	1	14	3	1	4/10/2024 7:48:02 AM
34	I2418548-01 6020TL	1	15	3	1	4/10/2024 7:52:38 AM
35	I2418548-02 6020TL	1	16	3	1	4/10/2024 7:57:15 AM
36	I2418548-03 6020TL	1	17	3	1	4/10/2024 8:01:52 AM
37	I2418548-04 6020TL	1	18	3	1	4/10/2024 8:06:29 AM
38	I2418548-05 6020TL	1	19	3	1	4/10/2024 8:11:06 AM
39	I2418559-02 6020TL	1	20	3	1	4/10/2024 8:15:43 AM
40	CCV	0	9	3	1	4/10/2024 8:20:21 AM
41	CCB	0	10	3	1	4/10/2024 8:25:03 AM
42	CCV	0	9	3	1	4/10/2024 8:39:44 AM
43	CCB	0	10	3	1	4/10/2024 9:12:58 AM
44	wg1905249-1 6020TL	1	22	3	1	4/10/2024 9:19:53 AM
45	I2418559-03 6020TL	1	21	3	1	4/10/2024 9:24:31 AM
46	LDR Ni 5ppm	4	2	3	1	4/10/2024 9:29:10 AM
47	wg1905249-2d10 6020TL	1	23	3	1	4/10/2024 9:36:36 AM
48	wg1905249-3d10 6020TL	1	25	3	1	4/10/2024 9:41:13 AM
49	wg1905249-5d10 6020TL	1	27	3	1	4/10/2024 9:45:50 AM
50	wg1905249-4 6020TL	1	26	3	1	4/10/2024 9:50:26 AM
51	L2418227-01 6020TL	1	24	3	1	4/10/2024 9:55:03 AM

Alpha ICPMSQ Seq

4/11/2024 5:22:29 AM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
52	L2415144-01 6020TL	1	29	3	1	4/10/2024 9:59:42 AM
53	wg1905249-6d5 6020TL	1	28	3	1	4/10/2024 10:04:20 AM
54	CCV	0	9	3	1	4/10/2024 10:08:57 AM
55	CCB	0	10	3	1	4/10/2024 10:13:38 AM
56	L2418087-01 6020TL	1	30	3	1	4/10/2024 10:23:20 AM
57	L2418087-02 6020TL	1	31	3	1	4/10/2024 10:27:57 AM
58	L2418227-02 6020TL	1	32	3	1	4/10/2024 10:32:35 AM
59	L2418557-01 6020TL	1	33	3	1	4/10/2024 10:37:13 AM
60	L2418557-02 6020TL	1	34	3	1	4/10/2024 10:41:51 AM
61	L2418557-04 6020TL	1	35	3	1	4/10/2024 10:46:30 AM
62	CCV	0	9	3	1	4/10/2024 11:06:19 AM
63	CCB	0	10	3	1	4/10/2024 11:11:00 AM
64	WG1906770-1 6020TL	1	36	3	1	4/10/2024 11:20:52 AM
65	L2419283-12 6020TL	1	43	3	1	4/10/2024 11:25:31 AM
66	WG1906770-2d10 6020TL	1	37	3	1	4/10/2024 11:30:09 AM
67	WG1906770-3d10 6020TL	1	39	3	1	4/10/2024 11:34:46 AM
68	WG1906770-5d10 6020TL	1	41	3	1	4/10/2024 11:39:23 AM
69	WG1906770-4 6020TL	1	40	3	1	4/10/2024 11:44:00 AM
70	L2419308-08 6020TL	1	38	3	1	4/10/2024 11:48:37 AM
71	WG1906770-6d5 6020TL	1	42	3	1	4/10/2024 11:53:14 AM
72	CCV	0	9	3	1	4/10/2024 11:59:07 AM
73	CCB	0	10	3	1	4/10/2024 12:03:48 PM
74	WG1906345-1 MCP-6020TL-10	1	44	3	1	4/10/2024 12:15:39 PM
75	WG1906345-2d10 MCP-6020TL-10	1	45	3	1	4/10/2024 12:20:18 PM
76	WG1906345-3d10 MCP-6020TL-10	1	46	3	1	4/10/2024 12:24:56 PM
77	L2418020-01 MCP-6020TL-10	1	47	3	1	4/10/2024 12:52:32 PM
78	L2418020-02 MCP-6020TL-10	1	48	3	1	4/10/2024 12:57:11 PM
79	L2418245-07 MCP-6020TL-10	1	49	3	1	4/10/2024 1:01:51 PM
80	L2418245-08 MCP-6020TL-10	1	50	3	1	4/10/2024 1:06:29 PM
81	L2418245-09 MCP-6020TL-10	1	51	3	1	4/10/2024 1:11:07 PM
82	L2417800-01 MCP-6020SL-10	1	55	3	1	4/10/2024 1:15:44 PM
83	L2417800-02 MCP-6020SL-10	1	56	3	1	4/10/2024 1:20:23 PM
84	CCV	0	9	3	1	4/10/2024 1:25:01 PM
85	CCB	0	10	3	1	4/10/2024 1:29:43 PM
86	WG1906406-1 MCP-6020SL-10	1	52	3	1	4/10/2024 1:41:17 PM
87	WG1906406-2d10 MCP-6020SL-10	1	53	3	1	4/10/2024 1:48:52 PM
88	WG1906406-3d10 MCP-6020SL-10	1	54	3	1	4/10/2024 1:55:51 PM
89	L2417800-03 MCP-6020SL-10	1	57	3	1	4/10/2024 2:00:28 PM
90	L2418020-01 MCP-6020SL-10	1	58	3	1	4/10/2024 2:05:07 PM
91	CCV	0	9	3	1	4/10/2024 2:10:56 PM
92	CCB	0	10	3	1	4/10/2024 2:15:38 PM
93	WG1906345-2d10 MCP-6020TL-10	1	45	3	1	4/10/2024 2:27:05 PM
94	WG1906345-3d10 MCP-6020TL-10	1	46	3	1	4/10/2024 2:31:42 PM
95	WG1906406-2d10 MCP-6020SL-10	1	53	3	1	4/10/2024 2:36:21 PM
96	WG1906406-3d10 MCP-6020SL-10	1	54	3	1	4/10/2024 2:40:59 PM
97	OB 8411-01 INF	1	59	3	1	4/10/2024 2:55:44 PM
98	OB 8411-02 EFF	1	60	3	1	4/10/2024 3:00:23 PM
99	CCV	0	9	3	1	4/10/2024 3:05:02 PM
100	CCB	0	10	3	1	4/10/2024 3:09:44 PM
101	CCV	0	9	3	1	4/10/2024 4:56:50 PM
102	CCB	0	10	3	1	4/10/2024 5:01:33 PM
103	WG1906871-1 6020TL	2	1	3	1	4/10/2024 5:10:56 PM
104	WG1906871-2d10 6020TL	2	2	3	1	4/10/2024 5:15:34 PM
105	WG1906871-3d10 6020TL	2	4	3	1	4/10/2024 5:20:13 PM
106	WG1906871-4d10 6020TL	2	5	3	1	4/10/2024 5:24:51 PM
107	WG1906871-5d10 6020TL	2	6	3	1	4/10/2024 5:29:30 PM

Alpha ICPMSQ Seq

4/11/2024 5:22:29 AM

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
108	WG1906871-6d5 6020TL	2	7	3	1	4/10/2024 5:34:08 PM
109	L2417074-02 6020TL	2	3	3	1	4/10/2024 5:38:46 PM
110	L2417074-01 6020TL	2	8	3	1	4/10/2024 5:43:25 PM
111	CCV	0	9	3	1	4/10/2024 5:53:24 PM
112	CCB	0	10	3	1	4/10/2024 5:58:06 PM
113	WG1906871-2d10 6020TL	2	2	3	1	4/10/2024 6:27:42 PM
114	CCV	0	9	3	1	4/10/2024 6:33:59 PM
115	CCB	0	10	3	1	4/10/2024 6:38:42 PM
116	wg1905986-1 6020SL	2	9	3	1	4/10/2024 7:10:59 PM
117	wg1905986-2d10 6020SL	2	10	3	1	4/10/2024 7:15:37 PM
118	wg1905986-3d10 6020SL	2	12	3	1	4/10/2024 7:20:16 PM
119	wg1905986-4d10 6020SL	2	13	3	1	4/10/2024 7:24:56 PM
120	wg1905986-7d10 6020SL	2	17	3	1	4/10/2024 7:29:35 PM
121	wg1905986-8d10 6020SL	2	18	3	1	4/10/2024 7:34:14 PM
122	wg1905986-5d10 6020SL	2	14	3	1	4/10/2024 7:38:53 PM
123	wg1905986-6d5 6020SL	2	15	3	1	4/10/2024 7:43:32 PM
124	L2418369-07 6020SL	2	11	3	1	4/10/2024 7:48:11 PM
125	L2418621-02 6020SL	2	16	3	1	4/10/2024 7:52:51 PM
126	CCV	0	9	3	1	4/10/2024 7:57:30 PM
127	CCB	0	10	3	1	4/10/2024 8:02:12 PM
128	wg1905986-9d10 6020SL	2	19	3	1	4/10/2024 8:06:55 PM
129	wg1905986-10d5 6020SL	2	20	3	1	4/10/2024 8:11:34 PM
130	L2418369-01 6020SL	2	21	3	1	4/10/2024 8:16:13 PM
131	L2418369-02 6020SL	2	22	3	1	4/10/2024 8:20:52 PM
132	L2418369-03 6020SL	2	23	3	1	4/10/2024 8:25:32 PM
133	L2418369-04 6020SL	2	24	3	1	4/10/2024 8:30:12 PM
134	L2418369-08 6020SL	2	25	3	1	4/10/2024 8:34:52 PM
135	L2418369-09 6020SL	2	26	3	1	4/10/2024 8:39:31 PM
136	L2418369-10 6020SL	2	27	3	1	4/10/2024 8:44:11 PM
137	L2418369-11 6020SL	2	28	3	1	4/10/2024 8:48:50 PM
138	CCV	0	9	3	1	4/10/2024 8:53:30 PM
139	CCB	0	10	3	1	4/10/2024 8:58:12 PM
140	L2418621-01 6020SL	2	29	3	1	4/10/2024 9:02:55 PM
141	L2418621-03 6020SL	2	30	3	1	4/10/2024 9:07:35 PM
142	L2418782-01 6020SL	2	31	3	1	4/10/2024 9:12:14 PM
143	L2418782-02 6020SL	2	32	3	1	4/10/2024 9:16:54 PM
144	CCV	0	9	3	1	4/10/2024 9:21:33 PM
145	CCB	0	10	3	1	4/10/2024 9:26:16 PM
146	CCV	0	9	3	1	4/10/2024 9:30:59 PM
147	CCB	0	10	3	1	4/10/2024 9:35:41 PM
148	CCB	0	10	3	1	

Alpha ICPMSRQ Seq

4/14/2024 5:09:51 PM

Sample List Summary:

Instrument ID: iCAP RQ

Index:	Label:	Rack	Vial	Main Runs:	Survey Runs:	Start Time:
1	Rinse	0	1	3	1	4/14/2024 12:02:59 PM
2	CAL LOT #M24-1045	0	1	3	1	4/14/2024 12:07:38 PM
3	Blank WKP ICPMSRQ	4	49	3	1	4/14/2024 12:12:17 PM
4	0.2/20 Cal	0	2	3	1	4/14/2024 12:17:01 PM
5	1/100 Cal	0	3	3	1	4/14/2024 12:21:41 PM
6	10/10000 Cal	0	4	3	1	4/14/2024 12:26:22 PM
7	60/6000 Cal	0	5	3	1	4/14/2024 12:31:03 PM
8	120/120000 Cal	0	6	3	1	4/14/2024 12:35:45 PM
9	Sr 200ppb	4	55	3	1	4/14/2024 12:40:28 PM
10	ICV	0	7	3	1	4/14/2024 12:45:12 PM
11	ICB	0	10	3	1	4/14/2024 12:49:55 PM
12	ICV	0	7	3	1	4/14/2024 12:59:16 PM
13	ICB	0	10	3	1	4/14/2024 1:04:00 PM
14	ICSA	4	53	3	1	4/14/2024 1:10:25 PM
15	LDR Check (10/1)	4	1	3	1	4/14/2024 1:15:09 PM
16	Rinse	0	1	3	1	4/14/2024 1:23:36 PM
17	CCV	0	9	3	1	4/14/2024 1:28:15 PM
18	CCB	0	10	3	1	4/14/2024 1:33:00 PM
19	I2355850-02d100 A2-6020T	1	1	3	1	4/14/2024 1:42:11 PM
20	I2355850-05d100 A2-6020T	1	2	3	1	4/14/2024 1:46:49 PM
21	I2355850-07d100 A2-6020T	1	3	3	1	4/14/2024 1:51:29 PM
22	I2414393-02d10 A2-6020T	1	4	3	1	4/14/2024 1:56:09 PM
23	I2414393-04d10 A2-6020T	1	5	3	1	4/14/2024 2:00:49 PM
24	I2414393-06d10 A2-6020T	1	6	3	1	4/14/2024 2:05:30 PM
25	I2414393-08d10 A2-6020T	1	7	3	1	4/14/2024 2:10:11 PM
26	I2414393-02d50 A2-6020T	1	8	3	1	4/14/2024 2:14:52 PM
27	I2414393-04d50 A2-6020T	1	9	3	1	4/14/2024 2:19:34 PM
28	I2414393-06d50 A2-6020T	1	10	3	1	4/14/2024 2:24:16 PM
29	CCV	0	9	3	1	4/14/2024 2:28:58 PM
30	CCB	0	10	3	1	4/14/2024 2:33:42 PM
31	WG1906880-1 6020SL	1	11	3	1	4/14/2024 2:39:30 PM
32	WG1906880-2d10 6020SL	1	12	3	1	4/14/2024 2:44:12 PM
33	WG1906880-3d10 6020SL	1	14	3	1	4/14/2024 2:48:55 PM
34	WG1906880-4d10 6020SL	1	15	3	1	4/14/2024 2:53:34 PM
35	WG1906880-5d10 6020SL	1	16	3	1	4/14/2024 2:58:13 PM
36	WG1906880-6d5 6020SL	1	17	3	1	4/14/2024 3:02:52 PM
37	I2417074-02 6020SL	1	13	3	1	4/14/2024 3:07:32 PM
38	I2417628-05 6020SL	1	18	3	1	4/14/2024 3:12:11 PM
39	LDR Check Al 10ppm FAIL	4	2	3	1	4/14/2024 3:18:23 PM
40	LDR Check Al 2ppm FAIL	4	3	3	1	4/14/2024 3:25:35 PM
41	CCV	0	9	3	1	4/14/2024 3:30:17 PM
42	CCB	0	10	3	1	4/14/2024 3:35:02 PM
43	WG1906880-2d50 6020SL	1	19	3	1	4/14/2024 3:44:16 PM
44	WG1906880-3d50 6020SL	1	20	3	1	4/14/2024 3:48:56 PM
45	WG1906880-4d50 6020SL	1	21	3	1	4/14/2024 3:53:37 PM
46	CCV	0	9	3	1	4/14/2024 3:59:44 PM
47	CCB	0	10	3	1	4/14/2024 4:04:28 PM

METALS ELN REPORT

Workgroup: WG1902788

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 3005A	1:1 HNO3	tHNO324122 01225EFM	1:1 HCl	tHCL241221 2047CLH	METALS	METSPIKE2	IPS, FPS, MIX	METPSMS	IPS, FPS, MIX	140, 326

Additional Reagent/Std

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2415362-01 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2415362-02 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2415362-03 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2415362-04 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2415362-05 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2415362-06 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2416828-01	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2417074-01 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2417074-02 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2417074-03 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2417074-04 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2417074-05 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2417074-06 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
L2417074-07 WATER	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	

METALS ELN REPORT

Workgroup: WG1902788

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2417426-12 SAMP	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-1 BLANK	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	FM2412220945 JDH
WG1902788-2 LCS	03/31/24 19:07	Maisie Mcqueen	50	<2	0.5	03/31/24 19:07	9	94.4	03/31/24 22:07	50	ELN: ADG
WG1902788-3 MS	03/31/24 19:07	Maisie Mcqueen	50	<2	0.5	03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-4 MSD	03/31/24 19:07	Maisie Mcqueen	50	<2	0.5	03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-5 PS	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-6 SERDIL	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-7 MS	03/31/24 19:07	Maisie Mcqueen	50	<2	0.5	03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-8 MSD	03/31/24 19:07	Maisie Mcqueen	50	<2	0.5	03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-9 PS	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	
WG1902788-10 SERDIL	03/31/24 19:07	Maisie Mcqueen	50	<2		03/31/24 19:07	9	94.4	03/31/24 22:07	50	IPS2411132030CLH

Reported: 15-APR-24 10:56 AM

METALS ELN REPORT

Workgroup: WG1902788

Reagent	Actual Volume	Units
1:1 Hydrochloric Acid (H	.5	ml
1:1 Nitric Acid (HNO3)	1	ml

Reported: 15-APR-24 10:56 AM

METALS ELN REPORT

Workgroup: WG1903435

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 3005A	1:1 HNO3	tHNO324122 01225EFM	1:1 HCl	tHCL241221 2047CLH	METALS	METSPIKE2	IPS, FPS, MIX	METPSMS	IPS, FPS, MIX	140, 326

Additional Reagent/Std

Sample/ Type	Digestion Date	Analyst	Lab Filtration Date	Sample Vol	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol ml	Comments
L2416485-02 SAMP	04/02/24 04:33	Christine Hamor	03-27-24 08:06	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417074-01 WATER	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417074-02	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417074-03 WATER	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417074-04 WATER	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417074-05 WATER	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417074-06 WATER	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417123-01 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417123-02 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417123-03 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417123-04 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417123-05 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417123-06 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417123-07 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	

METALS ELN REPORT

Workgroup: WG1903435

Sample/ Type	Digestion Date	Analyst	Lab Filtration Date	Sample Vol	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol ml	Comments
L2417128-01 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417128-02 SAMP	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
L2417449-13 WATER	04/02/24 04:33	Christine Hamor	03-30-24 08:40	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
WG1903435-1 BLANK	04/02/24 04:33	Christine Hamor	03/27/24 08:06	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	FM2413262158 HCR
WG1903435-2 LCS	04/02/24 04:33	Christine Hamor	NA	50	<2	.5	04/02/24 04:33	7	94.2	04/02/24 07:33	50	IPS2411132030 CLH
WG1903435-3 MS	04/02/24 04:33	Christine Hamor	NA	50	<2	.5	04/02/24 04:33	7	94.2	04/02/24 07:33	50	
WG1903435-4 MSD	04/02/24 04:33	Christine Hamor	NA	50	<2	.5	04/02/24 04:33	7	94.2	04/02/24 07:33	50	ELN check: ADG
WG1903435-5 PS	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	
WG1903435-6 SERDIL	04/02/24 04:33	Christine Hamor	NA	50	<2		04/02/24 04:33	7	94.2	04/02/24 07:33	50	

Reagent	Actual Volume	Units
1:1 Hydrochloric Acid (H	.5	ml
1:1 Nitric Acid (HNO3)	1	ml

Reported: 15-APR-24 10:56 AM

METALS ELN REPORT

Workgroup: WG1903862

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 3005A	1:1 HNO3	tHNO3241111408JDH	1:1 HCl	tHCL240716 2241HCR	METALS	METSPIKE2	IPS, FPS, MIX	METPSMS	IPS, FPS, MIX	140, 326

Additional Reagent/Std

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2409778-50 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417074-01	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417074-04 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417074-05 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417074-06 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417074-07 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417158-01 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417158-02 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417158-03 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417281-02 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417302-01 SAMP	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417423-01 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417423-02 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417423-03 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	

Reported: 15-APR-24 10:56 AM

METALS ELN REPORT

Workgroup: WG1903862

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2417447-01 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417447-02 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417447-03 WATER	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417609-01 SAMP	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
L2417609-03 SAMP	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
WG1903862-1 BLANK	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	FM2413262158 HCR
WG1903862-2 LCS	04/02/24 15:12	Heidy Rompich	50	<2	0.5	04/02/24 15:12	10	95.0	04/02/24 18:12	50	IPS2411132030 CLH
WG1903862-3 MS	04/02/24 15:12	Heidy Rompich	50	<2	0.5	04/02/24 15:12	10	95.0	04/02/24 18:12	50	eln: JWN
WG1903862-4 MSD	04/02/24 15:12	Heidy Rompich	50	<2	0.5	04/02/24 15:12	10	95.0	04/02/24 18:12	50	
WG1903862-5 PS	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	
WG1903862-6 SERDIL	04/02/24 15:12	Heidy Rompich	50	<2		04/02/24 15:12	10	95.0	04/02/24 18:12	50	

Reagent	Actual Volume	Units
1:1 Hydrochloric Acid (H	.5	ml
1:1 Nitric Acid (HNO3)	1	ml

Reported: 15-APR-24 10:56 AM

METALS ELN REPORT

Workgroup: WG1906871

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 3005A	1:1 HNO3	tHNO324140 41921HCR	1:1 HCl	tHCL241221 2047CLH	METALS	METSPIKE2	IPS, FPS, MIX	METPSMS	IPS, FPS, MIX	140, 326

Additional Reagent/Std

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2417074-01 WATER	04/10/24 10:42	John Niles	50	<2		04/10/24 10:42	7	95.1	04/10/24 13:42	50	
L2417074-02 WATER	04/10/24 10:42	John Niles	50	<2		04/10/24 10:42	7	95.1	04/10/24 13:42	50	
WG1906871-1 BLANK	04/10/24 10:42	John Niles	50	<2		04/10/24 10:42	7	95.1	04/10/24 13:42	50	FM2414042041 HCR
WG1906871-2 LCS	04/10/24 10:42	John Niles	50	<2	0.5	04/10/24 10:42	7	95.1	04/10/24 13:42	50	IPS241221153 8HCR
WG1906871-3 MS	04/10/24 10:42	John Niles	50	<2	0.5	04/10/24 10:42	7	95.1	04/10/24 13:42	50	
WG1906871-4 MSD	04/10/24 10:42	John Niles	50	<2	0.5	04/10/24 10:42	7	95.1	04/10/24 13:42	50	ELN: ADG
WG1906871-5 PS	04/10/24 10:42	John Niles	50	<2		04/10/24 10:42	7	95.1	04/10/24 13:42	50	
WG1906871-6 SERDIL	04/10/24 10:42	John Niles	50	<2		04/10/24 10:42	7	95.1	04/10/24 13:42	50	

Reagent	Actual Volume	Units
1:1 Hydrochloric Acid (H	.5	ml
1:1 Nitric Acid (HNO3)	1	ml

Reported: 15-APR-24 10:56 AM

METALS ELN REPORT

Workgroup: WG1906880

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 3005A	1:1 HNO3	tHNO324140 41833HCR	1:1 HCl	tHCL240716 2241HCR	METALS	METSPIKE2	IPS, FPS, MIX	METPSMS	IPS, FPS, MIX	140, 326

Additional Reagent/Std

Sample/ Type	Digestion Date	Analyst	Lab Filtration Date	Sample Vol	Ph	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol ml	Comments
L2417074-02 WATER	04/10/24 10:30	Joshua Holmes	NA	50	<2		04/10/24 10:30	10	95.0	04/10/24 13:30	50	
L2417628-05 WATER	04/10/24 10:30	Joshua Holmes	NA	50	<2		04/10/24 10:30	10	95.0	04/10/24 13:30	50	
WG1906880-1 BLANK	04/10/24 10:30	Joshua Holmes	NA	50	<2		04/10/24 10:30	10	95.0	04/10/24 13:30	50	FM2414042041 HCR
WG1906880-2 LCS	04/10/24 10:30	Joshua Holmes	NA	50	<2	0.5	04/10/24 10:30	10	95.0	04/10/24 13:30	50	IPS241221153 8HCR
WG1906880-3 MS	04/10/24 10:30	Joshua Holmes	NA	50	<2	0.5	04/10/24 10:30	10	95.0	04/10/24 13:30	50	
WG1906880-4 MSD	04/10/24 10:30	Joshua Holmes	NA	50	<2	0.5	04/10/24 10:30	10	95.0	04/10/24 13:30	50	ELN CHECK: JWN
WG1906880-5 PS	04/10/24 10:30	Joshua Holmes	NA	50	<2		04/10/24 10:30	10	95.0	04/10/24 13:30	50	
WG1906880-6 SERDIL	04/10/24 10:30	Joshua Holmes	NA	50	<2		04/10/24 10:30	10	95.0	04/10/24 13:30	50	

Reagent	Actual Volume	Units
1:1 Hydrochloric Acid (H	.5	ml
1:1 Nitric Acid (HNO3)	1	ml

Reported: 15-APR-24 10:56 AM

Inorganic Data
(Mercury Analysis)

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 10:25
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: MJR
Lab File ID	: WG1903236.pdf	**Instrument ID**	: NIC3
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1902792-1	**Date Collected**	: NA
Client ID	: WG1902792-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/01/24 10:11
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: MJR
Lab File ID	: WG1903236.pdf	**Instrument ID**	: NIC3
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 11:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 12:17
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 12:20
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 12:24
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 12:27
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903439-1	**Date Collected**	: NA
Client ID	: WG1903439-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/04/24 11:44
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/02/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 11:28
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	0.00015	0.00020	0.00009	J

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 11:31
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 11:34
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	0.00020	0.00020	0.00009	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 11:38
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	0.00013	0.00020	0.00009	J

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-07	**Date Collected**	: 03/27/24 13:30
Client ID	: EQ BLANK	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 11:41
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: SMV
Lab File ID	: WG1904747.pdf	**Instrument ID**	: NIC2
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 03/31/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	0.00015	0.00020	0.00009	J

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/10/24 15:19
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: MJR
Lab File ID	: WG1906884.pdf	**Instrument ID**	: NIC3
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1906878-1	**Date Collected**	: NA
Client ID	: WG1906878-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/10/24 15:13
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: MJR
Lab File ID	: WG1906884.pdf	**Instrument ID**	: NIC3
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Dissolved	ND	0.00020	0.00009	U

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/15/24 16:52
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: MJR
Lab File ID	: WG1908837.pdf	**Instrument ID**	: NIC4
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	0.00020	0.00020	0.00009	

Form 1
METALS

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1906875-1	**Date Collected**	: NA
Client ID	: WG1906875-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/15/24 16:46
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: MJR
Lab File ID	: WG1908837.pdf	**Instrument ID**	: NIC4
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 04/10/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	ND	0.00020	0.00009	U

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3	**Units**	: mg/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1811996-1			R1811996-3			R1811996-5			
Date Analyzed :	04/01/24 09:32			04/01/24 10:17			04/01/24 11:23			
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury	0.00300	0.0030	101	0.0050	0.00540	108	0.00540	107		

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4	**Units**	: mg/l

		Initial Calibration			Continuing Calibration(s)						
Lab ID	:	R1813384-5			R1813384-7						
Date Analyzed	:	04/04/24 09:13			04/04/24 10:15						
Parameter		**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury		0.00300	0.0029	97	0.0100	0.0102	102				

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC2	**Units**	: mg/l

		Initial Calibration			Continuing Calibration(s)						
Lab ID	:	R1813384-1			R1813384-9			R1813384-3		R1813384-11	
Date Analyzed	:	04/04/24 10:16			04/04/24 10:55			04/04/24 11:16		04/04/24 11:41	
Parameter		**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury		0.00300	0.0030	100	0.0100	0.0102	102	0.00500	99	0.0102	102

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC2	**Units**	: mg/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1813384-13			R1813384-15			
Date Analyzed :				04/04/24 11:57			04/04/24 12:43			
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury				**0.0050**	**0.00480**	**97**	**0.00490**	**97**		

Acceptance Criteria:

ICV:	**95-105%**	**(Methods 200.7, 245.1)**
	90-110%	**(Methods 200.8, 6010, 6020, 7470, 7471, 7474)**
	85-115%	**(Method 1631)**
CCV:	**90-110%**	**(Methods 200.7, 245.1, 6010, 6020, 7474)**
	85-115%	**(Methods 200.8, 1631)**
	80-120%	**(Methods 7470, 7471)**

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4	**Units**	: mg/l

		Initial Calibration			Continuing Calibration(s)						
Lab ID	:	R1813384-5			R1813384-7						
Date Analyzed	:	04/04/24 09:13			04/04/24 10:15						
Parameter		**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury		0.00300	0.0029	97	0.0100	0.0102	102				

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC2	**Units**	: mg/l

		Initial Calibration			Continuing Calibration(s)						
Lab ID	:	R1813384-1			R1813384-9			R1813384-3		R1813384-11	
Date Analyzed	:	04/04/24 10:16			04/04/24 10:55			04/04/24 11:16		04/04/24 11:41	
Parameter		**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury		0.00300	0.0030	100	0.0100	0.0102	102	0.00500	99	0.0102	102

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3	**Units**	: mg/l

		Initial Calibration			Continuing Calibration(s)						
Lab ID	:	R1815411-1			R1815411-3			R1815411-5		R1815411-7	
Date Analyzed	:	04/10/24 09:30			04/10/24 10:28			04/10/24 11:59		04/10/24 13:31	
Parameter		**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury		0.00300	0.0029	95	0.0050	0.00510	102	0.00510	102	0.00510	102

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3	**Units**	: mg/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1815411-9			R1815411-11		R1815411-13	
Date Analyzed :				04/10/24 14:20			04/10/24 14:59		04/10/24 15:36	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury				0.0050	0.00510	102	0.00510	102	0.00510	101

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4	**Units**	: mg/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :	R1817307-1			R1817307-3			R1817307-5		R1817307-7	
Date Analyzed :	04/15/24 11:43			04/15/24 12:54			04/15/24 13:37		04/15/24 14:03	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury	0.00300	0.0031	105	0.0050	0.00500	100	0.00500	100	0.00500	100

Acceptance Criteria:

ICV:	95-105%	(Methods 200.7, 245.1)
	90-110%	(Methods 200.8, 6010, 6020, 7470, 7471, 7474)
	85-115%	(Method 1631)
CCV:	90-110%	(Methods 200.7, 245.1, 6010, 6020, 7474)
	85-115%	(Methods 200.8, 1631)
	80-120%	(Methods 7470, 7471)

Form 2A
Initial and Continuing Calibration Verification

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4	**Units**	: mg/l

	Initial Calibration			Continuing Calibration(s)						
Lab ID :				R1817307-9			R1817307-11		R1817307-13	
Date Analyzed :				04/15/24 15:47			04/15/24 16:27		04/15/24 17:08	
Parameter	**True**	**Found**	**%R**	**True**	**Found**	**%R**	**Found**	**%R**	**Found**	**%R**
Mercury				0.0050	0.00490	99	0.00500	100	0.00490	98

Acceptance Criteria:

ICV:	**95-105%**	**(Methods 200.7, 245.1)**
	90-110%	**(Methods 200.8, 6010, 6020, 7470, 7471, 7474)**
	85-115%	**(Method 1631)**
CCV:	**90-110%**	**(Methods 200.7, 245.1, 6010, 6020, 7474)**
	85-115%	**(Methods 200.8, 1631)**
	80-120%	**(Methods 7470, 7471)**

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3		

		Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID	:	R1811996-2		R1811996-4		R1811996-6				WG1902792-1	
Date Analyzed	:	04/01/24 09:36		04/01/24 10:22		04/01/24 11:26				04/01/24 10:11	
Parameter		mg/l	Q	mg/l	Q	mg/l	Q	mg/l	Q	mg/l	Q
Mercury		0.0000915	U	0.0000915	U	0.0000915	U			0.00009	U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4		

	Initial Calibration Blank	Continuing Calibration Blank(s)			Preparation Blank
Lab ID :	R1813384-6	R1813384-8	R1813384-10	R1813384-4	WG1903439-1
Date Analyzed :	04/04/24 09:16	04/04/24 10:19	04/04/24 10:58	04/04/24 11:21	04/04/24 11:44
Parameter	mg/l Q	mg/l Q	mg/l Q	mg/l Q	mg/l Q
Mercury	0.0000915 U	0.0000915 U	0.0000915 U	0.0000915 U	0.00009 U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4		

		Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID	:	R1813384-2		R1813384-12		R1813384-14		R1813384-16			
Date Analyzed	:	04/04/24 10:20		04/04/24 11:44		04/04/24 12:01		04/04/24 12:47			
Parameter		mg/l	Q	mg/l	Q	mg/l	Q	mg/l	Q		Q
Mercury		0.0000915	U	0.0000915	U	0.0000915	U	0.0000915	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4		

		Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID	:	R1813384-6		R1813384-8		R1813384-10		R1813384-4			
Date Analyzed	:	04/04/24 09:16		04/04/24 10:19		04/04/24 10:58		04/04/24 11:21			
Parameter		mg/l	Q	mg/l	Q	mg/l	Q	mg/l	Q		Q
Mercury		0.0000915	U	0.0000915	U	0.0000915	U	0.0000915	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4		

		Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID	:	R1813384-2		R1813384-12							
Date Analyzed	:	04/04/24 10:20		04/04/24 11:44							
Parameter		mg/l	Q	mg/l	Q	mg/l	Q	mg/l	Q		Q
Mercury		0.0000915	U	0.0000915	U						

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3		

	Initial Calibration Blank	Continuing Calibration Blank(s)			Preparation Blank
Lab ID :	R1815411-2	R1815411-4	R1815411-6	R1815411-8	WG1906878-1
Date Analyzed :	04/10/24 09:33	04/10/24 10:31	04/10/24 12:02	04/10/24 13:35	04/10/24 15:13
Parameter	mg/l Q	mg/l Q	mg/l Q	mg/l Q	mg/l Q
Mercury	0.0000915 U	0.0000915 U	0.0000915 U	0.0000915 U	0.00009 U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1815411-10		R1815411-12		R1815411-14			
Date Analyzed :			04/10/24 14:23		04/10/24 15:03		04/10/24 15:39			
Parameter	mg/l	Q	mg/l	Q	mg/l	Q	mg/l	Q		Q
Mercury			0.0000915	U	0.0000915	U	0.0000915	U		

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4		

	Initial Calibration Blank	Continuing Calibration Blank(s)			Preparation Blank
Lab ID :	R1817307-2	R1817307-4	R1817307-6	R1817307-8	WG1906875-1
Date Analyzed :	04/15/24 11:57	04/15/24 12:57	04/15/24 13:40	04/15/24 14:06	04/15/24 16:46
Parameter	mg/l Q	mg/l Q	mg/l Q	mg/l Q	mg/l Q
Mercury	0.0000915 U	0.0000915 U	0.0000915 U	0.0000915 U	0.00009 U

Form 3
Blanks

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4		

	Initial Calibration Blank		Continuing Calibration Blank(s)						Preparation Blank	
Lab ID :			R1817307-10		R1817307-12		R1817307-14			
Date Analyzed :			04/15/24 15:50		04/15/24 16:32		04/15/24 17:11			
Parameter	mg/l	Q	mg/l	Q	mg/l	Q	mg/l	Q		Q
Mercury			0.0000915	U	0.0000915	U	0.0000915	U		

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1902792-3	**MS Analysis Date**	: 04/01/24 10:29
Matrix Spike Dup	: WG1902792-4	**MSD Analysis Date**	: 04/01/24 10:32

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Mercury, Total	ND	0.005	0.00473	95	0.005	0.00477	96	1	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1903439-3	**MS Analysis Date**	: 04/04/24 11:54
Matrix Spike Dup	: WG1903439-4	**MSD Analysis Date**	: 04/04/24 12:10

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Mercury, Dissolved	ND	0.005	0.00456	91	0.005	0.00451	90	1	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02		
Matrix Spike	: WG1906878-3	**MS Analysis Date**	: 04/10/24 15:22
Matrix Spike Dup	: WG1906878-4	**MSD Analysis Date**	: 04/10/24 15:26

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Mercury, Dissolved	ND	0.005	0.00468	94	0.005	0.00455	91	3	75-125	20

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-6AR	**Matrix**	: WATER
Lab Sample ID	: L2417074-02		
Matrix Spike	: WG1906875-3	**MS Analysis Date**	: 04/15/24 16:55
Matrix Spike Dup	: WG1906875-4	**MSD Analysis Date**	: 04/15/24 16:59

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Mercury, Total	0.00020	0.005	0.00544	105	0.005	0.00553	106	2	75-125	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1902792-2	**LCS Analysis Date**	: 04/01/24 10:14
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Mercury, Total	**0.00100**	**0.000990**	**100.**					**80-120**	**20**

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1903439-2	**LCS Analysis Date**	: 04/04/24 11:47
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Mercury, Dissolved	**0.00100**	**0.000990**	**100.**					**80-120**	**20**

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1906878-2	**LCS Analysis Date**	: 04/10/24 15:16
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
	True	Found	%R	True	Found	%R	RPD	Recovery	RPD
Parameter	(mg/l)	(mg/l)		(mg/l)	(mg/l)			Limits	Limit
Mercury, Dissolved	0.00100	0.000850	86.					80-120	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1906875-2	**LCS Analysis Date**	: 04/15/24 16:49
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Mercury, Total	**0.00100**	**0.00118**	**118.**					**80-120**	**20**

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 7470A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-01	03/31/24 20:24	-	25
WG1902792-1	03/31/24 20:24	-	25
WG1902792-2	03/31/24 20:24	-	25
WG1902792-3	03/31/24 20:24	-	25
WG1902792-4	03/31/24 20:24	-	25

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 7470A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-01	04/02/24 04:35	-	25
L2417074-03	04/02/24 04:35	-	25
L2417074-04	04/02/24 04:35	-	25
L2417074-05	04/02/24 04:35	-	25
L2417074-06	04/02/24 04:35	-	25
WG1903439-1	04/02/24 04:35	-	25
WG1903439-2	04/02/24 04:35	-	25
WG1903439-3	04/02/24 04:35	-	25
WG1903439-4	04/02/24 04:35	-	25

Form 12
Preparation Log

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Matrix	:	**WATER**	**Prep Method**	:	**EPA 7470A**

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-03	03/31/24 20:24	-	25
L2417074-04	03/31/24 20:24	-	25
L2417074-05	03/31/24 20:24	-	25
L2417074-06	03/31/24 20:24	-	25
L2417074-07	03/31/24 20:24	-	25

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 7470A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-02	04/10/24 11:54	-	25
WG1906878-1	04/10/24 11:54	-	25
WG1906878-2	04/10/24 11:54	-	25
WG1906878-3	04/10/24 11:54	-	25
WG1906878-4	04/10/24 11:54	-	25

Form 12
Preparation Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Matrix	: WATER	**Prep Method**	: EPA 7470A

Sample Number	Preparation Date	Weight (gram)	Volume (mL)
L2417074-02	04/10/24 10:28	-	25
WG1906875-1	04/10/24 10:28	-	25
WG1906875-2	04/10/24 10:28	-	25
WG1906875-3	04/10/24 10:28	-	25
WG1906875-4	04/10/24 10:28	-	25

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3	**Analysis Method**	: 1,7470A
Start Date	: 04/01/24 09:32	**End Date**	: 04/01/24 11:26

Sample Number	Dilution Factor	Analysis Time	Mercury, Total
R1811996-1 ICV	1	09:32:40	X
R1811996-2 ICB	1	09:36:53	X
WG1902792-1 BLANK	1	10:11:18	X
WG1902792-2 LCS	1	10:14:37	X
R1811996-3 CCV	1	10:17:56	X
R1811996-4 CCB	1	10:22:40	X
L2417074-01	1	10:25:58	X
WG1902792-3 MS	1	10:29:17	X
WG1902792-4 MSD	1	10:32:35	X
R1811996-5 CCV	1	11:23:16	X
R1811996-6 CCB	1	11:26:34	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC2	**Analysis Method**	: 1,7470A
Start Date	: 04/04/24 09:13	**End Date**	: 04/04/24 12:47

Sample Number	Dilution Factor	Analysis Time	Mercury, Dissolved
R1813384-5 ICV	1	09:13:19	X
R1813384-6 ICB	1	09:16:39	X
R1813384-7 CCV	1	10:15:53	X
R1813384-1 ICV	1	10:16:31	X
R1813384-8 CCB	1	10:19:12	X
R1813384-2 ICB	1	10:20:30	X
R1813384-9 CCV	1	10:55:35	X
R1813384-10 CCB	1	10:58:53	X
R1813384-3 CCV	1	11:16:10	X
R1813384-4 CCB	1	11:21:29	X
R1813384-11 CCV	1	11:41:29	X
WG1903439-1 BLANK	1	11:44:38	X
R1813384-12 CCB	1	11:44:47	X
WG1903439-2 LCS	1	11:47:57	X
L2417074-01	1	11:51:15	X
WG1903439-3 MS	1	11:54:34	X
R1813384-13 CCV	1	11:57:52	X
R1813384-14 CCB	1	12:01:10	X
WG1903439-4 MSD	1	12:10:54	X
L2417074-03	1	12:17:31	X
L2417074-04	1	12:20:48	X
L2417074-05	1	12:24:06	X
L2417074-06	1	12:27:25	X
R1813384-15 CCV	1	12:43:57	X
R1813384-16 CCB	1	12:47:16	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC2	**Analysis Method**	: 1,7470A
Start Date	: 04/04/24 09:13	**End Date**	: 04/04/24 11:44

Sample Number	Dilution Factor	Analysis Time	Mercury, Total
R1813384-5 ICV	1	09:13:19	X
R1813384-6 ICB	1	09:16:39	X
R1813384-7 CCV	1	10:15:53	X
R1813384-1 ICV	1	10:16:31	X
R1813384-8 CCB	1	10:19:12	X
R1813384-2 ICB	1	10:20:30	X
R1813384-9 CCV	1	10:55:35	X
R1813384-10 CCB	1	10:58:53	X
R1813384-3 CCV	1	11:16:10	X
R1813384-4 CCB	1	11:21:29	X
L2417074-03	1	11:28:07	X
L2417074-04	1	11:31:26	X
L2417074-05	1	11:34:44	X
L2417074-06	1	11:38:02	X
L2417074-07	1	11:41:20	X
R1813384-11 CCV	1	11:41:29	X
R1813384-12 CCB	1	11:44:47	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC3	**Analysis Method**	: 1,7470A
Start Date	: 04/10/24 09:30	**End Date**	: 04/10/24 15:39

Sample Number	Dilution Factor	Analysis Time	Mercury, Dissolved
R1815411-1 ICV	1	09:30:22	X
R1815411-2 ICB	1	09:33:40	X
R1815411-3 CCV	1	10:28:27	X
R1815411-4 CCB	1	10:31:46	X
R1815411-5 CCV	1	11:59:20	X
R1815411-6 CCB	1	12:02:39	X
R1815411-7 CCV	1	13:31:56	X
R1815411-8 CCB	1	13:35:14	X
R1815411-9 CCV	1	14:20:16	X
R1815411-10 CCB	1	14:23:34	X
R1815411-11 CCV	1	14:59:52	X
R1815411-12 CCB	1	15:03:10	X
WG1906878-1 BLANK	1	15:13:03	X
WG1906878-2 LCS	1	15:16:22	X
L2417074-02	1	15:19:40	X
WG1906878-3 MS	1	15:22:58	X
WG1906878-4 MSD	1	15:26:16	X
R1815411-13 CCV	1	15:36:30	X
R1815411-14 CCB	1	15:39:48	X

Form 13
Analysis Run Log

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Instrument ID	: NIC4	**Analysis Method**	: 1,7470A
Start Date	: 04/15/24 11:43	**End Date**	: 04/15/24 17:11

Sample Number	Dilution Factor	Analysis Time	Mercury, Total
R1817307-1 ICV	1	11:43:31	X
R1817307-2 ICB	1	11:57:33	X
R1817307-3 CCV	1	12:54:19	X
R1817307-4 CCB	1	12:57:39	X
R1817307-5 CCV	1	13:37:07	X
R1817307-6 CCB	1	13:40:25	X
R1817307-7 CCV	1	14:03:35	X
R1817307-8 CCB	1	14:06:52	X
R1817307-9 CCV	1	15:47:22	X
R1817307-10 CCB	1	15:50:40	X
R1817307-11 CCV	1	16:27:00	X
R1817307-12 CCB	1	16:32:49	X
WG1906875-1 BLANK	1	16:46:02	X
WG1906875-2 LCS	1	16:49:20	X
L2417074-02	1	16:52:38	X
WG1906875-3 MS	1	16:55:56	X
WG1906875-4 MSD	1	16:59:14	X
R1817307-13 CCV	1	17:08:25	X
R1817307-14 CCB	1	17:11:43	X

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File: PM4631-1
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MERCURY by 7470A, 245.1 (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container/Sample Preservation
Mercury, Total	7439-97-6	0.0002	0.0000915	mg/l	80-120	20	75-125	20	20		28 days	1 - Plastic 500ml HNO3 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 01/22/21
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METALS by 7470A (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container/Sample Preservation
Mercury, Total	7439-97-6	0.0002	0.0000915	mg/l	80-120		75-125	20	20		28 days	1 - Plastic 500ml HNO3 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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METALS by 7471B (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container/Sample Preservation
Mercury, Total	7439-97-6	0.08	0.05216	mg/kg	72-128		80-120	20	20		28 days	Metals Only-Glass 60mL/2oz unpreserv

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Title :
Date : 04/01/2024
Name :

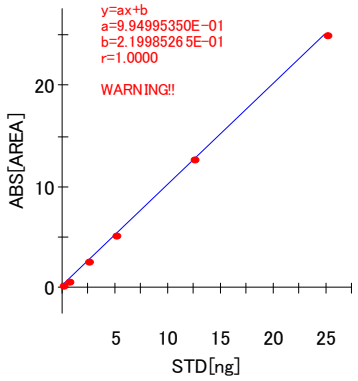
Method

STD
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

SMP
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

Measurement Time(sec) : 120sec

Calib



STD

No.	STD [ug/L]	SVOL [mL]	CVOL [mL]	DVOL [mL]	STD [ng]	AREA [ON]	MEAS [ng]	Dev [%]	M. TIME	Note
1	0.000	2.500	2.500	2.500	0.000	0.2440	0.0241	-	04/01/2024 09:06	MJR,NIC3
2	0.200	2.500	2.500	2.500	0.500	0.6331	0.4152	17.0	04/01/2024 09:09	MJR,NIC3
3	1.000	2.500	2.500	2.500	2.500	2.6671	2.4594	1.6	04/01/2024 09:13	MJR,NIC3
4	2.000	2.500	2.500	2.500	5.000	5.3065	5.1121	2.2	04/01/2024 09:29	MJR,NIC3
5	5.000	2.500	2.500	2.500	12.500	12.6690	12.5116	0.1	04/01/2024 09:19	MJR,NIC3
6	10.000	2.500	2.500	2.500	25.000	25.0725	24.9775	0.1	04/01/2024 09:23	MJR,NIC3

SMP

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
1	ICV	2.500	2.500	2.500	7.7919	7.6100	3.044	-	04/01/2024 09:32	MJR,NIC3
2	ICB	2.500	2.500	2.500	0.2402	0.0203	0.008	-	04/01/2024 09:36	MJR,NIC3
3	0.2PPB	2.500	2.500	2.500	0.6497	0.4319	0.173	-	04/01/2024 09:40	MJR,NIC3
4	wg1903101-1 wg1903101	2.500	2.500	2.500	0.2041	-0.0160	-0.006	-	04/01/2024 09:48	MJR,NIC3
5	wg1903101-2 wg1903101	2.500	2.500	2.500	2.3923	2.1832	0.873	-	04/01/2024 09:51	MJR,NIC3
6	L2416953-01 wg1903101	2.500	2.500	2.500	0.4042	0.1851	0.074	-	04/01/2024 09:54	MJR,NIC3

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
7	wg1903101-3 wg1903101	2.500	2.500	2.500	11.3056	11.1414	4.457	-	04/01/2024 09:58	MJR,NIC3
8	wg1903101-4 wg1903101	2.500	2.500	2.500	0.1545	-0.0658	-0.026	-	04/01/2024 10:01	MJR,NIC3
9	L2416953-02 wg1903101	2.500	2.500	2.500	0.1936	-0.0265	-0.011	-	04/01/2024 10:04	MJR,NIC3
10	L2417426-12 wg1902792	2.500	2.500	2.500	0.3718	0.1526	0.061	-	04/01/2024 10:07	MJR,NIC3
11	wg1902792-1 wg1902792	2.500	2.500	2.500	0.3101	0.0906	0.036	-	04/01/2024 10:11	MJR,NIC3
12	wg1902792-2 wg1902792	2.500	2.500	2.500	2.6950	2.4875	0.995	-	04/01/2024 10:14	MJR,NIC3
13	Check STD(5ug/L)	2.500	2.500	2.500	13.6311	13.4786	5.391	107.8	04/01/2024 10:17	MJR,NIC3
14	Check Blank	2.500	2.500	2.500	0.3419	0.1225	0.049	-	04/01/2024 10:22	MJR,NIC3
15	L2417074-01 wg1902792	2.500	2.500	2.500	0.3611	0.1418	0.057	-	04/01/2024 10:25	MJR,NIC3
16	wg1902792-3 wg1902792	2.500	2.500	2.500	11.9922	11.8314	4.733	-	04/01/2024 10:29	MJR,NIC3
17	wg1902792-4 wg1902792	2.500	2.500	2.500	12.1010	11.9408	4.776	-	04/01/2024 10:32	MJR,NIC3
18	L2416487-01 wg1901639	2.500	2.500	2.500	0.1281	-0.0923	-0.037	-	04/01/2024 10:55	MJR,NIC3
19	L2416487-02 wg1901639	2.500	2.500	2.500	0.1032	-0.1174	-0.047	-	04/01/2024 10:58	MJR,NIC3
20	L2416487-03 wg1901639	2.500	2.500	2.500	0.1060	-0.1146	-0.046	-	04/01/2024 11:02	MJR,NIC3
21	L2416487-04 wg1901639	2.500	2.500	2.500	0.1163	-0.1042	-0.042	-	04/01/2024 11:05	MJR,NIC3
22	L2416487-05 wg1901639	2.500	2.500	2.500	0.1128	-0.1077	-0.043	-	04/01/2024 11:08	MJR,NIC3
23	L2416487-06 wg1901639	2.500	2.500	2.500	0.1211	-0.0994	-0.040	-	04/01/2024 11:12	MJR,NIC3
24	L2416487-07 wg1901639	2.500	2.500	2.500	0.1370	-0.0834	-0.033	-	04/01/2024 11:15	MJR,NIC3
25	XCheck STD(5ug/L)	2.500	2.500	2.500	13.9334	13.7824	5.513	-	04/01/2024 11:18	MJR,NIC3
26	Check STD(5ug/L)	2.500	2.500	2.500	13.5338	13.3808	5.352	107.0	04/01/2024 11:23	MJR,NIC3
27	Check Blank	2.500	2.500	2.500	0.3189	0.0994	0.040	-	04/01/2024 11:26	MJR,NIC3
28	L2416487-09 wg1901639	2.500	2.500	2.500	0.0992	-0.1214	-0.049	-	04/01/2024 11:29	MJR,NIC3
29	L2416487-10 wg1901639	2.500	2.500	2.500	0.0913	-0.1293	-0.052	-	04/01/2024 11:33	MJR,NIC3
30	L2416487-11 wg1901639	2.500	2.500	2.500	0.0921	-0.1285	-0.051	-	04/01/2024 11:36	MJR,NIC3
31	L2416487-13 wg1901639	2.500	2.500	2.500	0.0947	-0.1259	-0.050	-	04/01/2024 11:39	MJR,NIC3
32	wg1901945-1 wg1901945	2.500	2.500	2.500	0.1668	-0.0535	-0.021	-	04/01/2024 11:50	MJR,NIC3
33	Xwg1901945-2 wg1901945	2.500	2.500	2.500	2.1838	1.9737	0.789	-	04/01/2024 11:53	MJR,NIC3
34	L2415941-04 wg1901945	2.500	2.500	2.500	0.2614	0.0416	0.017	-	04/01/2024 11:56	MJR,NIC3
35	wg1901945-3 wg1901945	2.500	2.500	2.500	10.6663	10.4989	4.200	-	04/01/2024 12:00	MJR,NIC3
36	wg1901945-4 wg1901945	2.500	2.500	2.500	0.1936	-0.0265	-0.011	-	04/01/2024 12:03	MJR,NIC3
37	L2416329-01 wg1901945	2.500	2.500	2.500	0.4543	0.2355	0.094	-	04/01/2024 12:06	MJR,NIC3
38	Check STD(5ug/L)	2.500	2.500	2.500	13.6050	13.4523	5.381	107.6	04/01/2024 12:10	MJR,NIC3

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
39	Check Blank	2.500	2.500	2.500	0.2626	0.0428	0.017	-	04/01/2024 12:15	MJR,NIC3
40	L2416329-02 wg1901945	2.500	2.500	2.500	0.3420	0.1226	0.049	-	04/01/2024 12:18	MJR,NIC3
41	L2416489-03 wg1901945	2.500	2.500	2.500	0.3780	0.1588	0.064	-	04/01/2024 12:22	MJR,NIC3
42	L2416498-02 wg1901945	2.500	2.500	2.500	7.2217	7.0369	2.815	-	04/01/2024 12:25	MJR,NIC3
43	L2416731-01 wg1901945	2.500	2.500	2.500	0.3139	0.0944	0.038	-	04/01/2024 12:28	MJR,NIC3
44	L2416731-02 wg1901945	2.500	2.500	2.500	0.3538	0.1345	0.054	-	04/01/2024 12:32	MJR,NIC3
45	L2416731-03 wg1901945	2.500	2.500	2.500	0.9710	0.7548	0.302	-	04/01/2024 12:35	MJR,NIC3
46	L2416731-04 wg1901945	2.500	2.500	2.500	0.3322	0.1128	0.045	-	04/01/2024 12:38	MJR,NIC3
47	L2416731-05 wg1901945	2.500	2.500	2.500	0.3235	0.1040	0.042	-	04/01/2024 12:42	MJR,NIC3
48	L2416731-07 wg1901945	2.500	2.500	2.500	0.1626	-0.0577	-0.023	-	04/01/2024 12:45	MJR,NIC3
49	wg1901945-2 wg1901945	2.500	2.500	2.500	3.0761	2.8705	1.148	-	04/01/2024 12:48	MJR,NIC3
50	xCheck STD(5ug/L)	2.500	2.500	2.500	-0.0053	-0.2264	-0.091	-	04/01/2024 12:52	MJR,NIC3
51	Check STD(5ug/L)	2.500	2.500	2.500	13.4688	13.3155	5.326	106.5	04/01/2024 13:02	MJR,NIC3
52	Check Blank	2.500	2.500	2.500	0.2041	-0.0160	-0.006	-	04/01/2024 13:06	MJR,NIC3
53	WG1902462-1 WG1902462	2.500	2.500	2.500	0.0603	-0.1605	-0.064	-	04/01/2024 13:32	MJR,NIC3
54	WG1902462-2 WG1902462	2.500	2.500	2.500	2.2093	1.9993	0.800	-	04/01/2024 13:36	MJR,NIC3
55	I2416511-02 WG1902462	2.500	2.500	2.500	0.3209	0.1014	0.041	-	04/01/2024 13:39	MJR,NIC3
56	WG1902462-3 WG1902462	2.500	2.500	2.500	12.5308	12.3727	4.949	-	04/01/2024 13:42	MJR,NIC3
57	WG1902462-4 WG1902462	2.500	2.500	2.500	0.3986	0.1795	0.072	-	04/01/2024 13:45	MJR,NIC3
58	I2416511-01 WG1902462	2.500	2.500	2.500	0.3257	0.1062	0.042	-	04/01/2024 13:49	MJR,NIC3
59	I2416511-03 WG1902462	2.500	2.500	2.500	0.2445	0.0246	0.010	-	04/01/2024 13:52	MJR,NIC3
60	I2416511-05 WG1902462	2.500	2.500	2.500	0.1029	-0.1177	-0.047	-	04/01/2024 13:55	MJR,NIC3
61	I2416581-01 WG1902462	2.500	2.500	2.500	0.1266	-0.0939	-0.038	-	04/01/2024 13:59	MJR,NIC3
62	I2416581-02 WG1902462	2.500	2.500	2.500	0.1166	-0.1039	-0.042	-	04/01/2024 14:02	MJR,NIC3
63	Check STD(5ug/L)	2.500	2.500	2.500	13.6982	13.5460	5.418	108.4	04/01/2024 14:05	MJR,NIC3
64	Check Blank	2.500	2.500	2.500	0.2828	0.0631	0.025	-	04/01/2024 14:10	MJR,NIC3
65	I2416581-03 WG1902462	2.500	2.500	2.500	0.1224	-0.0981	-0.039	-	04/01/2024 14:14	MJR,NIC3
66	I2416581-04 WG1902462	2.500	2.500	2.500	0.0839	-0.1368	-0.055	-	04/01/2024 14:17	MJR,NIC3
67	I2416749-27 WG1902462	2.500	2.500	2.500	0.0748	-0.1459	-0.058	-	04/01/2024 14:20	MJR,NIC3
68	I2416752-05 WG1902462	2.500	2.500	2.500	0.8432	0.6263	0.251	-	04/01/2024 14:24	MJR,NIC3
69	I2416851-01 WG1902462	2.500	2.500	2.500	4.3926	4.1936	1.677	-	04/01/2024 14:27	MJR,NIC3
70	Check STD(5ug/L)	2.500	2.500	2.500	13.4881	13.3349	5.334	106.7	04/01/2024 14:38	MJR,NIC3

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
71	Check Blank	2.500	2.500	2.500	0.2860	0.0663	0.027	-	04/01/2024 14:41	MJR,NIC3

Title :
Date : 4/4/2024
Name :

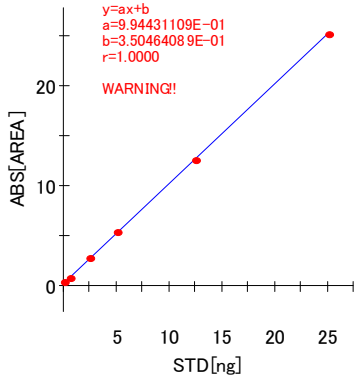
Method

STD
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

SMP
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

Measurement Time(sec) : 120sec

Calib



STD

No.	STD [ug/L]	SVOL [mL]	CVOL [mL]	DVOL [mL]	STD [ng]	AREA [ON]	MEAS [ng]	Dev [%]	M. TIME	Note
1	0.000	2.500	2.500	2.500	0.000	0.4025	0.0523	-	04/04/2024 09:56	SMV, NIC2
2	0.200	2.500	2.500	2.500	0.500	0.7965	0.4485	10.3	04/04/2024 09:59	SMV, NIC2
3	1.000	2.500	2.500	2.500	2.500	2.7850	2.4482	2.1	04/04/2024 10:03	SMV, NIC2
4	2.000	2.500	2.500	2.500	5.000	5.4346	5.1126	2.3	04/04/2024 10:06	SMV, NIC2
5	5.000	2.500	2.500	2.500	12.500	12.6907	12.4093	0.7	04/04/2024 10:09	SMV, NIC2
6	10.000	2.500	2.500	2.500	25.000	25.2401	25.0290	0.1	04/04/2024 10:13	SMV, NIC2

SMP

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
1	ICV	2.500	2.500	2.500	7.8157	7.5070	3.003	-	04/04/2024 10:16	SMV, NIC2
2	ICB	2.500	2.500	2.500	0.4035	0.0533	0.021	-	04/04/2024 10:20	SMV, NIC2
3	0.2 PPB	2.500	2.500	2.500	0.8017	0.4538	0.182	-	04/04/2024 10:24	SMV, NIC2
4	wg1904036-1 wg1904036	2.500	2.500	2.500	0.4169	0.0668	0.027	-	04/04/2024 10:46	SMV, NIC2
5	wg1904036-2 wg1904036	2.500	2.500	2.500	2.5778	2.2398	0.896	-	04/04/2024 10:49	SMV, NIC2
6	L2417840-01 wg1904036	2.500	2.500	2.500	0.4370	0.0870	0.035	-	04/04/2024 10:52	SMV, NIC2

NIC NIPPON INSTRUMENTS CORPORATION

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
7	wg1904036-3 wg1904036	2.500	2.500	2.500	13.0792	12.8000	5.120	-	04/04/2024 10:56	SMV, NIC2
8	wg1904036-4 wg1904036	2.500	2.500	2.500	0.4278	0.0778	0.031	-	04/04/2024 10:59	SMV, NIC2
9	L2417236-02 wg1904036	2.500	2.500	2.500	0.4188	0.0687	0.027	-	04/04/2024 11:02	SMV, NIC2
10	L2417525-01 wg1904036	2.500	2.500	2.500	0.4708	0.1210	0.048	-	04/04/2024 11:06	SMV, NIC2
11	L2417889-01 wg1904036	2.500	2.500	2.500	0.6233	0.2744	0.110	-	04/04/2024 11:09	SMV, NIC2
12	L2417889-02 wg1904036	2.500	2.500	2.500	0.5222	0.1727	0.069	-	04/04/2024 11:12	SMV, NIC2
13	Check STD(5ug/L)	2.500	2.500	2.500	12.6665	12.3850	4.954	99.1	04/04/2024 11:16	SMV, NIC2
14	Check Blank	2.500	2.500	2.500	0.3229	-0.0277	-0.011	-	04/04/2024 11:21	SMV, NIC2
15	I2417074-02 WG1902792	2.500	2.500	2.500	0.6955	0.3470	0.139	-	04/04/2024 11:24	SMV, NIC2
16	I2417074-03 WG1902792	2.500	2.500	2.500	0.7393	0.3910	0.156	-	04/04/2024 11:28	SMV, NIC2
17	I2417074-04 WG1902792	2.500	2.500	2.500	0.4021	0.0519	0.021	-	04/04/2024 11:31	SMV, NIC2
18	I2417074-05 WG1902792	2.500	2.500	2.500	0.8703	0.5227	0.209	-	04/04/2024 11:34	SMV, NIC2
19	I2417074-06 WG1902792	2.500	2.500	2.500	0.6766	0.3280	0.131	-	04/04/2024 11:38	SMV, NIC2
20	I2417074-07 WG1902792	2.500	2.500	2.500	0.7241	0.3757	0.150	-	04/04/2024 11:41	SMV, NIC2
21	wg1903439-1 wg1903439	2.500	2.500	2.500	0.4460	0.0961	0.038	-	04/04/2024 11:44	SMV, NIC2
22	wg1903439-2 wg1903439	2.500	2.500	2.500	2.8239	2.4873	0.995	-	04/04/2024 11:47	SMV, NIC2
23	L2417074-01 wg1903439	2.500	2.500	2.500	0.4649	0.1151	0.046	-	04/04/2024 11:51	SMV, NIC2
24	wg1903439-3 wg1903439	2.500	2.500	2.500	11.6858	11.3988	4.560	-	04/04/2024 11:54	SMV, NIC2
25	Check STD(5ug/L)	2.500	2.500	2.500	12.3510	12.0677	4.827	96.5	04/04/2024 11:57	SMV, NIC2
26	Check Blank	2.500	2.500	2.500	0.3675	0.0171	0.007	-	04/04/2024 12:01	SMV, NIC2
27	wg1903439-4 wg1903439	2.500	2.500	2.500	11.5806	11.2930	4.517	-	04/04/2024 12:10	SMV, NIC2
28	L2417074-02 wg1903439	2.500	2.500	2.500	0.5784	0.2292	0.092	-	04/04/2024 12:14	SMV, NIC2
29	L2417074-03 wg1903439	2.500	2.500	2.500	0.5382	0.1888	0.076	-	04/04/2024 12:17	SMV, NIC2
30	L2417074-04 wg1903439	2.500	2.500	2.500	0.5516	0.2023	0.081	-	04/04/2024 12:20	SMV, NIC2
31	L2417074-05 wg1903439	2.500	2.500	2.500	0.5401	0.1907	0.076	-	04/04/2024 12:24	SMV, NIC2
32	L2417074-06 wg1903439	2.500	2.500	2.500	0.5184	0.1689	0.068	-	04/04/2024 12:27	SMV, NIC2
33	L2417449-13 wg1903439	2.500	2.500	2.500	0.5901	0.2410	0.096	-	04/04/2024 12:30	SMV, NIC2
34	wg1902636-1 wg1902636	2.500	2.500	2.500	0.4825	0.1328	0.053	-	04/04/2024 12:34	SMV, NIC2
35	wg1902636-2 wg1902636	2.500	2.500	2.500	2.8075	2.4708	0.988	-	04/04/2024 12:37	SMV, NIC2
36	L2409778-42 wg1902636	2.500	2.500	2.500	0.6096	0.2606	0.104	-	04/04/2024 12:40	SMV, NIC2
37	Check STD(5ug/L)	2.500	2.500	2.500	12.4184	12.1355	4.854	97.1	04/04/2024 12:43	SMV, NIC2
38	Check Blank	2.500	2.500	2.500	0.3116	-0.0391	-0.016	-	04/04/2024 12:47	SMV, NIC2

NIC NIPPON INSTRUMENTS CORPORATION

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
39	wg1902636-3 wg1902636	2.500	2.500	2.500	12.4810	12.1985	4.879	-	04/04/2024 12:58	SMV, NIC2
40	wg1902636-4 wg1902636	2.500	2.500	2.500	12.4081	12.1252	4.850	-	04/04/2024 13:01	SMV, NIC2
41	zl2417040-02 wg1902636	2.500	2.500	2.500	0.4044	0.0542	0.022	-	04/04/2024 13:04	SMV, NIC2
42	zl2417040-03 wg1902636	2.500	2.500	2.500	0.4561	0.1062	0.042	-	04/04/2024 13:08	SMV, NIC2
43	l2417072-01 wg1902636	2.500	2.500	2.500	0.4493	0.0994	0.040	-	04/04/2024 13:11	SMV, NIC2
44	l2417072-02 wg1902636	2.500	2.500	2.500	0.4692	0.1194	0.048	-	04/04/2024 13:14	SMV, NIC2
45	l2417072-03 wg1902636	2.500	2.500	2.500	0.4845	0.1348	0.054	-	04/04/2024 13:18	SMV, NIC2
46	l2417072-04 wg1902636	2.500	2.500	2.500	0.5117	0.1621	0.065	-	04/04/2024 13:21	SMV, NIC2
47	l2417072-05 wg1902636	2.500	2.500	2.500	0.5164	0.1669	0.067	-	04/04/2024 13:24	SMV, NIC2
48	l2417072-06 wg1902636	2.500	2.500	2.500	0.4306	0.0806	0.032	-	04/04/2024 13:27	SMV, NIC2
49	Check STD(5ug/L)	2.500	2.500	2.500	12.3018	12.0183	4.807	96.1	04/04/2024 13:31	SMV, NIC2
50	Check Blank	2.500	2.500	2.500	0.3359	-0.0146	-0.006	-	04/04/2024 13:34	SMV, NIC2
51	l2417072-07 wg1902636	2.500	2.500	2.500	0.4541	0.1042	0.042	-	04/04/2024 13:42	SMV, NIC2
52	l2417072-08 wg1902636	2.500	2.500	2.500	0.4812	0.1315	0.053	-	04/04/2024 13:45	SMV, NIC2
53	l2417072-09 wg1902636	2.500	2.500	2.500	0.4561	0.1062	0.042	-	04/04/2024 13:48	SMV, NIC2
54	l2417072-10 wg1902636	2.500	2.500	2.500	0.4558	0.1059	0.042	-	04/04/2024 13:51	SMV, NIC2
55	l2417072-11 wg1902636	2.500	2.500	2.500	0.4793	0.1296	0.052	-	04/04/2024 13:55	SMV, NIC2
56	wg1902473-1 wg1902473	2.500	2.500	2.500	0.3594	0.0090	0.004	-	04/04/2024 14:02	SMV, NIC2
57	wg1902473-2 wg1902473	2.500	2.500	2.500	2.8416	2.5051	1.002	-	04/04/2024 14:05	SMV, NIC2
58	L2415236-03 wg1902473	2.500	2.500	2.500	0.3963	0.0461	0.018	-	04/04/2024 14:08	SMV, NIC2
59	wg1902473-3 wg1902473	2.500	2.500	2.500	12.7294	12.4483	4.979	-	04/04/2024 14:11	SMV, NIC2
60	wg1902473-4 wg1902473	2.500	2.500	2.500	12.8344	12.5538	5.022	-	04/04/2024 14:15	SMV, NIC2
61	Check STD(5ug/L)	2.500	2.500	2.500	12.4276	12.1448	4.858	97.2	04/04/2024 14:18	SMV, NIC2
62	Check Blank	2.500	2.500	2.500	0.3890	0.0388	0.016	-	04/04/2024 14:21	SMV, NIC2
63	L2415164-01 wg1902473	2.500	2.500	2.500	0.4092	0.0591	0.024	-	04/04/2024 14:25	SMV, NIC2
64	L2415164-02 wg1902473	2.500	2.500	2.500	0.3952	0.0450	0.018	-	04/04/2024 14:28	SMV, NIC2
65	L2415164-03 wg1902473	2.500	2.500	2.500	0.4105	0.0604	0.024	-	04/04/2024 14:31	SMV, NIC2
66	L2415164-04 wg1902473	2.500	2.500	2.500	0.3899	0.0397	0.016	-	04/04/2024 14:35	SMV, NIC2
67	L2415164-05 wg1902473	2.500	2.500	2.500	0.4020	0.0518	0.021	-	04/04/2024 14:38	SMV, NIC2
68	L2415164-06 wg1902473	2.500	2.500	2.500	0.4019	0.0517	0.021	-	04/04/2024 14:41	SMV, NIC2
69	L2415164-07 wg1902473	2.500	2.500	2.500	0.4112	0.0611	0.024	-	04/04/2024 14:45	SMV, NIC2
70	L2415164-08 wg1902473	2.500	2.500	2.500	0.4546	0.1047	0.042	-	04/04/2024 14:48	SMV, NIC2

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
71	L2415164-09 wg1902473	2.500	2.500	2.500	0.4272	0.0772	0.031	-	04/04/2024 14:51	SMV, NIC2
72	L2415236-01 wg1902473	2.500	2.500	2.500	0.3657	0.0153	0.006	-	04/04/2024 14:54	SMV, NIC2
73	Check STD(5ug/L)	2.500	2.500	2.500	12.2007	11.9166	4.767	95.3	04/04/2024 14:58	SMV, NIC2
74	Check Blank	2.500	2.500	2.500	0.3865	0.0362	0.014	-	04/04/2024 15:01	SMV, NIC2
75	L2415236-02 wg1902473	2.500	2.500	2.500	0.4867	0.1370	0.055	-	04/04/2024 15:10	SMV, NIC2
76	L2415236-04 wg1902473	2.500	2.500	2.500	0.4565	0.1066	0.043	-	04/04/2024 15:13	SMV, NIC2
77	L2415236-05 wg1902473	2.500	2.500	2.500	0.4644	0.1146	0.046	-	04/04/2024 15:16	SMV, NIC2
78	L2415236-06 wg1902473	2.500	2.500	2.500	0.4357	0.0857	0.034	-	04/04/2024 15:20	SMV, NIC2
79	L2415236-07 wg1902473	2.500	2.500	2.500	0.4310	0.0810	0.032	-	04/04/2024 15:23	SMV, NIC2
80	L2415236-09 wg1902473	2.500	2.500	2.500	0.4775	0.1277	0.051	-	04/04/2024 15:26	SMV, NIC2
81	L2415236-11 wg1902473	2.500	2.500	2.500	0.4274	0.0774	0.031	-	04/04/2024 15:30	SMV, NIC2
82	Check STD(5ug/L)	2.500	2.500	2.500	12.4390	12.1562	4.862	97.2	04/04/2024 15:33	SMV, NIC2
83	Check Blank	2.500	2.500	2.500	0.4373	0.0873	0.035	-	04/04/2024 15:36	SMV, NIC2
84	xICV2414040954EFM	2.500	2.500	2.500	7.1828	6.8706	2.748	-	04/04/2024 16:06	DJR,NIC2
85	xICV2414040954EFM	2.500	2.500	2.500	7.2322	6.9203	2.768	-	04/04/2024 16:13	DJR,NIC2
86	WG1903902-1 WG1903902	2.500	2.500	2.500	0.2519	-0.0991	-0.040	-	04/04/2024 16:40	DJR,NIC2
87	WG1903902-2 WG1903902	2.500	2.500	2.500	3.0009	2.6653	1.066	-	04/04/2024 16:44	DJR,NIC2
88	I2417281-02 WG1903902	2.500	2.500	2.500	0.5297	0.1802	0.072	-	04/04/2024 16:47	DJR,NIC2
89	WG1903902-3 WG1903902	2.500	2.500	2.500	13.4216	13.1443	5.258	-	04/04/2024 16:50	DJR,NIC2
90	WG1903902-4 WG1903902	2.500	2.500	2.500	0.4945	0.1448	0.058	-	04/04/2024 16:54	DJR,NIC2
91	I2417277-11 WG1903902	2.500	2.500	2.500	0.4289	0.0789	0.032	-	04/04/2024 16:57	DJR,NIC2
92	I2417353-01 WG1903902	2.500	2.500	2.500	0.3466	-0.0039	-0.002	-	04/04/2024 17:00	DJR,NIC2
93	Check STD(5ug/L)	2.500	2.500	2.500	12.1436	11.8592	4.744	94.9	04/04/2024 17:29	DJR,NIC2
94	Check Blank	2.500	2.500	2.500	0.4315	0.0815	0.033	-	04/04/2024 17:32	DJR,NIC2

NIC NIPPON INSTRUMENTS CORPORATION

Title :
Date : 04/10/2024
Name :

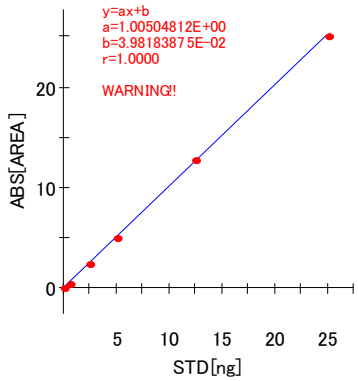
Method

STD
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

SMP
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

Measurement Time(sec) : 120sec

Calib



STD

No.	STD [ug/L]	SVOL [mL]	CVOL [mL]	DVOL [mL]	STD [ng]	AREA [ON]	MEAS [ng]	Dev [%]	M. TIME	Note
1	0.000	2.500	2.500	2.500	0.000	0.1412	0.1009	-	04/10/2024 09:10	MJR,NIC3
2	0.200	2.500	2.500	2.500	0.500	0.4937	0.4516	9.7	04/10/2024 09:13	MJR,NIC3
3	1.000	2.500	2.500	2.500	2.500	2.4997	2.4475	2.1	04/10/2024 09:17	MJR,NIC3
4	2.000	2.500	2.500	2.500	5.000	4.9922	4.9275	1.5	04/10/2024 09:20	MJR,NIC3
5	5.000	2.500	2.500	2.500	12.500	12.7070	12.6036	0.8	04/10/2024 09:23	MJR,NIC3
6	10.000	2.500	2.500	2.500	25.000	25.1348	24.9689	0.1	04/10/2024 09:27	MJR,NIC3

SMP

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
1	ICV	2.500	2.500	2.500	7.2166	7.1407	2.856	-	04/10/2024 09:30	MJR,NIC3
2	ICB	2.500	2.500	2.500	0.1472	0.1068	0.043	-	04/10/2024 09:33	MJR,NIC3
3	0.2PPB	2.500	2.500	2.500	0.5090	0.4668	0.187	-	04/10/2024 09:36	MJR,NIC3
4	wg1904920-1 wg1904920	2.500	2.500	2.500	0.7318	0.6885	0.275	-	04/10/2024 09:53	MJR,NIC3
5	xL2418184-07 wg1904920	2.500	2.500	2.500	0.5411	0.4988	0.200	-	04/10/2024 09:56	MJR,NIC3
6	wg1905529-1 wg1905529	2.500	2.500	2.500	0.1303	0.0900	0.036	-	04/10/2024 10:05	MJR,NIC3

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
7	wg1905529-2 wg1905529	2.500	2.500	2.500	4.8940	4.8298	1.932	-	04/10/2024 10:08	MJR,NIC3
8	I2418149-01 wg1905529	2.500	2.500	2.500	0.1544	0.1140	0.046	-	04/10/2024 10:11	MJR,NIC3
9	wg1905529-3 wg1905529	2.500	2.500	2.500	12.5232	12.4207	4.968	-	04/10/2024 10:15	MJR,NIC3
10	wg1905529-4 wg1905529	2.500	2.500	2.500	0.1720	0.1315	0.053	-	04/10/2024 10:18	MJR,NIC3
11	Xwg1905529-2 wg1905529	2.500	2.500	2.500	4.9816	4.9170	1.967	-	04/10/2024 10:21	MJR,NIC3
12	I2418048-01 wg1905529	2.500	2.500	2.500	0.1095	0.0693	0.028	-	04/10/2024 10:25	MJR,NIC3
13	Check STD(5ug/L)	2.500	2.500	2.500	12.8356	12.7315	5.093	101.9	04/10/2024 10:28	MJR,NIC3
14	Check Blank	2.500	2.500	2.500	0.1189	0.0787	0.031	-	04/10/2024 10:31	MJR,NIC3
15	I2418135-01 wg1905529	2.500	2.500	2.500	0.1349	0.0946	0.038	-	04/10/2024 11:06	MJR,NIC3
16	I2418135-02 wg1905529	2.500	2.500	2.500	0.1248	0.0846	0.034	-	04/10/2024 11:09	MJR,NIC3
17	I2418149-02 wg1905529	2.500	2.500	2.500	0.1684	0.1279	0.051	-	04/10/2024 11:13	MJR,NIC3
18	I2418149-05 wg1905529	2.500	2.500	2.500	0.1743	0.1338	0.054	-	04/10/2024 11:16	MJR,NIC3
19	I2418149-06 wg1905529	2.500	2.500	2.500	0.1528	0.1124	0.045	-	04/10/2024 11:19	MJR,NIC3
20	I2418235-03 wg1905529	2.500	2.500	2.500	0.0977	0.0576	0.023	-	04/10/2024 11:23	MJR,NIC3
21	wg1906796-1 wg1906796	2.500	2.500	2.500	0.2795	0.2385	0.095	-	04/10/2024 11:46	MJR,NIC3
22	wg1906796-2 wg1906796	2.500	2.500	2.500	2.6363	2.5834	1.033	-	04/10/2024 11:49	MJR,NIC3
23	L2418987-01 wg1906796	2.500	2.500	2.500	0.3291	0.2878	0.115	-	04/10/2024 11:52	MJR,NIC3
24	wg1906796-3 wg1906796	2.500	2.500	2.500	12.3635	12.2618	4.905	-	04/10/2024 11:56	MJR,NIC3
25	Check STD(5ug/L)	2.500	2.500	2.500	12.8011	12.6972	5.079	101.6	04/10/2024 11:59	MJR,NIC3
26	Check Blank	2.500	2.500	2.500	0.1113	0.0711	0.028	-	04/10/2024 12:02	MJR,NIC3
27	wg1906796-4 wg1906796	2.500	2.500	2.500	0.3356	0.2943	0.118	-	04/10/2024 12:06	MJR,NIC3
28	L2418987-02 wg1906796	2.500	2.500	2.500	0.3086	0.2674	0.107	-	04/10/2024 12:09	MJR,NIC3
29	I2417537-28 WG1904830	2.500	2.500	2.500	0.2124	0.1717	0.069	-	04/10/2024 13:05	MJR,NIC3
30	WG1904830-5 WG1904830	2.500	2.500	2.500	12.4893	12.3870	4.955	-	04/10/2024 13:08	MJR,NIC3
31	WG1904830-6 WG1904830	2.500	2.500	2.500	0.3141	0.2729	0.109	-	04/10/2024 13:12	MJR,NIC3
32	I2417579-11 WG1904830	2.500	2.500	2.500	0.4490	0.4071	0.163	-	04/10/2024 13:15	MJR,NIC3
33	I2417579-24 WG1904830	2.500	2.500	2.500	0.5615	0.5191	0.208	-	04/10/2024 13:18	MJR,NIC3
34	I2418220-01 WG1904830	2.500	2.500	2.500	3.3576	3.3011	1.320	-	04/10/2024 13:22	MJR,NIC3
35	I2418220-02 WG1904830	2.500	2.500	2.500	0.6709	0.6279	0.251	-	04/10/2024 13:25	MJR,NIC3
36	I2418223-01 WG1904830	2.500	2.500	2.500	0.7673	0.7238	0.290	-	04/10/2024 13:28	MJR,NIC3
37	Check STD(5ug/L)	2.500	2.500	2.500	12.8811	12.7768	5.111	102.2	04/10/2024 13:31	MJR,NIC3
38	Check Blank	2.500	2.500	2.500	0.1121	0.0719	0.029	-	04/10/2024 13:35	MJR,NIC3

NIC NIPPON INSTRUMENTS CORPORATION

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
39	I2418223-02 WG1904830	2.500	2.500	2.500	0.7573	0.7139	0.286	-	04/10/2024 13:38	MJR,NIC3
40	I2418224-01 WG1904830	2.500	2.500	2.500	0.6571	0.6142	0.246	-	04/10/2024 13:41	MJR,NIC3
41	I2418224-02 WG1904830	2.500	2.500	2.500	0.4060	0.3643	0.146	-	04/10/2024 13:53	MJR,NIC3
42	I2418224-03 WG1904830	2.500	2.500	2.500	0.3133	0.2721	0.109	-	04/10/2024 13:57	MJR,NIC3
43	WG1905176-1 WG1905176	2.500	2.500	2.500	0.0922	0.0521	0.021	-	04/10/2024 14:00	MJR,NIC3
44	WG1905176-2 WG1905176	2.500	2.500	2.500	2.6393	2.5864	1.035	-	04/10/2024 14:03	MJR,NIC3
45	I2418220-01 WG1905176	2.500	2.500	2.500	0.9523	0.9079	0.363	-	04/10/2024 14:07	MJR,NIC3
46	WG1905176-3 WG1905176	2.500	2.500	2.500	13.7320	13.6234	5.449	-	04/10/2024 14:10	MJR,NIC3
47	WG1905176-4 WG1905176	2.500	2.500	2.500	0.9618	0.9174	0.367	-	04/10/2024 14:13	MJR,NIC3
48	I2418220-02 WG1905176	2.500	2.500	2.500	0.1387	0.0984	0.039	-	04/10/2024 14:16	MJR,NIC3
49	Check STD(5ug/L)	2.500	2.500	2.500	12.8262	12.7222	5.089	101.8	04/10/2024 14:20	MJR,NIC3
50	Check Blank	2.500	2.500	2.500	0.1129	0.0727	0.029	-	04/10/2024 14:23	MJR,NIC3
51	I2418223-01 WG1905176	2.500	2.500	2.500	0.1024	0.0623	0.025	-	04/10/2024 14:26	MJR,NIC3
52	I2418223-02 WG1905176	2.500	2.500	2.500	0.0835	0.0435	0.017	-	04/10/2024 14:30	MJR,NIC3
53	wg1905238-1 wg1905238	2.500	2.500	2.500	0.1184	0.0782	0.031	-	04/10/2024 14:33	MJR,NIC3
54	wg1905238-2 wg1905238	2.500	2.500	2.500	2.7277	2.6744	1.070	-	04/10/2024 14:36	MJR,NIC3
55	I2418149-03 wg1905238	2.500	2.500	2.500	0.2117	0.1710	0.068	-	04/10/2024 14:40	MJR,NIC3
56	wg1905238-3 wg1905238	2.500	2.500	2.500	11.3887	11.2919	4.517	-	04/10/2024 14:43	MJR,NIC3
57	wg1905238-4 wg1905238	2.500	2.500	2.500	0.1749	0.1344	0.054	-	04/10/2024 14:46	MJR,NIC3
58	I2418149-04 wg1905238	2.500	2.500	2.500	0.1954	0.1548	0.062	-	04/10/2024 14:49	MJR,NIC3
59	I2418235-04 wg1905529	2.500	2.500	2.500	0.1106	0.0704	0.028	-	04/10/2024 14:53	MJR,NIC3
60	I2418235-05 wg1905529	2.500	2.500	2.500	0.0996	0.0595	0.024	-	04/10/2024 14:56	MJR,NIC3
61	Check STD(5ug/L)	2.500	2.500	2.500	12.7924	12.6885	5.075	101.5	04/10/2024 14:59	MJR,NIC3
62	Check Blank	2.500	2.500	2.500	0.1109	0.0707	0.028	-	04/10/2024 15:03	MJR,NIC3
63	I2418235-06 wg1905529	2.500	2.500	2.500	0.1083	0.0681	0.027	-	04/10/2024 15:09	MJR,NIC3
64	wg1906878-1 wg1906878	2.500	2.500	2.500	0.1066	0.0664	0.027	-	04/10/2024 15:13	MJR,NIC3
65	wg1906878-2 wg1906878	2.500	2.500	2.500	2.1929	2.1423	0.857	-	04/10/2024 15:16	MJR,NIC3
66	I2417074-02 wg1906878	2.500	2.500	2.500	0.1230	0.0828	0.033	-	04/10/2024 15:19	MJR,NIC3
67	wg1906878-3 wg1906878	2.500	2.500	2.500	11.8094	11.7105	4.684	-	04/10/2024 15:22	MJR,NIC3
68	wg1906878-4 wg1906878	2.500	2.500	2.500	11.4827	11.3854	4.554	-	04/10/2024 15:26	MJR,NIC3
69	I2418184-07 wg1906878	2.500	2.500	2.500	0.1532	0.1128	0.045	-	04/10/2024 15:29	MJR,NIC3
70	Check STD(5ug/L)	2.500	2.500	2.500	12.7542	12.6505	5.060	101.2	04/10/2024 15:36	MJR,NIC3

NIC NIPPON INSTRUMENTS CORPORATION

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
71	Check Blank	2.500	2.500	2.500	0.1121	0.0719	0.029	-	04/10/2024 15:39	MJR,NIC3
72	WG1906027-1 WG1906027	2.500	2.500	2.500	0.1006	0.0605	0.024	-	04/10/2024 16:12	MJR,NIC3
73	WG1906027-2 WG1906027	2.500	2.500	2.500	4.9707	4.9061	1.962	-	04/10/2024 16:15	MJR,NIC3
74	I2418120-03 WG1906027	2.500	2.500	2.500	0.0944	0.0543	0.022	-	04/10/2024 16:18	MJR,NIC3
75	WG1906027-3 WG1906027	2.500	2.500	2.500	11.7901	11.6913	4.677	-	04/10/2024 16:22	MJR,NIC3
76	WG1906027-4 WG1906027	2.500	2.500	2.500	0.1226	0.0824	0.033	-	04/10/2024 16:25	MJR,NIC3
77	I2418480-01 WG1906027	2.500	2.500	2.500	0.1308	0.0905	0.036	-	04/10/2024 16:28	MJR,NIC3
78	I2418480-02 WG1906027	2.500	2.500	2.500	0.0934	0.0533	0.021	-	04/10/2024 16:31	MJR,NIC3
79	wg1906327-1 wg1906327	2.500	2.500	2.500	0.1146	0.0744	0.030	-	04/10/2024 16:35	MJR,NIC3
80	wg1906327-2 wg1906327	2.500	2.500	2.500	2.6818	2.6287	1.051	-	04/10/2024 16:38	MJR,NIC3
81	wg1906327-3 wg1906327	2.500	2.500	2.500	2.9873	2.9327	1.173	-	04/10/2024 16:41	MJR,NIC3
82	Check STD(5ug/L)	2.500	2.500	2.500	12.6095	12.5065	5.003	100.1	04/10/2024 16:45	MJR,NIC3
83	Check Blank	2.500	2.500	2.500	0.1045	0.0644	0.026	-	04/10/2024 16:48	MJR,NIC3
84	I2418098-01 wg1906327	2.500	2.500	2.500	0.6685	0.6255	0.250	-	04/10/2024 16:51	MJR,NIC3
85	I2418098-02 wg1906327	2.500	2.500	2.500	0.3826	0.3411	0.136	-	04/10/2024 16:55	MJR,NIC3
86	Xwg1906327-3 wg1906327	2.500	2.500	2.500	3.0820	3.0269	1.211	-	04/10/2024 16:58	DJR,NIC3
87	Check STD(5ug/L)	2.500	2.500	2.500	12.7098	12.6063	5.043	100.9	04/10/2024 17:01	DJR,NIC3
88	Check Blank	2.500	2.500	2.500	0.1088	0.0686	0.027	-	04/10/2024 17:05	DJR,NIC3
89	wg1905594-3 wg1905594	2.500	2.500	2.500	11.9351	11.8355	4.734	-	04/10/2024 17:08	DJR,NIC3
90	wg1905594-4 wg1905594	2.500	2.500	2.500	0.5856	0.5430	0.217	-	04/10/2024 17:11	DJR,NIC3
91	I2417537-37 wg1905594	2.500	2.500	2.500	0.3822	0.3407	0.136	-	04/10/2024 17:14	DJR,NIC3
92	I2417537-40 wg1905594	2.500	2.500	2.500	0.1504	0.1100	0.044	-	04/10/2024 17:18	DJR,NIC3
93	I2418293-01 wg1905594	2.500	2.500	2.500	0.1209	0.0807	0.032	-	04/10/2024 17:21	DJR,NIC3
94	Check STD(5ug/L)	2.500	2.500	2.500	12.7926	12.6887	5.075	101.5	04/10/2024 17:24	DJR,NIC3
95	Check Blank	2.500	2.500	2.500	0.1115	0.0713	0.029	-	04/10/2024 17:28	DJR,NIC3
96	I2418298-01 wg1905594	2.500	2.500	2.500	0.8937	0.8496	0.340	-	04/10/2024 17:32	DJR,NIC3
97	I2418305-01 wg1905594	2.500	2.500	2.500	0.2429	0.2021	0.081	-	04/10/2024 17:35	DJR,NIC3
98	I2418363-01 wg1905594	2.500	2.500	2.500	0.1671	0.1266	0.051	-	04/10/2024 17:39	DJR,NIC3
99	I2418386-01 wg1905594	2.500	2.500	2.500	0.3346	0.2933	0.117	-	04/10/2024 17:42	DJR,NIC3
100	wg1905594-1 wg1905594	2.500	2.500	2.500	0.1176	0.0774	0.031	-	04/10/2024 17:45	DJR,NIC3
101	wg1905594-2 wg1905594	2.500	2.500	2.500	2.6985	2.6453	1.058	-	04/10/2024 17:49	DJR,NIC3
102	I2418189-01 wg1905594	2.500	2.500	2.500	0.5826	0.5401	0.216	-	04/10/2024 17:52	DJR,NIC3

NIC NIPPON INSTRUMENTS CORPORATION

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
103	wg1905416-1 wg1905416	2.500	2.500	2.500	0.0916	0.0515	0.021	-	04/10/2024 17:55	DJR,NIC3
104	wg1905416-2 wg1905416	2.500	2.500	2.500	2.6704	2.6174	1.047	-	04/10/2024 17:59	DJR,NIC3
105	I2418016-01 wg1905416	2.500	2.500	2.500	0.1821	0.1416	0.057	-	04/10/2024 18:02	DJR,NIC3
106	Check STD(5ug/L)	2.500	2.500	2.500	12.6866	12.5833	5.033	100.7	04/10/2024 18:05	DJR,NIC3
107	Check Blank	2.500	2.500	2.500	0.1056	0.0655	0.026	-	04/10/2024 18:09	DJR,NIC3
108	wg1905416-3 wg1905416	2.500	2.500	2.500	12.6773	12.5740	5.030	-	04/10/2024 18:12	DJR,NIC3
109	Xwg195416-4 wg195416	2.500	2.500	2.500	0.6426	0.5998	0.240	-	04/10/2024 18:16	DJR,NIC3
110	wg1905416-4 wg1905416	2.500	2.500	2.500	0.6373	0.5945	0.238	-	04/10/2024 18:23	DJR,NIC3
111	Check STD(5ug/L)	2.500	2.500	2.500	12.6412	12.5381	5.015	100.3	04/10/2024 18:26	DJR,NIC3
112	Check Blank	2.500	2.500	2.500	0.1087	0.0685	0.027	-	04/10/2024 18:29	DJR,NIC3
113	I2415144-01 wg1905251	2.500	2.500	2.500	0.1739	0.1334	0.053	-	04/10/2024 19:03	DJR,NIC3
114	I2418557-01 wg1905251	2.500	2.500	2.500	0.2523	0.2114	0.085	-	04/10/2024 19:07	DJR,NIC3
115	I2418557-02 wg1905251	2.500	2.500	2.500	0.1972	0.1566	0.063	-	04/10/2024 19:10	DJR,NIC3
116	I2418557-04 wg1905251	2.500	2.500	2.500	0.2036	0.1630	0.065	-	04/10/2024 19:13	DJR,NIC3
117	Check STD(5ug/L)	2.500	2.500	2.500	12.5855	12.4827	4.993	99.9	04/10/2024 19:17	DJR,NIC3
118	Check Blank	2.500	2.500	2.500	0.1070	0.0668	0.027	-	04/10/2024 19:20	DJR,NIC3
119	wg1905291-1 wg1905291	2.500	2.500	2.500	0.1010	0.0609	0.024	-	04/10/2024 20:49	DJR,NIC3
120	wg1905291-2 wg1905291	2.500	2.500	2.500	2.6994	2.6462	1.058	-	04/10/2024 20:52	DJR,NIC3
121	I2418559-01 wg1905291	2.500	2.500	2.500	0.1274	0.0871	0.035	-	04/10/2024 20:56	DJR,NIC3
122	wg1905291-3 wg1905291	2.500	2.500	2.500	12.9982	12.8933	5.157	-	04/10/2024 20:59	DJR,NIC3
123	wg1905291-4 wg1905291	2.500	2.500	2.500	13.0089	12.9039	5.162	-	04/10/2024 21:02	DJR,NIC3
124	I2418559-02 wg1905291	2.500	2.500	2.500	1.0525	1.0076	0.403	-	04/10/2024 21:06	DJR,NIC3
125	I2418559-03 wg1905291	2.500	2.500	2.500	0.1069	0.0667	0.027	-	04/10/2024 21:09	DJR,NIC3
126	xCheck STD(5ug/L)	2.500	2.500	2.500	10.7755	10.6818	4.273	-	04/10/2024 21:20	DJR,NIC3
127	xCheck Blank	2.500	2.500	2.500	0.1211	0.0809	0.032	-	04/10/2024 21:23	DJR,NIC3
128	Check STD(5ug/L)	2.500	2.500	2.500	10.7401	10.6465	4.259	85.2	04/10/2024 21:28	DJR,NIC3
129	Check Blank	2.500	2.500	2.500	0.1237	0.0835	0.033	-	04/10/2024 21:31	DJR,NIC3
130	Check STD(5ug/L)	2.500	2.500	2.500	10.4959	10.4036	4.161	83.2	04/10/2024 23:32	DJR,NIC3
131	Check Blank	2.500	2.500	2.500	0.1199	0.0797	0.032	-	04/10/2024 23:35	DJR,NIC3
132	wg1906563-1 wg1906563	2.500	2.500	2.500	0.0916	0.0515	0.021	-	04/10/2024 23:39	DJR,NIC3
133	wg1906563-2 wg1906563	2.500	2.500	2.500	2.5718	2.5193	1.008	-	04/10/2024 23:42	DJR,NIC3
134	L2419157-01 wg1906563	2.500	2.500	2.500	0.9233	0.8790	0.352	-	04/10/2024 23:45	DJR,NIC3

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
135	wg1906563-3 wg1906563	2.500	2.500	2.500	13.6758	13.5675	5.427	-	04/10/2024 23:49	DJR,NIC3
136	wg1906563-4 wg1906563	2.500	2.500	2.500	0.9723	0.9278	0.371	-	04/10/2024 23:52	DJR,NIC3
137	L2419157-02 wg1906563	2.500	2.500	2.500	0.2989	0.2578	0.103	-	04/10/2024 23:55	DJR,NIC3
138	Check STD(5ug/L)	2.500	2.500	2.500	10.7059	10.6125	4.245	84.9	04/10/2024 23:59	DJR,NIC3
139	Check Blank	2.500	2.500	2.500	0.1235	0.0833	0.033	-	04/11/2024 00:02	DJR,NIC3
140	Check STD(5ug/L)	2.500	2.500	2.500	10.7922	10.6984	4.279	85.6	04/11/2024 00:05	DJR,NIC3
141	Check Blank	2.500	2.500	2.500	0.1235	0.0833	0.033	-	04/11/2024 00:08	DJR,NIC3

Title :
Date : 4/15/2024
Name :

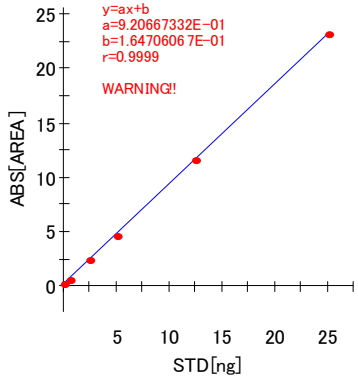
Method

STD
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

SMP
HONH3Cl : 0.0mL
(1+1)H2SO4 : 0.0mL
10w/v% SnCl2 : 0.3mL

Measurement Time(sec) : 120sec

Calib



STD

No.	STD [ug/L]	SVOL [mL]	CVOL [mL]	DVOL [mL]	STD [ng]	AREA [ON]	MEAS [ng]	Dev [%]	M. TIME	Note
1	0.000	2.500	2.500	2.500	0.000	0.2963	0.1429	-	04/15/2024 11:18	MJR,NIC4
2	0.200	2.500	2.500	2.500	0.500	0.5960	0.4685	6.3	04/15/2024 11:21	MJR,NIC4
3	1.000	2.500	2.500	2.500	2.500	2.4737	2.5080	0.3	04/15/2024 11:25	MJR,NIC4
4	2.000	2.500	2.500	2.500	5.000	4.7146	4.9420	1.2	04/15/2024 11:28	MJR,NIC4
5	5.000	2.500	2.500	2.500	12.500	11.5391	12.3545	1.2	04/15/2024 11:31	MJR,NIC4
6	10.000	2.500	2.500	2.500	25.000	23.2589	25.0842	0.3	04/15/2024 11:35	MJR,NIC4

SMP

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
1	ICV	2.500	2.500	2.500	7.3873	7.8450	3.138	-	04/15/2024 11:43	MJR,NIC4
2	ICB	2.500	2.500	2.500	0.2928	0.1391	0.056	-	04/15/2024 11:57	MJR,NIC4
3	0.2 PPB	2.500	2.500	2.500	0.6061	0.4794	0.192	-	04/15/2024 12:00	MJR,NIC4
4	wg1906917-1 wg1906917	2.500	2.500	2.500	0.2255	0.0660	0.026	-	04/15/2024 12:24	MJR,NIC4
5	wg1906917-2 wg1906917	2.500	2.500	2.500	2.5809	2.6244	1.050	-	04/15/2024 12:27	MJR,NIC4
6	L2418863-02 wg1906917	2.500	2.500	2.500	0.2409	0.0828	0.033	-	04/15/2024 12:31	MJR,NIC4

NIC NIPPON INSTRUMENTS CORPORATION

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
7	wg1906917-3 wg1906917	2.500	2.500	2.500	11.7309	12.5628	5.025	-	04/15/2024 12:34	MJR,NIC4
8	wg1906917-4 wg1906917	2.500	2.500	2.500	0.1906	0.0281	0.011	-	04/15/2024 12:37	MJR,NIC4
9	L2418863-04 wg1906917	2.500	2.500	2.500	0.1929	0.0306	0.012	-	04/15/2024 12:41	MJR,NIC4
10	L2418863-06 wg1906917	2.500	2.500	2.500	0.2312	0.0722	0.029	-	04/15/2024 12:44	MJR,NIC4
11	L2418863-07 wg1906917	2.500	2.500	2.500	0.2345	0.0758	0.030	-	04/15/2024 12:47	MJR,NIC4
12	L2418863-10 wg1906917	2.500	2.500	2.500	0.2469	0.0893	0.036	-	04/15/2024 12:50	MJR,NIC4
13	Check STD(5ug/L)	2.500	2.500	2.500	11.6305	12.4538	4.982	99.6	04/15/2024 12:54	MJR,NIC4
14	Check Blank	2.500	2.500	2.500	0.2982	0.1450	0.058	-	04/15/2024 12:57	MJR,NIC4
15	L2418863-12 wg1906917	2.500	2.500	2.500	0.2538	0.0968	0.039	-	04/15/2024 13:04	MJR,NIC4
16	L2418863-14 wg1906917	2.500	2.500	2.500	0.2975	0.1442	0.058	-	04/15/2024 13:07	MJR,NIC4
17	L2418863-16 wg1906917	2.500	2.500	2.500	0.2772	0.1222	0.049	-	04/15/2024 13:10	MJR,NIC4
18	L2418863-18 wg1906917	2.500	2.500	2.500	0.2009	0.0393	0.016	-	04/15/2024 13:13	MJR,NIC4
19	L2418863-20 wg1906917	2.500	2.500	2.500	0.2051	0.0439	0.018	-	04/15/2024 13:17	MJR,NIC4
20	L2418863-22 wg1906917	2.500	2.500	2.500	0.2190	0.0590	0.024	-	04/15/2024 13:20	MJR,NIC4
21	L2418863-24 wg1906917	2.500	2.500	2.500	0.2543	0.0973	0.039	-	04/15/2024 13:23	MJR,NIC4
22	L2418863-26 wg1906917	2.500	2.500	2.500	0.2784	0.1235	0.049	-	04/15/2024 13:27	MJR,NIC4
23	L2418863-28 wg1906917	2.500	2.500	2.500	0.2756	0.1204	0.048	-	04/15/2024 13:30	MJR,NIC4
24	L2418863-30 wg1906917	2.500	2.500	2.500	0.2151	0.0547	0.022	-	04/15/2024 13:33	MJR,NIC4
25	Check STD(5ug/L)	2.500	2.500	2.500	11.6483	12.4731	4.989	99.8	04/15/2024 13:37	MJR,NIC4
26	Check Blank	2.500	2.500	2.500	0.2910	0.1372	0.055	-	04/15/2024 13:40	MJR,NIC4
27	L2418863-32 wg1906917	2.500	2.500	2.500	0.2064	0.0453	0.018	-	04/15/2024 13:43	MJR,NIC4
28	L2418863-34 wg1906917	2.500	2.500	2.500	0.2060	0.0449	0.018	-	04/15/2024 13:47	MJR,NIC4
29	L2418863-36 wg1906917	2.500	2.500	2.500	0.2098	0.0490	0.020	-	04/15/2024 13:50	MJR,NIC4
30	L2417777-01 WG1906362	2.500	2.500	2.500	0.2108	0.0501	0.020	-	04/15/2024 13:53	MJR,NIC4
31	L2417777-03 WG1906362	2.500	2.500	2.500	0.2165	0.0563	0.023	-	04/15/2024 13:56	MJR,NIC4
32	L2418964-01 WG1906362	2.500	2.500	2.500	0.2107	0.0500	0.020	-	04/15/2024 14:00	MJR,NIC4
33	Check STD(5ug/L)	2.500	2.500	2.500	11.6913	12.5198	5.008	100.2	04/15/2024 14:03	MJR,NIC4
34	Check Blank	2.500	2.500	2.500	0.2868	0.1326	0.053	-	04/15/2024 14:06	MJR,NIC4
35	WG1907049-1 WG1907049	2.500	2.500	2.500	0.1602	-0.0049	-0.002	-	04/15/2024 14:36	MJR,NIC4
36	WG1907049-2 WG1907049	2.500	2.500	2.500	2.3614	2.3860	0.954	-	04/15/2024 14:39	MJR,NIC4
37	I2419228-01 WG1907049	2.500	2.500	2.500	0.2646	0.1085	0.043	-	04/15/2024 14:42	MJR,NIC4
38	WG1907049-3 WG1907049	2.500	2.500	2.500	11.3976	12.2008	4.880	-	04/15/2024 14:46	MJR,NIC4

NIC NIPPON INSTRUMENTS CORPORATION

No.	NAME	SVOL [mL]	CVOL [mL]	DVOL [mL]	AREA [ON]	MEAS [ng]	CONC [ug/L]	Recovery [%]	M. TIME	Note
39	WG1907049-4 WG1907049	2.500	2.500	2.500	0.2698	0.1141	0.046	-	04/15/2024 14:49	MJR,NIC4
40	I2419248-01 WG1907049	2.500	2.500	2.500	0.2330	0.0742	0.030	-	04/15/2024 14:52	MJR,NIC4
41	wg1908117-1 wg1908117	2.500	2.500	2.500	0.3368	0.1869	0.075	-	04/15/2024 15:34	MJR,NIC4
42	wg1908117-2 wg1908117	2.500	2.500	2.500	2.5541	2.5953	1.038	-	04/15/2024 15:37	MJR,NIC4
43	L2419308-01 wg1908117	2.500	2.500	2.500	0.3027	0.1499	0.060	-	04/15/2024 15:40	MJR,NIC4
44	wg1908117-3 wg1908117	2.500	2.500	2.500	11.4472	12.2547	4.902	-	04/15/2024 15:44	MJR,NIC4
45	Check STD(5ug/L)	2.500	2.500	2.500	11.5553	12.3721	4.949	99.0	04/15/2024 15:47	MJR,NIC4
46	Check Blank	2.500	2.500	2.500	0.2848	0.1304	0.052	-	04/15/2024 15:50	MJR,NIC4
47	wg1908117-4 wg1908117	2.500	2.500	2.500	0.2784	0.1235	0.049	-	04/15/2024 15:53	MJR,NIC4
48	L2419308-02 wg1908117	2.500	2.500	2.500	0.2655	0.1095	0.044	-	04/15/2024 15:57	MJR,NIC4
49	L2419308-03 wg1908117	2.500	2.500	2.500	0.1708	0.0066	0.003	-	04/15/2024 16:00	MJR,NIC4
50	L2419308-04 wg1908117	2.500	2.500	2.500	0.1712	0.0071	0.003	-	04/15/2024 16:03	MJR,NIC4
51	L2419308-05 wg1908117	2.500	2.500	2.500	0.1727	0.0087	0.003	-	04/15/2024 16:07	MJR,NIC4
52	L2419308-06 wg1908117	2.500	2.500	2.500	0.2037	0.0424	0.017	-	04/15/2024 16:10	MJR,NIC4
53	L2419308-07 wg1908117	2.500	2.500	2.500	0.2200	0.0601	0.024	-	04/15/2024 16:13	MJR,NIC4
54	L2419315-01 wg1908117	2.500	2.500	2.500	0.2512	0.0939	0.038	-	04/15/2024 16:17	MJR,NIC4
55	WG1906772-1 WG1906772	2.500	2.500	2.500	0.5542	0.4231	0.169	-	04/15/2024 16:20	MJR,NIC4
56	WG1906772-2 WG1906772	2.500	2.500	2.500	2.9771	3.0547	1.222	-	04/15/2024 16:23	MJR,NIC4
57	Check STD(5ug/L)	2.500	2.500	2.500	11.6375	12.4614	4.985	99.7	04/15/2024 16:27	MJR,NIC4
58	Check Blank	2.500	2.500	2.500	0.2887	0.1347	0.054	-	04/15/2024 16:32	MJR,NIC4
59	L2419308-08 WG1906772	2.500	2.500	2.500	0.4823	0.3450	0.138	-	04/15/2024 16:36	MJR,NIC4
60	WG1906772-3 WG1906772	2.500	2.500	2.500	12.7417	13.6607	5.464	-	04/15/2024 16:39	MJR,NIC4
61	WG1906772-4 WG1906772	2.500	2.500	2.500	0.4849	0.3478	0.139	-	04/15/2024 16:42	MJR,NIC4
62	WG1906875-1 WG1906875	2.500	2.500	2.500	0.3220	0.1708	0.068	-	04/15/2024 16:46	MJR,NIC4
63	WG1906875-2 WG1906875	2.500	2.500	2.500	2.8817	2.9511	1.180	-	04/15/2024 16:49	MJR,NIC4
64	L2417074-02 WG1906875	2.500	2.500	2.500	0.6406	0.5169	0.207	-	04/15/2024 16:52	MJR,NIC4
65	WG1906875-3 WG1906875	2.500	2.500	2.500	12.6855	13.5997	5.440	-	04/15/2024 16:55	MJR,NIC4
66	WG1906875-4 WG1906875	2.500	2.500	2.500	12.9042	13.8372	5.535	-	04/15/2024 16:59	MJR,NIC4
67	Check STD(5ug/L)	2.500	2.500	2.500	11.4665	12.2757	4.910	98.2	04/15/2024 17:08	MJR,NIC4
68	Check Blank	2.500	2.500	2.500	0.2974	0.1441	0.058	-	04/15/2024 17:11	MJR,NIC4

MERCURY TRUE VALUE CRITERIA

ICV	3 ug/l
LCSW	1 ug/l
MS	1 ug/l
CCV	5 ug/l

As of 6/1/13, Mercury True Value criteria is as follows:

ICV	3 ug/l
LCSW	1 ug/l
MS(aq)	5 ug/l
MS(soil)	1 ug/l
CCV	10 ug/l

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D102-540
Certificate Issue Date: June 22, 2018
Expiration Date: January 31, 2022
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 030512.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8160	6.36	3960 - 12400	4080 - 12200
Antimony	120	60.9	9.42	0.822 - 121	12.0 - 166
Arsenic	144	135	5.08	112 - 158	94.6 - 176
Barium	469	443	6.77	366 - 521	332 - 554
Beryllium	207	197	5.86	164 - 229	148 - 246
Boron	213	174	12.6	127 - 221	105 - 244
Cadmium	224	204	6.65	169 - 240	153 - 256
Calcium	5190	4830	9.12	3950 - 5700	3510 - 6150
Chromium	138	132	8.56	109 - 155	92.2 - 171
Cobalt	182	179	7.93	151 - 207	134 - 224
Copper	191	184	6.72	155 - 213	138 - 230
Iron	15000	14400	10.7	8770 - 20000	5120 - 23600
Lead	225	216	7.72	178 - 254	159 - 274
Magnesium	2570	2340	6.13	1780 - 2900	1460 - 3230
Manganese	331	323	6.71	266 - 380	242 - 404
Mercury	16.8	13.2	16.0	8.64 - 17.7	7.89 - 18.5
Molybdenum	193	175	2.39	141 - 209	125 - 226
Nickel	163	152	5.95	126 - 178	106 - 197
Potassium	2420	2050	6.31	1440 - 2660	1210 - 2890
Selenium	81.9	74.9	4.13	59.3 - 90.5	47.0 - 103
Silver	57.6	53.9	9.00	43.0 - 64.8	37.8 - 70.0
Sodium	161	149	12.1	111 - 188	57.7 - 241
Strontium	100	96.2	4.04	78.1 - 114	69.0 - 123
Thallium	253	232	3.54	188 - 276	168 - 296

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Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Tin	146	134	10.8	106 - 163	79.5 - 189
Titanium	449	340	7.20	70.2 - 609	44.9 - 711
Uranium	114	113	7.10	85.5 - 140	71.9 - 153
Vanadium	180	172	8.85	137 - 207	126 - 218
Zinc	217	211	6.58	171 - 250	147 - 274

ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	8160	80.8	138	-	-
Antimony	120	60.9	50.8	135	-	-
Arsenic	144	135	93.8	184	-	-
Barium	469	443	94.5	158	-	-
Beryllium	207	197	95.0	148	-	-
Boron	213	174	81.8	107	-	-
Cadmium	224	204	91.3	199	-	-
Calcium	5190	4830	93.0	122	-	-
Chromium	138	132	95.5	172	-	-
Cobalt	182	179	98.4	140	-	-
Copper	191	184	96.3	183	-	-
Iron	15000	14400	95.6	133	-	-
Lead	225	216	96.2	204	-	-
Magnesium	2570	2340	91.2	122	-	-
Manganese	331	323	97.6	147	-	-
Mercury	16.8	13.2	78.3	128	-	-
Molybdenum	193	175	90.8	143	-	-
Nickel	163	152	93.1	185	-	-
Potassium	2420	2050	84.7	121	-	-
Selenium	81.9	74.9	91.5	163	-	-

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Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Silver	57.6	53.9	93.6	150	-	-
Sodium	161	149	92.8	105	-	-
Strontium	100	96.2	96.2	90	-	-
Thallium	253	232	91.6	147	-	-
Tin	146	134	92.0	100	-	-
Titanium	449	340	75.6	93	-	-
Uranium	114	113	98.8	35	-	-
Vanadium	180	172	95.4	139	-	-
Zinc	217	211	97.0	180	-	-

1. The **Certified Values** are the actual "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALs™)**are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **PT Data/Traceability** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. This product is traceable to the lot numbers of its starting materials. All gravimetric and volumetric measurements related to its manufacture are traceable to NIST through an unbroken chain of comparisons.
Traceability Recovery (%) = [(% recovery certified standard)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. For additional information on this product such as intended use, instructions for use, level of homogeneity, and safety information, please refer to the provided Instruction Sheet

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller

Quality Officer

Matthew Seebeck

ISO/IEC GUIDE 34:2009 ACCREDITED REFERENCE MATERIAL PRODUCER CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005 ACCREDITED CHEMICAL TESTING LABORATORY CERTIFICATE NO. 1539.02

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Reference Material

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D105-540
Certificate Issue Date: March 19, 2019
Expiration Date: October 12, 2022
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 030512.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8800	8.32	4600 - 13000	4470 - 13100
Antimony	282	147	7.70	6.17 - 289	28.2 - 366
Arsenic	155	143	6.34	119 - 168	100 - 186
Barium	439	415	5.37	343 - 488	311 - 519
Beryllium	192	179	2.78	149 - 210	134 - 224
Boron	216	160	7.08	113 - 208	96.1 - 238
Cadmium	61.5	56.2	0.528	46.6 - 65.9	42.2 - 70.3
Calcium	5190	4960	6.64	4090 - 5840	3610 - 6310
Chromium	104	101	4.75	83.2 - 118	70.5 - 131
Cobalt	196	189	0.500	158 - 219	141 - 236
Copper	65.0	63.1	2.65	53.1 - 73.1	47.3 - 78.9
Iron	15000	15700	8.94	10100 - 21300	6000 - 25400
Lead	126	125	4.77	103 - 146	89.3 - 160
Magnesium	2570	2410	6.26	1860 - 2970	1520 - 3310
Manganese	387	382	5.37	315 - 449	290 - 474
Mercury	7.76	7.61	13.7	5.53 - 9.69	4.57 - 10.7
Molybdenum	120	107	0.500	86.0 - 128	75.5 - 139
Nickel	117	108	0.514	89.5 - 127	75.7 - 141
Potassium	2420	2110	5.62	1500 - 2720	1260 - 2960
Selenium	84.6	77.9	7.10	61.8 - 94.0	49.2 - 107
Silver	34.6	34.3	8.34	27.8 - 40.9	23.6 - 45.1
Sodium	161	145	6.72	106 - 183	54.3 - 235
Strontium	104	104	3.95	85.1 - 123	74.8 - 133
Thallium	123	113	0.500	91.3 - 134	77.1 - 149

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▪ Certificate of Analysis ▪

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Tin	118	107	0.500	83.5 - 130	61.2 - 152
Titanium	512	421	5.80	114 - 728	0.00 - 854
Uranium	103	104	6.18	79.1 - 128	71.9 - 135
Vanadium	87.3	83.7	8.55	66.8 - 101	54.2 - 113
Zinc	251	240	3.98	194 - 285	168 - 312

ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	8800	87.1	193	-	-
Antimony	282	147	52.3	216	-	-
Arsenic	155	143	92.5	240	-	-
Barium	439	415	94.6	222	-	-
Beryllium	192	179	93.4	220	-	-
Boron	216	160	74.2	152	-	-
Cadmium	61.5	56.2	91.5	239	-	-
Calcium	5190	4960	95.6	175	-	-
Chromium	104	101	96.8	237	-	-
Cobalt	196	189	96.2	215	-	-
Copper	65.0	63.1	97.1	237	-	-
Iron	15000	15700	105	195	-	-
Lead	126	125	99.0	243	-	-
Magnesium	2570	2410	93.9	177	-	-
Manganese	387	382	98.7	215	-	-
Mercury	7.76	7.61	98.0	157	-	-
Molybdenum	120	107	89.4	216	-	-
Nickel	117	108	92.5	235	-	-
Potassium	2420	2110	87.2	181	-	-
Selenium	84.6	77.9	92.1	231	-	-

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Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Silver	34.6	34.3	99.3	216	-	-
Sodium	161	145	89.8	166	-	-
Strontium	104	104	99.9	148	-	-
Thallium	123	113	91.8	215	-	-
Tin	118	107	90.4	164	-	-
Titanium	512	421	82.2	157	-	-
Uranium	103	104	101	61	-	-
Vanadium	87.3	83.7	95.9	214	-	-
Zinc	251	240	95.5	234	-	-

1. The **Certified Values** are the actual "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this reference material during the period of validity of this certificate.

2. The **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALs™)**are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **PT Data/Traceability** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. This product is traceable to the lot numbers of its starting materials. All gravimetric and volumetric measurements related to its manufacture are traceable to NIST through an unbroken chain of comparisons.
Traceability Recovery (%) = [(% recovery certified standard)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. For additional information on this product such as intended use, instructions for use, level of homogeneity, and safety information, please refer to the provided Instruction Sheet

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller

Brian Miller

Quality Officer

Matthew Seebeck

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Certified Reference Material

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D109-540
Certificate Issue Date: March 24, 2020
Expiration Date: October 03, 2023
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 090119.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value[7]	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8130	2.54	3920 - 12300	4060 - 12200
Antimony	259	134	5.03	4.56 - 264	25.9 - 335
Arsenic	171	156	3.38	129 - 183	109 - 203
Barium	253	239	4.81	197 - 280	179 - 298
Beryllium	179	169	6.59	141 - 198	127 - 212
Boron	114	87.5	10.3	62.5 - 113	52.5 - 125
Cadmium	149	137	5.43	113 - 160	103 - 171
Calcium	5190	4760	3.48	3890 - 5640	3460 - 6070
Chromium	163	154	3.79	126 - 181	108 - 200
Cobalt	127	121	5.07	101 - 141	90.8 - 151
Copper	57.0	54.9	4.13	46.1 - 63.6	41.1 - 68.6
Iron	15000	14100	6.27	8470 - 19700	4920 - 23200
Lead	133	130	3.00	107 - 152	93.3 - 167
Magnesium	2570	2320	3.32	1760 - 2880	1440 - 3200
Manganese	277	269	2.67	221 - 317	199 - 340
Mercury	21.6	20.5	7.72	14.7 - 26.3	12.3 - 28.6
Molybdenum	108	95.4	2.61	76.4 - 114	66.9 - 124
Nickel	58.7	53.9	4.97	44.5 - 63.3	37.7 - 70.0
Potassium	2420	2020	3.06	1410 - 2630	1190 - 2850
Selenium	181	167	5.63	132 - 201	113 - 221
Silver	35.5	33.6	5.20	26.8 - 40.3	23.0 - 44.1
Sodium	161	133	2.76	95.1 - 171	46.5 - 220
Strontium	89.7	87.9	4.59	71.7 - 104	62.8 - 113
Thallium	121	112	5.19	90.3 - 133	76.1 - 147

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▪ Certificate of Analysis ▪

Parameter	Certified Value[1]	Reference Value[7]	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Tin	83.5	74.0	5.42	57.6 - 90.4	39.7 - 108
Titanium	474	333	7.17	48.6 - 617	46.3 - 620
Uranium	51.9	51.9	3.36	39.6 - 64.3	35.9 - 68.0
Vanadium	68.1	62.6	6.00	49.4 - 75.8	37.0 - 88.3
Zinc	165	158	2.34	128 - 188	111 - 205

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ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number[6]	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	8130	80.5	196	-	-
Antimony	259	134	51.8	217	-	-
Arsenic	171	156	91.3	243	-	-
Barium	253	239	94.3	230	-	-
Beryllium	179	169	94.6	223	-	-
Boron	114	87.5	76.7	150	-	-
Cadmium	149	137	91.8	249	-	-
Calcium	5190	4760	91.8	184	-	-
Chromium	163	154	94.4	245	-	-
Cobalt	127	121	95.3	221	-	-
Copper	57.0	54.9	96.2	243	-	-
Iron	15000	14100	93.9	199	-	-
Lead	133	130	97.7	251	-	-
Magnesium	2570	2320	90.1	182	-	-
Manganese	277	269	97.2	220	-	-
Mercury	21.6	20.5	94.7	172	-	-
Molybdenum	108	95.4	88.3	218	-	-
Nickel	58.7	53.9	91.8	242	-	-
Potassium	2420	2020	83.5	187	-	-
Selenium	181	167	92.2	235	-	-
Silver	35.5	33.6	94.5	222	-	-
Sodium	161	133	82.7	177	-	-
Strontium	89.7	87.9	98.0	151	-	-
Thallium	121	112	92.2	219	-	-
Tin	83.5	74.0	88.6	170	-	-
Titanium	474	333	70.3	157	-	-
Uranium	51.9	51.9	100	60	-	-
Vanadium	68.1	62.6	91.9	213	-	-
Zinc	165	158	95.8	238	-	-

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1. The **Certified Values** are the actual gravimetric/volumetric "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this certified reference material alongside USEPA and NELAC compliant PT study materials. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and therefore, the acceptance limits of this certified reference material and any PT study material may differ relative to their difference in concentrations.

5. The **PT Performance Data** include the mean value, percent recovery and number of data points reported by laboratories in our Proficiency Testing study compared to the Certified Values. In the event this lot was not used in a proficiency testing scheme, the data displayed was generated internally by ERA.

6. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

7. The **Reference Values** are equal to the mean recoveries for the parameters as determined in an interlaboratory round robin study. The **Reference Values** represent the expected performance for the analytes in this standard. ERA recommends using the **Reference Values** when assessing or evaluating your results.

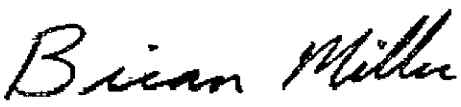
8. **Metrological Traceability**. This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

9. For additional information on this product such as intended use, storage information, instructions for use, minimum sample size, and safety information, please refer to the Product Use Instructions provided.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller



Quality Officer

Matthew Seebeck

ERA
A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D113-540
Certificate Issue Date: March 23, 2021
Expiration Date: October 13, 2024
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 090119.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	8630	12.0	4420 - 12800	4370 - 12900
Antimony	256	129	16.8	0.742 - 257	25.6 - 323
Arsenic	91.6	84.5	15.1	70.0 - 99.0	59.2 - 110
Barium	259	249	9.94	206 - 292	187 - 311
Beryllium	175	163	3.89	135 - 191	122 - 204
Boron	95.7	76.7	12.8	55.7 - 97.7	48.0 - 107
Cadmium	107	99.0	11.5	82.2 - 116	74.2 - 124
Calcium	5190	4760	11.8	3890 - 5640	3460 - 6070
Chromium	129	122	14.6	101 - 144	85.7 - 159
Cobalt	63.6	61.7	11.5	51.9 - 71.6	46.3 - 77.2
Copper	62.3	61.5	12.3	51.9 - 71.0	46.1 - 76.8
Iron	15000	14500	15.7	8860 - 20100	5190 - 23800
Lead	122	123	13.9	103 - 144	88.3 - 158
Lithium	6.42	7.30	18.7	5.13 - 9.48	3.20 - 11.4
Magnesium	2570	2360	8.87	1810 - 2920	1480 - 3250
Manganese	470	456	13.4	375 - 538	350 - 563
Mercury	22.1	18.9	14.5	13.0 - 24.8	11.3 - 26.4
Molybdenum	80.1	72.8	11.0	58.7 - 87.0	50.5 - 95.2
Nickel	143	135	14.2	112 - 158	94.7 - 176
Potassium	2420	2090	8.21	1480 - 2700	1240 - 2940
Selenium	128	121	11.7	96.9 - 146	80.4 - 162
Silver	45.4	44.1	6.69	35.5 - 52.8	30.7 - 57.6
Sodium	161	136	9.34	97.4 - 174	48.1 - 223
Strontium	82.2	82.3	8.42	67.4 - 97.1	58.6 - 106

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Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Thallium	154	144	7.54	117 - 171	101 - 187
Tin	89.7	79.8	14.0	62.2 - 97.4	43.5 - 116
Titanium	705	546	10.3	123 - 969	118 - 974
Uranium	29.5	30.9	3.38	23.9 - 37.9	21.3 - 40.5
Vanadium	196	186	14.2	148 - 224	138 - 235
Zinc	307	295	10.4	240 - 351	207 - 384

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Calculation of 7470A Mercury

Calculate Mercury concentration from the daily calibration curve. The curve is generated utilizing a straight-line equation defined as:

$$A = k1 + k2C$$

Where:

A = Average peak height of the sample/standard integrations
C = Sample/Standard Concentration, µg/L
k1 = y-intercept
k2 = slope

The instrument will plot peak height against concentration (µg/L). The result is generated in µg/L . This value is divided by 1000 to convert the units to mg/L. If the sample is diluted (DF), the result is multiplied by the DF to generate the final result.

Result, mg/L = (concentration, µg/L) x (1mg/1000µg) x (DF)

Calculation of 7471B Mercury

Calculate Mercury concentration from the daily calibration curve. The curve is generated utilizing a straight-line equation defined as:

$$A = k1 + k2C$$

Where:

A = Average peak height of the sample/standard integrations
C = Sample/Standard Concentration, µg/L
k1 = y-intercept
k2 = slope

The instrument will plot peak height against concentration (µg/L). The result is generated in µg/L . This value is divided by 1000 to convert the units to mg/L. If the sample is diluted (DF), the result is multiplied by the DF to generate the final result.

Result, mg/L = (concentration, µg/L) x (1mg/1000µg) x (DF)

The result in mg/kg is calculated on a dry weight basis using the sample weight digested(Wt), the final volume of the digestate(FV), and the percent total solids(%TS).

Result, mg/kg, wet = ((result, mg/L) x (FV)) /Wt

Result, mg/kg, dry wt = (Result, mg/kg wet)/(%TS)

No.	Sample No.	NAME
1	1	STD
2	2	STD
3	3	STD
4	4	STD
5	5	STD
6	6	STD
1	7	ICV
2	8	ICB
3	9	0.2PPB
4	10	wg1903101-1 wg1903101
5	11	wg1903101-2 wg1903101
6	12	L2416953-01 wg1903101
7	13	wg1903101-3 wg1903101
8	14	wg1903101-4 wg1903101
9	15	L2416953-02 wg1903101
10	16	L2417426-12 wg1902792
11	17	wg1902792-1 wg1902792
12	18	wg1902792-2 wg1902792
13	19	Check STD(5ug/L)
14	20	Check Blank
15	21	L2417074-01 wg1902792
16	22	wg1902792-3 wg1902792
17	23	wg1902792-4 wg1902792
18	24	L2416487-01 wg1901639
19	25	L2416487-02 wg1901639
20	26	L2416487-03 wg1901639
21	27	L2416487-04 wg1901639
22	28	L2416487-05 wg1901639
23	29	L2416487-06 wg1901639
24	30	L2416487-07 wg1901639
25	31	XCheck STD(5ug/L)
26	31	Check STD(5ug/L)
27	32	Check Blank
28	33	L2416487-09 wg1901639
29	34	L2416487-10 wg1901639
30	35	L2416487-11 wg1901639
31	36	L2416487-13 wg1901639
32	37	wg1901945-1 wg1901945
33	38	Xwg1901945-2 wg1901945
34	39	L2415941-04 wg1901945
35	40	wg1901945-3 wg1901945
36	41	wg1901945-4 wg1901945
37	42	L2416329-01 wg1901945

38	43	Check STD(5ug/L)
39	44	Check Blank
40	45	L2416329-02 wg1901945
41	46	L2416489-03 wg1901945
42	47	L2416498-02 wg1901945
43	48	L2416731-01 wg1901945
44	49	L2416731-02 wg1901945
45	50	L2416731-03 wg1901945
46	51	L2416731-04 wg1901945
47	52	L2416731-05 wg1901945
48	53	L2416731-07 wg1901945
49	54	wg1901945-2 wg1901945
50	55	xCheck STD(5ug/L)
51	55	Check STD(5ug/L)
52	56	Check Blank
53	57	WG1902462-1 WG1902462
54	58	WG1902462-2 WG1902462
55	59	l2416511-02 WG1902462
56	60	WG1902462-3 WG1902462
57	61	WG1902462-4 WG1902462
58	62	l2416511-01 WG1902462
59	63	l2416511-03 WG1902462
60	64	l2416511-05 WG1902462
61	65	l2416581-01 WG1902462
62	66	l2416581-02 WG1902462
63	67	Check STD(5ug/L)
64	68	Check Blank
65	69	l2416581-03 WG1902462
66	70	l2416581-04 WG1902462
67	71	l2416749-27 WG1902462
68	72	l2416752-05 WG1902462
69	73	l2416851-01 WG1902462
70	74	Check STD(5ug/L)
71	75	Check Blank

No.	Sample No.	NAME
1	1	STD
2	2	STD
3	3	STD
4	4	STD
5	5	STD
6	6	STD
1	7	ICV
2	8	ICB
3	9	0.2 PPB
4	10	wg1904036-1 wg1904036
5	11	wg1904036-2 wg1904036
6	12	L2417840-01 wg1904036
7	13	wg1904036-3 wg1904036
8	14	wg1904036-4 wg1904036
9	15	L2417236-02 wg1904036
10	16	L2417525-01 wg1904036
11	17	L2417889-01 wg1904036
12	18	L2417889-02 wg1904036
13	19	Check STD(5ug/L)
14	20	Check Blank
15	21	l2417074-02 WG1902792
16	22	l2417074-03 WG1902792
17	23	l2417074-04 WG1902792
18	24	l2417074-05 WG1902792
19	25	l2417074-06 WG1902792
20	26	l2417074-07 WG1902792
21	27	wg1903439-1 wg1903439
22	28	wg1903439-2 wg1903439
23	29	L2417074-01 wg1903439
24	30	wg1903439-3 wg1903439
25	31	Check STD(5ug/L)
26	32	Check Blank
27	33	wg1903439-4 wg1903439
28	34	L2417074-02 wg1903439
29	35	L2417074-03 wg1903439
30	36	L2417074-04 wg1903439
31	37	L2417074-05 wg1903439
32	38	L2417074-06 wg1903439
33	39	L2417449-13 wg1903439
34	40	wg1902636-1 wg1902636
35	41	wg1902636-2 wg1902636
36	42	L2409778-42 wg1902636
37	43	Check STD(5ug/L)

38	44	Check Blank
39	45	wg1902636-3 wg1902636
40	46	wg1902636-4 wg1902636
41	47	zl2417040-02 wg1902636
42	48	zl2417040-03 wg1902636
43	49	l2417072-01 wg1902636
44	50	l2417072-02 wg1902636
45	51	l2417072-03 wg1902636
46	52	l2417072-04 wg1902636
47	53	l2417072-05 wg1902636
48	54	l2417072-06 wg1902636
49	55	Check STD(5ug/L)
50	56	Check Blank
51	57	l2417072-07 wg1902636
52	58	l2417072-08 wg1902636
53	59	l2417072-09 wg1902636
54	60	l2417072-10 wg1902636
55	61	l2417072-11 wg1902636
56	62	wg1902473-1 wg1902473
57	63	wg1902473-2 wg1902473
58	64	L2415236-03 wg1902473
59	65	wg1902473-3 wg1902473
60	66	wg1902473-4 wg1902473
61	67	Check STD(5ug/L)
62	68	Check Blank
63	69	L2415164-01 wg1902473
64	70	L2415164-02 wg1902473
65	71	L2415164-03 wg1902473
66	72	L2415164-04 wg1902473
67	73	L2415164-05 wg1902473
68	74	L2415164-06 wg1902473
69	75	L2415164-07 wg1902473
70	76	L2415164-08 wg1902473
71	77	L2415164-09 wg1902473
72	78	L2415236-01 wg1902473
73	79	Check STD(5ug/L)
74	80	Check Blank
75	1	L2415236-02 wg1902473
76	2	L2415236-04 wg1902473
77	3	L2415236-05 wg1902473
78	4	L2415236-06 wg1902473
79	5	L2415236-07 wg1902473
80	6	L2415236-09 wg1902473
81	7	L2415236-11 wg1902473

82	11	Check STD(5ug/L)
83	12	Check Blank
84	13	xICV2414040954EFM
85	14	xICV2414040954EFM
86	15	WG1903902-1 WG1903902
87	16	WG1903902-2 WG1903902
88	17	l2417281-02 WG1903902
89	18	WG1903902-3 WG1903902
90	19	WG1903902-4 WG1903902
91	20	l2417277-11 WG1903902
92	21	l2417353-01 WG1903902
93	23	Check STD(5ug/L)
94	24	Check Blank

No.	Sample No.	NAME
1	1	STD
2	2	STD
3	3	STD
4	4	STD
5	5	STD
6	6	STD
1	7	ICV
2	8	ICB
3	9	0.2PPB
4	10	wg1904920-1 wg1904920
5	11	xL2418184-07 wg1904920
6	12	wg1905529-1 wg1905529
7	13	wg1905529-2 wg1905529
8	14	l2418149-01 wg1905529
9	15	wg1905529-3 wg1905529
10	16	wg1905529-4 wg1905529
11	17	Xwg1905529-2 wg1905529
12	18	l2418048-01 wg1905529
13	19	Check STD(5ug/L)
14	20	Check Blank
15	21	l2418135-01 wg1905529
16	22	l2418135-02 wg1905529
17	23	l2418149-02 wg1905529
18	24	l2418149-05 wg1905529
19	25	l2418149-06 wg1905529
20	26	l2418235-03 wg1905529
21	27	wg1906796-1 wg1906796
22	28	wg1906796-2 wg1906796
23	29	L2418987-01 wg1906796
24	30	wg1906796-3 wg1906796
25	31	Check STD(5ug/L)
26	32	Check Blank
27	33	wg1906796-4 wg1906796
28	34	L2418987-02 wg1906796
29	35	l2417537-28 WG1904830
30	36	WG1904830-5 WG1904830
31	37	WG1904830-6 WG1904830
32	38	l2417579-11 WG1904830
33	39	l2417579-24 WG1904830
34	40	l2418220-01 WG1904830
35	41	l2418220-02 WG1904830
36	42	l2418223-01 WG1904830
37	43	Check STD(5ug/L)

38	44	Check Blank
39	45	l2418223-02 WG1904830
40	46	l2418224-01 WG1904830
41	47	l2418224-02 WG1904830
42	48	l2418224-03 WG1904830
43	49	WG1905176-1 WG1905176
44	50	WG1905176-2 WG1905176
45	51	l2418220-01 WG1905176
46	52	WG1905176-3 WG1905176
47	53	WG1905176-4 WG1905176
48	54	l2418220-02 WG1905176
49	55	Check STD(5ug/L)
50	56	Check Blank
51	57	l2418223-01 WG1905176
52	58	l2418223-02 WG1905176
53	59	wg1905238-1 wg1905238
54	60	wg1905238-2 wg1905238
55	61	l2418149-03 wg1905238
56	62	wg1905238-3 wg1905238
57	63	wg1905238-4 wg1905238
58	64	l2418149-04 wg1905238
59	65	l2418235-04 wg1905529
60	66	l2418235-05 wg1905529
61	67	Check STD(5ug/L)
62	68	Check Blank
63	69	l2418235-06 wg1905529
64	70	wg1906878-1 wg1906878
65	71	wg1906878-2 wg1906878
66	72	l2417074-02 wg1906878
67	73	wg1906878-3 wg1906878
68	74	wg1906878-4 wg1906878
69	75	l2418184-07 wg1906878
70	79	Check STD(5ug/L)
71	80	Check Blank
72	1	WG1906027-1 WG1906027
73	2	WG1906027-2 WG1906027
74	3	l2418120-03 WG1906027
75	4	WG1906027-3 WG1906027
76	5	WG1906027-4 WG1906027
77	6	l2418480-01 WG1906027
78	7	l2418480-02 WG1906027
79	8	wg1906327-1 wg1906327
80	9	wg1906327-2 wg1906327
81	10	wg1906327-3 wg1906327

82	11	Check STD(5ug/L)
83	12	Check Blank
84	13	l2418098-01 wg1906327
85	14	l2418098-02 wg1906327
86	15	Xwg1906327-3 wg1906327
87	16	Check STD(5ug/L)
88	17	Check Blank
89	18	wg1905594-3 wg1905594
90	19	wg1905594-4 wg1905594
91	20	l2417537-37 wg1905594
92	21	l2417537-40 wg1905594
93	22	l2418293-01 wg1905594
94	23	Check STD(5ug/L)
95	24	Check Blank
96	25	l2418298-01 wg1905594
97	26	l2418305-01 wg1905594
98	27	l2418363-01 wg1905594
99	28	l2418386-01 wg1905594
100	29	wg1905594-1 wg1905594
101	30	wg1905594-2 wg1905594
102	31	l2418189-01 wg1905594
103	32	wg1905416-1 wg1905416
104	33	wg1905416-2 wg1905416
105	34	l2418016-01 wg1905416
106	35	Check STD(5ug/L)
107	36	Check Blank
108	37	wg1905416-3 wg1905416
109	38	Xwg195416-4 wg195416
110	39	wg1905416-4 wg1905416
111	40	Check STD(5ug/L)
112	41	Check Blank
113	42	l2415144-01 wg1905251
114	43	l2418557-01 wg1905251
115	44	l2418557-02 wg1905251
116	45	l2418557-04 wg1905251
117	47	Check STD(5ug/L)
118	48	Check Blank
119	49	wg1905291-1 wg1905291
120	50	wg1905291-2 wg1905291
121	51	l2418559-01 wg1905291
122	52	wg1905291-3 wg1905291
123	53	wg1905291-4 wg1905291
124	54	l2418559-02 wg1905291
125	55	l2418559-03 wg1905291

126	59	xCheck STD(5ug/L)
127	60	xCheck Blank
128	61	Check STD(5ug/L)
129	62	Check Blank
130	63	Check STD(5ug/L)
131	64	Check Blank
132	65	wg1906563-1 wg1906563
133	66	wg1906563-2 wg1906563
134	67	L2419157-01 wg1906563
135	68	wg1906563-3 wg1906563
136	69	wg1906563-4 wg1906563
137	70	L2419157-02 wg1906563
138	71	Check STD(5ug/L)
139	72	Check Blank
140	73	Check STD(5ug/L)
141	74	Check Blank

No.	Sample No.	NAME
1	1	STD
2	2	STD
3	3	STD
4	4	STD
5	5	STD
6	6	STD
1	7	ICV
2	8	ICB
3	9	0.2 PPB
4	10	wg1906917-1 wg1906917
5	11	wg1906917-2 wg1906917
6	12	L2418863-02 wg1906917
7	13	wg1906917-3 wg1906917
8	14	wg1906917-4 wg1906917
9	15	L2418863-04 wg1906917
10	16	L2418863-06 wg1906917
11	17	L2418863-07 wg1906917
12	18	L2418863-10 wg1906917
13	19	Check STD(5ug/L)
14	20	Check Blank
15	21	L2418863-12 wg1906917
16	22	L2418863-14 wg1906917
17	23	L2418863-16 wg1906917
18	24	L2418863-18 wg1906917
19	25	L2418863-20 wg1906917
20	26	L2418863-22 wg1906917
21	27	L2418863-24 wg1906917
22	28	L2418863-26 wg1906917
23	29	L2418863-28 wg1906917
24	30	L2418863-30 wg1906917
25	31	Check STD(5ug/L)
26	32	Check Blank
27	33	L2418863-32 wg1906917
28	34	L2418863-34 wg1906917
29	35	L2418863-36 wg1906917
30	36	L2417777-01 WG1906362
31	37	L2417777-03 WG1906362
32	38	L2418964-01 WG1906362
33	43	Check STD(5ug/L)
34	44	Check Blank
35	45	WG1907049-1 WG1907049
36	46	WG1907049-2 WG1907049
37	47	l2419228-01 WG1907049

38	48	WG1907049-3 WG1907049
39	49	WG1907049-4 WG1907049
40	50	l2419248-01 WG1907049
41	51	wg1908117-1 wg1908117
42	52	wg1908117-2 wg1908117
43	53	L2419308-01 wg1908117
44	54	wg1908117-3 wg1908117
45	55	Check STD(5ug/L)
46	56	Check Blank
47	57	wg1908117-4 wg1908117
48	58	L2419308-02 wg1908117
49	59	L2419308-03 wg1908117
50	60	L2419308-04 wg1908117
51	61	L2419308-05 wg1908117
52	62	L2419308-06 wg1908117
53	63	L2419308-07 wg1908117
54	64	L2419315-01 wg1908117
55	65	WG1906772-1 WG1906772
56	66	WG1906772-2 WG1906772
57	67	Check STD(5ug/L)
58	68	Check Blank
59	69	L2419308-08 WG1906772
60	70	WG1906772-3 WG1906772
61	71	WG1906772-4 WG1906772
62	72	WG1906875-1 WG1906875
63	73	WG1906875-2 WG1906875
64	74	L2417074-02 WG1906875
65	75	WG1906875-3 WG1906875
66	76	WG1906875-4 WG1906875
67	79	Check STD(5ug/L)
68	80	Check Blank

METALS ELN REPORT

Workgroup: WG1906878

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 7470A	HNO3	24006780	H2SO4	22320078	METALS	METSPIKE	HG24133008 57HCRV2	METSPIKE	HG24133008 57HCRV2	320, 344

Additional Reagent/Std	K2O8S2	PS2414050009HCR
	KMnO4	PP2415091850CLH
	NaCl-NH2OH.HCl	HH2414051951DJR
		ICV2414041646EFM

Sample/ Type	Digestion Date	Analyst	Lab Filtration Date	Sample Vol ml	Spike Amt	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2417074-02 WATER	04/10/24 11:54	Joshua Holmes	NA	25		04/10/24 11:54	8	95.0	04/10/24 13:54	25	
L2418184-07 SAMP	04/10/24 12:18	Ethan Moeller	04-04-24 10:50	25		04/10/24 12:18	8	95.0	04/10/24 14:18	25	
WG1906878-1 BLANK	04/10/24 11:54	Joshua Holmes	NA	25		04/10/24 11:54	8	95.0	04/10/24 13:54	25	ELN:efm
WG1906878-2 LCS	04/10/24 11:54	Joshua Holmes	NA	25	0.25	04/10/24 11:54	8	95.0	04/10/24 13:54	25	
WG1906878-3 MS	04/10/24 11:54	Joshua Holmes	NA	25	1.25	04/10/24 11:54	8	95.0	04/10/24 13:54	25	
WG1906878-4 MSD	04/10/24 11:54	Joshua Holmes	NA	25	1.25	04/10/24 11:54	8	95.0	04/10/24 13:54	25	

Reported: 15-APR-24 07:30 PM

METALS ELN REPORT

Workgroup: WG1906878

Reagent	Actual Volume	Units
Sulfuric Acid (H2SO4)	1.25	ml
Nitric Acid (HNO3)	.625	ml
Potassium Permanganat	3.75	ml
Potassium Persulfate (K	2	ml
NaCl-Hydroxylamine Hy	1.5	ml

Reported: 15-APR-24 07:30 PM

METALS ELN REPORT

Workgroup: WG1903439

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 7470A	HNO3	24006780	H2SO4	22320078	METALS	METSPIKE	HG24121920 06HCRV2	METSPIKE	HG24121920320, 344 06HCRV2	

Additional Reagent/Std	K2O8S2	PS2413292042HCR
	KMnO4	PP2413300400FAC
	NaCl-NH2OH.HCl	HH2413291810DJR
		ICV2412221327JDH

Sample/ Type	Digestion Date	Analyst	Lab Filtration Date	Sample Vol ml	Spike Amt	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2417074-01 WATER	04/02/24 04:35	Christine Hamor	NA	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	CONTAINER F
L2417074-02	04/02/24 04:35	Christine Hamor	NA	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	CONTAINER F
L2417074-03 WATER	04/02/24 04:35	Christine Hamor	NA	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	CONTAINER F
L2417074-04 WATER	04/02/24 04:35	Christine Hamor	NA	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	CONTAINER F
L2417074-05 WATER	04/02/24 04:35	Christine Hamor	NA	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	CONTAINER F
L2417074-06 WATER	04/02/24 04:35	Christine Hamor	NA	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	CONTAINER F
L2417449-13 WATER	04/02/24 04:35	Christine Hamor	03-30-24 08:40	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	CONTAINER X
WG1903439-1 BLANK	04/02/24 04:35	Christine Hamor	NA	25		04/02/24 04:35	5	95.1	04/02/24 06:35	25	ELN check: ADG
WG1903439-2 LCS	04/02/24 04:35	Christine Hamor	NA	25	.25	04/02/24 04:35	5	95.1	04/02/24 06:35	25	
WG1903439-3 MS	04/02/24 04:35	Christine Hamor	NA	25	1.25	04/02/24 04:35	5	95.1	04/02/24 06:35	25	

METALS ELN REPORT

Workgroup: WG1903439

Sample/ Type	Digestion Date	Analyst	Lab Filtration Date	Sample Vol	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
WG1903439-4 MSD	04/02/24 04:35	Christine Hamor	NA	25	1.25	04/02/24 04:35	5	95.1	04/02/24 06:35	25	

Reagent	Actual Volume	Units
Sulfuric Acid (H2SO4)	1.25	ml
Nitric Acid (HNO3)	.625	ml
Potassium Permanganat	3.75	ml
Potassium Persulfate (K:	2	ml
NaCl-Hydroxylamine Hy	1.5	ml

Reported: 15-APR-24 07:30 PM

METALS ELN REPORT

Workgroup: WG1902792

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 7470A	HNO3	24006780	H2SO4	22320078	METALS	METSPIKE	HG24121920 06HCRV2	METSPIKE	HG24121920320, 344 06HCRV2	

Additional Reagent/Std	K2O8S2	PS2413292042HCR
	KMnO4	PP2413300400FAC
	NaCl-NH2OH.HCl	HH2413272016DJR
		ICV2412221327JDH

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2416828-01	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417074-01 WATER	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417074-02	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417074-03 WATER	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417074-04 WATER	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417074-05 WATER	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417074-06 WATER	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417074-07 WATER	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
L2417426-12 SAMP	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	
WG1902792-1 BLANK	03/31/24 20:24	Maisie Mcqueen	25		03/31/24 20:24	5	94.3	03/31/24 22:24	25	ELN: ADG
WG1902792-2 LCS	03/31/24 20:24	Maisie Mcqueen	25	0.25	03/31/24 20:24	5	94.3	03/31/24 22:24	25	

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METALS ELN REPORT

Workgroup: WG1902792

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
WG1902792-3 MS	03/31/24 20:24	Maisie Mcqueen	25	1.25	03/31/24 20:24	5	94.3	03/31/24 22:24	25	
WG1902792-4 MSD	03/31/24 20:24	Maisie Mcqueen	25	1.25	03/31/24 20:24	5	94.3	03/31/24 22:24	25	

Reagent	Actual Volume	Units
Sulfuric Acid (H2SO4)	1.25	ml
Nitric Acid (HNO3)	.625	ml
Potassium Permanganat	3.75	ml
Potassium Persulfate (K:	2	ml
NaCl-Hydroxylamine Hy	1.5	ml

Reported: 15-APR-24 07:30 PM

METALS ELN REPORT

Workgroup: WG1906875

Digestion

Prep Method	Acid Type 1	Acid 1 Lot	Acid Type 2	Acid 2 Lot	Spike Type	Lims Spike Lot	Spike Lot	Post Spike Spikelot	Spike Lot	Pipette Id
EPA 7470A	HNO3	24006780	H2SO4	22320078	METALS	METSPIKE	HG24133008 57HCRV2	METSPIKE	HG24133008 57HCRV2	320, 344

Additional Reagent/Std	K2O8S2	PS2414050009HCR
	KMnO4	PP2415091850CLH
	NaCl-NH2OH.HCl	HH2414051951DJR
		ICV2414041646EFM

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
L2417074-02 WATER	04/10/24 10:28	John Niles	25		04/10/24 10:28	5	95.0	04/10/24 12:28	25	
WG1906875-1 BLANK	04/10/24 10:28	John Niles	25		04/10/24 10:28	5	95.0	04/10/24 12:28	25	ELN: ADG
WG1906875-2 LCS	04/10/24 10:28	John Niles	25	0.25	04/10/24 10:28	5	95.0	04/10/24 12:28	25	
WG1906875-3 MS	04/10/24 10:28	John Niles	25	1.25	04/10/24 10:28	5	95.0	04/10/24 12:28	25	
WG1906875-4 MSD	04/10/24 10:28	John Niles	25	1.25	04/10/24 10:28	5	95.0	04/10/24 12:28	25	
WG1906875-5 CALBLANK	04/10/24 11:14	John Niles	0		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-6 CCB	04/10/24 11:14	John Niles	0		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-7 CCV	04/10/24 11:14	John Niles	1.25		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-8 ICB	04/10/24 11:14	John Niles	0		04/10/24 11:14	5	95.0	04/10/24 13:14	25	

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METALS ELN REPORT

Workgroup: WG1906875

Sample/ Type	Digestion Date	Analyst	Sample Vol ml	Spike Amt ml	Start Date/Time	Hot Block Unit	Temperature (C)	Stop Date/Time	Final Vol	Comments
WG1906875-9 ICV	04/10/24 11:14	John Niles	0.25		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-10 STD1	04/10/24 11:14	John Niles	0.05		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-11 STD2	04/10/24 11:14	John Niles	0.25		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-12 STD3	04/10/24 11:14	John Niles	0.5		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-13 STD4	04/10/24 11:14	John Niles	1.25		04/10/24 11:14	5	95.0	04/10/24 13:14	25	
WG1906875-14 STD5	04/10/24 11:14	John Niles	2.5		04/10/24 11:14	5	95.0	04/10/24 13:14	25	

Reagent	Actual Volume	Units
Sulfuric Acid (H2SO4)	1.25	ml
Nitric Acid (HNO3)	.625	ml
Potassium Permanganat	3.75	ml
Potassium Persulfate (K	2	ml
NaCl-Hydroxylamine Hy	1.5	ml

Reported: 15-APR-24 07:30 PM

Wet Chemistry

Total Nitrogen Analysis

Results

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-01**	**Date Collected**	:	**03/28/24 08:50**
Client ID	:	**MW-3A**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 17:01**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**107,-**	**Analyst**	:	**JRO**
Lab File ID	:	**WG1904930.csv**	**Instrument ID**	:	
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Total Nitrogen**	**ND**	**0.30**	**0.30**	**U**

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-02**	**Date Collected**	:	**03/28/24 10:35**
Client ID	:	**MW-6AR**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 17:01**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**107,-**	**Analyst**	:	**JRO**
Lab File ID	:	**WG1904930.csv**	**Instrument ID**	:	
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Total Nitrogen**	**ND**	**0.30**	**0.30**	**U**

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-03**	**Date Collected**	:	**03/27/24 13:24**
Client ID	:	**MW-7A**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 17:01**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**107,-**	**Analyst**	:	**JRO**
Lab File ID	:	**WG1904930.csv**	**Instrument ID**	:	
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Total Nitrogen**	**0.64**	**0.30**	**0.30**	

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-04**	**Date Collected**	:	**03/27/24 14:35**
Client ID	:	**MW-7B**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 17:01**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**107,-**	**Analyst**	:	**JRO**
Lab File ID	:	**WG1904930.csv**	**Instrument ID**	:	
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Total Nitrogen**	**ND**	**0.30**	**0.30**	**U**

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-05**	**Date Collected**	:	**03/27/24 15:05**
Client ID	:	**MW-7C**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 17:01**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**107,-**	**Analyst**	:	**JRO**
Lab File ID	:	**WG1904930.csv**	**Instrument ID**	:	
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Total Nitrogen**	**1.2**	**0.30**	**0.30**	

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-06**	**Date Collected**	:	**03/28/24 00:00**
Client ID	:	**DUP**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 17:01**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**107,-**	**Analyst**	:	**JRO**
Lab File ID	:	**WG1904930.csv**	**Instrument ID**	:	
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Total Nitrogen**	**0.61**	**0.30**	**0.30**	

Sample Raw Data

ALPHA ANALYTICAL LABS

WET CHEMISTRY DEPARTMENT

TOTAL NITROGEN

Last Change 3/5/13 GFF
File tnitrogen.xlt

Sample #: _____

Client: _____

Analysis: **Total Nitrogen**

Method: ***Calculation from TKN & NO3/NO2***

Product: **TNITROGEN**
Analyte: **Total Nitrogen,**
Analysis Date: 4/4/2024 17:01
Technician: jro
Work group: WG1904930
RL: **0.3 mg/L**

Sample Number	TKN (mg/L)	NO3/NO2 (mg/L)	RL Multiplier	Result (mg/L)
L2417074-01	0.162	0.15	1.0	0.15
L2417074-02	0.218	0	1.0	0
L2417074-03	0	0.64	1.0	0.64
L2417074-04	0.12	0.14	1.0	0.14
L2417074-05	0	1.2	1.0	1.2
L2417074-06	0.444	0.17	1.0	0.614

Calculations of Total Nitrogen

Calculate the concentration value based on results for TKN-N and N03/NO2-N.

Aqueous samples:

mgTN-N/L = TKN-N(mg/l) + NO3/NO2-N (mg/l)

Soil samples:

mgTN-N/Kg = TKN-N(mg/Kg) + NO3/NO2-N(mg/Kg)

Total Kjeldahl Nitrogen Analysis

Results

Form 1
WETCHEM

Client	:	Alpha Geoscience	**Lab Number**	:	L2417074
Project Name	:	RANCO SAND & GRAVEL	**Project Number**	:	12123
Lab ID	:	L2417074-01	**Date Collected**	:	03/28/24 08:50
Client ID	:	MW-3A	**Date Received**	:	03/28/24
Sample Location	:	MANORVILLE, NY	**Date Analyzed**	:	04/04/24 13:36
Sample Matrix	:	WATER	**Dilution Factor**	:	1
Analytical Method	:	121,4500NH3-H	**Analyst**	:	KEP
Lab File ID	:	NH320240404-D	**Instrument ID**	:	LATCHAT5
Sample Amount	:		**%Solids**	:	N/A
Digestion Method	:		**Date Digested**	:	04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Total Kjeldahl	0.162	0.300	0.066	J

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 13:37
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500NH3-H	**Analyst**	: KEP
Lab File ID	: NH320240404-D	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Total Kjeldahl	0.218	0.300	0.066	J

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-03**	**Date Collected**	:	**03/27/24 13:24**
Client ID	:	**MW-7A**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 13:37**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**121,4500NH3-H**	**Analyst**	:	**KEP**
Lab File ID	:	**NH320240404-D**	**Instrument ID**	:	**LATCHAT5**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	**04/03/24**

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Nitrogen, Total Kjeldahl**	**ND**	**0.300**	**0.066**	**U**

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 13:38
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500NH3-H	**Analyst**	: KEP
Lab File ID	: NH320240404-D	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Total Kjeldahl	0.120	0.300	0.066	J

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 13:39
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500NH3-H	**Analyst**	: KEP
Lab File ID	: NH320240404-D	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Total Kjeldahl	ND	0.300	0.066	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 13:40
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500NH3-H	**Analyst**	: KEP
Lab File ID	: NH320240404-D	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Total Kjeldahl	0.444	0.300	0.066	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904089-1	**Date Collected**	: NA
Client ID	: WG1904089-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/04/24 13:33
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500NH3-H	**Analyst**	: KEP
Lab File ID	: NH320240404-D	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Total Kjeldahl	0.057	0.300	0.022	J

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904089-3	**Date Collected**	: 03/29/24 14:15
Client ID	: WG1904089-3 DUP	**Date Received**	: 03/29/24
Sample Location	:	**Date Analyzed**	: 04/04/24 13:54
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500NH3-H	**Analyst**	: KEP
Lab File ID	: NH320240404-D	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Total Kjeldahl	0.558	0.300	0.066	

Sample Raw Data

Original Run Filename: OM_4-4-2024_09-03-11AM.OMN Created: 4/4/2024 9:03:11 AM
Original Run Author's Signature: [A1WETCHEMINSTRUMENT]
Current Run Filename: OM_4-4-2024_09-03-11AM.OMN Last Modified: 4/4/2024 9:56:55 AM
Current Run Author's Signature: [A1WETCHEMINSTRUMENT]
Description: Default New Run

TRAY A

Sample	Rep.	Cup No.	Channel 2 Ammonia (mg N/L)	ADF	MDF	Weight	
STD 1	1	S1	10.00000				
STD 2	1	S2	8.00000				
STD 3	1	S3	4.00000				
STD 4	1	S4	2.00000				
STD 5	1	S5	1.00000				
STD 6	1	S6	0.40000				
STD 7	1	S7	0.20000				
STD 8	1	S8	0.10000				
STD 9	1	S9	0.05000				
STD 10	1	S10	0.00000				
CCV 0.4000	1	S6	0.39130				
	Known Conc:		100.00000				
	Calibration:		Table/Fig. : 1				
CCV 4.0000	1	S3	3.88674				
	Known Conc:		100.00000				
CCB	1	S10	0.02245				
	Known Conc:		100.00000				
HI ICV 8.0	1	1	7.89856				99%
LO ICV 1.0	1	2	0.97498				97%
ICB	1	3	0.00195				
WG1904087 WG1904086-1	1	4	-0.04108		1.50		
WG1904086-2	1	5	18.15324		7.50		91%
LCS LO	1	6	1.77667		1.50		89%
L2416861-04	1	7	0.07046		1.50		
L2416861-05	1	8	0.09972		1.50		
L2416861-06	1	9	0.12848		1.50		
L2417007-01	1	10	0.06693		3.00		
CCV 0.4000	1	S6	0.39110				
	Known Conc:		100.00000				
CCV 4.0000	1	S3	3.88579				
	Known Conc:		100.00000				
CCB	1	S10	0.01194				
	Known Conc:		100.00000				
L2417007-02	1	11	0.05688		1.50		
L2417007-03	1	12	0.06296		1.50		
L2417007-04	1	13	0.10087		3.00		
L2417071-01	1	14	0.00263		3.00		
WG1904086-4	1	15	3.22627		1.50		
WG1904086-3	1	16	0.05849		1.50		
L2417071-02	1	17	0.10577		1.50		
L2417071-03	1	18	0.05521		1.50		
L2414638-01	1	19	-0.01816		1.50		
L2417071-04	1	20	-0.04606		3.00		
CCV 0.4000	1	S6	0.38555				
	Known Conc:		100.00000				
CCV 4.0000	1	S3	3.93318				
	Known Conc:		100.00000				
CCB	1	S10	0.01519				
	Known Conc:		100.00000				
L2417071-05	1	21	0.02594		1.50		
L2417071-06	1	22	0.01274		1.50		
L2417074-01	1	23	-0.03038		1.50		
L2417074-02	1	24	0.17640		1.50		
L2417074-03	1	25	0.01408		1.50		
L2417074-04	1	26	0.01363		1.50		
WG1904087-4	1	27	3.66262		1.50		
WG1904087-3	1	28	0.09448		1.50		
L2417074-05	1	29	0.00516		1.50		
L2417074-06	1	30	0.00274		1.50		

CCV 0.4000	1	S6	0.39158			
	Known Conc:		100.00000			
CCV 4.0000	1	S3	3.91100			
	Known Conc:		100.00000			
CCB	1	S10	0.01218			
	Known Conc:		100.00000			

Channel 2 (Ammonia High) - Current View

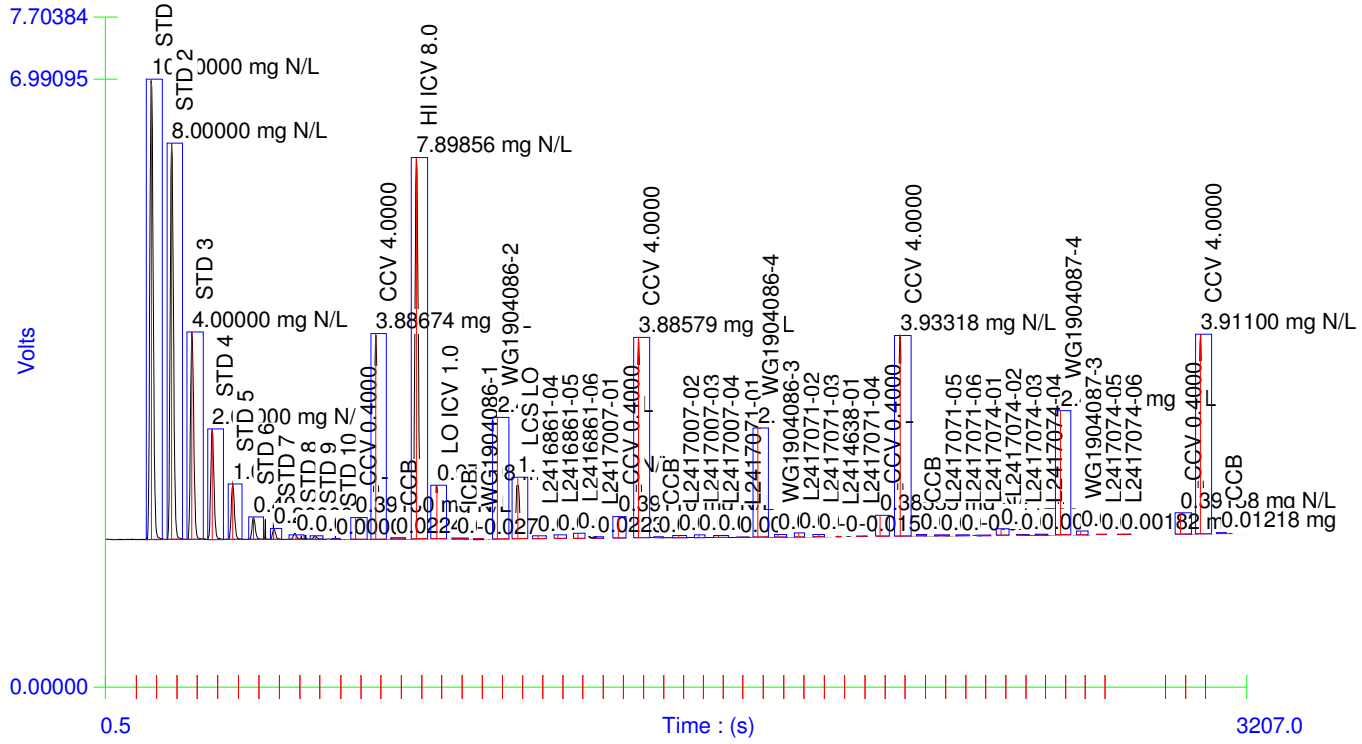
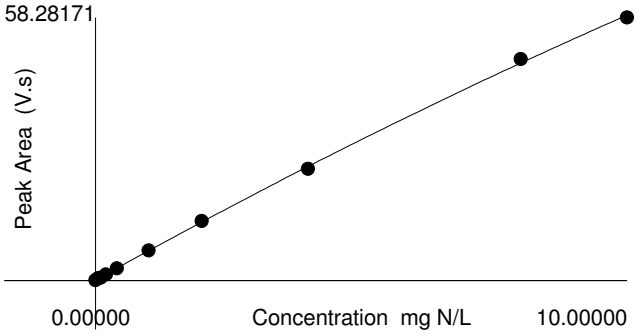


Table : 1 (Ammonia)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	10.00000	1	58.28171	5.29320	0.0	0.9	9.88086	4/4/2024	9:04:50 AM
2	8.00000	1	49.04776	4.55585	0.0	-1.8	8.16582	4/4/2024	9:05:47 AM
3	4.00000	1	24.75609	2.38436	0.0	2.1	3.92071	4/4/2024	9:06:44 AM
4	2.00000	1	13.15889	1.26937	0.0	-1.6	2.03029	4/4/2024	9:07:41 AM
5	1.00000	1	6.63731	0.63557	0.0	-0.9	1.00592	4/4/2024	9:08:38 AM
6	0.40000	1	2.67665	0.25608	0.0	0.2	0.39740	4/4/2024	9:09:37 AM
7	0.20000	1	1.32920	0.12588	0.0	3.1	0.19271	4/4/2024	9:10:34 AM
8	0.10000	1	0.63211	0.05096	0.0	11.6	0.08729	4/4/2024	9:11:33 AM
9	0.05000	1	0.44250	0.04027	0.0	-14.6	0.05867	4/4/2024	9:12:30 AM
10	0.00000	1	0.04890	0.00546			-0.00067	4/4/2024	9:13:26 AM

Figure : 1 (Ammonia)



Area = - 0.07188 * Conc^2 + 6.59284 * Conc + 0.05661
Conc = 0.00033 * Area^2 + 0.15059 * Area - 0.00803
Correlation Coefficient (r) = 0.99999

Weighting : 1/x

Author: A1WETCHEMINSTRUMENT Date : 4/4/2024

Original Run Filename: OM_4-4-2024_10-40-54AM.OMN Created: 4/4/2024 10:40:54 AM
Original Run Author's Signature: [A1WETCHEMINSTRUMENT]
Current Run Filename: OM_4-4-2024_10-40-54AM.OMN Last Modified: 4/4/2024 10:56:14 AM
Current Run Author's Signature: [A1WETCHEMINSTRUMENT]
Description: Default New Run

	Sample	Rep.	Cup No.	Channel 2 Ammonia (mg N/L)	ADF	MDF	Weight	
	CCV 0.4000	1	S6	0.37530				TRAY B
		Known Conc:		100.00000				
		Calibration:		Table/Fig. : 1				
	CCV 4.0000	1	S3	3.90908				
		Known Conc:		100.00000				
	CCB	1	S10	0.01430				
		Known Conc:		100.00000				
	WG1904470-1	1	1	0.00051		1.50		
	WG1904470-2	1	2	18.25741		7.50		91%
	LCS LO	1	3	1.90281		1.50		95%
	L2416829-01	1	4	0.12622		1.50		
	L2416881-03	1	5	12.51617		1.50		
	L2416969-01	1	6	11.38162		1.50		
	L2416971-01	1	7	7.35146		1.50		
	L2416971-02	1	8	7.65282		1.50		
	L2416989-01	1	9	0.33988		1.50		
X	L2417030-01	1	10	37.47979		1.50		
X	CCV 0.4000	1	S6	1.10318				RERUN OK
		Known Conc:		100.00000				

Channel 2 (Ammonia High) - Current View

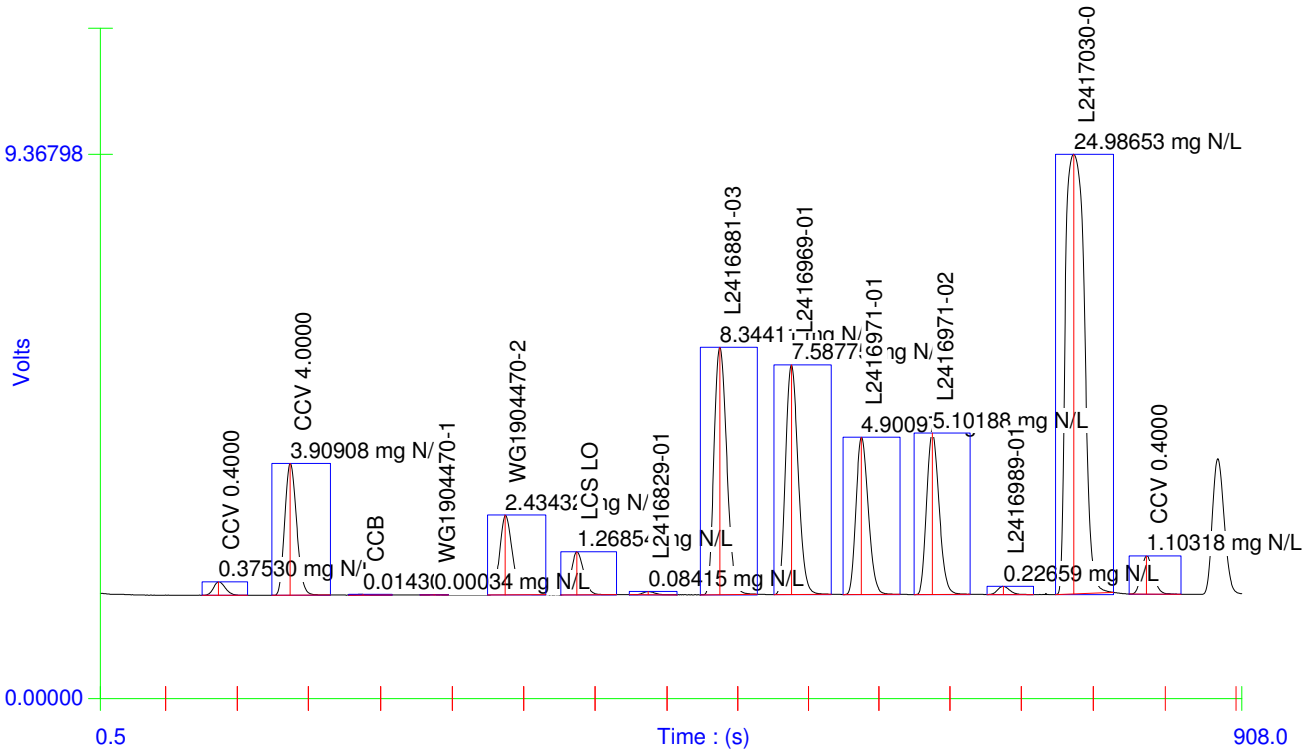
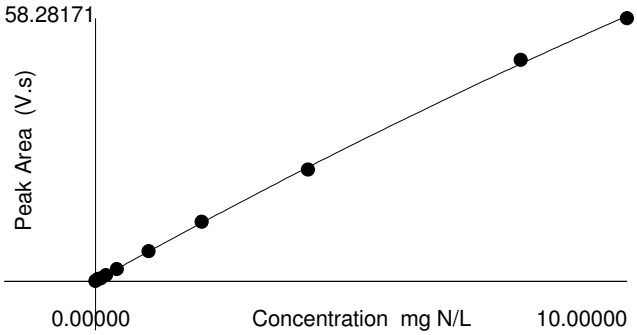


Table : 1 (Ammonia)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	10.00000	1	58.28171	5.29320	0.0	0.9	9.88086	4/4/2024	9:04:50 AM
2	8.00000	1	49.04776	4.55585	0.0	-1.8	8.16582	4/4/2024	9:05:47 AM
3	4.00000	1	24.75609	2.38436	0.0	2.1	3.92071	4/4/2024	9:06:44 AM
4	2.00000	1	13.15889	1.26937	0.0	-1.6	2.03029	4/4/2024	9:07:41 AM
5	1.00000	1	6.63731	0.63557	0.0	-0.9	1.00592	4/4/2024	9:08:38 AM
6	0.40000	1	2.67665	0.25608	0.0	0.2	0.39740	4/4/2024	9:09:37 AM
7	0.20000	1	1.32920	0.12588	0.0	3.1	0.19271	4/4/2024	9:10:34 AM
8	0.10000	1	0.63211	0.05096	0.0	11.6	0.08729	4/4/2024	9:11:33 AM
9	0.05000	1	0.44250	0.04027	0.0	-14.6	0.05867	4/4/2024	9:12:30 AM
10	0.00000	1	0.04890	0.00546			-0.00067	4/4/2024	9:13:26 AM

Figure : 1 (Ammonia)



Area = - 0.07188 * Conc^2 + 6.59284 * Conc + 0.05661
Conc = 0.00033 * Area^2 + 0.15059 * Area - 0.00803
Correlation Coefficient (r) = 0.99999

Weighting : 1/x

Original Run Filename: OM_4-4-2024_11-02-41AM.OMN Created: 4/4/2024 11:02:41 AM
Original Run Author's Signature: [A1WETCHEMINSTRUMENT]
Current Run Filename: OM_4-4-2024_11-02-41AM.OMN Last Modified: 4/4/2024 11:33:56 AM
Current Run Author's Signature: [A1WETCHEMINSTRUMENT]
Description: Default New Run

	Sample	Rep.	Cup No.	Channel 2 Ammonia (mg N/L)	ADF	MDF	Weight	
	CCV 0.4000	1	S6	0.40674				TRAY B
			Known Conc:	100.00000				
	CCV 4.0000	1	S3	3.92352				
			Known Conc:	100.00000				
			Calibration:	Table/Fig. : 1				
	CCB	1	S10	0.01307				
			Known Conc:	100.00000				
	L2417030-01; 20X	1	10	63.40265		30.00		
X	L2417031-01	1	11	41.66296		1.50		
X	L2417035-01	1	12	26.01924		1.50		
X	L2417066-04	1	13	1.30364		1.50		
X	L2417072-01	1	14	0.23321		1.50		+FB, RERUN
	L2417072-02	1	15	0.28406		1.50		
	L2417072-03	1	16	0.09153		1.50		
	WG1904470-4	1	17	3.69160		1.50		
	WG1904470-3	1	18	0.13145		1.50		
	L2417072-04	1	19	0.26766		1.50		
	CCV 0.4000	1	S6	0.40600				
			Known Conc:	100.00000				
	CCV 4.0000	1	S3	3.90632				
			Known Conc:	100.00000				
	CCB	1	S10	0.01839				
			Known Conc:	100.00000				
	L2417072-01	1	14	0.07388		1.50		
	L2417072-05	1	20	0.03283		1.50		
	L2417072-06	1	21	0.01687		1.50		
	L2417072-07	1	22	0.06690		1.50		
	L2417072-08	1	23	0.11044		1.50		
	L2417072-09	1	24	0.02680		1.50		
	L2417072-10	1	25	0.01021		1.50		
	L2417031-01; 30X	1	11	89.51495		45.00		
	L2417035-01; 20X	1	12	29.76289		30.00		
	L2417066-04	1	13	0.50086		1.50		
	CCV 0.4000	1	S6	0.39864				
			Known Conc:	100.00000				
	CCV 4.0000	1	S3	3.87907				
			Known Conc:	100.00000				
	CCB	1	S10	0.01573				
			Known Conc:	100.00000				

Author: A1WETCHEMINSTRUMENT Date : 4/4/2024

Channel 2 (Ammonia High) - Current View

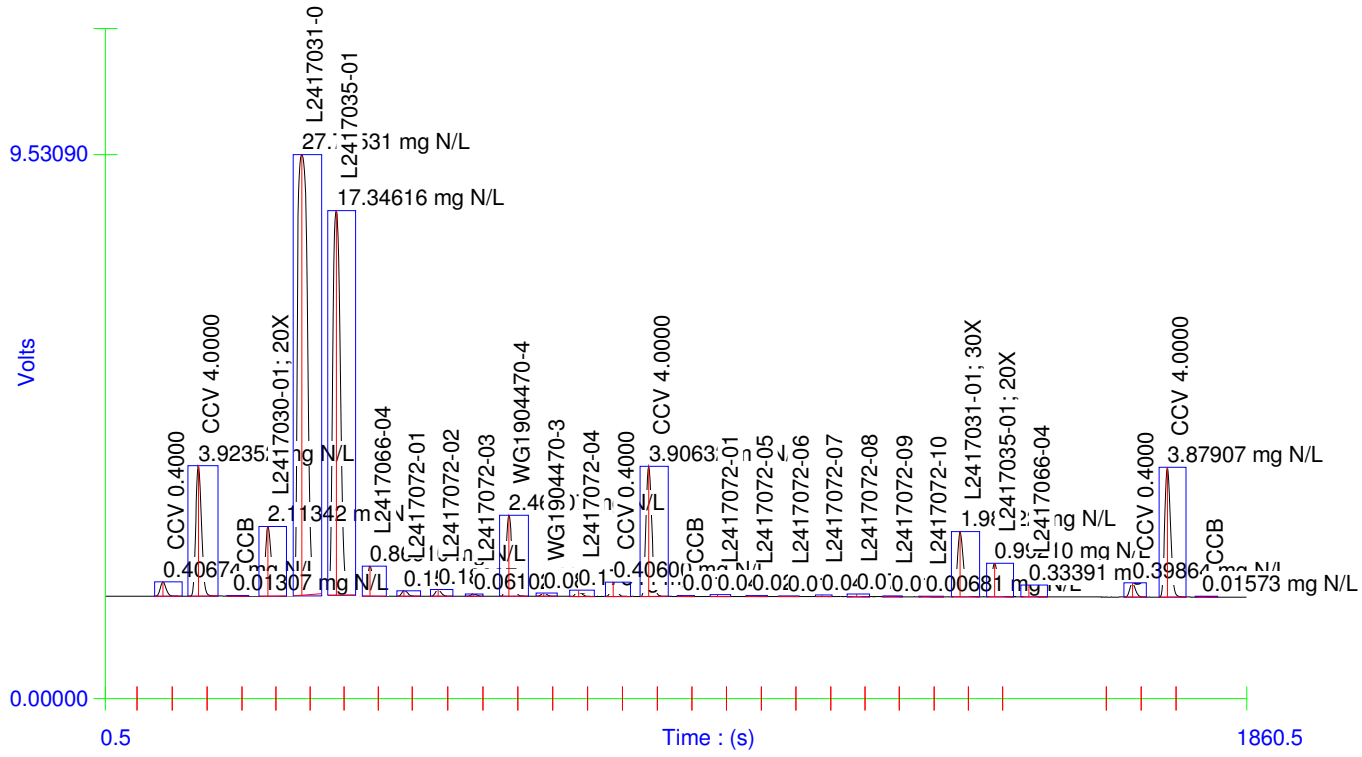
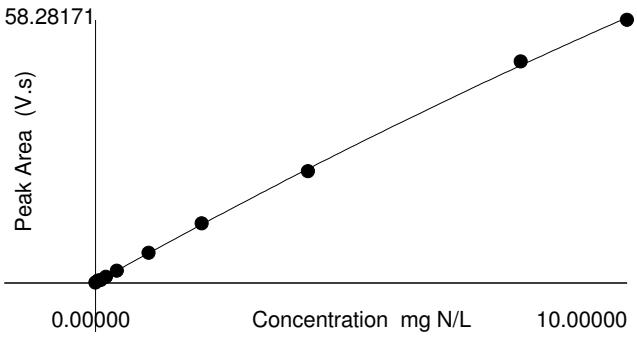


Table : 1 (Ammonia)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	10.00000	1	58.28171	5.29320	0.0	0.9	9.88086	4/4/2024	9:04:50 AM
2	8.00000	1	49.04776	4.55585	0.0	-1.8	8.16582	4/4/2024	9:05:47 AM
3	4.00000	1	24.75609	2.38436	0.0	2.1	3.92071	4/4/2024	9:06:44 AM
4	2.00000	1	13.15889	1.26937	0.0	-1.6	2.03029	4/4/2024	9:07:41 AM
5	1.00000	1	6.63731	0.63557	0.0	-0.9	1.00592	4/4/2024	9:08:38 AM
6	0.40000	1	2.67665	0.25608	0.0	0.2	0.39740	4/4/2024	9:09:37 AM
7	0.20000	1	1.32920	0.12588	0.0	3.1	0.19271	4/4/2024	9:10:34 AM
8	0.10000	1	0.63211	0.05096	0.0	11.6	0.08729	4/4/2024	9:11:33 AM
9	0.05000	1	0.44250	0.04027	0.0	-14.6	0.05867	4/4/2024	9:12:30 AM
10	0.00000	1	0.04890	0.00546			-0.00067	4/4/2024	9:13:26 AM

Figure : 1 (Ammonia)



Area = - 0.07188 * Conc^2 + 6.59284 * Conc + 0.05661
Conc = 0.00033 * Area^2 + 0.15059 * Area - 0.00803
Correlation Coefficient (r) = 0.99999

Weighting : 1/x

Original Run Filename: OM_4-4-2024_11-38-46AM.OMN Created: 4/4/2024 11:38:46 AM
Original Run Author's Signature: [A1WETCHEMINSTRUMENT]
Current Run Filename: OM_4-4-2024_11-38-46AM.OMN Last Modified: 4/4/2024 12:14:49 PM
Current Run Author's Signature: [A1WETCHEMINSTRUMENT]
Description: Default New Run

TRAY C

	Sample	Rep.	Cup No.	Channel 2 Ammonia (mg N/L)	ADF	MDF	Weight	
	CCV 0.4000	1	S6	0.39917				
		Known Conc:		100.00000				
	CCV 4.0000	1	S3	3.88146				
		Known Conc:		100.00000				
		Calibration:		Table/Fig. : 1				
	CCB	1	S10	0.01492				
		Known Conc:		100.00000				
	WG1904088-1 T	1	1	0.00890				
	WG1904088-2 T	1	2	35.98969		15.00		90%
	LCS LO T	1	3	3.91784		3.00		98%
	L2414638-01 T	1	4	0.24707		3.00		
	L2414638-02 T	1	5	0.14742		3.00		
	WG1904088-4 T	1	6	7.51158		3.00		
	WG1904088-3 T	1	7	0.44410		3.00		
X	L2414638-04 T	1	8	502.60687		30.00		
X	L2414638-05 T	1	9	2.43474		3.00		
	L2417072-01 T	1	10	0.17535		3.00		
	CCV 0.4000	1	S6	0.41216				
		Known Conc:		100.00000				
	CCV 4.0000	1	S3	3.87395				
		Known Conc:		100.00000				
	CCB	1	S10	0.02078				
		Known Conc:		100.00000				
	L2417072-02 T	1	11	0.42645		3.00		
	L2417072-03 T	1	12	0.15160		3.00		
	L2417072-04 T	1	13	0.37343		15.00		
	L2417072-05 T	1	14	0.62616		3.00		
	L2417072-06 T	1	15	0.19158		3.00		
	L2417072-07 T	1	16	0.25674		6.00		
	L2417072-08 T	1	17	0.11860		3.00		
	L2417072-09 T	1	18	0.03883		3.00		
	L2417072-10 T	1	19	0.06614		3.00		
	L2417072-11 T	1	20	0.07632		3.00		
	CCV 0.4000	1	S6	0.39860				
		Known Conc:		100.00000				
	CCV 4.0000	1	S3	3.98424				
		Known Conc:		100.00000				
	CCB	1	S10	0.01844				
		Known Conc:		100.00000				
	L2414638-04 T; 10X	1	8	573.65717		300.00		
	L2414638-05 T	1	9	1.39923		3.00		
	CCV 0.4000	1	S6	0.40060				
		Known Conc:		100.00000				
	CCV 4.0000	1	S3	3.96878				
		Known Conc:		100.00000				
	CCB	1	S10	0.02160				
		Known Conc:		100.00000				

Author: A1WETCHEMINSTRUMENT Date : 4/4/2024

Channel 2 (Ammonia High) - Current View

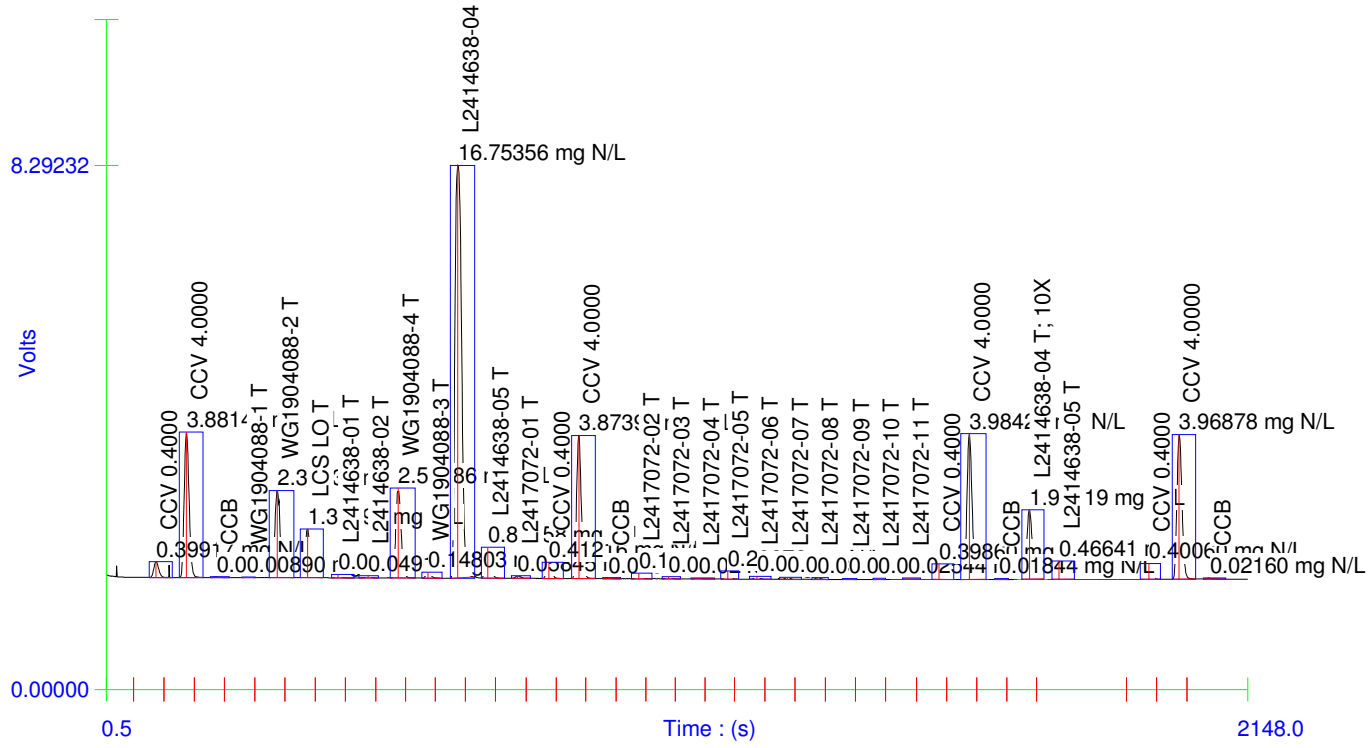
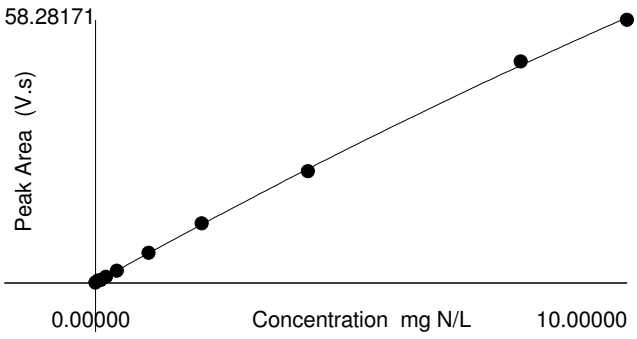


Table : 1 (Ammonia)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	10.00000	1	58.28171	5.29320	0.0	0.9	9.88086	4/4/2024	9:04:50 AM
2	8.00000	1	49.04776	4.55585	0.0	-1.8	8.16582	4/4/2024	9:05:47 AM
3	4.00000	1	24.75609	2.38436	0.0	2.1	3.92071	4/4/2024	9:06:44 AM
4	2.00000	1	13.15889	1.26937	0.0	-1.6	2.03029	4/4/2024	9:07:41 AM
5	1.00000	1	6.63731	0.63557	0.0	-0.9	1.00592	4/4/2024	9:08:38 AM
6	0.40000	1	2.67665	0.25608	0.0	0.2	0.39740	4/4/2024	9:09:37 AM
7	0.20000	1	1.32920	0.12588	0.0	3.1	0.19271	4/4/2024	9:10:34 AM
8	0.10000	1	0.63211	0.05096	0.0	11.6	0.08729	4/4/2024	9:11:33 AM
9	0.05000	1	0.44250	0.04027	0.0	-14.6	0.05867	4/4/2024	9:12:30 AM
10	0.00000	1	0.04890	0.00546			-0.00067	4/4/2024	9:13:26 AM

Figure : 1 (Ammonia)



Area = - 0.07188 * Conc^2 + 6.59284 * Conc + 0.05661
Conc = 0.00033 * Area^2 + 0.15059 * Area - 0.00803
Correlation Coefficient (r) = 0.99999

Weighting : 1/x

Original Run Filename: OM_4-4-2024_01-29-19PM.OMN Created: 4/4/2024 1:29:19 PM
Original Run Author's Signature: [A1WETCHEMINSTRUMENT]
Current Run Filename: OM_4-4-2024_01-29-19PM.OMN Last Modified: 4/4/2024 2:00:39 PM
Current Run Author's Signature: [A1WETCHEMINSTRUMENT]
Description: Default New Run

TRAY D

Sample	Rep.	Cup No.	Channel 2 Ammonia (mg N/L)	ADF	MDF	Weight	
CCV 0.4000	1	S6	0.38346				
	Known Conc:		100.00000				
	Calibration:		Table/Fig. : 1				
CCV 4.0000	1	S3	3.92298				
	Known Conc:		100.00000				
CCB	1	S10	0.00882				
	Known Conc:		100.00000				
WG1904089-1 T	1	1	0.01910				
WG1904089-2 T	1	2	34.90723		15.00		87%
LCS LO T	1	3	3.26623		3.00		82%
L2417074-01 T	1	4	0.16230		3.00		
L2417074-02 T	1	5	0.21798		3.00		
L2417074-03 T	1	6	0.05382		3.00		
L2417074-04 T	1	7	0.12027		3.00		
L2417074-05 T	1	8	-0.00740		3.00		
L2417074-06 T	1	9	0.44452		3.00		
L2417126-01 T	1	10	26.17458		30.00		
CCV 0.4000	1	S6	0.41189				
	Known Conc:		100.00000				
CCV 4.0000	1	S3	3.91118				
	Known Conc:		100.00000				
CCB	1	S10	0.01394				
	Known Conc:		100.00000				
L2417127-01 T	1	11	14.50717		30.00		
L2417137-01 T	1	12	62.26477		30.00		
L2417141-01 T	1	13	6.77570		15.00		
L2417142-01 T	1	14	6.01953		3.00		
L2417158-01 T	1	15	0.79939		3.00		
L2417158-02 T	1	16	0.63529		3.00		
L2417419-01 T	1	17	0.52525		3.00		
L2417429-01 T	1	18	0.28867		3.00		
WG1904089-4 T	1	19	7.37865		3.00		
WG1904089-3 T	1	20	0.55798		3.00		
CCV 0.4000	1	S6	0.39232				
	Known Conc:		100.00000				
CCV 4.0000	1	S3	3.85586				
	Known Conc:		100.00000				
CCB	1	S10	0.01955				
	Known Conc:		100.00000				

Author: A1WETCHEMINSTRUMENT Date : 4/4/2024

Channel 2 (Ammonia High) - Current View

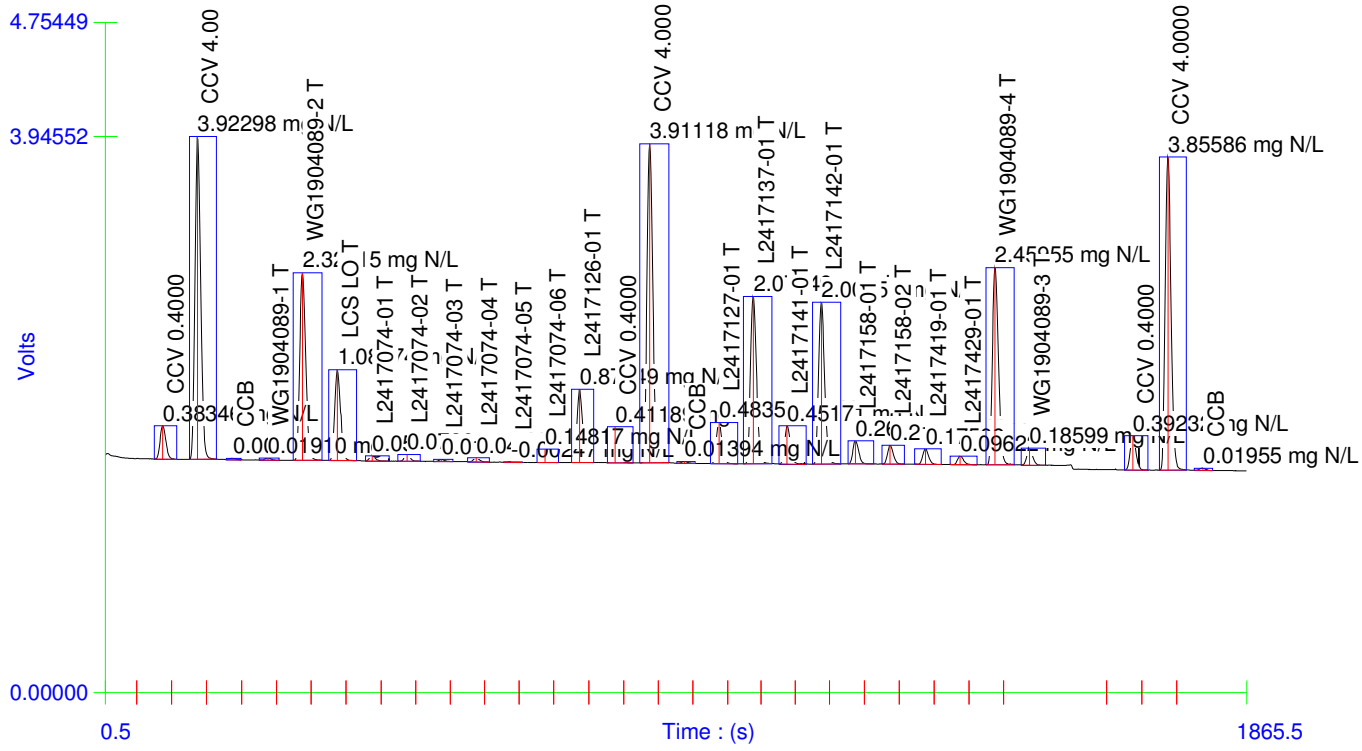


Table : 1 (Ammonia)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
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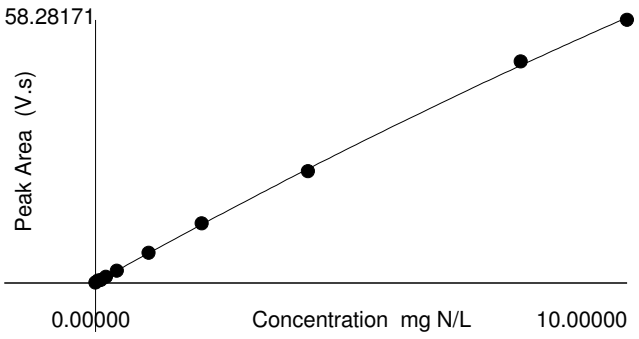
3	4.00000	1	24.75609	2.38436	0.0	2.1	3.92071	4/4/2024	9:06:44 AM
4	2.00000	1	13.15889	1.26937	0.0	-1.6	2.03029	4/4/2024	9:07:41 AM
5	1.00000	1	6.63731	0.63557	0.0	-0.9	1.00592	4/4/2024	9:08:38 AM
6	0.40000	1	2.67665	0.25608	0.0	0.2	0.39740	4/4/2024	9:09:37 AM
7	0.20000	1	1.32920	0.12588	0.0	3.1	0.19271	4/4/2024	9:10:34 AM
8	0.10000	1	0.63211	0.05096	0.0	11.6	0.08729	4/4/2024	9:11:33 AM
9	0.05000	1	0.44250	0.04027	0.0	-14.6	0.05867	4/4/2024	9:12:30 AM
10	0.00000	1	0.04890	0.00546			-0.00067	4/4/2024	9:13:26 AM

Figure : 1 (Ammonia)



Area = - 0.07188 * Conc^2 + 6.59284 * Conc + 0.05661
Conc = 0.00033 * Area^2 + 0.15059 * Area - 0.00803
Correlation Coefficient (r) = 0.99999

Weighting : 1/x

Quality Control

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: L2417429-01		
Matrix Spike	: WG1904089-4	**MS Analysis Date**	: 04/04/24 13:53
Matrix Spike Dup	:	**MSD Analysis Date**	:

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nitrogen, Total Kjeldahl	0.289J	8	7.38	92					77-111	24

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: NA	**Analysis Date**	: 04/04/24 13:52
Dup Sample ID	: WG1904089-3	**DUP Analysis Date**	: 04/04/24 13:54

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Nitrogen, Total Kjeldahl	0.289J	0.558	NC	24

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1904089-2	**LCS Analysis Date**	: 04/04/24 13:34
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Nitrogen, Total Kjeldahl	**40.0**	**34.9**	**87.**					**78-122**	**24**

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Nitrogen, Total Kjeldahl	NONE	0.3	0.066	mg/l	78-122		77-111	24	24	4500NH3-H	28 days	1 - Plastic 500ml H2SO4 preserved
Nitrogen, Total Kjeldahl	NONE	0.3	0.066	mg/l	78-122		77-111	24	24	351.1	28 days	1 - Plastic 500ml H2SO4 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11468-1
Page: 1

WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Nitrogen, Total Kjeldahl	NONE	150	31.5	mg/kg	81-115	26	43-160	26	26	4500NH3-H	28 days	1 - Glass 250ml/8oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Calculations of Nitrogen in TKN

Aqueous samples:

Compute sample TKN –N concentration by comparing sample peak areas with standard curve, as determined by the Lachat instrument software.

If the sample has a concentration of less than 2ppm, calculate results by using the low curve generated on Channel 1.

If the sample concentration is greater than 2ppm, calculate the results by using the high curve generated on Channel 2.

To Compute the final results for aqueous samples, multiply the direct reading by the dilution factor based on the initial preparation volume. (also done using software)

TKN-N mg/L = mg/L direct reading x dilution factor

Sequence Logs

From Page No. ____

Tray A (09-03-11AM)
prep 4/3/24 @11:05

1	Hi ICV 8.0
2	Lo ICV 1.0
3	ICB
4	WG190408G-1; BLK
5	(4087)-2; LCS Hi, 5x
6	LCS Lo
7	16861-04
8	-05
9	-06
10	17007-01 (2x)
11	-02
12	-03
13	-04 (2x)
14	17071-01 (2x)
15	-01 MS (2x) KOP
16	-01 Dup (2x)
17	-02
18	-03
19	14638-01
20	17071-04 (2x)
21	-05
22	-06
23	17074-01
24	-02
25	-03
26	-04
27	-04 MS
28	-04 Dup
29	-05
30	-06

KOP

Tray B (10-40-54AM, 11-02-41AM)
prep 4/3/24 @22:0[illegible] KOP

1	WG190447O-1; BLK
2	-2; LCS Hi, 5x
3	LCS Lo
4	16829-01
5	16881-03
6	16969-01
7	16971-01
8	-02
9	16989-01
⊗10	17030-01; 20x
⊗11	17031-01; 30x
⊗12	17035-01; 20x
⊗13	17066-04
⊗14	17072-01; + FB remn
15	-02
16	-03
17	-03 MS
18	-03 Dup
19	-04
20	-05
21	-06
22	-07
23	-08
24	-09
25	-10

Date: 4/4/24
Sodium Phenolate: 3/19/24 R-4065
Sodium Hypochlorate: 4/1/24 stop+shop
Sodium Nitropruisside: 3/19/24 R-3769
Borric Acid Soln.: 4/1/24 R-4019
ICV 1.0:
ICV 8.0: 4/2/24 WC-3402
Cal. Std: 3/19/24 WC-3294
See Front Page for Instructions:

To Page No. ____

Witnessed & Understood by me, Date

Invented by: Date

Recorded by:

Tray C(11-38-46AM)
prep 4/3/24 @9:50

1	WG1904088-1T. Blk	
2	-2T. LCS Hi. 5x	
3	LCS LoT	
4	14638 -01T	
5	-02T	
6	-02T MS	
7	-02T Dup	
8	-04T (10x). 10x	
9	-05T	
10	17072 -01T	
11	-02T	
12	-03T	
13	-04T (5x)	
14	-05T	
15	-06T	
16	-07T (2x)	
17	-08T	
18	-09T	
19	-10T	
20	-11T	

Tray D(01-29-19PM)
prep 4/3/24 @9:50

1	WG1904089-1T. Blk	
2	-2T. LCS Hi. 5x	
3	LCS LoT	
4	17074 -01T	
5	-02T	
6	-03T	
7	-04T	
8	-05T	
9	-06T	
10	17126 -01T (10x)	
11	17127 -01T (10x)	
12	17137 -01T (10x)	
13	17141 -01T (5x)	
14	17142 -01T	
15	17158 -01T	
16	-02T	
17	17419 -01T	
18	17429 -01T	
19	-01T MS	
20	-01T Dup	

WP

nessed & Understood by me, | Date | Invented by: | Date
Recorded by:

Sample Preparation

Project No. _____

onfidential Book No. _____ TITLE _____

rom Page No. ____

WG1904089

Sample	Vol (mL)	DIL	FINAL Vol (mL)
BLANK	50	1x	150
LOW			
HIGH			
L2417074-01			
-02			
-03			
-04			
-05			
-06			
L2417126-01		10x (5↑50) (N=38)	
L2417127-01		10x (5↑50) (N=43)	
L2417137-01		10x (5↑50) matrix	
L2417141-01		5x (10↑50) (N=24)	
L2417142-01		1x	
L2417158-01			
-02			
L2417419-01			
L2417429-01 PA			
-01 DUP			
-01 MS			

Same Standards and Reagents as previous page # 73

04/03/24 DBN/ERB @ 09:50 →

To Page No. ____

Witnessed & Understood by me, | Date | Invented by: | Date

Recorded by:

Ammonia Analysis

Results

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-01**	**Date Collected**	:	**03/28/24 08:50**
Client ID	:	**MW-3A**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 09:43**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**44,350.1**	**Analyst**	:	**KEP**
Lab File ID	:	**NH320240404-A**	**Instrument ID**	:	**LATCHAT5**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	**04/03/24**

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	**Nitrogen, Ammonia**	**ND**	**0.075**	**0.024**	**U**

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-02**	**Date Collected**	:	**03/28/24 10:35**
Client ID	:	**MW-6AR**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 09:44**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**44,350.1**	**Analyst**	:	**KEP**
Lab File ID	:	**NH320240404-A**	**Instrument ID**	:	**LATCHAT5**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	**04/03/24**

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	**Nitrogen, Ammonia**	**0.176**	**0.075**	**0.024**	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 09:45
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,350.1	**Analyst**	: KEP
Lab File ID	: NH320240404-A	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	Nitrogen, Ammonia	ND	0.075	0.024	U

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-04**	**Date Collected**	:	**03/27/24 14:35**
Client ID	:	**MW-7B**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/04/24 09:46**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**44,350.1**	**Analyst**	:	**KEP**
Lab File ID	:	**NH320240404-A**	**Instrument ID**	:	**LATCHAT5**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	**04/03/24**

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	**Nitrogen, Ammonia**	**ND**	**0.075**	**0.024**	**U**

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 09:49
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,350.1	**Analyst**	: KEP
Lab File ID	: NH320240404-A	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	Nitrogen, Ammonia	ND	0.075	0.024	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/04/24 09:50
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,350.1	**Analyst**	: KEP
Lab File ID	: NH320240404-A	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	Nitrogen, Ammonia	ND	0.075	0.024	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904087-1	**Date Collected**	: NA
Client ID	: WG1904087-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/04/24 09:20
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,350.1	**Analyst**	: KEP
Lab File ID	: NH320240404-A	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	Nitrogen, Ammonia	ND	0.075	0.024	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904087-3	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7BDUP	**Date Received**	: 03/28/24
Sample Location	:	**Date Analyzed**	: 04/04/24 09:48
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,350.1	**Analyst**	: KEP
Lab File ID	: NH320240404-A	**Instrument ID**	: LATCHAT5
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7664-41-7	Nitrogen, Ammonia	0.094	0.075	0.024	

Sample Raw Data

Original Run Filename: OM_4-4-2024_09-03-11AM.OMN Created: 4/4/2024 9:03:11 AM
Original Run Author's Signature: [A1WETCHEMINSTRUMENT]
Current Run Filename: OM_4-4-2024_09-03-11AM.OMN Last Modified: 4/4/2024 9:56:55 AM
Current Run Author's Signature: [A1WETCHEMINSTRUMENT]
Description: Default New Run

TRAY A

Sample	Rep.	Cup No.	Channel 2 Ammonia (mg N/L)	ADF	MDF	Weight	
STD 1	1	S1	10.00000				
STD 2	1	S2	8.00000				
STD 3	1	S3	4.00000				
STD 4	1	S4	2.00000				
STD 5	1	S5	1.00000				
STD 6	1	S6	0.40000				
STD 7	1	S7	0.20000				
STD 8	1	S8	0.10000				
STD 9	1	S9	0.05000				
STD 10	1	S10	0.00000				
CCV 0.4000	1	S6	0.39130				
	Known Conc:		100.00000				
	Calibration:		Table/Fig. : 1				
CCV 4.0000	1	S3	3.88674				
	Known Conc:		100.00000				
CCB	1	S10	0.02245				
	Known Conc:		100.00000				
HI ICV 8.0	1	1	7.89856				99%
LO ICV 1.0	1	2	0.97498				97%
ICB	1	3	0.00195				
WG1904087 WG1904086-1	1	4	-0.04108		1.50		
WG1904086-2	1	5	18.15324		7.50		91%
LCS LO	1	6	1.77667		1.50		89%
L2416861-04	1	7	0.07046		1.50		
L2416861-05	1	8	0.09972		1.50		
L2416861-06	1	9	0.12848		1.50		
L2417007-01	1	10	0.06693		3.00		
CCV 0.4000	1	S6	0.39110				
	Known Conc:		100.00000				
CCV 4.0000	1	S3	3.88579				
	Known Conc:		100.00000				
CCB	1	S10	0.01194				
	Known Conc:		100.00000				
L2417007-02	1	11	0.05688		1.50		
L2417007-03	1	12	0.06296		1.50		
L2417007-04	1	13	0.10087		3.00		
L2417071-01	1	14	0.00263		3.00		
WG1904086-4	1	15	3.22627		1.50		
WG1904086-3	1	16	0.05849		1.50		
L2417071-02	1	17	0.10577		1.50		
L2417071-03	1	18	0.05521		1.50		
L2414638-01	1	19	-0.01816		1.50		
L2417071-04	1	20	-0.04606		3.00		
CCV 0.4000	1	S6	0.38555				
	Known Conc:		100.00000				
CCV 4.0000	1	S3	3.93318				
	Known Conc:		100.00000				
CCB	1	S10	0.01519				
	Known Conc:		100.00000				
L2417071-05	1	21	0.02594		1.50		
L2417071-06	1	22	0.01274		1.50		
L2417074-01	1	23	-0.03038		1.50		
L2417074-02	1	24	0.17640		1.50		
L2417074-03	1	25	0.01408		1.50		
L2417074-04	1	26	0.01363		1.50		
WG1904087-4	1	27	3.66262		1.50		
WG1904087-3	1	28	0.09448		1.50		
L2417074-05	1	29	0.00516		1.50		
L2417074-06	1	30	0.00274		1.50		

CCV 0.4000	1	S6	0.39158			
	Known Conc:		100.00000			
CCV 4.0000	1	S3	3.91100			
	Known Conc:		100.00000			
CCB	1	S10	0.01218			
	Known Conc:		100.00000			

Channel 2 (Ammonia High) - Current View

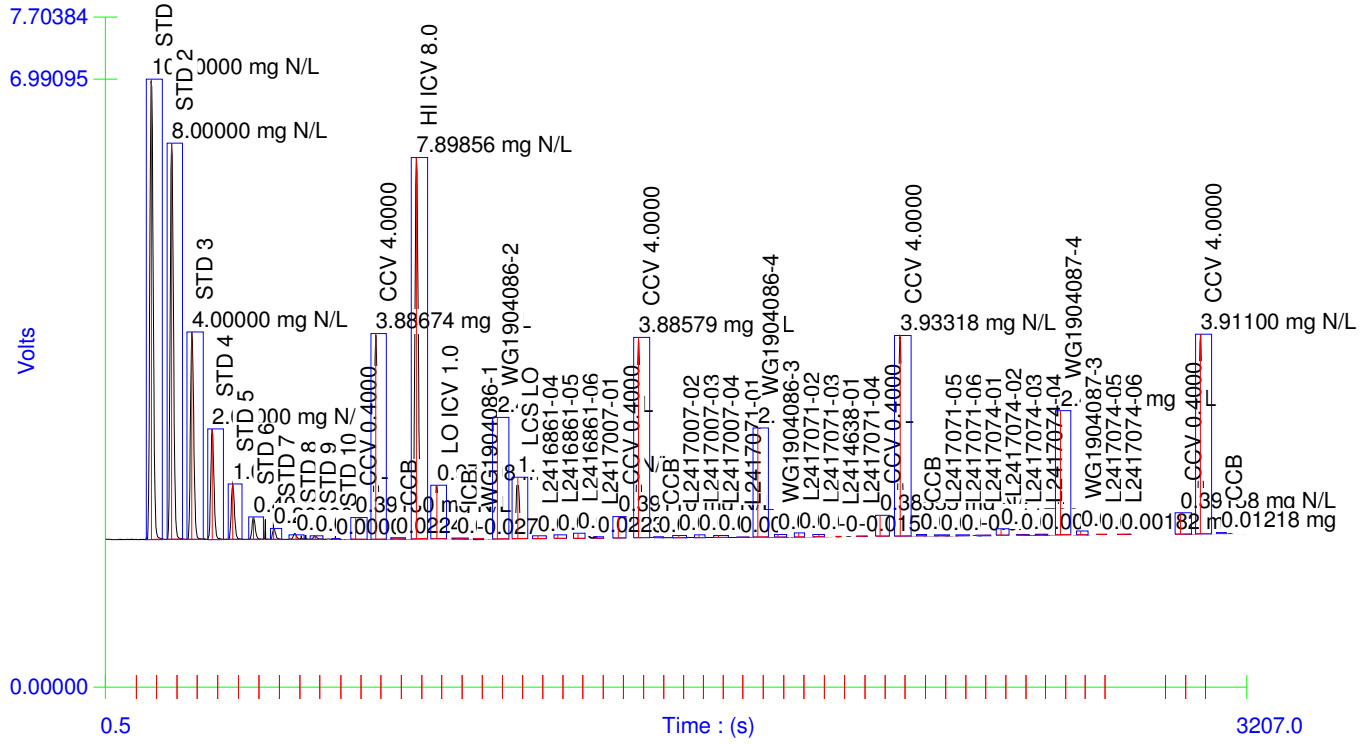
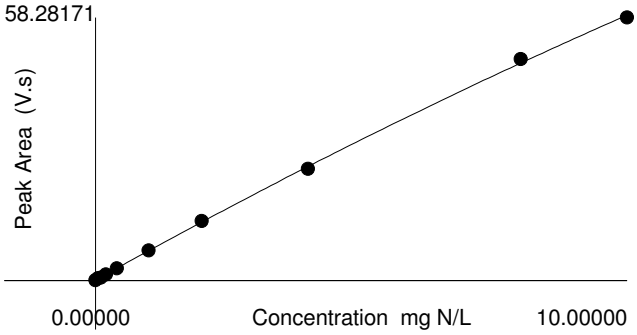


Table : 1 (Ammonia)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	10.00000	1	58.28171	5.29320	0.0	0.9	9.88086	4/4/2024	9:04:50 AM
2	8.00000	1	49.04776	4.55585	0.0	-1.8	8.16582	4/4/2024	9:05:47 AM
3	4.00000	1	24.75609	2.38436	0.0	2.1	3.92071	4/4/2024	9:06:44 AM
4	2.00000	1	13.15889	1.26937	0.0	-1.6	2.03029	4/4/2024	9:07:41 AM
5	1.00000	1	6.63731	0.63557	0.0	-0.9	1.00592	4/4/2024	9:08:38 AM
6	0.40000	1	2.67665	0.25608	0.0	0.2	0.39740	4/4/2024	9:09:37 AM
7	0.20000	1	1.32920	0.12588	0.0	3.1	0.19271	4/4/2024	9:10:34 AM
8	0.10000	1	0.63211	0.05096	0.0	11.6	0.08729	4/4/2024	9:11:33 AM
9	0.05000	1	0.44250	0.04027	0.0	-14.6	0.05867	4/4/2024	9:12:30 AM
10	0.00000	1	0.04890	0.00546			-0.00067	4/4/2024	9:13:26 AM

Figure : 1 (Ammonia)



Area = - 0.07188 * Conc^2 + 6.59284 * Conc + 0.05661
Conc = 0.00033 * Area^2 + 0.15059 * Area - 0.00803
Correlation Coefficient (r) = 0.99999

Weighting : 1/x

Quality Control

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-7B	**Matrix**	: WATER
Lab Sample ID	: L2417074-04		
Matrix Spike	: WG1904087-4	**MS Analysis Date**	: 04/04/24 09:47
Matrix Spike Dup	:	**MSD Analysis Date**	:

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nitrogen, Ammonia	ND	4	3.66	92					90-110	20

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-7B	**Matrix**	: WATER
Lab Sample ID	: L2417074-04	**Analysis Date**	: 04/04/24 09:46
Dup Sample ID	: WG1904087-3	**DUP Analysis Date**	: 04/04/24 09:48

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Nitrogen, Ammonia	ND	0.094	NC	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1904087-2	**LCS Analysis Date**	: 04/04/24 09:21
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Nitrogen, Ammonia	**20.0**	**18.2**	**91.**					**90-110**	**20**

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Nitrogen, Ammonia	7664-41-7	0.075	0.024	mg/l	80-120	20	80-120	20	20	4500NH3-BH	28 days	1 - Plastic 500ml H2SO4 preserved
Nitrogen, Ammonia	7664-41-7	0.075	0.024	mg/l	90-110	20	90-110	20	20	350.1	28 days	1 - Plastic 500ml H2SO4 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11468-1
Page: 1

WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Nitrogen, Ammonia	7664-41-7	7.5	2.79	mg/kg	83-115	20	55-144	20	20	4500NH3-BH	28 days	1 - Glass 250ml/8oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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Calculations of Nitrogen in Ammonia

Aqueous samples:

Compute sample NH_3 –N concentration by comparing sample peak areas with standard curve, as determined by the Lachat instrument software.

If the sample has a concentration of less than 2ppm, calculate results by using the low curve generated on Channel 1.

If the sample concentration is greater than 2ppm, calculate the results by using the high curve generated on Channel 2.

To Compute the final results for aqueous samples, multiply the direct reading by the dilution factor based on the initial preparation volume. (also done using software)

NH_3-N mg/L = mg/L direct reading x dilution factor

Sequence Logs

From Page No. ___

Tray A (09-03-11AM)
prep 4/3/24 @11:05

1	Hi ICV 8.0
2	Lo ICV 1.0
3	ICB
4	WG190408G-1: BLK
5	(4087)-2; LCS Hi, 5x
6	LCS Lo
7	16861-04
8	-05
9	-06
10	17007-01 (2x)
11	-02
12	-03
13	-04 (2x)
14	17071-01 (2x)
15	-01 MS ~~(2x)~~ KOP
16	-01 Dup ~~(2x)~~
17	-02
18	-03
19	14638-01
20	17071-04 (2x)
21	-05
22	-06
23	17074-01
24	-02
25	-03
26	-04
27	-04 MS
28	-04 Dup
29	-05
30	-06

KOP

Tray B
prep 4/3/24 @22:0[illegible]

1	WG190447G-1: BLK
2	-2; LCS Hi, 5x
3	LCS Lo
4	16829-01
5	16881-03
6	16969-01
7	16971-01
8	-02
9	16989-01
⊗10	17030-01; 20x
11	17031-01
12	17035-01
13	17066-04
14	17072-01
15	-02
16	-03
17	-03 MS
18	-03 Dup
19	-04
20	-05
21	-06
22	-07
23	-08
24	-09
25	-10

Date: 4/4/24
Sodium Phenolate: 3/19/24 R-4065
Sodium Hypochlorate: 4/1/24 stop+shop
Sodium Nitropruisside: 3/19/24 R-3969
Borric Acid Soln.: 4/1/24 R-4019
ICV 1.0:
ICV 8.0: 4/2/24 WC-3402
Cal. Std: 3/19/24 WC-3294
See Front Page for Instructions:

To Page No. ___

Witnessed & Understood by me, | Date | Invented by: | Date
Recorded by:

Sample Preparation

① WG1904086 ② WG1904087

Sample	Vol. 100mL	Dil. 1X	INT PH <2	ADJPH ~9.5	Final vol. 150mL
Blank					
Low					
High					
① L2416861-04					
-05					
-06					
7007-01		2x(50↑100) matrix			
-02		1X			
-03		2x(50↑100) matrix			
-04		2x(50↑100) matrix			
7071-01PA		2x(50↑100) limited vol.			
-01Dup		1X			
-01MS					
-02					
-03					
② 4638-01					
7071-04		2x(50↑100) matrix			
-05		1X			
-06					
7074-01					
-02					
-03					
-04PA					
-04Dup					
-04MS					
-05					
-06					

Same Standards and reagents as previous Page # 142

04/03/24 @ 11:05 ERB

To Page No. ____

Nitrate and Nitrite Analysis

Results

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-01**	**Date Collected**	:	**03/28/24 08:50**
Client ID	:	**MW-3A**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/03/24 16:23**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**44,353.2**	**Analyst**	:	**MRM**
Lab File ID	:	**NO3240403-Z1**	**Instrument ID**	:	**LACHAT4**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Nitrogen, Nitrate/Nitrite**	**0.15**	**0.10**	**0.046**	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 16:27
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,353.2	**Analyst**	: MRM
Lab File ID	: NO3240403-Z1	**Instrument ID**	: LACHAT4
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Nitrate/Nitrite	ND	0.10	0.046	U

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-03**	**Date Collected**	:	**03/27/24 13:24**
Client ID	:	**MW-7A**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/03/24 16:28**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**44,353.2**	**Analyst**	:	**MRM**
Lab File ID	:	**NO3240403-Z1**	**Instrument ID**	:	**LACHAT4**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Nitrogen, Nitrate/Nitrite**	**0.64**	**0.10**	**0.046**	

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-04**	**Date Collected**	:	**03/27/24 14:35**
Client ID	:	**MW-7B**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/03/24 16:29**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**44,353.2**	**Analyst**	:	**MRM**
Lab File ID	:	**NO3240403-Z1**	**Instrument ID**	:	**LACHAT4**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Nitrogen, Nitrate/Nitrite**	**0.14**	**0.10**	**0.046**	

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-05**	**Date Collected**	:	**03/27/24 15:05**
Client ID	:	**MW-7C**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/03/24 16:30**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**44,353.2**	**Analyst**	:	**MRM**
Lab File ID	:	**NO3240403-Z1**	**Instrument ID**	:	**LACHAT4**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Nitrogen, Nitrate/Nitrite**	**1.2**	**0.10**	**0.046**	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 16:32
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,353.2	**Analyst**	: MRM
Lab File ID	: NO3240403-Z1	**Instrument ID**	: LACHAT4
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Nitrate/Nitrite	0.17	0.10	0.046	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904403-1	**Date Collected**	: NA
Client ID	: WG1904403-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/03/24 16:18
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,353.2	**Analyst**	: MRM
Lab File ID	: NO3240403-Z1	**Instrument ID**	: LACHAT4
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Nitrate/Nitrite	ND	0.10	0.046	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904403-3	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3ADUP	**Date Received**	: 03/28/24
Sample Location	:	**Date Analyzed**	: 04/03/24 16:24
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,353.2	**Analyst**	: MRM
Lab File ID	: NO3240403-Z1	**Instrument ID**	: LACHAT4
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Nitrogen, Nitrate/Nitrite	0.16	0.10	0.05	

Sample Raw Data

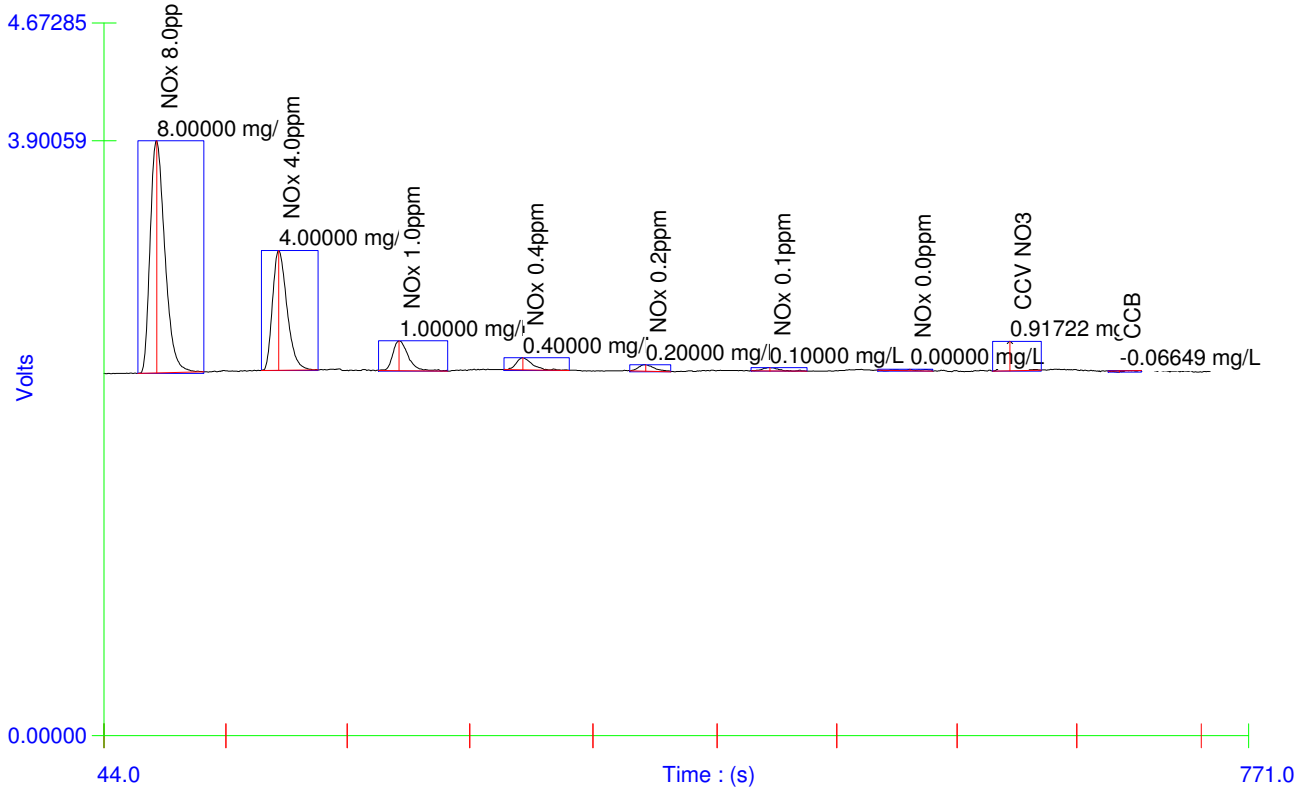
Author: MRM

Date : 4/3/2024

Original Run Filename: OM_4-3-2024_03-24-06PM.OMN Created: 4/3/2024 3:24:06 PM
Original Run Author's Signature: [A1wetcheminstrument]
Current Run Filename: OM_4-3-2024_03-24-06PM.OMN Last Modified: 4/3/2024 3:37:08 PM
Current Run Author's Signature: [A1wetcheminstrument]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 NO3+NO2 (mg/L)	ADF	MDF	Weight
NOx 8.0ppm	1	S3	8.00000			
NOx 4.0ppm	1	S4	4.00000			
NOx 1.0ppm	1	S2	1.00000			
NOx 0.4ppm	1	S5	0.40000			
NOx 0.2ppm	1	S6	0.20000			
NOx 0.1ppm	1	S7	0.10000			
NOx 0.0ppm	1	S1	0.00000			
CCV NO3	1	S2	0.91722			
		Known Conc:	1.00000			
		Calibration:	Table/Fig. : 1			
CCB	1	S1	-0.06649			
		Known Conc:	0.00000			

Channel 1 (NO3+NO2) - Set: 1 / 1

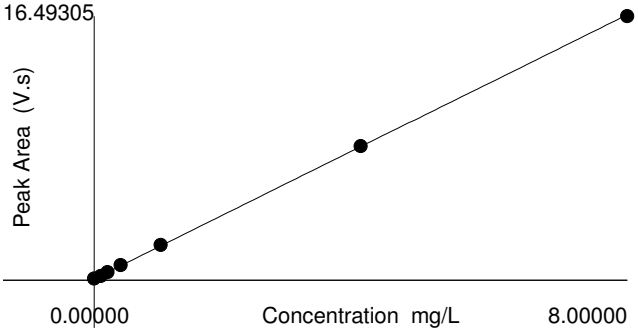


Author: MRM Date : 4/3/2024

Table : 1 (NO3+NO2)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	8.00000	1	16.49305	1.52262	0.0	0.6	7.95025	4/3/2024	3:25:03 PM
2	4.00000	1	8.36785	0.78596	0.0	-0.4	4.01442	4/3/2024	3:26:21 PM
3	1.00000	1	2.19813	0.19518	0.0	-2.5	1.02581	4/3/2024	3:27:38 PM
4	0.40000	1	0.94147	0.08050	0.0	-3.9	0.41709	4/3/2024	3:28:56 PM
5	0.20000	1	0.50060	0.04328	0.0	-1.5	0.20353	4/3/2024	3:30:14 PM
6	0.10000	1	0.25358	0.02278	0.0	11.6	0.08388	4/3/2024	3:31:33 PM
7	0.00000	1	0.09645	0.00849			0.00777	4/3/2024	3:32:50 PM

Figure : 1 (NO3+NO2)



Area = 2.06358 * Conc + 0.08060
Conc = 0.48440 * Area - 0.03896
Correlation Coefficient (r) = 0.99998

Weighting : 1/x

Author: MRM Date : 4/3/2024

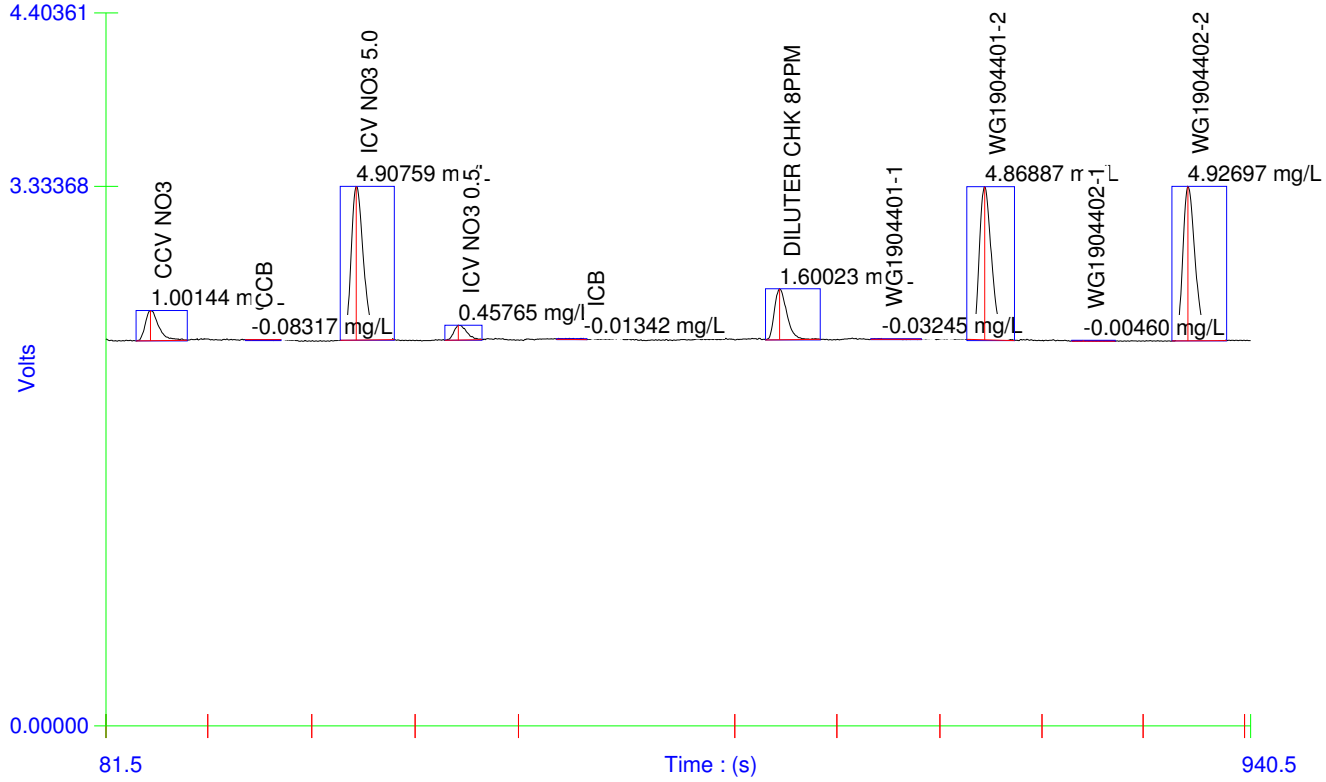
Original Run Filename: OM_4-3-2024_04-02-12PM.OMN Created: 4/3/2024 4:02:12 PM
Original Run Author's Signature: [A1wetcheminstrument]
Current Run Filename: OM_4-3-2024_04-02-12PM.OMN Last Modified: 4/3/2024 4:37:53 PM
Current Run Author's Signature: [A1wetcheminstrument]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 NO3+NO2 (mg/L)	ADF	MDF	Weight
CCV NO3	1	S2	1.00144			
		Known Conc:	1.00000			
		Calibration:	Table/Fig. : 1			
CCB	1	S1	-0.08317			
		Known Conc:	0.00000			
ICV NO3 5.0	1	1	4.90759			
ICV NO3 0.5	1	3	0.45765			
ICB	1	5	-0.01342			
DILUTER CHK 8PPM	1	6	8.00114	5.00		
WG1904401-1	1	11	-0.03245			
WG1904401-2	1	12	4.86887			
WG1904402-1	1	13	-0.00460			
WG1904402-2	1	14	4.92697			
WG1904403/04-1	1	15	-0.02408			
WG1904403/04-2	1	16	4.94466			
CCV NO3	1	S2	0.94173			
		Known Conc:	1.00000			
CCB	1	S1	-0.02570			
		Known Conc:	0.00000			
L2417074-01M	1	17	0.14942			
WG1904403-3	1	18	0.16218			
WG1904403-4	1	19	3.88469			
L2417074-02M	1	20	-0.04380			
L2417074-03M	1	21	0.64081			
L2417074-04M	1	22	0.14446			
L2417074-05M	1	23	1.25121			
L2417074-06M	1	24	0.17466			
L2417158-01D	1	25	0.18550			
L2417158-02D	1	26	0.17362			
CCV NO3	1	S2	0.89908			
		Known Conc:	1.00000			

Author: MRM

Date : 4/3/2024

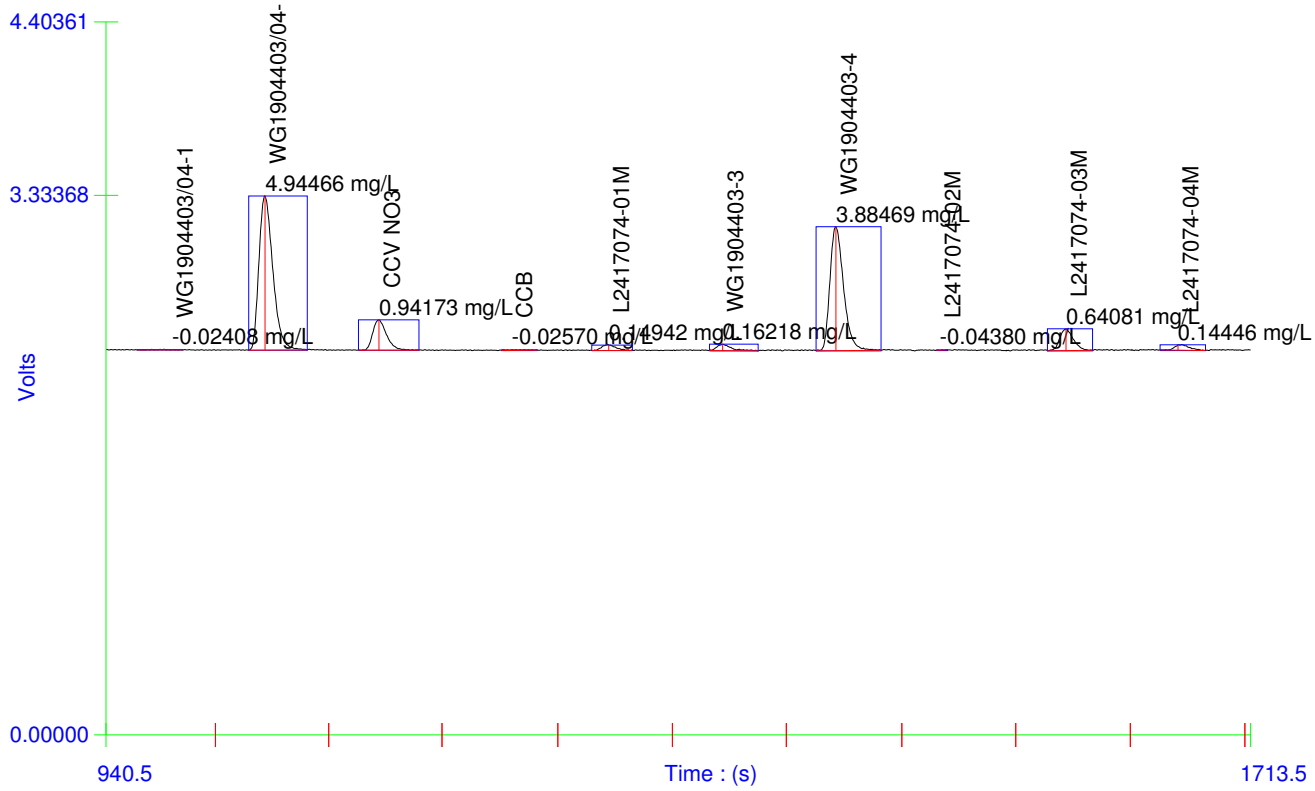
Channel 1 (NO3+NO2) - Set: 1 / 3



Author: MRM

Date : 4/3/2024

Channel 1 (NO3+NO2) - Set: 2 / 3



Author: MRM Date : 4/3/2024

Channel 1 (NO3+NO2) - Set: 3 / 3

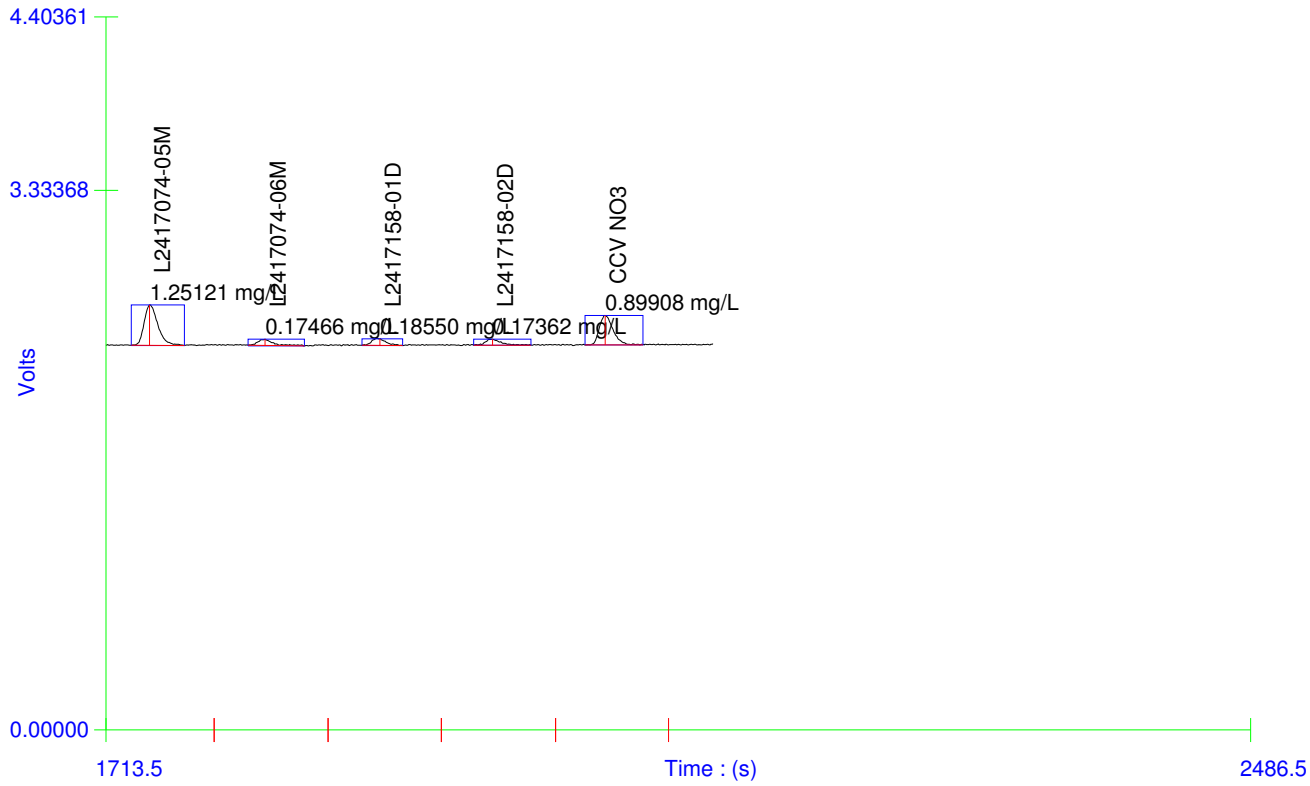
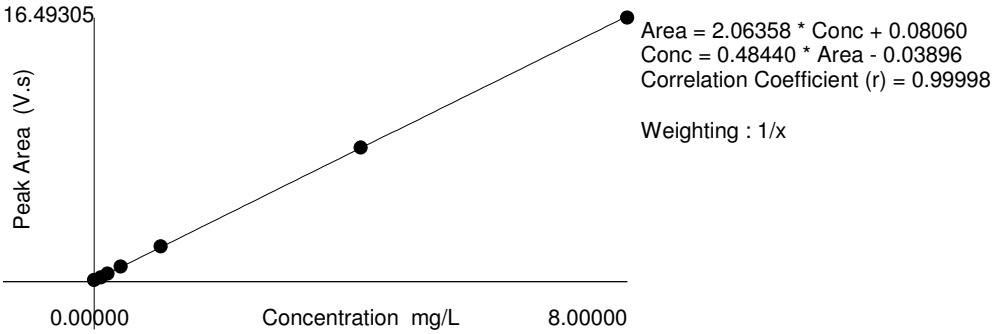


Table : 1 (NO3+NO2)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	8.00000	1	16.49305	1.52262	0.0	0.6	7.95025	4/3/2024	3:25:03 PM
2	4.00000	1	8.36785	0.78596	0.0	-0.4	4.01442	4/3/2024	3:26:21 PM
3	1.00000	1	2.19813	0.19518	0.0	-2.5	1.02581	4/3/2024	3:27:38 PM
4	0.40000	1	0.94147	0.08050	0.0	-3.9	0.41709	4/3/2024	3:28:56 PM
5	0.20000	1	0.50060	0.04328	0.0	-1.5	0.20353	4/3/2024	3:30:14 PM
6	0.10000	1	0.25358	0.02278	0.0	11.6	0.08388	4/3/2024	3:31:33 PM
7	0.00000	1	0.09645	0.00849			0.00777	4/3/2024	3:32:50 PM

Figure : 1 (NO3+NO2)



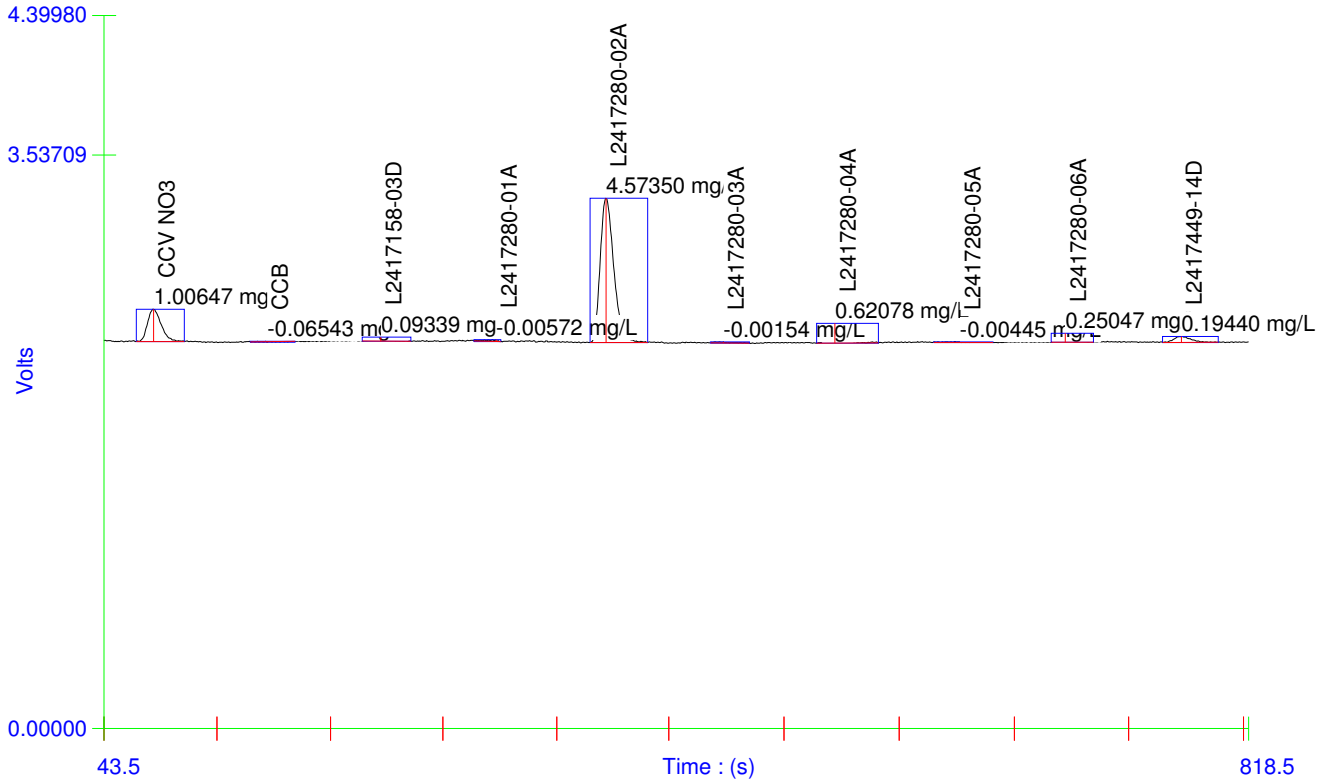
Author: MRM Date : 4/3/2024

Original Run Filename: OM_4-3-2024_04-38-52PM.OMN Created: 4/3/2024 4:38:52 PM
Original Run Author's Signature: [A1wetcheminstrument]
Current Run Filename: OM_4-3-2024_04-38-52PM.OMN Last Modified: 4/3/2024 5:54:44 PM
Current Run Author's Signature: [A1wetcheminstrument]
Description: Default New Run

Sample	Rep.	Cup No.	Channel 1 NO3+NO2 (mg/L)	ADF	MDF	Weight
CCV NO3	1	S2	1.00647			
	Known Conc:		1.00000			
CCB	1	S1	-0.06543			
	Known Conc:		0.00000			
	Calibration:		Table/Fig. : 1			
L2417158-03D	1	27	0.09339			
L2417280-01A	1	28	-0.00572			
L2417280-02A	1	29	4.57350			
L2417280-03A	1	30	-0.00154			
L2417280-04A	1	31	0.62078			
L2417280-05A	1	32	-0.00445			
L2417280-06A	1	33	0.25047			
L2417449-14D	1	34	0.19440			
WG1904401-5	1	35	0.18997			
WG1904401-6	1	36	2.77481			
CCV NO3	1	S2	1.00084			
	Known Conc:		1.00000			
CCB	1	S1	-0.03027			
	Known Conc:		0.00000			
L2417482-01A	1	37	0.23474			
L2417503-01C	1	38	4.12607			
L2417503-02C	1	39	1.70894			
L2417518-01B	1	40	1.08995			
L2417518-02A	1	41	0.67688			
L2417518-03A	1	42	0.34838			
L2417518-04B	1	43	0.27791			
L2417525-01F	1	44	0.52297			
WG1904401-3	1	45	0.52974			
WG1904401-4	1	46	4.31619			
CCV NO3	1	S2	0.99800			
	Known Conc:		1.00000			
CCB	1	S1	-0.04759			
	Known Conc:		0.00000			
L2417889-01F	1	47	1.82525			
L2417889-02F	1	48	1.83142			
L2417621-05G	1	49	-0.03536			
L2417621-09F1	1	50	0.26813			
WG1904402-3	1	51	0.24538			
WG1904402-4	1	52	3.92728			
L2417690-02A	1	53	0.82986			
L2417759-01E	1	54	0.24330			
L2417759-02E	1	55	0.24213			
L2417759-03E	1	56	0.27970			
CCV NO3	1	S2	1.00440			
	Known Conc:		1.00000			
CCB	1	S1	-0.01268			
	Known Conc:		0.00000			
L2417838-01A	1	57	-0.01512			
L2417890-01G	1	58	0.21172			
L2417890-02G	1	59	0.03589			
L2417890-03H	1	60	0.87681			
L2417890-04H	1	61	0.30043			
L2417890-05H	1	62	0.15905			
L2417890-06H	1	63	0.30602			
L2417900-01E	1	64	2.22180			
WG1904402-5	1	65	2.21121			
WG1904402-6	1	66	5.98452			
CCV NO3	1	S2	1.05859			
	Known Conc:		1.00000			

CCB	1	S1	-0.02764			
	Known Conc:		0.00000			
L2417900-02E	1	67	2.22001			
L2417900-03E	1	68	2.33546			
L2417900-04D	1	69	2.26872			
L2417900-06B	1	70	4.60808			
L2417900-08B	1	71	3.12775			
CCV NO3	1	S2	1.02109			
	Known Conc:		1.00000			
CCB	1	S1	-0.08599			
	Known Conc:		0.00000			

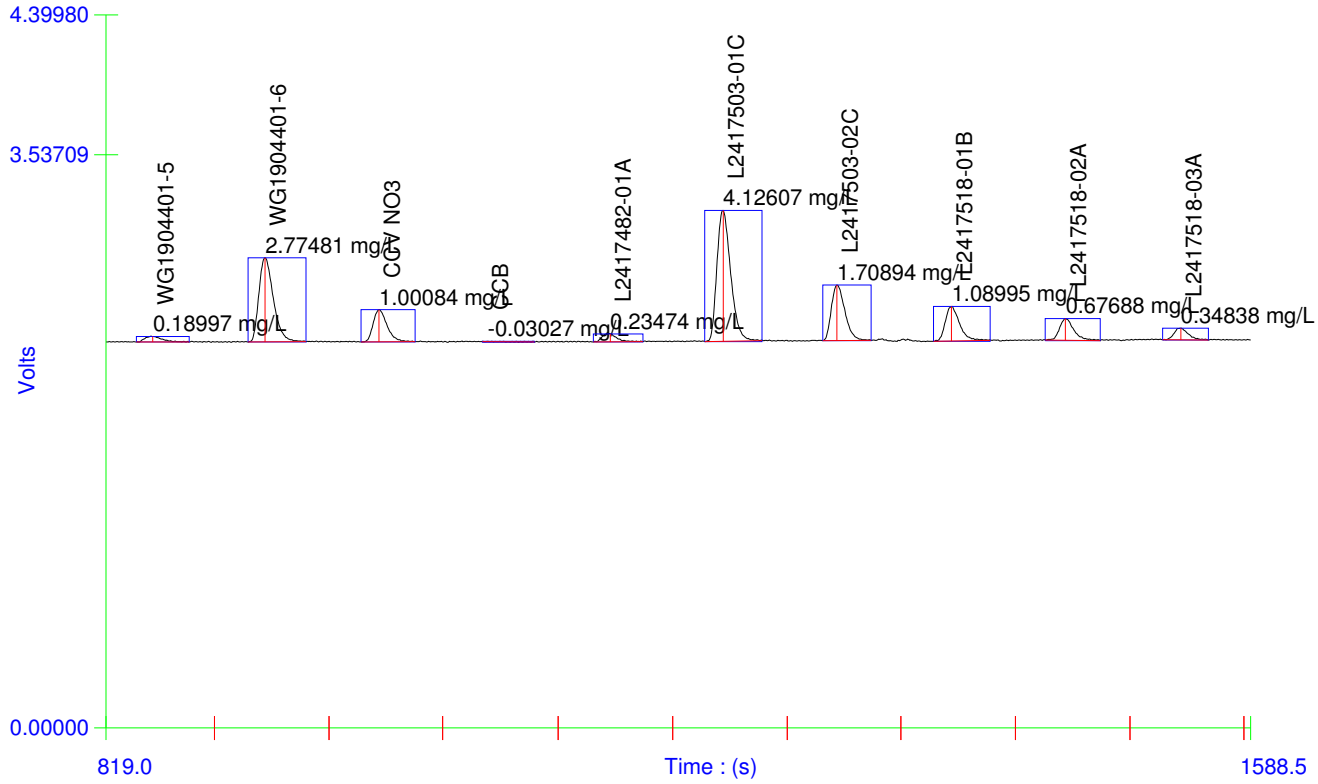
Channel 1 (NO3+NO2) - Set: 1 / 6



Author: MRM

Date : 4/3/2024

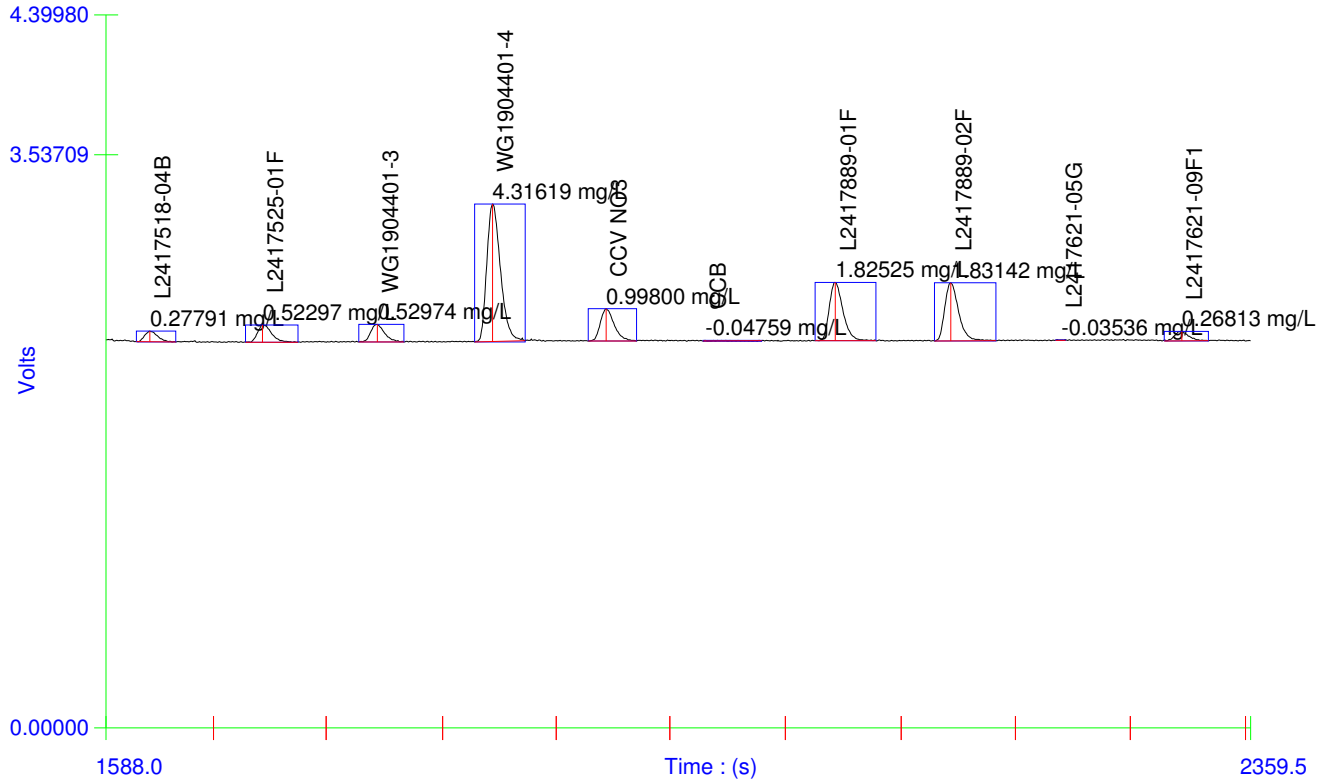
Channel 1 (NO3+NO2) - Set: 2 / 6



Author: MRM

Date : 4/3/2024

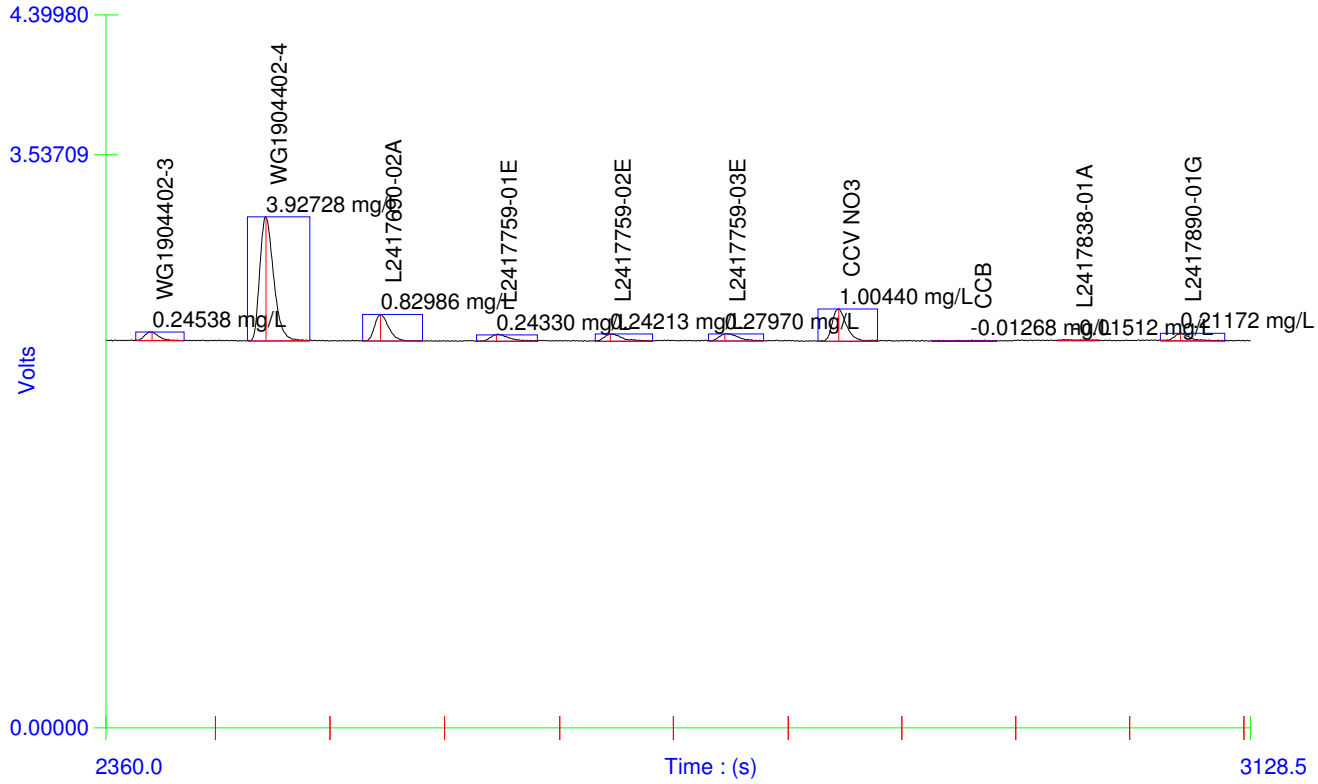
Channel 1 (NO3+NO2) - Set: 3 / 6



Author: MRM

Date : 4/3/2024

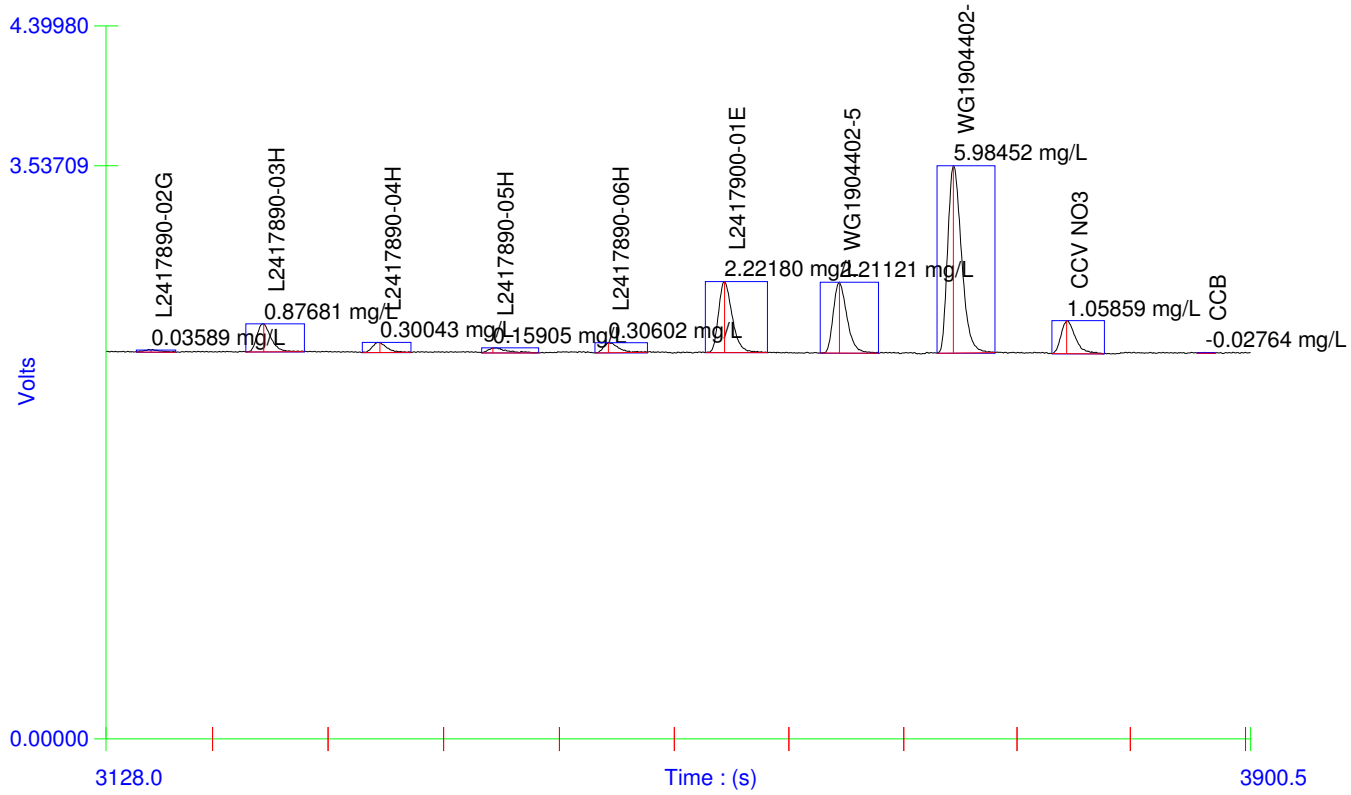
Channel 1 (NO3+NO2) - Set: 4 / 6



Author: MRM

Date : 4/3/2024

Channel 1 (NO3+NO2) - Set: 5 / 6



Author: MRM Date : 4/3/2024

Channel 1 (NO3+NO2) - Set: 6 / 6

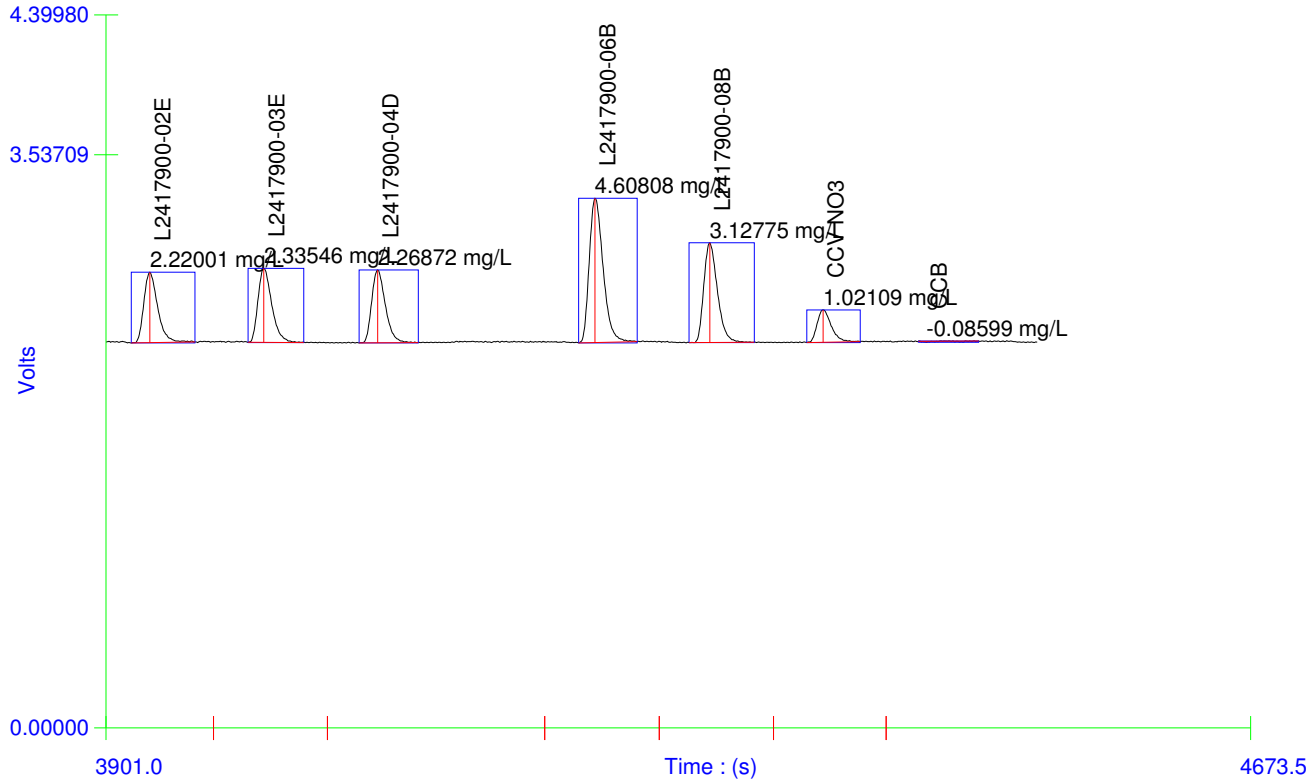
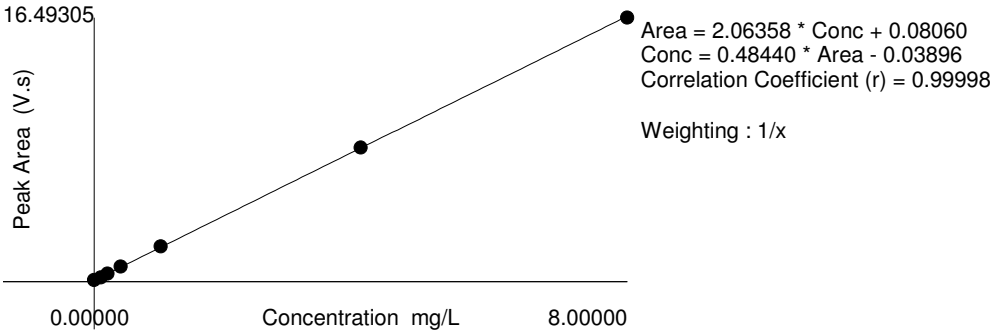


Table : 1 (NO3+NO2)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	8.00000	1	16.49305	1.52262	0.0	0.6	7.95025	4/3/2024	3:25:03 PM
2	4.00000	1	8.36785	0.78596	0.0	-0.4	4.01442	4/3/2024	3:26:21 PM
3	1.00000	1	2.19813	0.19518	0.0	-2.5	1.02581	4/3/2024	3:27:38 PM
4	0.40000	1	0.94147	0.08050	0.0	-3.9	0.41709	4/3/2024	3:28:56 PM
5	0.20000	1	0.50060	0.04328	0.0	-1.5	0.20353	4/3/2024	3:30:14 PM
6	0.10000	1	0.25358	0.02278	0.0	11.6	0.08388	4/3/2024	3:31:33 PM
7	0.00000	1	0.09645	0.00849			0.00777	4/3/2024	3:32:50 PM

Figure : 1 (NO3+NO2)



Quality Control

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1904403-4	**MS Analysis Date**	: 04/03/24 16:25
Matrix Spike Dup	:	**MSD Analysis Date**	:

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nitrogen, Nitrate/Nitrite	0.15	4	3.9	94					80-120	20

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/03/24 16:23
Dup Sample ID	: WG1904403-3	**DUP Analysis Date**	: 04/03/24 16:24

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Nitrogen, Nitrate/Nitrite	0.15	0.16	6	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1904403-2	**LCS Analysis Date**	: 04/03/24 16:19
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Nitrogen, Nitrate/Nitrite	**5.00**	**4.90**	**98.**					**90-110**	**20**

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Nitrogen, Nitrate	14797-55-8	0.1	0.0228	mg/l	90-110		83-113	6	6	353.2	48 hours	1 - Plastic 250ml unpreserved
Nitrogen, Nitrate	14797-55-8	0.1	0.0228	mg/l	90-110		83-113	17	17	4500NO3-F	48 hours	1 - Plastic 250ml unpreserved
Nitrogen, Nitrite	NONE	0.05	0.0143	mg/l	90-110	20	80-120	20	20	353.2	48 hours	1 - Plastic 250ml unpreserved
Nitrogen, Nitrite	NONE	0.05	0.0143	mg/l	90-110	20	80-120	20	20	4500NO3-F	48 hours	1 - Plastic 250ml unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11468-1
Page: 1

WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Nitrogen, Nitrate	14797-55-8	1	0.261	mg/kg	90-110	20	80-120	20	20	4500NO3-F	48 hours	1 - Glass 250ml/8oz unpreserved
Nitrogen, Nitrite	NONE	1	0.282	mg/kg	90-110	20	80-120	20	20	4500NO3-F	48 hours	1 - Glass 250ml/8oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Calculations of Nitrogen, Nitrate

Aqueous Samples:
Compute sample N in NO3 concentration by comparing sample peak areas with standard curve, as determined by the Lachat instrument software.

Calculate results by using reading on Channel 1 (NO3+NO2) and Channel 2 (NO2)

$$NO3\ mg/I = (NO3+NO2)\ mg/L - (NO2)\ mg/L$$

To compute final results for aqueous samples, multiply the direct reading by the dilution factor (also done using software)

$$(NO3)\text{-}N\ mg/L = mg/L\ direct\ reading \times dilution\ factor$$

Calculations of Nitrogen, Nitrite

Aqueous Samples:
Compute sample N in NO2 concentration by comparing sample peak areas with standard curve, as determined by the Lachat instrument software.

Calculate results by using reading on Channel 2 (NO2)

To compute final results for aqueous samples, multiply the direct reading by the dilution factor (also done using software)

$$(NO2)\text{-}N\ mg/L = mg/L\ direct\ reading \times dilution\ factor$$

Sequence Logs

Date: 040324

Initals: KAF

Syringe Lot: 20230410

Filter Lot: 15904235A

Cup #:	Sample ID:
1	ICV NO3 5
2	ICV NO2 5
3	ICV NO3 0.5
4	ICV NO2 0.5
5	ICB
6	5X DILUTER CHECK
7	BLANK NO3
8	LCS NO3
9	BLANK NO2
10	LCS NO2
11	WG1904401-1
12	WG1904401-2
13	WG1904402-1
14	WG1904402-2
15	WG1904403/04-1
16	WG1904403/04-2
17	L2417074-01M
18	WG1904403-3
19	WG1904403-4
20	L2417074-02M
21	L2417074-03M
22	L2417074-04M
23	L2417074-05M
24	L2417074-06M
25	L2417158-01D
26	L2417158-02D
27	L2417158-03D
28	L2417280-01A
29	L2417280-02A
30	L2417280-03A
31	L2417280-04A
32	L2417280-05A
33	L2417280-06A
34	L2417449-14D
35	WG1904401-5
36	WG1904401-6
37	L2417482-01A
38	L2417503-01C
39	L2417503-02C
40	L2417518-01B
41	L2417518-02A
42	L2417518-03A
43	L2417518-04B

Comments:
Buffer: NO3NO2_040224_BUFFER
Color: NO3NO2_032924_COLOR
NO3 MS: NO3_031624_200PPM_CAL
NO2 MS: NO2_031624_200PPM_CAL
ICV NO3 5: NO3_040324_5PPM_ICV
ICV NO2 5: NO2_040324_5PPM_ICV
ICV NO3 0.5: NO3_040324_0.5PPM_ICV
ICV NO2 0.5: NO2_040324_0.5PPM_ICV

Cup #:	Sample ID:	Comments:
44	L2417525-01F	
45	WG1904401-3	
46	WG1904401-4	
47	L2417889-01F	
48	L2417889-02F	
49	L2417621-05G	
50	L2417621-09F1	
51	WG1904402-3	
52	WG1904402-4	
53	L2417690-02A	
54	L2417759-01E	
55	L2417759-02E	
56	L2417759-03E	
57	L2417838-01A	
58	L2417890-01G	
59	L2417890-02G	
60	L2417890-03H	
61	L2417890-04H	
62	L2417890-05H	
63	L2417890-06H	
64	L2417900-01E	
65	WG1904402-5	
66	WG1904402-6	
67	L2417900-02E	
68	L2417900-03E	
69	L2417900-04D	
70	L2417900-06B	
71	L2417900-08B	

Total Dissolved Solids Analysis

Results

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/02/24 03:17
Sample Matrix	: WATER	**Dilution Factor**	: 1.3
Analytical Method	: 121,2540C	**Analyst**	: DEW
Lab File ID	: WG1903588.pdf	**Instrument ID**	: BALANCE#22
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Solids, Total Dissolved	36.	13	4.0	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/02/24 03:17
Sample Matrix	: WATER	**Dilution Factor**	: 1.3
Analytical Method	: 121,2540C	**Analyst**	: DEW
Lab File ID	: WG1903588.pdf	**Instrument ID**	: BALANCE#22
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Solids, Total Dissolved	160	13	4.0	

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-03**	**Date Collected**	:	**03/27/24 13:24**
Client ID	:	**MW-7A**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/02/24 03:17**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1.3**
Analytical Method	:	**121,2540C**	**Analyst**	:	**DEW**
Lab File ID	:	**WG1903588.pdf**	**Instrument ID**	:	**BALANCE#22**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Solids, Total Dissolved**	**96.**	**13**	**4.0**	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/02/24 03:17
Sample Matrix	: WATER	**Dilution Factor**	: 1.3
Analytical Method	: 121,2540C	**Analyst**	: DEW
Lab File ID	: WG1903588.pdf	**Instrument ID**	: BALANCE#22
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Solids, Total Dissolved	120	13	4.0	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/02/24 03:17
Sample Matrix	: WATER	**Dilution Factor**	: 1.3
Analytical Method	: 121,2540C	**Analyst**	: DEW
Lab File ID	: WG1903588.pdf	**Instrument ID**	: BALANCE#22
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Solids, Total Dissolved	120	13	4.0	

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-06**	**Date Collected**	:	**03/28/24 00:00**
Client ID	:	**DUP**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/02/24 03:17**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1.3**
Analytical Method	:	**121,2540C**	**Analyst**	:	**DEW**
Lab File ID	:	**WG1903588.pdf**	**Instrument ID**	:	**BALANCE#22**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	**Solids, Total Dissolved**	**48.**	**13**	**4.0**	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903588-1	**Date Collected**	: NA
Client ID	: WG1903588-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/02/24 03:17
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2540C	**Analyst**	: DEW
Lab File ID	: WG1903588.pdf	**Instrument ID**	: BALANCE#22
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Solids, Total Dissolved	ND	10	3.1	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903588-3	**Date Collected**	: 04/01/24 09:45
Client ID	: WG1903588-3 DUP	**Date Received**	: 04/01/24
Sample Location	:	**Date Analyzed**	: 04/02/24 03:17
Sample Matrix	: WATER	**Dilution Factor**	: 1.3
Analytical Method	: 121,2540C	**Analyst**	: DEW
Lab File ID	: WG1903588.pdf	**Instrument ID**	: BALANCE#22
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Solids, Total Dissolved	1300	13	4.0	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903588-4	**Date Collected**	: 04/01/24 10:00
Client ID	: WG1903588-4 DUP	**Date Received**	: 04/01/24
Sample Location	:	**Date Analyzed**	: 04/02/24 03:17
Sample Matrix	: WATER	**Dilution Factor**	: 1.3
Analytical Method	: 121,2540C	**Analyst**	: DEW
Lab File ID	: WG1903588.pdf	**Instrument ID**	: BALANCE#22
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Solids, Total Dissolved	1900	13	4.0	

Sample Raw Data

Wet Chemistry Gravimetric ELN

Printed: APR-03-24 07:32:02

WorkGroup	WG1903588	**Temp In (C)**	180	**Temp In (C)**	180	**Temp In (C)**		**Temp In (C)**		**Temp In (C)**					
Title	Solids, Total Dissolved	**Temp Out (C)**	180	**Temp Out (C)**	180	**Temp Out (C)**		**Temp Out (C)**		**Temp Out (C)**					
Method	SM2540C	**Time In**	03-APR-24 01:10	**Time In**	03-APR-24 04:43	**Time In**		**Time In**		**Time In**					
Instrument	BALANCE#22	**Time Out**	03-APR-24 03:45	**Time Out**	03-APR-24 07:11	**Time Out**		**Time Out**		**Time Out**					
		Evaporation	**Temp In (C)** 90	**Time In** 02-APR-24 05:50								**LCS Lot #** 032724A	**TrueValue** 500	**Units** mg/l	

Sample #	Analysis Date	Analyst	Cup ID	Filter Lot	Tare Weight (gm)	Sample Volume (ml)	Net Weight (1) (gm)	Net Weight (2) (gm)	Net Weight (3) (gm)	Net Weight (4) (gm)	Net Weight (5) (gm)	Result mg/L	Dil	Comment
L2417074-01	02-APR-24 03:17	DEB WHELAN	H8	71913375	64.2244	80	64.2276	64.2273				36.25	1.3	
L2417074-02	02-APR-24 03:17	DEB WHELAN	EJ	71913375	57.6967	80	57.71	57.7097				162.50	1.3	
L2417074-03	02-APR-24 03:17	DEB WHELAN	EQ	71913375	60.0195	80	60.0273	60.0272				96.25	1.3	
L2417074-04	02-APR-24 03:17	DEB WHELAN	W8	71913375	74.7314	80	74.7413	74.7409				118.75	1.3	
L2417074-05	02-APR-24 03:17	DEB WHELAN	PG	71913375	61.7107	80	61.7203	61.7205				120.00	1.3	
L2417074-06	02-APR-24 03:17	DEB WHELAN	FR	71913375	59.1518	80	59.1556	59.1558				47.50	1.3	
L2417311-01	02-APR-24 03:17	DEB WHELAN	S	71913375	69.9053	80	69.927	69.9272				271.25	1.3	
L2417311-02	02-APR-24 03:17	DEB WHELAN	W4	71913375	65.1388	80	65.1532	65.1534				180.00	1.3	
L2417399-01	02-APR-24 03:17	DEB WHELAN	XC	71913375	64.4288	80	64.4471	64.4469				226.25	1.3	T2
L2417399-02	02-APR-24 03:17	DEB WHELAN	CE	71913375	64.742	80	64.7738	64.7737				396.25	1.3	
L2417399-03	02-APR-24 03:17	DEB WHELAN	CO	71913375	59.4365	80	59.4651	59.465				356.25	1.3	
L2417399-04	02-APR-24 03:17	DEB WHELAN	W11	71913375	62.9794	80	62.9817	62.9821				28.75	1.3	
L2417399-06	02-APR-24 03:17	DEB WHELAN	W6	71913375	72.6068	80	72.6201	72.6199				163.75	1.3	
L2417399-07	02-APR-24 03:17	DEB WHELAN	Z	71913375	66.6227	80	66.6534	66.6532				381.25	1.3	
L2417399-08	02-APR-24 03:17	DEB WHELAN	X	71913375	65.4544	80	65.462	65.4623				95.00	1.3	
L2417399-09	02-APR-24 03:17	DEB WHELAN	GA	71913375	65.7107	80	65.7217	65.722				137.50	1.3	
L2417419-01	02-APR-24 03:17	DEB WHELAN	W12	71913375	64.7416	80	64.7656	64.7655				298.75	1.3	
L2417525-01	02-APR-24 03:17	DEB WHELAN	E1	71913375	59.5264	80	59.5924	59.592				820.00	1.3	
L2417611-01	02-APR-24 03:17	DEB WHELAN	CH	71913375	67.2358	80	67.3423	67.3424				1331.25	1.3	INF
L2417611-02	02-APR-24 03:17	DEB WHELAN	EL	71913375	64.199	80	64.3514	64.351				1900.00	1.3	EFF
WG1903588-1	02-APR-24 03:17	DEB WHELAN	BA	71913375	76.1	100	76.0995	76.0999				-5.00	1	T1
WG1903588-2	02-APR-24 03:17	DEB WHELAN	TL	71913375	65.2306	50	65.2539	65.2541				466.00	2	
WG1903588-3	02-APR-24 03:17	DEB WHELAN	EH	71913375	61.8137	80	61.9185	61.9182				1306.25	1.3	

Wet Chemistry Gravimetric ELN

Printed: APR-03-24 07:32:02

WorkGroup	WG1903588	**Temp In (C)**	180	**Temp In (C)**	180	**Temp In (C)**		**Temp In (C)**		**Temp In (C)**					
Title	Solids, Total Dissolved	**Temp Out (C)**	180	**Temp Out (C)**	180	**Temp Out (C)**		**Temp Out (C)**		**Temp Out (C)**					
Method	SM2540C	**Time In**	03-APR-24 01:10	**Time In**	03-APR-24 04:43	**Time In**		**Time In**		**Time In**					
Instrument	BALANCE#22	**Time Out**	03-APR-24 03:45	**Time Out**	03-APR-24 07:11	**Time Out**		**Time Out**		**Time Out**					
		Temp In (C)	90	**Time In**	02-APR-24 05:50							**LCS Lot #**	032724A	**TrueValue**	500	**Units**	mg/l

Sample #	Analysis Date	Analyst	Cup ID			Sample Volume (ml)					Result mg/L	Dil	Comment
WG1903588-4	02-APR-24 03:17	DEB WHELAN	B48	71913375	61.207	80	61.3599	61.3602			1911.25	1.3	

Quality Control

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: NA	**Analysis Date**	: 04/02/24 03:17
Dup Sample ID	: WG1903588-3	**DUP Analysis Date**	: 04/02/24 03:17

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Solids, Total Dissolved	1300	1300	0	10

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: NA	**Analysis Date**	: 04/02/24 03:17
Dup Sample ID	: WG1903588-4	**DUP Analysis Date**	: 04/02/24 03:17

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Solids, Total Dissolved	1900	1900	0	10

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1903588-2	**LCS Analysis Date**	: 04/02/24 03:17
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Solids, Total Dissolved	**500.**	**470.**	**93.**					**80-120**	**10**

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Solids, Total Dissolved	NONE	10	3.07	mg/l	80-120			10	10	2540C	7 days	1 - Plastic 500ml unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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Calculations of TDS

$$\text{mgTDS/L} = \frac{(A - B) \times 1000}{\text{Sample volume, (L)}}$$

Where:

A = Final weight (weight of dish + dried residue, g)
B = Initial weight (weight of clean dish, g)

Sulfide Analysis

Results

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 14:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500S2-D	**Analyst**	: LOF
Lab File ID	: WG1903295.csv	**Instrument ID**	: GENSYS10VI
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/01/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	Sulfide	ND	0.10	0.10	U

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-02**	**Date Collected**	:	**03/28/24 10:35**
Client ID	:	**MW-6AR**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/01/24 14:30**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**121,4500S2-D**	**Analyst**	:	**LOF**
Lab File ID	:	**WG1903295.csv**	**Instrument ID**	:	**GENSYS10VI**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	**04/01/24**

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	**Sulfide**	**ND**	**0.10**	**0.10**	**U**

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 14:31
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500S2-D	**Analyst**	: LOF
Lab File ID	: WG1903295.csv	**Instrument ID**	: GENSYS10VI
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/01/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	Sulfide	ND	0.10	0.10	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 14:31
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500S2-D	**Analyst**	: LOF
Lab File ID	: WG1903295.csv	**Instrument ID**	: GENSYS10VI
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/01/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	Sulfide	ND	0.10	0.10	U

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-05**	**Date Collected**	:	**03/27/24 15:05**
Client ID	:	**MW-7C**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/01/24 16:16**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**121,4500S2-D**	**Analyst**	:	**LOF**
Lab File ID	:	**WG1903295.csv**	**Instrument ID**	:	**GENSYS10VI**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	**04/01/24**

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	**Sulfide**	**ND**	**0.10**	**0.10**	**U**

Form 1
WETCHEM

Client	:	**Alpha Geoscience**	**Lab Number**	:	**L2417074**
Project Name	:	**RANCO SAND & GRAVEL**	**Project Number**	:	**12123**
Lab ID	:	**L2417074-06**	**Date Collected**	:	**03/28/24 00:00**
Client ID	:	**DUP**	**Date Received**	:	**03/28/24**
Sample Location	:	**MANORVILLE, NY**	**Date Analyzed**	:	**04/01/24 16:30**
Sample Matrix	:	**WATER**	**Dilution Factor**	:	**1**
Analytical Method	:	**121,4500S2-D**	**Analyst**	:	**LOF**
Lab File ID	:	**WG1903295.csv**	**Instrument ID**	:	**GENSYS10VI**
Sample Amount	:		**%Solids**	:	**N/A**
Digestion Method	:		**Date Digested**	:	**04/01/24**

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	**Sulfide**	**ND**	**0.10**	**0.10**	**U**

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903295-1	**Date Collected**	: NA
Client ID	: WG1903295-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/01/24 14:28
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500S2-D	**Analyst**	: LOF
Lab File ID	: WG1903295.csv	**Instrument ID**	: GENSYS10VI
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/01/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	Sulfide	ND	0.10	0.10	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903295-3	**Date Collected**	: 03/27/24 12:55
Client ID	: WG1903295-3 DUP	**Date Received**	: 03/27/24
Sample Location	:	**Date Analyzed**	: 04/01/24 16:14
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500S2-D	**Analyst**	: LOF
Lab File ID	: WG1903295.csv	**Instrument ID**	: GENSYS10VI
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/01/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
18496-25-8	Sulfide	ND	0.10	0.10	U

Sample Raw Data

ALPHA ANALYTICAL

WET CHEMISTRY DEPARTMENT

Sulfide, Total

Last Change3/5/13
File Sulfide-Total-L.xlt

SOP No.: 07-30

Product: SULFIDE-4500
Curve Calibration Date : 3/13/2024
Curve Identifier: 031324
Analysis: Sulfide, Total
Analyte: Sulfide,
Method: SM 4500S2-AD
Prep Date/Time: 4/1/24 12:29
Instrument: GENSYS10vis
Technician: LOF
Wavelength: 664 nm
Work group: WG1903295
LCS Volume(ml): 250.0
RDL: 0.1 mg/L
LCS Concentration (mg/l): 0.263
Cell: 1 cm

Standard ID ug/100ml	Peak Area abs	Dilution
0	0.000	1.0
5.485	0.047	1.0
10.97	0.095	1.0
21.94	0.186	1.0
43.88	0.348	1.0
87.76	0.676	1.0
131.64	0.934	1.0
175.52	1.213	1.0

Calibration Curve
Volume: 50ml

Slope	y-intercept
0.006920	0.024604599

Correlation Coefficient: 0.998610

ICV/LCS Concentration (mg/l): 0.26

Reagents/Media Information

Material	Lot No.
ICV/LCS:	S2_040124_LCS
CCV:	S2_040124_SPK
MS:	S2_040124_SPK
2N HCl:	2024011808
1N NaOH:	032724_NaOH 1N
Sulfide 1 Reagent:	A2062
Sulfide 2 Reagent:	A3059
0.2N NaOH:	

Get Samples
CHOOSE M
SM4500
SM4500 (PP3)

Time	Date	Sample number	Sample Volume (ml)		Absorbance	Conc. (ug S/100ml)	Coloring Dilution Factor		RDL Multiplier	FINAL RESULT (mg/l)	Recovery
14:27	4/1/2024	ICV	250		0.471	64.508	1		1.0	0.26	100%
14:27	4/1/2024	ICB	250		0	0.000	1		1.0	0.00	
14:28	4/1/2024	BLANK	250		0.001	0.000	1		1.0	0.00	Recovery
14:28	4/1/2024	LCS	250		0.425	57.861	1		1.0	0.23	88%
14:29	4/1/2024	L2416644-01	300		0.001	0.000	1		1.0	0.00	
14:29	4/1/2024	L2416644-02	300		-0.003	0.000	1		1.0	0.00	
16:11	4/1/2024	L2416680-01	290		0.007	0.000	1		1.0	0.00	
16:12	4/1/2024	L2416680-02	290		-0.008	0.000	1		1.0	0.00	
16:13	4/1/2024	L2416680-03	290		-0.008	0.000	1		1.0	0.00	
16:13	4/1/2024	L2416680-09	280		0.144	17.254	1		1.0	0.06	
16:13	4/1/2024	L2416680-10	280		0.002	0.000	1		1.0	0.00	
16:15	4/1/2024	CCV	250		0.461	63.063	1		1.0	0.25	96%
16:15	4/1/2024	CCB	250		0	0.000	1		1.0	0.00	
14:30	4/1/2024	L2417074-01	300		-0.002	0.000	1		1.0	0.00	
14:30	4/1/2024	L2417074-02	295		-0.001	0.000	1		1.0	0.00	
14:31	4/1/2024	L2417074-03	300		-0.002	0.000	1		1.0	0.00	
14:31	4/1/2024	L2417074-04	290		0	0.000	1		1.0	0.00	
16:16	4/1/2024	L2417074-05	305		-0.011	0.000	1		1.0	0.00	
16:30	4/1/2024	L2417074-06	300		0.002	0.000	1		1.0	0.00	
16:31	4/1/2024	CCV	250		0.51	70.144	1		1.0	0.28	108%
16:30	4/1/2024	CCB	250		0.001	0.000	1		1.0	0.00	
						0.000	1				
14:28	4/1/2024	WG1903295-1	250		0.001	0.000	1		1.0	0.00	
16:14	4/1/2024	WG1903295-3	280		0.014	0.000	1		1.0	0.00	DUP

		Sample number	Sample volume		Absorbance	Sample Result mg/l	Dilution Factor	Spike conc. mg/l	RDL Multiplier	Spike Result mg/l	Recovery %
16:14	4/1/2024	WG1903295-4	255		0.651	0.00	1	0.52	1.0	0.35	67
							1	0.00			
14:28	4/1/2024	WG1903295-2	250		0.425		1	0.26	1.0	0.23	88%

COMMENTS & OBSERVATIONS	SAMPLE RESULT
	ICV
	ICB
	L2416644-01
	L2416644-02
	L2416680-01
	L2416680-02
	CCB
	L2417074-01
	L2417074-02
	L2417074-03
	L2417074-04
	L2417074-05
	L2417074-06
	CCV
	CCB
	0
	WG1903295-1
L2416680-10	WG1903295-3

L2416680-10	WG1903295-4
	0
LCS	WG1903295-2

Quality Control

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: L2416680-10		
Matrix Spike	: WG1903295-4	**MS Analysis Date**	: 04/01/24 16:14
Matrix Spike Dup	:	**MSD Analysis Date**	:

		Matrix Spike Sample				Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R		Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Sulfide	ND	0.52	0.35	67	Q					70-130	20

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: NA	**Analysis Date**	: 04/01/24 16:13
Dup Sample ID	: WG1903295-3	**DUP Analysis Date**	: 04/01/24 16:14

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Sulfide	ND	ND	NC	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1903295-2	**LCS Analysis Date**	: 04/01/24 14:28
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Sulfide	0.260	0.230	88.					75-125	20

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Sulfide	18496-25-8	0.1	0.1	mg/l	75-125		70-130	20	20	4500S2-D	7 days	2 - Plastic 250ml Zn Acetate/NaOH preserved
Sulfide	18496-25-8	0.1	0.1	mg/l	75-125		70-130	20	20	9030B	7 days	2 - Plastic 250ml Zn Acetate/NaOH preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11468-1
Page: 1

WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Sulfide	18496-25-8	0.5	0.156	mg/kg	75-125	25	70-130	25	25	9030B	7 days	1 - Glass 250ml/8oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Calculations of Total Sulfide

Aqueous samples:

Calculate the concentration value of the sample (in mgS/100ml) directly from the standard curve.

$$\text{mgS/100ml} = \frac{\text{absorbance - y-intercept}}{\text{slope}} \times \text{Dilution Factor}$$

Calculate the final concentration value of Sulfide in the sample:

$$\text{mgS/L} = \frac{\text{mgS/100ml}}{\text{Sample volume (ml)}}$$

Alkalinity Analysis

Results

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 15:41
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U
71-52-3	Alkalinity, Bicarbonate	8.90	2.00	NA	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 15:46
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U
71-52-3	Alkalinity, Bicarbonate	90.4	2.00	NA	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 15:49
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U
71-52-3	Alkalinity, Bicarbonate	47.6	2.00	NA	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 15:51
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U
71-52-3	Alkalinity, Bicarbonate	47.1	2.00	NA	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 15:54
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U
71-52-3	Alkalinity, Bicarbonate	29.3	2.00	NA	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 15:56
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U
71-52-3	Alkalinity, Bicarbonate	9.12	2.00	NA	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904422-1	**Date Collected**	: NA
Client ID	: WG1904422-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/03/24 16:29
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U
71-52-3	Alkalinity, Bicarbonate	ND	2.00	NA	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904422-2	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3ADUP	**Date Received**	: 03/28/24
Sample Location	:	**Date Analyzed**	: 04/03/24 15:44
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,2320B	**Analyst**	: MRW
Lab File ID	: 240403_csv.csv	**Instrument ID**	: METTLER
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg CaCO3/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
71-52-3	Alkalinity, Bicarbonate	8.36	2.00	NA	
3812-32-6	Alkalinity, Carbonate	ND	2.00	NA	U

Sample Raw Data

Results Editor

LabX

Results

Sample ID 1	Potential (R4	onsumption 8.3 (R	onsumption 4.5 (R	onsumption 4.2 (R	Content (R5	LK LOW (R6	Creation time	Comment	cyc	amp	lume [	ensity [g/m	rrection fac	eratu	ple	ple	ple	ple	ple
Rinse,MRW	7.44 pH	NaN mL	0.899 mL	0.901 mL	17.980 m	17.940 mg	4/3/2024 9:50:24		S1	1	50 m	1.0 g/mL	1.0	25.0					
Rinse,MRW	6.22 pH	NaN mL	0.165 mL	0.182 mL	3.300 mg/	2.960 mg/	4/3/2024 9:51:59		S1	2	50 m	1.0 g/mL	1.0	25.0					
Rinse,MRW	5.87 pH	NaN mL	0.146 mL	0.192 mL	2.920 mg/	2.000 mg/	4/3/2024 9:53:30		S1	3	50 m	1.0 g/mL	1.0	25.0					
WG1904206-1	5.73 pH	NaN mL	0.123 mL	0.156 mL	2.460 mg/	1.800 mg/	4/3/2024 9:55:02	WG19042	S1	4	50 m	1.0 g/mL	1.0	25.0					
WG1904206-2	11.29 pH	5.221 mL	5.547 mL	5.552 mL	110.940	110.840 m	4/3/2024 9:56:40	WG19042	S1	5	50 m	1.0 g/mL	1.0	25.0					
WG1904206-2	11.28 pH	4.960 mL	5.296 mL	5.298 mL	105.920	105.880 m	4/3/2024 10:01:4	WG19042	S1	6	50 m	1.0 g/mL	1.0	25.0					
I2417072-03	6.18 pH	NaN mL	9.504 mL	9.633 mL	190.080	187.500 m	4/3/2024 10:05:2	WG19042	S1	7	50 m	1.0 g/mL	1.0	25.0					
WG1904206-3	6.37 pH	NaN mL	9.459 mL	9.603 mL	189.180	186.300 m	4/3/2024 10:11:0	WG19042	S1	8	50 m	1.0 g/mL	1.0	25.0					
WG1904206-4	9.18 pH	2.684 mL	11.798 mL	14.349 mL	235.960	184.940 m	4/3/2024 10:16:5	WG19042	S1	9	50 m	1.0 g/mL	1.0	25.0					
I2415578-02	5.62 pH	NaN mL	NaN mL	NaN mL	NaN mg/	NaN mg/L	4/3/2024 10:30:2	WG19042	S1	10	50 m	1.0 g/mL	1.0	25.0					
I2415578-03	5.63 pH	NaN mL	NaN mL	NaN mL	NaN mg/	NaN mg/L	4/3/2024 10:46:5	WG19042	S1	11	50 m	1.0 g/mL	1.0	25.0					
I2415578-04	5.53 pH	NaN mL	NaN mL	NaN mL	NaN mg/	NaN mg/L	4/3/2024 11:03:2	WG19042	S1	12	50 m	1.0 g/mL	1.0	25.0					
I2415578-05	6.51 pH	NaN mL	NaN mL	NaN mL	NaN mg/	NaN mg/L	4/3/2024 11:19:5	WG19042	S1	13	50 m	1.0 g/mL	1.0	25.0					
I2415578-07 2.5x+	5.18 pH	NaN mL	9.474 mL	12.908 mL	189.480	120.800 m	4/3/2024 11:36:2	WG19042	S1	14	50 m	1.0 g/mL	1.0	25.0					
I2415578-08 2.5x+	5.07 pH	NaN mL	7.004 mL	9.966 mL	140.080	80.840 mg	4/3/2024 11:46:0	WG19042	S1	15	50 m	1.0 g/mL	1.0	25.0					
I2416909-01	6.19 pH	NaN mL	2.138 mL	2.151 mL	42.760 m	42.500 mg	4/3/2024 11:52:1	WG19042	S1	16	50 m	1.0 g/mL	1.0	25.0					
I2417033-01	7.18 pH	NaN mL	8.786 mL	8.890 mL	175.720	173.640 m	4/3/2024 11:54:3	WG19042	S1	17	50 m	1.0 g/mL	1.0	25.0					
I2417072-01	5.90 pH	NaN mL	0.150 mL	0.173 mL	3.000 mg/	2.540 mg/	4/3/2024 11:59:4	WG19042	S1	18	50 m	1.0 g/mL	1.0	25.0					
I2417072-01 CONF	5.47 pH	NaN mL	0.160 mL	0.202 mL	3.200 mg/	2.360 mg/	4/3/2024 12:06:1	WG19042	S1	19	50 m	1.0 g/mL	1.0	25.0					
I2417072-02	6.38 pH	NaN mL	9.188 mL	9.296 mL	183.760	181.600 m	4/3/2024 12:07:5	WG19042	S1	20	50 m	1.0 g/mL	1.0	25.0					
I2415578-01 2.5x+	4.79 pH	NaN mL	4.334 mL	8.234 mL	86.680 m	8.680 mg/	4/3/2024 12:13:0	WG19042	S1	21	50 m	1.0 g/mL	1.0	25.0					
I2417072-04	7.10 pH	NaN mL	15.568 mL	26.022 mL	311.360	102.280 m	4/3/2024 12:18:5	WG19042	S1	22	50 m	1.0 g/mL	1.0	25.0					
I2417072-05	6.20 pH	NaN mL	2.877 mL	2.897 mL	57.540 m	57.140 mg	4/3/2024 1:13:43	WG19042	S1	23	50 m	1.0 g/mL	1.0	25.0					
I2417072-06	6.61 pH	NaN mL	3.973 mL	4.028 mL	79.460 m	78.360 mg	4/3/2024 1:16:38	WG19042	S1	24	50 m	1.0 g/mL	1.0	25.0					

Results Editor

LabX

Sample ID 1	Potential (R4	onsumption 8.3 (R	onsumption 4.5 (R	onsumption 4.2 (R	Content (R5	ALK LOW (R6	Creation time	Comment	cyc	amp	lume [	ensity [g/m	rrection fac	eratu	nple	nple	nple	nple	nple
I2417072-07	6.38 pH	NaN mL	13.476 mL	13.644 mL	269.520	266.160 m	4/3/2024 1:19:51	WG19042	S1	25	50 m	1.0 g/mL	1.0	25.0					
I2417072-08	6.73 pH	NaN mL	5.410 mL	5.447 mL	108.200	107.460 m	4/3/2024 1:28:08	WG19042	S1	26	50 m	1.0 g/mL	1.0	25.0					
I2417072-09	6.60 pH	NaN mL	18.427 mL	18.650 mL	368.540	364.080 m	4/3/2024 1:31:56	WG19042	S1	27	50 m	1.0 g/mL	1.0	25.0					
I2417072-10	7.11 pH	NaN mL	13.094 mL	13.273 mL	261.880	258.300 m	4/3/2024 1:41:52	WG19042	S1	28	50 m	1.0 g/mL	1.0	25.0					
I2417072-11	7.10 pH	NaN mL	13.054 mL	13.208 mL	261.080	258.000 m	4/3/2024 1:49:21	WG19042	S1	29	50 m	1.0 g/mL	1.0	25.0					
I2415578-02 2.5x+	5.28 pH	NaN mL	33.979 mL	NaN mL	679.580	NaN mg/L	4/3/2024 2:01:57	WG19042	S1	30	50 m	1.0 g/mL	1.0	25.0					
I2415578-03 2.5x+	5.31 pH	NaN mL	NaN mL	NaN mL	NaN mg/	NaN mg/L	4/3/2024 2:18:27	WG19042	S1	31	50 m	1.0 g/mL	1.0	25.0					
I2415578-04 2.5x+	5.15 pH	NaN mL	21.994 mL	30.923 mL	439.880	261.300 m	4/3/2024 2:34:58	WG19042	S1	32	50 m	1.0 g/mL	1.0	25.0					
I2415578-05 2.5x+	5.74 pH	NaN mL	10.000 mL	12.354 mL	200.000	152.920 m	4/3/2024 2:52:31	WG19042	S1	33	50 m	1.0 g/mL	1.0	25.0					
I2415578-03 2.5x+	5.16 pH	NaN mL	31.996 mL	NaN mL	639.920	NaN mg/L	4/3/2024 3:18:23	WG19042	S1	34	50 m	1.0 g/mL	1.0	25.0					
I2417074-01	5.47 pH	NaN mL	0.465 mL	0.485 mL	9.300 mg/	8.900 mg/	4/3/2024 3:41:22	WG19044	S1	35	50 m	1.0 g/mL	1.0	25.0					
WG1904422-2	5.44 pH	NaN mL	0.441 mL	0.464 mL	8.820 mg/	8.360 mg/	4/3/2024 3:44:26	WG19044	S1	36	50 m	1.0 g/mL	1.0	25.0					
I2417074-02	5.97 pH	NaN mL	4.521 mL	4.561 mL	90.420 m	89.620 mg	4/3/2024 3:46:20	WG19044	S1	37	50 m	1.0 g/mL	1.0	25.0					
I2417074-03	5.81 pH	NaN mL	2.380 mL	2.404 mL	47.600 m	47.120 mg	4/3/2024 3:49:37	WG19044	S1	38	50 m	1.0 g/mL	1.0	25.0					
I2417074-04	5.83 pH	NaN mL	2.356 mL	2.384 mL	47.120 m	46.560 mg	4/3/2024 3:51:57	WG19044	S1	39	50 m	1.0 g/mL	1.0	25.0					
I2417074-05	5.68 pH	NaN mL	1.466 mL	1.490 mL	29.320 m	28.840 mg	4/3/2024 3:54:47	WG19044	S1	40	50 m	1.0 g/mL	1.0	25.0					
I2417074-06	5.46 pH	NaN mL	0.469 mL	0.482 mL	9.380 mg/	9.120 mg/	4/3/2024 3:56:43	WG19044	S1	41	50 m	1.0 g/mL	1.0	25.0					
CCV	11.06 pH	5.097 mL	5.390 mL	5.396 mL	107.800	107.680 m	4/3/2024 4:20:28		S1	42	50 m	1.0 g/mL	1.0	25.0					
WG1904422-1	5.24 pH	NaN mL	0.093 mL	0.120 mL	1.860 mg/	1.320 mg/	4/3/2024 4:29:16	WG19044	S1	43	50 m	1.0 g/mL	1.0	25.0					
--	4.51 pH	NaN mL	NaN mL	3.525 mL	NaN mg/	NaN mg/L	4/3/2024 5:00:29		S1	44	50 m	1.0 g/mL	1.0	25.0					

Results Editor

Results

Sample ID 1	Sample ID 2	Sample ID 3	Sample ID 4	Sample ID 5	Sample ID 6	Creation tim	nple cycle na	Sample	Sensor type	st of standar	Standard	Comment	mperature [	point 1 (Cal	ope 1 (Cal1.S
						4/3/2024 9:								7.073 pH	-58.23 mV/

Results Editor

Results

Sample ID 1	Sample ID 2	Sample ID 3	Sample ID 4	Sample ID 5	Sample ID 6	Creation time	mple cycle na	Sample	Volume [mL]	Density [g/mL	orrection fact	mperature [°	Comment	Potential (R1)
--						4/3/2024 9:	S1	1	0 mL	1.0 g/mL	1.0	25.0 °C		7.02 pH

Quality Control

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/03/24 15:41
Dup Sample ID	: WG1904422-2	**DUP Analysis Date**	: 04/03/24 15:44

Parameter	Sample Concentration (mg CaCO3/L)	Duplicate Concentration (mg CaCO3/L)	RPD	RPD Limit
Alkalinity, Carbonate	ND	ND	NC	10
Alkalinity, Bicarbonate	8.90	8.36	6	9

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Alkalinity, Total	471-34-1	2		mg CaCO3/L	90-110	10	86-116	10	10	2320B	14 days	1 - Plastic 250ml unpreserved/No Headspace

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Calculations of Alkalinity

$$\text{Alkalinity, mg } CaCO_3/L = \frac{A \times N \times 50{,}000}{\text{mL Sample}}$$

Where:

A = mL of the standard acid titrated

N = normality of the standard acid

Results are calculated using Mettler Toledo software.

Standard sample size is 50mL, 0.02N Sulfuric acid for titration

Sequence Logs

CAL	240403	LCS 7.02	7.02	INT:	MRW
pH 4	3295	Titrant:	4057		
pH 7	3239	LCS:	3257		
pH 10	3388	MS:	3255		
LCS	3382				

1	RINSE	
2	RINSE	
3	RINSE	
4	BLANK	
5	LCS	
6	LCS	
7	l2417072-03	
8	DUP	
9	MS	
10	l2415578-02	
11	l2415578-03	
12	l2415578-04	
13	l2415578-05	
14	l2415578-07	2.5x+10
15	l2415578-08	2.5x+10
16	l2416909-01	
17	l2417033-01	
18	l2417072-01	
19	l2417072-01	CONF
20	l2417072-02	
21	l2415578-01	2.5x+10
22	l2417072-04	
23	l2417072-05	
24	l2417072-06	
25	l2417072-07	
26	l2417072-08	
27	l2417072-09	
28	l2417072-10	
29	l2417072-11	
30	l2415578-02	2.5x+10
31	l2415578-03	2.5x+10
32	l2415578-04	2.5x+10
33	l2415578-05	2.5x+10
34	l2415578-03	2.5x+15
35	l2417074-01	
36	DUP	
37	l2417074-02	
38	l2417074-03	
39	l2417074-04	
40	l2417074-05	
41	l2417074-06	

42 CCV
43 CCB

Phosphates Analysis

Results

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 18:02
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	0.015	0.031	0.012	J

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 18:06
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	0.126	0.031	0.012	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 18:07
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	0.037	0.031	0.012	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 18:10
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	0.104	0.031	0.012	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 18:11
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	0.025	0.031	0.012	J

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/03/24 18:12
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	0.012	0.031	0.012	J

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904304-1	**Date Collected**	: NA
Client ID	: WG1904304-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/03/24 18:00
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	ND	0.031	0.012	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1904304-3	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3ADUP	**Date Received**	: 03/28/24
Sample Location	:	**Date Analyzed**	: 04/03/24 18:03
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 121,4500P-E(M)	**Analyst**	: MEF
Lab File ID	: PHOS040324-WG1904304	**Instrument ID**	: SEAL
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 04/03/24

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7723-14-0	Phosphate, Total	0.012	0.031	0.012	J

Sample Raw Data

Logo

AQ-2 Tray Report

Serial Number:	090856
Report Requested By:	EASAMOAH
Date & Time:	03-Apr-2024 19:29:11
Tray Number:	2
Tray Name:	WG1904304,306

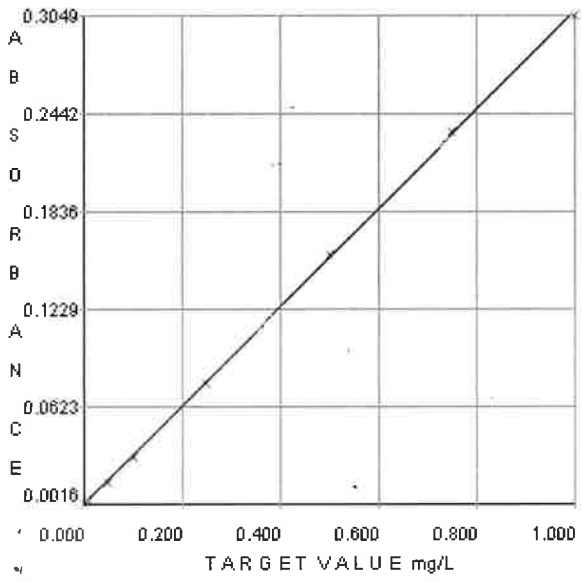
T-Phos 1

Calibration Chart

Type	Observed	Calculated	Target	% Error
S1	0.0016	0.001	0.000	
S90	0.0042	0.010	0.010	-0.93
S91	0.0157	0.047	0.050	-5.70
S92	0.0310	0.097	0.100	-2.90
S93	0.0771	0.247	0.250	-1.04
S94	0.1568	0.508	0.500	1.50
S95	0.2340	0.759	0.750	1.21
S96	0.3049	0.991	1.000	-0.95
S0	0.0016	0.001	0.000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover(%):	-0.0
Calibration Equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured Absorbance
a =:	-3.912382E-003
b =:	3.261371E+000
Date & Time:	03-Apr-2024 12:26:38

Calibration Graph



Reagents

Name	Batch	Prepared By	Expiry Date
TP color	032624-tp color	Maeve Flaherty	16-Apr-2024 22:00:00
TP ascorbic	032624-aa	E ASAMOAH	10-Apr-2024 22:00:00

Test Results

Cup	Type	ID	Details	Result	Units	Test Dil.	Cup Dil.	User	Time/Date
2	ICV	ICV	3-APR-2024 17:26	0.466	mg/L			EYA	03-Apr-2024 17:58:06
3	ICB	ICB	3-APR-2024 17:26	-0.000	mg/L			EYA	03-Apr-2024 17:59:14
4	U1	WG1904304-1O	3-APR-2024 17:26	-0.001ELL	mg/L			EYA	03-Apr-2024 18:00:21
5	U2	WG1904304-2O	3-APR-2024 17:26	0.468	mg/L			EYA	03-Apr-2024 18:01:29
6	U3	L2417074-01O	3-APR-2024 17:26	0.005	mg/L			EYA	03-Apr-2024 18:02:37
7	U4	WG1904304-3O	3-APR-2024 17:26	0.004	mg/L			EYA	03-Apr-2024 18:03:45
8	U5	WG1904304-4O	3-APR-2024 17:26	0.500	mg/L			EYA	03-Apr-2024 18:04:53
9	U6	L2417074-02O	3-APR-2024 17:26	0.041	mg/L			EYA	03-Apr-2024 18:06:01
10	U7	L2417074-03O	3-APR-2024 17:26	0.012	mg/L			EYA	03-Apr-2024 18:07:10
	CCV	C C V		0.471	mg/L			EYA	03-Apr-2024 18:08:20
	CCB	C C B		0.002	mg/L			EYA	03-Apr-2024 18:09:14
11	U8	L2417074-04O	3-APR-2024 17:26	0.034	mg/L			EYA	03-Apr-2024 18:10:16
12	U9	L2417074-05O	3-APR-2024 17:26	0.008	mg/L			EYA	03-Apr-2024 18:11:09

13	U10	L2417074-06O	3-APR-2024 17:26	0.004	mg/L		EYA	03-Apr-2024 18:12:03
14	U11	L2416885-03	3-APR-2024 17:26	0.148	mg/L		EYA	03-Apr-2024 18:12:56
15	U12	L2417485-01	3-APR-2024 17:26	0.142	mg/L		EYA	03-Apr-2024 18:13:50
16	U13	L2417567-01	3-APR-2024 17:26	0.010	mg/L		EYA	03-Apr-2024 18:14:43
17	U14	WG1904306-3	3-APR-2024 17:26	0.012AVF	mg/L		EYA	03-Apr-2024 19:25:27
18	U15	WG1904306-4	3-APR-2024 17:26	0.510	mg/L		EYA	03-Apr-2024 18:16:30
	CCV	C C V		0.462	mg/L		EYA	03-Apr-2024 19:26:20
	CCB	C C B		0.002	mg/L		EYA	03-Apr-2024 19:27:15

Quality Control

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1904304-4	**MS Analysis Date**	: 04/03/24 18:04
Matrix Spike Dup	:	**MSD Analysis Date**	:

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	**Sample Conc. (mg/l)**	**Spike Added (mg/l)**	**Spike Conc. (mg/l)**	**%R**	**Spike Added (mg/l)**	**Spike Conc. (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Phosphate, Total	**0.015J**	**1.53**	**1.54**	**101**					**80-120**	**15**

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/03/24 18:02
Dup Sample ID	: WG1904304-3	**DUP Analysis Date**	: 04/03/24 18:03

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Phosphate, Total	0.015J	0.012J	NC	15

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1904304-2	**LCS Analysis Date**	: 04/03/24 18:01
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Phosphate, Total	**1.53**	**1.44**	**94.**					**84-118**	**15**

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Phosphorus, Total	7723-14-0	0.01	0.004	mg/l	80-120		75-125	20	20	4500P-E	28 days	1 - Plastic 500ml H2SO4 preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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Page: 1

WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Phosphorus, Total	7723-14-0	5	1.67	mg/kg	52-148	20	75-125	20	20	4500P-E	28 days	1 - Glass 250ml/8oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Phosphorus, Orthophosphate	7723-14-0	0.005	0.001	mg/l	90-110		80-120	20	20	4500P-E	48 hours	1 - Plastic 500ml unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11468-1
Page: 1

WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Phosphorus, Orthophosphate	7723-14-0	0.05	0.05	mg/kg						4500P-E	48 hours	1 - Glass 250ml/8oz unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

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Calculations of TPhosphorus

Aqueous samples:

Calculate the concentration value of the sample directly from the standard curve. All calculations are done by SEAL (segmant flow spectrometer).

$$\text{Mg TPhosphorus/L} = \frac{\text{absorbance - y-intercept}}{\text{slope}} \times \text{Dilution Factor}$$

Wet Chemistry
By
IC Methods

Results

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-01	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 19:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
24959-67-9	Bromide	0.071	0.050	0.013	
16887-00-6	Chloride	5.67	0.500	0.083	
16984-48-8	Fluoride	ND	0.050	0.037	U
14808-79-8	Sulfate	6.08	1.00	0.454	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-02	**Date Collected**	: 03/28/24 10:35
Client ID	: MW-6AR	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 19:41
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
24959-67-9	Bromide	0.193	0.050	0.013	
16887-00-6	Chloride	22.5	0.500	0.083	
16984-48-8	Fluoride	0.053	0.050	0.037	
14808-79-8	Sulfate	20.6	1.00	0.454	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-03	**Date Collected**	: 03/27/24 13:24
Client ID	: MW-7A	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 19:52
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
24959-67-9	Bromide	0.092	0.050	0.013	
16887-00-6	Chloride	18.4	0.500	0.083	
16984-48-8	Fluoride	0.040	0.050	0.037	J
14808-79-8	Sulfate	20.4	1.00	0.454	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-04	**Date Collected**	: 03/27/24 14:35
Client ID	: MW-7B	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 20:03
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
24959-67-9	Bromide	0.156	0.050	0.013	
16887-00-6	Chloride	21.0	0.500	0.083	
16984-48-8	Fluoride	0.047	0.050	0.037	J
14808-79-8	Sulfate	21.8	1.00	0.454	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-05	**Date Collected**	: 03/27/24 15:05
Client ID	: MW-7C	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 20:14
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
24959-67-9	Bromide	0.083	0.050	0.013	
16887-00-6	Chloride	22.2	0.500	0.083	
16984-48-8	Fluoride	ND	0.050	0.037	U
14808-79-8	Sulfate	28.2	1.00	0.454	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: L2417074-06	**Date Collected**	: 03/28/24 00:00
Client ID	: DUP	**Date Received**	: 03/28/24
Sample Location	: MANORVILLE, NY	**Date Analyzed**	: 04/01/24 20:25
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
24959-67-9	Bromide	0.071	0.050	0.013	
16887-00-6	Chloride	5.60	0.500	0.083	
16984-48-8	Fluoride	ND	0.050	0.037	U
14808-79-8	Sulfate	6.10	1.00	0.454	

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903534-1	**Date Collected**	: NA
Client ID	: WG1903534-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 04/01/24 17:19
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
24959-67-9	Bromide	ND	0.050	0.013	U
16887-00-6	Chloride	ND	0.500	0.083	U
16984-48-8	Fluoride	ND	0.050	0.037	U
14808-79-8	Sulfate	ND	1.00	0.454	U

Form 1
WETCHEM

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Lab ID	: WG1903534-4	**Date Collected**	: 03/28/24 08:50
Client ID	: MW-3ADUP	**Date Received**	: 03/28/24
Sample Location	:	**Date Analyzed**	: 04/02/24 00:25
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 44,300.0	**Analyst**	: AU,
Lab File ID	: WG1903534	**Instrument ID**	: IC3
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	:

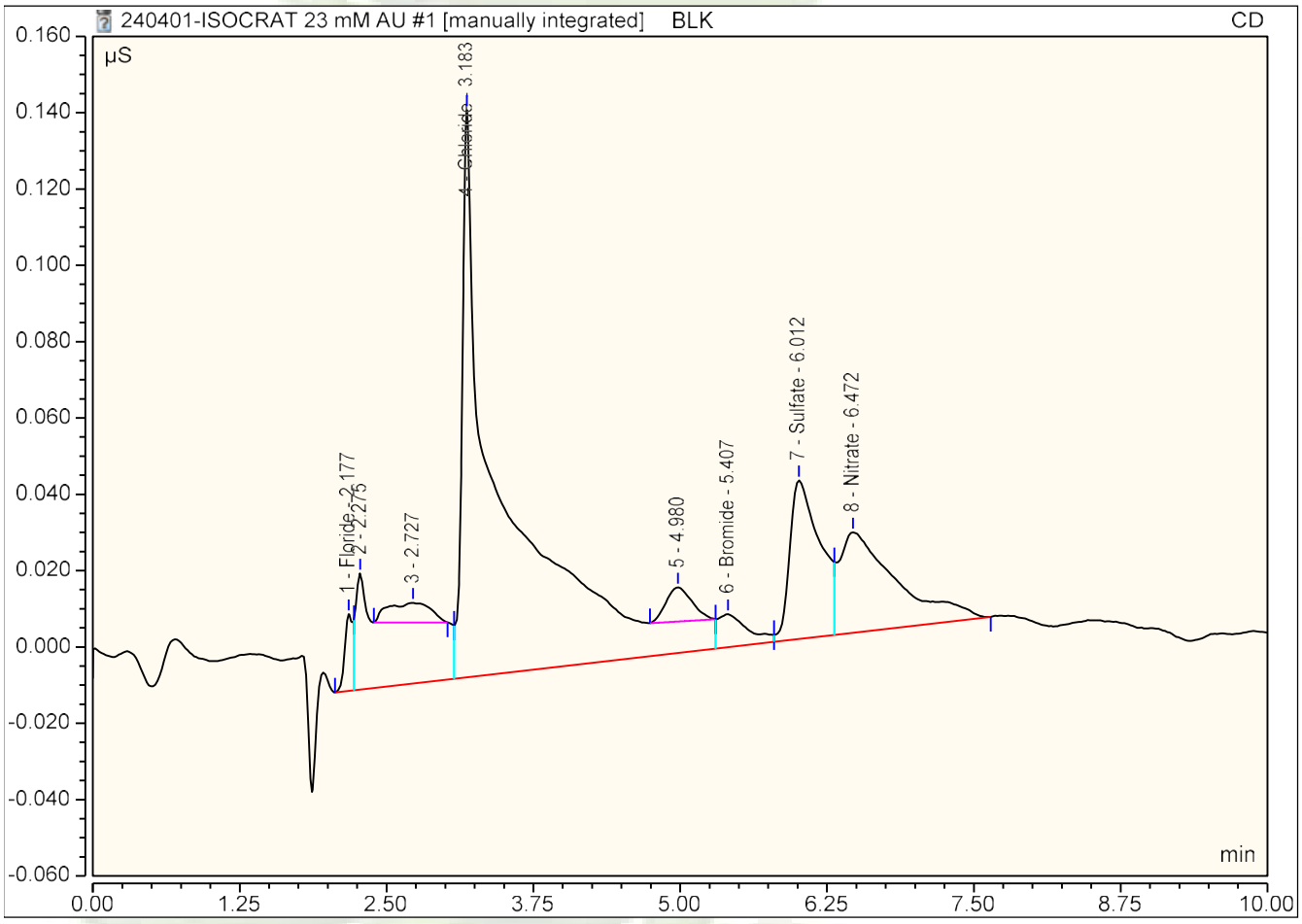
		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
14808-79-8	Sulfate	6.06	1.00	0.454	
16887-00-6	Chloride	5.67	0.500	0.084	
24959-67-9	Bromide	0.114	0.050	0.013	
16984-48-8	Fluoride	ND	0.050	0.037	U

Sample Raw Data

Peak Integration Report

Sample Name:	**BLK**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 12:22**	*Run Time:*	**10.00**

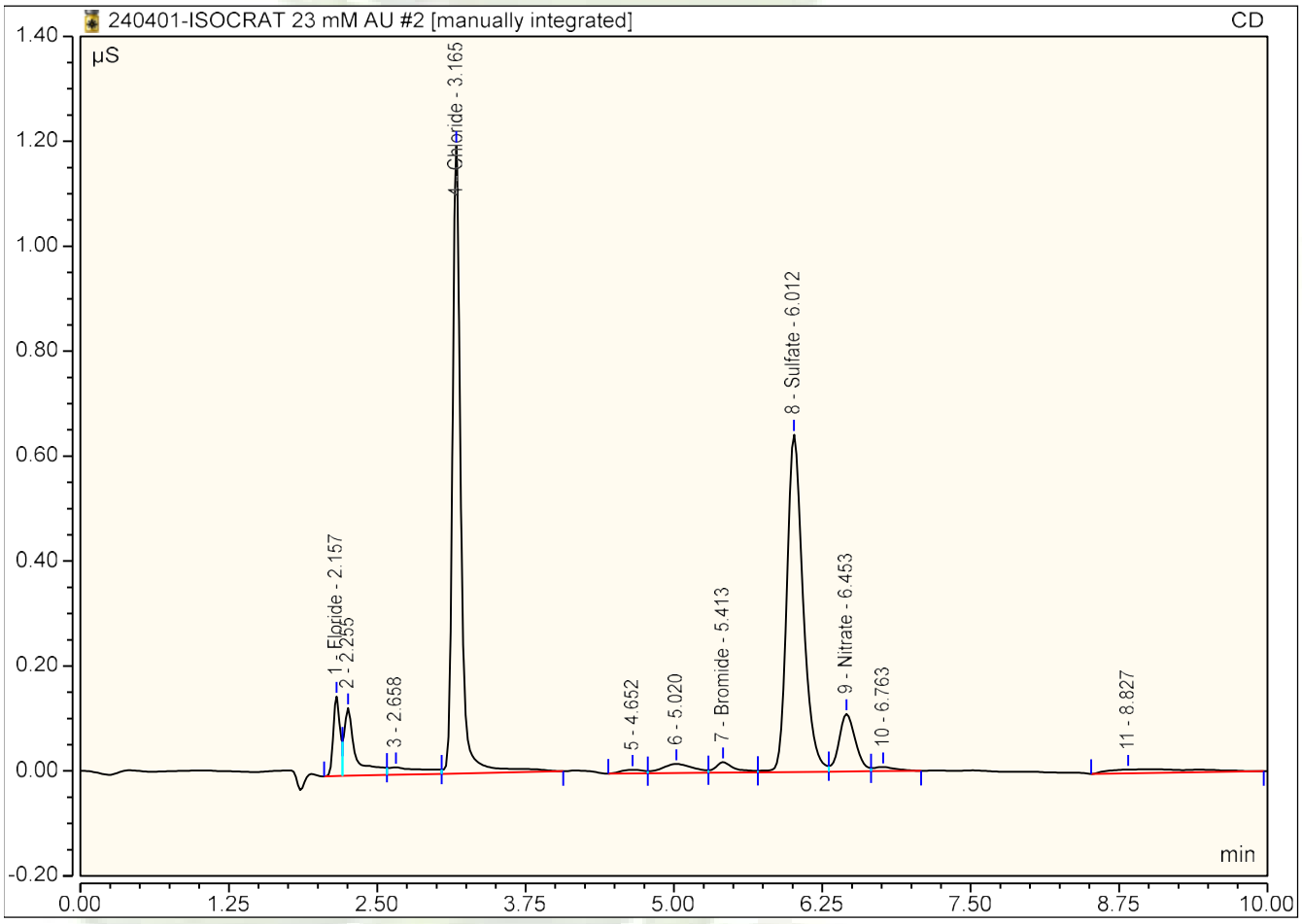
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.18	**Floride**	BM *	0.002	0.020	n.a.
4	3.18	**Chloride**	M	0.061	0.149	0.1864
6	5.41	**Bromide**	M	0.003	0.009	0.0342
7	6.01	**Sulfate**	M *	0.012	0.042	0.1750
8	6.47	**Nitrate**	MB*	0.015	0.026	0.0369
TOTAL:				0.09	0.25	0.43



Peak Integration Report

Sample Name:	**STD 0.5**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 12:33**	*Run Time:*	**10.00**

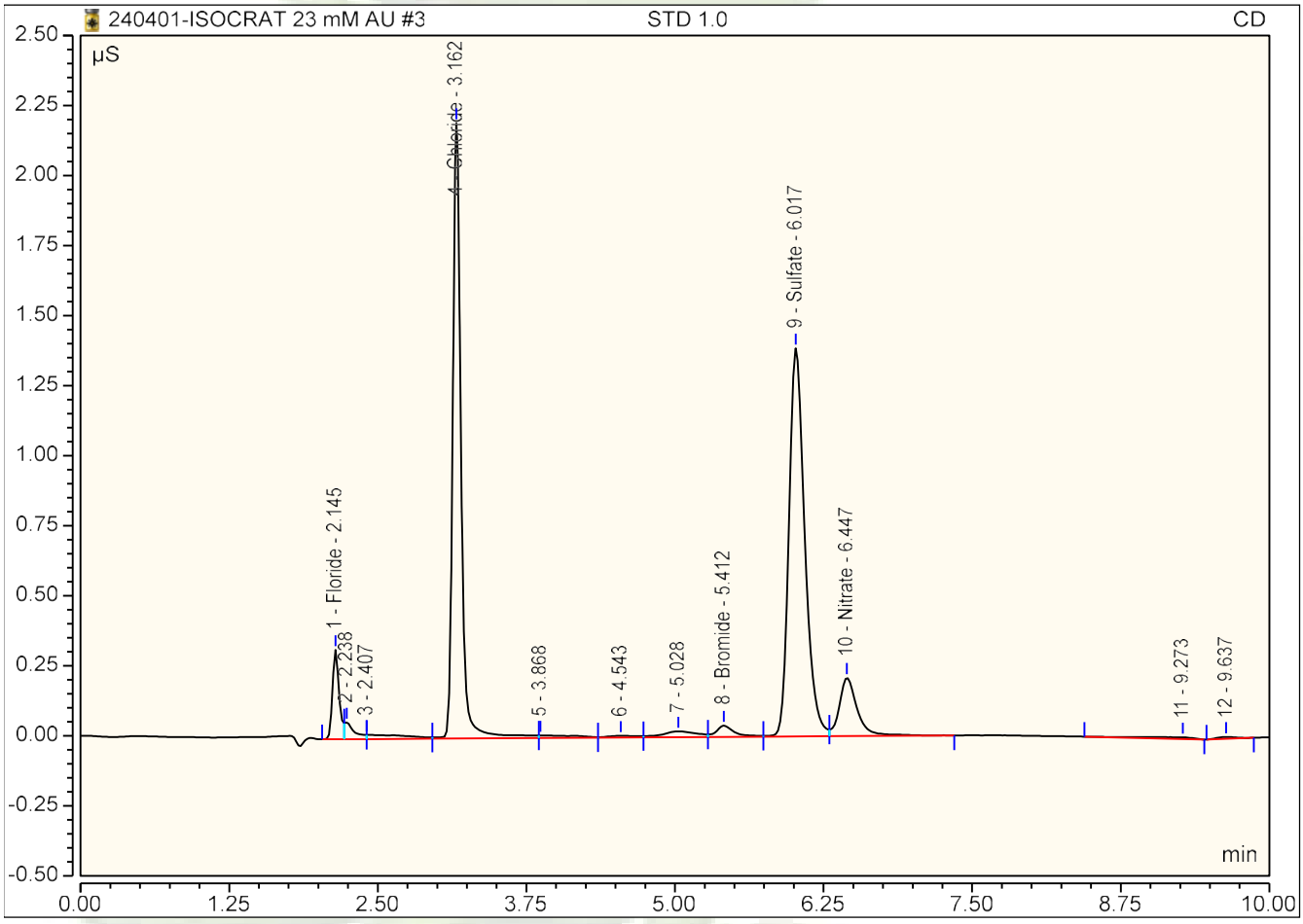
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.16	**Floride**	BM	0.010	0.151	0.0120
4	3.17	**Chloride**	MB	0.098	1.196	0.2940
7	5.41	**Bromide**	M	0.004	0.020	0.0432
8	6.01	**Sulfate**	M *	0.102	0.643	0.5226
9	6.45	**Nitrate**	M *	0.018	0.110	0.0398
TOTAL:				0.23	2.12	0.91



Peak Integration Report

Sample Name:	**STD 1.0**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 12:44**	*Run Time:*	**10.00**

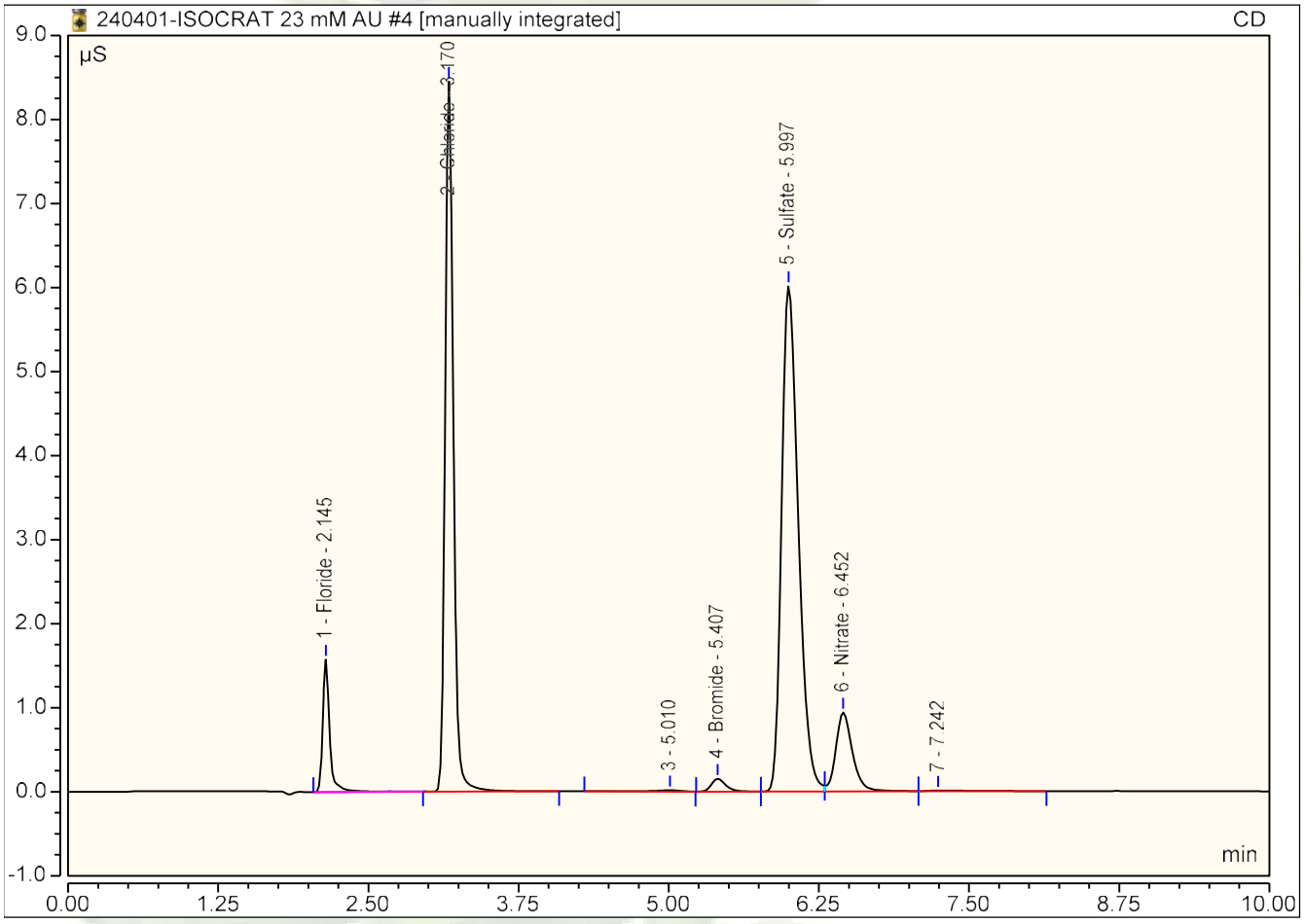
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.15	**Floride**	BM	0.021	0.319	0.0318
4	3.16	**Chloride**	M	0.178	2.197	0.5228
8	5.41	**Bromide**	M	0.007	0.040	0.0693
9	6.02	**Sulfate**	M	0.214	1.385	0.9571
10	6.45	**Nitrate**	MB	0.036	0.208	0.0594
TOTAL:				0.46	4.15	1.64



Peak Integration Report

Sample Name:	**STD 2.0**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 12:55**	*Run Time:*	**10.00**

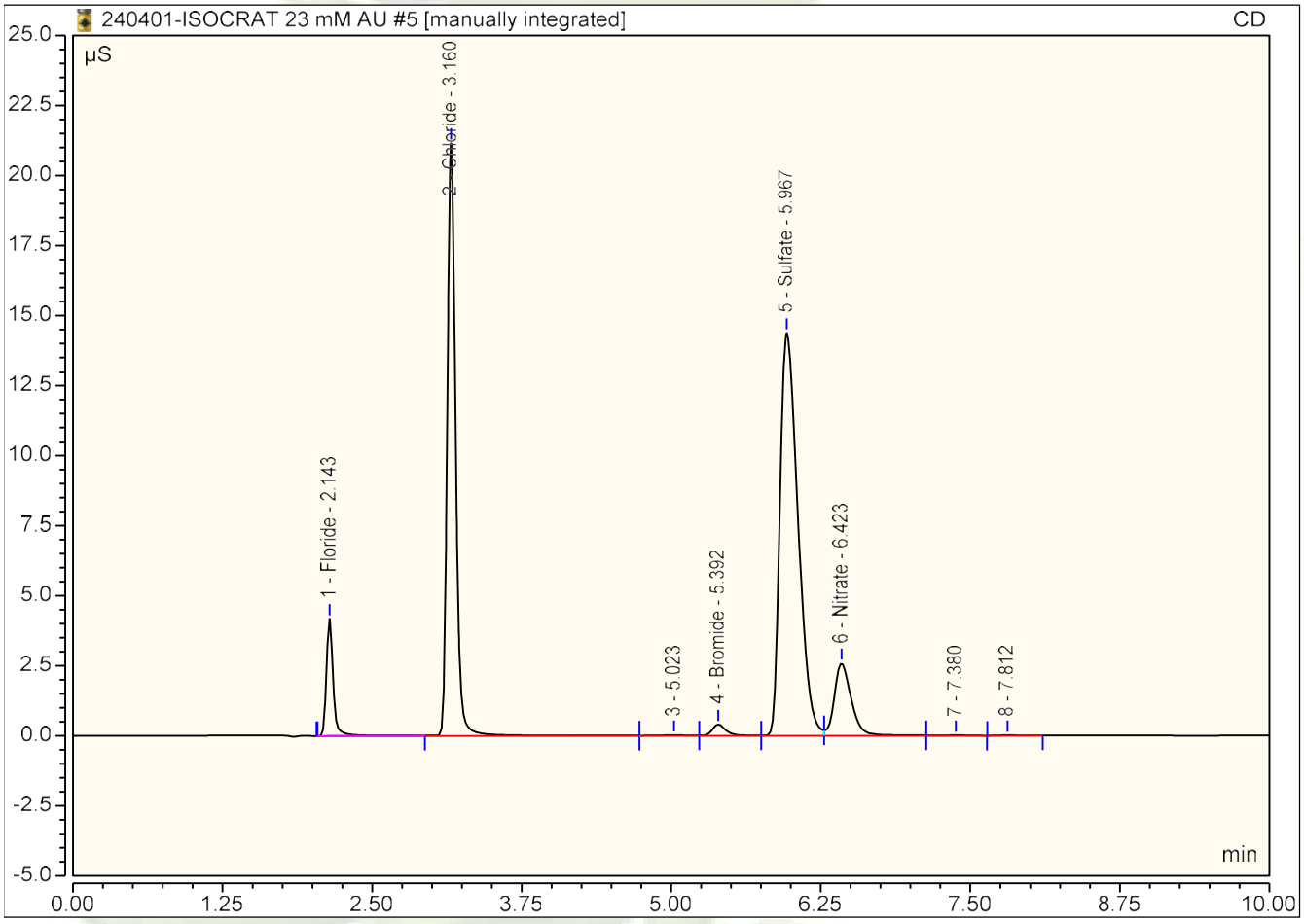
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.15	**Floride**	Ru	0.106	1.578	0.1880
2	3.17	**Chloride**	BMB	0.676	8.448	1.9546
4	5.41	**Bromide**	BM	0.021	0.153	0.1806
5	6.00	**Sulfate**	M *	0.975	6.016	3.9106
6	6.45	**Nitrate**	M *	0.151	0.940	0.1790
TOTAL:				1.93	17.14	6.41



Peak Integration Report

Sample Name:	**STD 3.0**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 13:05**	*Run Time:*	**10.00**

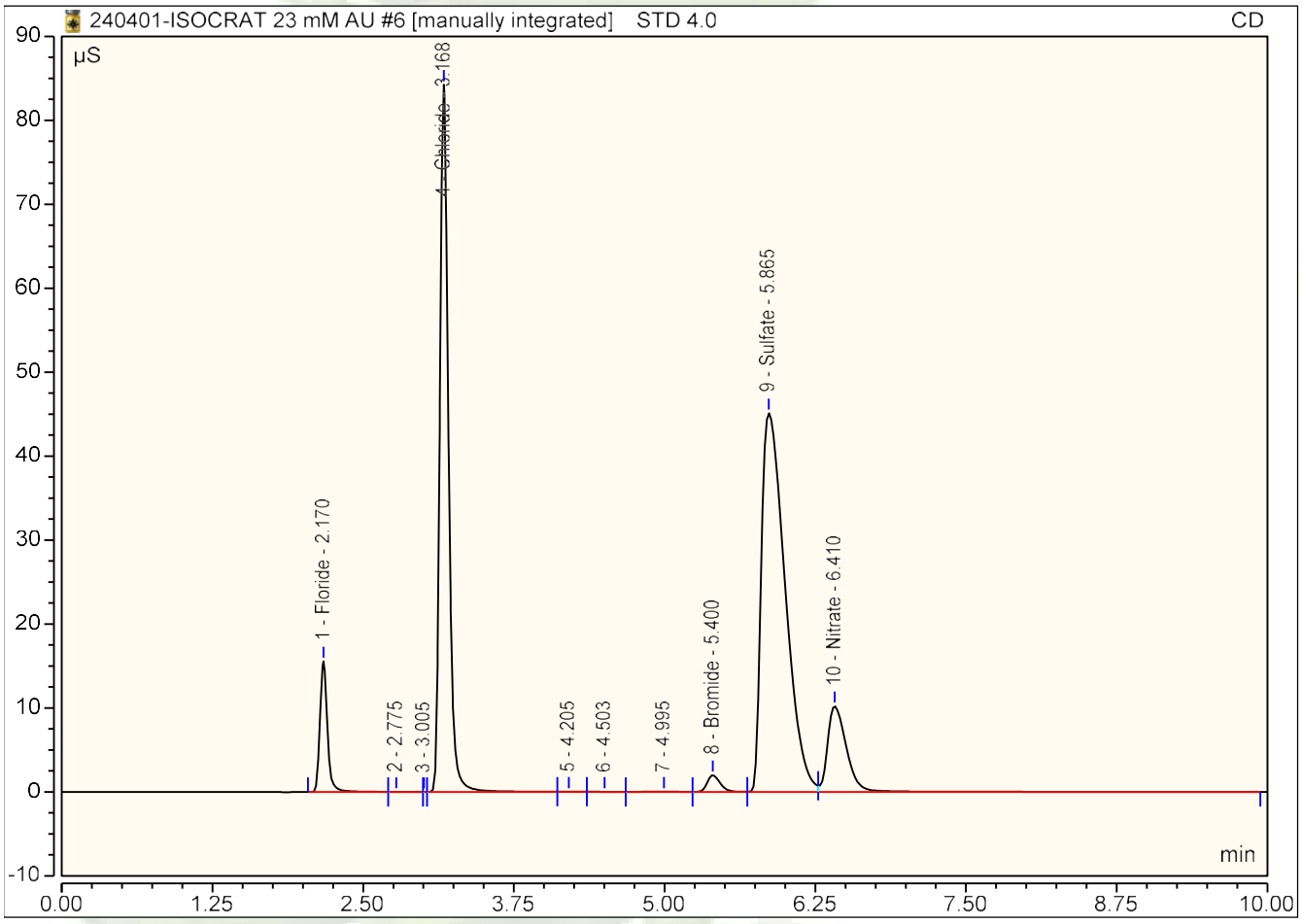
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.14	**Floride**	Ru	0.277	4.179	0.5004
2	3.16	**Chloride**	BM	1.731	21.162	4.9838
4	5.39	**Bromide**	M	0.056	0.404	0.4551
5	5.97	**Sulfate**	M *	2.507	14.373	9.8530
6	6.42	**Nitrate**	M *	0.426	2.585	0.4648
TOTAL:				5.00	42.70	16.26



Peak Integration Report

Sample Name:	**STD 4.0**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 13:16**	*Run Time:*	**10.00**

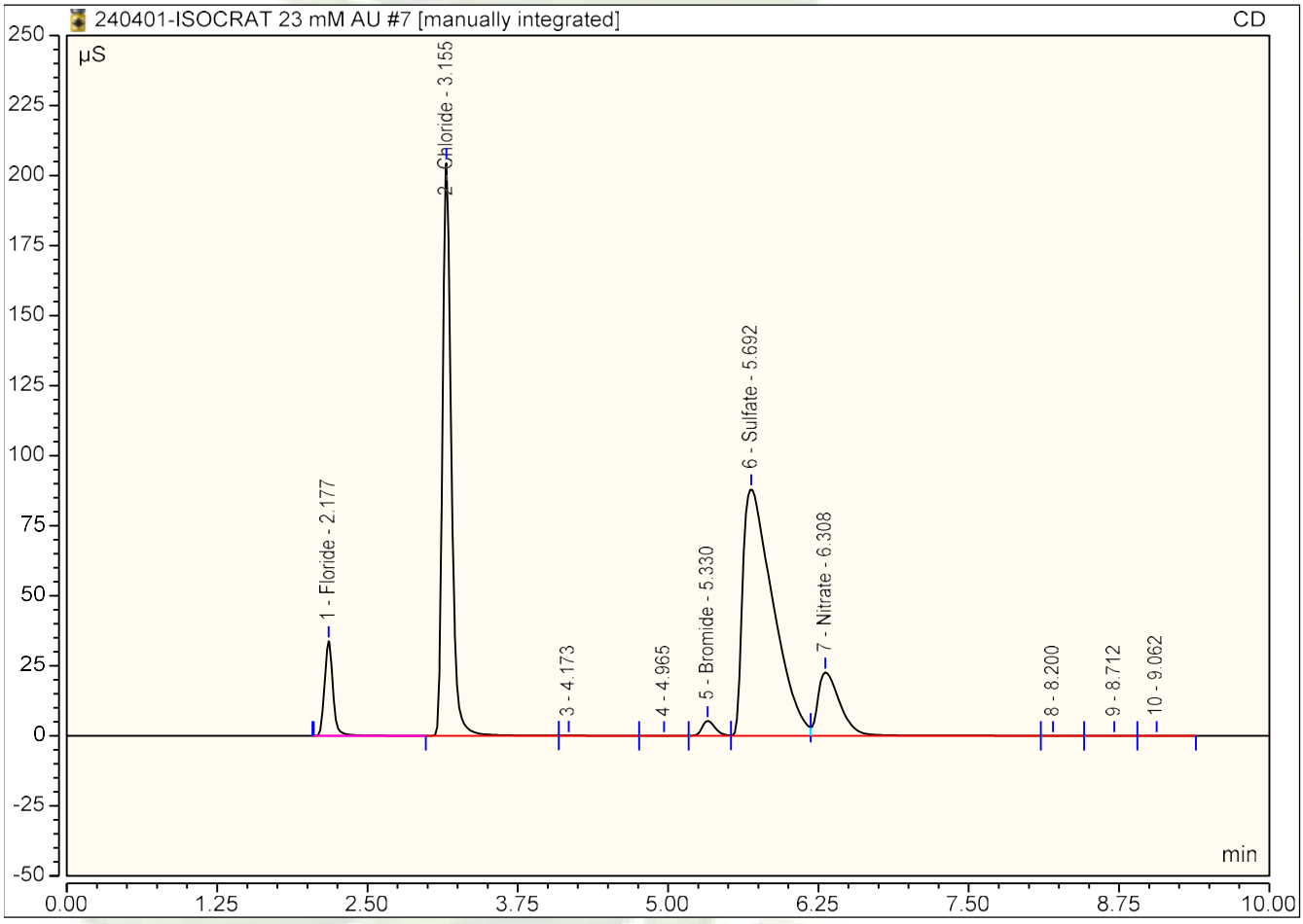
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.17	**Floride**	BM	1.143	15.572	2.0801
4	3.17	**Chloride**	M	6.947	84.246	19.9662
8	5.40	**Bromide**	M	0.255	2.011	2.0124
9	5.87	**Sulfate**	M *	10.324	45.122	40.1849
10	6.41	**Nitrate**	MB*	1.911	10.225	2.0105
TOTAL:				20.58	157.17	66.25



Peak Integration Report

Sample Name:	**STD 5.0**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 13:27**	*Run Time:*	**10.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.18	**Floride**	Ru	2.725	33.825	4.9687
2	3.16	**Chloride**	BM	17.410	204.448	50.0165
5	5.33	**Bromide**	M	0.667	5.355	5.2299
6	5.69	**Sulfate**	M *	25.726	88.124	99.9446
7	6.31	**Nitrate**	M *	4.859	22.654	5.0780
TOTAL:				51.39	354.41	165.24



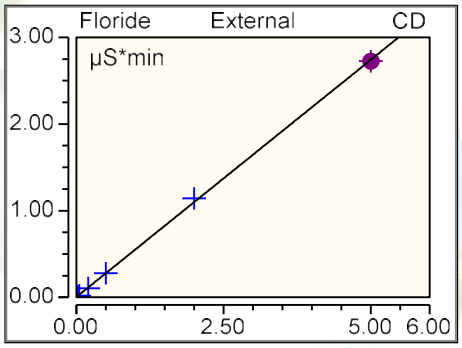
Calibration Batch Report

Sequence:	**240401-ISOCRAT 23 mM AU**	*Injection Volume:*	**5,000.00**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**18-Jan-2024 / 13:27**	*Run Time:*	**10**

Calibration Summary

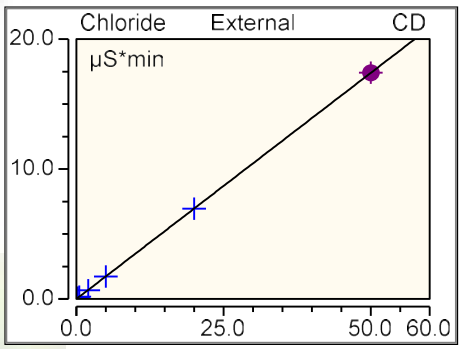
Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
Floride	Area	Lin, AddZero	7.000	0.003	0.548	0.000	99.9609
Chloride	Area	Lin, AddZero	7.000	-0.004	0.348	0.000	99.9997
Bromide	Area	Lin, AddZero	6.000	-0.002	0.128	0.000	99.8853
Sulfate	Area	Lin, AddZero	7.000	-0.033	0.258	0.000	99.9990
Nitrate	Area	Lin, AddZero	6.000	-0.021	0.961	0.000	99.9151
		AVERAGE:		-0.0113	0.4485	0.0000	99.9520

Injection Name	Ret.Time min CD	Area µS*min CD	Height µS CD	Amount CD
	Floride	Floride	Floride	Floride
STD 0.5	2.157	0.0098	0.151	0.012
STD 1.0	2.145	0.0206	0.319	0.032
STD 2.0	2.145	0.1062	1.578	0.188
STD 3.0	2.143	0.2773	4.179	0.500
STD 4.0	2.170	1.1428	15.572	2.080
STD 5.0	2.177	2.7253	33.825	4.969
Average	2.156			
Rel. Std. Dev.	0.664 %			

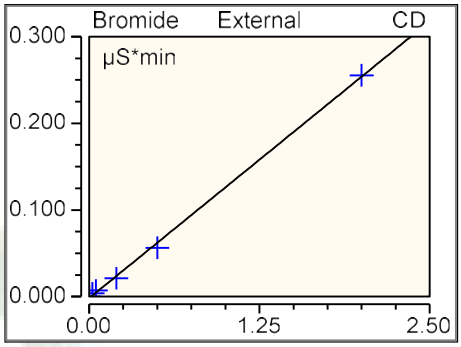


No.	Peak Name	Ret. Time	Window	Standard	Eval.Type	Cal. Type	Peak Type
1	Floride	2.150	0.249 AN	External	Area	Lin, AddZ	Ru
2	Chloride	3.150	0.692 AN	External	Area	Lin, AddZ	BM
3	Bromide	5.400	0.290 AF	External	Area	Lin, AddZ	M
4	Sulfate	5.900	0.604 AN	External	Area	Lin, AddZ	M *
5	Nitrate	6.400	0.491 AN	External	Area	Lin, AddZ	M *

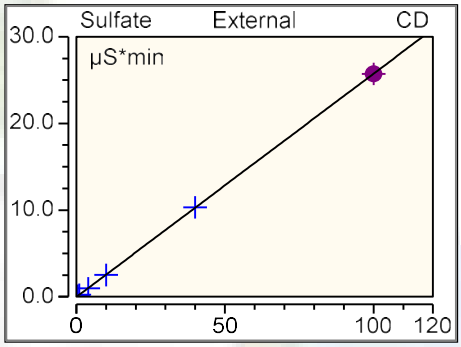
Injection Name	Ret.Time min CD	Area µS*min CD	Height µS CD	Amount CD
	Chloride	Chloride	Chloride	Chloride
STD 0.5	3.165	0.0982	1.196	0.294
STD 1.0	3.162	0.1779	2.197	0.523
STD 2.0	3.170	0.6764	8.448	1.955
STD 3.0	3.160	1.7310	21.162	4.984
STD 4.0	3.168	6.9473	84.246	19.966
STD 5.0	3.155	17.4096	204.448	50.017
Average	3.163			
Rel. Std. Dev.	0.176 %			



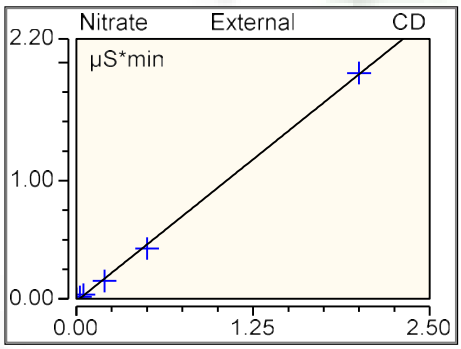
Injection Name	Ret.Time min CD	Area µS*min CD	Height µS CD	Amount CD
	Bromide	Bromide	Bromide	Bromide
STD 0.5	5.413	0.0037	0.020	0.043
STD 1.0	5.412	0.0070	0.040	0.069
STD 2.0	5.407	0.0213	0.153	0.181
STD 3.0	5.392	0.0564	0.404	0.455
STD 4.0	5.400	0.2555	2.011	2.012
STD 5.0	5.330	0.6669	5.355	5.230
Average	5.392			
Rel. Std. Dev.	0.584 %			



Injection Name	Ret.Time min CD	Area µS*min CD	Height µS CD	Amount CD
	Sulfate	Sulfate	Sulfate	Sulfate
STD 0.5	6.012	0.1019	0.643	0.523
STD 1.0	6.017	0.2139	1.385	0.957
STD 2.0	5.997	0.9751	6.016	3.911
STD 3.0	5.967	2.5067	14.373	9.853
STD 4.0	5.865	10.3241	45.122	40.185
STD 5.0	5.692	25.7261	88.124	99.945
Average	5.925			
Rel. Std. Dev.	2.146 %			



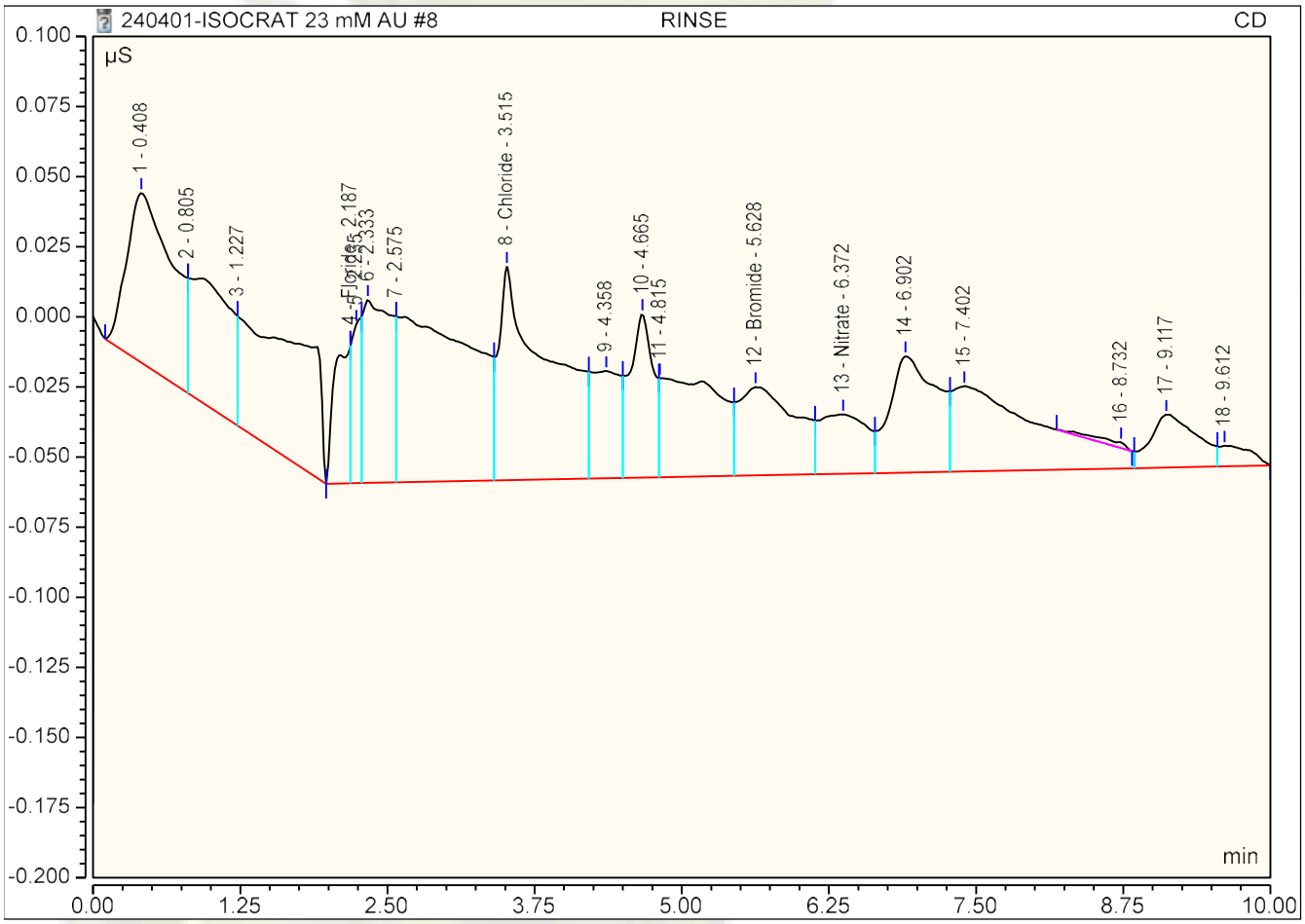
Injection Name	Ret.Time min CD	Area µS*min CD	Height µS CD	Amount CD
	Nitrate	Nitrate	Nitrate	Nitrate
STD 0.5	6.453	0.0176	0.110	0.040
STD 1.0	6.447	0.0364	0.208	0.059
STD 2.0	6.452	0.1513	0.940	0.179
STD 3.0	6.423	0.4260	2.585	0.465
STD 4.0	6.410	1.9112	10.225	2.010
STD 5.0	6.308	4.8589	22.654	5.078
Average	6.416			
Rel. Std. Dev.	0.862 %			



Peak Integration Report

Sample Name:	**RINSE**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 16:24**	*Run Time:*	**10.00**

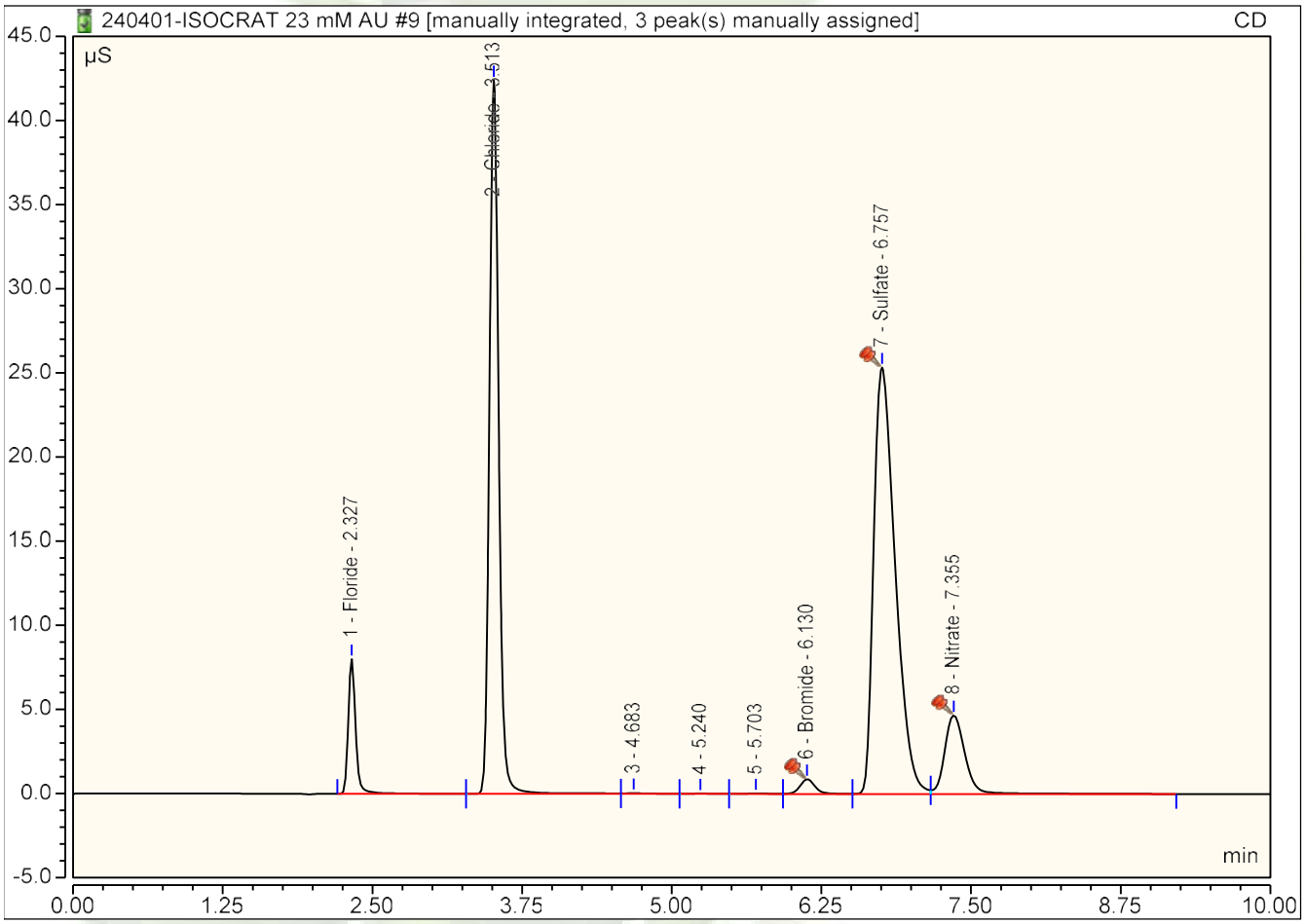
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
4	2.19	**Floride**	BM	0.008	0.049	0.0080
8	3.52	**Chloride**	M	0.038	0.076	0.1206
12	5.63	**Bromide**	M	0.017	0.032	0.1508
13	6.37	**Nitrate**	M	0.010	0.021	0.0317
TOTAL:				0.07	0.18	0.31



Peak Integration Report

Sample Name:	**CCV**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 16:35**	*Run Time:*	**10.00**

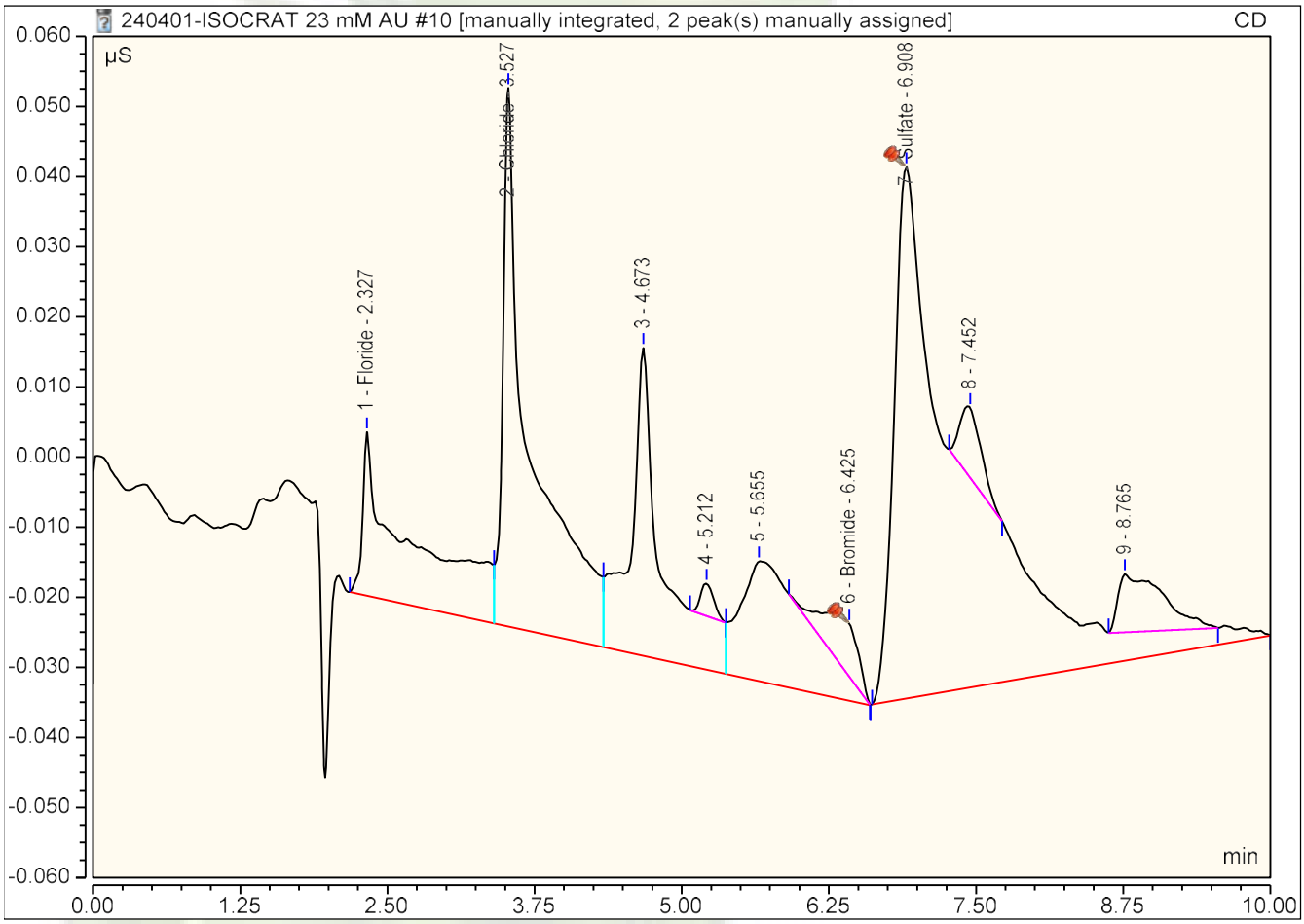
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM *	0.585	8.005	1.0613
2	3.51	**Chloride**	M *	3.808	42.403	10.9482
6	6.13	**Bromide**	M ^	0.128	0.874	1.0117
7	6.76	**Sulfate**	M *^	5.289	25.345	20.6491
8	7.36	**Nitrate**	MB*^	0.920	4.668	0.9789
TOTAL:				10.73	81.29	34.65



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 16:46**	*Run Time:*	**10.00**

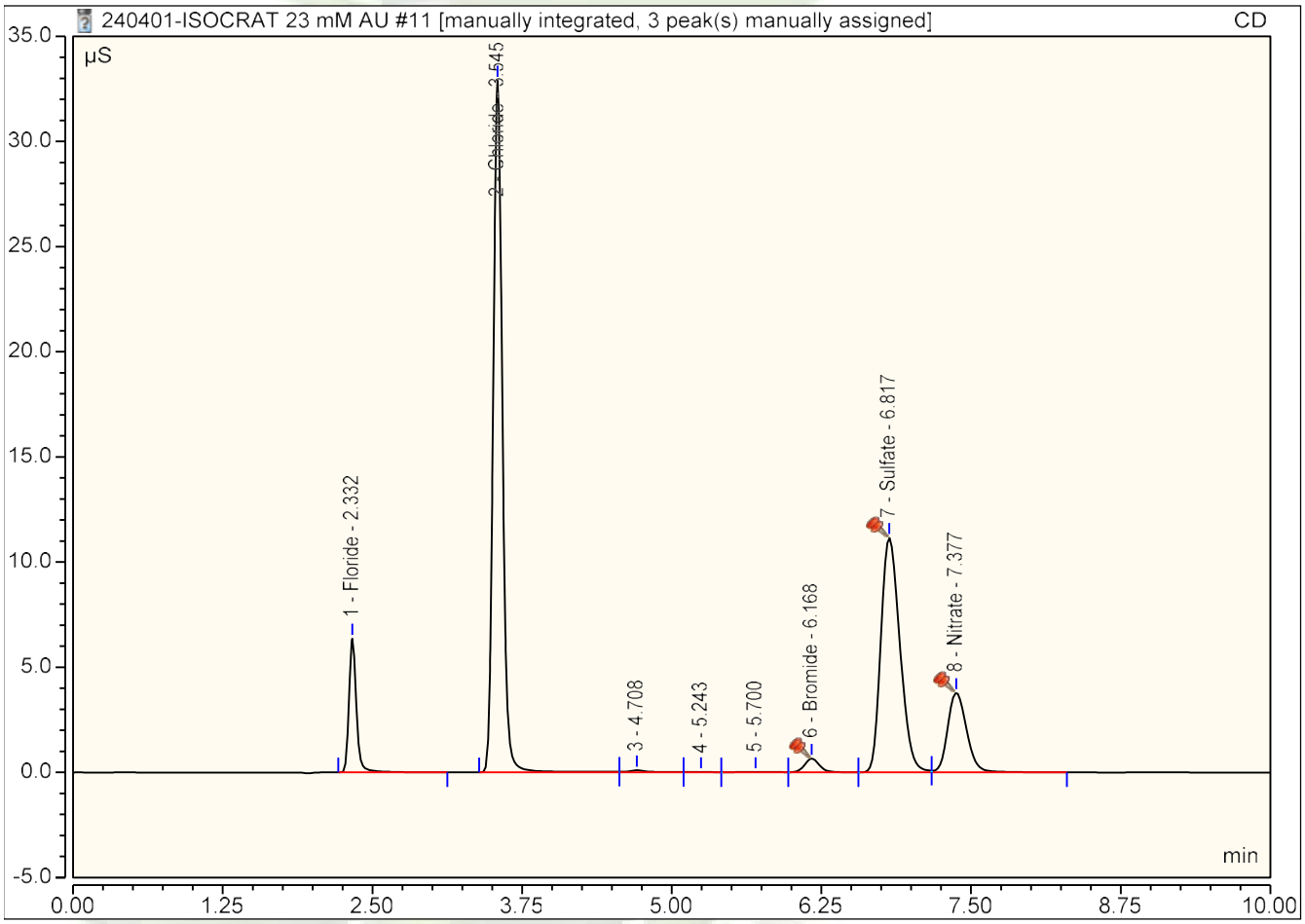
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.011	0.023	0.0139
2	3.53	**Chloride**	M	0.021	0.077	0.0730
6	6.43	**Bromide**	Rd^	0.003	0.008	0.0340
7	6.91	**Sulfate**	BMB*^	0.054	0.076	0.3355
		TOTAL:		0.09	0.18	0.46



Peak Integration Report

Sample Name:	**ICV**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 16:57**	*Run Time:*	**10.00**

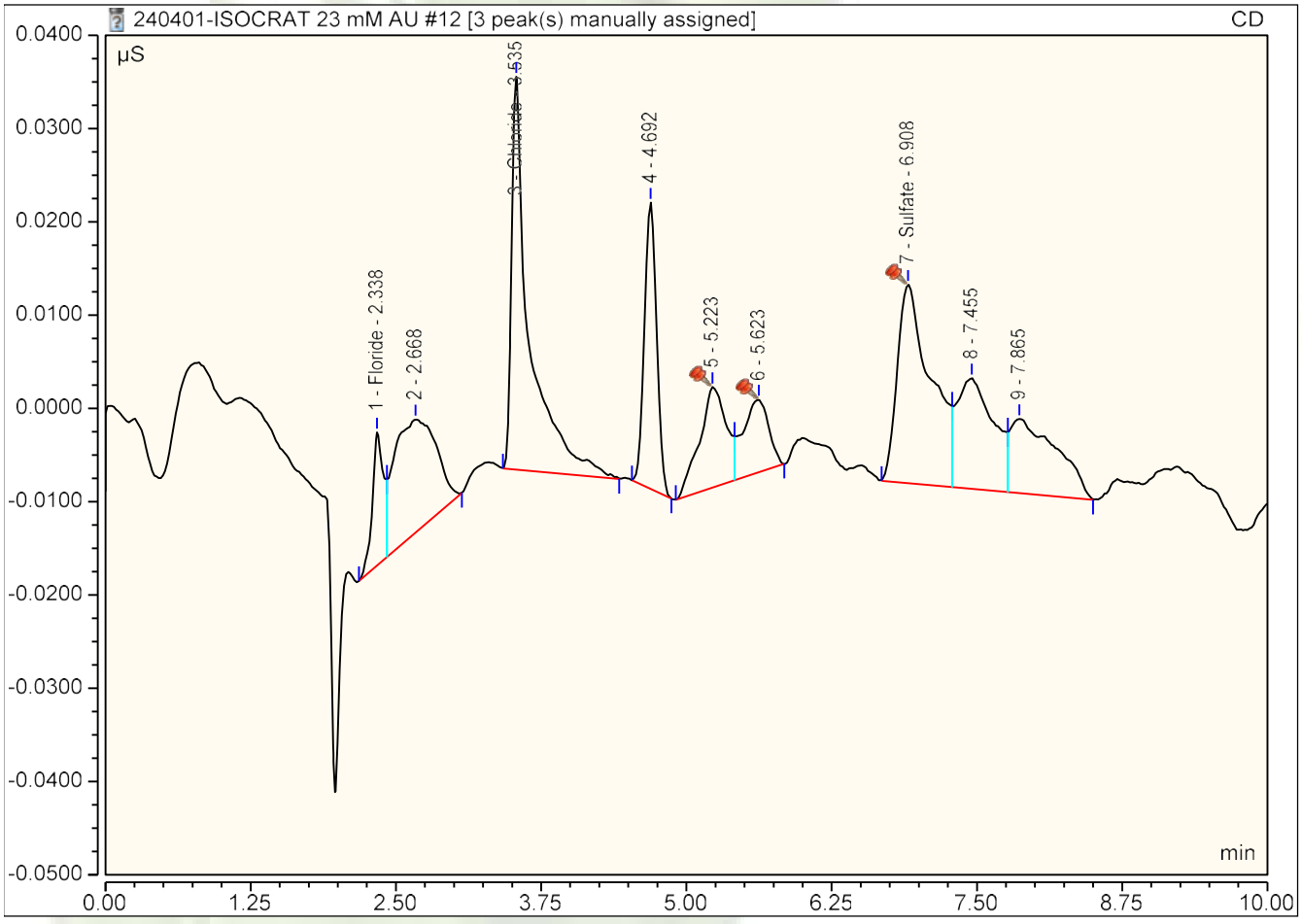
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BMB	0.461	6.368	0.8362
2	3.55	**Chloride**	BM	2.930	32.898	8.4284
6	6.17	**Bromide**	M ^	0.097	0.659	0.7728
7	6.82	**Sulfate**	M *^	2.059	11.159	8.1145
8	7.38	**Nitrate**	MB*^	0.694	3.784	0.7439
TOTAL:				6.24	54.87	18.90



Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 17:08**	*Run Time:*	**10.00**

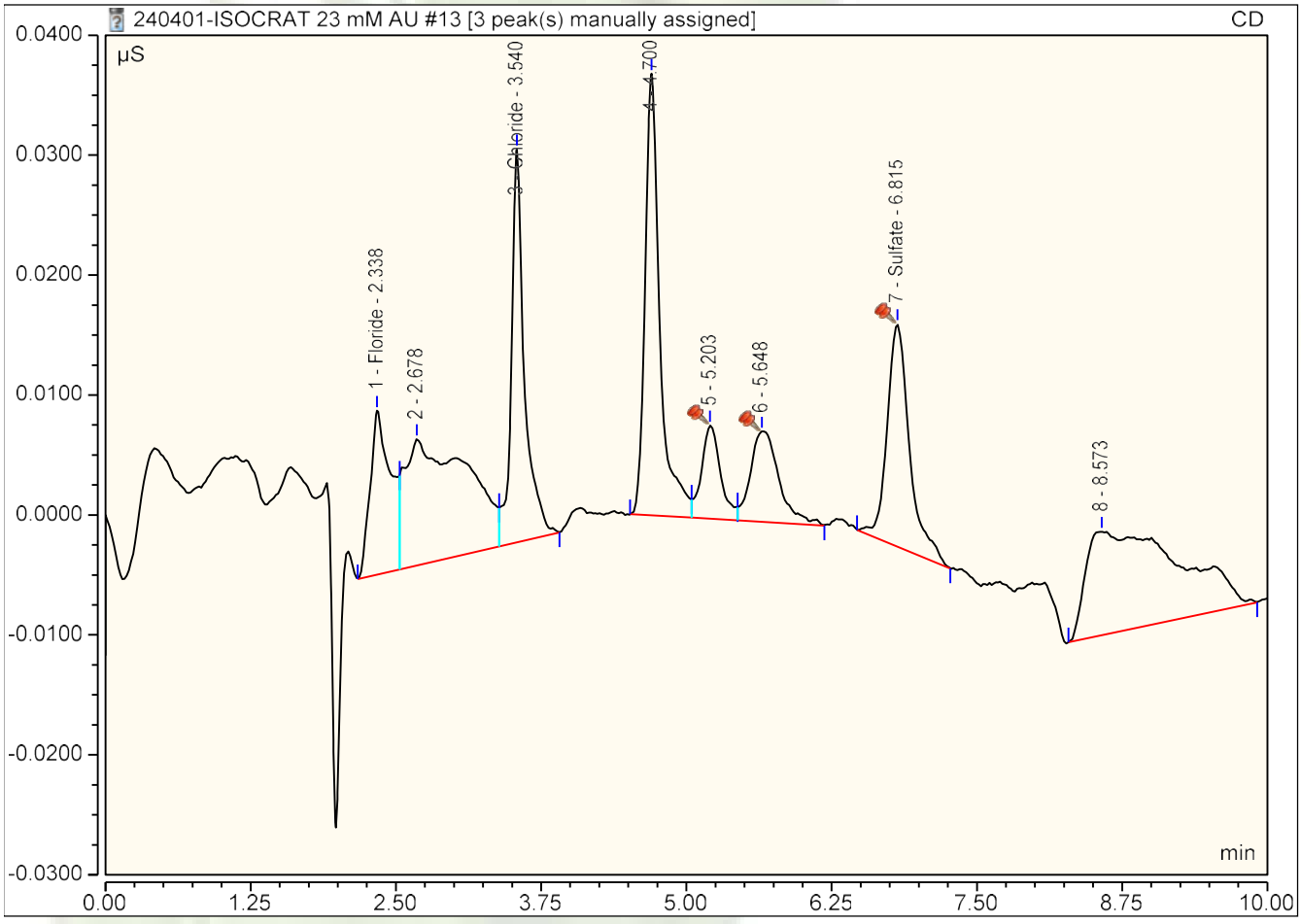
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.34	**Floride**	BM	0.002	0.014	n.a.
3	3.54	**Chloride**	BMB	0.007	0.042	0.0334
7	6.91	**Sulfate**	BM ^	0.007	0.021	0.1549
TOTAL:				0.02	0.08	0.19



Peak Integration Report

Sample Name:	**WG1903535-1**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 17:19**	*Run Time:*	**10.00**

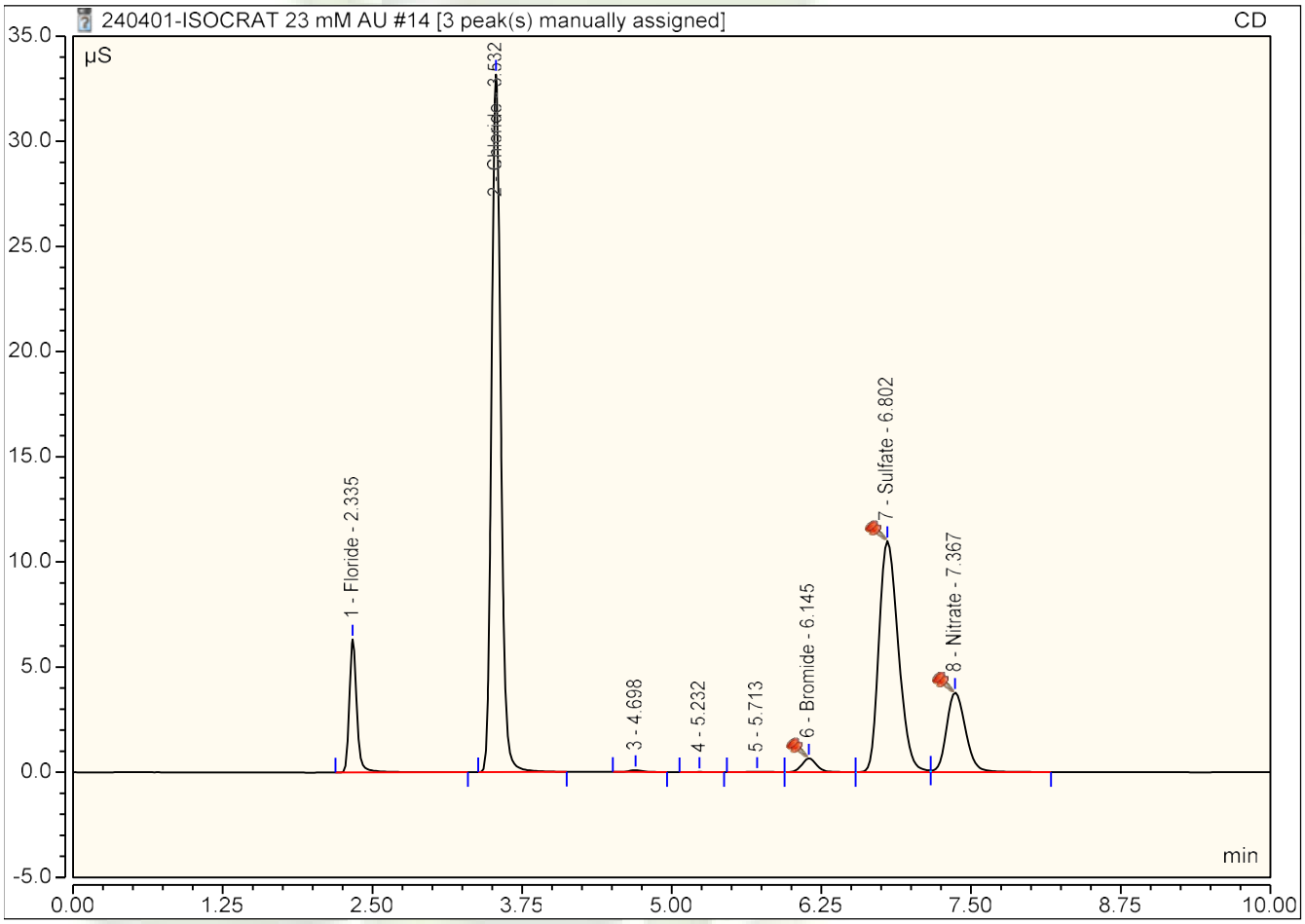
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.34	**Floride**	BM	0.003	0.014	n.a.
3	3.54	**Chloride**	MB	0.004	0.033	0.0243
7	6.82	**Sulfate**	BMB^	0.004	0.019	0.1433
TOTAL:				0.01	0.07	0.17



Peak Integration Report

Sample Name:	**WG1903535-2**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 17:30**	*Run Time:*	**10.00**

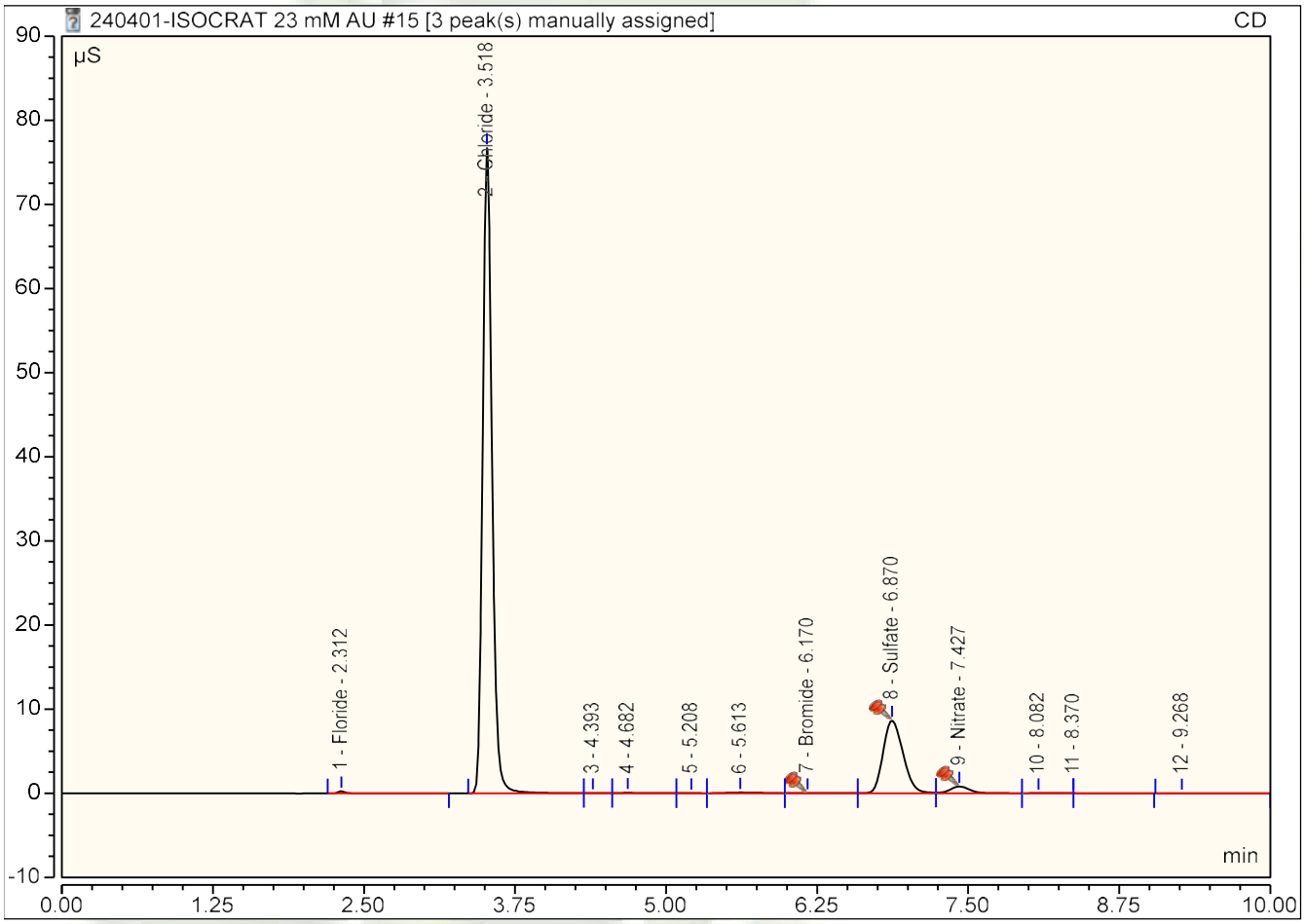
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.34	**Floride**	BMB	0.461	6.328	0.8364
2	3.53	**Chloride**	BMB	2.947	33.170	8.4776
6	6.15	**Bromide**	M ^	0.095	0.655	0.7587
7	6.80	**Sulfate**	M ^	2.066	10.986	8.1431
8	7.37	**Nitrate**	MB^	0.690	3.773	0.7397
TOTAL:				6.26	54.91	18.96



Peak Integration Report

Sample Name:	**XL2417040-01; 10X SO4**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 17:41**	*Run Time:*	**10.00**

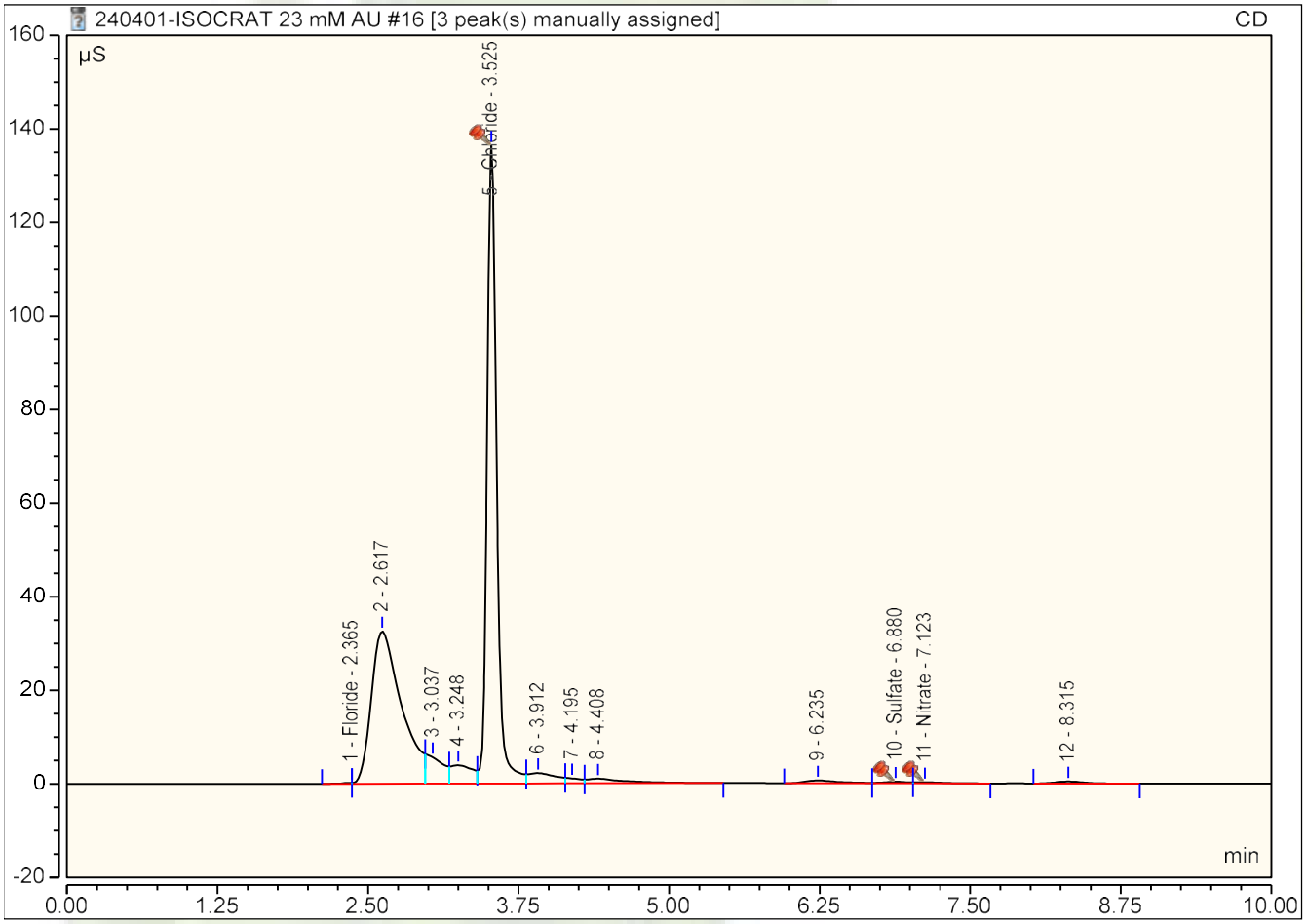
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.31	**Floride**	BMB	0.024	0.255	0.3848
2	3.52	**Chloride**	BM	6.846	76.709	196.7644
7	6.17	**Bromide**	M ^	0.014	0.034	1.2705
8	6.87	**Sulfate**	M ^	1.656	8.659	65.5319
9	7.43	**Nitrate**	M ^	0.160	0.818	1.8772
TOTAL:				8.70	86.47	265.83



Peak Integration Report

Sample Name:	**XL2417040-02; 10X**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 17:52**	*Run Time:*	**10.00**

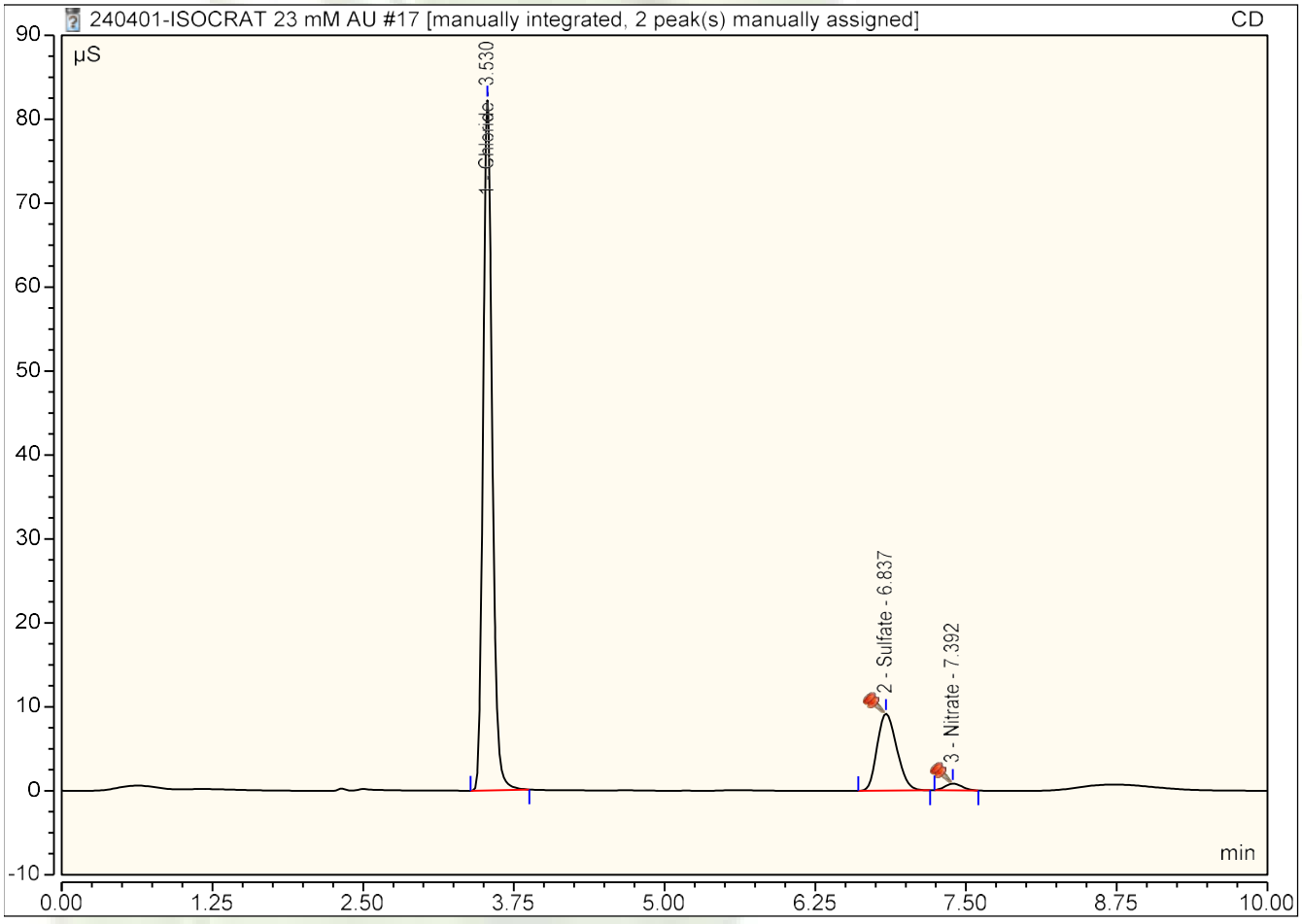
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.37	**Floride**	BM	0.022	0.178	0.3341
5	3.53	**Chloride**	M ^	12.590	136.396	361.7354
10	6.88	**Sulfate**	M ^	0.082	0.357	4.4348
11	7.12	**Nitrate**	MB^	0.066	0.241	0.9036
TOTAL:				12.76	137.17	367.41



Peak Integration Report

Sample Name:	**XL2417040-03; 10X**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 18:02**	*Run Time:*	**10.00**

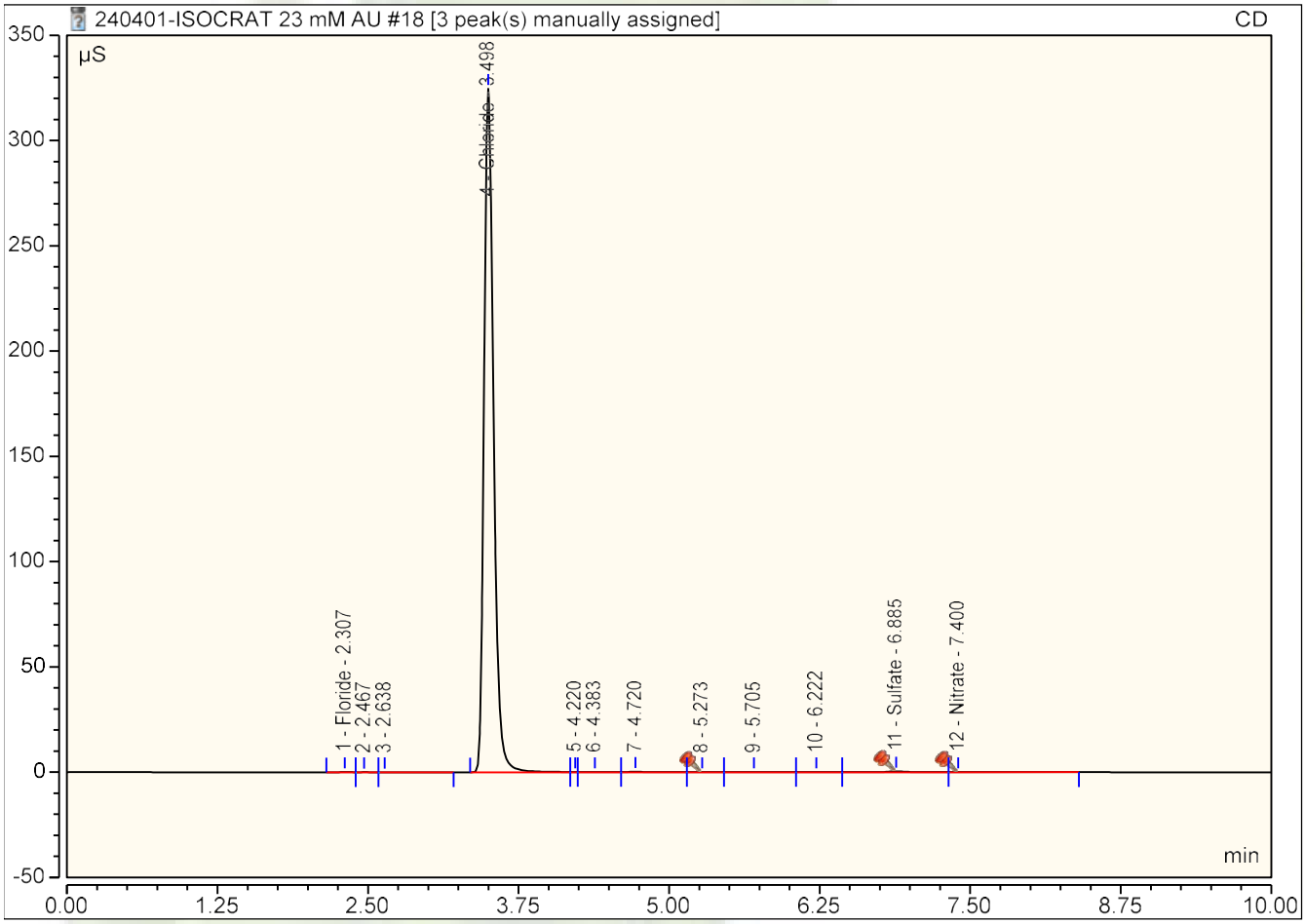
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	3.53	**Chloride**	BMB	7.240	82.196	208.0646
2	6.84	**Sulfate**	BMB^	1.729	9.165	68.3615
3	7.39	**Nitrate**	BMB*^	0.131	0.803	1.5772
TOTAL:				9.10	92.16	278.00



Peak Integration Report

Sample Name:	**XL2417263-01; 50X CL**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**50.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 18:13**	*Run Time:*	**10.00**

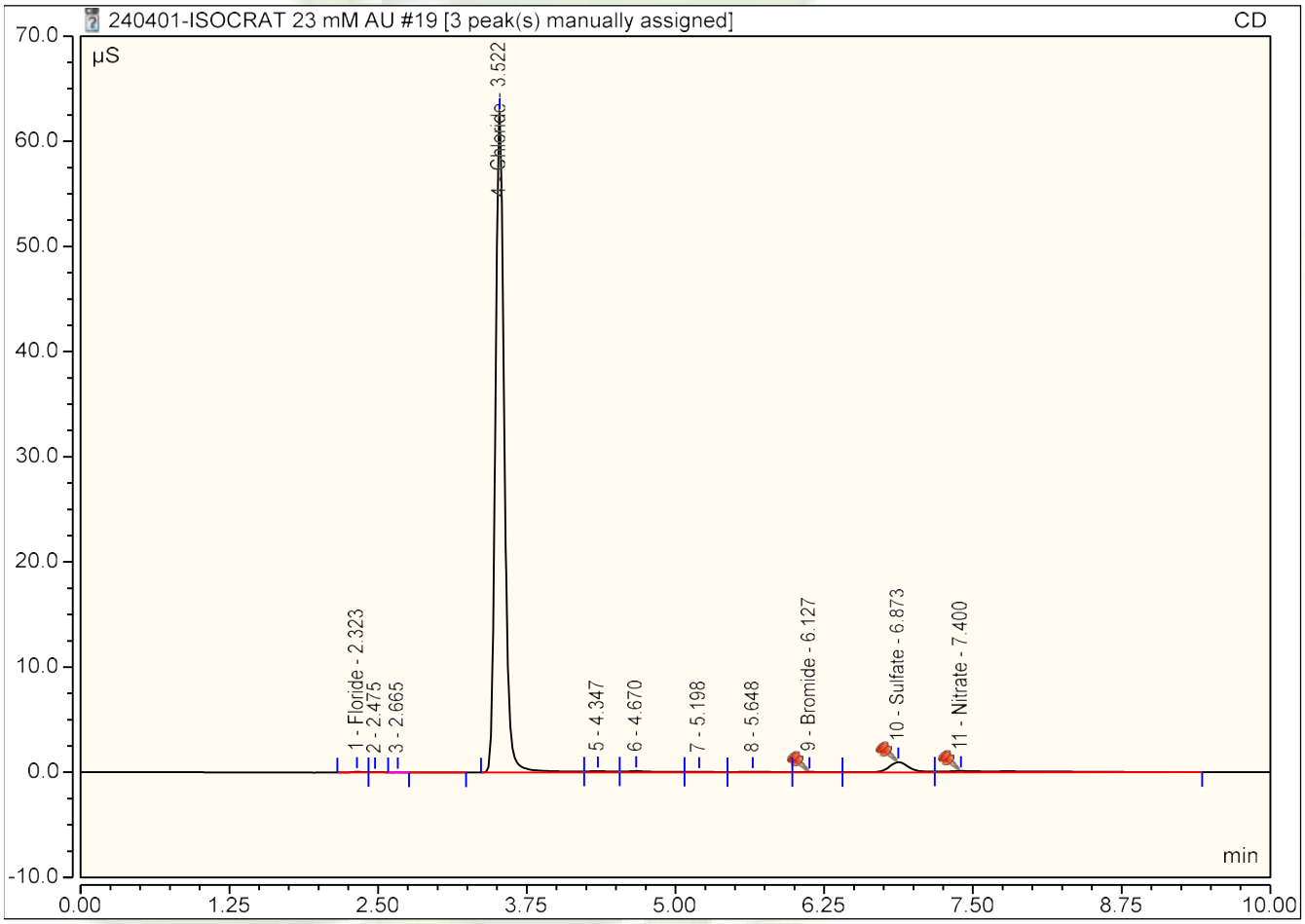
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.31	**Floride**	BM	0.005	0.055	0.1433
4	3.50	**Chloride**	BM	29.859	324.641	4288.6499
11	6.89	**Sulfate**	M ^	0.095	0.389	24.8704
12	7.40	**Nitrate**	MB^	0.016	0.038	1.9043
TOTAL:				29.97	325.12	4315.57



Peak Integration Report

Sample Name:	**L2417416-01; 100X CL**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**100.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 18:24**	*Run Time:*	**10.00**

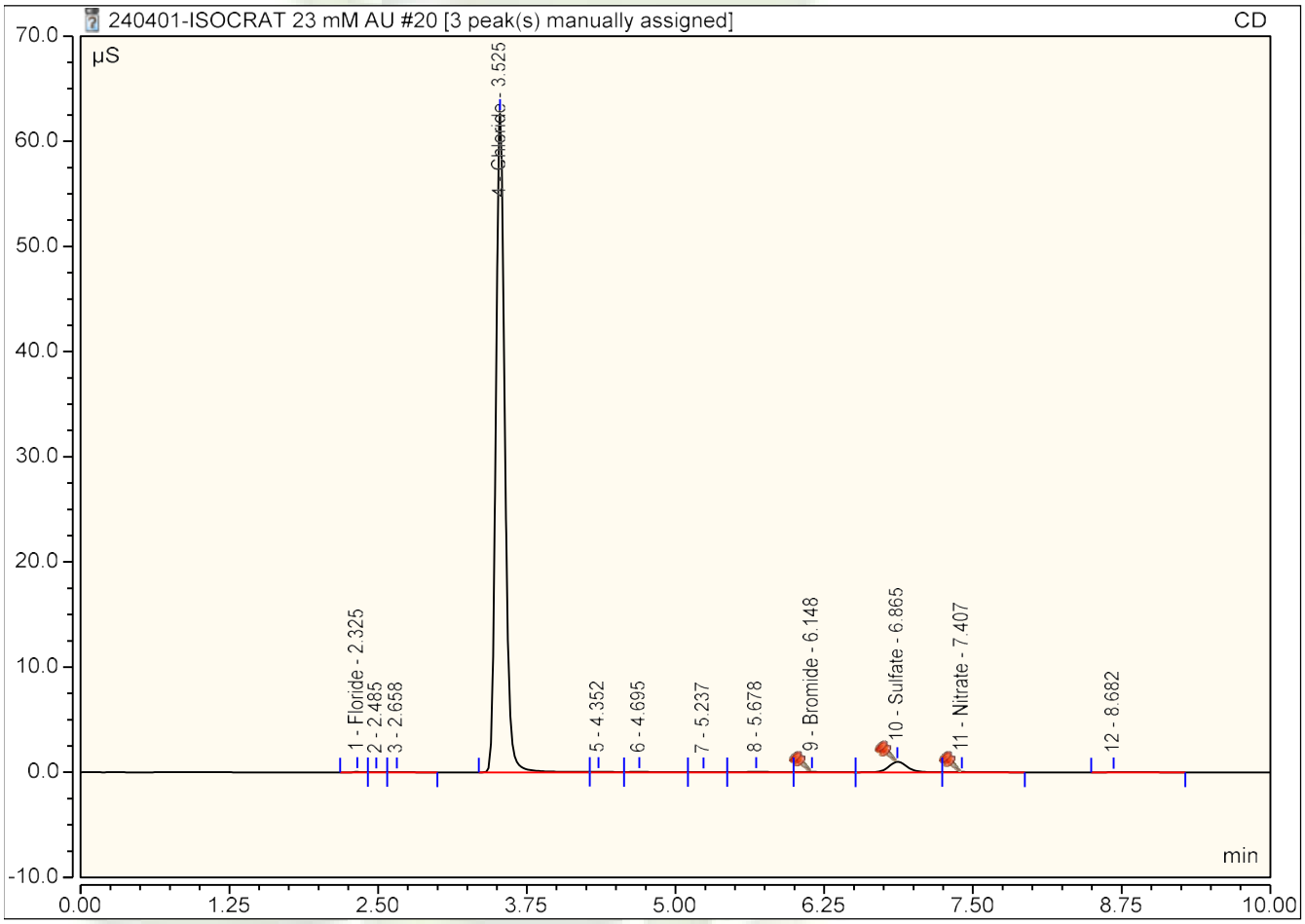
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.005	0.058	0.3379
4	3.52	**Chloride**	BM	5.445	62.713	1565.1678
9	6.13	**Bromide**	M ^	0.009	0.037	8.1232
10	6.87	**Sulfate**	M ^	0.190	0.966	86.5705
11	7.40	**Nitrate**	MB^	0.124	0.123	15.0747
TOTAL:				5.77	63.90	1675.27



Peak Integration Report

Sample Name:	**L2417416-02; 100X**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**100.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 18:35**	*Run Time:*	**10.00**

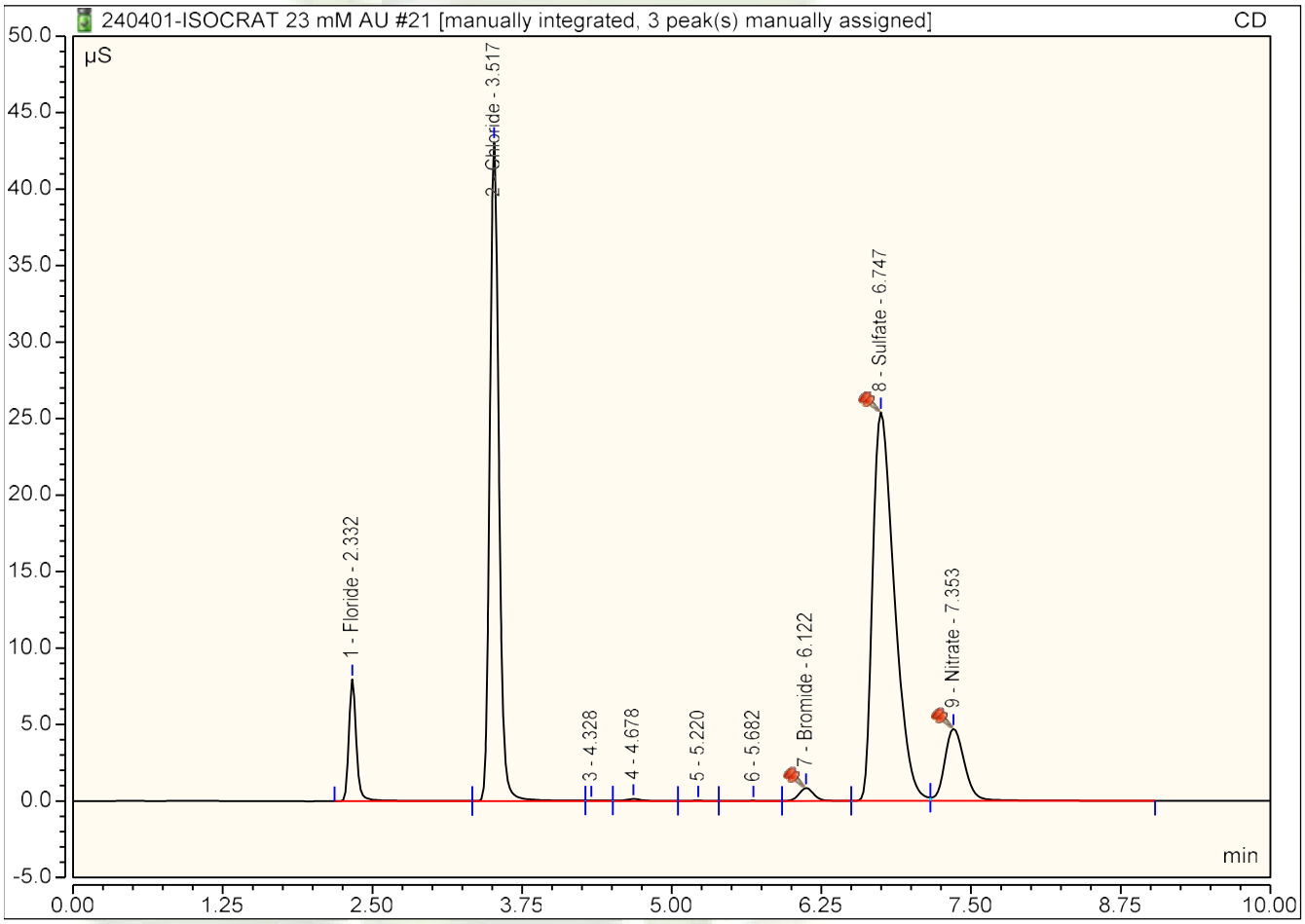
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.004	0.047	0.1369
4	3.53	**Chloride**	BM	5.499	62.625	1580.5955
9	6.15	**Bromide**	M ^	0.009	0.039	8.6189
10	6.87	**Sulfate**	M ^	0.181	0.997	82.8995
11	7.41	**Nitrate**	MB^	0.008	0.035	2.9783
TOTAL:				5.70	63.74	1675.23



Peak Integration Report

Sample Name:	**CCV**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 18:46**	*Run Time:*	**10.00**

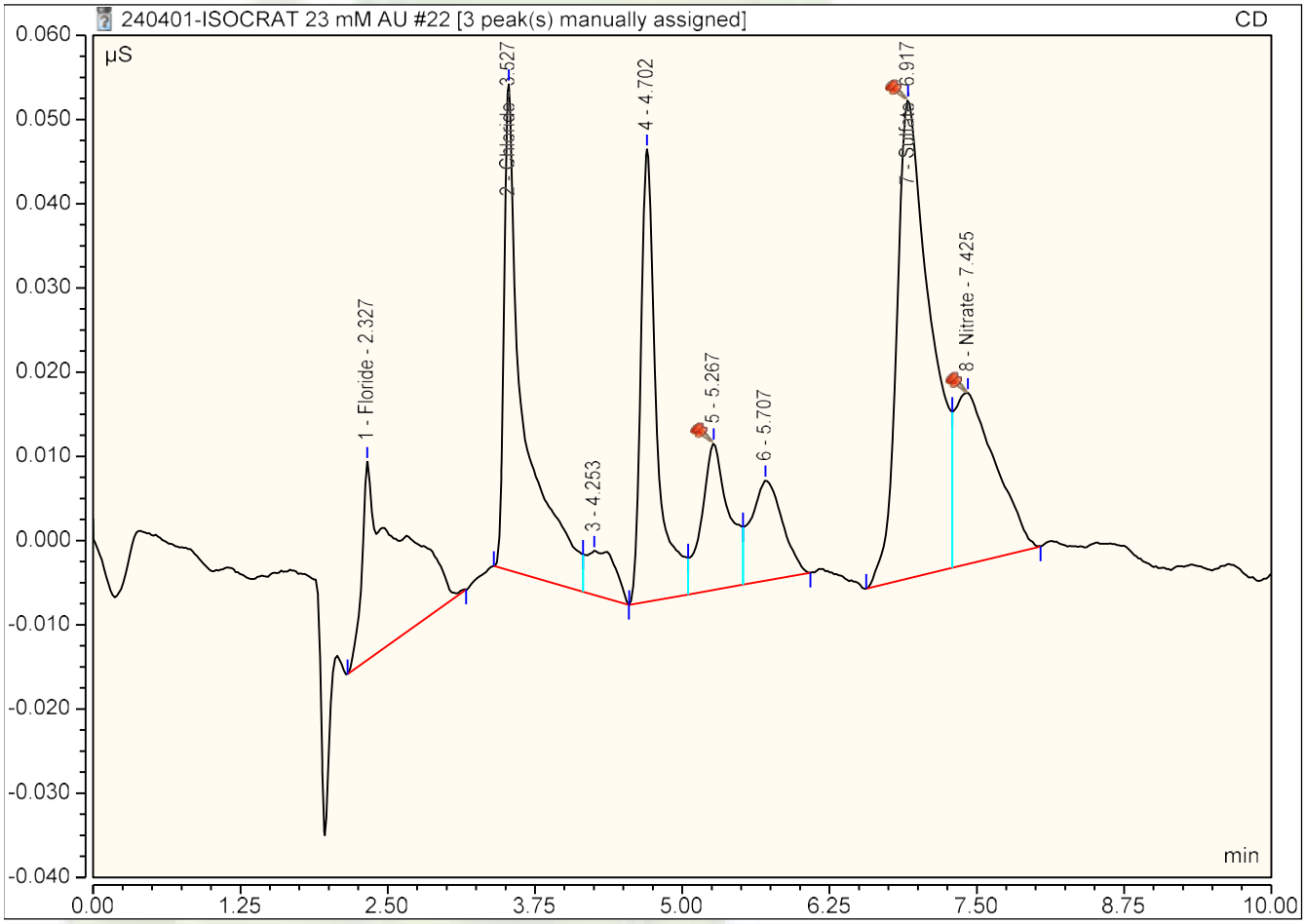
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM *	0.591	7.961	1.0730
2	3.52	**Chloride**	M *	3.788	43.096	10.8911
7	6.12	**Bromide**	M ^	0.122	0.849	0.9652
8	6.75	**Sulfate**	M *^	5.362	25.401	20.9322
9	7.35	**Nitrate**	MB*^	0.913	4.712	0.9713
TOTAL:				10.78	82.02	34.83



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 18:57**	*Run Time:*	**10.00**

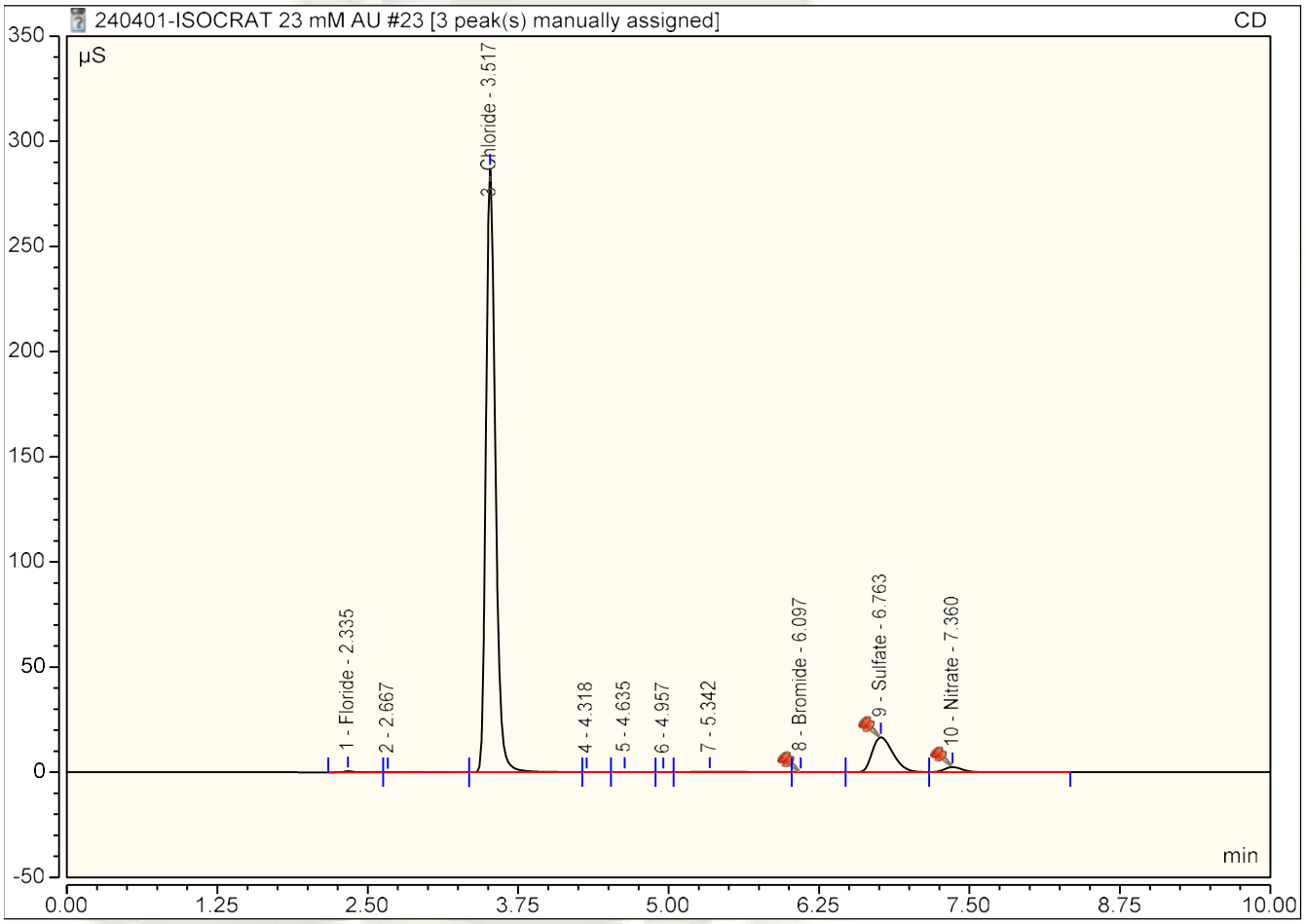
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BMB	0.009	0.024	0.0101
2	3.53	**Chloride**	BM	0.011	0.058	0.0439
7	6.92	**Sulfate**	BM ^	0.019	0.057	0.2008
8	7.43	**Nitrate**	MB^	0.008	0.020	0.0300
TOTAL:				0.05	0.16	0.28



Peak Integration Report

Sample Name:	**L2417419-01 CL SO4 BR**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 19:08**	*Run Time:*	**10.00**

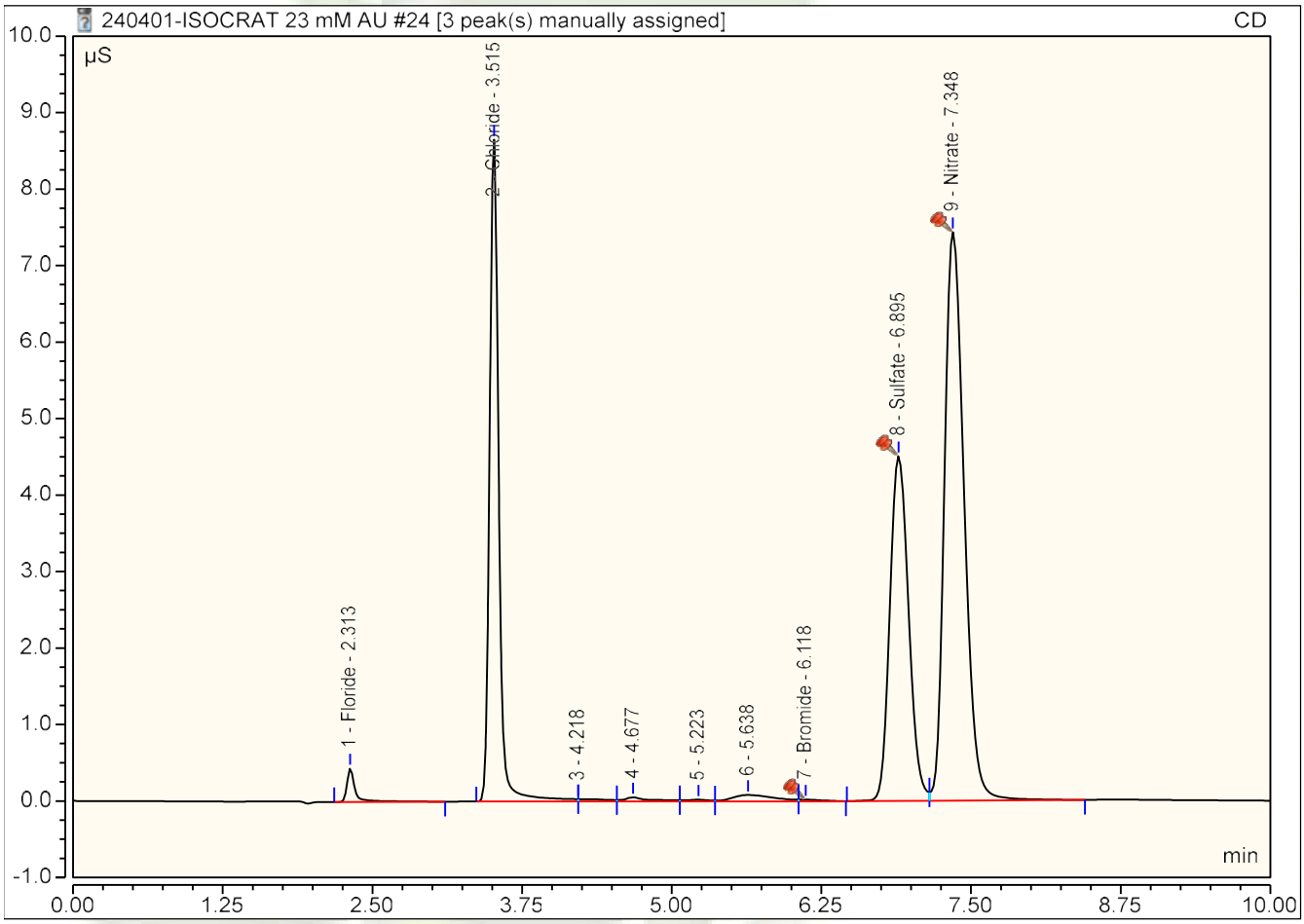
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.34	**Floride**	BM	0.042	0.531	0.0706
3	3.52	**Chloride**	M	25.949	287.049	74.5445
8	6.10	**Bromide**	M ^	0.014	0.054	0.1259
9	6.76	**Sulfate**	M ^	3.337	16.607	13.0733
10	7.36	**Nitrate**	MB^	0.446	2.415	0.4860
TOTAL:				29.79	306.66	88.30



Peak Integration Report

Sample Name:	**L2717333-01 CL**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 19:19**	*Run Time:*	**10.00**

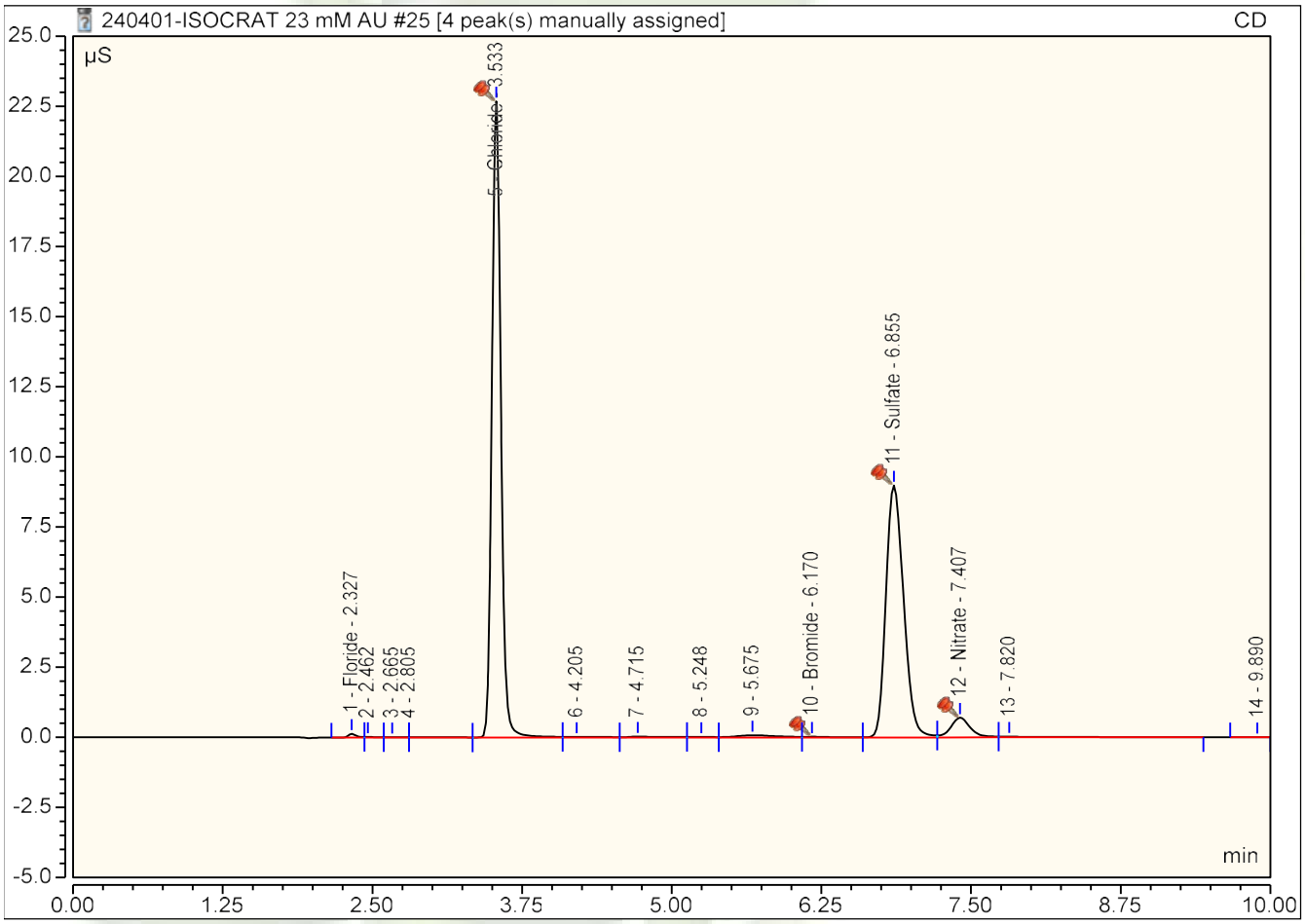
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.31	**Floride**	BMB	0.036	0.441	0.0602
2	3.52	**Chloride**	BM	0.765	8.652	2.2100
7	6.12	**Bromide**	MB^	0.005	0.022	0.0520
8	6.90	**Sulfate**	BM ^	0.812	4.509	3.2793
9	7.35	**Nitrate**	MB^	1.408	7.432	1.4866
TOTAL:				3.03	21.06	7.09



Peak Integration Report

Sample Name:	**L2417074-01 F CL SO4 BR**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 19:30**	*Run Time:*	**10.00**

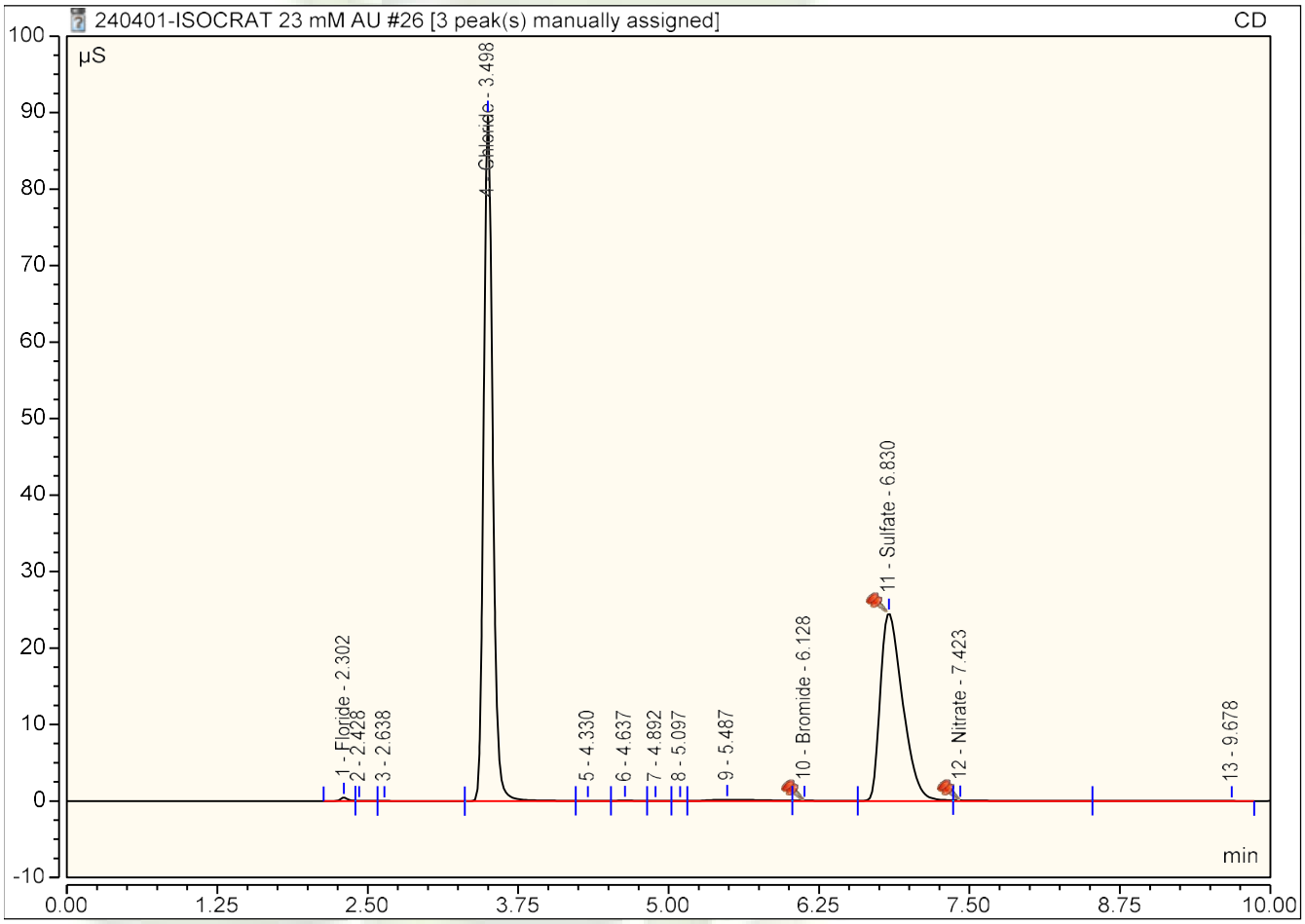
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.011	0.137	0.0151
5	3.53	**Chloride**	M ^	1.970	22.689	5.6717
10	6.17	**Bromide**	M ^	0.007	0.025	0.0712
11	6.86	**Sulfate**	M ^	1.533	8.985	6.0768
12	7.41	**Nitrate**	M ^	0.132	0.702	0.1594
TOTAL:				3.66	32.54	11.99



Peak Integration Report

Sample Name:	**L2417074-02**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 19:41**	*Run Time:*	**10.00**

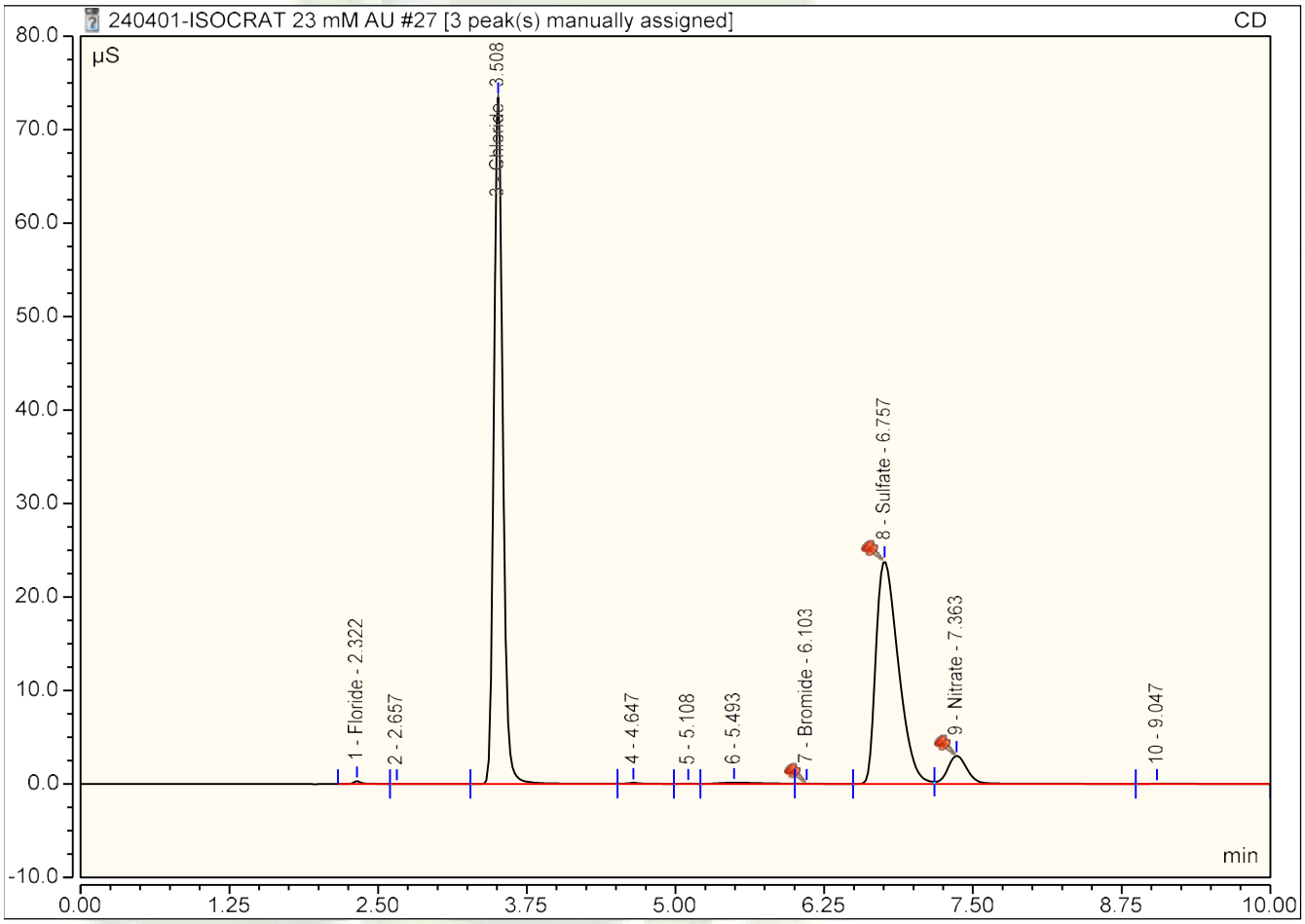
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.30	**Floride**	BM	0.033	0.461	0.0539
4	3.50	**Chloride**	M	7.839	89.641	22.5264
10	6.13	**Bromide**	M ^	0.023	0.074	0.1928
11	6.83	**Sulfate**	M ^	5.288	24.571	20.6428
12	7.42	**Nitrate**	M ^	0.057	0.096	0.0807
TOTAL:				13.24	114.84	43.50



Peak Integration Report

Sample Name:	**L2417074-03**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 19:52**	*Run Time:*	**10.00**

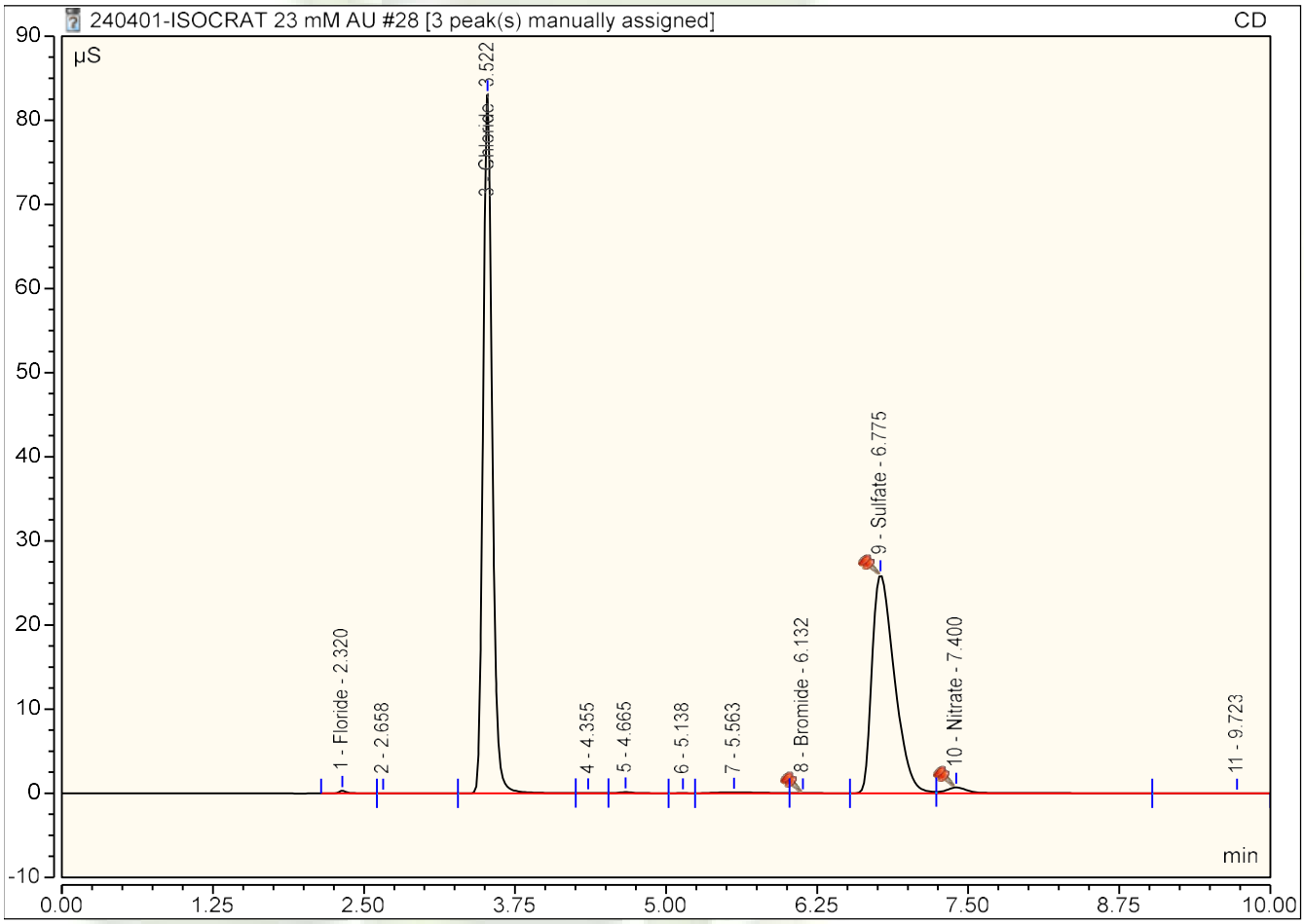
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.026	0.305	0.0409
3	3.51	**Chloride**	M	6.409	73.487	18.4191
7	6.10	**Bromide**	M ^	0.010	0.042	0.0921
8	6.76	**Sulfate**	M ^	5.214	23.843	20.3563
9	7.36	**Nitrate**	M ^	0.589	3.013	0.6350
TOTAL:				12.25	100.69	39.54



Peak Integration Report

Sample Name:	**L2417074-04**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 20:03**	*Run Time:*	**10.00**

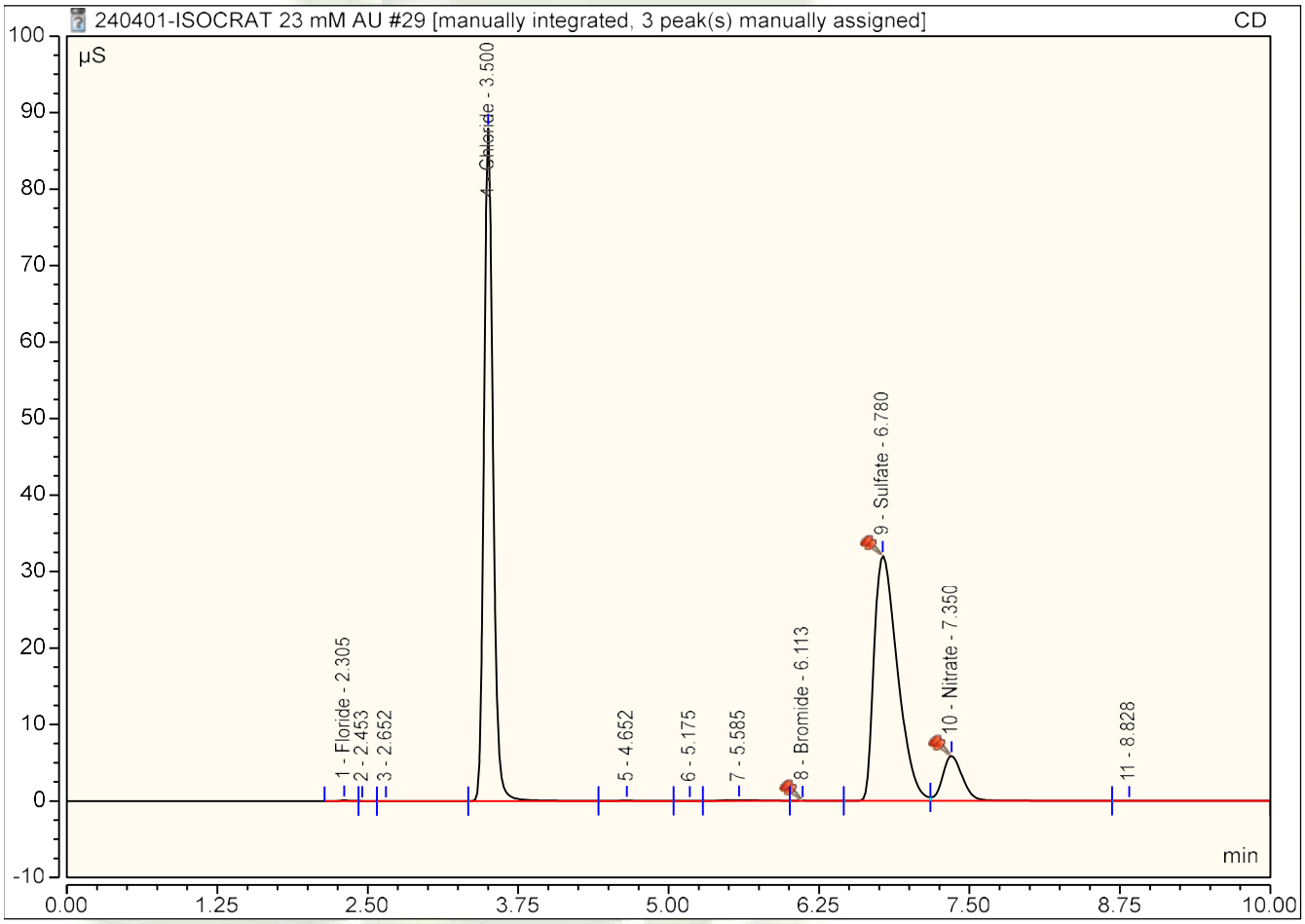
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.029	0.339	0.0473
3	3.52	**Chloride**	M	7.293	83.047	20.9582
8	6.13	**Bromide**	M ^	0.018	0.059	0.1558
9	6.78	**Sulfate**	M ^	5.597	25.963	21.8440
10	7.40	**Nitrate**	M ^	0.184	0.712	0.2133
TOTAL:				13.12	110.12	43.22



Peak Integration Report

Sample Name:	**L2417074-05**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 20:14**	*Run Time:*	**10.00**

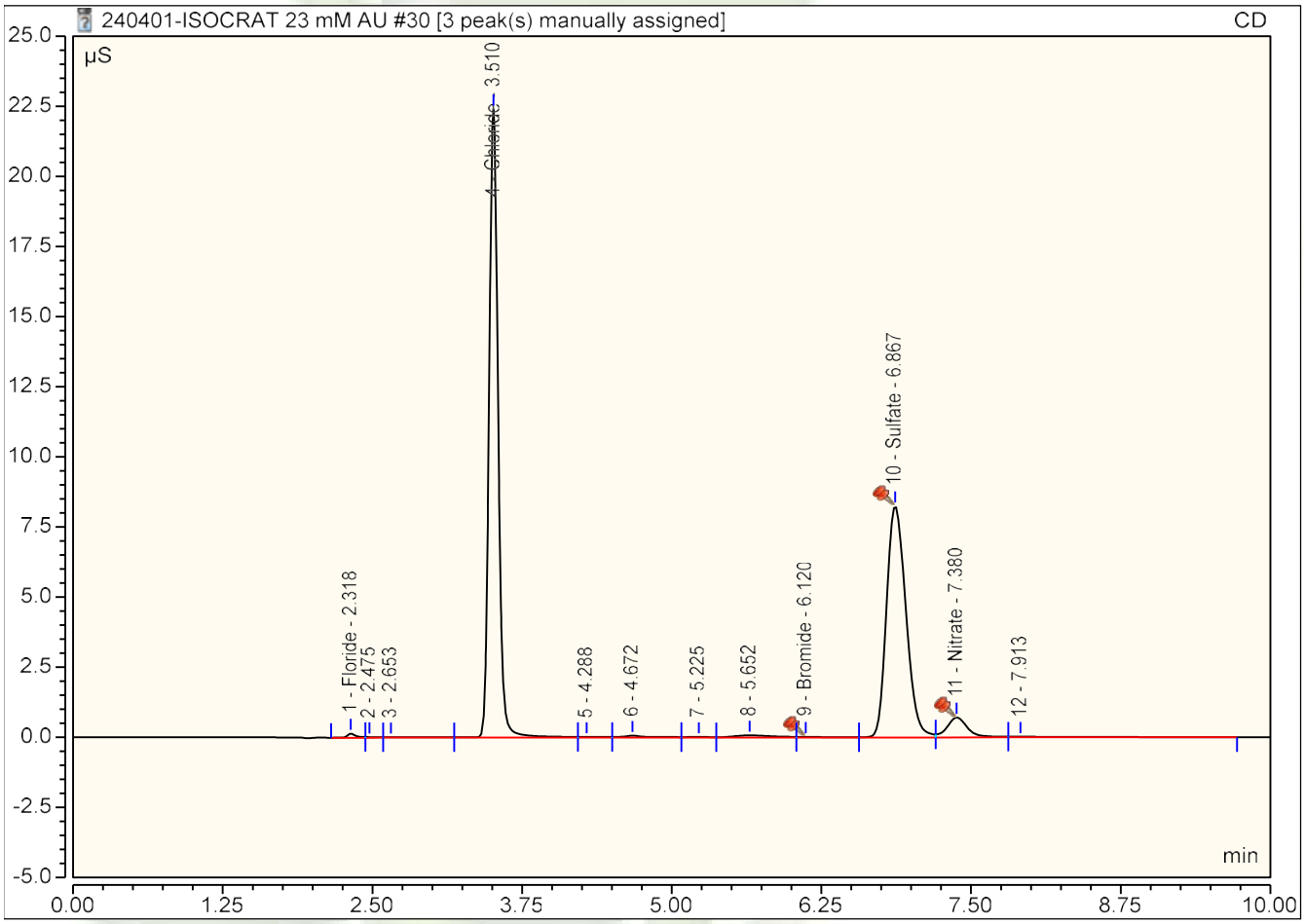
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.31	**Floride**	BM *	0.010	0.119	0.0117
4	3.50	**Chloride**	M *	7.729	87.956	22.2114
8	6.11	**Bromide**	M *^	0.009	0.042	0.0830
9	6.78	**Sulfate**	M *^	7.227	32.065	28.1669
10	7.35	**Nitrate**	M *^	1.155	5.893	1.2232
TOTAL:				16.13	126.07	51.70



Peak Integration Report

Sample Name:	**L2417074-06**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 20:25**	*Run Time:*	**10.00**

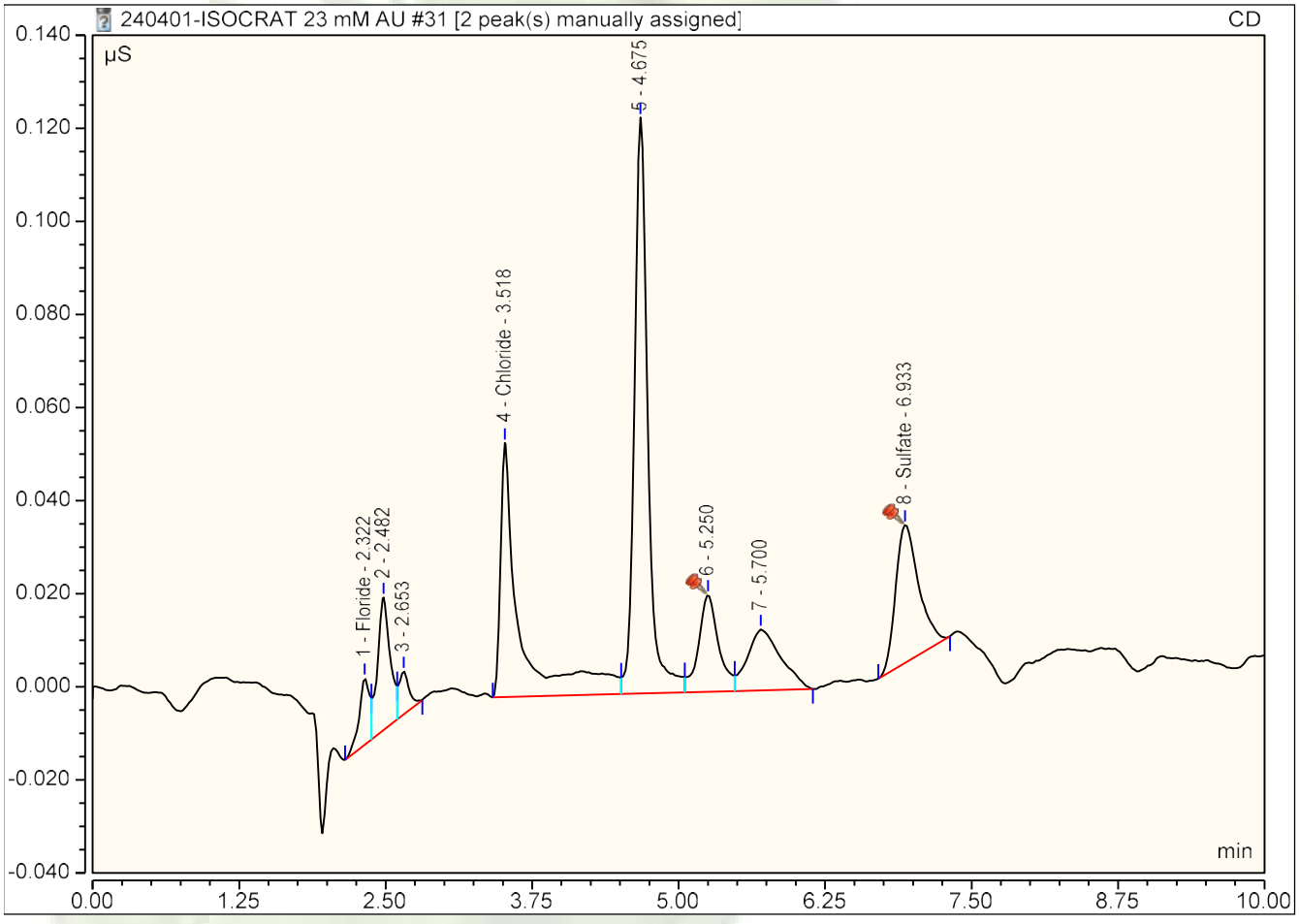
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.012	0.150	0.0168
4	3.51	**Chloride**	M	1.947	22.415	5.6048
9	6.12	**Bromide**	M ^	0.007	0.025	0.0718
10	6.87	**Sulfate**	M ^	1.540	8.253	6.1031
11	7.38	**Nitrate**	M ^	0.141	0.711	0.1685
TOTAL:				3.65	31.55	11.97



Peak Integration Report

Sample Name:	**L2717175-01**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 20:35**	*Run Time:*	**10.00**

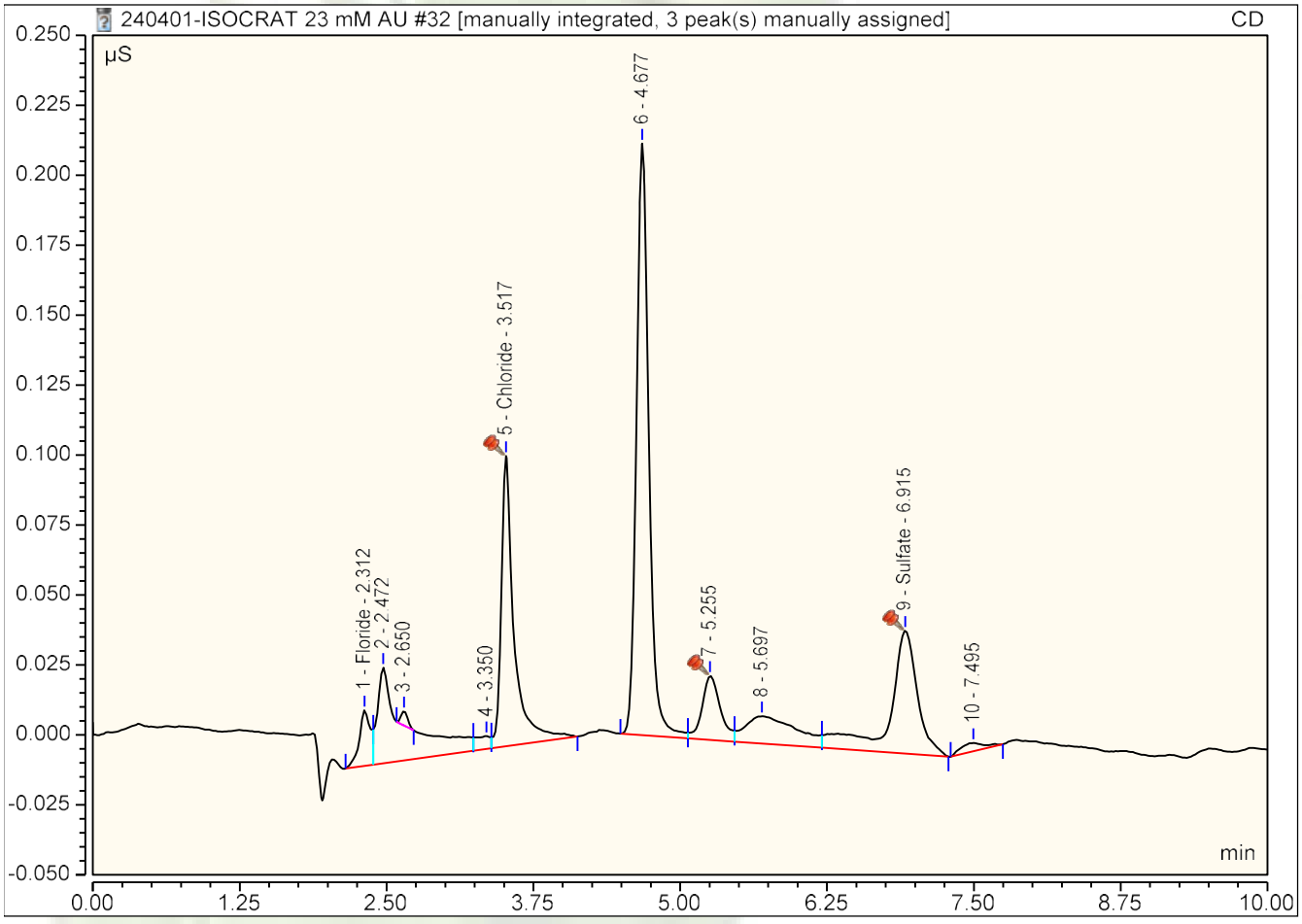
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.001	0.014	n.a.
4	3.52	**Chloride**	BM	0.010	0.055	0.0417
8	6.93	**Sulfate**	BMB^	0.007	0.030	0.1534
TOTAL:				0.02	0.10	0.20



Peak Integration Report

Sample Name:	**WG1903535-3**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 20:46**	*Run Time:*	**10.00**

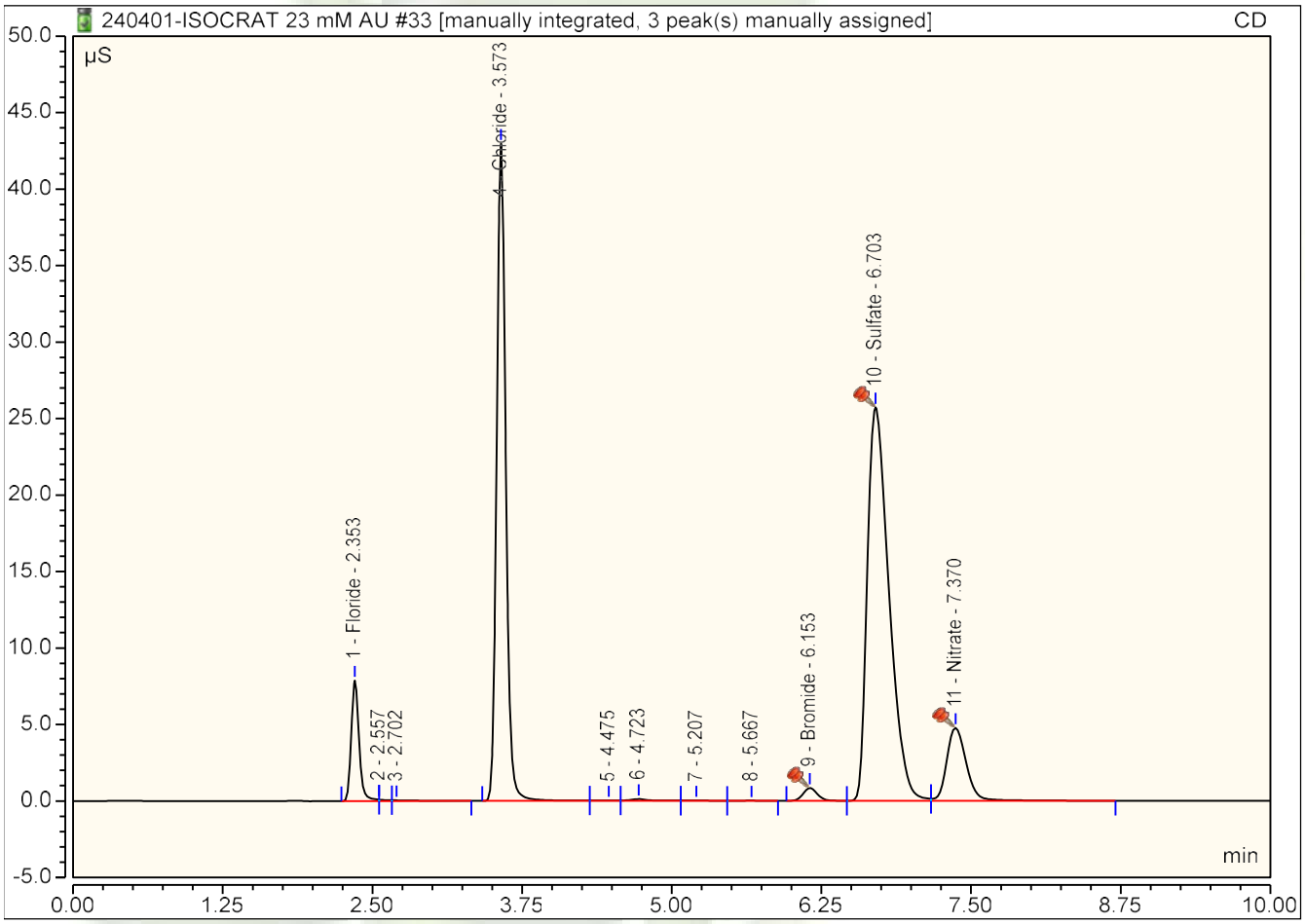
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.31	**Floride**	BM *	0.002	0.020	n.a.
5	3.52	**Chloride**	MB^	0.013	0.104	0.0492
9	6.92	**Sulfate**	MB^	0.012	0.044	0.1744
TOTAL:				0.03	0.17	0.22



Peak Integration Report

Sample Name:	**CCV**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 20:57**	*Run Time:*	**10.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.35	**Floride**	BM *	0.602	7.886	1.0933
4	3.57	**Chloride**	BM	3.802	42.953	10.9312
9	6.15	**Bromide**	BM ^	0.117	0.848	0.9308
10	6.70	**Sulfate**	M *^	5.423	25.722	21.1689
11	7.37	**Nitrate**	MB*^	0.900	4.765	0.9586
TOTAL:				10.84	82.17	35.08



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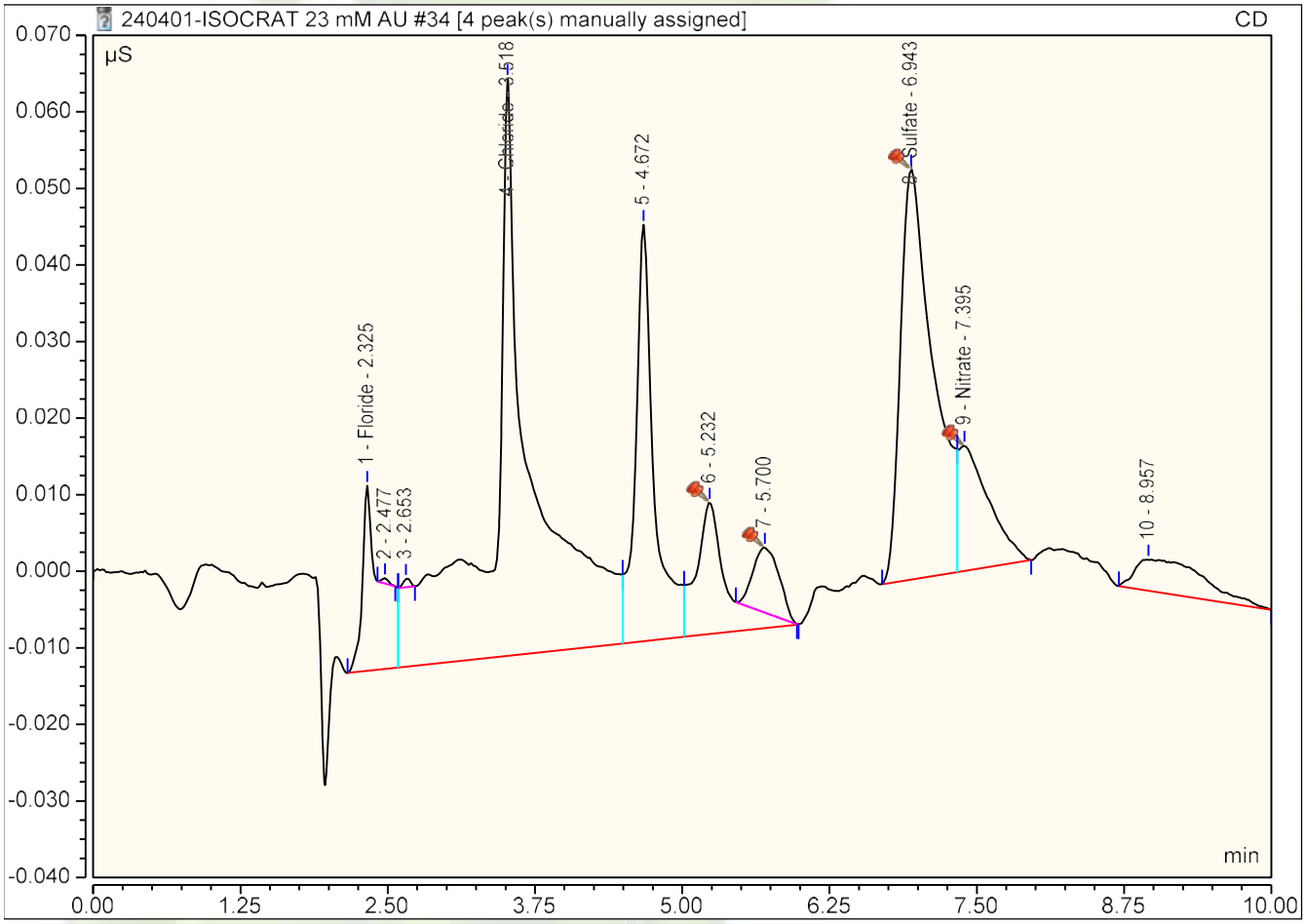
Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 21:08**	*Run Time:*	**10.00**

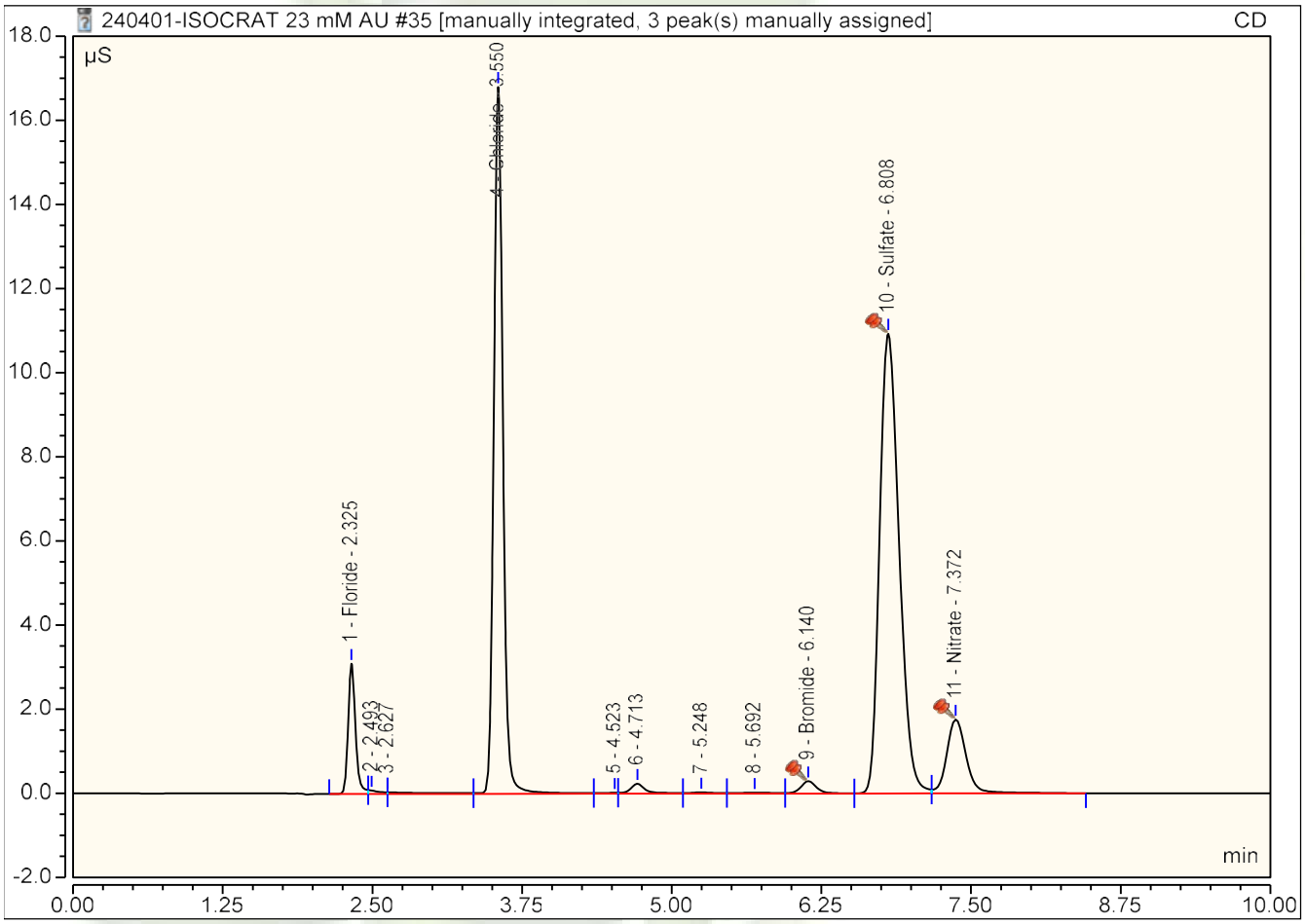
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.004	0.024	0.0023
4	3.52	**Chloride**	M	0.031	0.075	0.1022
8	6.94	**Sulfate**	BM ^	0.017	0.054	0.1939
9	7.40	**Nitrate**	MB^	0.005	0.016	0.0266
TOTAL:				0.06	0.17	0.32



Peak Integration Report

Sample Name:	**WG1903535-4**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 21:19**	*Run Time:*	**10.00**

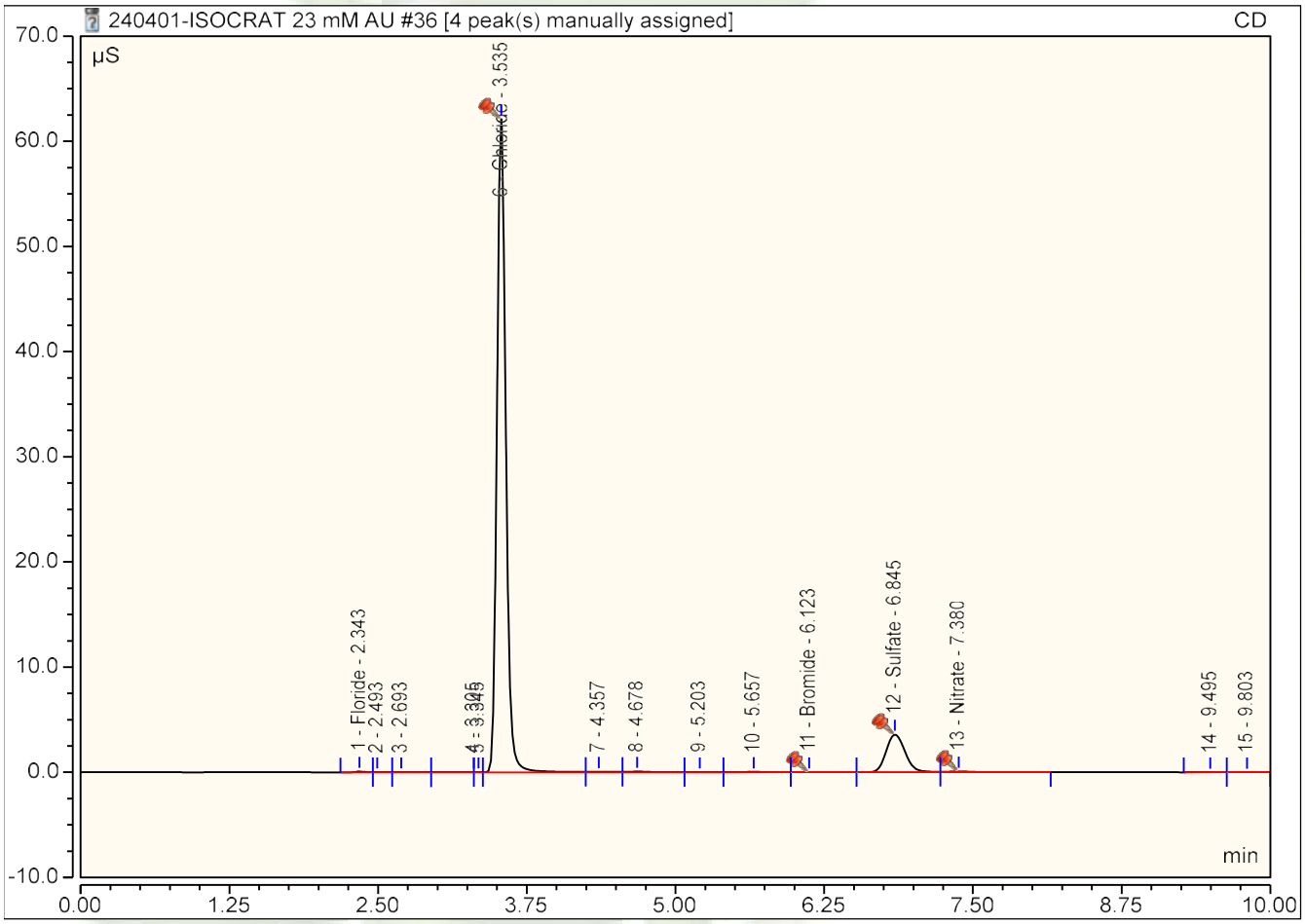
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.220	3.095	0.3964
4	3.55	**Chloride**	M	1.483	16.806	4.2717
9	6.14	**Bromide**	M ^	0.046	0.296	0.3726
10	6.81	**Sulfate**	M *^	2.064	10.932	8.1372
11	7.37	**Nitrate**	MB*^	0.332	1.760	0.3673
TOTAL:				4.15	32.89	13.55



Peak Integration Report

Sample Name:	**L2417525-01; 25X CL**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**25.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 21:30**	*Run Time:*	**10.00**

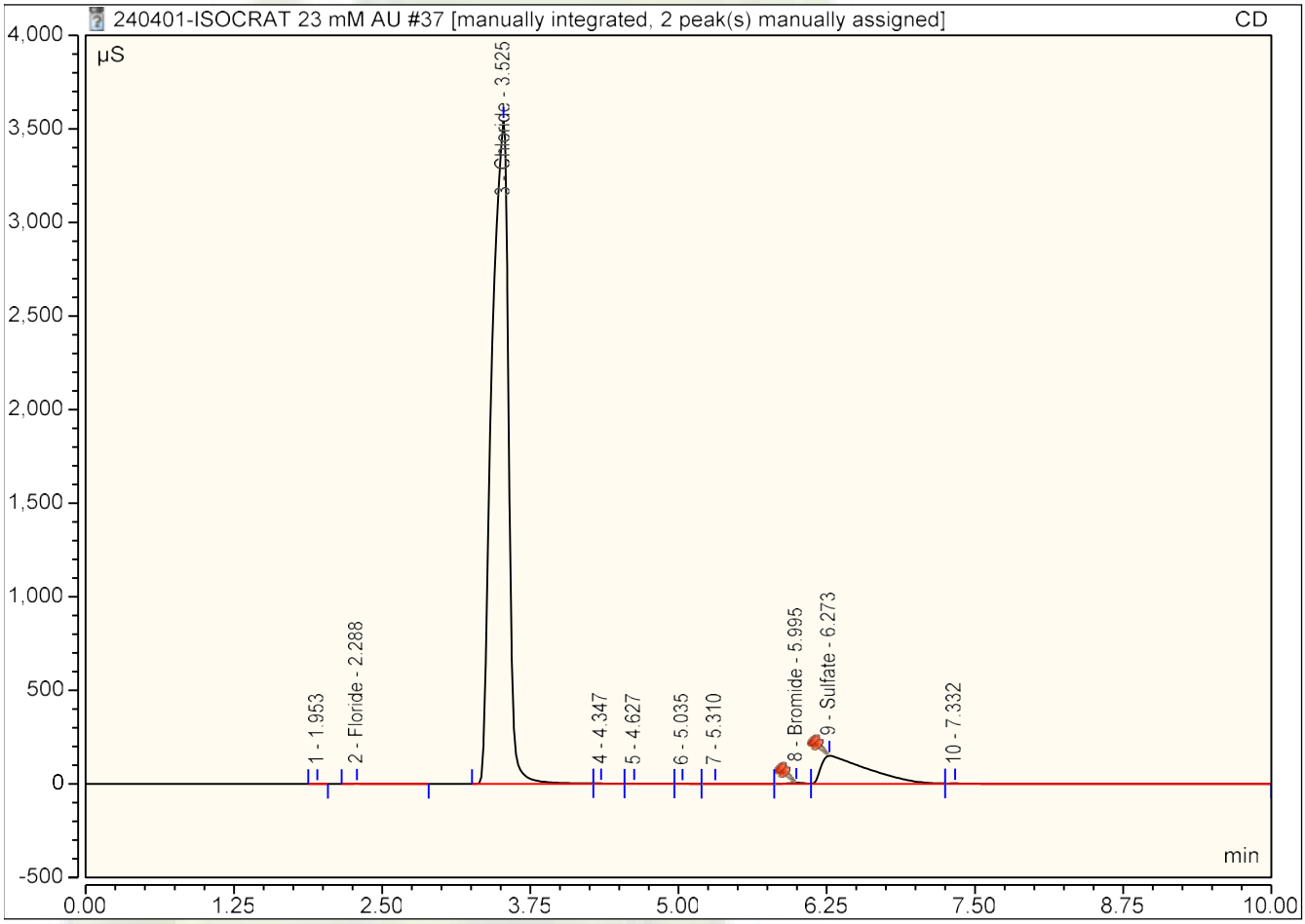
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.34	**Floride**	BM	0.007	0.080	0.1759
6	3.54	**Chloride**	M ^	5.407	62.128	388.5693
11	6.12	**Bromide**	M ^	0.006	0.025	1.4550
12	6.85	**Sulfate**	M ^	0.661	3.593	67.3287
13	7.38	**Nitrate**	MB^	0.020	0.084	1.0593
TOTAL:				6.10	65.91	458.59



Peak Integration Report

Sample Name:	**XL2417429-01 BR**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 21:41**	*Run Time:*	**10.00**

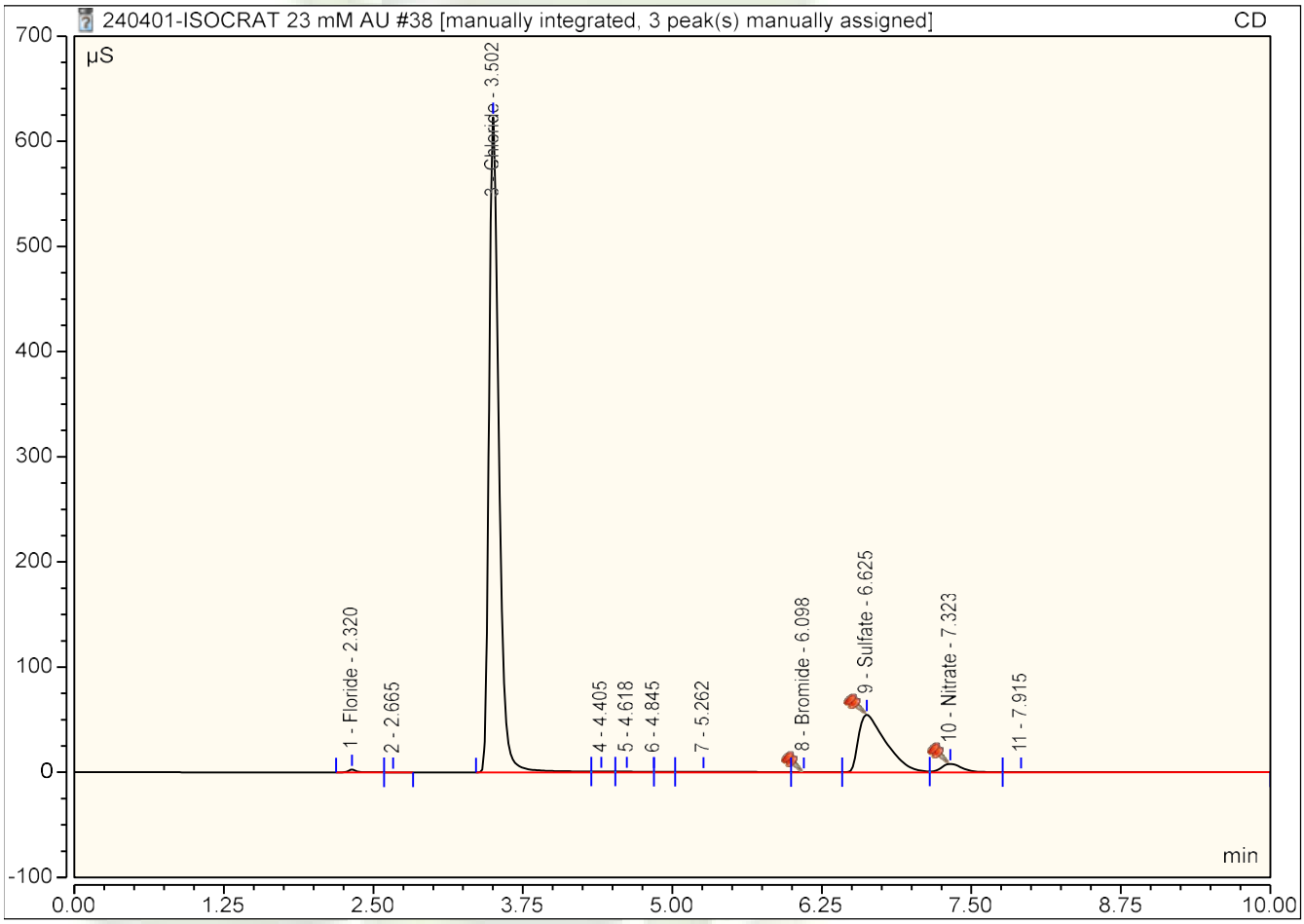
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
2	2.29	**Floride**	BMB	0.089	0.850	0.1564
3	3.53	**Chloride**	BM	577.747	3538.894	1659.4369
8	6.00	**Bromide**	M ^	0.957	6.276	7.4974
9	6.27	**Sulfate**	M *^	68.062	150.720	264.2077
TOTAL:				646.86	3696.74	1931.30



Peak Integration Report

Sample Name:	**L2417040-01 SO4**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 21:52**	*Run Time:*	**10.00**

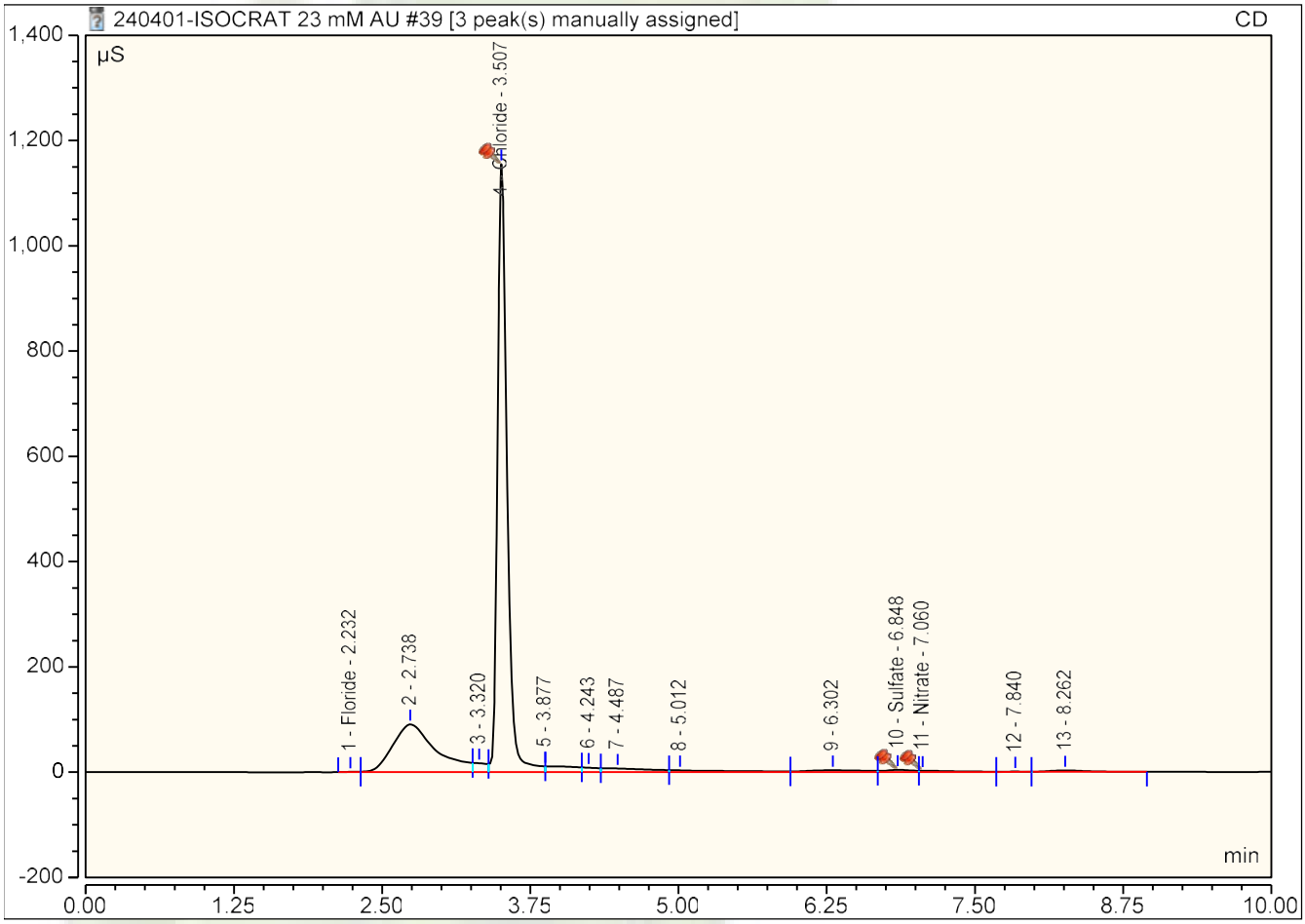
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.201	2.760	0.3616
3	3.50	**Chloride**	BM	59.908	622.816	172.0808
8	6.10	**Bromide**	M ^	0.085	0.248	0.6761
9	6.63	**Sulfate**	M *^	14.537	54.873	56.5304
10	7.32	**Nitrate**	M ^	1.639	8.054	1.7267
TOTAL:				76.37	688.75	231.38



Peak Integration Report

Sample Name:	**L2417040-02**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 22:03**	*Run Time:*	**10.00**

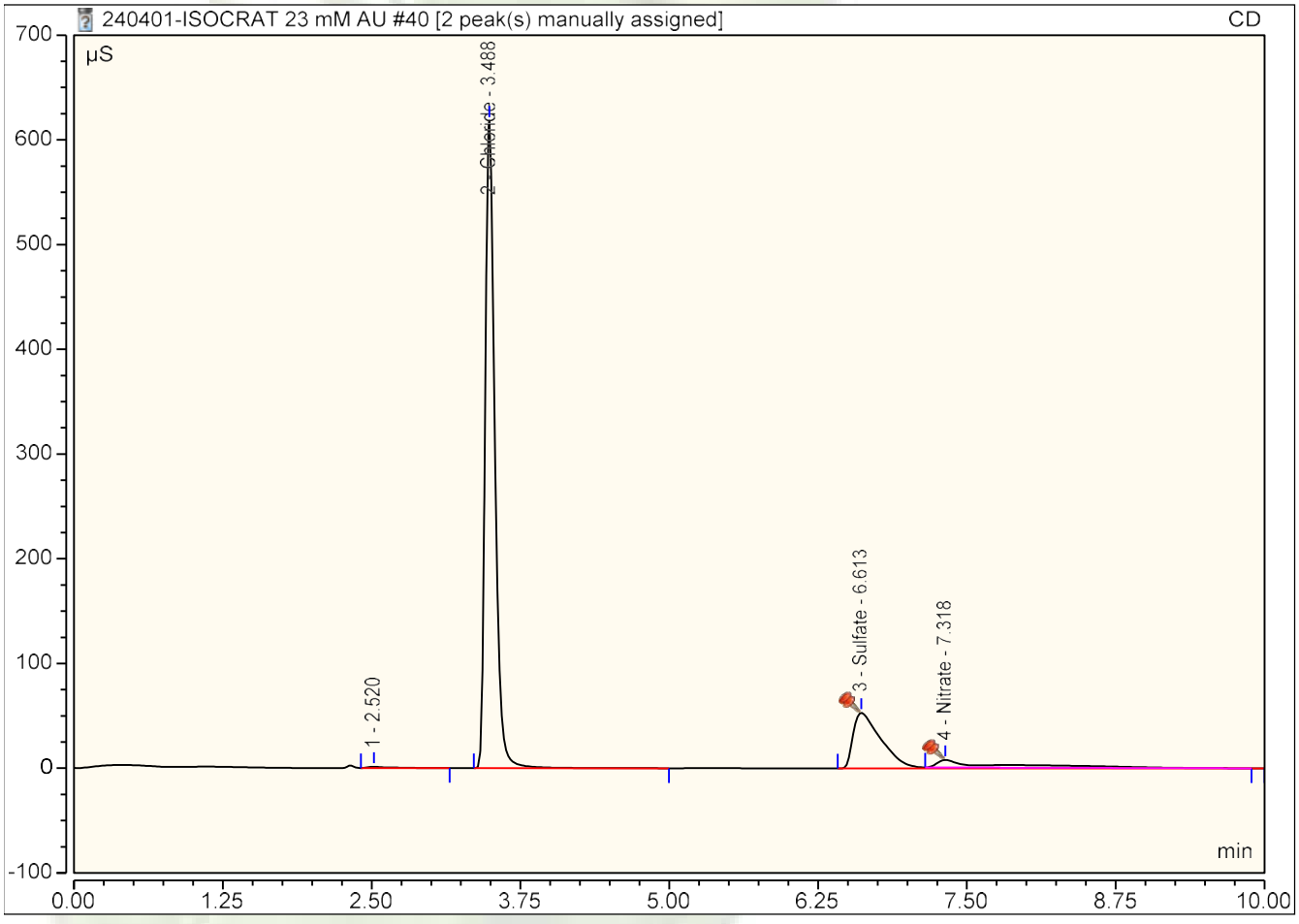
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.23	**Floride**	BM	0.097	0.687	0.1713
4	3.51	**Chloride**	M ^	109.409	1155.006	314.2609
10	6.85	**Sulfate**	M ^	1.046	4.155	4.1857
11	7.06	**Nitrate**	M ^	0.858	2.391	0.9146
TOTAL:				111.41	1162.24	319.53



Peak Integration Report

Sample Name:	**L2417040-03**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 22:14**	*Run Time:*	**10.00**

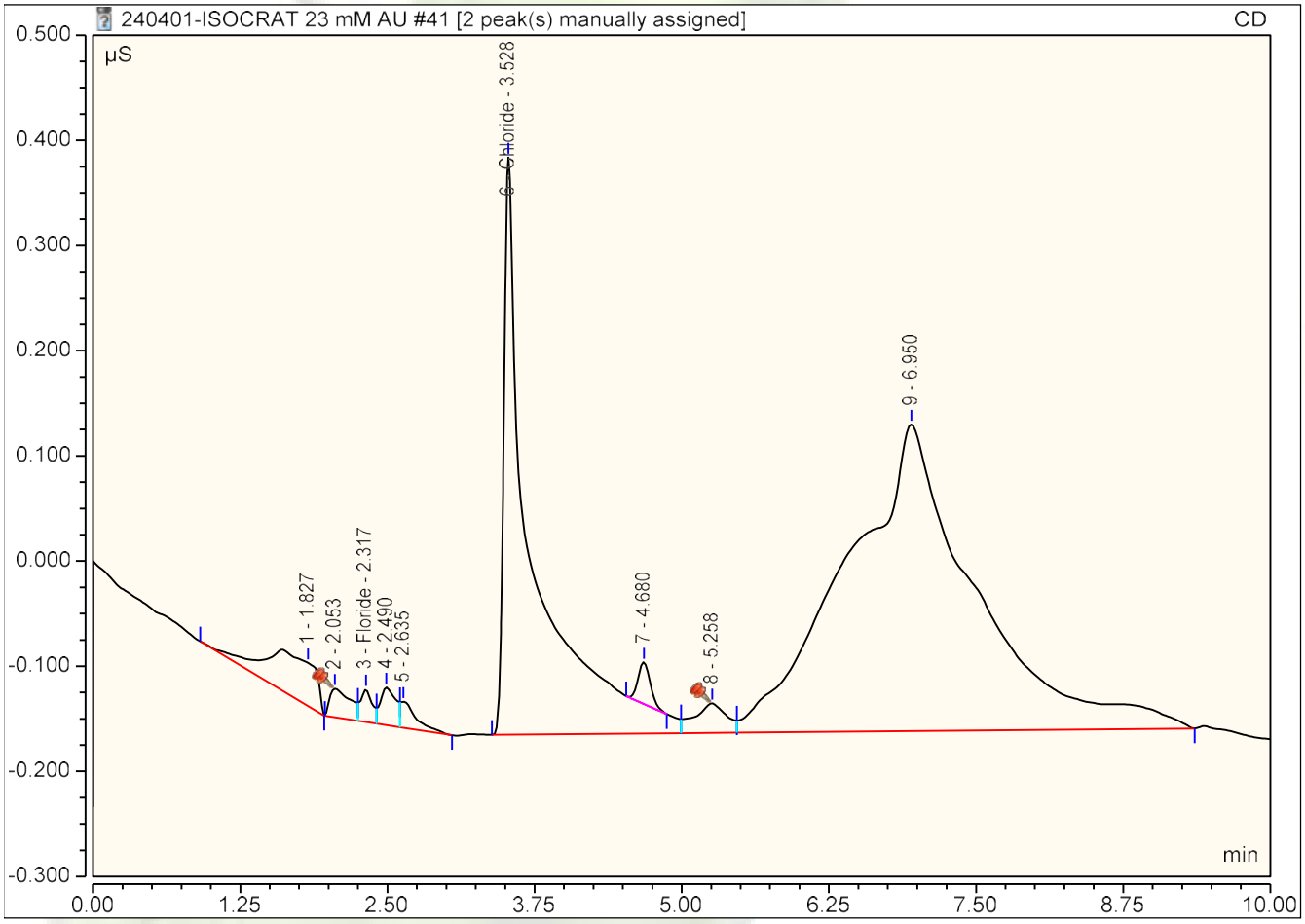
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
2	3.49	**Chloride**	BMB	58.442	618.286	167.8722
3	6.61	**Sulfate**	BMB^	15.742	53.143	61.2077
4	7.32	**Nitrate**	Rd^	4.407	7.124	4.6082
TOTAL:				78.59	678.55	233.69



Peak Integration Report

Sample Name:	**RINSE**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 22:25**	*Run Time:*	**10.00**

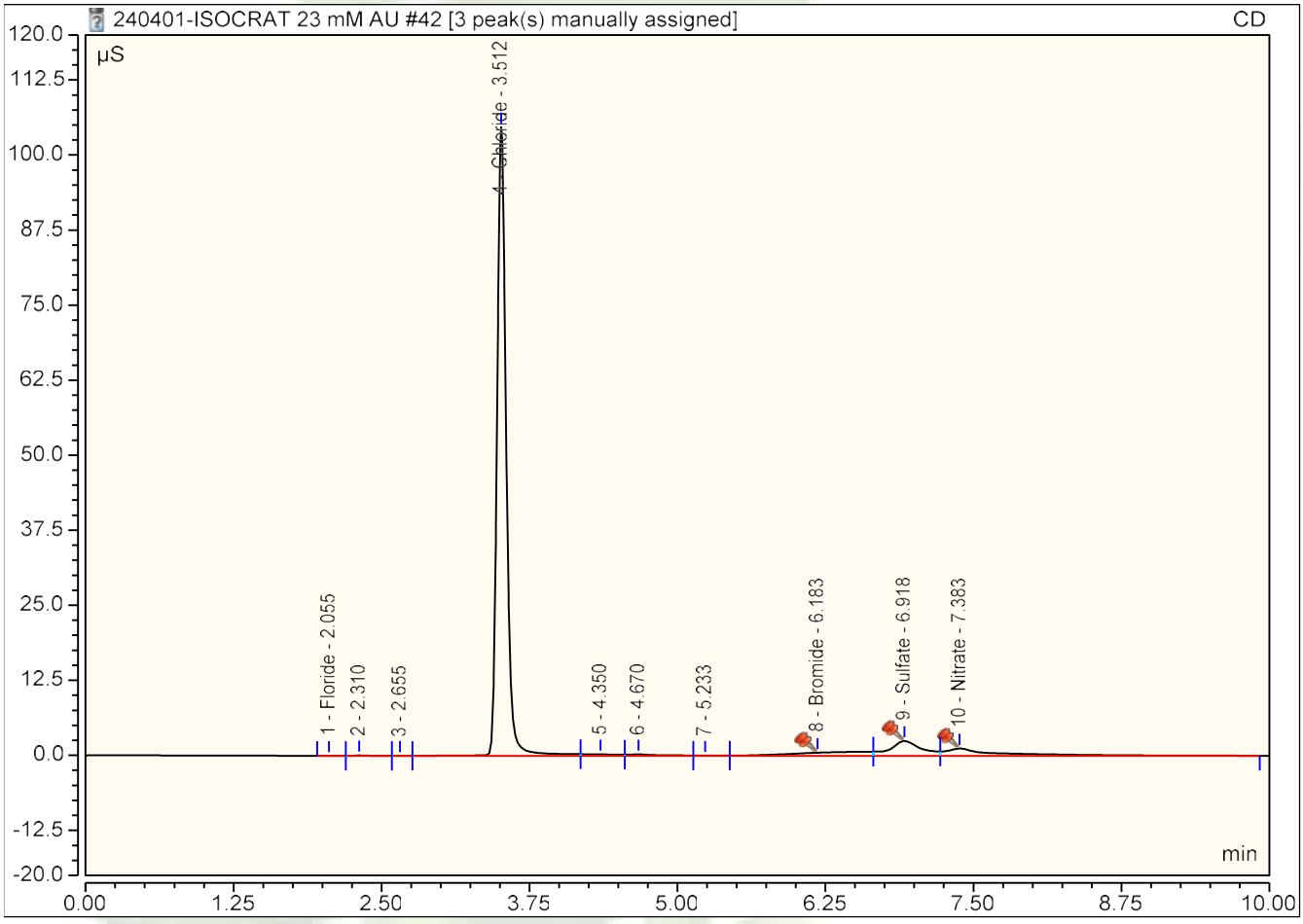
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
3	2.32	**Floride**	M	0.003	0.031	0.0005
6	3.53	**Chloride**	BM	0.154	0.549	0.4535
TOTAL:				0.16	0.58	0.45



Peak Integration Report

Sample Name:	**L2417503-01; 25X CL**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**25.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 22:36**	*Run Time:*	**10.00**

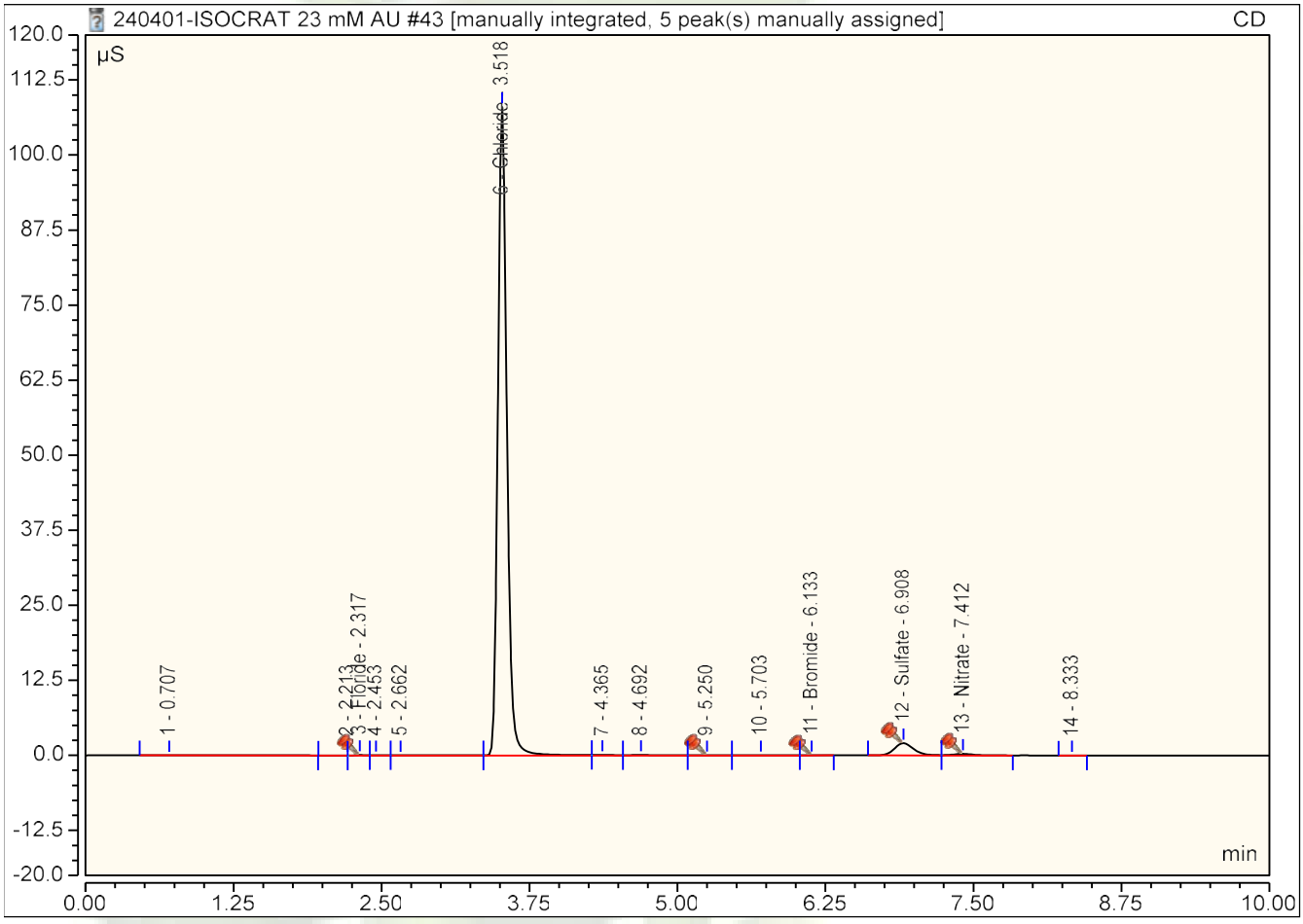
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.06	**Floride**	BM	0.004	0.022	0.0446
4	3.51	**Chloride**	M	9.469	104.743	680.2278
8	6.18	**Bromide**	M ^	0.467	0.523	91.7545
9	6.92	**Sulfate**	M ^	0.747	2.473	75.5987
10	7.38	**Nitrate**	MB^	0.648	1.209	17.3943
TOTAL:				11.34	108.97	865.02



Peak Integration Report

Sample Name:	**L2417503-02; 25X**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**25.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 22:47**	*Run Time:*	**10.00**

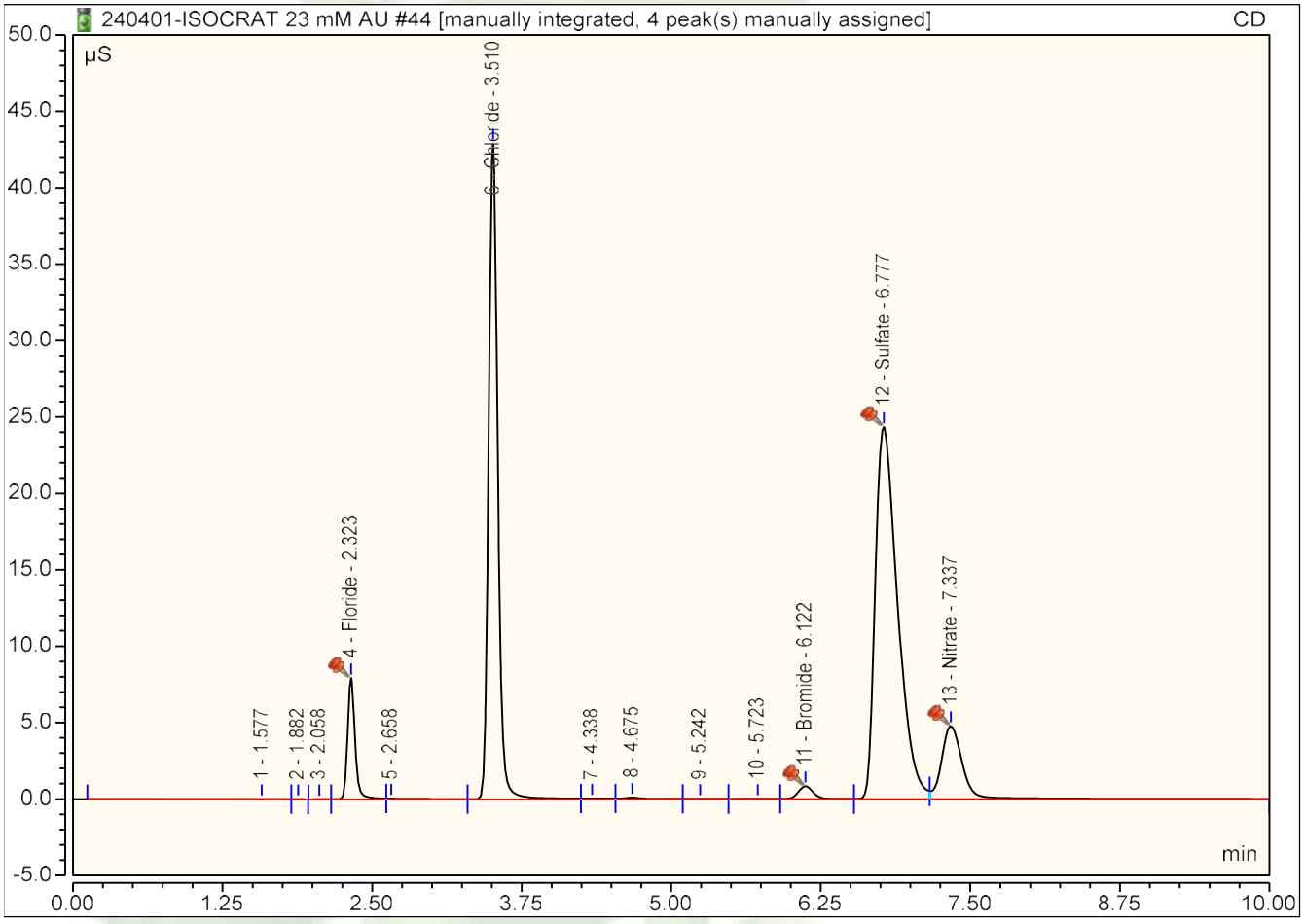
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
3	2.32	**Floride**	M ^	0.009	0.097	0.2686
6	3.52	**Chloride**	M	9.616	108.034	690.8091
11	6.13	**Bromide**	MB^	0.003	0.015	0.8794
12	6.91	**Sulfate**	BM *^	0.386	2.029	40.6185
13	7.41	**Nitrate**	MB*^	0.051	0.262	1.8774
TOTAL:				10.07	110.44	734.45



Peak Integration Report

Sample Name:	**CCV**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 22:57**	*Run Time:*	**10.00**

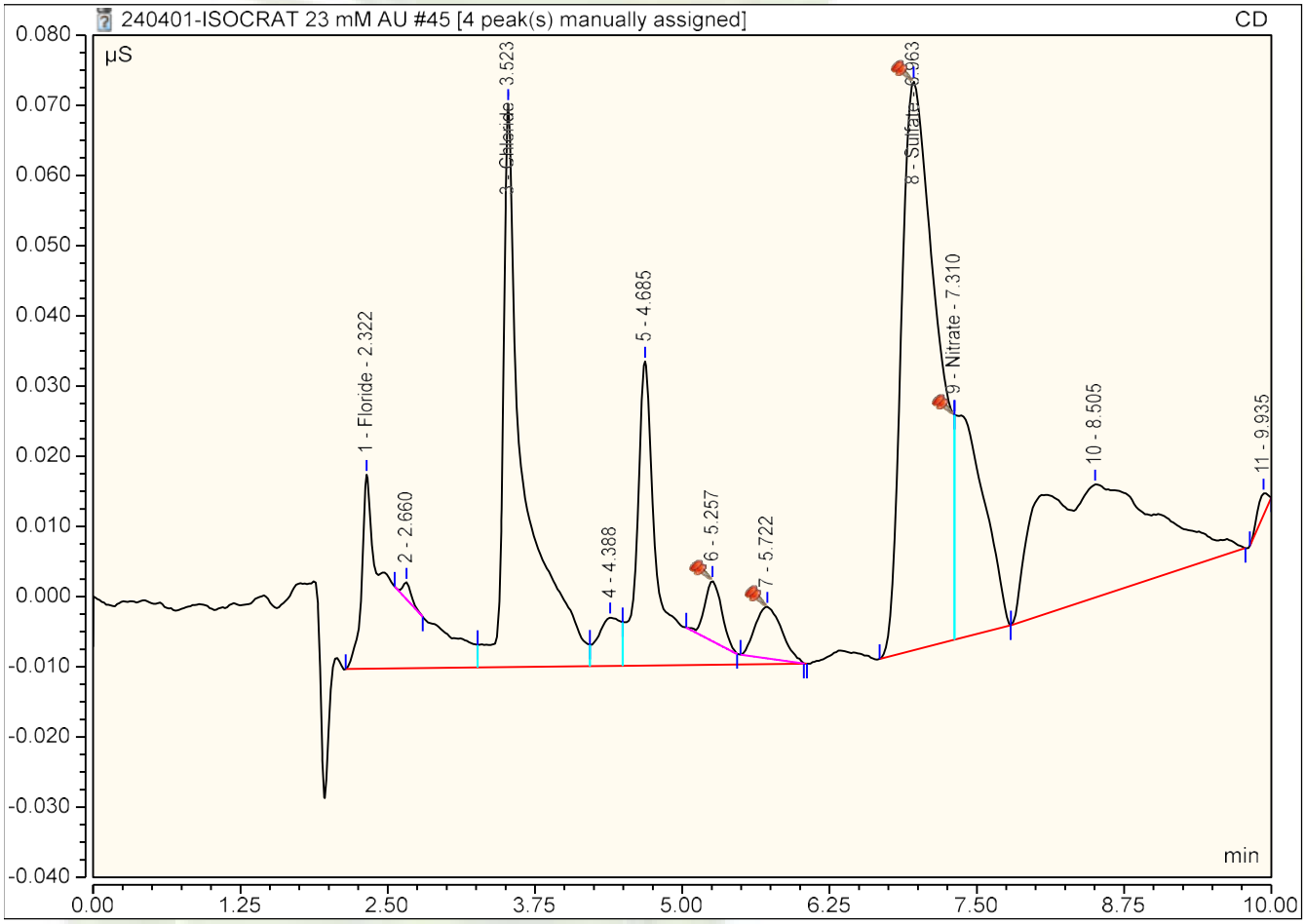
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
4	2.32	**Floride**	M ^	0.581	7.933	1.0539
6	3.51	**Chloride**	M	3.780	42.932	10.8696
11	6.12	**Bromide**	M ^	0.129	0.865	1.0262
12	6.78	**Sulfate**	M *^	5.271	24.360	20.5784
13	7.34	**Nitrate**	MB*^	0.989	4.788	1.0506
TOTAL:				10.75	80.88	34.58



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 23:08**	*Run Time:*	**10.00**

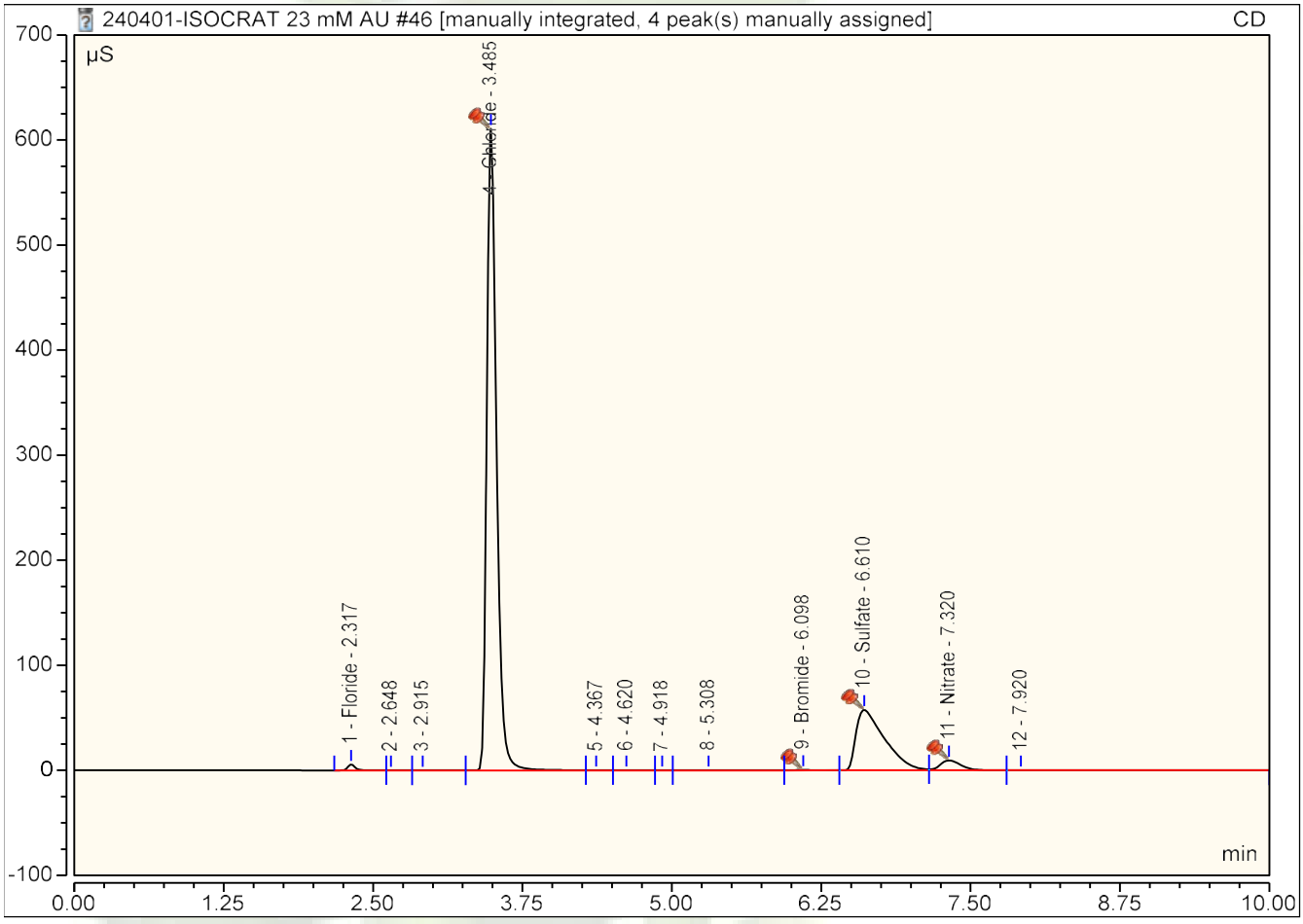
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.010	0.028	0.0115
3	3.52	**Chloride**	M	0.017	0.080	0.0601
8	6.96	**Sulfate**	BM ^	0.028	0.081	0.2362
9	7.31	**Nitrate**	MB^	0.009	0.032	0.0309
TOTAL:				0.06	0.22	0.34



Peak Integration Report

Sample Name:	**WG1903533-3**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 23:19**	*Run Time:*	**10.00**

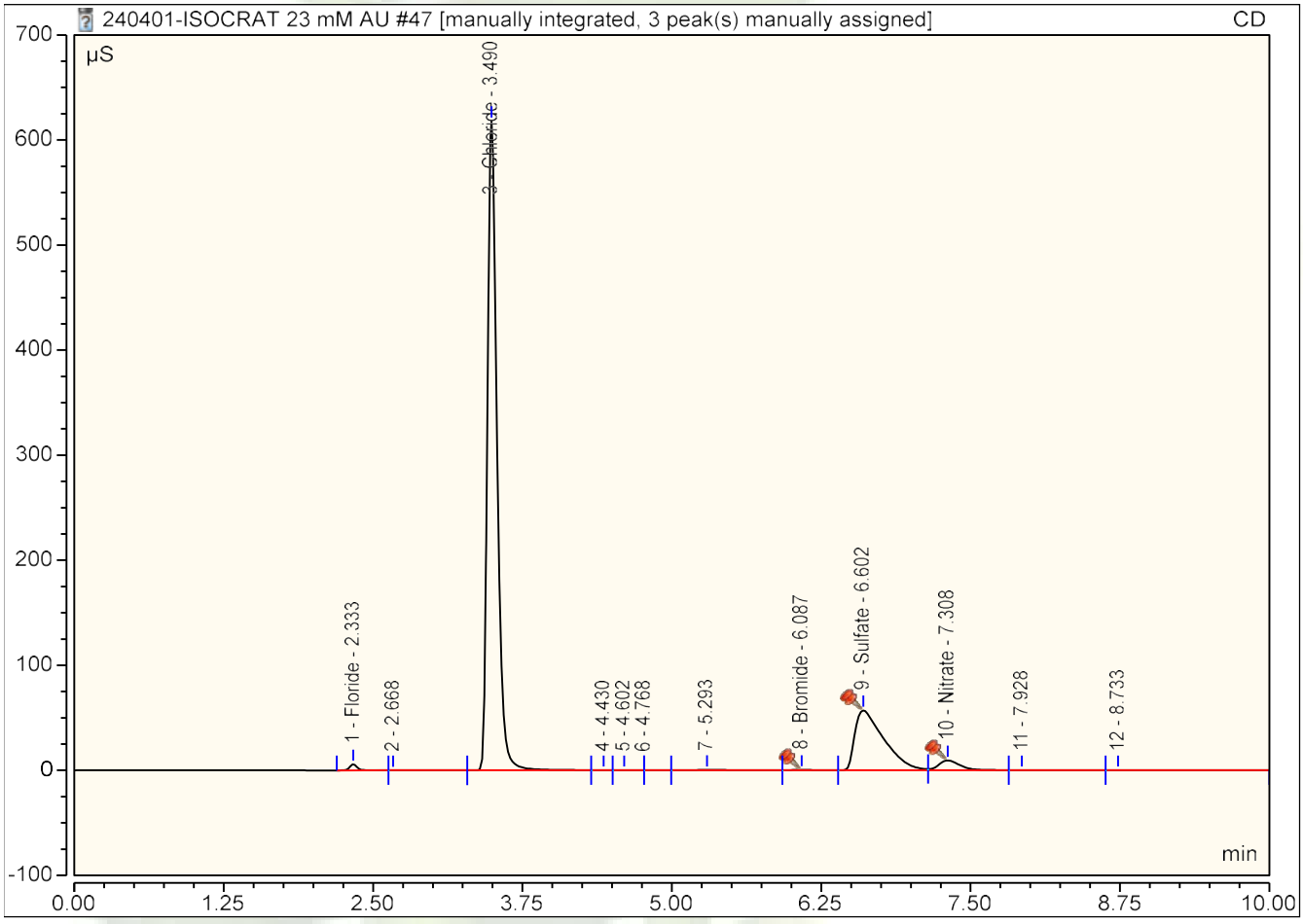
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.411	5.619	0.7436
4	3.49	**Chloride**	M ^	57.690	610.766	165.7120
9	6.10	**Bromide**	M ^	0.078	0.410	0.6267
10	6.61	**Sulfate**	M *^	15.907	57.558	61.8452
11	7.32	**Nitrate**	M ^	1.911	9.490	2.0102
TOTAL:				76.00	683.84	230.94



Peak Integration Report

Sample Name:	**WG1903533-4**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 23:30**	*Run Time:*	**10.00**

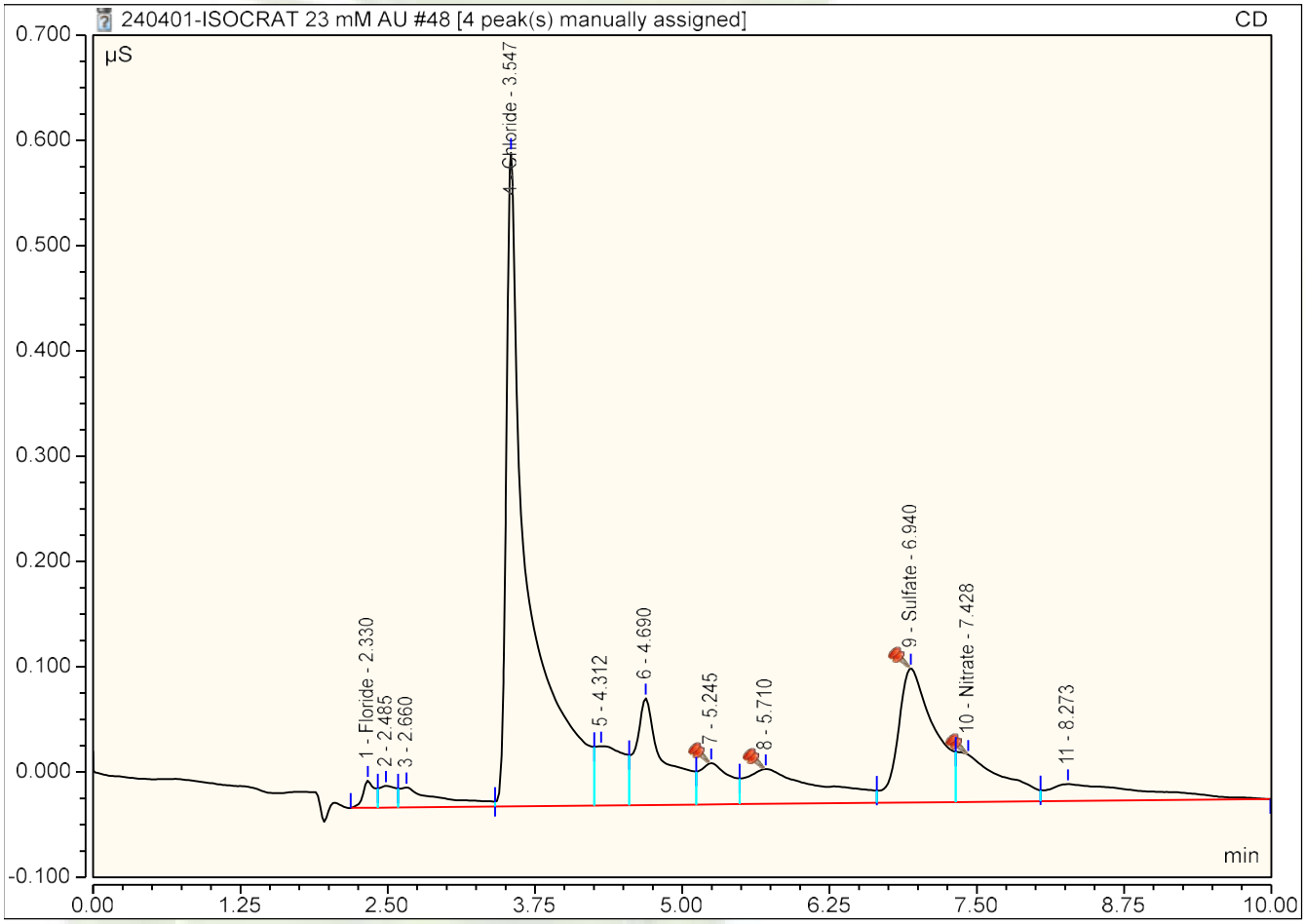
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.416	5.740	0.7544
3	3.49	**Chloride**	M	57.552	618.049	165.3158
8	6.09	**Bromide**	M ^	0.118	0.499	0.9399
9	6.60	**Sulfate**	M *^	16.011	57.146	62.2513
10	7.31	**Nitrate**	M ^	1.988	9.443	2.0902
TOTAL:				76.09	690.88	231.35



Peak Integration Report

Sample Name:	**RINSE**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 23:41**	*Run Time:*	**10.00**

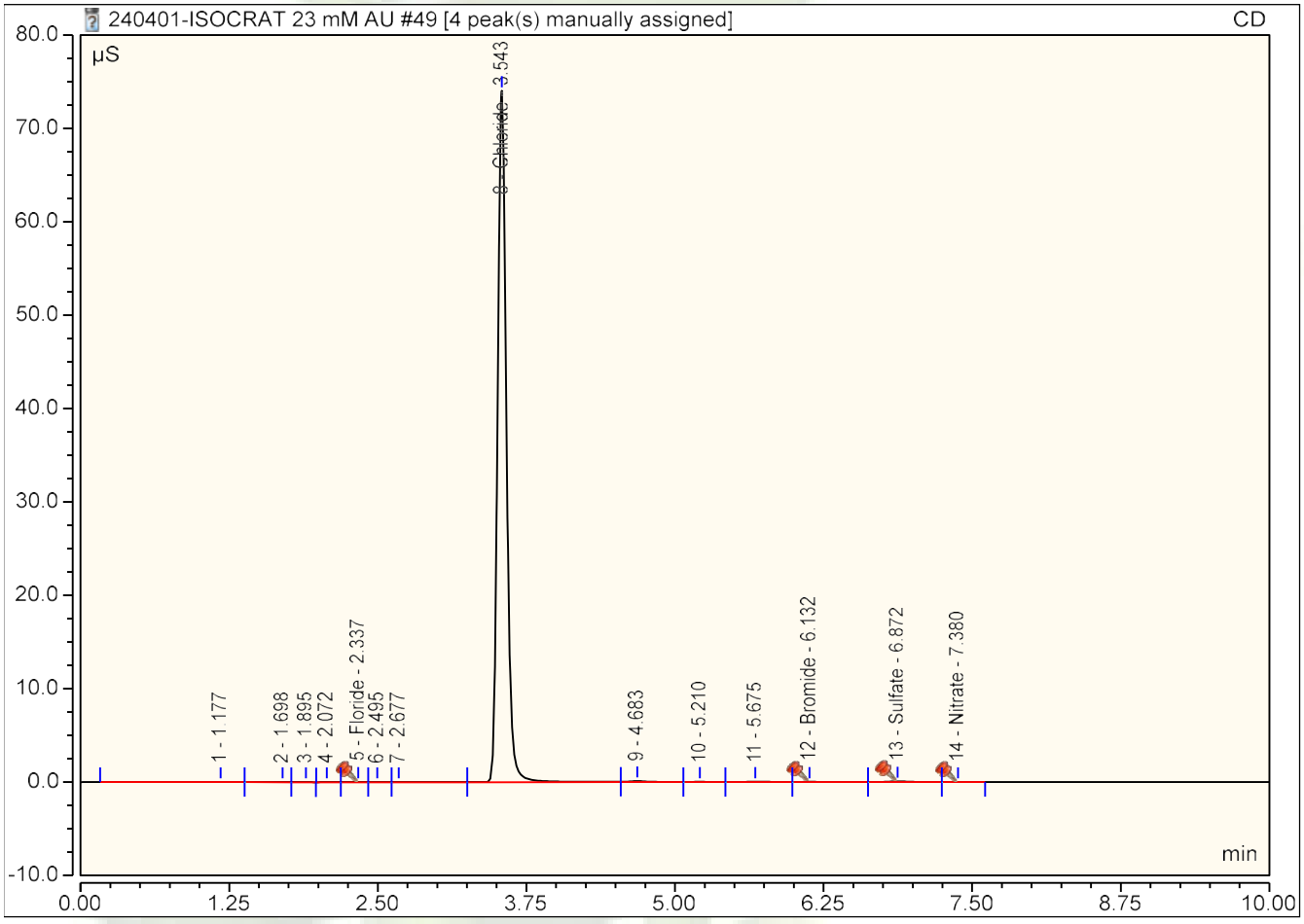
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.003	0.026	n.a.
4	3.55	**Chloride**	M	0.136	0.621	0.4025
9	6.94	**Sulfate**	M ^	0.046	0.127	0.3056
10	7.43	**Nitrate**	M ^	0.020	0.045	0.0427
TOTAL:				0.21	0.82	0.75



Peak Integration Report

Sample Name:	**L2417263-01; 250X CL**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**250.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**01-Apr-2024 / 23:52**	*Run Time:*	**10.00**

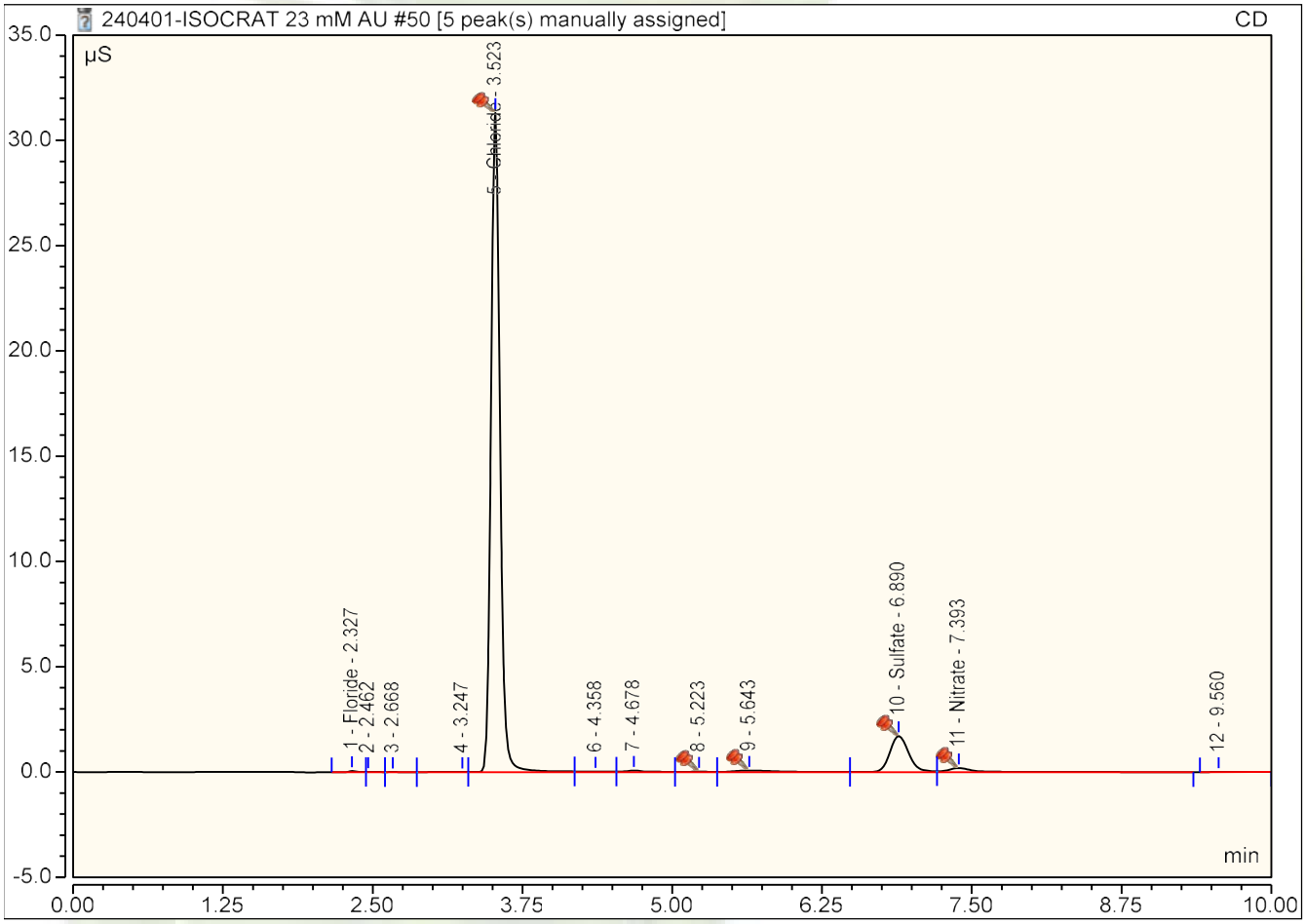
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
5	2.34	**Floride**	M ^	0.005	0.036	0.8201
8	3.54	**Chloride**	M	6.377	74.025	4582.3492
12	6.13	**Bromide**	M ^	0.010	0.035	23.5473
13	6.87	**Sulfate**	M ^	0.018	0.079	49.6903
14	7.38	**Nitrate**	MB^	0.002	0.008	5.8020
TOTAL:				6.41	74.18	4662.21



Peak Integration Report

Sample Name:	**L2417419-01; 10X CL**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**02-Apr-2024 / 00:03**	*Run Time:*	**10.00**

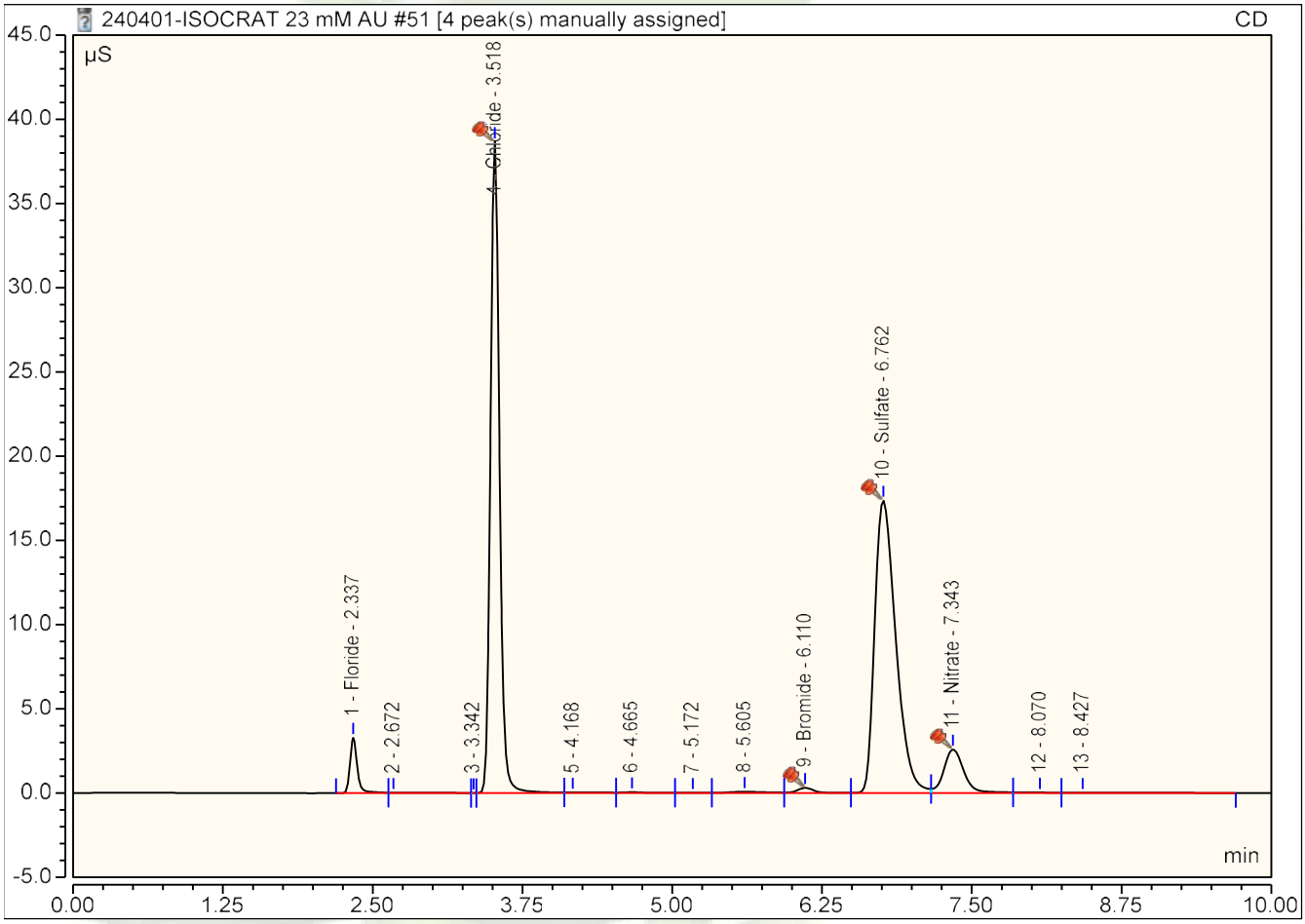
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.33	**Floride**	BM	0.006	0.063	0.0503
5	3.52	**Chloride**	M ^	2.723	31.317	78.3288
10	6.89	**Sulfate**	M ^	0.315	1.716	13.4918
11	7.39	**Nitrate**	MB^	0.062	0.198	0.8608
TOTAL:				3.11	33.29	92.73



Peak Integration Report

Sample Name:	**WG1903534-3**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**02-Apr-2024 / 00:14**	*Run Time:*	**10.00**

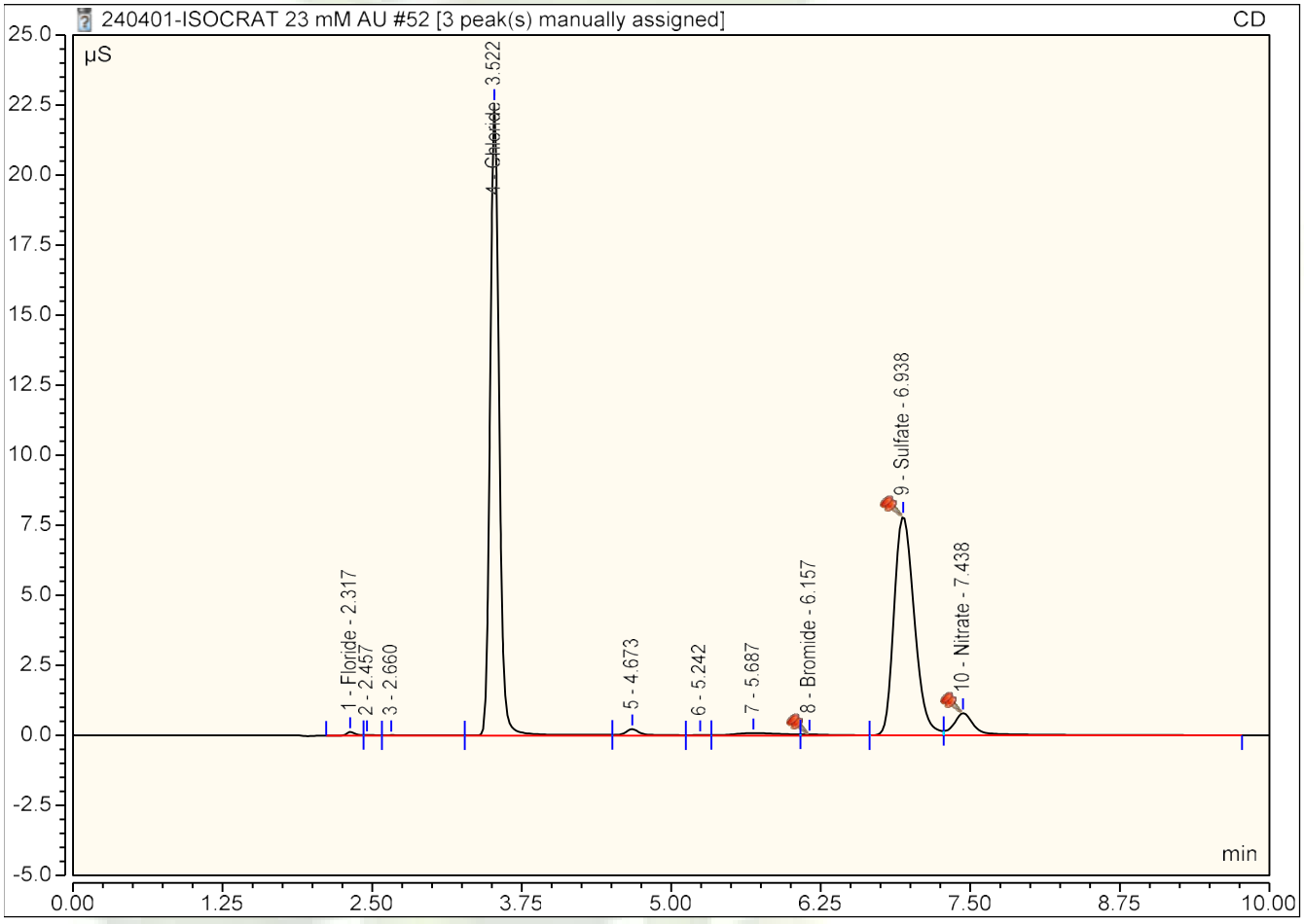
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.34	**Floride**	BM	0.233	3.289	0.4190
4	3.52	**Chloride**	M ^	3.367	38.657	9.6816
9	6.11	**Bromide**	M ^	0.051	0.309	0.4102
10	6.76	**Sulfate**	M ^	3.552	17.369	13.9102
11	7.34	**Nitrate**	M ^	0.497	2.586	0.5387
TOTAL:				7.70	62.21	24.96



Peak Integration Report

Sample Name:	**L2417074-01-4**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**02-Apr-2024 / 00:25**	*Run Time:*	**10.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.32	**Floride**	BM	0.012	0.140	0.0166
4	3.52	**Chloride**	M	1.971	22.554	5.6737
8	6.16	**Bromide**	M ^	0.013	0.041	0.1140
9	6.94	**Sulfate**	M ^	1.529	7.819	6.0616
10	7.44	**Nitrate**	MB^	0.180	0.798	0.2089
TOTAL:				3.71	31.35	12.07



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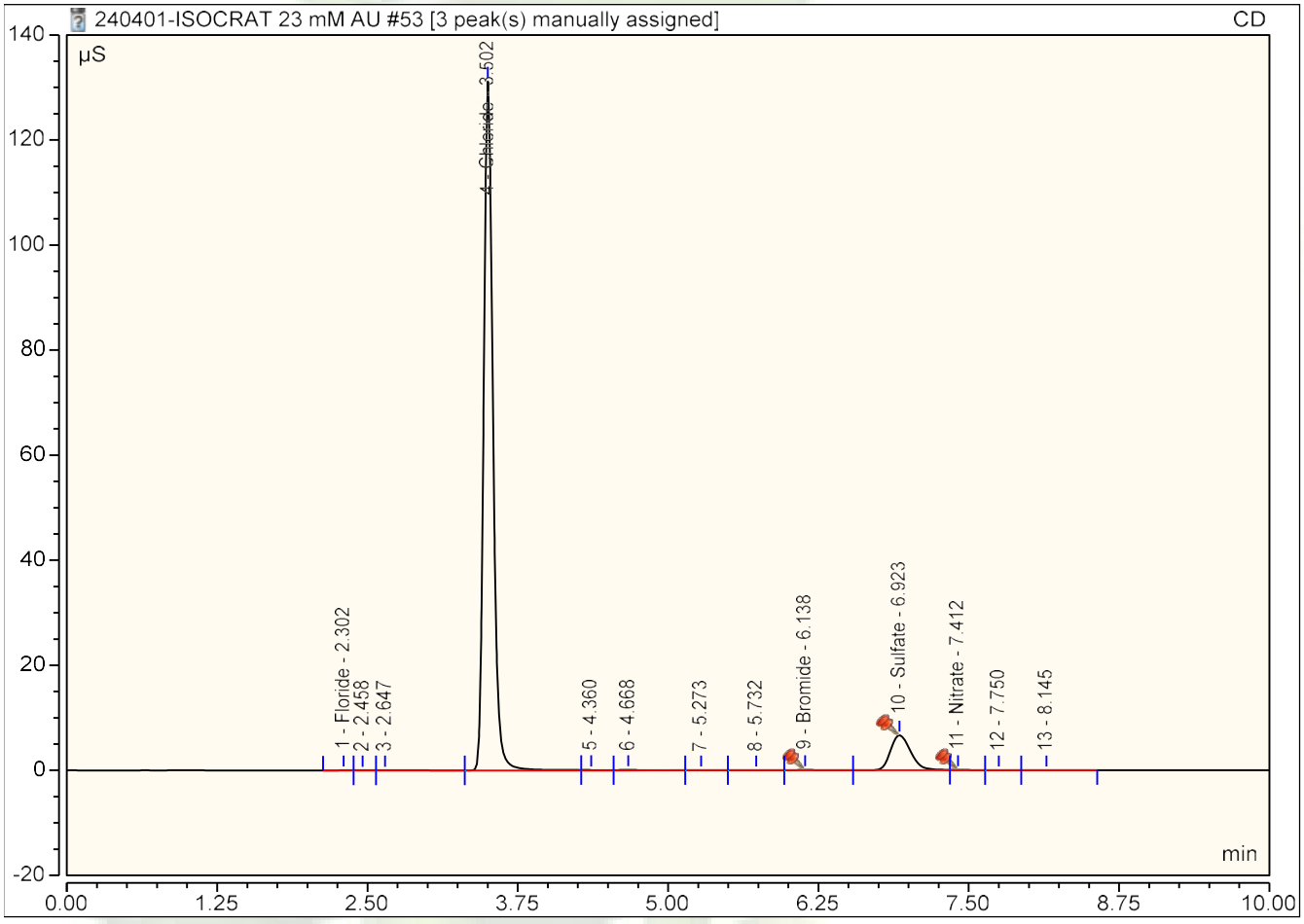
Version 7.2.10.23925

Peak Integration Report

Sample Name:	**L2417429-01; 50X BR**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**50.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**02-Apr-2024 / 00:36**	*Run Time:*	**10.00**

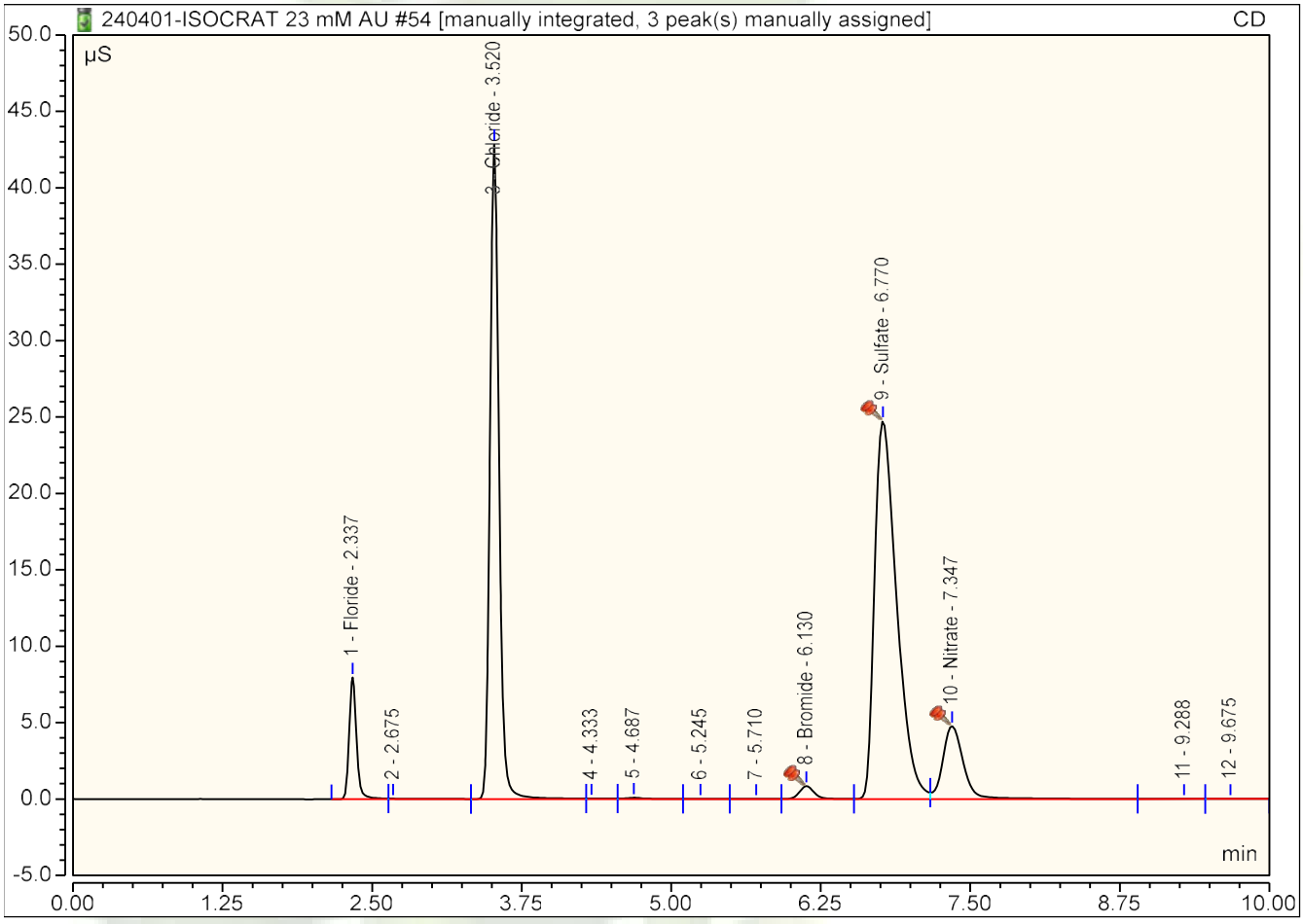
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.30	**Floride**	BM	0.003	0.034	n.a.
4	3.50	**Chloride**	M	11.699	131.146	1680.6419
9	6.14	**Bromide**	M ^	0.015	0.083	6.6336
10	6.92	**Sulfate**	M ^	1.299	6.676	258.2894
11	7.41	**Nitrate**	M ^	0.016	0.076	1.8889
TOTAL:				13.03	138.02	1947.45



Peak Integration Report

Sample Name:	**CCV**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**02-Apr-2024 / 00:47**	*Run Time:*	**10.00**

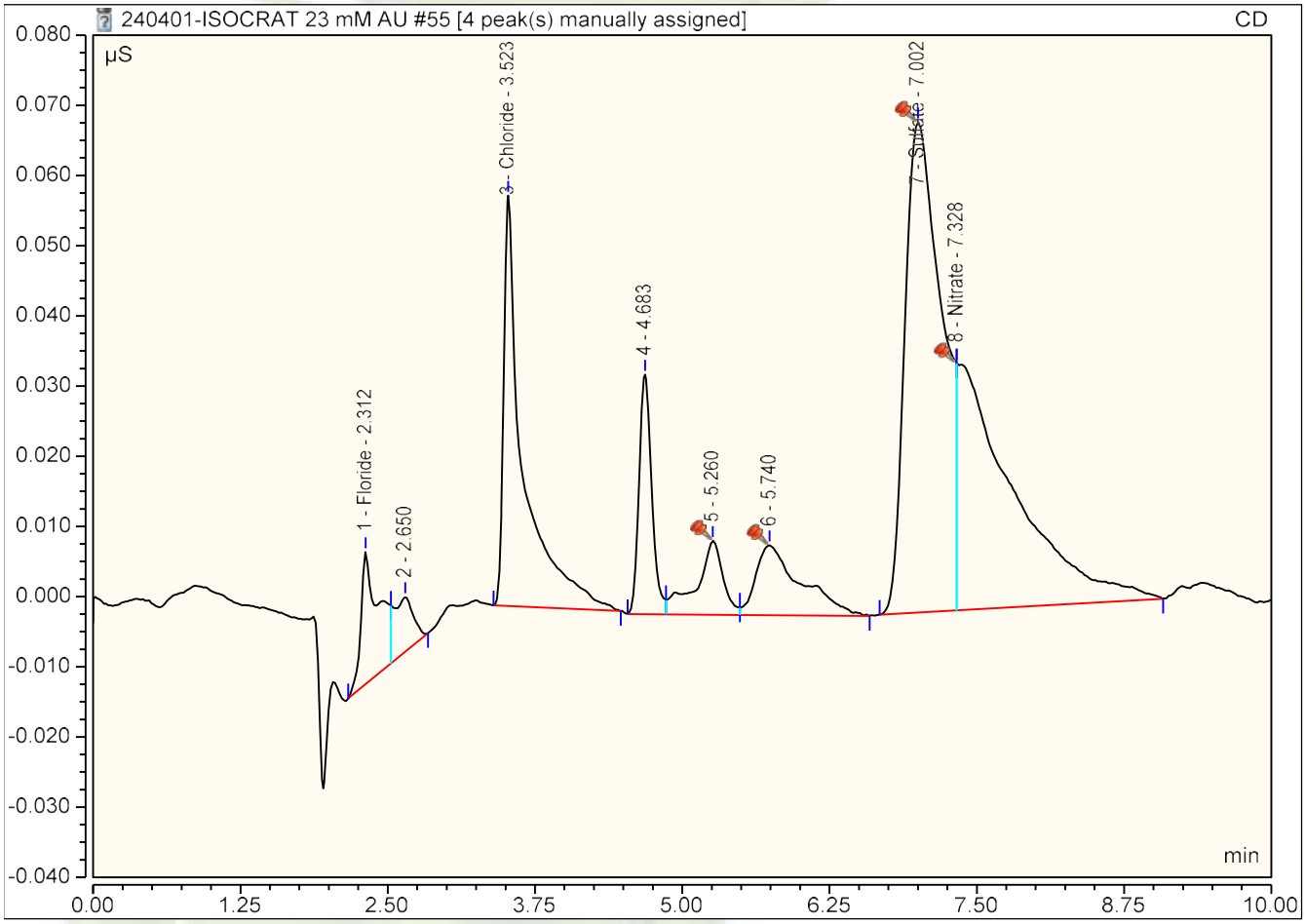
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.34	**Floride**	BM	0.574	7.964	1.0415
3	3.52	**Chloride**	M	3.763	42.883	10.8192
8	6.13	**Bromide**	M ^	0.124	0.852	0.9855
9	6.77	**Sulfate**	M *^	5.308	24.749	20.7234
10	7.35	**Nitrate**	M *^	0.958	4.773	1.0186
TOTAL:				10.73	81.22	34.59



Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**5000.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Instrument Method:	**IC 3 method 23 mM**	*Operator:*	**Wetchem25**
Inj. Date / Time:	**02-Apr-2024 / 00:58**	*Run Time:*	**10.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount
1	2.31	**Floride**	BM	0.003	0.019	0.0001
3	3.52	**Chloride**	BMB	0.011	0.058	0.0440
7	7.00	**Sulfate**	BM ^	0.025	0.070	0.2250
8	7.33	**Nitrate**	MB^	0.020	0.035	0.0420
TOTAL:				0.06	0.18	0.31



Anion Summary Report

No.	Name	Dilution	Amount CD Floride	Amount CD Chloride	Amount CD Nitrate	Amount CD Sulfate	Amount CD Bromide	Inject Time	Comment
1	BLK	1.0	n.a.	0.1864	0.0369	0.1750	0.0342	18/Jan/2024 12:22	CVN
2	STD 0.5	1.0	0.0120	0.2940	0.0398	0.5226	0.0432	18/Jan/2024 12:33	LOT#240112-0.5
3	STD 1.0	1.0	0.0318	0.5228	0.0594	0.9571	0.0693	18/Jan/2024 12:44	LOT#240112-1.0
4	STD 2.0	1.0	0.1880	1.9546	0.1790	3.9106	0.1806	18/Jan/2024 12:55	LOT#240112-2.0
5	STD 3.0	1.0	0.5004	4.9838	0.4648	9.8530	0.4551	18/Jan/2024 13:05	LOT#240112-3.0
6	STD 4.0	1.0	2.0801	19.9662	2.0105	40.1849	2.0124	18/Jan/2024 13:16	LOT#240112-4.0
7	STD 5.0	1.0	4.9687	50.0165	5.0780	99.9446	5.2299	18/Jan/2024 13:27	LOT#240112-5.0
8	RINSE	1.0	0.0080	0.1206	0.0317	n.a.	0.1508	01/Apr/2024 16:24	WG1903535-3533-3534
9	CCV	1.0	1.0613	10.9482	0.9789	20.6491	1.0117	01/Apr/2024 16:35	LOT#240328-C
10	CCB	1.0	0.0139	0.0730	n.a.	0.3355	0.0340	01/Apr/2024 16:46	AU
11	ICV	1.0	0.8362	8.4284	0.7439	8.1145	0.7728	01/Apr/2024 16:57	LOT#240328-I
12	ICB	1.0	n.a.	0.0334	n.a.	0.1549	n.a.	01/Apr/2024 17:08	AU
13	WG1903535-1	1.0	n.a.	0.0243	n.a.	0.1433	n.a.	01/Apr/2024 17:19	WG1903535; AU
14	WG1903535-2	1.0	0.8364	8.4776	0.7397	8.1431	0.7587	01/Apr/2024 17:30	WG1903535; AU
15	XL2417040-01; 10X SO4	10.0	0.3848	196.7644	1.8772	65.5319	1.2705	01/Apr/2024 17:41	AU
16	XL2417040-02; 10X	10.0	0.3341	361.7354	0.9036	4.4348	n.a.	01/Apr/2024 17:52	AU
17	XL2417040-03; 10X	10.0	n.a.	208.0646	1.5772	68.3615	n.a.	01/Apr/2024 18:02	AU
18	XL2417263-01; 50X CL	50.0	0.1433	4288.6499	1.9043	24.8704	n.a.	01/Apr/2024 18:13	AU
19	L2417416-01; 100X CL	100.0	0.3379	1565.1678	15.0747	86.5705	8.1232	01/Apr/2024 18:24	WG1903534; AU
20	L2417416-02; 100X	100.0	0.1369	1580.5955	2.9783	82.8995	8.6189	01/Apr/2024 18:35	WG1903534; AU
21	CCV	1.0	1.0730	10.8911	0.9713	20.9322	0.9652	01/Apr/2024 18:46	LOT#240328-C
22	CCB	1.0	0.0101	0.0439	0.0300	0.2008	n.a.	01/Apr/2024 18:57	AU
23	L2417419-01 CL SO4 BR	1.0	0.0706	74.5445	0.4860	13.0733	0.1259	01/Apr/2024 19:08	WG1903535; AU
24	L2717333-01 CL	1.0	0.0602	2.2100	1.4866	3.2793	0.0520	01/Apr/2024 19:19	WG1903535; AU
25	L2417074-01 F CL SO4 BR	1.0	0.0151	5.6717	0.1594	6.0768	0.0712	01/Apr/2024 19:30	WG1903534; AU
26	L2417074-02	1.0	0.0539	22.5264	0.0807	20.6428	0.1928	01/Apr/2024 19:41	WG1903534; AU
27	L2417074-03	1.0	0.0409	18.4191	0.6350	20.3563	0.0921	01/Apr/2024 19:52	WG1903534; AU
28	L2417074-04	1.0	0.0473	20.9582	0.2133	21.8440	0.1558	01/Apr/2024 20:03	WG1903534; AU
29	L2417074-05	1.0	0.0117	22.2114	1.2232	28.1669	0.0830	01/Apr/2024 20:14	WG1903534; AU
30	L2417074-06	1.0	0.0168	5.6048	0.1685	6.1031	0.0718	01/Apr/2024 20:25	WG1903534; AU
31	L2717175-01	1.0	n.a.	0.0417	n.a.	0.1534	n.a.	01/Apr/2024 20:35	WG1903535; AU
32	WG1903535-3	1.0	n.a.	0.0492	n.a.	0.1744	n.a.	01/Apr/2024 20:46	WG1903535; AU
33	CCV	1.0	1.0933	10.9312	0.9586	21.1689	0.9308	01/Apr/2024 20:57	LOT#240328-C
34	CCB	1.0	0.0023	0.1022	0.0266	0.1939	n.a.	01/Apr/2024 21:08	AU
35	WG1903535-4	1.0	0.3964	4.2717	0.3673	8.1372	0.3726	01/Apr/2024 21:19	WG1903535; AU

36	L2417525-01; 25X CL	25.0	0.1759	388.5693	1.0593	67.3287	1.4550	01/Apr/2024 21:30	WG1903535; AU
37	XL2417429-01 BR	1.0	0.1564	1659.4369	n.a.	264.2077	7.4974	01/Apr/2024 21:41	AU
38	L2417040-01 SO4	1.0	0.3616	172.0808	1.7267	56.5304	0.6761	01/Apr/2024 21:52	WG1903533; AU
39	L2417040-02	1.0	0.1713	314.2609	0.9146	4.1857	n.a.	01/Apr/2024 22:03	WG1903533; AU
40	L2417040-03	1.0	n.a.	167.8722	4.6082	61.2077	n.a.	01/Apr/2024 22:14	WG1903533; AU
41	RINSE	1.0	0.0005	0.4535	n.a.	n.a.	n.a.	01/Apr/2024 22:25	AU
42	L2417503-01; 25X CL	25.0	0.0446	680.2278	17.3943	75.5987	91.7545	01/Apr/2024 22:36	WG1903534; AU
43	L2417503-02; 25X	25.0	0.2686	690.8091	1.8774	40.6185	0.8794	01/Apr/2024 22:47	WG1903534; AU
44	CCV	1.0	1.0539	10.8696	1.0506	20.5784	1.0262	01/Apr/2024 22:57	LOT#240328-C
45	CCB	1.0	0.0115	0.0601	0.0309	0.2362	n.a.	01/Apr/2024 23:08	AU
46	WG1903533-3	1.0	0.7436	165.7120	2.0102	61.8452	0.6267	01/Apr/2024 23:19	WG1903533; AU
47	WG1903533-4	1.0	0.7544	165.3158	2.0902	62.2513	0.9399	01/Apr/2024 23:30	WG1903533; AU
48	RINSE	1.0	n.a.	0.4025	0.0427	0.3056	n.a.	01/Apr/2024 23:41	AU
49	L2417263-01; 250X CL	250.0	0.8201	4582.3492	5.8020	49.6903	23.5473	01/Apr/2024 23:52	WG1903535; AU
50	L2417419-01; 10X CL	10.0	0.0503	78.3288	0.8608	13.4918	n.a.	02/Apr/2024 00:03	WG1903535; AU
51	WG1903534-3	1.0	0.4190	9.6816	0.5387	13.9102	0.4102	02/Apr/2024 00:14	WG1903534; AU
52	L2417074-01-4	1.0	0.0166	5.6737	0.2089	6.0616	0.1140	02/Apr/2024 00:25	WG1903534; AU
53	L2417429-01; 50X BR	50.0	n.a.	1680.6419	1.8889	258.2894	6.6336	02/Apr/2024 00:36	WG1903535; AU
54	CCV	1.0	1.0415	10.8192	1.0186	20.7234	0.9855	02/Apr/2024 00:47	LOT#240328-C
55	CCB	1.0	0.0001	0.0440	0.0420	0.2250	n.a.	02/Apr/2024 00:58	AU
	Sum:			19289.093	84.649	1773.546			0.000
	Average:			350.711	1.764	33.463			#DIV/0!
	Rel.Std.Dev:			259.377 %	188.069 %	158.905 %			#DIV/0!

Quality Control

Form 5a
Matrix Spike

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01		
Matrix Spike	: WG1903534-3	**MS Analysis Date**	: 04/02/24 00:14
Matrix Spike Dup	:	**MSD Analysis Date**	:

		Matrix Spike Sample				Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R		Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Bromide	0.071	0.4	0.410	98						90-110	20
Chloride	5.67	4	9.68	100						90-110	18
Fluoride	ND	0.4	0.419	85	Q					90-110	15
Sulfate	6.08	8	13.9	98						90-110	20

Form 6
Lab Duplicates

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: MW-3A	**Matrix**	: WATER
Lab Sample ID	: L2417074-01	**Analysis Date**	: 04/01/24 19:30
Dup Sample ID	: WG1903534-4	**DUP Analysis Date**	: 04/02/24 00:25

Parameter	Sample Concentration (mg/l)	Duplicate Concentration (mg/l)	RPD	RPD Limit
Bromide	0.071	0.114	46 Q	20
Chloride	5.67	5.67	0	18
Fluoride	ND	ND	NC	15
Sulfate	6.08	6.06	0	20

Form 7
Laboratory Control Sample

Client	: Alpha Geoscience	**Lab Number**	: L2417074
Project Name	: RANCO SAND & GRAVEL	**Project Number**	: 12123
Client Sample ID	: NA	**Matrix**	: WATER
Lab Sample ID	: WG1903534-2	**LCS Analysis Date**	: 04/01/24 17:30
Dup Sample ID	:	**LCSD Analysis Date**	:

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	**True (mg/l)**	**Found (mg/l)**	**%R**	**True (mg/l)**	**Found (mg/l)**	**%R**	**RPD**	**Recovery Limits**	**RPD Limit**
Bromide	0.800	0.759	95.					90-110	20
Chloride	8.00	8.48	106.					90-110	18
Fluoride	0.800	0.836	104.					90-110	15
Sulfate	8.00	8.14	102.					90-110	20

Date Created: 11/11/21
Created By: Jason Hebert
File: PM11467-1
Page: 1

WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container/Sample Preservation
Bromide	24959-67-9	0.05	0.0132	mg/l	90-110		90-110	20	20	300.0	28 days	1 - Plastic 250ml unpreserved
Chloride	16887-00-6	0.5	0.0839	mg/l	90-110		64-148	18	18	9056	28 days	1 - Plastic 250ml unpreserved
Chloride	16887-00-6	0.5	0.0839	mg/l	90-110		90-110	18	18	300.0	28 days	1 - Plastic 250ml unpreserved
Fluoride	16984-48-8	0.05	0.037	mg/l	90-110		81-124	15	15	9056	28 days	1 - Plastic 500ml unpreserved
Fluoride	16984-48-8	0.05	0.037	mg/l	90-110		90-110	15	15	300.0	28 days	1 - Plastic 500ml unpreserved
Nitrogen, Nitrate	14797-55-8	0.05	0.0128	mg/l	90-110		90-110	15	15	300.0	48 hours	1 - Plastic 250ml unpreserved
Nitrogen, Nitrate	14797-55-8	0.05	0.0128	mg/l	90-110		80-120	15	15	9056	48 hours	1 - Plastic 250ml unpreserved
Sulfate	14808-79-8	1	0.454	mg/l	90-110		72-124	20	20	9056	28 days	1 - Plastic 500ml unpreserved
Sulfate	14808-79-8	1	0.454	mg/l	90-110		90-110	20	20	300.0	28 days	1 - Plastic 500ml unpreserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)
Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.

Calculations of Anions by Ion Chromatography

Aqueous samples:

The Dionex calculates the area of the peaks produced by the instrument, compares them to the peak area of the calibration standard stored in its memory, and calculates result in mg/L.

If the sample was manually diluted prior to analysis, the calculated mean must be manually multiplied by the dilution factor. The Reported Detection Limit is also multiplied by the same dilution factor.

$$\text{Result, mg/L} = \frac{\text{area - y-intercept}}{\text{slope}} \times \text{Dilution Factor}$$

Subcontracted Data

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

April 16, 2024

Pace MA
Pace MA
Eight Walkup Drive
Westborough, MA 01581

RE: Project: L2417074
Pace Project No.: 50369611

Dear Pace MA:

Enclosed are the analytical results for sample(s) received by the laboratory on April 02, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tina Sayer

Tina Sayer
tina.sayer@pacelabs.com
(317)228-3127
Project Manager

Enclosures

cc: Melissa Deyo, Pace MA

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Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: L2417074
Pace Project No.: 50369611

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: L2417074
Pace Project No.: 50369611

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50369611001	**MW-3A**	Water	03/28/24 08:50	04/02/24 09:40
50369611002	**MW-6AR**	Water	03/28/24 10:35	04/02/24 09:40
50369611003	**MW-7A**	Water	03/27/24 13:24	04/02/24 09:40
50369611004	**MW-7B**	Water	03/27/24 14:35	04/02/24 09:40
50369611005	**MW-7C**	Water	03/27/24 15:05	04/02/24 09:40
50369611006	**DUP**	Water	03/28/24 00:00	04/02/24 09:40

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SAMPLE ANALYTE COUNT

Project: L2417074
Pace Project No.: 50369611

Lab ID	Sample ID	Method	Analysts	Analytes Reported
50369611001	**MW-3A**	EPA 9056	KBB	1
50369611002	**MW-6AR**	EPA 9056	KBB	1
50369611003	**MW-7A**	EPA 9056	KBB	1
50369611004	**MW-7B**	EPA 9056	KBB	1
50369611005	**MW-7C**	EPA 9056	KBB	1
50369611006	**DUP**	EPA 9056	KBB	1

PASI-I = Pace Analytical Services - Indianapolis

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ANALYTICAL RESULTS

Project: L2417074
Pace Project No.: 50369611

Sample: MW-3A **Lab ID: 50369611001** Collected: 03/28/24 08:50 Received: 04/02/24 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 Iodide by IC	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Iodide	ND	mg/L	0.50	1		04/03/24 19:30		

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ANALYTICAL RESULTS

Project: L2417074
Pace Project No.: 50369611

Sample: MW-6AR **Lab ID: 50369611002** Collected: 03/28/24 10:35 Received: 04/02/24 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 Iodide by IC	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Iodide	ND	mg/L	0.50	1		04/03/24 17:53		

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ANALYTICAL RESULTS

Project: L2417074
Pace Project No.: 50369611

Sample: MW-7A **Lab ID: 50369611003** Collected: 03/27/24 13:24 Received: 04/02/24 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 Iodide by IC	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Iodide	ND	mg/L	0.50	1		04/03/24 18:12		

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ANALYTICAL RESULTS

Project: L2417074
Pace Project No.: 50369611

Sample: MW-7B **Lab ID: 50369611004** Collected: 03/27/24 14:35 Received: 04/02/24 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 Iodide by IC	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Iodide	ND	mg/L	0.50	1		04/03/24 18:31		

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ANALYTICAL RESULTS

Project: L2417074
Pace Project No.: 50369611

Sample: MW-7C **Lab ID: 50369611005** Collected: 03/27/24 15:05 Received: 04/02/24 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 Iodide by IC	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Iodide	ND	mg/L	0.50	1		04/03/24 18:51		

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ANALYTICAL RESULTS

Project: L2417074
Pace Project No.: 50369611

Sample: DUP **Lab ID: 50369611006** Collected: 03/28/24 00:00 Received: 04/02/24 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 Iodide by IC	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Iodide	ND	mg/L	0.50	1		04/03/24 19:10		

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(317)228-3100

QUALITY CONTROL DATA

Project: L2417074
Pace Project No.: 50369611

QC Batch: 783234 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 Iodide by IC
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50369611001, 50369611002, 50369611003, 50369611004, 50369611005, 50369611006

METHOD BLANK: 3583676 Matrix: Water
Associated Lab Samples: 50369611001, 50369611002, 50369611003, 50369611004, 50369611005, 50369611006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iodide	mg/L	ND	0.50	04/03/24 17:14	

LABORATORY CONTROL SAMPLE: 3583677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iodide	mg/L	5	5.8	115	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3583678 3583679

Parameter	Units	50369611001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iodide	mg/L	ND	5	5	5.6	5.7	113	114	80-120	1	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: L2417074
Pace Project No.: 50369611

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: L2417074
Pace Project No.: 50369611

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50369611001	**MW-3A**	EPA 9056	783234		
50369611002	**MW-6AR**	EPA 9056	783234		
50369611003	**MW-7A**	EPA 9056	783234		
50369611004	**MW-7B**	EPA 9056	783234		
50369611005	**MW-7C**	EPA 9056	783234		
50369611006	**DUP**	EPA 9056	783234		

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Subcontract Chain of Custody

Pace Analytical (Indianapolis, IN)
7726 Moller Road
Indianapolis, IN 46268

50369611

Alpha Job Number
L2417074

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 716.427.5229
Email: Melissa.Deyo@pacelabs.com

Project Information

Project Location: NY
Project Manager: Melissa Deyo

Turnaround & Deliverables Information

Due Date:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:

Regulatory Criteria: NY-TOGS-GA

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2417074

Report to include Method Blank, LCS/LCSD:

Additional Comments: Invoices to: invoices@pacelabs.coupahost.com Reports to: west.subreports@pacelabs.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	MW-3A	03-28-24 08:50	WATER	Iodide	
	MW-6AR	03-28-24 10:35	WATER	Iodide	
	MW-7A	03-27-24 13:24	WATER	Iodide	
	MW-7B	03-27-24 14:35	WATER	Iodide	
	MW-7C	03-27-24 15:05	WATER	Iodide	
	DUP	03-28-24 00:00	WATER	Iodide	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		4/1/24	UPS	4/1/24
	UPS	4/2/24 940	Mattie	4/2/24 940
Form No: AL_subcoc				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 4/2/24 1345 mw

1. **Courier:** ☐ FED EX ☑ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER _____

2. **Custody Seal on Cooler/Box Present:** ☐ Yes ☑ No

(If yes)**Seals Intact:** ☐ Yes ☐ No **(leave blank if no seals were present)**

3. **Thermometer:** 1 2 3 4 5 6 7 8 A B C D E F (G) H

4. **Cooler Temperature(s):** 1.3/1.3 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

6. **Ice Type:** ☑ Wet ☐ Blue ☐ None

7. **If temp. is over 6°C or under 0°C, was the PM notified?:** ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Custody Signatures Present?	✓		Headspace Wisconsin Sulfide?			✓
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Present?		✓	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																		1										W				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe